

#### A. Electrical, Plumbing, and Mechanical

- 1. Exterior lighting. All projects shall comply with the City of San Diego lighting ordinance. 2. GFCI outlets. Ground Fault Circuit Interrupter (GFCI) outlets are required in bathrooms, at kitchen countertops, at laundry and wet bar sinks, in garages, in crawlspaces, in
- unfinished basements, and outdoors, (CEC 210.8) AFCI outlets. Electrical circuits in bedrooms, living rooms, dining rooms, dens, closets, hallways, or similar rooms must be protected by Arc Fault Circuit Interrupters (AFCI). (CEC 210.12)
- Luminaire requirements. Installed luminaires shall meet the efficacy and fixture requirements of CBEES 150.0(k).
- Smoke detectors in building remodels. Smoke detectors are required in each existing sleeping room, outside each separate sleeping area in the immediate vicinity of sleeping rooms, and on each story of a dwelling including basements. Battery-operated detectors are acceptable in existing areas with no construction taking place and in alterations not resulting in removal of interior wall or ceiling finishes and without access via an attic, crawl space, or basement. (CRC R314.3)
- Carbon monoxide detectors in building remodels. Carbon monoxide detectors are required outside each separate sleeping area in the immediate vicinity of sleeping rooms and on each story of a dwelling including basements. Battery-operated detectors are acceptable in existing areas with no construction taking place and in alterations not resulting in removal of interior wall or ceiling finishes and without access via an attic, crawl space, or basement. (CRC R315.3)
- Water heater seismic strapping. Minimum two 3/4-inch-by-24-gauge straps required around water heaters, with 1/4-inch-by-3-inch lag bolts attached directly to framing. Straps shall be at points within upper third and lower third of water heater vertical dimension. Lower connection shall occur minimum 4 inches above controls. (CPC 507.2)
- 8. Gas appliances in garages. Water heaters and heating/cooling equipment capable of igniting flammable vapors shall be placed on minimum 18-inch-high platform unless listing report number provided showing ignition-resistant appliance. (CPC 507.13 and
- Impact protection of appliances. Water heaters and heating/cooling equipment subject to vehicular impact shall be protected by bollards or an equivalent measure. (CPC 507.13.1 and CMC 305.11)
- 10. Water closet clearance. Minimum 30-inch-wide by 24-inch-deep clearance required at front of water closets. (CPC 402.5)
- 1. Shower size. Shower compartments shall have minimum area of 1024 square inches and be able to encompass a 30-inch-diameter circle. Shower doors shall have a minimum 22-inch unobstructed width. (CPC 408.5 and CPC 408.6)
- 12. Fireplace appliances. Fireplaces with gas appliances are required to have the flue damper permanently fixed in the open position and fireplaces with LPG appliances are to have no 'pit' or 'sump' configurations. (CMC 303.7.1)
- 13. Chimney clearance. Minimum 2-foot chimney clearance required above building within 10-foot horizontally of chimney. The chimney shall extend minimum 3 feet above highest point where chimney passes through roof. (CRC R1003.9)

#### . Mechanical Ventilation and Indoor Air Quality (ASHRAE 62.2-2010)

- **Transfer air.** Ventilation air shall be provided directly from the outdoors and not as transfer air from adjacent dwelling units or other spaces, such as garages, unconditioned crawlspaces, or unconditioned attics. (CBEES 150.0(o))
- Instructions and labeling. Ventilation system controls shall be labeled and the home owner shall be provided with instructions on how to operate the system. (CBEES
- Combustion and solid-fuel burning appliances. Combustion appliances shall be properly vented and air systems shall be designed to prevent back drafting. (CBEES
- . Garages. The wall and openings between occupiable spaces and the garage shall be sealed. HVAC systems that include air handlers or return ducts located in garages shall have total air leakage of no more than 6% of total fan flow when measured at 0.1 in, w.c. using California Title 24 or equivalents. (CBEES 150.0(o))
- ductwork shall be provided with a filter having a minimum efficiency of MERV 6 or better.
- . Air inlets. Air inlets (not exhaust) shall be located away from known contaminants.
- Air moving equipment. Air moving equipment used to meet either the whole-building ventilation requirement or the local ventilation exhaust requirement shall be rated in terms of airflow and sound. (CBEES 150.0(o))
- . All continuously operating fans shall be rated at a maximum of 1.0 sone. b. Intermittently operated whole-building ventilation fans shall be rated at a maximum of
- c. Intermittently operated local exhaust fans shall be rated at maximum of 3.0 sone. d. Remotely located air-moving equipment (mounted outside of habitable spaces) need not meet sound requirements if at least 4 feet of ductwork between fan and intake grill.

### D. Foundation and Underfloor

- 1. Foundation reinforcement, Continuous footings and stem walls shall be provided with a minimum two longitudinal No. 4 bars, one at the top and one at the bottom of the footing. (CRC R403.1.3.3)
- Shear wall foundation support. Shear walls shall be supported by continuous foundations. (CRC 403.1.2)
- Concrete slabs-on-grade. Slabs-on-grade shall be minimum 3-1/2-inches thick. (CRC
- **4. Vapor retarder.** A 6-mil polyethylene or approved vapor retarder with joints lapped minimum 6 inches shall be placed between a concrete slab-on-grade and the base course or subgrade. (CRC 506.2.3)
- Anchor bolts and sills. Foundation plates or sills shall be bolted or anchored to the foundation or foundation wall per the following (CRC R403.1.6 and CRC R602.11.1):
- a. Minimum 1/2-inch-diameter steel bolts **b.** Bolts embedded at least 7 inches into concrete or masonry
- **c.** Bolts spaced maximum 6 feet on center
- d. Minimum two bolts per plate/sill piece with one bolt located maximum 12 inches and minimum 7 bolt diameters from each end of each sill plate/piece
- e. Minimum 3-inch by 3-inch by 0.299-inch steel plate washer between sill and nut on
- **Hold-downs.** All hold-downs must be tied in place prior to foundation inspection. Protection of wood against decay. Naturally durable or preservative-treated wood shall
- be provided in the following locations (CRC R317.1): a. All wood in contact with ground, embedded in concrete in direct contact with ground, or
- embedded in concrete exposed to weather Wood joists within 18 inches and wood girders within 12 inches of the exposed ground
- in crawl spaces shall be of naturally durable or preservative-treated wood Wood framing members that rest on concrete or masonry exterior foundation walls and are less than 8 inches from exposed earth shall be of naturally durable or preservative-treated wood
- **d.** Wood framing, sheathing, and siding on the exterior of the building and having clearance less than 6 inches from the exposed ground or less than 2 inches vertically from concrete steps, porch slabs, patio slabs, and similar horizontal surface exposed to
- e. Sills and sleepers on concrete or masonry slab in direct contact with ground unless separated from such slab by impervious moisture barrier

#### D. Foundation and Underfloor (Continued)

- f. Ends of wood girders entering masonry or concrete walls with clearances less than 1/2 inch on tops, sides, and ends
- g. Wood structural members supporting moisture-permeable floors or roofs exposed to weather, such as concrete or masonry slabs, unless separated from such floors or roofs by an impervious moisture barrier
- h. Wood furring strips or other wood framing members attached directly to interior of exterior concrete or masonry walls below grade except where vapor retarder applied between wall and furring strips or framing members
- 8. Underfloor ventilation. Underfloor areas shall have ventilation openings through foundation walls or exterior walls, with minimum net area of ventilation openings of 1 square foot for each 150 square feet of underfloor area. On such ventilating opening shall be within 3 feet of each corner of the building. (CRC R408.1)
- 9. Underfloor access. Underfloor areas shall be provided with a minimum 18-inch by 24-inch access opening. (CRC R408.4)

#### E. Wood Framing

1. Fastener requirements. The number, size, and spacing of fasteners connecting wood members/elements shall not be less than that set forth in CRC Table R602.3(1). (CRC R502.9, CRC R602.3, and CRC R802.2)

center and the bearing studs below are spaced 24 inches on center, such members shall

hole is not located in the same section as a cut or notch. Studs located in exterior wall or

bearing partitions drilled over 40% and up to 60% shall also be doubled with no more

- 2. Stud size, height, and spacing. The size, height, and spacing of studs shall be in accordance with CRC Table R602.3(5). (CRC R602.3.1)
- 3. Sill plate. Studs shall have full bearing on nominal 2-inch thick or larger sill plate with width at least equal to stud width. (CRC R602.3.4) **4. Bearing studs.** Where joists, trusses, or rafters are spaced more than 16 inches on
- bear within 5 inches of the studs beneath. (CRC R602.3.3) 5. Drilling and notching of studs. Any stud in an exterior wall or bearing partition may be cut or notched to a depth not exceeding 25% of its width. Studs in nonbearing partitions may be notched to a depth not to exceed 40% of a single stud width. Any stud may be bored or drilled, provided the diameter of the resulting hole is no more than 60% of the stud width, the edge of the hole is no more than 5/8 inch to the edge of the stud, and the
- than two successive studs bored. (CRC R602.6) **6. Top plate.** Wood stud walls shall be capped with a double top plate installed to provide overlapping at corners and at intersections with other partitions. End joints in double top plates shall be offset at least 24 inches. Joints in plates need not occur over studs. Plates shall be minimum nominal 2 inches thick and have width at least equal to width of
- 7. **Top plate splices.** Top plate lap splices shall be face-nailed with minimum 8 16d nails on each side of splice. (CRC R602.10.8.1)
- 8. Drilling and notching of top plate. When piping or ductwork is placed in or partly in an exterior wall or interior load-bearing wall, necessitating cutting, drilling, or notching of the top plate by more than 50% of its width, a galvanized metal tie not less than 0.054-inch thick and 1-1/2-inches wide shall be fastened across and to the plate at each side of the opening with not less than 8 10d nails having a minimum length of 1-1/2 inches at each side or equivalent. The metal tie must extend minimum 6 inches past the opening. (CRC
- 9. Cripple walls. Foundation cripple walls shall be framed of studs not less in size than the studding above. Cripple walls more than 4 feet in height shall have studs sized as required for an additional story. Cripple walls with stud height less than 14 inches shall be sheathed on at least one side with a wood structural panel fastened to both the top and bottom plates in accordance with Table R602.3(1), or the cripple walls shall be constructed of solid blocking. Cripple walls shall be supported on continuous foundations. (CRC R602.9)
- **10. Wall bracing.** Buildings shall be braced in accordance with the methods allowed per CRC R602.10.2, CRC R602.10.4, and/or CRC R602.10.5. 11. Braced wall line spacing. Spacing between braced wall lines shall not exceed 20 feet
- or alternate provisions of CRC R602.10.1.3. 12. Shear wall cumulative length. The cumulative length of shear walls within each braced wall line shall meet the provisions of CRC Table R602.10.3(1) for wind loads and CRC Table R602.10.3(2) for seismic loads. (CRC R602.10.1.1)
- 13. Shear wall spacing. Shear walls shall be located not more than 25 feet on center. (CRC
- 14. Shear wall offset. Shear walls may be offset out-of-plan not more than 4 feet from the considered part of the same braced wall line. (CRC R602.10.1.2)
- 15. Shear wall location. Shear walls shall be located at the ends of each braced wall line or meet the alternate provisions of CRC R602.10.2.2.
- **16.** Individual shear wall length. Shear walls shall meet minimum length requirements of CRC R602.10.6.5.1. 17. Cripple wall bracing. Cripple walls shall be braced per CRC R602.10.11.
- **18. Shear wall and diaphragm nailing.** All shear walls, roof diaphragms, and floor diaphragms shall be nailed to supporting construction per CRC Table R602.3(1). (CRC
- 19. Shear wall joints. All vertical joints in shear wall sheathing shall occur over, and be fastened to, common studs. Horizontal joints in shear walls shall occur over, and be fastened to, minimum 1-1/2-inch-thick blocking. (CRC R602.10.10)
- 20. Framing over openings. Headers, double joists, or trusses of adequate size to transfer loads to vertical members shall be provided over window and door openings in load-bearing walls and partitions. (CBC 2304.3.2) 21. Joists under bearing partitions. Joists under parallel bearing partitions shall be of
- adequate size to support the load. Double joists, sized to adequately support the load, that are separated to permit the installation of piping or vents shall be full-depth solid-blocked with minimum 2-inch nominal lumber spaced at maximum 4 feet on center. Bearing partitions perpendicular to joists shall not be offset from supporting girders, walls, or partitions more than the joist depth unless such joists are of sufficient size to carry the additional load. (CRC R502.4)
- 22. Joists above or below shear walls. Where joists are perpendicular to a shear wall above or below, a rim joist, band joist, or blocking shall be provided along the entire length of the shear wall. Where joists are parallel to a shear wall above or below, a rim joist, end joist, or other parallel framing shall be provided directly above and/or below the shear wall. Where a parallel framing member cannot be located directly above and/or below the shear wall, full-depth blocking at 16-inch spacing shall be provided between the parallel framing members to each side of the shear wall. (CRC R602.10.8)
- 23. Floor member bearing. The ends of each floor joist, beam, or girder shall have minimum 1-1/2 inches of bearing on wood or metal and minimum 3 inches of bearing on masonry or concrete except where supported on a 1-inch-by-4-inch ribbon strip and nailed to the adjoining stud or by the use of approved joist hangers. (CRC R502.6)
- **24. Floor joist lap.** Floor joists framing opposite sides over a bearing support shall lap minimum 3 inches and shall be nailed together within minimum 3 10d face nails. A wood or metal splice with strength equal to or greater than that provided by the lap is permitted.
- 25. Floor joist-to-girder support. Floor joists framing into the side of a wood girder shall be supported by approved framing anchors or on ledger strips minimum nominal 2 inches by 2 inches. (CRC R502.6.2)
- **26. Floor joist lateral restraint.** Floor joists shall be supported laterally at ends and each intermediate support by minimum 2-inch full-depth blocking, by attachment to full-depth header, band joist, or rim joist, to an adjoining stud, or shall be otherwise provided with lateral support to prevent rotation. (CRC R502.7)
- **27. Floor joist bridging.** Floor joists exceeding nominal 2 inches by 12 inches shall be supported laterally by solid blocking, diagonal bridging (wood or metal), or a continuous 1-inch-by-3-inch strip nailed across the bottom of joists perpendicular to joists at maximum 8-foot intervals. (CRC R502.7.1) **28.** Framing of floor openings. Openings in floor framing shall be framed with a header and
- trimmer joists. When the header joist span does not exceed 4 feet, the header joist may be a single member the same size as the floor joist. Single trimmer joists may be used to carry a single header joist located within 3 feet of the trimmer joist bearing. When the header joist span exceeds 4 feet, the trimmer joists and header joist shall be doubled and of sufficient cross section to support the floor joists framing into the header. Approved hangers shall be used for the header-joist-to-trimmer-joist connections when the header joist span exceeds 6 feet. Tail joists over 12 feet long shall be supported at the header by framing anchors or on ledger strips minimum 2 inches by 2 inches. (CRC R502.10)

## E. Wood Framing (Continued)

- 29. Girders. Girders for single-story construction or girders supporting loads from a single floor shall not be less than 4 inches by 6 inches for spans 6 feet or less, provided that girders are spaced not more than 8 feet on center. Other girders shall be designed to support the loads specified in the CBC. Girder end joints shall occur over supports. When a girder is spliced over a support, an adequate tie shall be provided. The ends of beams or girders supported on masonry or concrete shall not have less than 3 inches of bearing, (CBC 2308.7)
- **30.** Ridges, hips, and valleys. Rafters shall be framed to a ridge board or to each other with a gusset plate as a tie. Ridge boards shall be minimum 1-inch nominal thickness and not less in depth than the cut end of the rafter. At all valley and hips, there shall be a valley or hip rafter not less than 2-inch nominal thickness and not less in depth than the cut end of the rafter. Hip and valley rafters shall be supported at the ridge by a brace to a bearing partition or be designed to carry and distribute the specific load at that point, Where the roof pitch is less than 3:12 slope (25% gradient), structural members that support rafters and ceilings joists, such as ridges, hips, and valleys, shall be designed as beams. (CRC R802.3)
- 31. Ceiling joist and rafter connections. Ceiling joists and rafters shall be nailed to each other per CRC Table R802.5.1(9), and the rafter shall be nailed to the wall top plate per CRC Table R602.3(1). Ceiling joists shall be continuous or securely joined per CRC Table R802.5.1(9) where they meet over interior partitions and are nailed to adjacent rafters to provide a continuous tie across the building when such joists are parallel to rafters. Where ceiling joists are not connected to the rafters at the wall top plate, joists connected higher in the attic shall be installed as rafter ties, or rafter ties shall be installed to provide a continuous tie. Where ceiling joists are not parallel to rafters, rafter ties shall be installed. Rafter ties shall be minimum 2 inches by 4 inches nominal, installed per CRC Table R802.5.1(9), or connections of equivalent capacities shall be provided. Where ceilings joists or rafter ties are not provided, the ridge formed by these rafters shall be supported by a wall or engineer-designed girder. (CRC R802.3.1)
- 32. Ceiling joists lapped. Ends of ceiling joists shall be lapped minimum 3 inches or butted over bearing partitions or beams and toenailed to the bearing element. Where ceiling joists provide resistance to rafter thrust, lapped joists shall be nailed together per CRC Table R602.3(1) and butted joists shall be tied together in a manner to resist such thrust.
- 33. Collar ties. Collar ties or ridge straps to resist wind uplift shall be connected in the upper third of the attic space. Collar ties shall be a minimum 1 inch by 4 inches nominal and spaced at maximum 4 feet on center. (CRC R802.3.1)
- **34. Purlins.** Purlins installed to reduce the span of rafters shall be sized not less than the required size of the rafters they support. Purlins shall be continuous and shall be supported by 2-inch-by-4-inch nominal braces installed to bearing walls at a minimum 45-degree slope from horizontal. The braces shall be spaced maximum 4 feet on center with a maximum 8-foot unbraced length. (CRC R802.5.1)
- 5. Roof/ceiling member bearing. The ends of each rafter or ceiling joist shall have not less than 1-1/2 inches of bearing on wood or metal and not less than 3 inches of bearing on masonry or concrete. (CRC R802.6) . Roof/ceiling member lateral support. Roof framing members and ceiling joists with a

metal), or a continuous 1-inch-by-3-inch wood strip nailed across the rafters or ceiling

header-joist-to-trimmer-joist connections when the header joist span exceeds 6 feet. Tail

joists over 12 feet long shall be supported at the header by framing anchors or on ledger

- nominal depth-to-thickness ratio exceeding 5:1 shall be provided with lateral support at points of bearing to prevent rotation. (CRC R802.8) 37. Roof/ceiling bridging. Rafters and ceiling joists with a nominal depth-to-thickness ratio exceeding 6:1 shall be supported laterally by solid blocking, diagonal bridging (wood or
- joists at maximum 8-foot intervals. (CRC R802.8.1) 38. Framing of roof/ceiling openings. Openings in roof and ceiling framing shall be framed with a header and trimmer joists. When the header joist span does not exceed 4 feet, the header joist may be a single member the same size as the ceiling joist or rafter. Single trimmer joists may be used to carry a single header joist located within 3 feet of the trimmer joist bearing. When the header joist span exceeds 4 feet, the trimmer joists and header joist shall be doubled and of sufficient cross section to support the ceiling joists or rafters framing into the header. Approved hangers shall be used for the
- strips minimum 2 inches by 2 inches. (CRC R502.10) 39. Roof framing above shear walls. Rafters or roof trusses shall be connected to top plates of shear walls with blocking between the rafters or trusses. (CRC R602.10.8)
- 40. Roof diaphragm under fill framing. Roof plywood shall be continuous under California G. Roofing and Weatherproofing
- **41. Roof diaphragm at ridges.** Minimum 2-inch nominal blocking required for roof
- 42. Blocking of roof trusses. Minimum 2-inch nominal blocking required between trusses at ridge lines and at points of bearing at exterior walls. **43.** Truss clearance. Minimum 1/2-inch clearance required between top plates of interior
- non-bearing partitions and bottom chords of trusses. 44. Drilling, cutting, and notching of roof/floor framing. Notches in solid lumber joists, rafters, blocking, and beams shall not exceed one-sixth the member depth, shall be not longer than one-third the member depth, and shall not be located in the middle one-third of the span. Notches at member ends shall not exceed one-fourth the member depth. The tension side of members 4 inches or greater in nominal thickness shall not be notched except at member ends. The diameter of holes bored or cut into members shall not exceed one-third the member depth. Holes shall not be closer than 2 inches to the top or bottom of the member or to any other hole located in the member. Where the member is also notched, the hole shall not be closer than 2 inches to the notch. (CRC
- **45.** Exterior landings, decks, balconies, and stairs. Such elements shall be positively anchored to the primary structure to resist both vertical and lateral forces or shall be designed to be self-supporting. Attachment shall not be accomplished by use of toenails
- or nails subject to withdrawal. (CRC R311.3) **46. Fireblocking.** Fireblocking shall be provided in the following locations (CRC R302.11
- and CRC R1003.19): a. In concealed spaces of stud walls and partitions, including furred spaces, and parallel
- rows of studs or staggered studs, as follows:
- i. Vertically at the ceiling and floor levels
- ii. Horizontally at intervals not exceeding 10 feet
- **b.** At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings, and cove ceilings c. In concealed spaces between stair stringers at the top and bottom of the run
- d. At openings around vents, pipes, ducts, cables and wires at ceiling and floor level, with
- an approved material to resist the free passage of flame and products of combustion e. At chimneys and fireplaces per item E.49 f. Cornices of a two-family dwelling at the line of dwelling-unit separation
- 47. Fireblocking materials. Except as otherwise specified in items E.48 and E.49, fireblocking shall consist of the following materials with the integrity maintained (CRC
- a. Two-inch nominal lumber **b.** Two thicknesses of one-inch nominal lumber with broken lap joints
- c. One thickness of 23/32-inch wood structural panel with joints backed by 23/32-inch wood structural panel
- **d.** One thickness of 3/4-inch particleboard with joints backed by 3/4-inch particleboard e. 1/2-inch gypsum board
- f. 1/4-inch cement-based millboard
- g. Batts or blankets of mineral or glass fiber of other approved materials installed in such a manner as to be securely retained in place. Batts or blankets of mineral or class fiber or other approved non-rigid materials shall be permitted for compliance with the 10-foot horizontal fireblocking in walls constructed using parallel rows of studs or staggered studs. Unfaced fiberglass batt insulation used as fireblocking shall fill the entire cross-section of the wall cavity to a minimum height of 16 inches measured vertically. When piping, conduit, or similar obstructions are encountered, the insulation shall be packed tightly around the obstruction. Loose-fill insulation material shall not be used as a fireblock unless specifically tested in the form and manner intended for use to demonstrate its ability to remain in place and to retard the spread of fire and hot
- 48. Fireblocking at openings around vents, pipes, ducts, cables, and wires at ceiling and floor level. Such openings shall be fireblocked with an approved material to resist the free passage of flame and products of combustion. (CRC R302.11)

# E. Wood Framing (Continued)

- 49. Fireblocking of chimneys and fireplaces. All spaces between chimneys and floors and ceilings through which chimneys pass shall be fireblocked with noncombustible material securely fastened in place. The fireblocking of spaces between chimneys and wood joists, beams, or headers shall be self-supporting or be placed on strips of metal or metal lath laid across the spaces between combustible material and the chimney. (CRC R1003.19)
- 50. Draftstopping. In combustible construction where there is usable space both above and below the concealed space of a floor/ceiling assembly, draftstops shall be installed so that the area of the concealed space does not exceed 1000 square feet. Draftstopping shall divide the concealed space into approximately equal areas. Where the assembly is enclosed by a floor membrane above and a ceiling membrane below, draftstopping shall be provided in floor/ceiling assemblies under the following circumstances (CRC R302.12):
- a. Ceiling is suspended under the floor framing
- **b.** Floor framing is constructed of truss-type open-web or perforated members
- **51. Draftstopping materials.** Draftstopping shall not be less than 1/2-inch gypsum board, 3/8-inch wood structural panels, or other approved materials adequately supported. Draftstopping shall be installed parallel to the floor framing members unless otherwise approved by the building official. The integrity of draftstops shall be maintained. (CRC
- 2. Combustible insulation clearance. Combustible insulation shall be separated minimum 4. 3 inches from recessed luminaires, fan motors, and other heat-producing devices. (CRC

#### F. General Material Specifications

- 1. Lumber. All joists, rafters, beams, and posts 2-inches to 4-inches thick shall be No. 2 grade Douglas Fir-Larch or better. All posts and beams 5 inches and thicker shall be No. 1 grade Douglas Fir-Larch or better. Studs not more than 8 feet long shall be stud-grade Douglas Fir-Larch or better when supporting not more than one floor, roof, and ceiling. Studs longer than 8 feet shall be No. 2 grade Douglas Fir-Larch or better.
- Concrete. Concrete shall have a minimum compressive strength of 2,500 psi at 28 days and shall consist of 1 part cement, 3 parts sand, 4 parts 1-inch maximum size rock, and not more than 7-1/2 gallons of water per sack of cement. (CRC R402.2)
- Mortar. Mortar used in construction of masonry walls, foundation walls, and retaining walls shall conform to ASTM C 270 and shall consist of 1 part portland cement, 2-1/4 to 3 parts sand, and 1/4 to 1/2 part hydrated lime. (CBC 2103.2)
- Grout. Grout shall conform to ASTM C 476 and shall consist of 1 part portland cement, 1/10 part hydrated lime, 2-1/4 to 3 parts sand, and 1 to 2 parts gravel. Grout shall attain a minimum compressive strength of 2,000 psi at 28 days. (CBC 2103.3)
- masonry units. (CBC 2103.1) Reinforcing steel. Reinforcing steel used in construction of reinforced masonry or

Masonry. Masonry units shall comply with ASTM C 90 for load-bearing concrete

- concrete structures shall be deformed and comply with ASTM A 615. (CBC 2103.4) 7. Structural steel. Steel used as structural shapes such as wide-flange sections, channels, plates, and angles shall comply with ASTM A36. Pipe columns shall comply
  - with ASTM A53. Structural tubes shall comply with ASTM A500, Grade B. **Fasteners for preservative-treated wood.** Fasteners for preservative-treated and fire-retardant-treated wood - including nuts and washers -- shall be of hot dipped zinc-coated galvanized steel, stainless steel, silicon bronze, or copper. (CRC R317.3.1) **Exception:** 1/2-inch diameter or greater steel bolts
  - **Exception:** Fasteners other than nails and timber rivets may be of mechanically deposited zinc-coated steel with coating weights in accordance with ASTM B 695,
  - **Exception:** Plain carbon steel fasteners acceptable in SBX/DOT and zinc borate preservative-treated wood in an interior, dry environment
- Fasteners for fire-retardant-treated wood. Fasteners for fire-retardant-treated wood used in exterior applications or wet or damp locations shall be of hot dipped zinc-coated galvanized steel, stainless steel, silicon bronze, or copper. (CRC R317.3.3)

- 1. Roof covering. All roof covering shall be installed per applicable requirements of CBC 1507. Roof coverings shall be at least Class A rated in accordance with ASTM E 108 or UL 790, which shall include coverings of slate, clay or concrete roof tile, exposed
- concrete roof deck, ferrous or copper shingles or sheets. 2. Roof flashing. Flashing shall be installed at wall and roof intersections, at gutters, wherever there is a change in roof slope or direction, and around roof openings. Where flashing is of metal, the metal shall be corrosion-resistant with a thickness of not less than 0.019 inch (No. 26 galvanized sheet). (CRC R903.2.1)
- Crickets and saddles. A cricket or saddle shall be installed on the ridge side of any chimney or penetration more than 30 inches wide as measured perpendicular to the slope. Cricket or saddle covering shall be sheet metal or the same material as the roof covering. (CRC R903.2.2) Water-resistive barrier. A minimum of one layer of No. 15 asphalt felt shall be attached
- to stude or sheathing of all exterior walls. Such felt or material shall be applied horizontally, with the upper layer lapped over the lower layer minimum 2 inches. Where joints occur, felt shall be lapped minimum 6 inches. The felt shall be continuous to the top of walls and terminated at penetrations and building appendages in a manner to maintain a weather-resistant exterior wall envelope. (CRC R703.2)
- Wall flashing. Approved corrosion-resistant flashing shall be applied shingle fashion at the following locations to prevent entry of water into the wall cavity or penetration of water to the building structural framing components (CRC R703.8):
- a. Exterior door and window openings, extending to the surface of the exterior wall finish or to the water-resistive barrier for subsequent drainage
- b. At the intersection of chimneys or other masonry construction with frame or stucco
- walls, with projecting lips on both sides under stucco copings
- **c.** Under and at the ends of masonry, wood, or metal copings and sills
- d. Continuously above all projecting wood trim e. Where exterior porches, decks, or stairs attach to a wall or floor assembly of
- wood-frame construction **f.** At wall and roof intersections

g. At built-in gutters

- 6. Dampproofing. Dampproofing materials for foundation walls enclosing usable space below grade shall be installed on the exterior surface of the wall, and shall extend from the top of the footing to finished grade. (CRC R406.1)
- 7. Weep screed. A minimum 0.019-inch (No. 26 galvanized sheet gage), corrosion-resistant weep screed or plastic weep screed with a minimum vertical attachment flange of 3-1/2 inches shall be provided at or below the foundation plate line on exterior stud walls in accordance with ASTM C 92. The weep screed shall be placed a minimum 4 inches above the earth or 2 inches above paved areas and shall be of a type allowing trapped water to drain to the exterior of the building. (CRC R703.7.2.1)

### H. Grading and soils

- Grading permit. Grading permit required if volume of earth moved exceeds 200 cubic yards or if any cuts or fills exceed 8 feet in height/depth. (County Grading Ordinance 202) Compaction report. Compaction report required for fill material 12 inches or more in
- I. Green Building Standards Code (CALGreen) Requirements Applicability. CalGreen residential mandatory measures shall apply to every newly constructed building or structure and within any addition or alteration increasing a building's conditioned area, volume, or size. (CalGreen 101.3, CalGreen 301.1.1)

Exception: All residential buildings undergoing permitted alterations, additions, or

improvements shall replace noncompliant plumbing fixtures with water-conserving

plumbing fixtures per CalGreen 301.1.1 and CalGreen 4.303.1

## I. (CALGreen) Requirements (Continued)

- 2. Water conserving plumbing fixtures and fittings. Plumbing fixtures and fittings shall

  13. Moisture content of building materials. Building materials with visible signs of
- comply with the following per CalGreen 4.303.1:
- a. Water closets: Maximum 1.28 gallons per flush **b.** Urinals: Maximum 0.5 gallons per flush
- c. Single showerheads: Maximum flow rate of 2.0 gallons per minute at 80 psi d. Multiple showerheads serving one shower: Maximum combined flow rate of 2.0
- gallons per minute at 80 psi e. Lavatory faucets: Maximum flow rate of 1.2 gallons per minute at 60 psi, minimum
- flow rate of 0.8 gallons per minute at 20 psi
- Kitchen faucets: Maximum flow rate of 1.8 gallons per minute at 60 psi Exception: Temporary increase allowed to maximum 2.2 gallons per minute at 60 psi if
- faucet defaults back to maximum 1.8 gallons per minute at 60 psi 3. Irrigation controllers. Automatic irrigation system controllers for landscaping shall
- comply with the following (CalGreen 4.304.1): a. Controllers shall be weather- or soil moisture-based controllers that automatically
- adjust irrigation in response to changes in plants' needs as weather conditions change. **b.** Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-based controllers are
- not required to have rain sensor input. Joints and openings. Openings in the building envelope separating conditioned space from unconditioned space needed to accommodate utility and other penetrations must be sealed in compliance with the California Energy Code. (CALGreen 4.406.1)
- such opening with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency. Construction waste reduction, disposal, and recycling. Reduce and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition debris.

**Exception:** Annular spaces around pipes, electric cables, conduits or other openings in

plates at exterior walls shall be protected against the passage of rodents by closing

- (CALGreen 4.408.1)
- **Exception:** Excavated soil and land-clearing debris. **Exception:** Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite
- be prepared and available on site during construction. Documentation demonstrating compliance with the plan shall be accessible during construction for the enforcing agency. (CALGreen 4.408.2) The plan:

a. Identify the construction and demolition waste materials to be diverted from disposal by

Construction waste management plan. A construction waste management plan shall

- recycling, reuse on the project or salvage for future use or sale b. Specify if construction and demolition waste materials will be sorted on-site
- c. Identify diversion facilities where the construction and demolition waste materials will d. Identify construction methods employed to reduce the amount of construction and
- demolition waste generated e. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both
- 7. Operation and maintenance manual. Prior to final inspection, a manual, compact disc, eb-based reference, or other acceptable media which includes all of the following shall be placed in the building (CALGreen 4.410.1): a. Directions to owner or occupant that manual shall remain with the building throughout
- **b.** Operation and maintenance instructions for the following: i. Equipment and appliances, including water-saving devices and systems, HVAC system, photovoltaic systems, water-heating systems and other major appliances and

caulking, painting, grading around the building, etc.

(source-separated) or bulk mixed (single stream)

ii. Roof and yard drainage, including gutters and downspouts. iii. Space conditioning systems, including condensers and air filters.

the life cycle of the structure.

- iv. Landscape irrigation systems.
- v. Water reuse systems. c. Information from local utility, water, and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.
- **d.** Public transportation and/or carpool options available in the area. e. Educational material on the positive impacts of an interior relative humidity between 30-60 percent and what methods an occupant may use to maintain the relative
- humidity level in that range. f. Information about water-conserving landscape and irrigation design and controllers which conserve water.
- g. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation. h. Information on required routine maintenance measures, including, but not limited to,
- i. Information about state solar energy and incentive programs available. j. A copy of all special inspection verifications required by the enforcing agency or code. 8. Covering of duct openings and protection of mechanical equipment during construction. At the time of rough installation or during storage on the construction site and until final startup of the heating and cooling equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other
- methods acceptable to the enforcing agency to reduce the amount of dust or debris which may collect in the system. (CALGreen 4.504.1) 9. Adhesives, sealants, caulks, paints, and coatings pollutant control. Adhesives (including carpet adhesives), sealants, caulks, paints, and coatings shall comply with
- VOC limits per CALGreen 4.504.2. Verification of compliance shall be provided at the request of the enforcing agency. (CALGreen 4.504.2.1) 10. Carpet systems. All carpet installed in the building interior shall meet the testing and
- product requirements of one of the following (CALGreen 4.504.3): a. Carpet and Rug Institute's Green Label Plus Program (all carpet cushion must meet the requirements of this program). b. California Department of Public Health Standard Practice for the testing of VOCs
- (Specification 01350). c. NSF/ANSI 140 at the Gold level.
- d. Scientific Certifications Systems Indoor Advantage™ Gold. 11. Resilient flooring systems. At least 80 percent of the floor area receiving resilient flooring shall comply with one of or more of the following (CALGreen 4.504.4):
- a. VOC emission limits defined in the Collaborative for High Performance Schools (CHPS) High Performance Products Database b. Products compliant with CHPS criteria certified under the Greenguard Children &

c. Certification under the Resilient Floor Covering Institute (RFCI) FloorScore program

- d. Meet the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 12. Composite wood products. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall
- meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.) by or before the dates specified in those sections, as shown in CalGreen Table 4.504.5. The following limits are in parts per million (CALGreen 4.504.5):
- 0.05 Hardwood plywood veneer core b. Hardwood plywood composite core c. Particle board
- 0.11 d. Medium-density fiberboard (MDF) e. Thin MDF (5/16 inch or less) 0.13

- I. (CALGreen) Requirements (Continued)
  - water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 percent moisture content. Moisture
  - content shall be verified in compliance with the following (CALGreen 4.505.3): a. Moisture content shall be determined with either a probe-type or contact-type
  - moisture meter. **b.** Moisture readings shall be taken at a point 2 feet to 4 feet from the grade stamped end of each piece to be verified.
  - c. At least three random moisture readings shall be performed on wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing. Insulation products which are visibly wet or have high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying
- recommendations prior to enclosure. 14. Bathrooms with a bathtub and/or shower shall be mechanically ventilated per the
- following (CalGreen 4.506.1): a. Fans shall be ENERGY STAR compliant and ducted to terminate outside
- **b.** Unless functioning as a component of a whole-house ventilation system, fans shall have humidity controls capable of adjustment - manually or automatically
- between a relative humidity range of 50% to 80%. 15. Heating and air-conditioning system design. Heating and air-conditioning systems shall be sized, designed, and have their equipment selected using the
- following methods (CALGreen 4.507.2):

a. The heat loss and heat gain is established according to ANSI/ACCA 2 Manual

J, ASHRAE handbooks, or other equivalent design software or methods.

c. Select heating and cooling equipment according to ACCA 36-S Manual S or

Duct systems are sized according to ANSI/ACCA 1 Manual D 2009, ASHRAE handbooks, or other equivalent design software or methods.

other equivalent design software or methods

PLANS APPROVED BY THE CITY OF SANTE BUILDING INSPECTION DIVISION SUBJECT to the requirements of the California Housing Law and the building laws of the City of Santee, California. The stamping or

022 California Building Standard Code **Approved** 04/09/2024 Plan Reviewer: amoon Permit: B-ADU-24-0002

TO THE FOLLOWING:

restrictions.

antee

watermarking of these plans and

specifications SHALL NOT be held to permi

or approve the violation of any City

County, State, Federal Laws or other

THESE ARE MINIMUM REQUIREMENTS AND SHALL NOT SUPERSEDE MORE RESTRICTIVE SPECIFICATIONS ON THE PLANS OR AS REQUIRED BY APPLICABLE CODE.

SIGNA.

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Sheet Number

Effective .	ION A4.60 January 1 320C (New 0	, 2023				
	APPLICA	EVELS NT TO SE 'E MEASU		ENFOR	RIFICATIONS CING AGENCY RIFICATION N	
FEATURE OR MEASURE			uisites ectives 1	Enforcing Agency	Installer or Designer	Third
	Mandatory	Tier 1	Tier 2	All	All	All
PLANNING AND DESIGN						
Site Selection						
A4.103.1 A site which complies with at least one of the following characteristics is selected:     An infill site is selected.			<u>*</u>		_	_
A greyfield site is selected.     An EPA-recognized Brownfield site is selected.						
A4.103.2 Facilitate community connectivity by one of the following methods:  1. Locate project within a 1/4-mile true walking distance			NA			
of at least 4 basic services;  2. Locate project within 1/2-mile true walking distance of at least 7 basic services;						
<ol><li>Other methods increasing access to additional resources.</li></ol>						
Site Preservation						
A4.104.1 An individual with oversight responsibility for the project has participated in an ecucational program promoting environmentally friendly design or development and has provided training or instruction to appropriate entities.			NA			
Deconstruction and Reuse of Existing Materials						
A4.105.2 Existing buildings are disassembled for reuse or recycling of building materials. The proposed structure utilizes at least one of the following materials which can be easily reused:  1. Light fixtures						
Plumbing fixtures     Doors and trim     Masonry     Electrical devices     Appliances     Foundations or portions of foundations			*			
Site Development						
4.106.2 A plan is developed and implemented to manage storm water drainage during construction.	×					
4.106.3 Construction plans shall indicate how site grading, or a drainage system will manage all surface water flows to keep water from entering buildings.	⊠					

Effective	ION A4.60 January 1, 520C (New 0	2023				
	APPLICAL	EVELS NT TO SE E MEASU		ENFOR	RIFICATIONS CING AGENCY RIFICATION N	
FEATURE OR MEASURE		Prereq and Ele	uisites ectives <sup>1</sup>	Enforcing Agency	Installer or Designer	Third- Party
	Mandatory	Tier 1	Tier 2	All	All	All
4.106.4.1 Provide capability for electric vehicle charging for one- and two-family dwellings; townhouses with attached private garages; in accordance with Section 4.106.4.1.	⊠		*			
4.106.4.2 Provide capability for electric vehicle charging for multifamily dwellings and hotel/motels in accordance with Sections 4.106.4.2.1 or 4.106.4.2.2, as applicable.						
4.106.4.3 Provide capability for electric vehicle charging for existing parking lots or new parking lots for existing residential buildings in accordance with Section 4.106.4.3, as applicable.						
A4.106.1 Reserved.						
A4.106.2.1 Soil analysis is performed by a licensed design professional and the findings are utilized in the structural design of the building.						
A4.106.2.2 Soil disturbance and erosion are minimized by at least one of the following:						
<ol> <li>Natural drainage patterns are evaluated, and erosion controls are implemented to minimize erosion during construction and after occupancy.</li> </ol>			*			
<ol> <li>Site access is accomplished by minimizing the amount of cut and fill needed to install access roads and driveways.</li> </ol>						
<ol> <li>Underground construction activities are coordinated to utilize the same trench, minimize the amount of time the disturbed soil is exposed, and the soil is replaced using accepted compaction methods.</li> </ol>						
A4.106.2.3 Topsoil shall be protected or saved for reuse as specified in this section.						
Tier 1. Displaced topsoil shall be stockpiled for reuse in a designated area and covered or protected from erosion.		<b>⊠</b> ²	$\square^2$			
Tier 2. The construction area shall be identified and delineated by fencing or flagging to limit construction activity to the construction area.			$\square^2$			
A4.106.3 Postconstruction landscape designs accomplish one or more of the following:						
<ol> <li>Areas disrupted during construction are restored to be consistent with native vegetation species and patterns.</li> </ol>			Ħ			
Utilize at least 75% native California or drought tolerant plant and tree species appropriate for the climate zone region.			Ł			

	ION A4.60	2	PLICA	TION CHE	CKLIST			
Effective .								
HCD SHL	APPLICA	LEVELS APPLICANT TO SELECT			VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION MET			
FEATURE OR MEASURE	Prerequ and Elec			Enforcing Agency	Installer or Designer	Third- Party		
	Mandatory	Tier 1	Tier 2	All	All	All		
A4.106.4 Permeable paving is utilized for the parking, walking or patio surfaces in compliance with the following:								
Tier 1. Not less than 20% of the total parking, walking or patio surfaces shall be permeable.		$\boxtimes^2$						
Tier 2. Not less than 30% of the total parking, walking or patio surfaces shall be permeable.			$\boxtimes^2$					
A4.106.5 Roofing materials shall have a minimum 3-year aged solar reflectance and thermal emittance or a minimum Solar Reflectance Index (SRI) equal to or greater than the values specified in the applicable tables.								
Low-Rise Residential Tier 1. roof covering shall meet or exceed the values contained in Table A4.106.5.1(1).		$\boxtimes^2$						
Tier 2. roof covering shall meet or exceed the values contained in Table A4.106.5.1(2).			<b>⊠</b> ²					
High-Rise Residential, Hotels and Motels Tier 1, roof covering shall meet or exceed the values contained in Table A4.106.5.1(3).		<b>⊠</b> 2		П	П	П		
Tier 2. roof covering shall meet or exceed the values contained in Table A4.106.5.1(4).		_	<b>⊠</b> 2					
A4.106.6 Install a vegetated rocf for at least 50 percent of the roof area. Vegetated roofs shall comply with requirements for roof gardens and landscaped roofs in the California Building Code, Chapters 15 and 16.								
A4.106.7 Reduce nonroof heat islands for 50 percent of sidewalks, patios, driveways or other paved areas by using one or more of the methods listed.								
A4.106.8.1 Tier 1 and Tier 2 for one- and two-family dwellings and townhouses with attached private garages. Install a dedicated 208/240-volt branch circuit, including an overcurrent protective device rated at 40 amperes minimum per dwelling unit.		<b>⊠</b> ²	<b>⊠</b> ²					
A4.106.8.2.1 Provide capability for electric vehicle charging in new multifamily dwellings, as specified.  Tier 1. 35 percent of the total number of parking spaces shall be electric vehicle (EV) ready with low power Level 2 EV charging receptacles. For projects with 20 or more dwelling units, sleeping units or guest rooms, 10 percent of the total number of parking spaces shall be equipped with Level 2 EVSE.		<b>⊠</b> ²						
Tier 2. 40 percent of the total number of parking spaces shall be electric vehicle (EV ready) with low power Level 2 EV charging recentacles. For projects with 20 or more dwelling units, sleeping units or guest rooms, 15 percent of the total number of parking spaces shall be equipped with Level 2 EVSE.			<b>⊠</b> ²					

Effective	ION A4.60 January 1 620C (New 0	, 2023				
	APPLICA	EVELS NT TO SE 'E MEASU		ENFOR	RIFICATIONS CING AGENCY ERIFICATION N	
FEATURE OR MEASURE			uisites ectives <sup>1</sup>	Enforcing Agency	Installer or Designer	Third Party
	Mandatory	Tier 1	Tier 2	All	All	All
A4.106.9 Provide bicycle parking facilities as noted below or meet a local ordinance, whichever is more stringent. Number of bicycle parking spaces may be reduced, as approved by the enforcing agency, due to building site characteristics, including but not limited to, isolation from other development.						
Provide short-term bicycle parking, per Section A4.106.9.1.			*			
<ol><li>Provide long-term bicycle parking for multifamily buildings, per Section A4.106.9.2.</li></ol>						
<ol><li>Provide long-term bicycle parking for hotel and motel buildings, per Section A4.106.9.3.</li></ol>						
Innovative Concepts and Local Environmental Conditions						
A4.108.1 Items in this section are necessary to address innovative concepts or local environmental conditions.						
Item 1						
Item 2						
Item 3						
ENERGY EFFICIENCY (LOW-RISE RESIDENTIAL)						
General						
4.201.1 Building meets or exceeds the requirements of the California Building Energy Efficiency Standards <sup>3</sup> .	⊠	<b>⊠</b> ²	<b>⊠</b> ²			
Performance Approach for Newly Constructed Buildings						
A4.203.1.1. Hourly Source Energy Design Ratings (EDR1). EDR ratings for building design shall be computed by Energy Compliant software and shall reduce the EDR1 required by the software by the compliance margins specified in Table A4.203.1.1.		⊠²	⊠²	_	0	

Effective	ION A4.60 January 1 620C (New 0	, 2023					
	LEVELS APPLICANT TO SELECT ELECTIVE MEASURES			VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METH			
FEATURE OR MEASURE		Prerequisites and Electives <sup>1</sup>		Enforcing Agency	Installer or Designer	Third Party	
	Mandatory	Tier 1	Tier 2	All	All	All	
A4.203.1.2 Prerequisite options. In addition, a minimum of two of the efficiency measures specified in Sections A4.203.1.2.1 through A4.203.1.2.8 will be required to be met.  Roof Deck Insulation or Ducts in Conditioned Space. High performance Walls. Compact Hot Water Distribution System. Drain Water Heat Recovery. High Performance Vertical Fenestration. Heat Pump Water Heater Demand Management. Battery Storage System Controls. Heat Pump Space and Water Heating.		<b>⊠</b> ²	<b>⊠</b> ²			0	
A4.203.1.3 Consultation with local electric service provider. Local jurisdictions considering adoption of reduced EDR targets based on using solar photovoltaic (PV) systems larger than required by the California Energy Code shall consult with the local electric service provider to ensure that that PV system sizing required to comply with the EDR targets will be acceptable to the local electric service provider.		<b>⊠</b> ²	<b>⊠</b> ²			0	
WATER EFFICIENCY AND CONSERVATION							
Indoor Water Use							
4.303.1 Plumbing fixtures (water closets and urinals) and fittings (showerheads, faucets and pre-rinse spray valves) installed in residential buildings shall comply with the prescriptive requirements of Sections 4.303.1.1 through 4.303.1.4.5.							
4.303.2 Submeters for multi-family building and dwelling units in mixed-use residential/commercial buildings. Submeters shall be installed to measure water usage of individual rental dwelling units in accordance with the California Plumbing Code.							
4.303.3 Plumbing fixtures and fittings required in Section 4.303.1 shall be installed in accordance with the California Plumbing Code and shall meet the applicable referenced standards.	⊠			0			

Effective	ION A4.60	2 , 2023	PLICA'	TION CHE	CKLIST	
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FEATURE OR MEASURE			uisites ectives <sup>1</sup>	Enforcing Agency	Installer or Designer	Third- Party
	Mandatory	Tier 1	Tier 2	All	All	All
A4.303.1 The maximum flow rate of kitchen faucets shall not exceed 1.5 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, out not to exceed 2.2 gallons per minute at 60 psi and must lefault to a maximum flow rate of 1.5 gallons per minute at 60 psi.  Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.			<b>*</b>	0		
303.1.4.3 Metering faucets in residential buildings shall not deliver more than 0.2 gallons per cycle.						
A4.303.2 Alternate water source for nonpotable applications. Alternate nonpotable water sources are used or indoor potable water reduction. Alternate nonpotable water sources shall be installed in accordance with the california Plumbing Code.						
A4.303.3 Install at least one qualified ENERGY STAR dishwasher or clothes washer.			*			
A4.303.4 Nonwater urinals or waterless toilets are installed.						
A4.303.5 One- and two-family dwellings shall be equipped with a demand hot water recirculation system.						
Outdoor Water Use						
304.1 Residential developments shall compy with a local vater efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient andscape Ordinance (MWELO), whichever is more tringent.						
A4.304.1 A rainwater capture, storage and re-use system is designed and installed.			*			
44.304.2 A landscape design is installed, which does not tilize potable water.						
14.304.3 For new water service connections, landscaped rigated areas less than 5,000 square feet shall be provided vith separate submeters or metering devices for outdoor otable water use.						
Vater Reuse Systems			-0			
4.305.1 Piping is installed to permit future use of a raywater irrigation system served by the clothes washer or ther fixtures.						
4.305.2 Recycled water piping is installed.						
4.305.3 Recycled water is used for landscape irrigation.						

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	APPLICA	EVELS NT TO SE		ENFOR	RIFICATIONS CING AGENCY ERIFICATION N	TO METHOD
FEATURE OR MEASURE			uisites ectives 1	Enforcing Agency	Installer or Designer	Third- Party
	Mandatory	Tier 1	Tier 2	All	All	
Innovative Concepts and Local Environmental Conditions						
A4.306.1 Items in this section are necessary to address innovative concepts or local environmental conditions.						
Item 1						
Item 2						
Item 3						
MATERIAL CONSERVATION AND RESOURCE EFFICIENCY						
Foundation Systems						
A4.403.1 A Frost-Protected Shallow Foundation (FPSF) is designed and constructed.						
A4.403.2 Cement use in foundation mix design is reduced. Tier 1. Not less than a 20 percent reduction in cement use. Tier 2. Not less than a 25 percent reduction in cement use.	2	<b>□</b> 2	<b>⊠</b> ²			
Efficient Framing Techniques			M.			
A4.404.1 Beams and headers and trimmers are the minimum size to adequately support the load.						
A4.404.2 Building dimensions and layouts are designed to minimize waste.			0			
A4.404.3 Use premanufactured building systems to eliminate solid sawn lumber whenever possible.						
A4.404.4 Material lists are included in the plans which specify material quantity and provide direction for on-site cuts.						
Material Sources						
A4.405.1 One or more of the following building materials, that do not require additional resources for finishing are used:  1. Exterior trim not requiring paint or stain.			W)			_
Windows not requiring paint or stain.     Siding or exterior wall coverings which do not require paint or stain.			*			

Effective	ION A4.60 January 1, 620C (New 0	2023					
	APPLICAL	EVELS NT TO SE E MEASU		VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD			
FEATURE OR MEASURE			uisites ectives 1	Enforcing Agency	Installer or Designer	Third- Party	
	Mandatory	Tier 1	Tier 2	All	All	All	
A4.405.2 Floors that do not require additional coverings are used including but not limited to stained, natural or stamped concrete floors.							
A4.405.3 Postconsumer or preconsumer recycled content value (RCV) materials are used on the project.							
Tier 1. Not less than a 10% RCV. Tier 2. Not less than a 15% RCV.		<b>⊠</b> ²	<b>⊠</b> ²				
A4.405.4 Renewable source building products are used.							
Enhanced Durability and Reduced Maintenance							
4.406.1 Annular spaces around pipes, electric cables, conduits or other openings in plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.	×						
Water Resistance and Moisture Management							
A4.407.1 Install foundation and landscape drains.							
A4.407.2 Install gutter and downspout systems to route water at least 5 feet away from the foundation or connect to landscape drains which discharge to a dry well, sump, bioswale, rainwater capture system or other approved onsite location.			*				
A4.407.3 Provide flashing details on the building plans and comply with accepted industry standards or manufacturer's instructions.							
A4.407.4 Protect building materials delivered to the construction site from rain and other sources of moisture.			*				
A4.407.5 In Climate Zone 16, an ice/water barrier is installed at roof valleys, eaves and wall to roof intersections.							
A4.407.6 Exterior doors to the dwelling are protected to prevent water intrusion.			*				
A4.407.7 A permanent overhang or awning at least 2 feet in depth is provided at all exterior walls.			to				

		ION A4.6	02	LIOA	TION OIL	CKLIST	
	Effective .	620C (New					
	9	APPLICA	EVELS NT TO SE /E MEASU		ENFOR	RIFICATIONS CING AGENCY	/ TO
	FEATURE OR MEASURE			quisites ectives <sup>1</sup>	Enforcing Agency	Installer or Designer	Thi
		Mandatory	Tier 1	Tier 2	AII	All	A
Const	ruction Waste Reduction, Disposal and Recycling						
65% o	Recycle and/or salvage for reuse a minimum of f the nonhazardous construction and demolition waste ordance with one of the following:						
	Comply with a more stringent local construction and demolition waste management ordinance; or A construction waste management plan, per	Ø			П	П	
	Section 4.408.2; or A waste management company, per	123					-
4.	Section 4.408.3; or The waste stream reduction alternative, per Section 4.408.4.						
followir Tier 1 verifica Tier 2 verifica Excep	. At least a 65% reduction with a third-party ation At least a 75% reduction with a third-party		<b>⊠</b> ²	⊠²			
Buildir	ng Maintenance and Operation						
	An operation and maintenance manual shall be ad to the building occupant or owner.						
constru areas ti deposit materia corruga metals	Where 5 or more multifamily dwelling units are cted on a building site, provide readily accessible hat serve the entire building and are identified for the ing, storage and collection of non-hazardous its for recycling, including (at a minimum) paper, ited cardboard, glass, plastics, organic waste, and or meet a lawfully enacted local recycling ordinance, restrictive.						
exemp	tion: Rural jurisdictions that meet and apply for the tion in Public Resources Code n 42649.82(a)(2)(A) et seq. will also be exempt from janic waste portion of this section.						
nnovat Conditi	tive Concepts and Local Environmental lons						
A4.411.	1 Items in this section are necessary to address ve concepts or local environmental conditions.						

Effective	ION A4.60	)2 , 2023	PLICA	TION CHE	ECKLIST	
	APPLICA	EVELS NT TO SE 'E MEASU		ENFOR	RIFICATIONS CING AGENCY ERIFICATION N	
FEATURE OR MEASURE		Prerec	quisites ectives <sup>1</sup>	Enforcing Agency	Installer or Designer	Third- Party
	Mandatory	Tier 1	Tier 2	All	All	All
Item 1						
Item 2						
Item 3						
ENVIRONMENTAL QUALITY						
Fireplaces						
4.503.1 Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.	⊠					_
Pollutant Control						
4.504.1 Duct openings and other related air distribution component openings shall be covered during construction.						
4.504.2.1 Adhesives, sealants and caulks shall be compliant with VOC and other toxic compound limits.						
4.504.2.2 Paints, stains and other coatings shall be compliant with VOC limits.	⊠					
4.504.2.3 Aerosol paints and coatings shall be compliant with product-weighted MIR Limits for ROC and other toxic compounds.	×					
4.504.2.4 Documentation shall be provided to verify that compliant VOC limit finish materials have been used.	⋈					
4.504.3 Carpet and carpet systems shall be compliant with VOC limits.	⋈					
1.504.4 80% of floor area receiving resilient flooring shall comply with specified VOC criteria.	⊠					
Particleboard, medium density fiberboard (MDF) and hardwood plywood used in interior finish systems shall comply with low formaldehyde emission standards.						

Effective	ION A4.60 January 1	)2 , 2023						
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FEATURE OR MEASURE	ELECTIV	Prerequisites and Electives		Prerequisites		Enforcing Agency	Installer or Designer	Third
	Mandatory	Tier 1	Tier 2	All	All	All		
A4.504.1 Use composite wood products made with either California Air Resources Board approved no-added formaldehyde (NAF) resins or ultra-low emitting formaldehyde (ULEF) resins.						0		
A4.504.2 Install VOC compliant resilient flooring systems.  Tier 1. At least 90% of the resilient flooring installed shall comply.  Tier 2. 100% of the resilient flooring installed shall comply.		<b>⊠</b> ²	<b>⊠</b> ²					
A4.504.3 Thermal insulation installed in the building shall meet the following requirements:  Tier 1. Install thermal insulation in compliance with VOC limits.  Tier 2. Install insulation which contains no-added formaldehyde (NAF) and is in compliance with Tier 1.		<b>⊠</b> ²	<b>⊠</b> ²					
Interior Moisture Control								
<b>4.505.2</b> Vapor retarder and capillary break is installed at slab-on-grade foundations.	⊠							
4.505.3 Moisture content of building materials used in wall and floor framing is checked before enclosure.	⊠							
Indoor Air Quality and Exhaust								
4.506.1 Each bathroom shall be provided with the following:  1. ENERGY STAR fans ducted to terminate outside the building.  2. Fans must be controlled by a humidity control (separate or built-in); OR functioning as a component of a whole-house ventilation system.  3. Humidity controls with manual or automatic means of	×			0	_			
adjustment, capable of adjustment between a relative humidity range of ≤ 50% to a maximum of 80%.								
A4.506.1 Reserved.								
A4.506.2 [HR] Provide filters on return air openings rated MERV 8 or higher during construction when it is necessary to use HVAC equipment.			*					
A4.506.3 Direct-vent appliances shall be used when equipment is located in conditioned space; or the equipment must be installed in an isolated mechanical room.			Ď					

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FEATURE OR MEASURE			uisites ectives <sup>1</sup>	Enforcing Agency	Installer or Designer	Third Party		
	Mandatory	Tier 1	Tier 2	All	All	All		
Environmental Comfort								
4.507.2 Duct systems are sized, designed, and equipment is selected using the following methods:  1. Establish heat loss and heat gain values according								
to ANSI/ACCA 2 Manual J - 2016 or equivalent.  2. Size duct systems according to ANSI/ACCA 1 Manual D - 2016 or equivalent.	⊠	⊠						
<ol><li>Select heating and cooling equipment according to ANSI/ACCA 3 Manual S - 2014 or equivalent.</li></ol>								
Outdoor Air Quality Reserved								
Innovative Concepts and Local Environmental Conditions								
A4.509.1 Items in this section are necessary to address innovative concepts or local environmental conditions.								
Item 1								
Item 2								
Item 3								
INSTALLER AND SPECIAL INSPECTOR QUALIFICATIONS								
Qualifications								
702.1 HVAC system installers are trained and certified in the proper installation of HVAC systems.	⋈							
702.2 Special inspectors employed by the enforcing agency must be qualified and able to demonstrate competence in the discipline they are inspecting.	⊠							
Verifications								
703.1 Verification of compliance with this code may include construction documents, plans, specifications builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which show substantial conformance.	⊠							

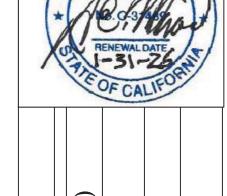
<sup>1</sup>Green building measures listed in this table may be mandatory if adopted by a city, county, or city and county as specified in Section 101.7 <sup>2</sup> Required prerequisite for this Tier.

# TIER 2 NOTES AND ITEMS

CONTRACTOR AND OR OWNER TO VERIFY COMPLIANCE WITH ALL PERTINENT TIER 2 MEASURES AS REQUIRED BY THE CITY OF SANTEE

CONTRACTOR AND OR OWNER TO REVIEW ALL TIER 2 VOLUNTARY RULES, REGULATIONS, MEASURES, ETCERA BEFORE INSTALLATION OF ANY AND ALL ITEMS THAT MIGHT BE AFFECTED BY TIER 2.

ITEMS THAT ARE CHECKED OFF ON THE ELECTIVE MEASURES ARE ONES THAT ARE THOUGHT TO BE PRACTICABLE TO IMPLEMENT ON THIS PROJECT BUT ARE NOT PROMISED TO BE SO AS THIS INFORMATION IS HARD TO ASCERTAIN AND A LOT OF IT IS NOT APPLICABLE TO THIS PROJECT.



DATE: REVISIONS:

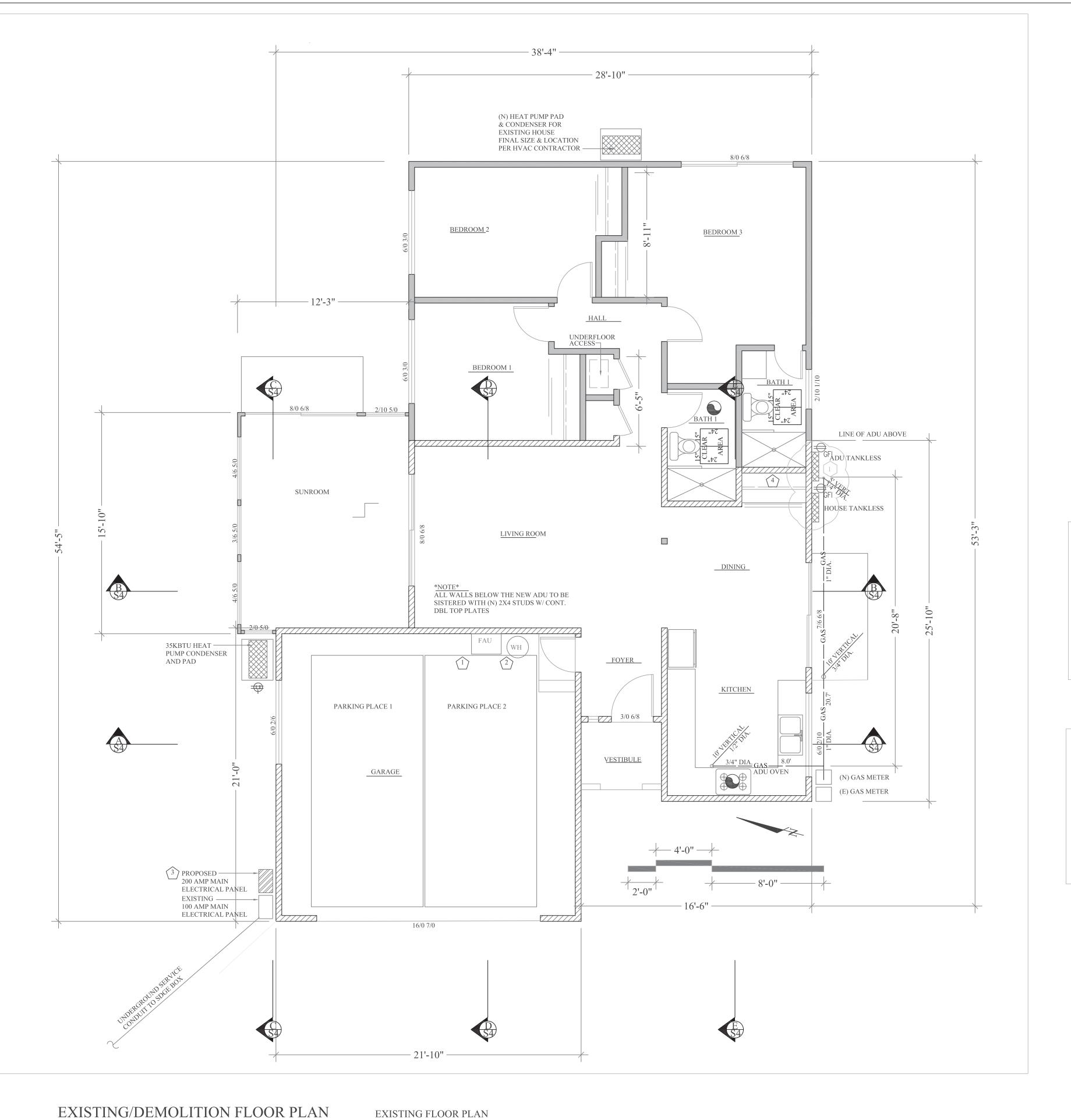
Santee Do MORE > DUE EAST PLANS APPROVED BY THE CITY OF SANTEE TO THE FOLLOWING:

Plans are accepted for construction subject to the requirements of the California Housing Law and the building laws of the City of Santee, California. The stamping or watermarking of these plans and specifications SHALL NOT be held to permit or approve the violation of any City, County, State, Federal Laws or other restrictions. 2022 California Building Standard Codes

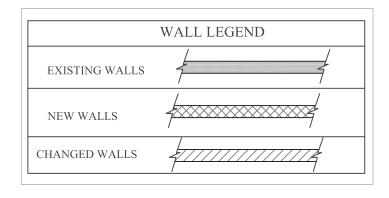
**Approved** 04/09/2024 Plan Reviewer: amoon

Permit: B-ADU-24-0002

SHEET NO.



SEE SHEET A2, S3, S4



HOUSE FAU TO BE REMOVED & REPLACED WITH HEAT PUMP

2 EXISTING TANK WATER HEATER TO BE REMOVED AND REPLACED WITH A 199KBTU GAS TANKLESS

PROPOSED ADU 200 AMP MAIN ELECTRICAL PANEL

GENERAL AREA TO ROUTE THE REQUIRED SEPARATE SANITARY SEWER SYSTEM.

\*NOTE\*
THE ADU AND THE PRIMARY DWELLING UNIT SHALL HAVE SEPARATE, INDEPENDENT WATER SUPPLY AND SANITARY SEWER SYSTEMS.

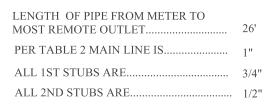
\*NOTE\*
THE ADU AND THE PRIMARY DWELLING UNIT
SHALL HAVE SEPARATE, INDEPENDENT HEATING AND AIR CONDITIONING (IF USED) SYSTEMS, INCLUDING DIRECT ACCESS TO THEIR OWN SYSTEM FOR SERVICE AND REPAIR.

GAS APPLIANCE TABLE EXISTING METER					
APPLIANCE	BTU REQUIREMENT				
(E) GAS DRYER	30,000 BTU				
(E) OVEN/RANGE	50,000 BTU				
TANKLESS W.H.	199,000 BTU				
(E) F.A.U.	75,000 BTU				
TOTAL DEMAND	354,000 BTU				
ESTIMATED CFH (CUBIC FT./HR)	346 CFH				

	GAS APPLIANCE TABLE NEW METER FOR ADU					
	APPLIANCE	BTU REQUIREMENT				
	GAS DRYER	30,000 BTU				
	OVEN/RANGE	50,000 BTU				
	TANKLESS W.H.	199,000 BTU				
	TOTAL DEMAND	279,000 BTU				
	ESTIMATED CFH	241 CFH				
	(CUBIC FT./HR)					

GAS APPLIANCE TABLE			
NEW METE	ER FOR ADU		
APPLIANCE	CFG/HR		
GAS DRYER	32		
OVEN/RANGE	59		
TANKLESS W.H.	150		
TOTAL DEMAND	241		
ESTIMATED CFG/HR (CUBIC FT./HR)	241 CFH		







watermarking of these plans and specifications SHALL NOT be held to permit or approve the violation of any City, County, State, Federal Laws or other 022 California Building Standard Codes

Plan Reviewer: amoon

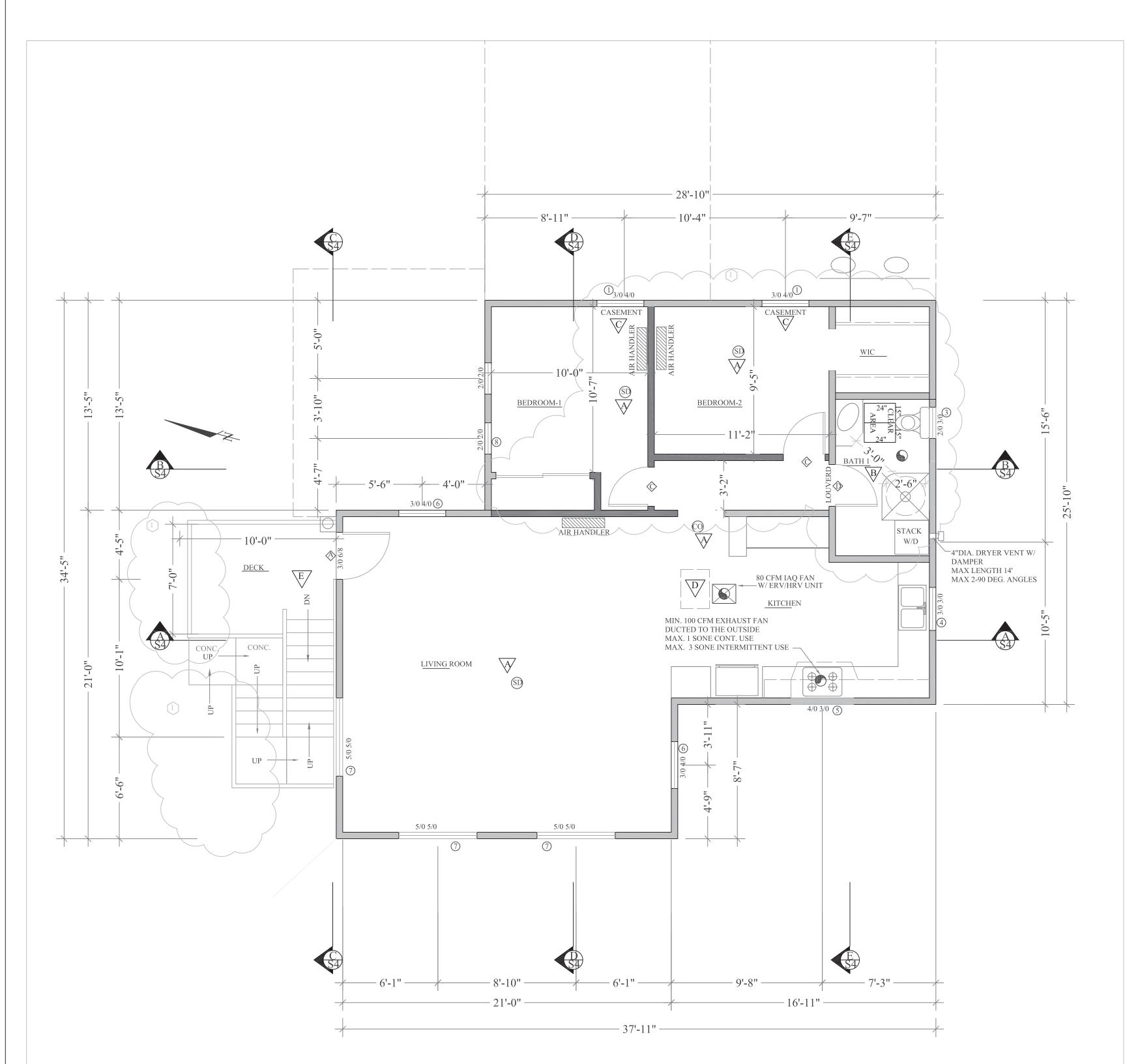
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SHEET NO.

ADU

(REM

MA TELEPHONE # (619) 865-7237



PROPOSED ADU FLOOR PLAN

1/4"=1'-0"

SEE SHEET(S)

CARBON MONOXIDE ALARMS ARE REQUIRED IN NEW CONSTRUCTION AND WHEN A PERMIT IS REQUIRED FOR ALTERATIONS, REPAIRS, OR ADDITIONS EXCEEDING \$1,000.00 FOR NEW CONSTRUCTION THE ALARM(S) MUST BE HARDWIRED. MAY BE BATTERY OPERATED IN EXSTING CONSTRUCTION.

INSTALL ON EACH LEVEL INCLUDING BASEMENTS AND OUTSIDE IN IMMEDIATE VICINITY OF SLEEPING AREAS. (CRC R315)

\*SMOKE ALARM NOTE\* R314.3.1, R 314.6 SEE SECTION R314 OF THE CURRENT CRC WHEN ALTERATIONS, REPAIRS, OR ADDITIONS REQUIRING A PERMIT OCCUR, OR WHEN ONE OR MORE SLEEPING ROOMS ARE ADDED OR CREATED IN EXISTING DWELLINGS, THE INDIVIDUAL DWELLING UNIT SHALL BE EQUIPPED WITH SMOKE ALARMS LOCATED AS REQUIRED FOR NEW DWELLINGS FOR EXCEPTIONS SEE SECTION R314.6

R314.1 SMOKE DETECTION AND NOTIFICATION ALL SMOKE ALARMS SHALL BE LISTED IN ACCORDANCE WITH UL217 AND INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF THIS CODE AND THE HOUSEHOLD FIRE WARNING EQUIPMENT PROVISIONS OF NFPA 72. SYSTEMS AND COMPONENTS SHALL BE CALIFORNIA STATE FIRE MARSHALL LISTED AND APPROVED IN ACCORDANCE WITH CALIFORNIA CODE OF REGULATIONS, TITLE19, DIVISION 1 FOR THE PURPOSE FOR WHICH THEY ARE INSTALLED.



SLEEPING ROOMS AND BASEMENTS MUST HAVE AN EXTERIOR EGRESS DOOR OR WINDOW WITH

A.) 5.7 SQ.FT. MINIMUM NET CLEAR OPENABLE AREA (5.0 SQ. FT. FOR GRADE-LEVEL OPENINGS)

B.) 24" MINIMUM NET CLEAR OPENABLE HEIGHT C.) 20" MINIMUM NET CLEAR OPENABLE WIDTH

TO THE PUBLIC WAY

D.) MAX 44" FINISHED SILL TO FLOOR E.) DIRECT OPENING TO PUBLIC WAY OR YARD/COURTYARD

F.) WINDOW WELLS OF 9 SQ. FT. HORIZONTAL AREA AND 36" MINIMUM DIMENSIONS AND EQUIPPED WITH LADDERS/STEPS FOR ESCAPE

BATHROOM BY KEYNOTES SEE SHEETS 5,6

THE CONTROL VALVES IN BATHTUBS, WHIRLPOOL BATHTUBS, SHOWERS, AND TUB-SHOWER COMBINATIONS MUST BE PRESSURE BALANCED OR THERMOSTATIC MIXING VALVES. CPC SECTION 414.5 AND 418.0

PROVIDE LAV FAUCETS WITH A MAX. FLOW RATE OF 1.2 GALLONS PER MINUTE (GPM) MIN. FLOW RATE OF O.8 GPM @ 20 PSI SHOWER HEADS- MAX 1.8 GPM @ 80 PSI PROVIDE ULTRA LOW FLUSH TOILET(S)

WATER CONSERVING FIXTURES NEW WATER CLOSETS SHALL USE NO MORE THAN 1.28 GALLONS OF WATER PER FLUSH, LAVATORIES MAY NOT EXCEED 1.2 GPM, ONLY TEMPORARILY THEN DEFAULT TO MAX 1.8 GPM @ 60 PSI (KITCHENS ONLY) OTHER FAUCETS, 1.2 GPM @ 60 PSI

WHERE THE WATER CLOSET (OR OTHER PLUMBING INTERIOR OF AT LEAST 1,024 FIXTURE) COMES INTO CONTACT WITH THE WALL SQUARE INCHES OR FLOOR, THE JOINT SHALL BE CAULKED AND SEALED TO BE WATERTIGHT. (CPC 402.2)

ANY NEW OR REPLACED MIXING VALVE IN A SHOWER (INCLUDING OVER A TUB) SHALL BE PRESSURE BALANCING AND SET AT A MAXIMUM 120 DEGREES F. ANY NEW OR REPLACED WATER-FILLER VALVE IN BATHTUBS/WHIRLPOOLS SHALL HAVE A TEMPERATURE LIMITING DEVICE SET AT A MAXIMUM OF 120 DEGREES F. THE WATER HEATER THERMOSTAT CANNOT BE USED TO MEET THESE REQUIREMENTS. (CPC 408.3, 409.4)

SHOWER STALLS SHALL BE A MINIMUM FINISHED INTERIOR OF 1,024 SQUARE INCHES, BE CAPABLE OF ENCOMPASSING A 30" CIRCLE. ANY DOORS SHALL SWING OUT OF THE ENCLOSURE & HAVE A MINIMUM CLEAR OPENING OF 22".(CPC 408.5, 408.6)

BATHROOMS, WATER CLOSET COMPARTMENTS AND OTHER SIMILAR ROOMS SHALL BE PROVIDED WITH AGGREGATE GLAZING AREA IN WINDOWS OF NOT LESS THAN 3 SQUARE FEET, ONE HALF OF WHICH MUST BE OPERABLE UNLESS ARTIFICIAL LIGHT AND A MECHANICAL VENTILATION SYSTEM ARE PROVIDED.

SHOWER/BATH IS PRE-FABRICATED AND HAS A MINIMUM FINISHED

EXHAUST FANS WITH A MIN. VENTILATION RATE OF 50 CFM ARE REQUIRED IN ALL BATHROOMS, EVEN IF AN OPERABLE WINDOW IS INSTALLED. EXHAUST FANS AND LIGHTING SHALL HAVE SEPARATE CONTROL SWITCHES (EVEN IF A COMBINATION UNIT IS INSTALLED). THE EXHAUST FAN MAY NEED TO BE SUPPLIED BY A GFCI PROTECTED CIRCUIT BASED ON 'THE MANUFACTURER'S REQUIREMENTS (CEES 150.0(o)) EXHAUST DUCTS AND DRYÈR VENTS SHÀLL BE EQUIPPED WITH BACK DRAFT DAMPERS

BATHROOM FLOOR SHALL HAVE A STABLE, FIRM, SLIP RESISTANT SURFACE IN COMPLIANCE WITH SECTION 1124B.1

WET C.O.F. RATING MIN. 50, 60 PREFERRED

SHOWER COMPARTMENTS AND BATHTUBS WITH INSTALLED SHOWER HEADS SHALL BE FINISHED WITH A NONABSORBENT SURFACE THAT EXTENDS TO A HEIGHT OF NOT LESS THAN 6 FEET ABOVE THE FLOOR. (CBC 1210 & CRC 307.2)

THE WATER CLOSET SHALL HAVE A CLEARANCE OF 30" WIDE (15" O.C.) AND 24" IN FRONT (CPC 402.2)

♦ DOOR SCHEDULE OTHER INFORMATION A 3'-0"X6'-8" SOLID CORE EXT. DOOR B 2'-6"X6'-8" HOLLOW CORE INT. DOOR 2 2' 8"V6' 8" HOLLOW COPE INT DOOP D 2'-8"X6'-8" HOLLOW CORE INT. DOOR TO PROVIDE MAKE UP AIR FOR THE DRYER

U	-FACTOR (	0.30 SHGC 0.23	3	REFER T	O CF-1-R SHE	ETS	
	OWINDO	W SCHEDU	$X = OPE$ $LE_0 = FIXE$	NABLE D	SEE TITLE 24 MORE II		
#	SIZE	OPEN	T	YPE	OTHER INF	ORM.	ATION
1	3'-0"x4'-0"	CASEMENT	DUAL GLAZ	ZD VINYL	EMERGENO	Y EG	RESS
2	2'-6"x4'-0"	XO DBL HNG	DUAL GLAZ	D VINYL	TEMPERED	OBS0	CURRE
3	2'-0" x3'-0"	XO DBL HNG	DUAL GLAZ	D VINYL	TEMPERED	OBSO	CURRE
4	3'-0" x3'-0"	XO SLIDER	DUAL GLAZ	D VINYL			
5	4'-0" x3'-0"	XO SLIDER	DUAL GLAZ	D VINYL			
6	3'-0"x4'-0"	XO DBL HNG	DUAL GLAZ	D VINYL			
7	5'-0" x5'-0"	XO SLIDER	DUAL GLAZ	D VINYL			
8	2'-0"x2'-0"	AWNING	DUAL GLAZ	D VINYL			
9							

ROOF CONSTRUCTION SHALL HAVE AN ATTIC ACCESS OPENING TO ATTIC AREAS THAT EXCEED 30 S.F. AND HAVE A VERTICAL HEIGHT 30" OR MORE. HEIGHT SHALL BE MEASURED FROM THE TOP OF THE CEILING FRAMING MEMBERS TO THE UNDERSIDE OF THE ROOF FRAMING MEMBERS. MIN. 22"X30" MIN. 30" VERT. CLEAR FROM BOTTOM OF CEILING FRAMING MEMBERS. ACCESS MUST BE PROVIDED TO EACH SEPARATED ATTIC AREA (IF OVER 30 SQ. FT.), SHALL BE LOCATED IN A HALLWAY OR OTHER READILY ACCESSIBLE LOCATION.

ALL LANDINGS MUST BE WITHIN 1-1/2" OF THE DOOR THRESHOLD IN THE DIRECTION OF THE SWING. ALL LANDINGS MUST BE NO MORE THAN 7-3/4" F.F. TO TOP OF LANDING

> EXISTING 'NONCOMPLIANT' FIXTURES (TOILETS THAT USE MORE THAN 1.6 GALLONS OF WATER PER FLUSH, URINALS THAT USE MORE THAN ONE GALLON OF WATER PER FLUSH, SHOWERHEADS THAT HAVE A FLOW CAPACITY OF MORE THAN 2.5 GALLONS OF WATER PER MINUTE) SHALL BE REPLACED. CERTIFICATION OF COMPLIANCE SHALL BE GIVEN TO THE BUILDING INSPECTOR PRIOR TO FINAL PERMIT APPROVAL. CALIFORNIA SB407



PLANS APPROVED BY THE CITY OF SANTER BUILDING INSPECTION DIVISION SUBJECT TO THE FOLLOWING:

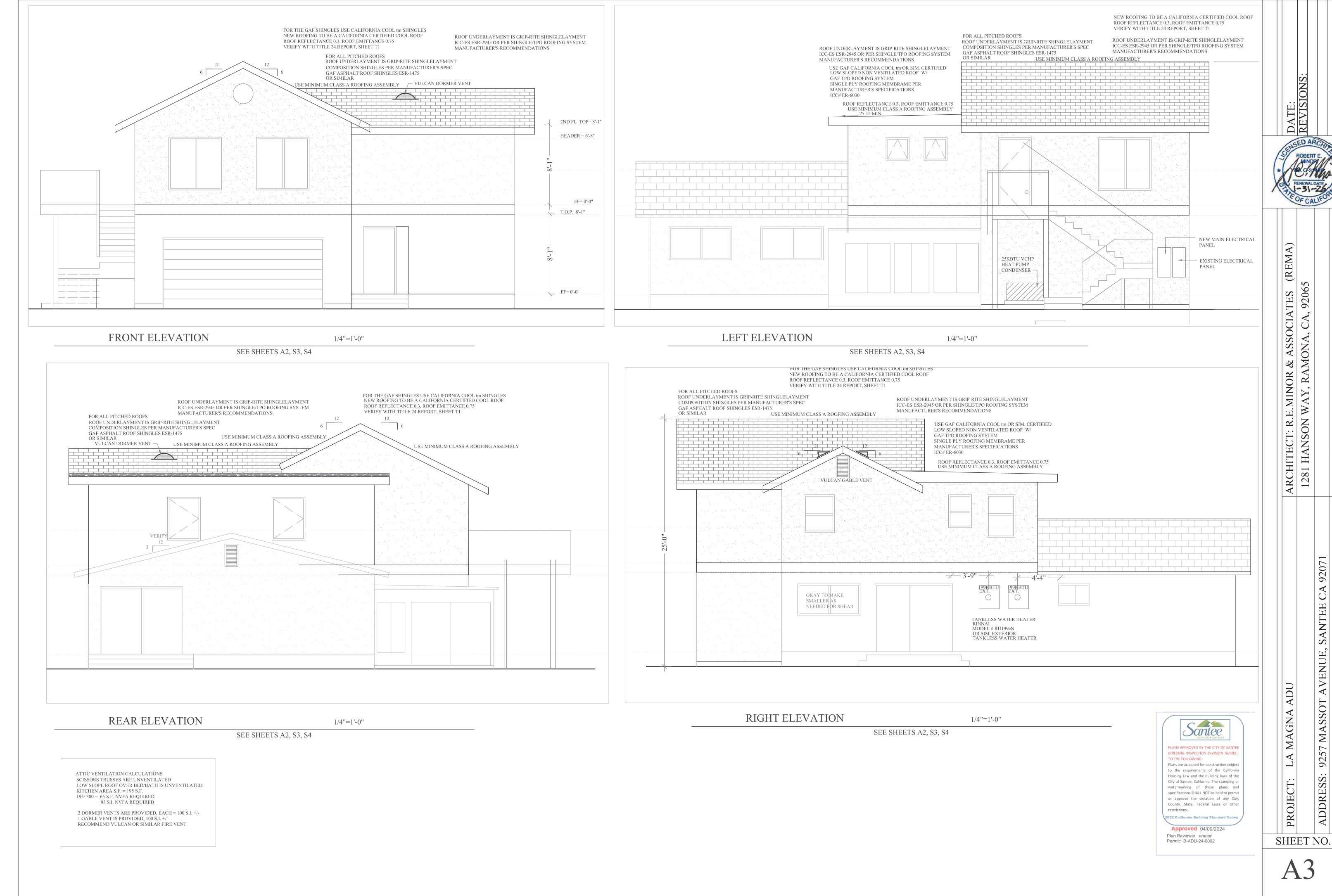
to the requirements of the California Housing Law and the building laws of the City of Santee, California. The stamping or watermarking of these plans and specifications SHALL NOT be held to permit or approve the violation of any City, County, State, Federal Laws or other restrictions.

Plans are accepted for construction subject

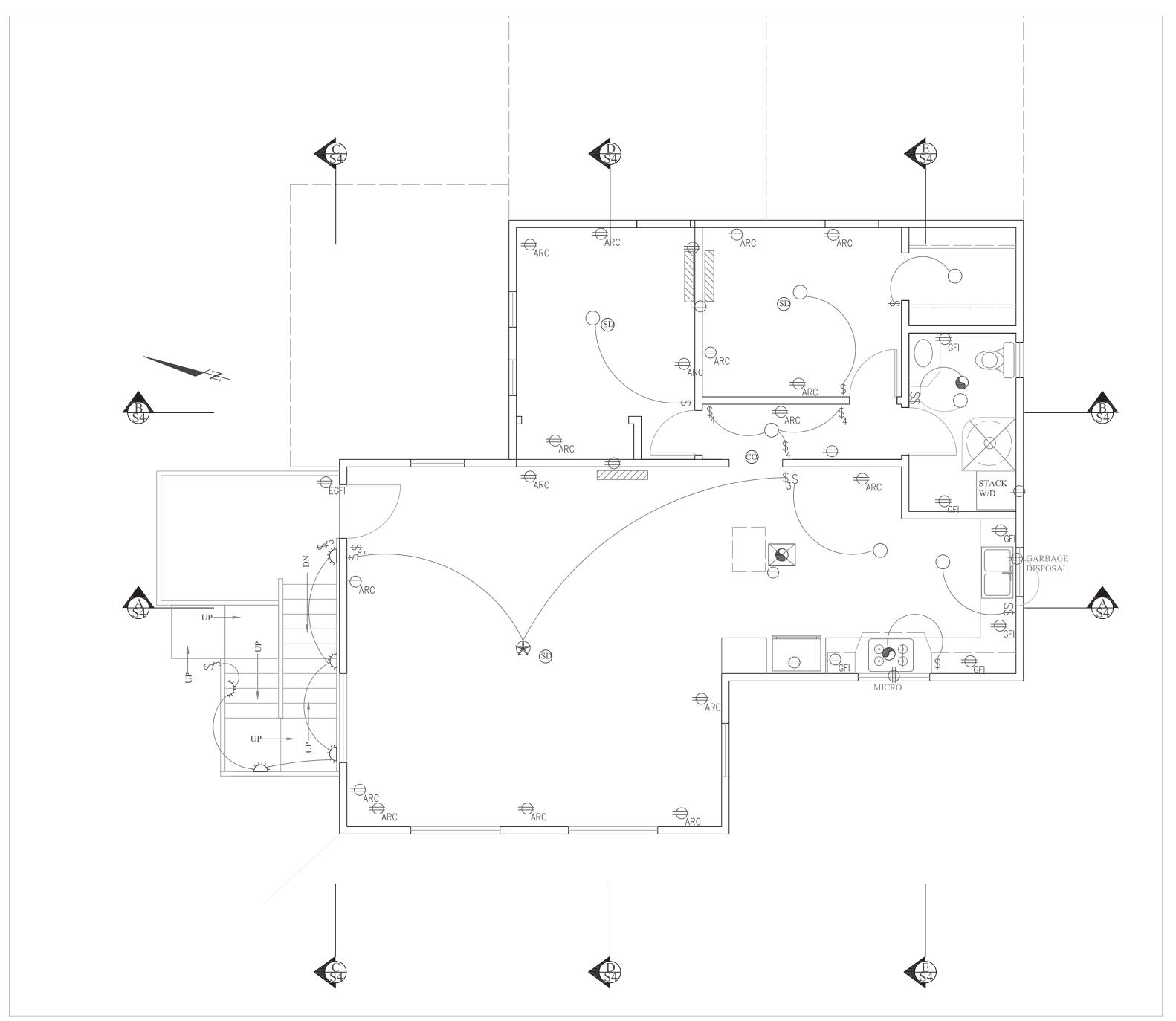
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022 California Building Standard Co

SHEET NO.



24 SHTS



CONCEPTUAL ELECTRICAL PLAN

D.) GFCI PROTECTED OUTLETS FOR LOCATIONS

KITCHENS, GARAGES, WITHIN 6' OF A SINK, ETC.

DESCRIBED IN NEC 210.8: BATHROOMS, OUTDOORS

1/4"=1'-0"

ALL WORK DONE SHALL BE COMPLY WITH CURRENT CALIFORNIA ELECTRICAL CODE SEE SHEETA4 FOR 1ST STORY ELECTRICAL WORK FOR THE ADU

\*NOTE\* IN ADDITION TO DEDICATED CIRCUITS FOR MICROWAVE, DISHWASHER, REFRIGERATOR AND GARBAGE DISPOSAL, 2- 20 AMP CIRCUITS ARE REQUIRED WITH NO MORE THAN 4 OUTLETS ON EACH OF THE CIRCUITS. REVIEW ELECTRICAL PLAN WITH ELECTRICAL CONTRACTOR.

ALL LUMINAIRES SHALL BE HIGH EFFICACY AND SHALL HAVE A MANUAL ON/OFF IN ADDITION TO A VACANCY SENSOR OR DIMMER.

LIGHTING IN BATHROOMS SHALL HAVE ALL EFFICACY LUMINAIRES ELECTRICAL DEVICES SPECIFICATIONS AND AT LEAST ONE LUMINAIRE MUST BE CONTROLLED BY A PER CEC ARTICLE 210 & 406 VACANCY SENSOR A.) TAMPER RESISTANT RECEPTACLES FOR ALL KITCHENS: ALL THE INSTALLED WATTAGE OF LUMINAIRES IN KITCHENS LOCATIONS LOCATED IN 210.52) (I.E., ALL

SHALL BE HIGH EFFICACY AND SHALL HAVE A MANUAL ON/OFF IN RECEPTACLES IN A DWELLING). ADDITION TO A VACANCY SENSOR OR DIMMER. UNDER CABINET LIGHTING B.) WEATHER RESISTANT TYPE FOR RECEPTACLES SHALL BE SWITCHED SEPARATELY. INSTALLED IN DAMP OR WET LOCATIONS C.) ARC-FAULT PROTECTION FOR ALL OUTLETS (NOT JUST RECEPTACLES) LOCATED IN ROOMS DESCRIBED IN NEC 210.12(B): FAMILY, LIVING, BEDROOMS, DINING, HALLS, ETC.

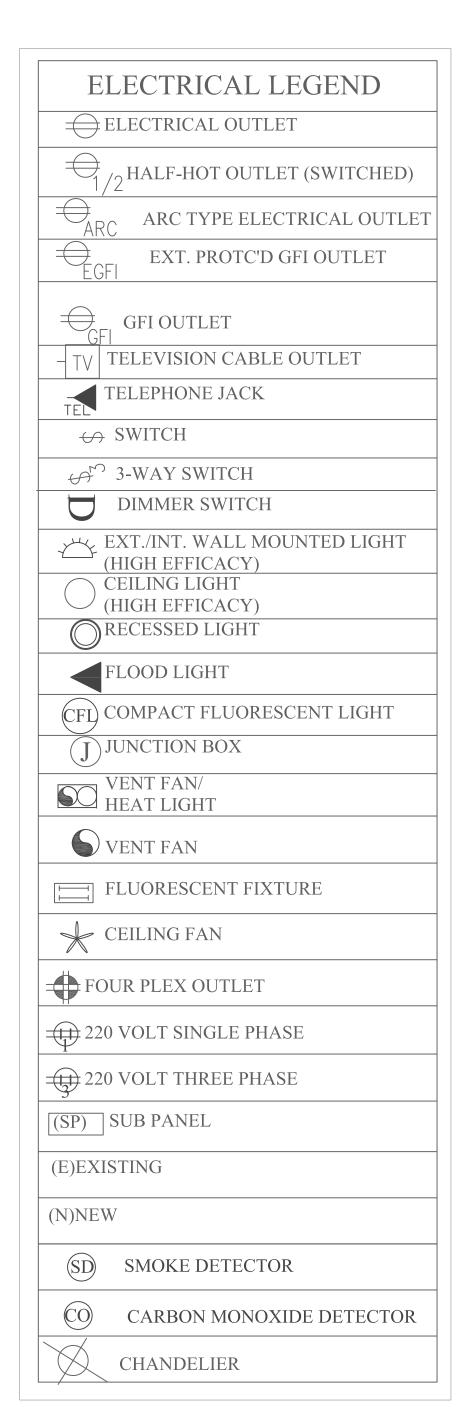
OTHER ROOMS: ALL LUMINAIRES SHALL BE HIGH EFFICACY AND SHALL HAVE A MANUAL ON/OFF IN ADDITION TO A VACANCY SENSOR OR DIMMER. OUTDOOR LIGHTING: ALL LUMINAIRES MOUNTED TO THE BUILDING OR TO OTHER BUILDINGS ON THE SAME LOT SHALL BE HIGH EFFICACY LUMINAIRES AND MUST BE CONTROLLED BY A MANUAL ON AND OFF SWITCH, AND CONTROLLED BY ONE OF THESE AUTOMATIC CONTROL TYPES. PHOTOCONTROL AND A MOTION SENSOR, OR ASTRONOMICAL TIME CLOCK, OR ENERGY MANAGEMENT CONTROL SYSTEM (EMCS)

STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE TO ILLUMINATE THE LANDINGS AND TREADS. THE LIGHT SOURCE SHALL BE CAPABLE OF ILLUMINATING TREADS AND LANDINGS TO LEVELS OF NOT LESS THAN 1 FOOT-CANDLE (11 LUX) AS MEASURED AT THE CENTER OF TREADS AND LANDINGS.

A 240V 30A DRYER RECEPTACLE SHALL BE PROVIDED WITH GFCI PROTECTION, PER CEC 210.8(9)

PROVIDE A MINIMUM OF 2 SMALL APPLIANCE BRANCH CIRCUITS WITHING THE LOCATIONS SPECIFIED IN ARTICLE 210.52(B) (I.E. KITCHEN AND DINING AREAS) CEC 210.11(C)1

BATHROOM CIRCUITRY SHALL BE: A. A 20-AMPERE CIRCUIT DEDICATED TO EACH BATHROOM, OR B. AT LEAST ONE 20 AMPERE CIRCUIT SUPPLYING ONLY BATHROOM RECEPTACLE OUTLETS CEC 210.11(C)3



PLANS APPROVED BY THE CITY OF SANTEE BUILDING INSPECTION DIVISION SUBJECT Plans are accepted for construction subject to the requirements of the California Housing Law and the building laws of the City of Santee, California. The stamping or watermarking of these plans and specifications SHALL NOT be held to permit or approve the violation of any City,

> **Approved** 04/09/2024 Plan Reviewer: amoon Permit: B-ADU-24-0002

DATE: REVISIONS:

County, State, Federal Laws or other 022 California Building Standard Codes

SHEET NO.

EM	PESCRIPTION OF BUILDING ELEMENTS		NUMBER AND TYPE OF FASTENER <sup>1, b, c</sup>	SPACING AND LOCATION
1	Blocking between ceiling joists or rafters to top	plate	Roof  4-8d box (2 <sup>1</sup> / <sub>2</sub> " × 0.113") or  3-8d common (2 <sup>1</sup> / <sub>2</sub> " × 0.131"); or  3-10d box (3" × 0.128"); or  3-3" × 0.131" nails	Toe nail
2	Ceiling joists to top plate		4-8d box (2 <sup>1</sup> I <sub>2</sub> "×0.113"); or 3-8d common (2 <sup>1</sup> I <sub>2</sub> "×0.131"); or 3-10d box (3"×0.128"); or 3-3"×0.131" nails	Per joist, toe nail
3	Ceiling joist not attached to parallel rafter, laps partitions [see Sections R802.3.1, R802.3.2 at R802.5.1(9)]		4-10d box (3" × 0.128"); or 3-16d common (3½" × 0.162"); or 4-3" × 0.131" nails	Face nail
4	Ceiling joist attached to parallel rafter (heel join [see Sections R802.3.1 and R802.3.2 and Tab R802.5.1(9)]		Table R802.5.1(9)	Face nail
5	Collar tie to rafter, face nail or 1 1/4" × 20 ga. ridgrafter	ge strap to	4-10d box (3"×0.128"); or 3-10d common (3"×0.148"); or 4-3"×0.131" nails	Face nail each rafter
6	Rafter or roof truss to plate		3-16d box nails (3 <sup>1</sup> / <sub>2</sub> "×0.135"); or 3-10d common nails (3"×0.148"); or 4-10d box (3"×0.128"); or	2 toe nails on one side and 1 toe nai on opposite side of each rafter or truss
			4-3" × 0.131" nails 4-16d (3 <sup>1</sup> / <sub>2</sub> " × 0.135"); or 3-10d common (3 <sup>1</sup> / <sub>2</sub> " × 0.148"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails	Toe nail
7	Roof rafters to ridge, valley or hip rafters or roo to minimum 2" ridge beam	f rafter	3-16d box 3 <sup>1</sup> / <sub>2</sub> " × 0.135"); or 2-16d common (3 <sup>1</sup> / <sub>2</sub> " × 0.162"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails	End nail
$\overline{}$			Wall 16d common (3 <sup>1</sup> / <sub>2</sub> " × 0.162")	24" o.c. face nail
8	Stud to stud (not at braced wall panels)		10d box (3"×0.128"); or 3"×0.131" nails	16" o.c. face nail
9	Stud to stud and abutting studs at intersecting w	all corners	16d box (3 <sup>1</sup> / <sub>2</sub> " × 0.135"); or 3" × 0.131" nails	12" o.c. face rail
	(at braced wall panels)		16d common (3 <sup>1</sup> / <sub>2</sub> " × 0.162") 16d common (3 <sup>1</sup> / <sub>2</sub> " × 0.162")	16" o.c. face nail 16" o.c. each edge face nail
10	Built-up header (2" to 2" header with 1/2" spacer	)	16d box (3 <sup>1</sup> / <sub>2</sub> " × 0.135")	12" o.c. each edge face nail
11	Continuous header to stud		5-8d box (2 <sup>1</sup> / <sub>2</sub> " × 0.113"); or 4-8d common (2 <sup>1</sup> / <sub>2</sub> " × 0.131"); or 4-10d box (3" × 0.128")	Toe nail
12	Top plate to top plate		16d common (3 <sup>1</sup> / <sub>2</sub> "× 0.162") 10d box (3"× 0.128"); or 3"× 0.131" nails	16" o.c. face nail
13	Double top plate splice for SDCs A-D <sub>2</sub> with seismic braced wall line spacing < 25'		8-16d common (3 <sup>1</sup> / <sub>2</sub> " × 0.162"); or 12-16d box (3 <sup>1</sup> / <sub>2</sub> " × 0.135"); or 12-10d box (3" × 0.128"); or 12-3" × 0.131" nails	Face nail on each side of end joint (minimum 24" lap splice length each side of end joint)
	Double top plate splice SDCs $D_0$ , $D_1$ , or $D_2$ ; and wall line spacing $\geq 25'$	braced	12-16d (3 <sup>1</sup> / <sub>2</sub> "×0.135")	
ITEM	DESCRIPTION OF BUILDING ELEMENTS		mber and type of fasteners, b, o mon (3 <sup>1</sup> / <sub>2</sub> "× 0.162")	SPACING AND LOCATION 16" o.c. face nail
14	Bottom plate to joist, rim joist, band joist or blocking (not at braced wall panels)		(3 <sup>1</sup> / <sub>2</sub> " × 0.135"); or	12" o.c. face nail
15	Bottom plate to joist, rim joist, band joist or blocking (at braced wall panel)	3-16d bo 2-16d co	ox (3 <sup>1</sup> / <sub>2</sub> " × 0.135"); or mmon (3 <sup>1</sup> / <sub>2</sub> " × 0.162"); or 131" nails	3 each 16" o.c. face nail 2 each 16" o.c. face nail 4 each 16" o.c. face nail
16	4-8d box 3-16d bo 4-8d con 4-10d bo		. (2 <sup>1</sup> / <sub>2</sub> " × 0.113"); or ox (3 <sup>1</sup> / <sub>2</sub> " × 0.135"); or mmon (2 <sup>1</sup> / <sub>2</sub> " × 0.131"); or ox (3" × 0.128"); or 131" nails	Toe nail
	Top to a state of sta	3-16d box (3 <sup>1</sup> / <sub>2</sub> " × 0.135"); or 2-16d common (3 <sup>1</sup> / <sub>2</sub> " × 0.162"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails		End nail
17	Top plates, laps at corners and intersections	2-16d co	x (3" × 0.128"); or mmon (3 <sup>1</sup> / <sub>2</sub> " × 0.162"); or 131" nails	Face nail
18	1" brace to each stud and plate	2-8d con	(2½" × 0.113"); or nmon (2½" × 0.131"); or x (3" × 0.128"); or 1½"."	Face nail
19	1"×6" sheathing to each bearing	3-8d box 2-8d com 2-10d bo	(2 <sup>1</sup> / <sub>2</sub> " × 0.113"); or mon (2 <sup>1</sup> / <sub>2</sub> " × 0.131"); or x (3" × 0.128"); or , 1" crown, 16 ga., 1 <sup>3</sup> / <sub>4</sub> " long	Face nail
20	$1$ " $\times$ $8$ " and wider sheathing to each bearing	3-8d box 3-8d com 3-10d bo 3 staples. Wider th 4-8d box 3-8d com 3-10d bo	(2 <sup>1</sup> / <sub>2</sub> "×0.113"); or nmon (2 <sup>1</sup> / <sub>2</sub> "×0.131"); or x (3"×0.128"); or .1" crown, 16 ga., 1 <sup>3</sup> / <sub>4</sub> " long an 1"×8" (2 <sup>1</sup> / <sub>2</sub> "×0.113"); or mon (2 <sup>1</sup> / <sub>2</sub> "×0.131"); or x (3"×0.128"); or , 1" crown, 16 ga., 1 <sup>3</sup> / <sub>4</sub> " long	Face nail
21	Joist to sill, top plate or girder	3-8d com 3-10d bo	(2 <sup>1</sup> / <sub>2</sub> " × 0.113"); or mx on (2 <sup>1</sup> / <sub>2</sub> " × 0.131"); or x on (2 <sup>1</sup> / <sub>2</sub> " × 0.128"); or 131" nails	Toe nail
22	Rim joist, band joist or blocking to sill or top plate (roof applications also)	8d box (2 8d comm 10d box	$2^{1}/_{2}$ " × 0.113") non $(2^{1}/_{2}$ " × 0.131"); or $(3" \times 0.128")$ ; or	4" o.c. toe nail
23	1"×6" subfloor or less to each joist	3" × 0.13 3-8d box 2-8d com		Face nail
ITEM	DESCRIPTION OF BUILDING ELEMENTS	2 staples	, 1" crown, 16 ga., 1 <sup>3</sup> / <sub>4</sub> " long	SPACING AND LOCATION
			Floor	STANING AND LOCATION
24	2" subfloor to joist or girder	2-16d co	x (3 <sup>1</sup> / <sub>2</sub> " × 0.135"); or mmon (3 <sup>1</sup> / <sub>2</sub> " × 0.162")	Blind and face nail
25	2" planks (plank & beam—floor & roof)  Band or rim joist to joist	2-16d cor 3-16d cor 4-10 box	x (3 <sup>1</sup> / <sub>2</sub> " × 0.135"); or mmon (3 <sup>1</sup> / <sub>2</sub> " × 0.162") mmon (3 <sup>1</sup> / <sub>2</sub> " × 0.162") (3" × 0.128"), or	At each bearing, face nail
	June 10 June		131" nails; or 4 ga. staples, <sup>7</sup> / <sub>16</sub> " crown	
		20d com	mon (4" × 0.192"); or	Nail each layer as follows: 32" o.c at top and bottom and staggered.
	Pulls and defended to the control of		(3" × 0.128"); or 1" nails	24" o.c. face nail at top and bottom staggered on opposite sides
27	Built-up girders and beams, 2-inch lumber layers	3 X U.13	1 1164113	suggested on opposite stees

2-20d common (4"× 0.192"); or

4-16d box (3<sup>1</sup>/<sub>2</sub>" × 0.135"); or 3-16d common (3<sup>1</sup>/<sub>2</sub>" × 0.162"); or

2-10d (3" × 0.128")

6d common (2" × 0.113") nail (subfloor, wall)

galvanized roofing nail, 1/16" head

"long; 11/4" screws, Type W or S

"long; 15/8" screws, Type W or S

ameter, or 1" crown staple 16 ga., 11/4" long

<sup>3</sup>/<sub>4</sub>" galvanized roofing nail, <sup>7</sup>/<sub>16</sub>" head liameter, or 1" crown staple 16 ga., 1'/<sub>4</sub>" long

-10d box (3" × 0.128"); or 4-3" × 0.131" nails

Wood structural panels, sublicor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing [see Table R602.3(3) for wood structural panel exterior wall sheathing to wall framing]

8d common nail (21/2" × 0.131") 10d common (3"×0.148") nail; or 8d (21/2" × 0.131") deformed nail

Other wall sheathing®

Wood structural panels, combination subfloor underlayment to fram

6d deformed (2" × 0.120") nail; or

8d common (21/2" x 0.131") nail; or

8d deformed (21/2"× 0.120") nail

8d deformed (21/2"× 0.120") nail

TABLE R602.3(1)—continued FASTENING SCHEDULE Nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 80 ksi for shank diameter of 0.192 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch bu

Where the ultimate design wind speed is 130 mph or less, nails for attaching wood structural panel roof sheathing to gable end wall framing shall be spaced inches on center. Where the ultimate design wind speed is greater than 130 mph, nails for attaching panel roof sheathing to intermediate supports shall be spaced 6 inches on center for minimum 48-inch distance from ridges, caves and gable end walls; and 4 inches on center to gable end wall framing. Gypsum sheathing shall conform to ASTM C1396 and shall be installed in accordance with GA 253. Fiberboard sheathing shall conform to ASTM C208. Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and required blocking and at floor perimeters only Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and required blocking. Blocking of roof or floo sheathing panel edges perpendicular to the framing members need not be provided except as required by other provisions of this code. Floor perimeter shall be

Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule, provide two toe nails on one side of the rafter and toe nails from

the ceiling joist to top plate in accordance with this schedule. The toe nail on the opposite side of the rafter shall not be required.

8d common (21/2" x 0.131") nail

3-10d box (3" x 0.128"); or

28 Ledger strip supporting joists or rafters

29 Bridging to joist

sheathing

"structural cellulosi fiberboard sheathing

not larger than 0.177 inch, and 100 ksi for shank diameters of 0.142 inch or less. Staples are 16 gage wire and have a minimum 7/10-inch on diameter crown width

Spacing of fasteners not included in this table shall be based on Table R602.3(2).

Four-foot by 8-foot or 4-foot by 9-foot panels shall be applied vertically.

Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater.

1/2" gypsum sheathingd

36 \[ \frac{5}{8}" gypsum sheathing<sup>d</sup>

supported by framing members or solid blocking.

7 3/4" and less

38 7/8"-1"

39 11/8"-11/4"

ace nail at ends and at each splice

At each joist or rafter, face nail

Each end, toe nail

# WOOD AND LUMBER NOTES

\*PRESSURE TREATED PLATE NOTE\* FOR ALL INTERIOR WALLS USE ONLY BORATE TREATED PLATE STOCK. DO NOT USE COPPER TREATED PLATE STOCK.

LUMBER NOTES

FRAMING LUMBER TO BE DF/L#2 BTR UNLESS OTHERWISE NOTED HDRS TO BE DF#1
ROOF SHEATHING TO BE 5/8" (NOM) CDX PLYWD. INDEX 40/20
UNBLOCK'D W/ 8d COMMONS, 6" O.C. E.N., B.N., 12"O.C. F.N.
UNLESS NOTED OTHERWISE W/ HCLIPS
FLOOR SHEATHING TO BE 5/8" T&G CDX PLYWD. INDEX 42/20
W/ 10d SCREW NAILS, 6" O.C. E.N., B.N., 12" O.C. F.N.
USE CONSTRUCTION ADHESIVE FLOOR JOISTS TO PLYWOOD
SHEAD PANELS TO BE 3/8" TYPE I DLYWOOD 24/0

SHEAR PANELS TO BE 3/8" TYPE I PLYWOOD 24/0

UNLESS NOTED OTHERWISE
PROVIDE SHEAR PANEL B.N. ALONG ALL TRIMMERS, POSTS, TOP AND BOTTOM PLATES
PROVIDE SIMPSON ST6224 @ CORNERS @ TOP PLATES
DOUBLE TOP PLATES TO BE DF/L #2 OR BETTER
DOUBLE TOP PLATES AT SHEAR WALL LINES TO BE WITHOUT SPLICES OR BREAKS
WHERE LESS THAN 20 FEET IN LENGTH.
NAILS FOR PLYWOOD SHEAR WALLS AND ROOF DIAPHRAM TO BE COMMON NAILS UNLESS
NOTED OTHERWISE.

ALL STUDS TO BE DF/L#2 OR BETTER. COORDINATE PLUMBING, MECHANICAL AND ELCTRICAL RUNS WITH STRUCTURAL FRAMING, SHEAR PANELS, SILL, TOP PLATES, AND OTHER CONSTRUCTION. IF THERE IS A CONFLICT OR INSTALLATION PROBLEM GET APPROVAL FROM THE AUTHORITY ISSUING THE BUILDING PERMIT BEFORE REDUCING THE STRUCTURAL INTEGRITY OF ANY PORTION OF THE FRAMING SYSTEM. OSB WITH EQUILVALENT STRUCTURAL RATING MAY BE USED IN PLACE OF PLYWOOD SPECIFIED. PROVIDE DIAPHRAGM BOUNDARY NAILING ALONG ALL LINES OF ROOF BLOCKING, DRAGS, COLLECTORS AND WHERE INDICATED ON THE PLANS AND DETAILS.

CUT, NOTCH, DRILL, BORE, SHAVE, TAPER OR FOR ANY REASONS MODIFY PRE-ENGINEERED, MANUFACTURED STRUCTURAL ELEMENTS SUCH AS GLUED-LAMINATED MEMBERS, PARALAMS, MICROLAMS, I-JOISTS, LIGHT GUAGE METAL MEMBERS AND OTHER SIMILAR TIMBER OR STEEL PRODUCTS UNLESS SUCH MODIFICATIONS ARE WITHIN THE WRITTEN PARAMETERS SET FORTH BY THE MANUFACTURER OF THAT PRODUCT OR A LETTER OF CERTIFICATION FROM THE MANUFACTURER'S ENGINEER WITH DETAIL SIGNED AND STAMPED IS ISSUED AND AUTHORIZED BY THE PROJECT ENGINEER OF RECORD AND APPROVED BY THE CITY OF BUILDING OFFICIAL".

ALL NEW EXTERIOR WALLS TO BE FULLY SHEATHED WITH EITHER 3/8" STRUCTURAL I PLYWOOD, 1/2" CDX PLYWOOD OR 1/2" OSB

BEAM & JOIST	LIST FOR LAMAGN	A ADU
RB-1 ROOF BEAM	3-1/2" X 11-7/8" V LAN	1 2.0 3100
RB-2 ROOF BEAM	1-1/2" X 16" VLAM 2.0	3100
RB-3 ROOF BEAM	1-1/2" X 16" VLAM 2.0	3100
		DE TO H-2
H-1 ROOF HEADER	4X4 DF/L #1 NOT USI	ED USE H-2
H-2 ROOF HEADER	4X6 DF/L #1	
H-3 ROOF HEADER	4X8 DF/L #1	
FJ-1 FLOOR I JOISTS	11-7/8" BCI 90 2.0	16" O.C.
FJ-2 FLOOR I JOISTS	11-7/8" BCI 5000 1.7	16" O.C.
FJ-3 FLOOR I JOISTS	11-7/8" BCI 5000 1.7	16" O.C.
FJ-4 DECK JOISTS	2X8 DF/L#2	16" O.C.
	ENO DIVENE	
FB-1 FLOOR BEAM	3-1/2" X 11-7/8" V LAN	A 2.0 3100
FB-2 FLOOR BEAM	3-1/2" X 11-7/8" V LAN	1 2.0 3100
FB-3 FLOOR BEAM	3-1/2" X 11-7/8" V LAN	1 2.0 3100
FB-4 FLOOR BEAM	5-1/4" X 11-7/8" V LAN	A 2.0 3100
FB-5 FLOOR BEAM	3-1/2" X 11-7/8" V LAN	
FB-6 FLOOR BEAM	3-1/2" X 11-7/8" V LAN	A 2.0 3100
FB-7 FLOOR BEAM	3-1/2" X 11-7/8" V LAN	A 2.0 3100
FB-8 FLOOR BEAM	3-1/2" X 11-7/8" V LAN	A 2.0 3100
FB-9 FLOOR BEAM	3-1/2" X 11-7/8" V LAN	1 2.0 3100
DB-1 DECK BEAM	4X12 DF/L #1	
DD-1 DECK DEAWI	TA12 DI/L #1	
	2X8 DF/L #2/BTR @ 24" O	
	2X8 DF/L #2/BTR @ 24" C	
RCR-1 ROOF/CLG RAF	TER 1-1/2" X 16" V LAN @16" O.C. RIP .25:	

### BASIS OF DESIGN

"BASIS OF DESIGN OF STRUCTURES AND STRUCTURAL CALCULATIONS USING DESIGN PARAMETERS PER CALIFORNIA BUILDING CODE 2019" BUILDING RISK CATEGORY----- I I DESIGN ROOF LIVE LOAD ----- 20 PSF DESIGN FLOOR LIVE LOAD ----- 40 PSF DESIGN DEAD LOADS ROOF DEAD LOAD ----- 15.0 PSF FLOOR DEAD LOAD ----- 15.0 PSF INTERIOR WALL DEAD LOAD----- 8.0 PSF EXTERIOR WALL DEAD LOAD----- 18.0 PSF DECK DEAD LOAD ----- 10.0 PSF DECK LIVE- LOAD ----- 60 PSF NOMINAL DESIGN WIND SPEED------ 110 MPH (3 SECOND GUST) WIND IMPORTANCE FACTOR----- 1 WIND EXPOSURE----- B SEISMIC IMPORTANCE FACTOR----- Is AND OCCUPANCY CATEGORY MAPPED SPECTRAL RESPONSE COEFFICIENTS---- Ss----- 0.91 g SITE CLASS----- 0.51 g SPECTRAL RESPONSE COEFFICIENTS----- SDS----- 0.8 g SEISMIC DESIGN CATEGORY----- SDC----- D SEISMIC RESPONSE COEFFICIENT----- Cs ----- 0.102 RESPONSE MODIFICATION FACTOR ----- R ----- 6.5

# MATERIAL PROPERTIES

# MATERIAL PROPERTIES

SHEAR RESISTANCE OR STEEL SHEETS

FRAMING- SEE THIS SHEET

ANCHOR BOLTS- A307 W/3"X3" X 0.229" SQUARE STEEL WASHERS CONCRETE- MIN. 2,500 PSI @ 25 DAYS FOR ALL CONCRETE USED U.N.O.

SESMIC FORCE RESISTING TYPE ----- LIGHT FRAMED WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR

REINFORCING- #3-#5 ------ GRADE 40 #6 & LARGER ----- GRADE 60 STIRRUPS & SHEAR TIES ----- GRADE 60 STEEL BEAMS..... .. ASTM A36 NUTS, BOLTS..... A 304

STUCCO TO BE 3-COAT STANDARD STUCCO OVER GALVANIZED SELF FURRED STUCCO LATH OVER 2 LAYERS OF 60 MINUTE GRADE 'D' BUILDING PAPER

ALL FRAMING AND OTHER CONSTRUCTION CONNECTORS USED TO BE BY SIMPSON ALL EXTERIOR METAL CONNECTORS TO BE HOT DIPPED GALVANIZED

OR Z-MAX CORROSION RESISTANT INCLUDING NUTS & WASHERS FASTENERS, INCLUDING NUTS & WASHERS, AND CONNECTORS IN CONTACT WITH

PRESERVATIVE-TREATED AND FIRE-RETARDENT-TREATED WOOD SHALL BE IN ACCORDANCE WITH SECTIONS 2304.10.5.1 THROUGH2304.10.5.4. THE COATING WEIGHTS FOR ZINC-COATED FASTENERS SHALL BE IN ACCORDANCE WITH ASTM A153. STAINLESS STEEL DRIVEN FASTENERS SHALL BE IN ACCORDANCE WITH THE MATERIAL REQUIREMENTS OF ASTM F1667. (CBC 2304.10.5) FASTENERS, INCLUDING NUTS AND WASHERS, FOR FIRE-RETARDENT- TREATED

WOOD USED IN EXTERIOR APPLICATIONS OR WET OR DAMP LOCATIONS SHALL BE OF HOT-DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER. STAPLES SHALL BE OF STAINLESS STEEL. FASTENERS OTHER THAN NAILS, STAPLES, TIMBER RIVETS, WOOD SCREWS AND LAG SCREWS SHALL BE PERMITTED TO BE OF MECHANICALLY DEPOSITED ZINC-COATED STEEL WITH COATING WEIGHTS IN ACCORDANCE WITH ASTM B695, CLASS 55 MINIMUM. (CBC 2304.10.5.3)

## SHEAR WALL SCHEDULE

JOB NUMBER 23022

		SHEAR WAL	L TABL	E
TYPE	SHEATHING SIZE	NAILING	PLF	COMMENTS
Α	3/8" CDX PLYWOOD or OSB	8d @ 6"o.c. B.N. 8d @ 6"o.c. E.N. 8d @ 12"o.c. F.N.	260	SILL PLATE 16d@ 6"o.c A35 18"o.c. 5/8"dia. A.B. @48"o.c.
В	3/8" CDX PLYWOOD or OSB	8d @ 4"o.c. B.N. 8d @ 4"o.c. E.N. 8d @ 12"o.c. F.N.	380	SILL PLATE 16d@ 4"o.c A35 12"o.c. 5/8"dia. A.B. @40"o.c.
С	3/8"	8d @ 3"o.c. B.N. 8d @ 3"o.c. E.N.	S 400	SILL PLATE 16d@ 3"o.c A35 9"o.c.
•	CDX PLYWOOD or OSB	8d @ 12"o.c. F.N.	W 490	5/8"dia. A.B. @32"o.c.
_	3/8"	8d @ 2"o.c. B.N. * 8d @ 2"o.c. E.N. *	S 400	SILL PLATE 16d@ 2.5"o.c A35 6"o.c.
D	CDX PLYWOOD	8d @ 12"o.c. F.N. *	W 640	5/8"dia. A.B. @24"o.c.

NOTE: 5/8" DIA. ANCHOR BOLTS @ 24"O.C. UNO

or OSB

\* ALL BOUNDARY FRAMIMG SHALL NOT BE LESS THAN 3 1/2"

SHEAR WALL TABLE						
TYPE SHEATHING SIZE NAILING				COMMENTS		
Е	1/2" (15/32")	10d @ 6"o.c. B.N. 10d @ 6"o.c. E.N.	S 620	2x SILL PLATE 16d@ 6"o.c A35 16"o.c.		
-	CDX PLYWOOD or OSB	10d @ 12"o.c. F.N.	W 870	5/8"dia. A.B. @32"o.c.		
F	1/2" (15/32")	10d @ 4"o.c. B.N. 10d @ 4"o.c. E.N.	S 920	3x SILL PLATE 16d@ 4"o.c A35 12"o.c.		
ŗ	CDX PLYWOOD or OSB	10d @ 12"o.c. F.N.	W 1290	5/8"dia. A.B. @26"o.c. 3/4"dia. A.B. @40"o.c.		
G	1/2" (15/32")	10d @ 3"o.c. B.N. 10d @ 3"o.c. E.N.	5 1200	3x SILL PLATE 16d@ 3"o.c A35 8"o.c.		
	CDX PLYWOOD or OSB	10d @ 12"o.c. F.N.	W 1680	5/8"dia. A.B. @20"o.c. 3/4"dia. A.B. @32"o.c.		
н	1/2" (15/32")	10d @ 2"o.c. B.N. * 10d @ 2"o.c. E.N. *	S 1540	3x SILL PLATE 16d@ 2.5"o.c A35 6"o.c.		
	CDX PLYWOOD or OSB	10d @ 12"o.c. F.N. *	W 2155	5/8"dia. A.B. @15"o.c. 3/4"dia. A.B. @24"o.c.		

NOTE: 5/8" DIA. ANCHOR BOLTS @ 24"O.C. UNO \* ALL BOUNDARY FRAMIMG SHALL NOT BE LESS THAN 3 1/2"

# STRUCTURAL ABBREVIATIONS

ACI	AMERICAN CONCRETE INSTITUTE	K	KIP- 1000 LBS
	AMERICAN CONCRETE INSTITUTE  AMERICAN INSTITUTE OF STEEL CONSTRUCTION	K.P.	K.P. KING POST
AISC	ALTERNATE	LBS	POUNDS
ALT	ASTM	MANUF	MANUFACTURER
ASTM		MAS.	MASONRY
A.B.	ANCHOR BOLT	MATL	MATERIAL
ARCH.	ARCHITECTURAL PLANS	MAX.	
<u>a</u>	AT	M.B.	MAXIMUM
BCI	BOISE CASCADE 'I' JOIST		MACHINE BOLT
BLDG.	BUILDING	MECH	MECHANICAL
BLKG	BLOCKING	MIN.	MINIMUM
BM	BEAM	MISC	MISCALLENEOUS
B.N.	BOUNDARY NAIL	(N)	NEW
BOP	BOTTOM OF PIER	N.G.	NATURAL GRADE
	BOTTOM	NO	NUMBER
BOT	BEARING	NTS	NOT TO SCALE
BRG.	CENTER LINE	O.C.	ON CENTER
CL		P.A.	POST ABOVE
CLR	CLEAR CEL DIG LOIST	PL	PLATE
CJ	CEILING JOIST	PLF	POUNDS PER LINEAR FOOT
CLG.	CEILING	PLYWD	
COL.	COLUMN	PNL	PLYWOOD
CONC.	CONCRETE		PANEL
CONST.	CONSTRUCTION	P/C	PRECAST
CONN	CONNECTION	PSF	POUNDS PER SQUARE FOOT
CONT.	CONTINUOUS	PSI	POUNDS PER SQUARE INCH
D.F.	DOUGLAS FIRE	P.T.	PRESSURE TREATED
	DIAMETER	P.T.D.F.	PRESSURE TREATED DOUGLAS FIRE
DIA	DIMENSION	RB	RIDGE BEAM
DIM		REF.	REFERENCE
DBL	DOUBLE	REINF.	REINFORCEMENT
DN	DOWN	RDQ'D.	REQUIRED
DTL	DETAIL	REV.	REVISION
DWG.	DRAWING	SCHED.	SCHEDULE
EA	EACH	SECT	
E.F.	EACH FACE		SECTION
ELEV	ELEVATION	SHT	SHEET
E.N.	END NAIL	SIM.	SIMILAR
EOR	ENGINEER OF RECORD	SPEC'S	SPECIFICATION
EQ	EQUAL	SQ.	SQARE
E.W.	EACH WAY	S.S.	STUCTURAL SHEET
	EXISTING	STD	STANDARD
(E)	EXPANSION	STL	STEEL
EXP.		STRUCT	STRUCTURAL
EXT.	EXTERIOR	S.W.	SIMPSON STRONG WALL
FB	FLUSH BEAM	S.S.W.	SIMPSON STEEL STRONG WALL
F.G.	FINISH GRADE	SEOR	STRUCTURAL ENGINEER OF RECORD
FND	FOUNDATION		TOP AND BOTTOM
FIN	FINISH	T&B	TOP OF CONCRETE
FJ	FLOOR JOIST	T.O.C.	
F.S.	FINISH SURFACE	T.O.F.	TOP OF PUED
FTG.	FOOTING	T.O.P.	TOP OF PIER
GA	GAUGE	T.O.S.	TOP OF STEEL
	GALVANIZED	S.O.W.	SCOPE OF WORK
GALV	GYPSUM	TYP.	TYPICAL
GYP.		U.N.O.	UNLESS NOTED OTHERWISE
GYP.BD.	GYPSUM BOARD	U.O.N.	UNLESS OTHERWISE NOTED
GLB	GLUE LAM BEAM	(V)	VERTICAL
(H)	HORIZONTAL		VERIFY IN FIELD
HDR	HEADER	V.I.F.	BOISE CASCADE VERSA-LAM
IF.	INSIDE FACE	V.L.	WITH
INSUL.	INSULATION	W/	WELDED WIRE REINFORCEMENT

# HOLDOWNS SCHEDULE

# HOLDOWNS

	HOL	DOWN SCHEDULE	ALL FOOTINGS THAT INCORPORATE HALL HOLDOWNS AND OTHER METAL O		
Z	POST & HOLDOWN		HOLDOWN ANCHOR BOLT		
ATION			NEW FOUNDATION	EXISTING FOUNDATION	
	1	DBL. 2X STUDS W/HDU2-SDS2.5	SSTB16 (12" MIN. EMBEDMENT)	5/8" DIA. THREADED ROD (10" MIN. EMB.)	
FOUND	2	DBL. 2X STUDS W/HDU4-SDS2.5	SSTB16 (12" MIN. EMBEDMENT)	5/8" DIA. THREADED ROD (10" MIN. EMB.)	
	3	4X4 POST W/HDU5-SDS2.5	SSTB24 (20" MIN. EMBEDMENT)	5/8" DIA. THREADED ROD (10" MIN. EMB.)	
, TO	4	4X6 POST W/HDU8-SDS2.5	SSTB28 (24" MIN. EMBEDMENT)	N/A	
POST	5	4X6 POST W/HDU11-SDS2.5	SSTB30 (24" MIN. EMBEDMENT)	N/A	
P	6	6X6 POST W/HDU14-SDS2.5	SB1X30 (24" MIN. EMBEDMENT)	N/A	

# STATEMENT OF SPECIAL INSPECTIONS

# STATEMENT OF SPECIAL INSPECTIONS

"THE SPECIAL INSPECTOR MUST BE CERTIFIED IN THE CATEGORY OF WORK REQUIRED TO HAVE SPECIAL INSPECTION.

"THE SPECIAL INSPECTIONS IDENTIFIED ON PLANS ARE IN ADDITION TO, AND NOT A SUBSTITUTE FOR THOSE INSPECTIONS REQUIRED TO BE PERFORMED BY A CITY'S BUILDING INSPECTOR."

SPECIAL INSPECTION REQUIRED FOR 5/8" DIA. X 10" SIMPSON RFB ANCHOR BOLTS WITH SIMPSON SET XP HIGH STRENGTH ADHESIVE- ESR-2508 AT ALL OF THE HDU- LOCATIONS SHOWN ON THE FOUNDATION PLAN AND PER THE SHEAR PANEL ANCHOR BOLT SCHEDULE





8 OF 24 SHTS.

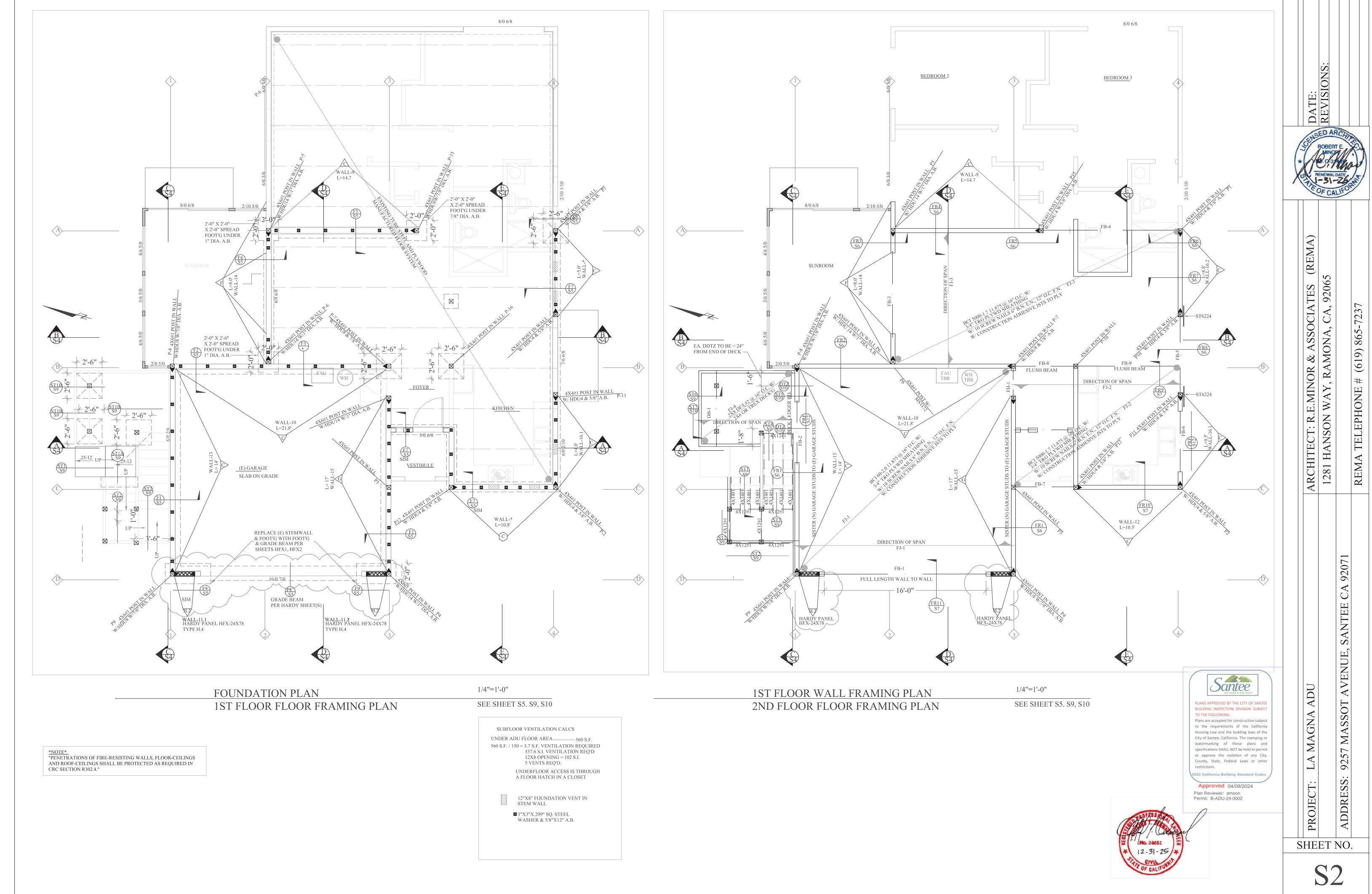
9257 MASSOT AVE

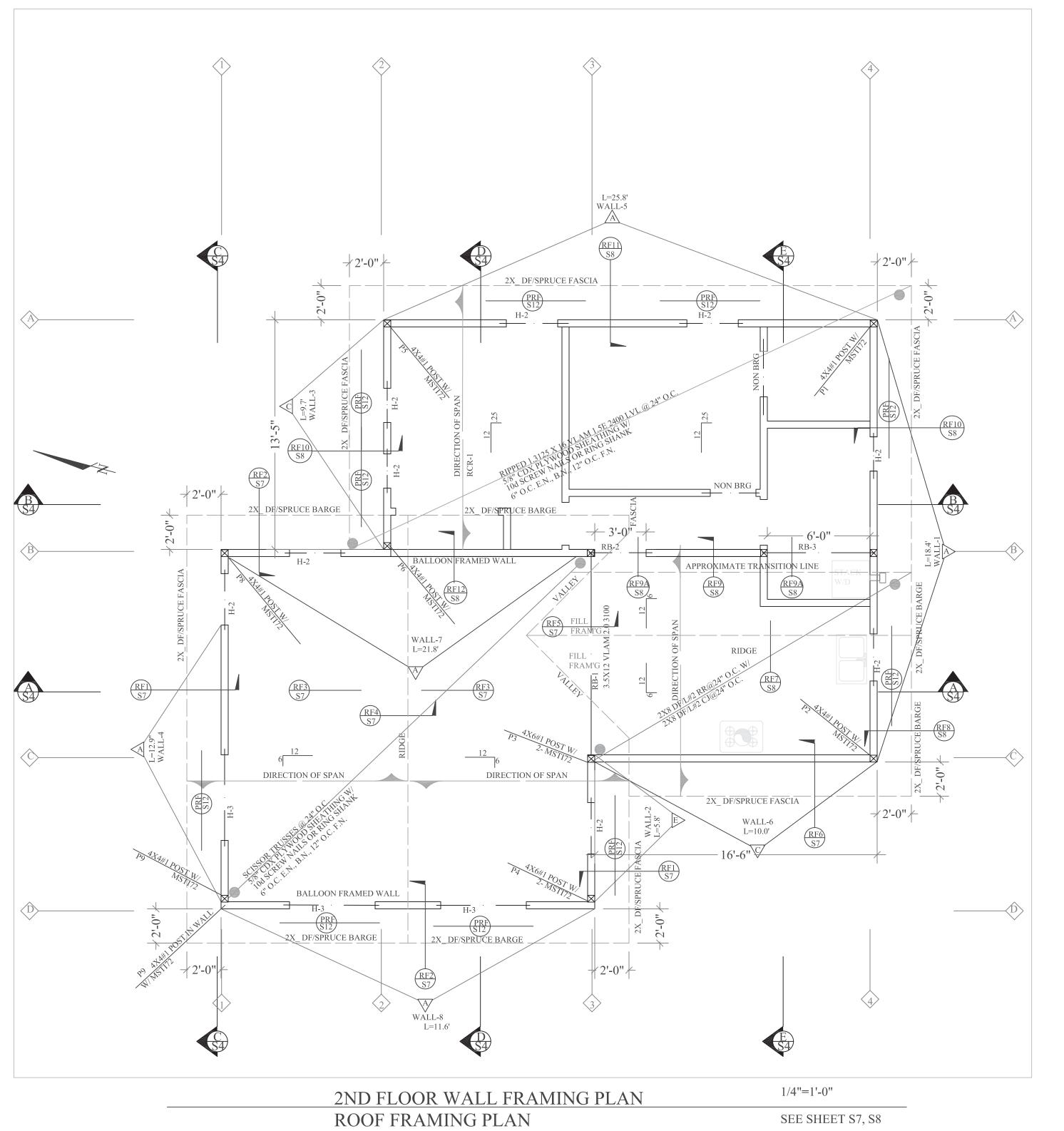
DATE: REVISIONS

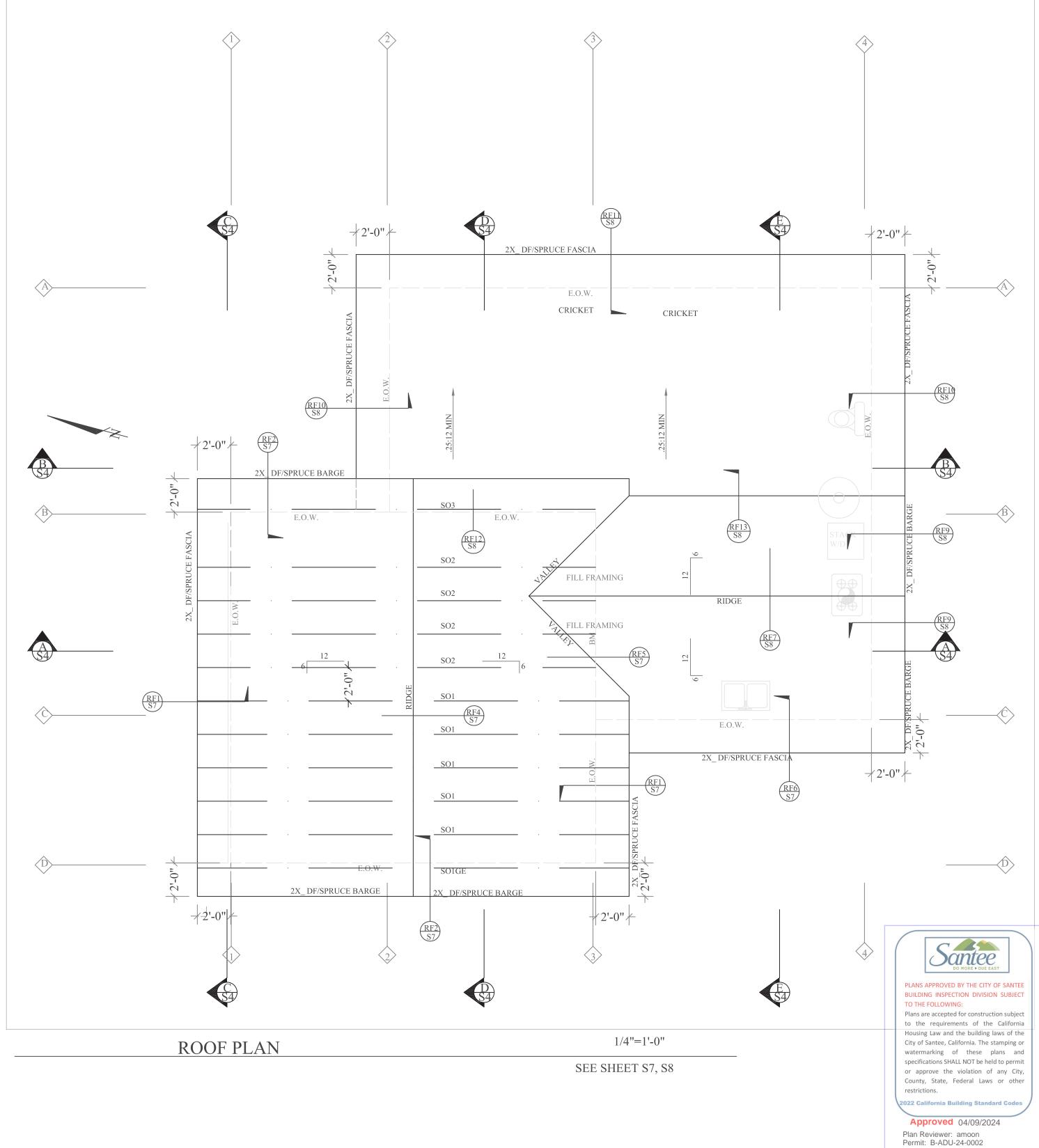
(619) #

92

SHEET NO







\*NOTE\*\_
"PENETRATIONS OF FIRE-RESISTING WALLS, FLOOR-CEILINGS
AND ROOF-CEILINGS SHALL BE PROTECTED AS REQUIRED IN
CRC SECTION R302.4."



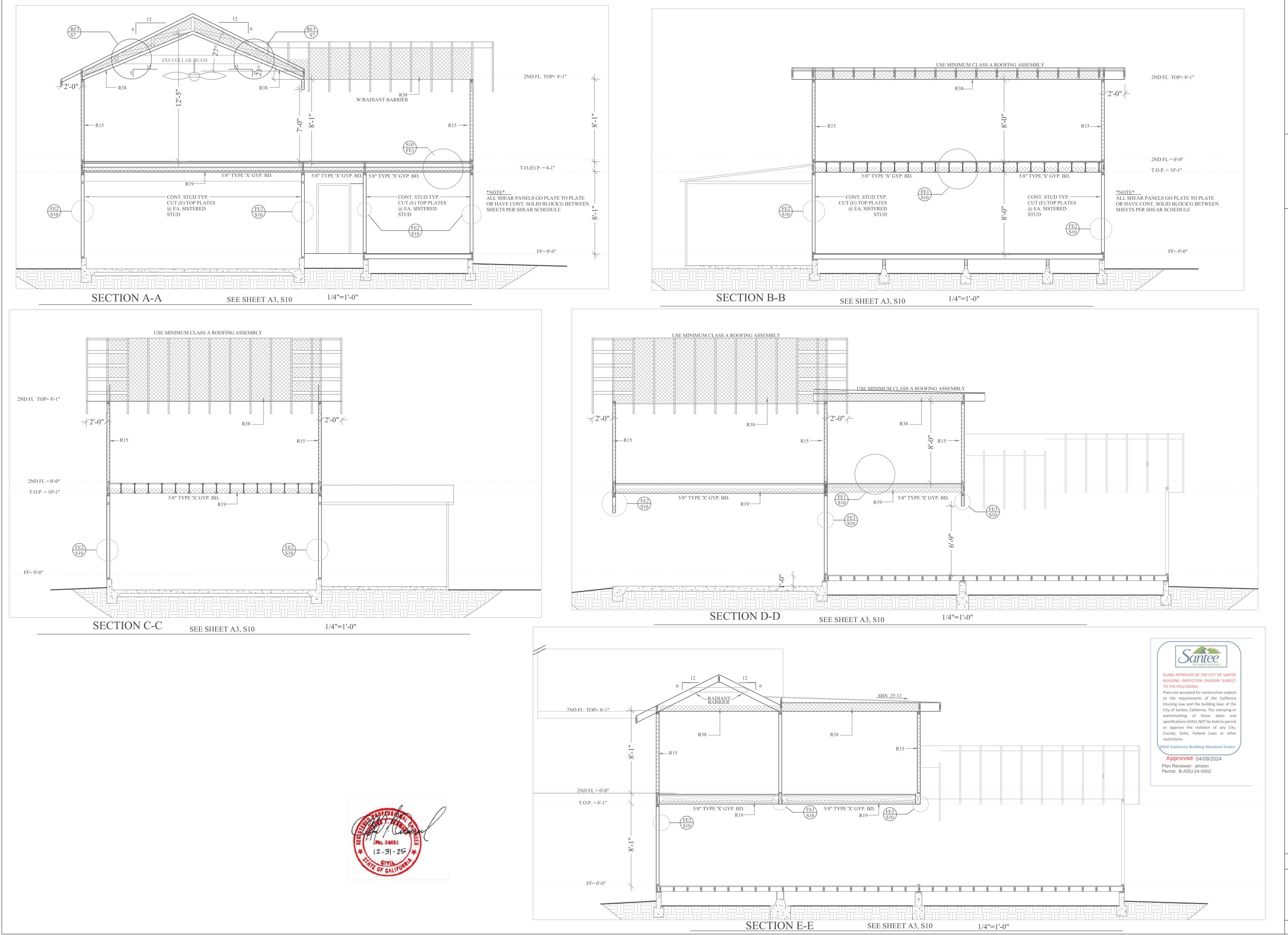
ON TEST:

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10 OF 24 SHTS.

9257 MASSOT AVENUE, SANTEE CA 92071

ARCHITECT: R.E.MINOR & ASSOCIATES (REMA) 1281 HANSON WAY, RAMONA, CA, 92065



DATE:
REVISIONS:

ROBERT E. MINOS.

RENEWALDATE

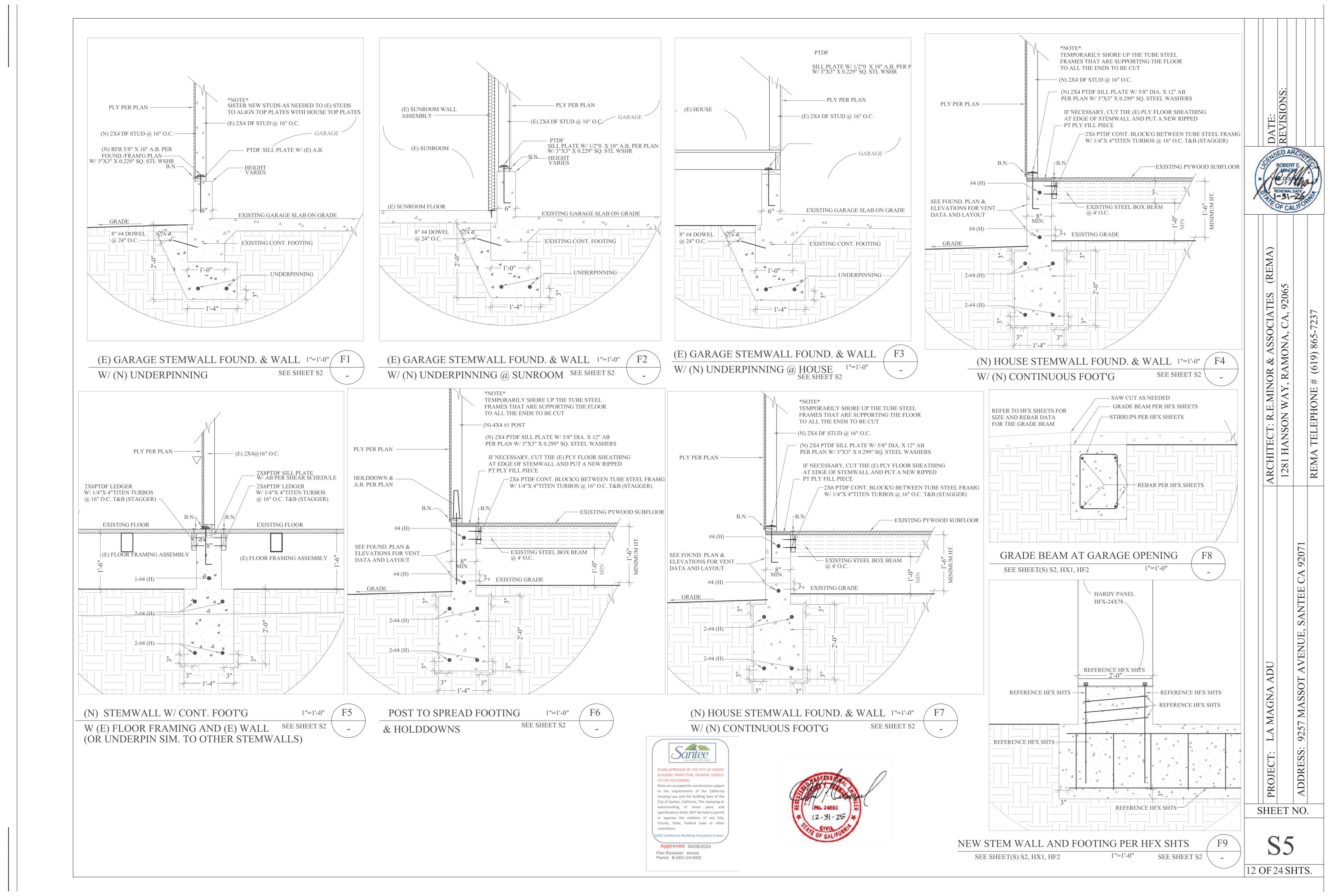
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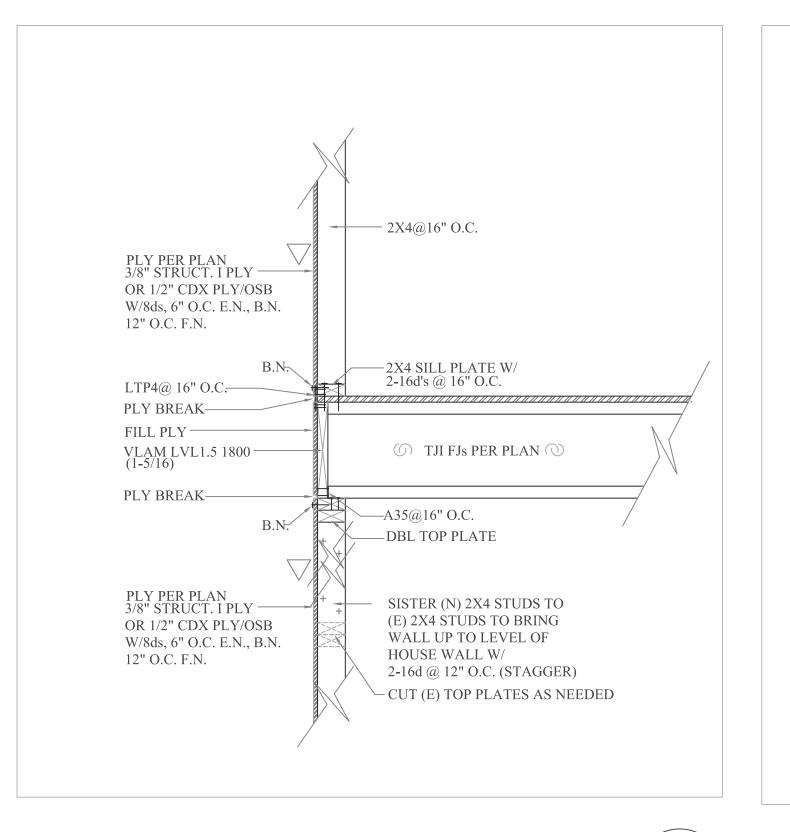
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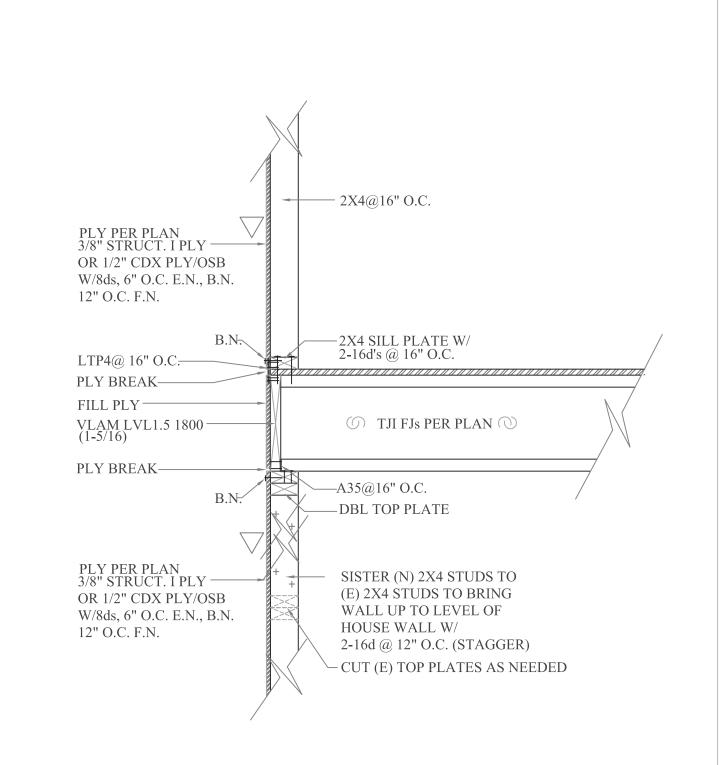
(619) 865-7237 9257 MASSOT AVENUE, SANTEE CA ADDRESS:

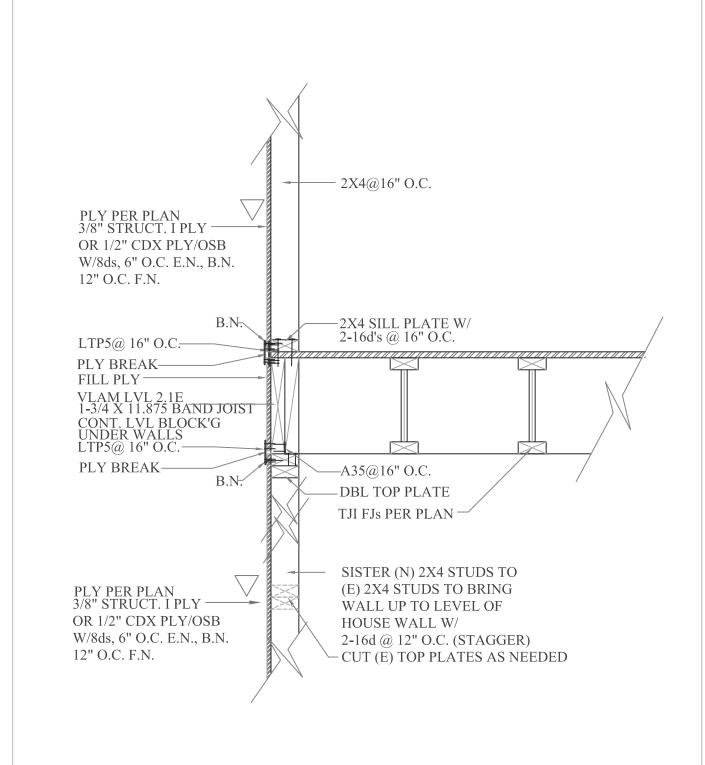
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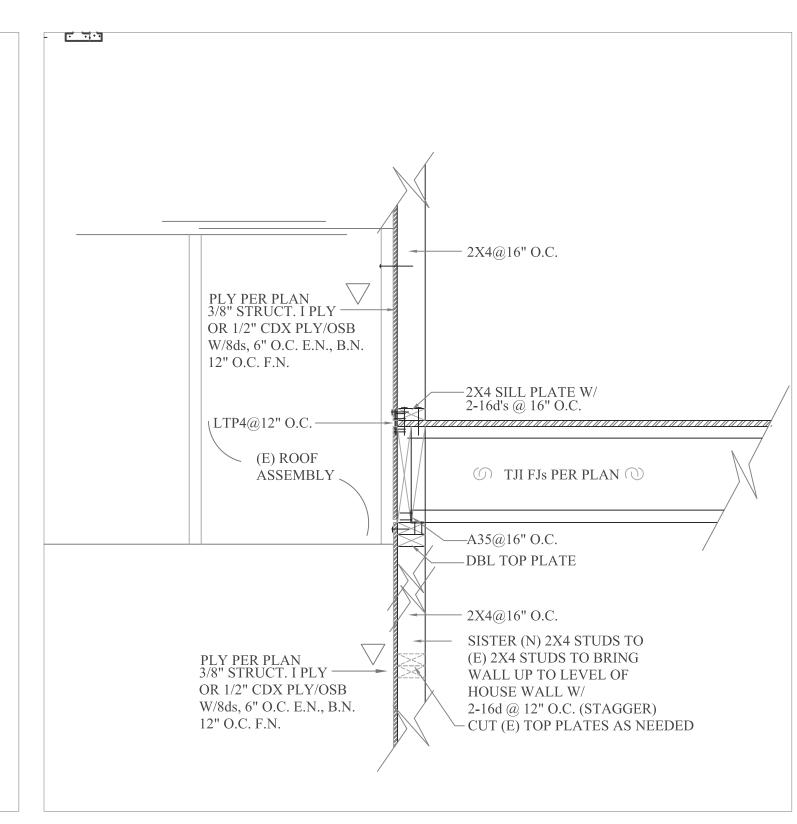
**S**4





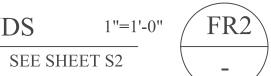




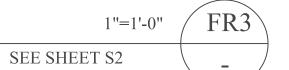




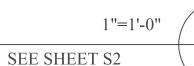




(E) WALL TO FLOOR TO WALL



(E) WALL TO FLOOR TO WALL TO (E) ROOF



DATE: REVISIONS:

(REMA)

VOR & ASSOCIATES (1), RAMONA, CA, 92065

CHITECT: R.E.MINOR & 281 HANSON WAY, RAN

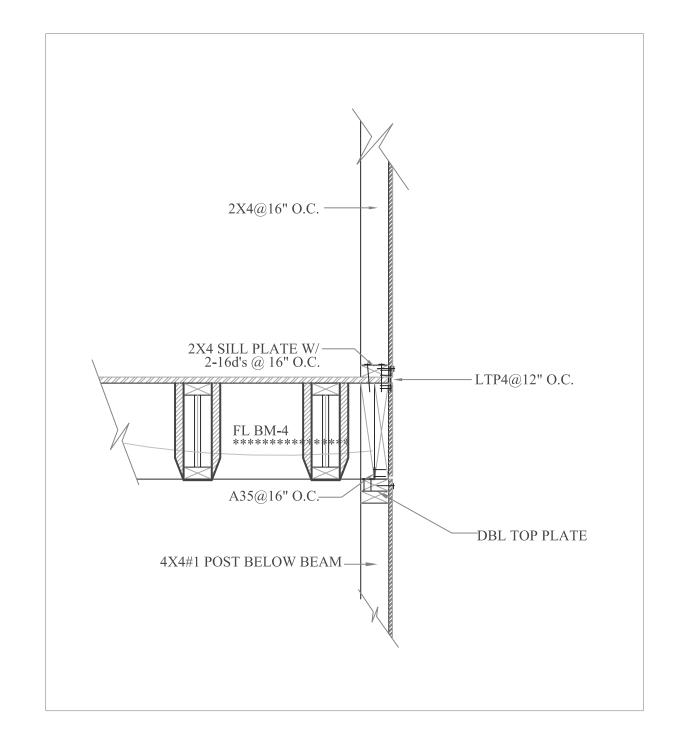
ARC

SANTEE

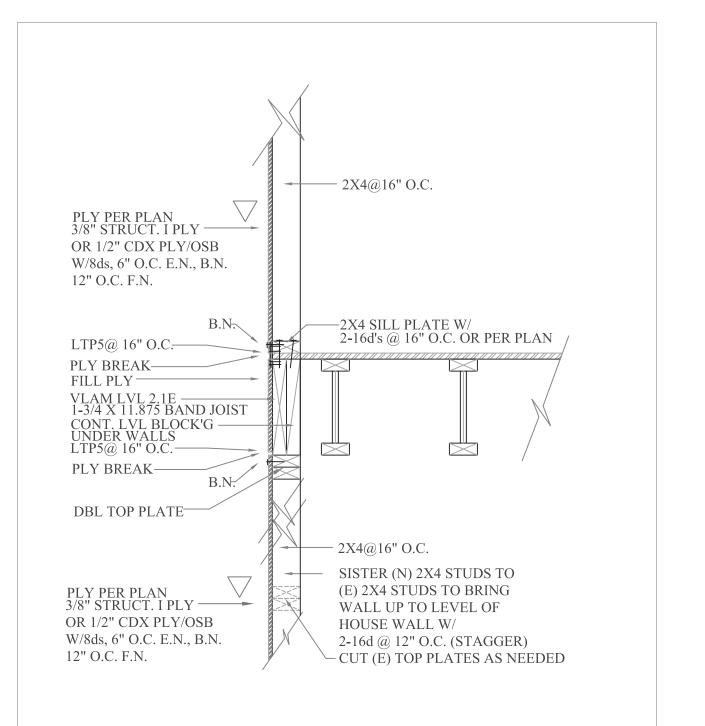
(619) 865-723

5-1/4"X11-7/8" VLAM 2.0 3100 — MSTA24 BM TO TOP PLATE DBL TOP PLATE 4X4#1 POST BELOW BEAM 2X4@16" O.C.

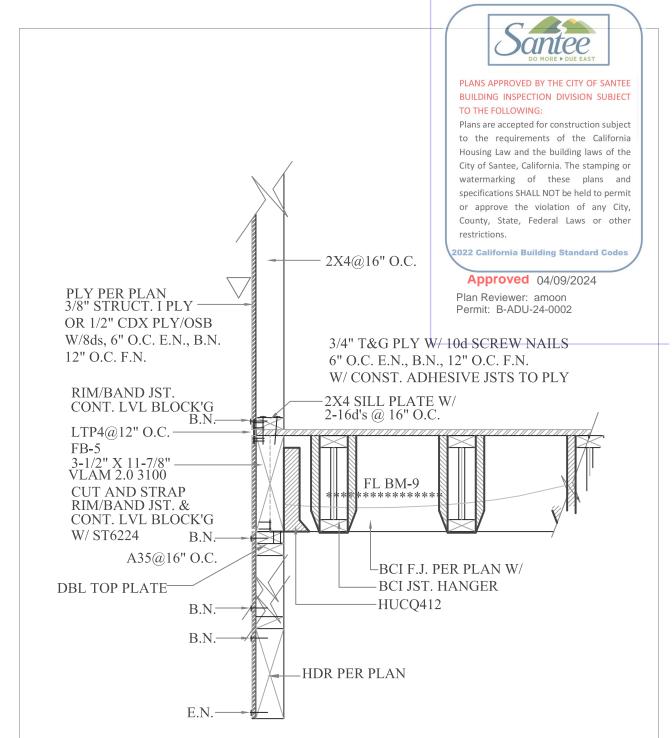








(E) WALL TO TO FL. TO WALL 1"=1'-0"	FR7
SEE SHEET S2	_ /

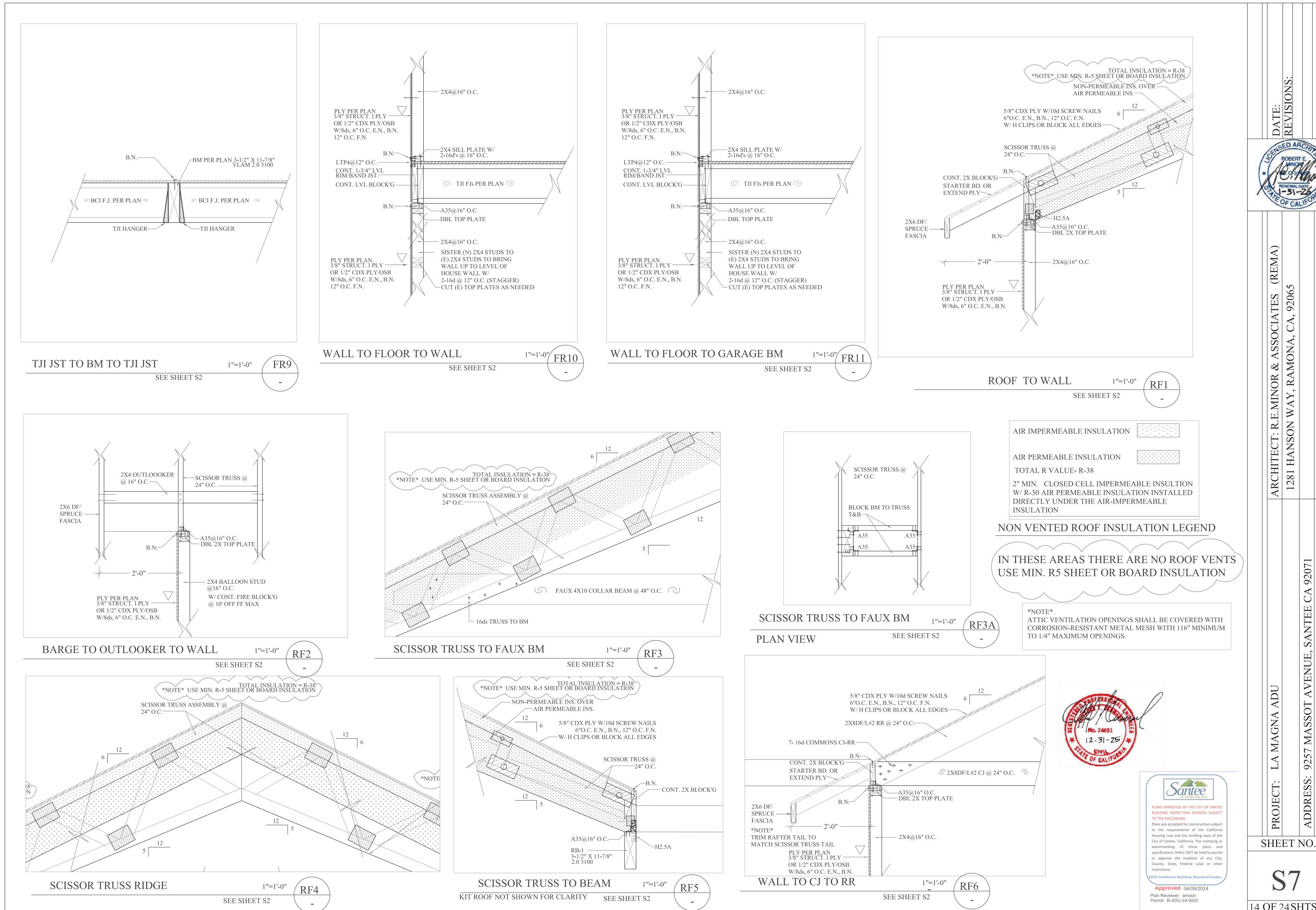




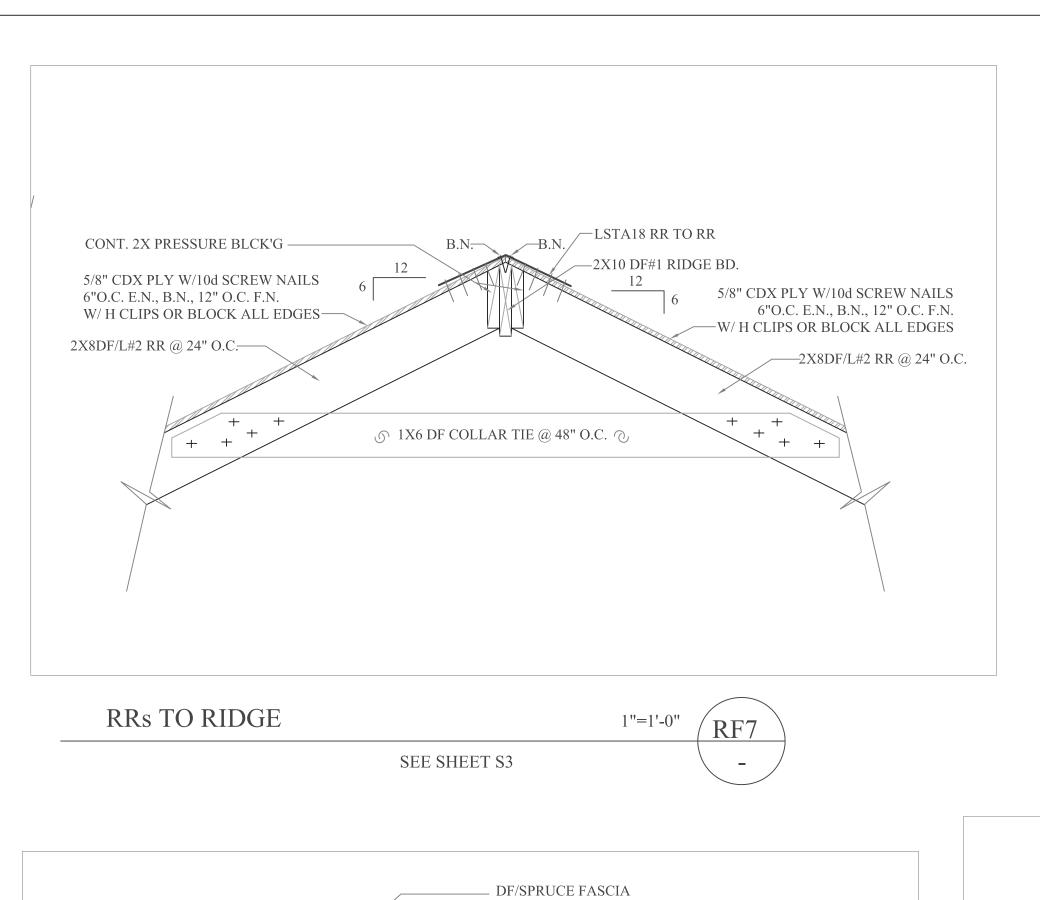


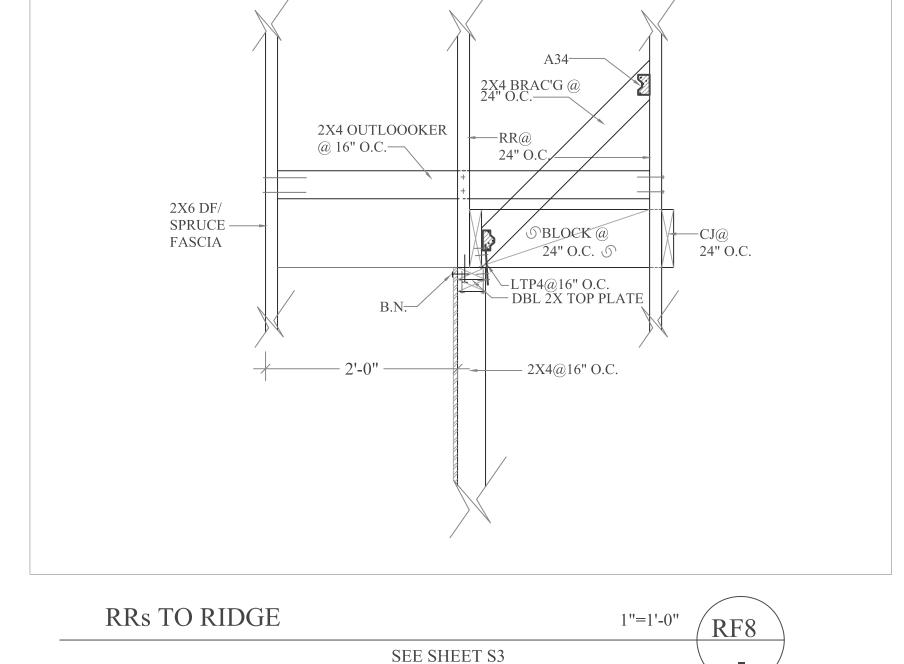
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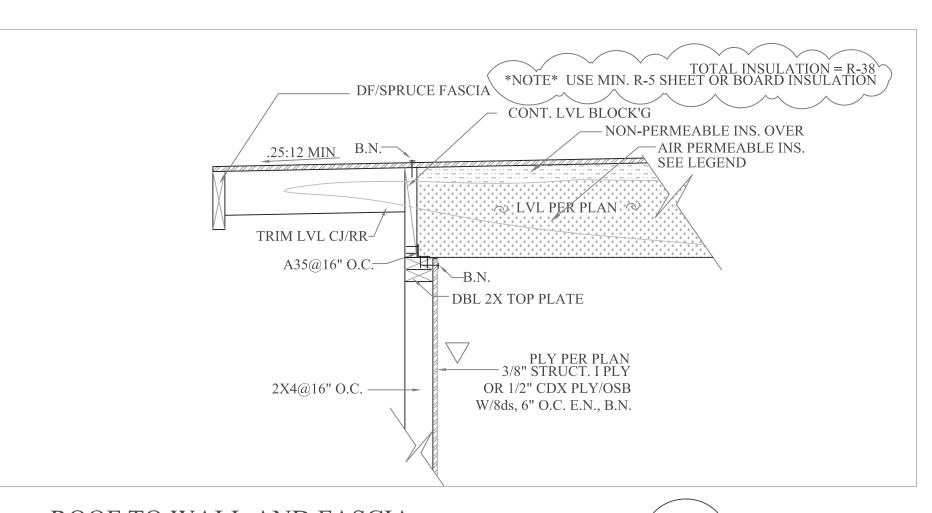
A MAGN

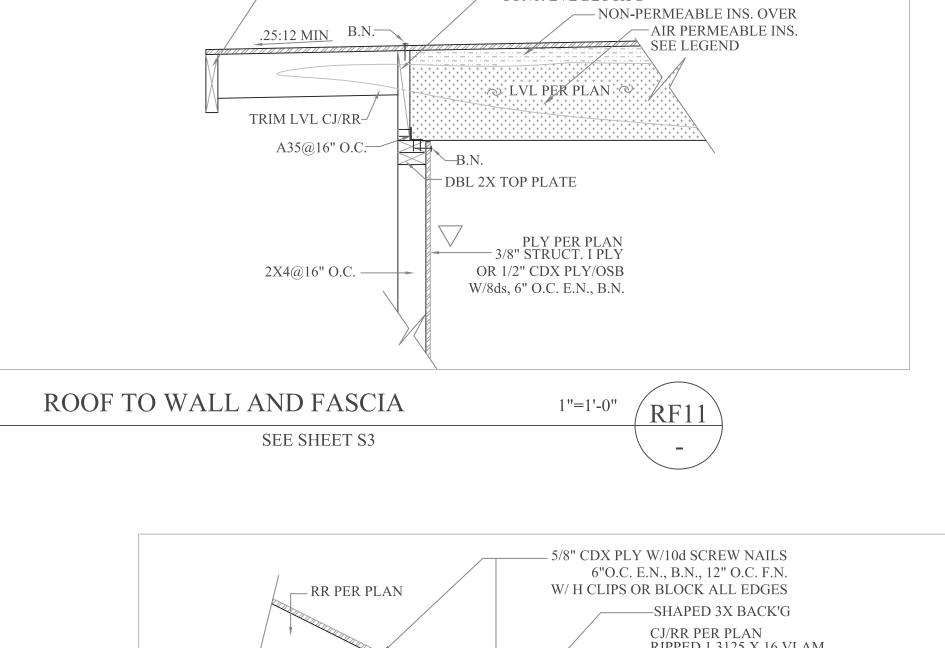


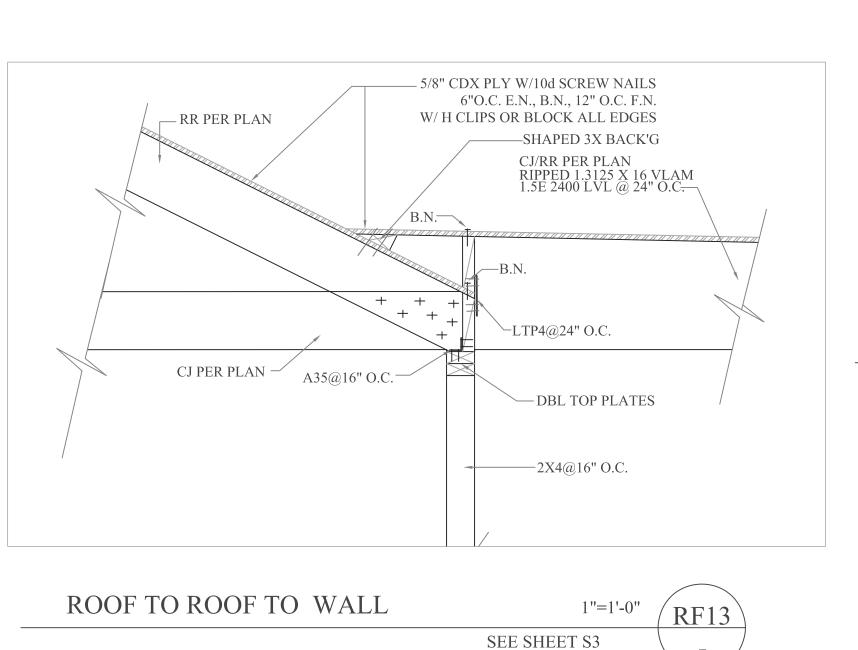
(619) 865-723

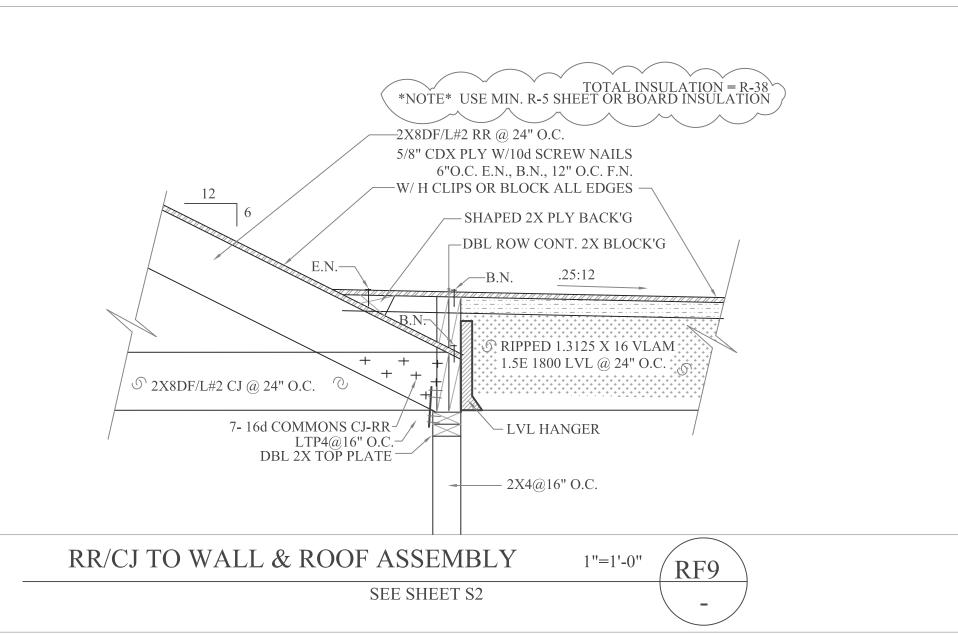


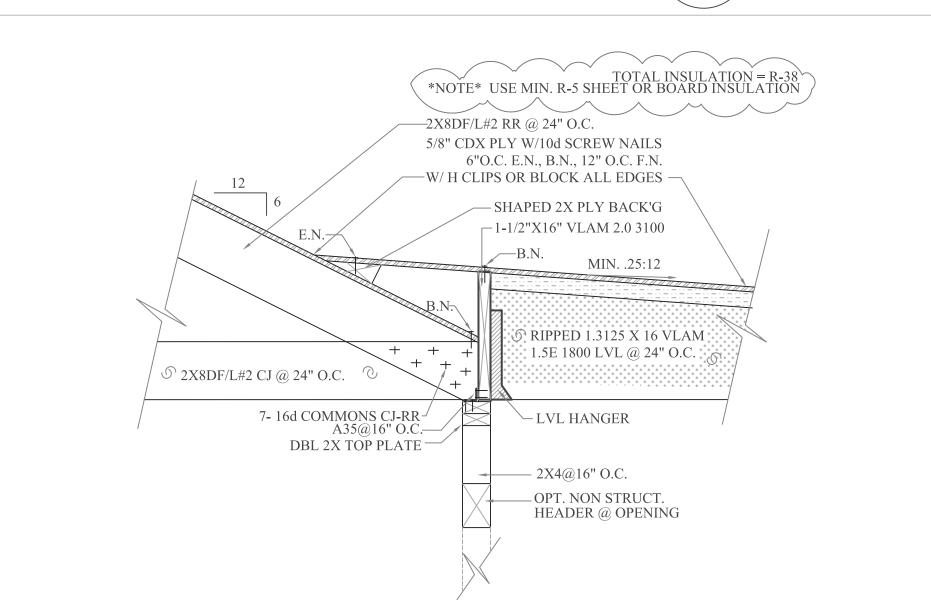








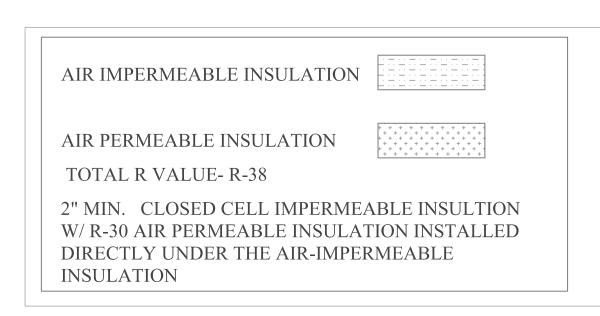




SEE SHEET S3, S4 (SECT. E-E)

1"=1'-0"

RF9A



RR/CJ TO RB-3



NON VENTED ROOF INSULATION LEGEND

IN THESE AREAS THERE ARE NO ROOF VENTS USE MIN. R-5 SHEET OR BOARD INSULATION



PROJECT: SHEET NO.

DATE: REVISIONS:

(REMA)

VOR & ASSOCIATES (1), RAMONA, CA, 92065

E.MINOR I WAY, RA

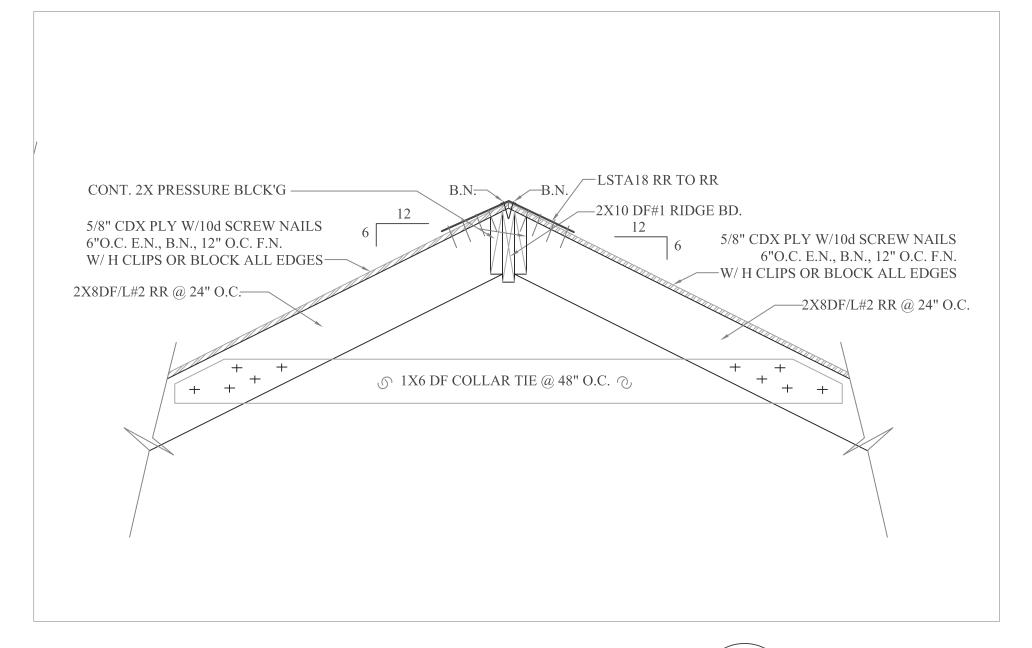
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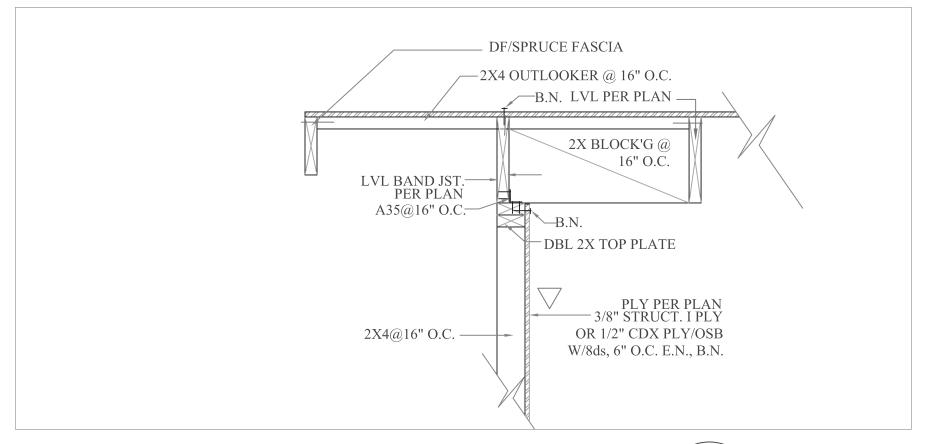
ARC 128

SANTEE

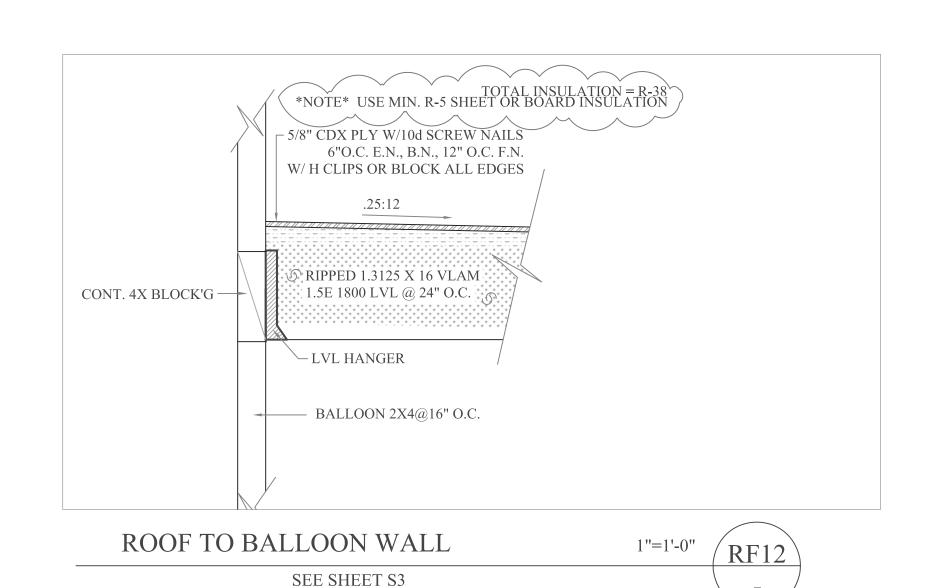
AVENUE,

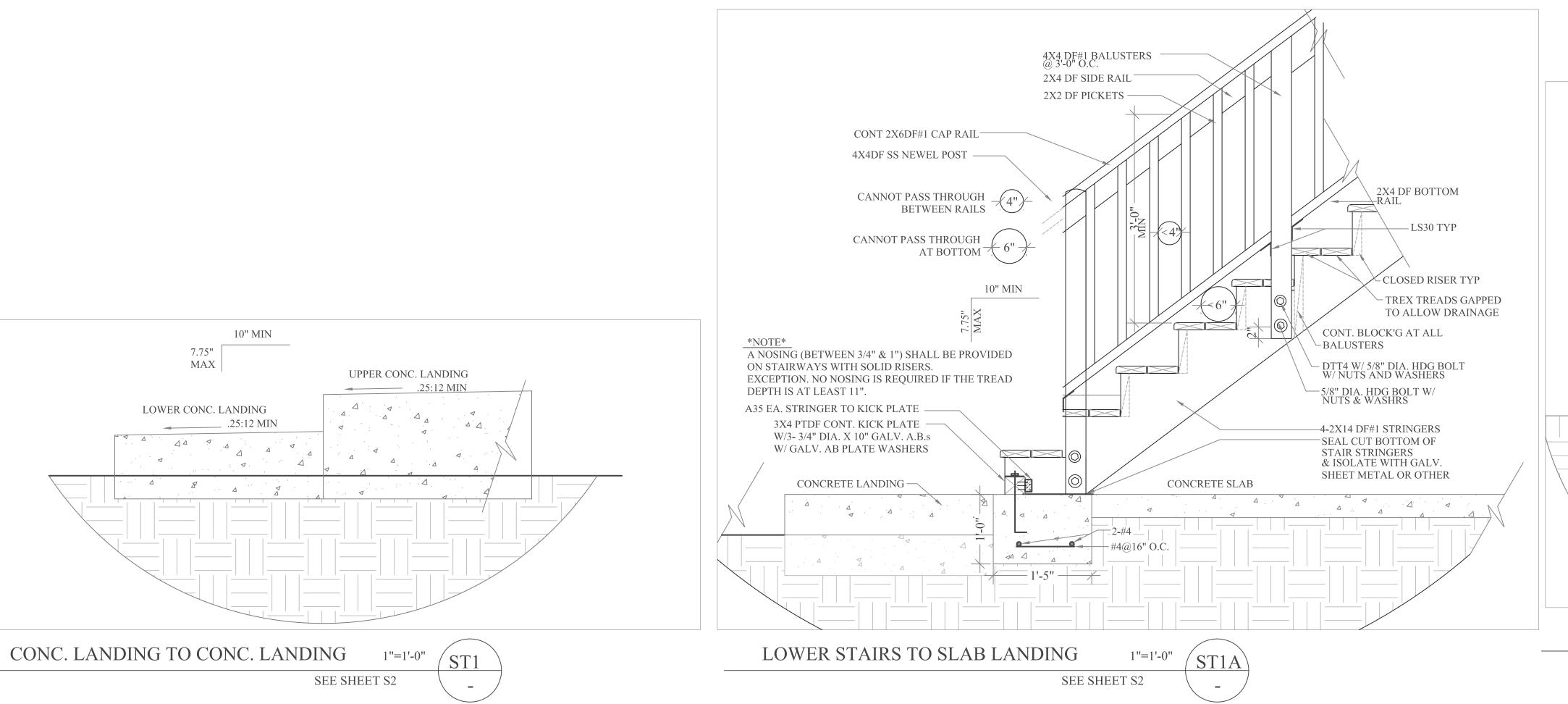
(619) 865-7237

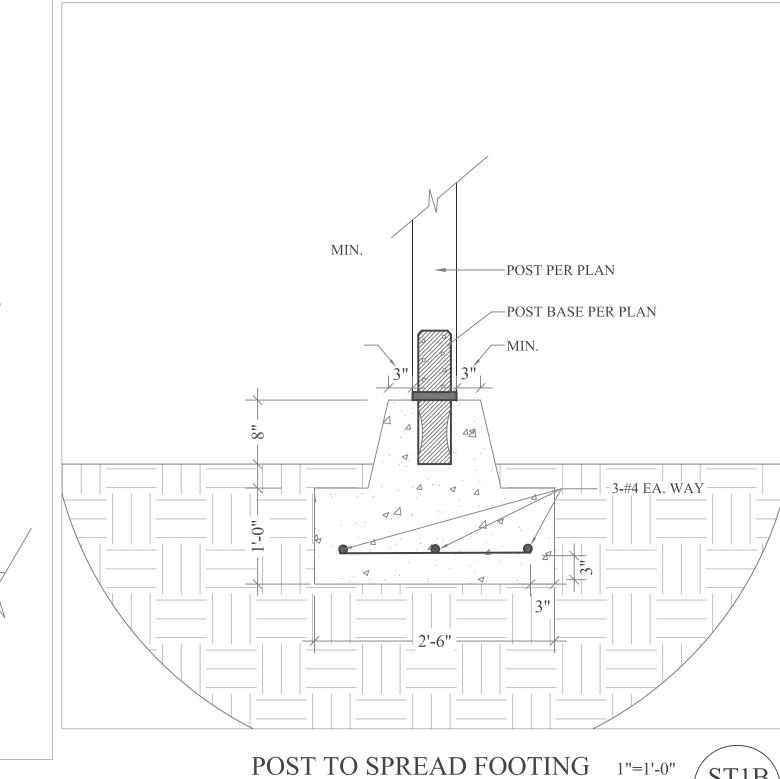


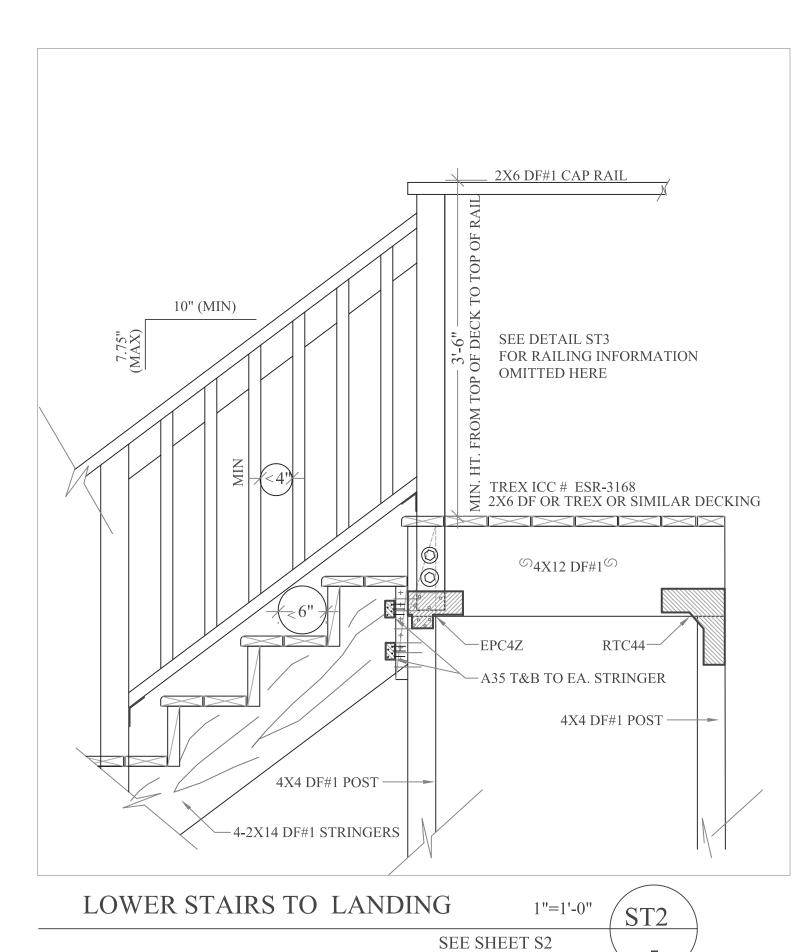


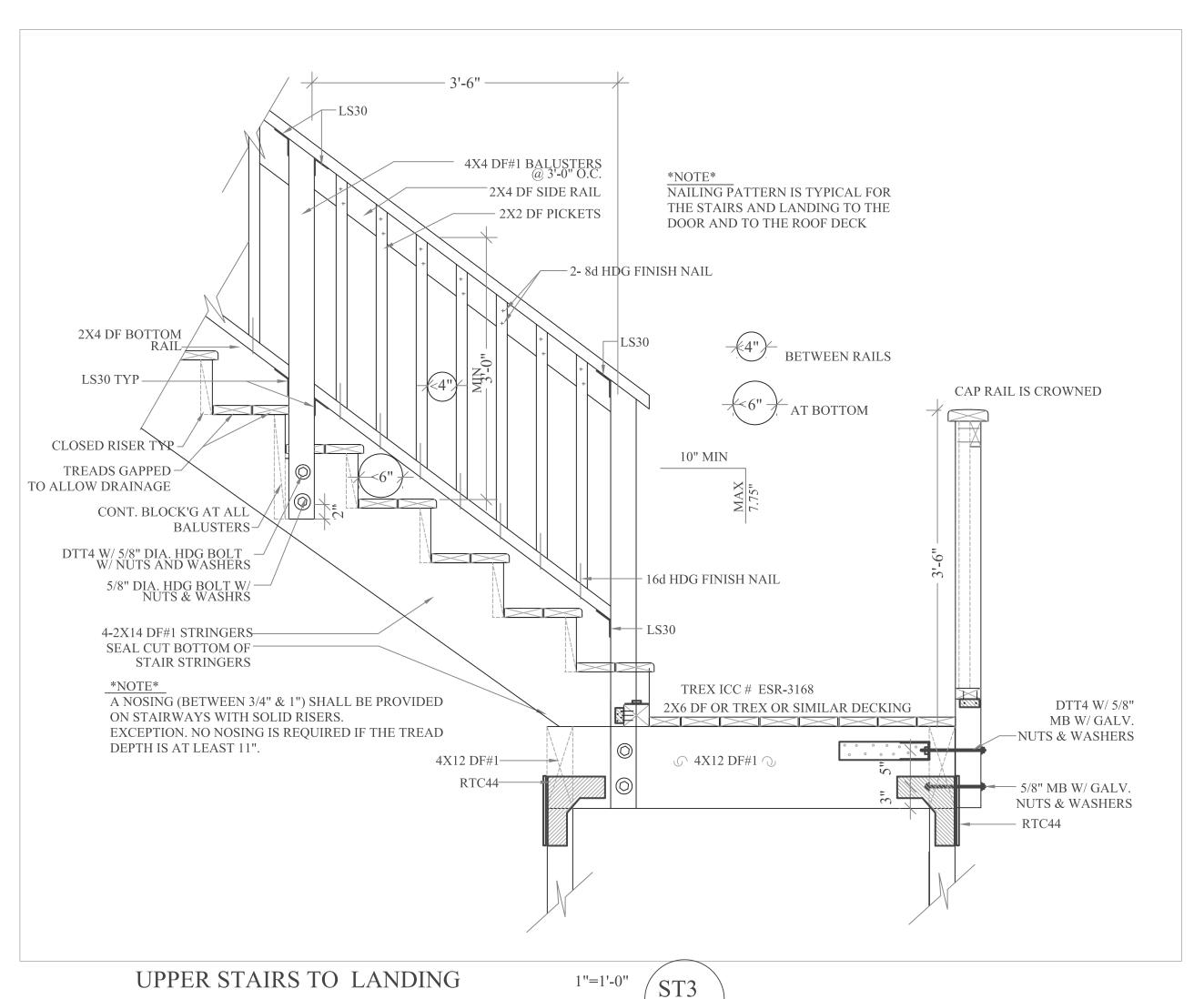




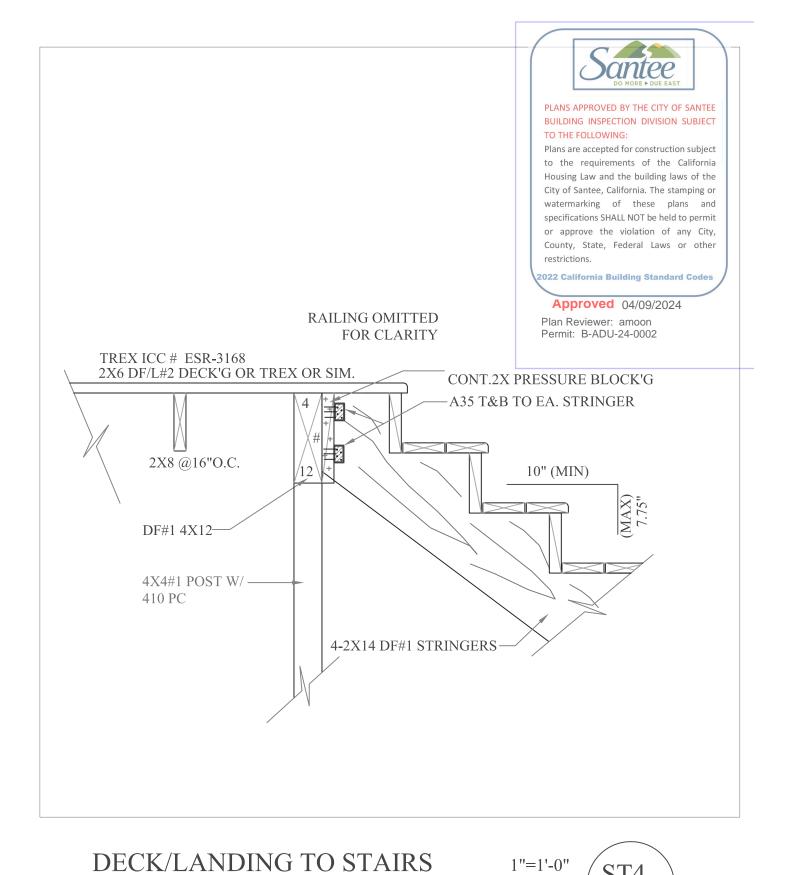






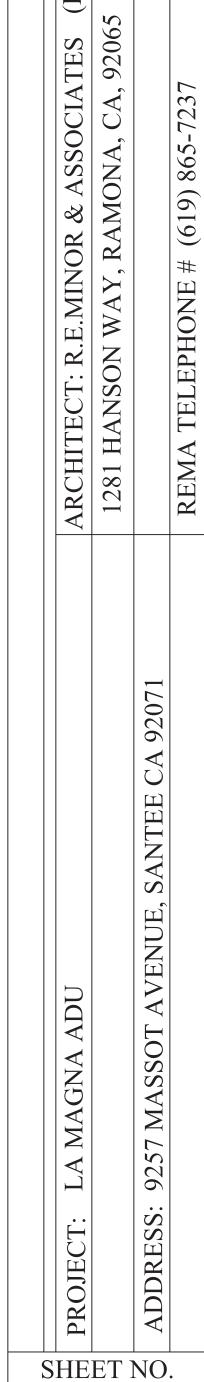


SEE SHEET S2



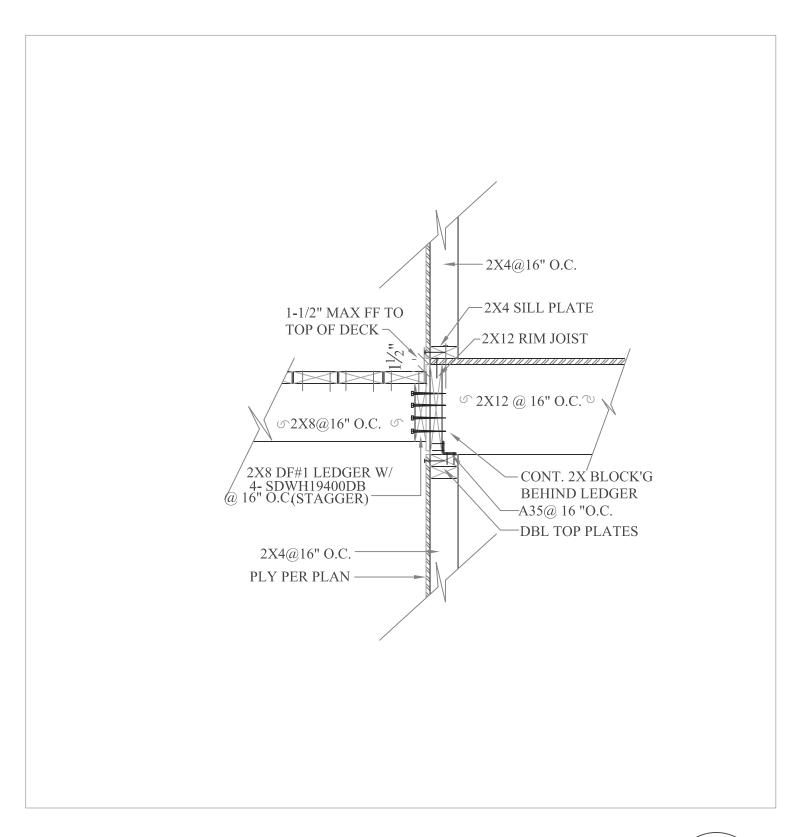
SEE SHEET S2

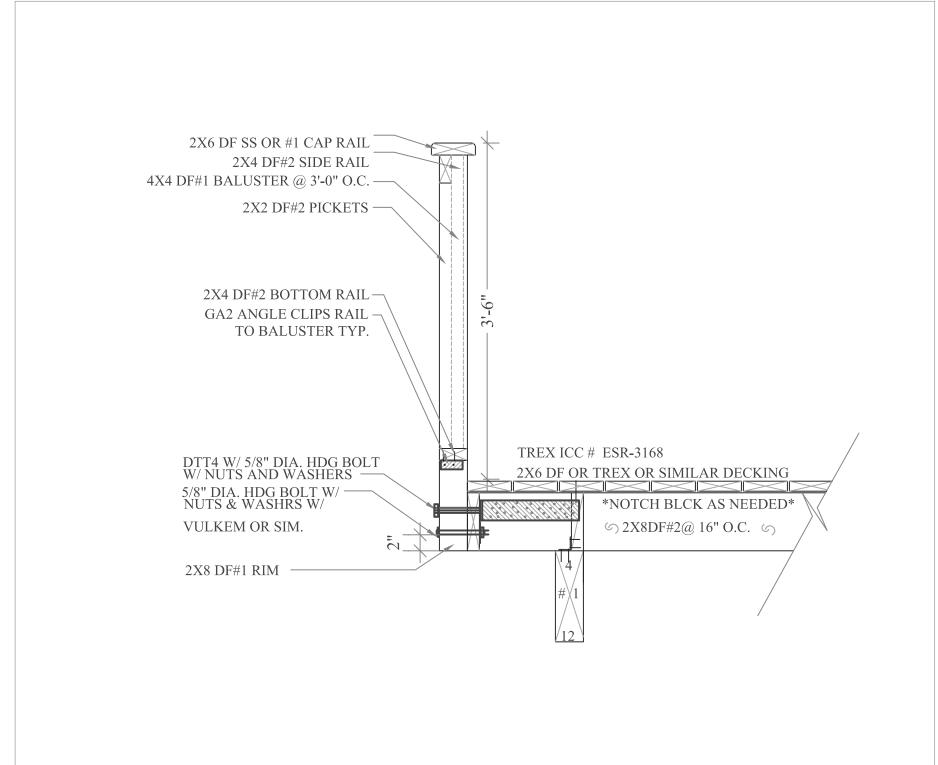
SEE SHEET S2

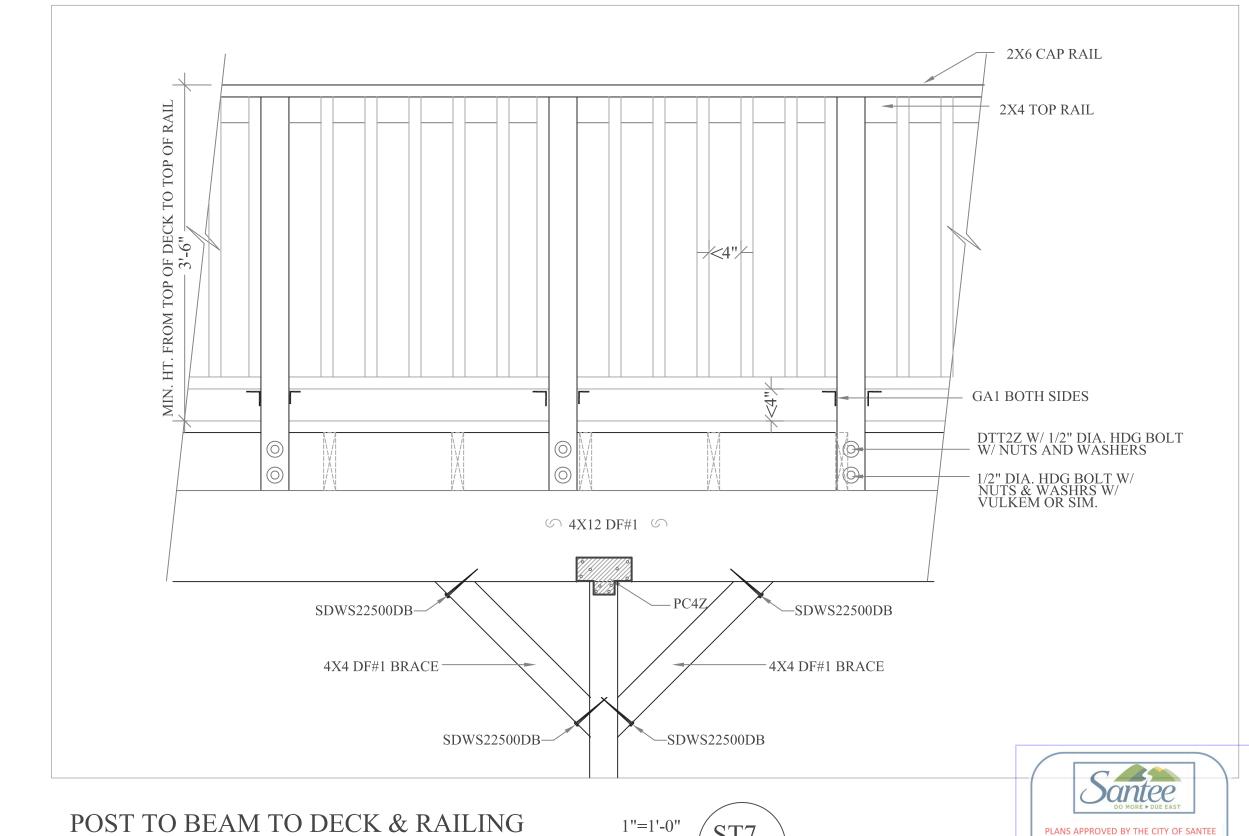


(REMA)

**S**9







SEE SHEET S2





LA DBS P/B 2017-069

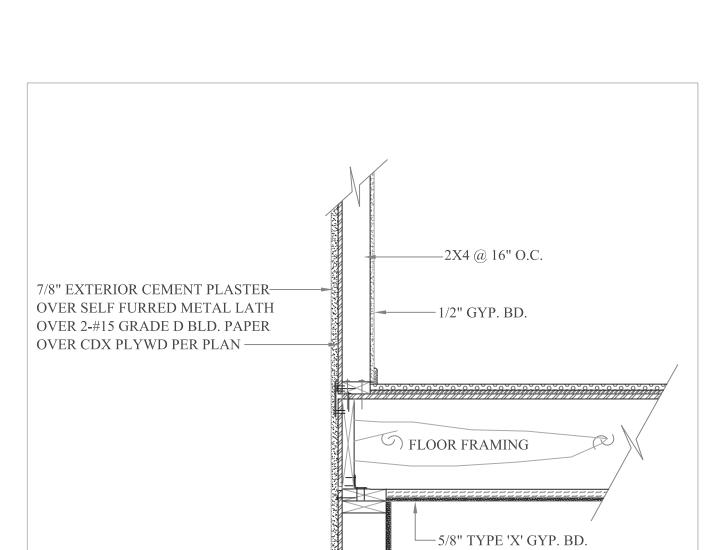
& 40 OZ JUTTED PAD

- R-13 MIN. INSULATION

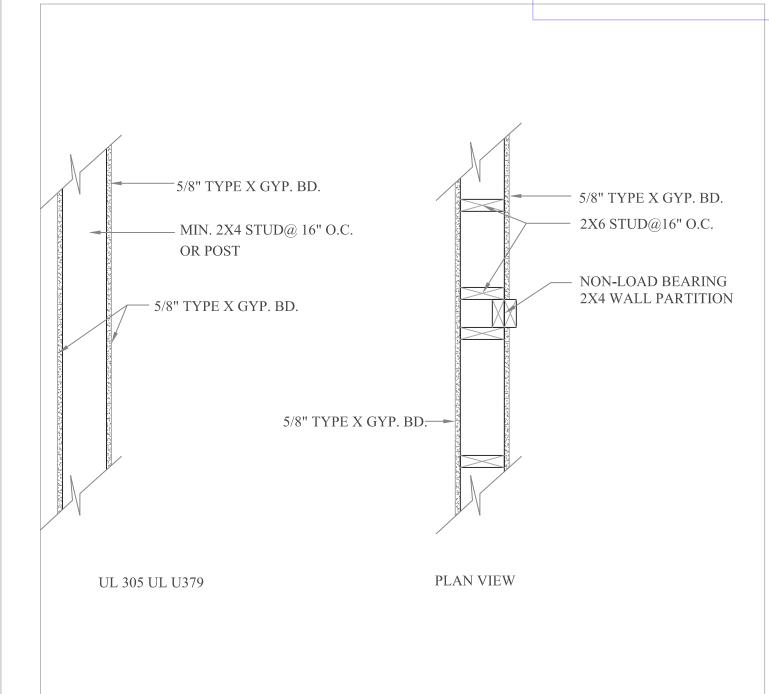
— 5/8" TYPE 'X' GYP. BD.

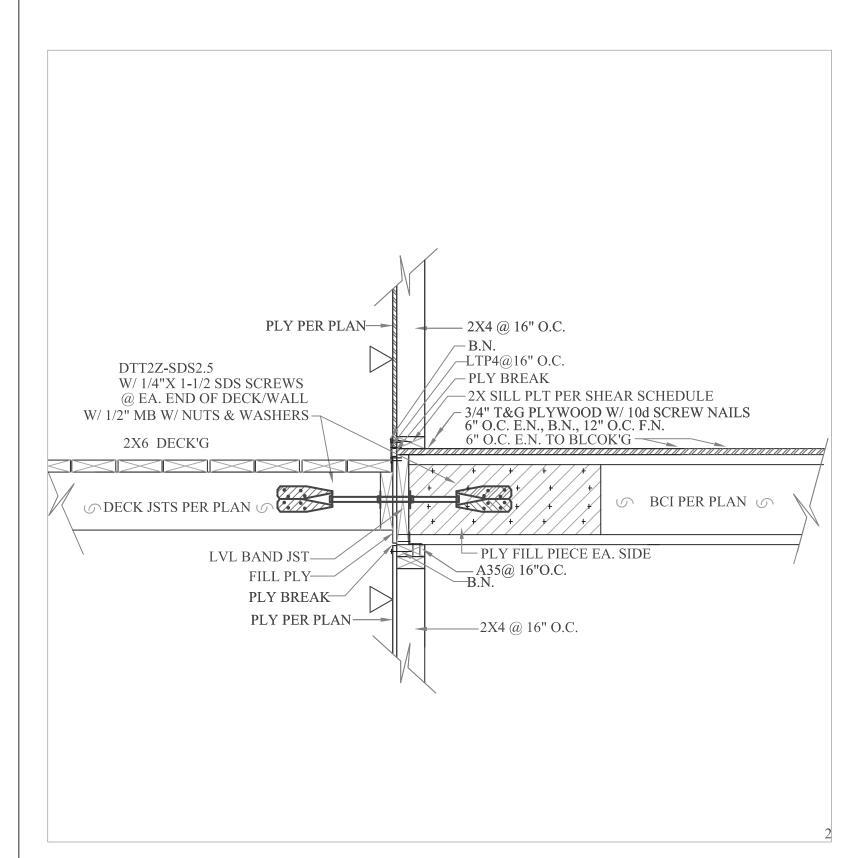
- 1" RESILIENT CHANNEL@16" O.C.

13 0Z FACE WT. CARPET (31 OZ TOT)



IBC TABLE 7.2.1.1(I)



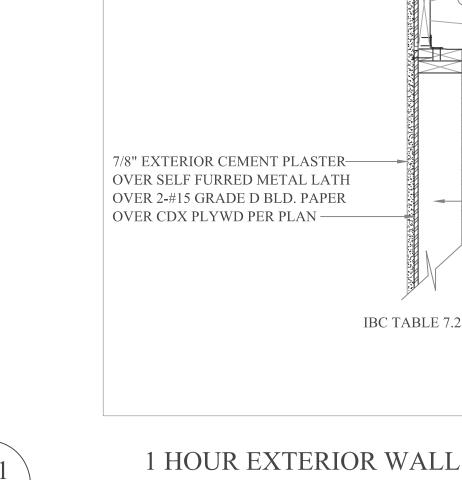


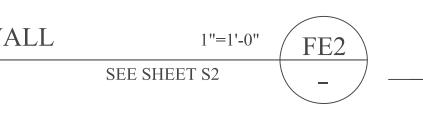
SEE SHEET S2

HOUSE TO DECK LEDGER

LATERAL TENSION DEVICE







**−** 5/8" TYPE 'X' GYP. BD.

——2X6 @ 16" O.C.



(REMA) VOR & ASSOCIATES (1), RAMONA, CA, 92065 (619) 865-7237 CHITECT: R.I 81 HANSON ARC

BUILDING INSPECTION DIVISION SUBJECT

Plans are accepted for construction subj to the requirements of the Californi Housing Law and the building laws of th

watermarking of these plans ar specifications SHALL NOT be held to permi or approve the violation of any City,

County, State, Federal Laws or other

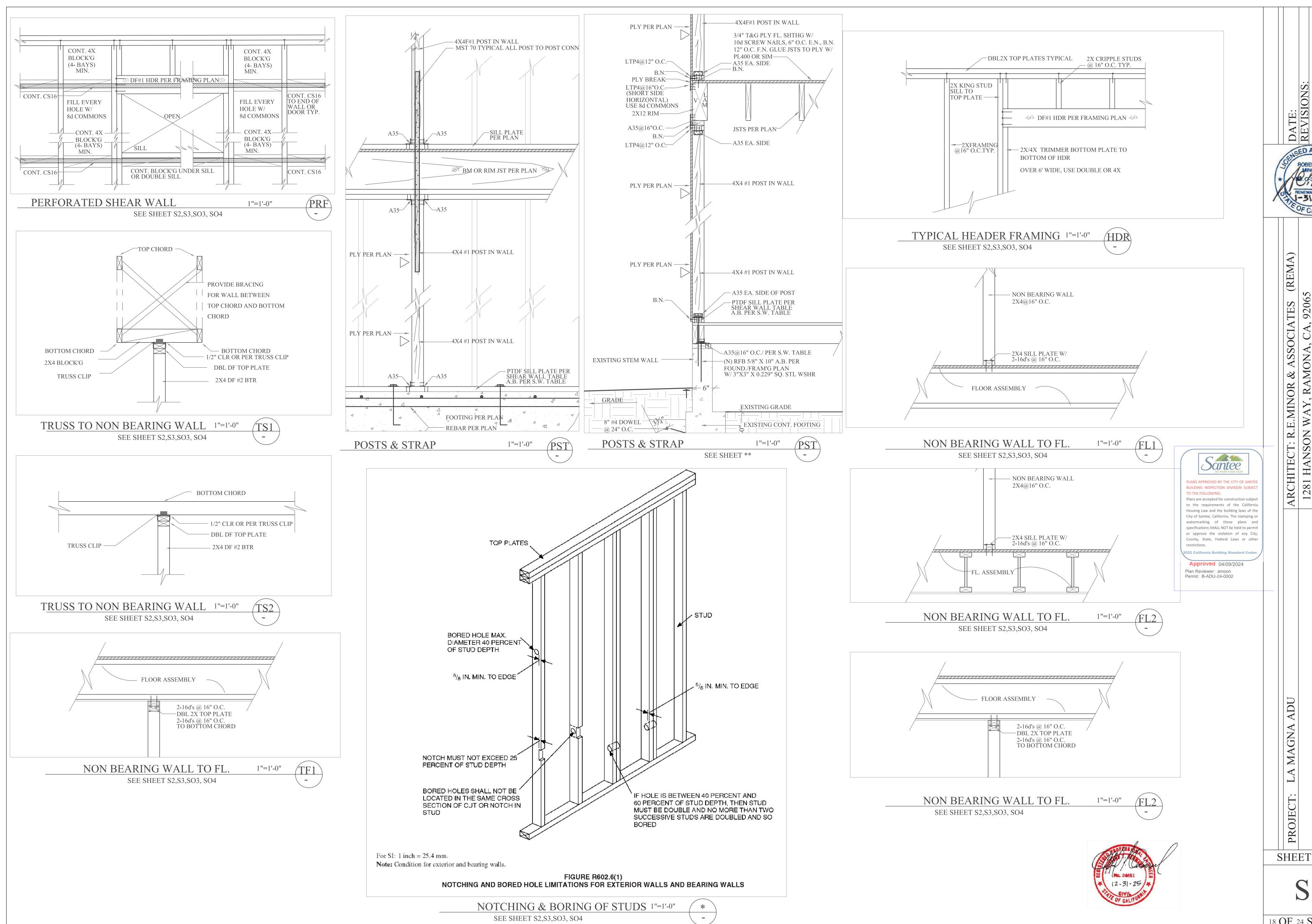
**Approved** 04/09/2024 Plan Reviewer: amoon Permit: B-ADU-24-0002

1"=1'-0"

TO THE FOLLOWING:

DATE: REVISIONS:

SHEET NO.



(619) 865-

TELEPHONE

9207

MASSOT 9257

SHEET NO.

CONTINUOUS FOOTING

(2B)

STEM WALL @ OUTSIDE CORNER

**UA SECTIONS & ELEVATIONS** 

**CURB @ OUTSIDE CORNER** 

(1B)

**CURB @ OUTSIDE CORNER** 

**RA SECTIONS & ELEVATIONS** 

**CURB @ OUTSIDE CORNER** 

BB-RA SECTIONS & ELEVATIONS

CONTINUOUS FOOTING

(3B)

DESIGNS ARE TO RESIST LOADING PER ACI 318-19. SEC 17.10.5.3 2. STD INDICATES ANCHORS COMPLYING WITH ASTM F1554 GRADE

36 WITH A HARDY FRAME BOLT BRACE (HFXBB) INSTALLED WITH STD OR GRADE 8 DOUBLE NUTS ON THE EMBED END. HS INDICATES ANCHORS COMPLYING WITH ASTM A193 GRADE B7

WITH A 1/2"x3"x3"(MIN) HFPW PLATE WASHER INSTALLED WITH DOUBLE NUTS ON THE EMBED END (HFXBB NOT REQUIRED).

4. LE = LENGTH OF EMBEDMENT FROM THE TOP OF FOOTING OR GRADE BEAM TO THE TOP OF THE HFXBB BOLT BRACE (TOP OF

5. CA1 = DISTANCE FROM HD CENTERLINE TO THE END OF THE FOOTING OR GRADE BEAM

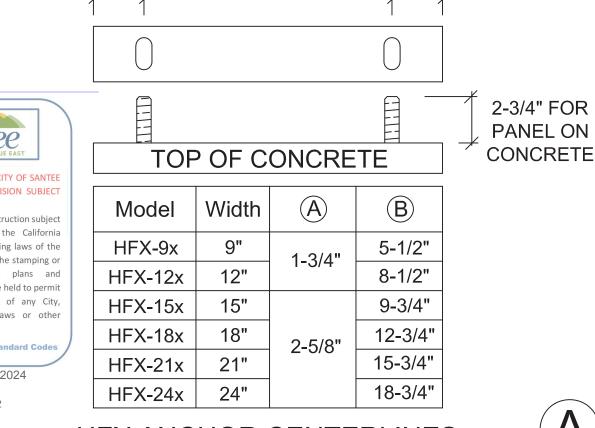
6. CA2 = DISTANCE FROM HD CENTERLINE TO BOTH THE FRONT AND THE BACK FACE OF THE FOOTING OR GRADE BEAM.

SHEAR TIES ARE GRADE 60 (MIN) REBAR AND REQUIRED FOR NEAR EDGE DISTANCE CONDITIONS PER ACI 318-19, F'C = 2,500 PSI. CURBS AND STEM WALLS MUST BE 6 INCH (MIN) WIDTH FOR UA AND RA, 12 INCH (MIN) WIDTH FOR BB-RA.

FOR UA APPLICATIONS, ADDITIONAL TIES MAY BE REQUIRED AT STEM WALLS. SHEAR TIES ARE NOT REQUIRED FOR INSTALLATION AWAY FROM EDGE (SEE DETAIL 1A), INSTALLATION ON WOOD FRAMING, OR FOR IRC BRACED WALL PANEL

9. STIRRUPS ARE GRADE 60 (MIN) REBAR. SEE TABLE FOR SIZE AND SPACING. SEE "STIRRUP LAYOUT" DIAGRAMS AND "KEY" FOR LAYOUT PATTERNS.

10. CONCRETE EDGE DISTANCES MUST COMPLY WITH ACI 318-19. SECTION 17.9.2. COATED REINFORCEMENT MAY BE SPECIFIED BY THE EOR TO LIMIT EXPOSURE AND THEREFORE REDUCE MINIMUM CONCRETE COVER. COATED REINFORCEMENT MUST COMPLY WITH ACI 318-19, SECTION 20.5.2.



- ANCHORAGE IS DESIGNED FOR TENSION AND SHEAR TRANSFER ONLY, FOUNDATION DESIGN
- REQUIREMENT AND IS NOT INTENDED TO REPLACE REINFORCEMENT DESIGNED BY THE
- HFXBB BOLT BRACE MAY BE PLACED ON TOP OF THE STIRRUPS WITH DOUBLE-NUTS INSTALLED AT EMBED END OF STANDARD GRADE ANCHOR RODS. (NOTE:  $\frac{1}{2}$ " x 3" x 3" MIN. HFPW PLATE WASHERS ARE REQUIRED TO BE DOUBLE-NUTTED AT EMBED END OF HIGH STRENGTH ANCHOR RODS.)
- BY HARDY FRAMES ARE STAMPED ON BOTH

DATE: 1-1-2023



**IMPORTANT NOTES** 

REVISIONS DATE

PANEL

×

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**DETAIL** 

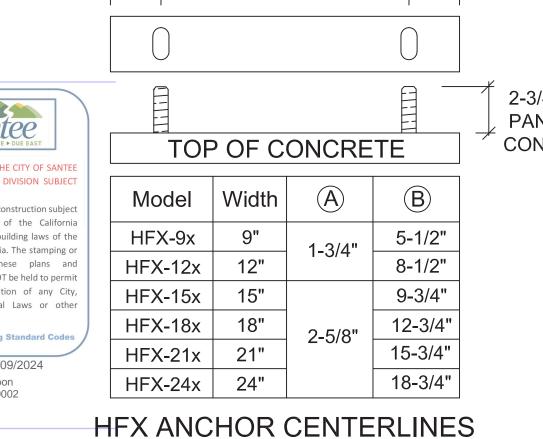
ANCHORAGE

Y FRAME SH SWINGLEY STERFIELD, N

A

DETAIL SHEET IS NOT PROPRIETARY AND IS NOT REQUIRED FOR PLAN SUBMITTAL WITH HARDY FRAME PRODUCTS

THE EMBEDDED HFPW PLATE WASHER @ HS ANCHORS)



**IMPORTANT!** 

2. REINFORCEMENT SHOWN IS THE MINIMUM

3. FOR RA AND BB-RA INSTALLATIONS, THE

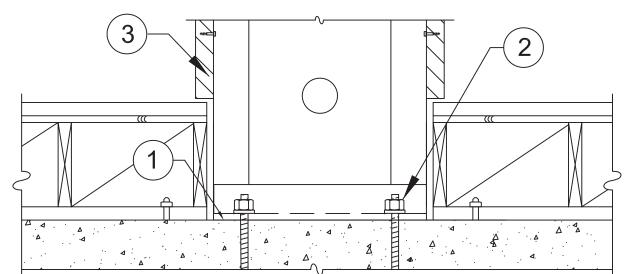
HIGH STRENGTH ALL-THREAD RODS PROVIDED

- WS SCREWS IS PERMITTED. FIELD INSTALLED WOOD BACKING AS NEEDED
- BACK TO BACK INSTALLATION

# **ALTERNATE:**

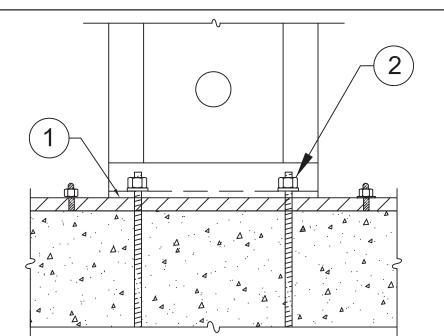
- 1. WOOD FILLER (13  $\frac{1}{2}$ " MAX DEPTH) WITH USP MP4F CONNECTORS BOTH SIDES, QUANTITY BY BUILDING DESIGN PROFESSIONAL
- 1/4" x 3" (MINIMUM) WS SCREWS, QUANTITY PER TABLES ADJACENT FRAMING WITH 1/4" DIAMETER SCREWS INSTALLED THROUGH
- PRE-PUNCHED HOLES IN PANEL EDGES REQ'D WHEN INSTALLING A FILLER GREATER THAN 1-1/2" ABOVE TO BRACE OUT-OF-PLANE HINGE OR WHEN SPECIFIED BY THE DESIGN PROFESSIONAL
- 4. MiTek HFFB FILLER BRACE WITH 1/4"  ${\sf x}$  1-1/2" WS SCREWS TO FILLER (FILL ALL HOLES) AND 1/4" SELF-TAPPING SCREWS TO PANEL (5 MIN. EACH FACE) REQ'D WHEN INSTALLING A FILLER GREATER THAN 3-1/4" ABOVE TO BRACE OUT-OF-PLANE

# FILLER GREATER THAN 1-1/2 IN.



- 1. 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND CONCRETE.
- 2. NUTS AND WASHERS PER TABLE NOTE 1
- ADJACENT FRAMING WITH 1/4" DIAMETER SCREWS INSTALLED AT THE PANEL EDGES WHEN INSTALLING A FILLER GREATER THAN 1-1/2" ABOVE OR WHEN SPECIFIED BY DESIGN PROFESSIONAL

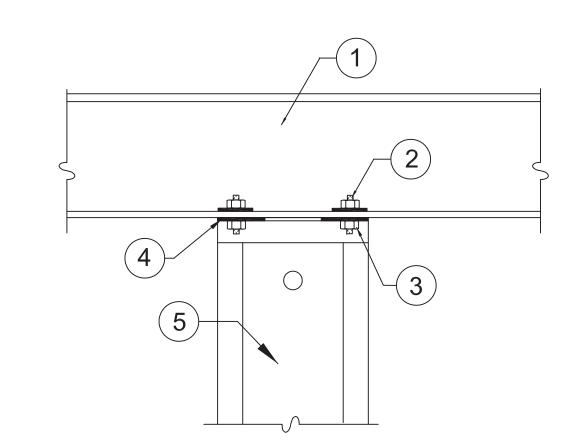
# RAISED FLOOR HEAD-OUT



ALLOWABLE VALUES ON 2x PLATE ARE LESS THAN INSTALLATION ON CONCRETE

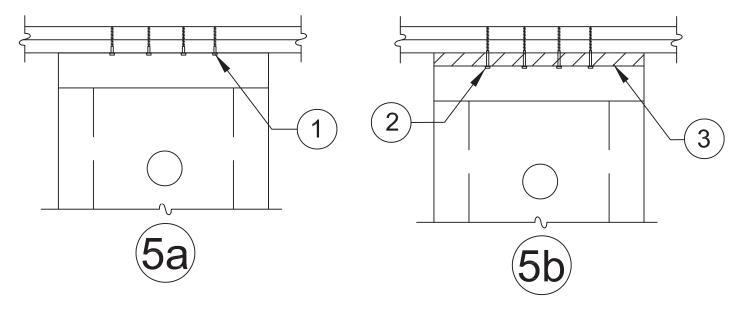
- 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND TREATED PLATE.
- NUTS AND WASHERS PER TABLE NOTE 1.

INSTALLATION ON 2x PLATE



- STEEL BEAM PER PLANS
- ALL THREAD RODS THRU-BOLTED TO STEEL BEAM BY BUILDING
- NUTS AND WASHERS PER TABLE NOTE 1.
- HARDY FRAME STACKING WASHERS (HFSW) REQUIRED TO BE WELDED INSIDE TOP CHANNEL OF LOWER PANEL
- HARDY FRAME® "STK" PANEL WITH STACKING WASHERS WELDED INSIDE THE TOP CHANNEL BY MANUFACTURER.

# STEEL BEAM ABOVE THRU-BOLT

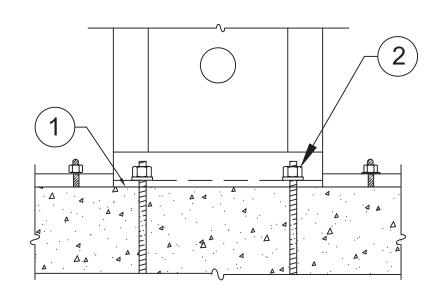


- 1/4" x 3" (MINIMUM) WS SCREWS, QUANTITY PER TABLES
- 2. 1/4" x 4-1/2" (MINIMUM) WS SCREWS, QUANTITY PER TABLES 3. 2x WOOD FILLER.

(6)

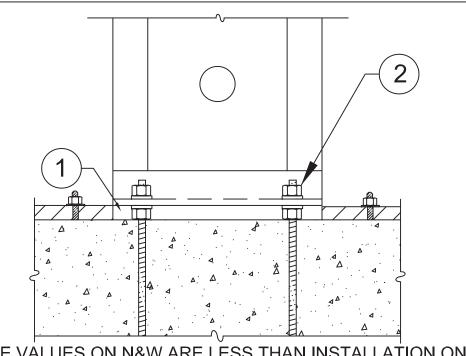
(8)

# TOP PLATE CONNECTIONS



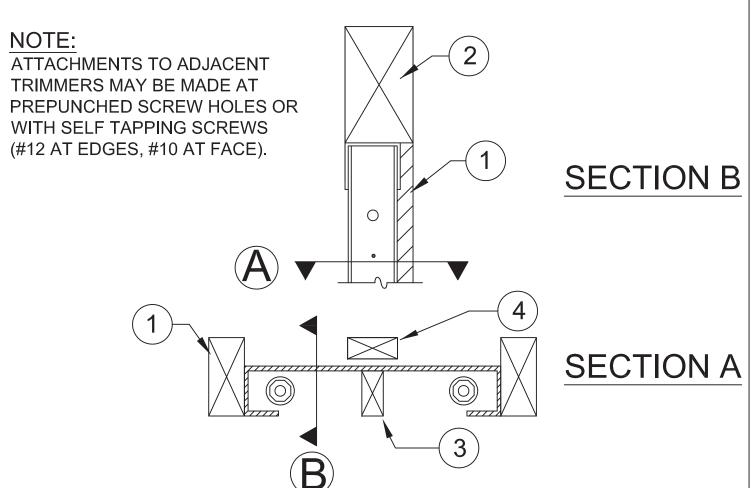
- 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND CONCRETE
- 2. NUTS AND WASHERS PER TABLE NOTE 1

# INSTALLATION ON CONCRETE



- ALLOWABLE VALUES ON N&W ARE LESS THAN INSTALLATION ON CONCRETE 1. PLUS OR MINUS 1-1/2" GAP TO BE FILLED WITH 5,000 PSI NON-SHRINK **GROUT (MINIMUM)**
- 2. NUT AND WASHER GRADES PER TABLE NOTE 1.

INSTALLATION ON NUTS & WASHERS (10)



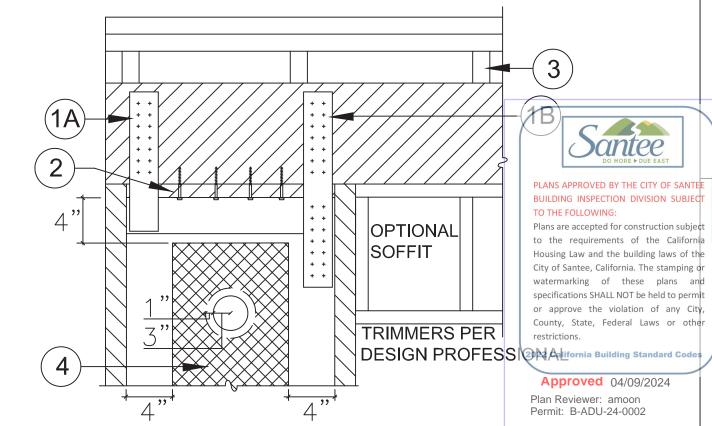
- TRIMMERS PROVIDE FULL BEARING FOR HEADER ABOVE, DESIGN AND
- 6x HEADER.

5

- IN THE PANEL CAVITY AS NEEDED.
- 4. WOOD MEMBER FLUSH TO FACE OF WALL FOR BACKING AS NEEDED

# 6x HEADER ABOVE-SECTIONS

TO PREVENT DRILLING ADDITIONAL HOLES ORIENT THE PANEL CAVITY TOWARD THE FIXTURE BEING INSTALLED



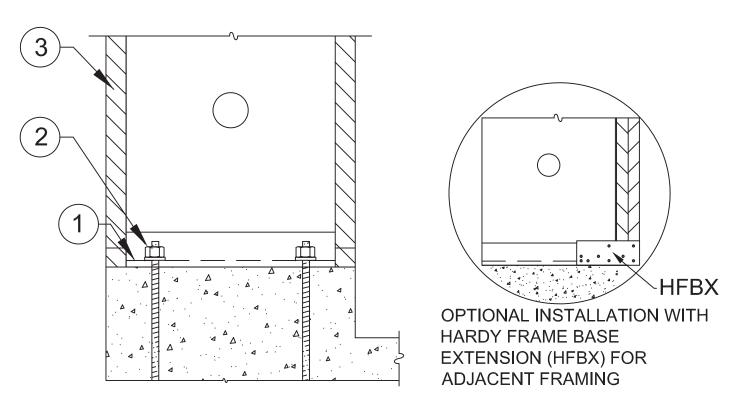
- 1. (A) PRE-WELDED STRAPS ARE PROVIDED ON 78" AND 79-1/2" PANEL HEIGHTS. THEY ARE AVAILABLE FOR OTHER HEIGHTS UPON REQUEST (B) FIELD INSTALLED STRAPS WITH SELF TAPPING SCREWS ARE PERMITTED.
- THE DESIGN AND CONNECTION IS BY THE DESIGN PROFESSIONAL A 2x WOOD FILLER WITH 1/4"x4-1/2" (MIN.) WS SCREWS IS PERMITTED WHEN CRIPPLE STUDS OCCUR, SHEAR TRANSFER DESIGN TO BE PER THE
- **BUILDING DESIGN PROFESSIONAL** 4. A 1" DIA. HOLE MAY BE ADDED IN THE PANEL FACE WHEN IT IS LOCATED IN THE UPPER HALF OF THE PANEL HEIGHT AND IS 4" MINIMUM FROM ANY EDGE. FOR PANELS MORE THAN 12" WIDE, ADDITIONAL HOLES MUST BE

OFFSET 1" MINIMUM FROM THE 3" DIA. PREPUNCHED HOLE. FOR HOLES

LARGER THAN 1" DIAMETER OR TO ADD MORE THAN ONE HOLE CONTACT

# TOP CONNECTION TO HEADER

MITEK HARDY FRAME TECHNICAL SUPPORT AT (800) 754-3030.



- 15# FELT OR EQUIVALENT MOISTURE BARRIER RECOMMENDED BETWEEN PANEL BASE AND CONCRETE
- 2. NUTS AND WASHERS PER TABLE NOTE 1
- 3. ADJACENT FRAMING OPTIONAL U.N.O. BY BUILDING DESIGN PROFESSIONAL

# INSTALLATION ON CURB

	HFX PANELS 78	IN. T	HRO	UGH N	OMINAL	13 FEE
	Model Number	Net Height (in)	Depth (in)	Hold Down Diameter <sup>1</sup> (in)	Top Screw Qty <sup>2</sup> (ea)	Screw Qty Available at Edges (ea) <sup>3</sup>
	HFX-12,15,18,21 & 24x78	78			9" Width = 5	
	HFX-9x79.5	79-1/2			y widii = 3	
В	HFX-12,15,18,21 & 24x8	92-1/4			12" Width = 6	4
	HFX-9x8	93-3/4	3-1/2	1-1/8	   15" Width = 8	
	HFX-12,15,18,21 & 24x9	104-1/4		, .		
	HFX-12,15,18,21 & 24x10	116-1/4			18" Width = 10	5
	HFX-15,18,21 & 24x11	128-1/4			21" Width = 12	
	HFX-15,18,21 & 24x12	140-1/4				6
Α	HFX-15,18,21 & 24x13	152-1/4			24" Width = 14	

# BALLOON PANELS 14 FEET THROUGH 20 FEET

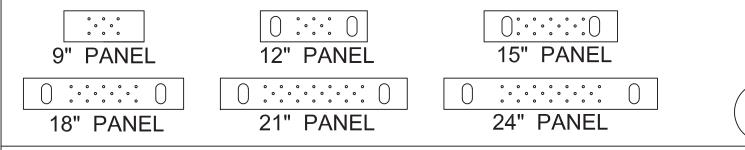
DALLOCIATA				1111000112	
Model Number	Net Height (in)	Depth (in)	Hold Dowr Diameter <sup>1</sup> (in)	Top Screw Qty <sup>2</sup> (ea)	Screw Qty Available at Edges (ea) <sup>3</sup>
HFX-15,18,21 & 24x14	164-1/4			15" Width = 8	
HFX-15,18,21 & 24x15	176-1/4			10 Width 0	6
HFX-15,18,21 & 24x16	188-1/4			18" Width = 10	
HFX-15,18,21 & 24x17	200-1/4	3-1/2	1-1/8		7
HFX-15,18,21 & 24x18	212-1/4			21" Width = 12	,
HFX-15,18,21 & 24x19	224-1/4			0.411.147.141	8
HFX-15,18,21 & 24x20	236-1/4			24" Width = 14	U

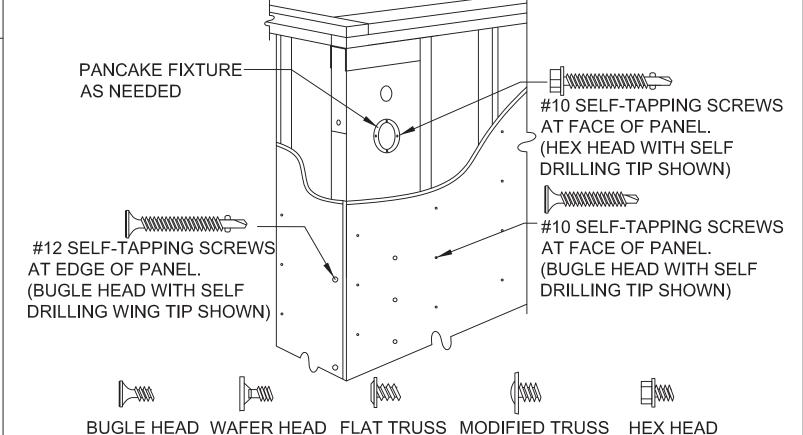
#### **TABLE NOTES**

- FOR STD OR HS GRADE HOLD DOWN ANCHOR BOLTS CONNECT TO THE PANEL BASE WITH HARDENED ROUND WASHERS BELOW GRADE 8 NUTS. ALTERNATE WASHERS ARE (2 EA) ROUND-FLAT OR (2 EA) SAE WASHERS ON EACH BOLT. ALTERNATE NUTS ARE 2H HEAVY HEX
- 1/4" DIAMETER MITEK®PRO SERIES™ WS SCREWS. LENGTH IS 3" (MINIMUM WHEN ATTACHED DIRECTLY TO THE COLLECTOR AND 4-1/2" (MINIMUM) WHEN INSTALLING A 2x FILLER ABOVE THE PANEL
- ADJACENT FRAMING WITH 1/4" DIAMETER SCREWS IS REQUIRED AT THE PANEL EDGES WHEN INSTALLING A FILLER ABOVE THE TOP CHANNEL THAT IS GREATER THAN 1-1/2" OR WHEN SPECIFIED BY THE DESIGN **PROFESSIONAL**

#### **INSTALLATION INSTRUCTIONS**

- WHEN INSTALLING ON CONCRETE CONNECT WITH (1 EA) HARDENED ROUND WASHER BELOW (1 EA) GRADE 8 NUT, SECURE WITH A DEEP SOCKET (RECOMMENDED) UNTIL SNUG TIGHT. ALTERNATE WASHERS AND NUTS ARE PROVIDED IN TABLE NOTE 1
- INSTALLATION ON CONCRETE PROVIDES THE HIGHEST ALLOWABLE ON OTHER SUPPORTING SURFACES.
- USE 1/4"X4-1/2" MITEK® PRO SERIES™ WS SCREWS AT TOP CONNECTIONS WITH A 2x FILLER. IF THE TOP OF PANEL IS IN DIRECT CONTACT WITH THE COLLECTOR ABOVE (TOP PLATES, HEADER, BEAM, ETC.) USE1/4 x 3" (MIN) 4. FOR INSTALLATIONS WITH A FILLER GREATER THAN 1-1/2" ABOVE, OR WHEN SPECIFIED BY THE DESIGN PROFESSIONAL. ADJACENT KING POSTS TO BRACE THE OUT-OF-PLANE HINGE CAN BE CONNECTED WITH 1/4" DIA. B SCREWS THROUGH PRE-PUNCHED HOLES AT THE PANEL EDGES.





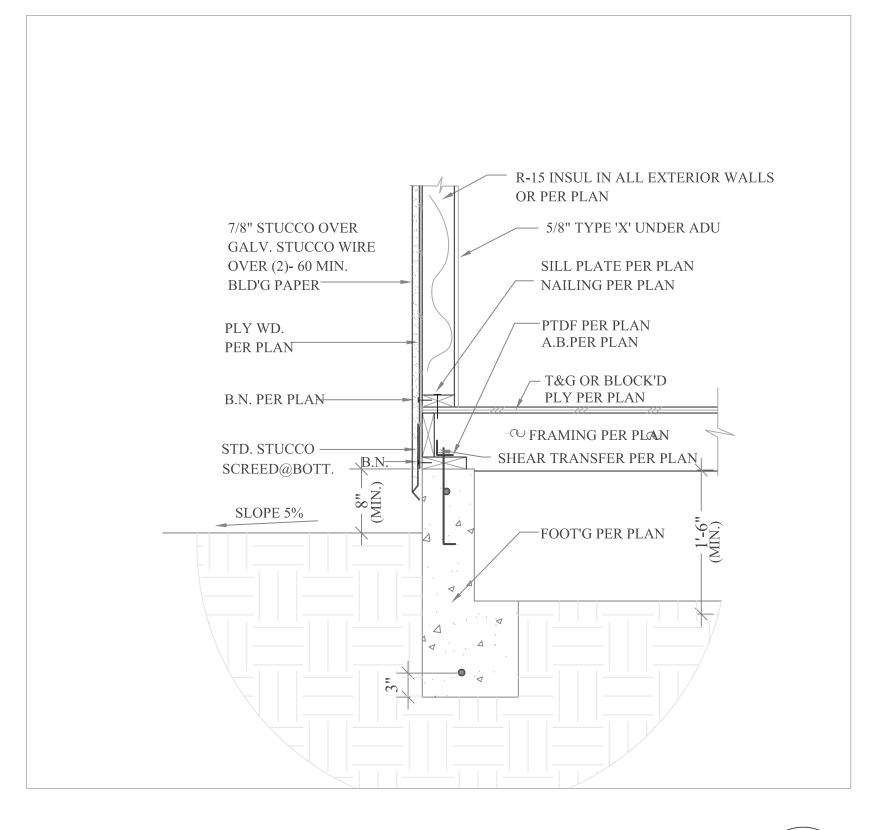
SELF DRILLING TIP SELF DRILLING WING TIP

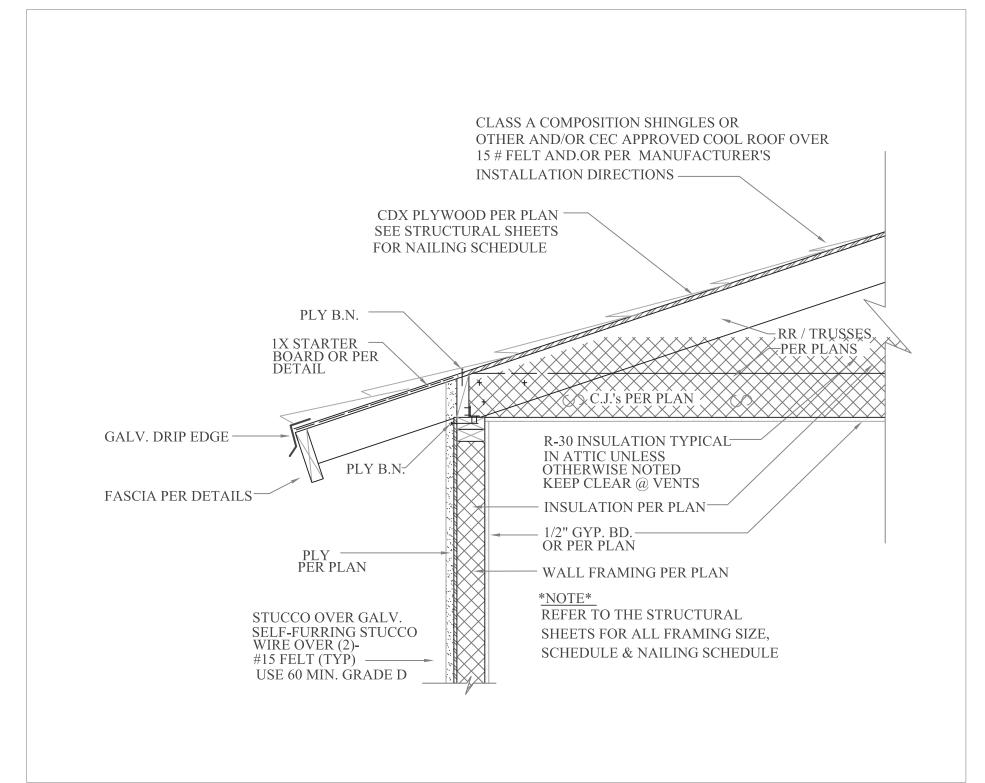
A. SURFACE FINISHES. CONNECTORS AND FIXTURES ARE ATTACHED TO THE PANEL

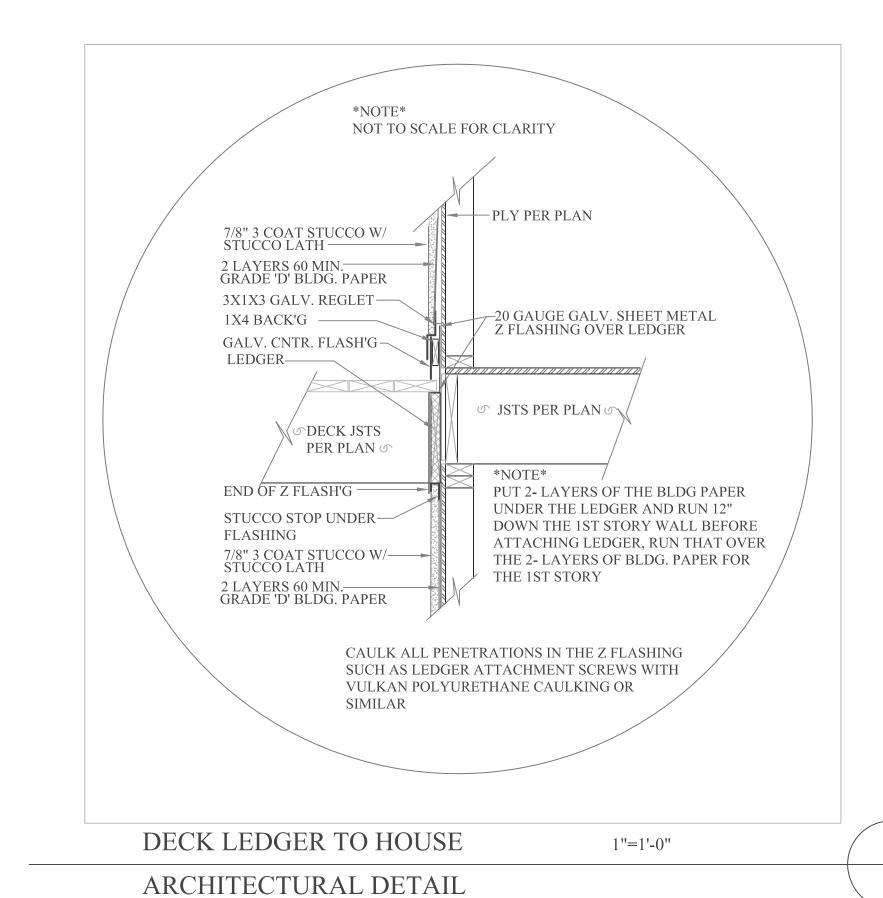
- FACE WITH # 10 SELF-TAPPING SCREWS SPACED NO LESS THAN 2-1/4" OC B. ATTACHMENTS TO THE PANEL EDGES ARE MADE WITH # 12 SELF-TAPPING SCREWS
- C. STRUCTURAL CONNECTIONS ARE TO BE DESIGNED BY THE DESIGN PROFESSIONAL. D. STRUCTURAL HARDWARE USED TO TRANSFER LOADS SHOULD NOT EXCEED 12

AMING

DATE: 1-1-2023



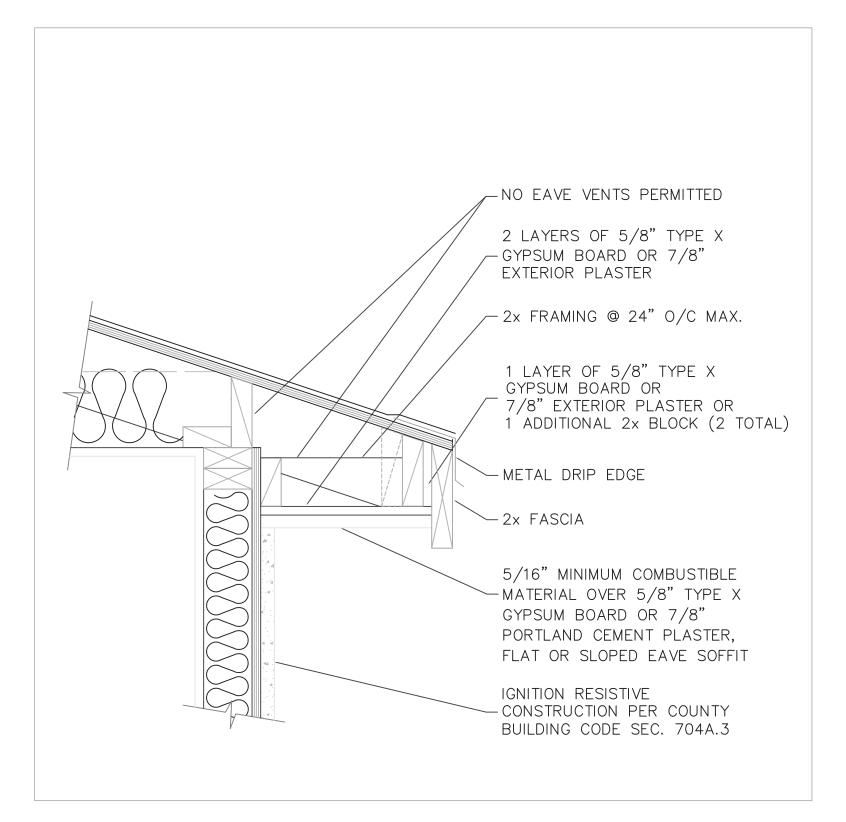




EXTERIOR WALLS

ARCHITECTURAL DETAIL

ROOF TO WALL FINISHES ARCHITECTURAL DETAIL



RECOMMENDED EAVE TYPE OPTION

ARCHITECTURAL DETAIL

NO EAVE VENTS PERMITTED \_\_2x FRAMING @ 24" O/C MAX. - METAL DRIP EDGE -7/8" EXTERIOR PLASTER 7/8" EXTERIOR PLASTER -FLAT OR SLOPED EAVE SOFFIT IGNITION RESISTIVE - CONSTRUCTION PER COUNTY BUILDING CODE SEC. 704A.3

ARCHITECTURAL DETAIL

RECOMMENDED EAVE TYPE OPTION 2

One-Hour Fire Resistance Assembly

ICC-ES®/APA® ESR-1336

See the US version of the Boise Cascade Fire Design & Installation Guide for specific assembly information and other fire resistive options or contact your local Boise Cascade representative.

A STATE OF THE STA

FIRE ASSEMBLY COMPONENTS 1. Min. <sup>23</sup>/<sub>32</sub>" thick tongue and groove sheathing (exterior glue), installed with long

edge perpendicular to joist length, staggered one joist spacing with adjacent sheets, and glued to joists with construction adhesive. 2. BCI\* Joists at 24" o.c. or less.

3. Two layers %" Type X or two layers ½" Type C gypsum board, installed per Figures 2 or 3 of ICC-ES®/APA® ESR-1336.

SOUND ASSEMBLY COMPONENTS When constructed with resilient channels

• Add carpet & pad to fire assembly: • Add 31/2" glass fiber insulation to fire assembly:

 Add an additional layer of minimum %" sheathing and 9½" glass fiber insulation to fire assembly:

IIC=68 or IIC-46 STC=61 IIC=50

Boise Cascade EWP + Western Specifier Guide + 3/14/2013, rev 9/15/201

1 HOUR FIRE RESISTANCE ASSEMBLY &

STC-IIC RATED FLOOR OPTIONS USE THE FIRST OR THE THIRD SEE SHEET 10, DET. FE1



Plans are accepted for construction subject to the requirements of the California Housing Law and the building laws of the City of Santee, California. The stamping or watermarking of these plans and specifications SHALL NOT be held to permit or approve the violation of any City, County, State, Federal Laws or other

**Approved** 04/09/2024 Plan Reviewer: amoon Permit: B-ADU-24-0002



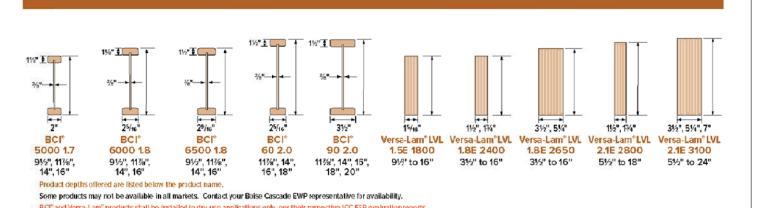


PROJECT: SHEET NO.

ARC

SANTEE

DATE: REVISIONS



Western Product Profiles



## BCI® Joist Architectural Specifications

Scope: This work includes the complete Design: The BCl\* Joists shall be sized and Storage and Installation: The BCl\* Joists, furnishing and installation of all BCI° Joists detailed to fit the dimensions and loads as shown on the drawings, herein specified indicated on the plans. All designs shall and necessary to complete the work.

Materials: BCl° Joists shall be manufactured by Boise Cascade Engineered Wood Products with oriented strand board webs, Versa-Lam® laminated veneer lumber flanges and waterproof, structural Drawing: Additional drawings showing adhesives.

Joist webs shall be graded Structural I Exposure 1 by an agency listed by a model code evaluation service. Strands on the face layers of the web panels shall be oriented vertically in the joist. The web panels shall be glued together to form a continuous web member. The web panels shall be machined to fit into a groove in the center of the wide face of the flange members so as to form a pressed glue joint at that junction.

Boise Cascade EWP • Western Specifier Guide • 3/14/2013, rev 9/15/2022

be in accordance with allowable values and section properties developed in accordance with ASTM D5055 and listed in the governing code evaluation service's

fit and placement in the building are (are not) to be provided by the supplier.

Fabrication: The BCI\* Joists and section properties shall be manufactured in a plant evaluated for fabrication by the governing code evaluation service and under the supervision of a third-party inspection agency listed by the corresponding

if stored prior to erection, shall be stored in a vertical and level position and protected from the weather. They shall be handled with care so they are not damaged.

accordance with the plans and the Boise Cascade Engineered Wood Products Installation Guide. Temporary construction layout and detail necessary for determining loads which cause stresses beyond design limits are not permitted. Erection bracing shall be provided to keep the BCI® Joists straight and plumb as required and to assure adequate lateral support for the

The BCI® Joists are to be installed in

Codes: The BCI® Joists shall be evaluated

individual BCI° Joists and the entire system

until the sheathing material has been

by a model code evaluation service.

## Residential Floor Span Tables

homeowner.

#### **About Floor Performance**

Homeowner's expectations and opinions vary greatly due to the increase the joist depth, limit joist deflections, glue and screw a subjective nature of rating a new floor. Communication with the ultimate end user to determine their expectation is critical. Vibration is usually the cause of most complaints. Installing lateral bridging may ceiling to the bottom flanges of the joists. help; however, squeaks may occur if not installed properly. Spacing the joists closer together does little to affect the perception of the

floor's performance. The most common methods used to increase

the performance and reduce vibration of wood floor systems is to

plumb with level-bearing supports, and install a direct-attached The floor span tables listed below offer three very different performance options, based on performance requirements of the

			***T	HREE STA	R ***			***F	OUR STA	R * * * *		CAUTION		MUM STIF VED BY C		CAUTION
	B¢l°	commo standar than L/2 perform applicar	n industry d for resid <b>360 code</b> i ance may tions, espe	and desig ential floo minimum. still be an ecially with	to L/480: n commun r joists, 333 However, issue in ce 19 <sup>1</sup> /2" and 1 attached c	ity <b>% stiffer</b> , floor ertain 11 <sup>7</sup> /8"	addition stiffer t experie values	ad deflect n to provid han the the nace has be to provide nance leve wher.	ing a floor ree star fl een incorp a floor wit	that is 10 loor, field corated in tha premi	Live Load deflection limited to L/360: Floors that meet the minimum building code L/360 criteria are structurally sound to carry the specified loads; however, there is a much higher risk of floor performance issues. This table should only be used for applications where floor performance is not a concern.					
Joist Depth	Joist Series	12" o.c.	16" 0.C.	19.2" o.c.	24" o.c.	32" 0.0.	12" o.c.	16" o.c.	19.2" o.c.	24" o.c.	32" o.c.	12" o.c.	16" o.c.	19.2" o.c.	24" 0.C.	32" 0.C.
	5000 1.7	17'-1"	15'-7"	14'-9"	13'-9"	12'-0"	11'-6''	11'-6"	10'-0"	10'-0"	9'-6"	18'-11"	17"-0"	15'-6"	13'-11"	12'-0"
91/2"	6000 1.8	17'-11"	16'-5"	15'-6"	14'-5"	13'-2"	11'-6''	11'-6"	10'-0"	10'-0"	9'-10"	19'-10"	18'-2"	17'-2"	15'-9"	13'-8"
	6500 1.8	18'-5"	16'-10"	15'-11"	14'-10''	13'-6"	11'-6''	11'-6"	10'-0''	10'-0"	10'-0"	20'-5"	18'-8"	17'-8"	16'-5''	14'-3"
	5000 1.7	20'-2"	18'-5"	17'-5"	15'-9''	13"-4"	15'-6"	14'-4''	13'-6''	12'-7"	11'-5"	22'-3"	19'–4"	17'-7"	15'-9''	13'-4"
	60001.8	21'-3"	19'-5"	18'-4''	17'-1"	14'-10"	15'-6"	15'-1"	14'-3"	13'-3"	12'-0"	23'-6"	21'-6"	20'-0"	17'-11"	14'-10"
11%"	65001.8	21'-11"	20-0"	18'-11''	17'-7"	14"-10"	16'-0"	15'-7"	14'-9"	13'-8"	12'-5"	24'-3"	22'-2"	20'-11"	18'-10"	14'-10"
	60 2.0	23'-3"	21'-3"	20'-1"	18'-8"	16"-4"	18'-0"	16'-7"	15'-7"	14'-6"	13'-2"	25'-9"	23'-6"	22'-3"	20'-9"	16'-4''
	90 2.0	26'-3"	23'-11"	22'-6"	20'-11"	19"-1"	19'-0"	18'-7"	17'-6''	16'-2"	14'-8"	29'-0"	26'-6"	25'-0"	23'-3"	19'-4"
	5000 1.7	22'-11"	21'-0"	19'-2"	17'-2"	13'-11"	18'-0"	16'-5"	15'-6"	14'-5"	13'-1"	24'-4"	21'-0"	19'-2"	17'-2''	13'-11"
	60001.8	24'-2"	22-2"	20'-11"	19"-6"	15'-5"	18'-11"	17"-3"	16'-3"	15'-2"	13'-9"	26'-9"	23'-11"	21'-10"	19'-6''	15'-5''
14"	65001.8	24'-10"	22-9"	21'-5"	20'-0"	15'-5"	19'-5"	17'-9"	16'-8''	15'-6"	14'-1"	27'-6"	25'-1"	22'-11"	20'-6"	15'-5''
	60 2.0	26'-5"	24'-2"	22'-9"	21'-3"	16'-4"	20'-8"	18'-10"	17'-9''	16'-5"	14"-11"	29'-3"	26'-8"	25'-3"	21'-10''	16'-4"
	90 2.0	29'-9"	27'-1"	25'-6"	23'-8"	19'-6"	23'-3"	21'-1"	19'-9"	18'-4"	16'-7"	32'-10"	30'-0"	28'-3"	26'-0''	19'-6"
	6000 1.8	26'-9"	24'-5"	23'-1"	20'-10''	15'-9"	20'-11"	19'-1"	18'-0"	16'-9''	15'-2"	29'-6"	25'-6"	23'-4"	20'-10''	15'-9''
16"	65001.8	27'-5"	25'-1"	23'-8"	21'-1"	15'-9"	21'-6"	19'-7"	18'-5"	17'-2"	15'-7"	30'-4"	26'-11"	24'-6"	21'-1"	15'-9''
16.	60 2.0	29'-3"	26'-8"	25'-2"	21'-10''	16"-4"	22'-10"	20'-10"	19'-7"	18'-2"	16'-4"	32'-4"	29'-6"	27'-4"	21'-10''	16'-4"
	90 2.0	32'-11"	29'-11"	28'-2"	26'-2"	19"7"	25'-8''	23'-4''	21'-11''	20'-3"	18'-4"	36'-4"	33'-2"	31'-3"	26'-2"	19'-7"
18"	90 2.0	35'-11"	32'-8''	30'-9"	28'-7"	23'-10"	28'-1"	25'-5"	23'-11"	22'-2"	20'-0"	39'-8"	36'-2"	34'-1"	31'-9"	23'-10''
20"	90 2.0	38"-10"	35'-4"	33'-4"	30'-11"	24'-8"	30'-4"	27'-6"	25'-11"	24'-0"	21'-8"	42'-11"	39'-1"	36'-10"	32'-11"	24'-8"

#### Span table is based on a residential floor load of 40 psf live load and 10 psf dead load (12 psf dead load for 90 2.0 joists). Span values assume 23/32" minimum plywood/OSB rated sheathing is glued and

nailed to joists for composite action (joists spaced at 32" o.c. require sheathing rated for such spacing - 1/8" plywood/OSB). Span values represent the most restrictive of simple or multiple span applications. Analyze multiple span joists with BC Calc sizing software if the length of any span is less than half the length of an adjacent span.

Span values are the maximum allowable dear distance between supports.

 Table values assume minimum bearing lengths without web stiffeners for
joist depths of 16" inches and less (18" & 20" joists require web stiffeners at all bearing locations). Floor tile will increase dead load and may require specific deflection limits.

contact Boise Cascade EWP Engineering for further information. This table was designed to apply to a broad range of applications. It may be possible to exceed the limitations of this table by analyzing a specific application with the BC Calc sizing software.

#### One-Hour Fire Resistance Assembly

See the US version of the Boise Cascade Fire Design & Installation Guide for specific assembly information and other fire resistive options or contact your local Boise Cascade representative.

Any Span 8 1'-0" 1'-1" 1'-8" 2'-4" 2'-11" 3'-7"

# ICC-ES®/APA® ESR-1336

- FIRE ASSEMBLY COMPONENTS 1. Min. <sup>23</sup>/<sub>32</sub>" thick tongue and groove sheathing (exterior glue), installed with long edge perpendicular to joist length, staggered one joist spacing with adjacent sheets, and glued to joists with construction adhesive.
- 2. BCI° Joists at 24" o.c. or less. 3. Two layers 1/2" Type X or two layers 1/2" Type C gypsum board, installed per Figures 2 or 3 of ICC-ES®/APA® ESR-1336

#### SOUND ASSEMBLY COMPONENTS When constructed with resilient channels Add carpet & pad to fire assembly:

Add 31/2" glass fiber insulation to fire assembly: Add an additional layer of minimum 5/8" sheathing and 91/2" glass fiber insulation to fire assembly:

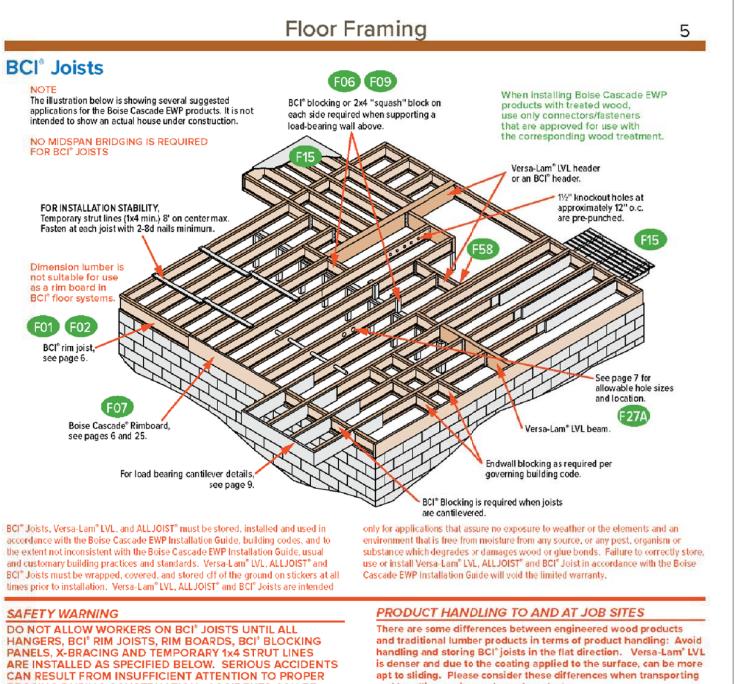
#### BCI® Joists, Versa-Lam® LVL, and ALLJOIST® must be stored, installed and used in accordance with the Boise Cascade EWP Installation Guide, building codes, and to the extent not inconsistent with the Boise Cascade EWP Installation Guide, usual and customary building practices and standards. Versa-Lam® LVL, ALLJOIST® and BCI\* Joists must be wrapped, covered, and stored off of the ground on stickers at all times prior to installation. Versa-Lam®LVL, ALLJOIST® and BCI® Joists are inten-SAFETY WARNING

DO NOT ALLOW WORKERS ON BCI® JOISTS UNTIL ALL HANGERS, BCI° RIM JOISTS, RIM BOARDS, BCI° BLOCKING PANELS, X-BRACING AND TEMPORARY 1x4 STRUT LINES ARE INSTALLED AS SPECIFIED BELOW. SERIOUS ACCIDENTS CAN RESULT FROM INSUFFICIENT ATTENTION TO PROPER BRACING DURING CONSTRUCTION. ACCIDENTS CAN BE AVOIDED UNDER NORMAL CONDITIONS BY FOLLOWING THESE GUIDELINES:

- Build a braced end wall at the end of the bay, or permanently install the first eight feet of BCI° Joists and the first course of sheathing. As of BCI\* Joists at the end of the bay
- All hangers, BCI<sup>e</sup> rim joists, rim boards, BCI<sup>e</sup> blocking panels, and x-bracing must be completely installed and properly nailed as each BCI\* Joist is set.
- Install temporary 1x4 strut lines at no more than eight feet on center as additional BCI° Joists are set. Nail the strut lines to the sheathed area, or braced end wall, and to each BCI' Joist with two 8d nails. The ends of cantilevers must be temporarily secured by strut lines on
- both the top and bottom flanges. Straighten the BCI<sup>o</sup> Joists to within ½ inch of true alignment before
- attaching strut lines and sheathing. Remove the temporary strut lines only as required to install the
- permanent sheathing. Failure to install temporary bracing may result in sideways buckling or roll-over under light construction loads.
- Do not stack construction materials (sheathing, drywall, etc) in the middle of BCI® Joist spans, contact Boise Cascade EWP Engineering

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for proper storage and shoring information.



PLANS APPROVED BY THE CITY OF SANTE

BUILDING INSPECTION DIVISION SUBJECT

Plans are accepted for construction subject to the requirements of the California

Housing Law and the building laws of the

City of Santee, California. The stamping or watermarking of these plans and

specifications SHALL NOT be held to permit

or approve the violation of any City,

County, State, Federal Laws or other

22 California Building Standard Code

Approved 04/09/2024

Plan Reviewer: amoon

Permit: B-ADU-24-0002

TO THE FOLLOWING:

restrictions.

and handling engineered wood products.

Floor Framing Details Additional floor framing details available with BC Framer® software END BEARING DETAILS BCI° joist blocking.

BCI® Joists with Sultable for use as rim board with BCI® Joists. perpendicular to wall, consult design professional of record and/or local building official. Boise Cascade® Solid block all posts from above One 8d nail / each side at bearing joist must be designed to carry wall above when not stacked over 1½" minimum bearing length To limit splitting flange, start nails at least 1½" from end. Nails may need to be driven at an angle to limit splitting of bearing plate. Blocking required underneath braced wall panels and shear walls, consult design INTERMEDIATE BEARING DETAILS Intermedate Bearing.

Cross bracing OK as blocking only if support below is not a braced wall panel or shear wall and no wall exists above. Double ECI® Joist Connection FO5 Structural Panel reinforcement (when required). with 10 - 10d nail Backer block required where top flange joist hanger load exceeds 250 lbs. Install tight to top flange. and 9. Uplift on backspan shall be

BCI® Joists shall be laterally supported at the ends with hangers, rimboard, BCI® rim joist or blocking panels. BCI® blocking panels or rimboard are required at cantilever Blocking may be required at intermediate bearings for floo diaphragm per IRC® in high seismic areas, consult local

building official.

MINIMUM BEARING LENGTH FOR BCI' JOISTS Minimum end bearing: 11/2" for all BCI® Joists. 31/2" is required at cantilever and intermediate supports. the building code evaluation report or the BC Calc software.

NAILING REQUIREMENTS onger bearing lengths allow higher reaction values. Refer to

BCI rim joist, rim board or closure panel to BCI joist: Rims or closure panel 15/16 inches thick and less 2-8d nails, one each in the top and bottom flange. BCI\* 5000 rim joist: 2-10d box nails, one each in the top BCI® 6000/60 rim joist: 2-16d box nalls, one each in the top and bottom flange. BCI® 6500/90 rim joist: Toe-nail top flange to rim joist with

BCl<sup>®</sup>rim joist, rim board or 3Cl<sup>®</sup>blocking panel to support:
— Min. 8d nails @ 6" o.c. per IRC<sup>®</sup>. Connection per design professional of record's specification for shear transfer. CP\* joist to support:

2-8d nails, one on each side of the web, placed 1% inches minimum from the end of the BCI\* Joist to limit splitting.

3-8d nails, one on each side of the BCI\* Joist to limit splitting.

42 Capacities shown are for a double squash blocks at each joist, SPF or better.

43 Web stiffeners required at each end of blocking, values not applicable for rim joists. Prescriptive residential floor sheathing nailing requires 8d common nails @ 6" o.c. on edges and @ 12" o.c. in the field (IRC® Table R602.3(1)).

See closest allowable nail spacing limits on page ?4 for floor diaphragm nailing specified at closar spacing than IRC9.

Maximum bracing spacing for full lateral stability: 18" for BC1"

See Web Stiffener Requirements on page 9.

PROTECT BC1" JOISTS FROM THE WEATHER 14 gauge staples may be substituted for 8d nats if the staples penetrate at least 1 finch into the joist. Wood screws may be acceptable, contact local building of fidal and/or Boise Cascade EWP Engineering for further information. BACKER AND FILLER BLOCK DIMENSIONS

Series Backer Block Thickness Filler Block Thickness .7 %" or %" wood panels Two %" wood panels or 2 x 0.1.8 | 11/8" or two 1/2" wood panels 2 x \_ + 7/16" or 1/2" wood panel 5000 1.7, 6000 1.8, 6500 1.8 2300 N/A 001.8 116" or two 56" wood panels 2 x \_ + 56" or 34" wood panel 0.2.0 11/8" or two 1/2" wood panels 2 x \_ + 7/16" or 1/2" wood panel 5000 1.7, 6000 1.8, 6500 1.8 250 N/A Cut backer and filler blocks to a maximum depth equal to the web depth minus ¼" to avoid a forced fit. 5000 1.7, 6000 1.8, 6500 1.8 2000 N/A \*Detail F 9 Table Double Squash Block Vertical Load [lb/ft] 60001.8, 65001.8 2300 2700 Squash blocks are to be in full contact with upper floor and

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tx blocking required at bearing (not shown for clarity). %2" min. plywood/OSB rated sheathing as reinforceme

Install reinforcement with face grain horizontal. Install on

Apply construction adhesive to contact surfaces and faste

BCl\* Joists are intended only for applications that

3 rows of min. 10d box nails at 6" o.c. Alternate nailing

Minimum Heel Depth

# BCI® Joist Hole Location & Sizing

BCI\* Joists are manufactured with 11/2" round perforated knockouts in the web at approximately 12" on center (see table below) (see table below) A 1½" round hole may be No holes (except knockouts) Minimum distance from support, listed in table below, is required for all holes greater than 1½"

	Span (ft)	12	1'-0"	1'-7''	2'-7"	3'-6"	4'-5"	5'-4"								
Joist	[19]	16	1'-0"	2'-2"	3'-5"	4'-8"	5'-11"	7-2"								
Round Ho	le Diamel	ter [in]	2	3	4	5	6	7	8	8%	10	11	12	13	14	15
Rectangula	ar Hole Si	de [in]	140	-		2	3	5	7	8	-	-	=	1941	¥	-
03/225		8	1'-0"	1'-1"	1'-6"	2'-0"	2'-5"	2'-11"	3'-5"	3'-10"						
Any 11%"	Span	12	1'-0"	1'-7''	2'-3"	3'-0"	3'-8"	4'-5"	5'-1"	5'-9"						
Joist	[ft]	16	1'-2"	2'-1"	3'-0"	4'-O"	4'-11"	5'-10''	6'-10"	7'-8"						
30131		20	1'-5"	2'-7''	3'-10"	5'-0"	6'-2"	7-4"	8'-6"	9'-7"						
Round Ho	le Diamei	ter [in]	2	3	4	5	6	7	8	8%	10	11	12	13	14	15
Rectangula	ar Hole Si	de [in]	-	-	-	2	2	3	5	6	8	9	=	140	2	-
		8	1'-0"	1'-1"	1-2"	1'-2"	1'-6"	1-11"	2'-4"	2'-9"	3'-3"	3'-8"				
Any		12	1'-0"	1'-1"	1'-2"	1-7"	2'-3"	2'-11"	3'-6"	4'-1''	4'-10"	5'-6"				
14"	Span (ft)	16	1'-0"	1'-1"	1'-3"	2'-2"	3'-0"	3'-10"	4'-9"	5'-6"	6'-6"	7-4"				
Joist	[14]	20	1'-0"	1'-1"	1'-7"	2'-8"	3'-9"	4'-10''	5'-11"	6'-10"	8'-1"	9'-2"				
		24	1'-0"	1'-1"	1'-11"	3'-3"	4'-6"	5'-10''	7'-1"	8'-3"	9'-9"	11'-0"				
Round Ho	le Diamei	ter [in]	2	3	4	5	6	7	8	8%	10	11	12	13	14	15
Rectangula	ar Hole Si	de [in]		-	-	-	-	2	3	5	6	8	9	10	~	-
Any 16" Span	8	1'-0"	1'-1"	1-2"	1'-2"	1-3"	1-3"	1'-7"	1'-11''	2'-4"	2'-9"	3'-2"	3-7"			
	0	12	1'-0"	1'-1"	1'-2"	1'-2"	1-3"	1-9"	2'-4"	2'-11"	3'-7"	4'-2"	4'-9"	5'-4"		
	Span (ft)	16	1'-0"	1'-1"	1'-2"	1'-2"	1'-7"	2'-5"	3'-2"	3'-10"	4'-9"	5'-7''	6'-4"	7-2"		
Joist	[11]	20	1'-0"	1'-1"	1'-2"	1'-2"	2'-0"	3'-0''	4'-0"	4'-10''	5'-11"	6'-11"	7'-11"	8'-11"		
		24	1'-0"	1'-1"	1'-2"	1'-3"	2'-5"	3'-7"	4'-9"	5'-10"	7-2"	8'-4"	9'-6"	10'-9"		
Round Ho	le Diamei	ter [in]	2	3	4	5	6	7	8	8%	10	11	12	13	14	15
Rectangula	ar Hole Si	de [in]		-	-	-		-	2	3	5	6	7	9	10	11
181		12	1'-0"	1'-1"	1-2"	1'-2"	7-5"	1'-11"	2'-4"	2'-9"	3'-3"	3'-9"	4'-2"	4'-8"	5'-1"	5'-7'
BCI*		16	1'-0"	1'-1"	1'-2"	1'-4"	1'-11"	2'-7"	3'-2"	3'-8"	4'-5"	5'-0"	5'-7"	6-3"	6'-10"	7'-5'
90 2.0	Span [ft]	20	1'-0"	1'-1"	1'-2"	1'-8"	2'-5"	3'-3"	4'-0"	4'-8"	5'-6"	6'-3"	7'-0"	7-9"	8'-7'	9'-4'
Joist	[11]	24	1'-0"	1'-1"	1'-2"	2'-0"	2'-11"	3'-10"	4'-9"	5'-7"	6'-7"	7'-6"	8'-5"	9'-4"	10'-3"	11'-2'
9,615,7		28	1'-0"	1'-1"	1'-4"	2'-5"	3'-5"	4'-6''	5'-7"	6'-6"	7'-9"	8'-9"	9'-10"	10'-11"	12'-0"	13'-1"
Round Ho	le Diamel	ter [in]	2	3	4	5	6	7	8	8%	10	11	12	13	14	15
Rectangula	ar Hole Si	de [in]	- 22	-	-	- 2	- 3	-	-	2	3	5	6	7	8	10
0.00		12	1'-0"	1'-1"	1'-2"	1'-2"	1-3"	1-6"	1'-11'	2'-3"	2'-9"	3'-2"	3'-7"	3'-11"	4'-4"	4'-9'
20" BCI*	0	16	1'-0"	1'-1"	1'-2"	1'-2"	1'-6"	2'-1''	2'-7"	3'-1"	3'-8"	4'-3"	4'-9"	5'-3"	5'-10"	6'-4"
90 2.0	Span [ft]	20	1'-0"	1'-1"	1'-2"	1'-3"	7-11"	2'-7"	3'-3"	3'-10"	4'-7"	5'-3"	5'-11"	6-7"	7'-4"	8'-0'
Joist.	1.9	24	1'-0"	1'-1"	1'-2"	1'-6"	2'-4"	3'-1"	3'-11"	4'-7"	5'-6"	6'-4"	7'-2"	7-11"	8'-9"	9'-7"
(2000)		28	1'-0"	1'-1"	1'-2"	1'-9"	2'-8"	3'-8"	4'-7"	5'-5"	6'-6"	7'-5"	8'-4"	9-3"	10'-3"	11'-2"

Single Span Joist Maximum Hole Size See chart for mak.

Chole hole size for joist depth Minimum 2: diameter/ width of largest hole 6" x 14" 6" x 1: 7" x 16" 8" x 15" Simple span oist 6'-0" min. the specifications as shown in the hole distance chart shown above or as allowed using BC Calc® sizing software. Boise Cascade EWP + Western Specifier Guide + 3/14/2013, rev 9/15/2022

a⁄g joist span size for joist depth √2 joist span Multiple span joist 12-0" min. Multiple span joist 12-0" min.

joist depth and the actual joist span rounded up to the nearest to the column headed by the appropriate round hole diameter or rectangular hole side. Use hole. The table value is the closest that the centerline of the hole may be to the centerline of the nearest support. The entire web may be cut

out. DO NOT cut the flanges. Holes apply to either single or multiple joists in repetitive member conditions. For multiple holes, the amount of uncut web between holes must equal at least twice the

diameter (or longest side) of the

largest hole. 11/2" round knockouts in the web may be removed by using a short piece of metal pipe and hammer. Holes may be positioned vertically in the web, provided they don't extend into either flange. This table was designed to apply to design conditions covered by uniform load PLF tables only, shown elsewhere in this publication. Use BC Calc® software to check other hole sizes or holes under other design conditions, including joists supporting concentrated loads. It may be possible to

exceed the limitations of this

application with the BC Calc®

table by analyzing a specific

# Hole size table based on maximum uniform load of 40 psf live load and 10 psf dead load, at maximum spacing of 24" on-center.

Larger holes may be possible for either Single or Multiple

span joists; use BC Calc<sup>®</sup> sizing software for specific analysis.

# **BCI JOISTS INFORMATION**

SHEET NO.

DATE: REVISIONS

(619)

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PREFORMANCE COMPLIANCE METHOD Project Name: Goldfinch St. ADU 2024 Calculation Description: Title 24 Analysis  GENERAL INFORMATION  01 Project Name: Goldfinch St. ADU 2024  02 Rin Title Title 24 Analysis  03 Project Location 04 City San Drogo 65 Standards Version 06 Jip Code 92 103 O7 Forthwave Version 08 Climate Zone 10 Building Type Single Sanily 11 Runther of Dwelling Units 1 12 Project Sone Anal (ft) 12 Project Sone Anal (ft) 13 Number of Stories 14 Addition Cond. Floor Anal (ft) 15 Number of Stories 16 Disting Cond. Floor Anal (ft) 16 Disting Cond. Floor Anal (ft) 17 Fenestration Avenage U-floation 20 ADU Bedröom. Count 17 Forth Stories 21 Disting Cond. Floor Anal (ft) 20 ADU Bedröom. Count 17 This building Complies with Computer Performance 21 This building Incorporates one or more Special Features shown below	CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD  Project Name: Goldfinch St. ADU 2024  Calculation Description: Title 24 Analysis  Energy Design Ratings  Energy Design Ratings  Compliance Margins  Compliance Margins  Compliance Margins  Compliance Margins  Source Energy  Efficiency EDR  Source Energy  Efficiency EDR  (EDR21)  Standard Design  34.4  47.1  32.6  Proposed Design  32.5  44.7  31.5  0.9  2.4  1.1  RESULT <sup>3</sup> - PBASS  **Ellicency EDR Includes efficiency and demand response measures such as protocolists (PF) system and batteries  *Building complies when source energy, efficiency and demand response measures such as protocolists (PF) system and batteries  *Building complies when source energy, efficiency and demand response measures such as protocolists (PF) system and batteries  *Building complies when source energy, efficiency and demand response measures such as grotocolists (PF) system and batteries  *Building complies when source energy, efficiency and demand response measures such as grotocolists (PF) system and batteries  *Building complies when source energy, efficiency and demand response measures such as grotocolists (PF) system and batteries  *Building complies when source energy, efficiency and demand response measures such as grotocolists (PF) system and batteries  *Building complies when source energy, efficiency and demand response measures such as grotocolists (PF) system and batteries  *Building complies when source energy, efficiency and demand response measures such as grotocolists (PF) system and batteries  *Building complies when source energy, efficiency and demand response measures such as grotocolists (PF) system and batteries  *Building complies when source energy, efficiency and demand response measures such as grotocolists (PF) system and batteries  *Building complies the system of the system and batteries  *Building complies the system of the sy	CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD   Calculation Date/Time: 2024-03-07T19-33-22-08:00   (Page 3 of 32)   Calculation Description: Title 24 Analysis   Input File Name: Goldfinch - 2024-03-07T19-33-22-08:00   (Page 3 of 32)   Input File Name: Goldfinch - 2024-03-07T19-33-22-08:00   (Page 3 of 32)   Input File Name: Goldfinch - 2024-03-07T19-33-22-08:00   (Page 3 of 32)   Input File Name: Goldfinch - 2024-03-07T19-33-22-08:00   (Page 3 of 32)   Input File Name: Goldfinch - 2024-03-07T19-33-22-08:00   (Page 3 of 32)   Input File Name: Goldfinch - 2024-03-07T19-33-22-08:00   (Page 3 of 32)   Input File Name: Goldfinch - 2024-03-07T19-33-22-08:00   Input File Name: Goldfinch - 2024-03-07T19-32-07T19-0	CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD  Project Names Goldfrindh St. ADJ. 2024  Calculation Description: Title 24 Analysis  Input File Name: Goldfrindh - 2024-ribid22x    ENERGY USE INTENSITY
Registration Number: 223-P010072611B-000-000-00000000 Registration Date/Time: 2024-03-08 20:18.04 HERS Provider: CalCERTS inc.  CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Report Generated: 2024-03-07 19:36:40 Schema Version: rev 20220901	Registration Number: 223-P010072611B-000-00000000 Registration Date/Time: 2024-03-08 20:18.04 HERS Provider: CalCERTS inc.  CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Report Generated: 2024-03-07 19:36:40 Schema Version: rev 20220901	Registration Number: 223-P010072611B-000-000-0000000 Registration Date/Time: 2024-03-08 20:18:04 HERS Provider: CalCERTS inc.  CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022,0.000 Report Generated: 2024-03-07 19:36:40 Schema Version: rev 20220901	Registration Number: 223-P010072611B-000-000000000000000000000000 Registration Date/Time: 2024-03-08 20:18:04 HERS Provider: CalCERTS inc.  CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Report Generated: 2024-03-07 19:36:40 Schema Version: rev 20220901
CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD   Project Name: Goldfright St. A20J 2024   Calculation Description: Title 24 Analysis   Input File Name: Goldfright - 2024-05-07119-33-22-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-07119-33-22-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-07119-33-22-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-07119-33-22-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-07119-33-22-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-07119-33-22-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-07119-33-22-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-07119-33-22-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-07119-33-22-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-07119-33-22-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-07119-33-22-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-07119-33-22-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-07119-33-22-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-08:00   (Page 5 of 12)   Input File Name: Goldfright - 2024-05-08:00   (Page 5 of 12)   Input File Name: Goldfright -	CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD   Project Name: Goldfrinch St. ADU 2024   Calculation Date/Firms: 2024-03-0719-33-22-08-00   (Page 6 of 22)	CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD   Project Name: Goldfisch St. ADU 2024   Calculation Description: Take 24 Analysis   Input File Name: Goldfisch St. ADU 2024	CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD   Project Name: Goldfiech St. ADJ 2024   Calculation Date/Firme: 2024-03-07119-33-22-08-00   (Page 8 of 12)
CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Coldifficity 51. ADJ. 2024 Calculation Detectprism: Title 24 Analysis Input File Name: Coldifficity 51. ADJ. 2024 Calculation Detectprism: Title 24 Analysis Input File Name: Coldifficity 52.24 (Pb22 ribb)  OSCULUS SUBFACE CONTROLLOMS  Construction Rame Surface Style Excellent Associated to Surface Style Excellent Construction Rame Surface Style Excellent Associated to Subface Style Associated to Subface Style Associated to Subface Style Associated to Subface Style Bood Excellent Subface Style Subface	CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE IMETHOD  CFIR-PER-02-E Project Name: Gioliffich St. ACH2 2024 Calculation Date/Fine: 2024-03-0719-33-22-08-00 [Page 19 of 12) Imput File Name: Gioliffich 2024-03-0719-33-22-08-00 [Page 19 of 22)  MACER HEATERS - NEA HEAT PUMP  61 02 03 04 05 06 07 06  Name # of Units Timel Voic (gal) NEEM Heat Pump Neem Pump Neem Neem Pump Nee	CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Coldificit 5: A-DU 2024 Calculation Date/Frime: 2024-03-07-173-35-22-08:00 (Page 12 of 12) Imput File Name: Coldificit 5: 2074-03-07-173-35-22-08:00 (Page 12 of 12)  HAZ HEAT PURPS - RESIDENTIAL PERFORMANCE COMPLIANCE  NO. 02 02 03 04 05 05 07 08 00 Name: verified Airflow Airflow Targe: Verified Esti/Esti2 dest/dest2 dest2/dest2 dest2/dest2 dest2/dest2 dest2/dest2 dest2/dest2 dest2 dest2/dest2 dest2/dest2 dest2/dest2 dest2/dest2 dest2/dest2 dest2 dest2/dest2 dest2 dest2/dest2 dest2/dest2/dest2 dest2/dest2 dest2/dest2 dest2/dest2 dest2/dest2 dest2/de	CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Goldfrinch St. ADU 2021 Calculation Date/Time: 2024-03-07T19:33:22-08.00 (Page 12 of 12) Input File Name: Goldfrinch- 2024-03-07T19:33:22-08.00 (Page 12 of 12) Input File Name: Goldfrinch- 2024-03-07T19:33:22-08.00 (Page 12 of 12) Input File Name: Goldfrinch- 2024-03-07T19:33:22-08.00 (Page 12 of 12) Input File Name: Goldfrinch- 2024-03-08.00 (Page 12 of 12 of 12) Input File Name: Goldfrinch- 2024-03-08.00 (Page 12 of
	LAMAGNA CF-1-R		



PROJECT: LA MAGNA ADU
LA ADDRESS: 9257 MASSOT AV

ARCHITECT: R.E.MINOR & ASSOCIATES (REMA) 1281 HANSON WAY, RAMONA, CA, 92065

REMA TELEPHONE # (619) 865-7237

9207

SANTEE

(04/2022)	
uilding Envelope	9:
§ 110.6(a)1:	Air Leakage. Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AAMAWDMA/CSA 101/LS.2/A440-2011.*
§ 110.6(a)5:	Labeling. Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	Field fabricated exterior doors and fenestration products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped.
§ 110.7:	Air Leakage. All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a):	Insulation Certification by Manufacturers. Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	Insulation Requirements for Heated Slab Floors. Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	Roofing Products Solar Reflectance and Thermal Emittance. The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	Radiant Barrier. When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150 O(a):	Roof Deck, Ceiling and Rafter Roof Insulation. Roof decks in newly constructed attics inclimate zones 4 and 8-16 area-weighted average U-factor not exceeding U-0.184. Ceiling and rafter roofs minimum R-22 insulation in wood-frame ceiling; or area-weighted average U-factor must not exceed 0.043. Rafter roof alterations minimum R-19 or area-weighted everage U-factor of 0.054 or less. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.
§ 150.0(b):	Loose-fill Insulation. Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	Wall Insulation. Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102
	Masonry walls must meet Tables 150.1-A or B. *
§ 150.0(d):	Raised-floor Insulation. Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.*
§ 150.0(f) :	Slab Edge Insulation. Slab edge insulation must meet all of the following have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab foor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	Vapor Retarder. In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to §150.0(d).
§ 150.0(g)2:	Vapor Retarder. In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
§ 150.0(q):	Fenestration Products. Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.45; or area-weighted average U-factor of all fenestration must not exceed 0.45.
ireplaces, Decor	ative Gas Appliances, and Gas Log:
§ 110.5(e)	Pilot Light. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1:	Closable Doors. Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2:	Combustion Intake. Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.
§ 150.0(e)3:	Flue Damper. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control.*
pace Conditionii	ng, Water Heating, and Plumbing System:
§ 110.0-§ 110.3:	Certification. Healing, ventilation, and air conditioning (HVAC) equipment, water heaters showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission.
§ 110.2(a):	HVAC Efficiency. Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-N.*  Controls for Heat Pumps with Supplementary Electric Resistance Heat pumps with supplementary electric resistance.
§ 1102(b):	Controls for Heat Pumps with Supplementary Electric Resistance Heaters. Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-off temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.
	Thermostats. All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a
§ 110.2(c):	setback thermostal. *
§ 110.3(c)3:	<b>Insulation</b> . Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating.
	Isolation Valves. Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW, must have isolation valves with
§ 110.3(c)6:	hose hibbs or other fittings on both cold and bot water lines to allow for flushing the water heater when the valves are closed

2022 Single-Family Residential Mandatory Requirements Summary

#### 5/6/22

2022 Single-Family Residential Mandatory Requirements Summar

ENELOY COMMESSION	
§ 150.0(k) 1G:	Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JAB *
§ 150.0(k) 1H:	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JAB elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k) 11:	<b>Light Sources in Drawers, Cabinets, and Linen Closets.</b> Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150 0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or Inen closet is closed.
§ 150.0(k)2A:	Interior Switches and Controls. All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	Interior Switches and Controls. Exhaust fans must be controlled separately from lighting systems. *
§ 150.0(k)2A:	Accessible Controls. Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off.*
§ 150.0(k)2B:	Multiple Controls. Controls must not bypass a dimmer, occupant sensor, or vacancy sersor function if the dimmer or sensor is installed to comply with § 150.0(k).
§ 150.0(k)2C:	Mandatory Requirements. Lighting controls must comply with the applicable requirements of § 110.9.
§ 150.0(k)2D:	Energy Management Control Systems. An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.0(k)2A.
§ 150.0(k)2E:	Automatic Shutoff Controls. In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.
§ 150.0(k)2F:	Dimmers. Lighting in habitable spaces (e.g., iving rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A.
§ 150.0(k)2K:	Independent controls. Integrated lighting of exhaust fans shall be controlled independently from the fans, Lighting under cabinets or snelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting.
§ 150.0(k)3A:	Residential Outdoor Lighting. For single-family residential buildings, outcoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control) or an astronomical time clock. An energy management control system that provides the specified control functionality and meets all applicable requirements may be used to mee: these requirements.
§ 150.0(k)4:	Internally illuminated address signs. Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.
§ 150.0(k)5:	Residential Garages for Eight or More Vehicles. Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.

hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.

§ 110.10(a)1:	Single-family Residences. Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b)-(e).
§110.10(b)1A:	Minimum Solar Zone Area. The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Pat 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet.
§ 110.10(b)2:	Azimuth. All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.
§ 110.10(b)3A:	Shading. The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.
§ 110.10(b)3B:	Shading. Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.
§ 110.10(b)4:	Structural Design Loads on Construction Documents. For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.

§ 110.10(c): pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single-family

§ 110.10(e)1: Main Electrical Service Panel. The main electrical service panel must have a minimum busbar rating of 200 amps.

Interconnection Pathways. The construction documents must indicate: a location reserved for inverters and metering equipment and a

residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system. **Documentation.** A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must be

Main Electrical Service Panel. The main electrical service panel must have a reserved space to allow for the installation of a double pole

#### § 110.10(e)2: Main Electrical Service Panel. The main electrical service panel must have a space of salar and a space of salar electric." Electric and Energy Storage Ready:

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§ 110.10(d):



ENEFOY COMHISSION	
§ 110.5:	Pilot Lights. Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool an
	spa heaters. *
	Building Cooling and Heating Loads. Healing and/or cooling loads are calculated in accordance with the ASHRAE Handbook,
§ 150.0(h)1:	Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfor: System Installation
	Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.
§ 150.0(h)3A:	Clearances. Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any
48	dryer.
§ 150.0(h)3B:	<b>Liquid Line Drier.</b> Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
3 133.50	Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation. All domestic hot water
§ 150.0())1:	piping must be insulated as specified in § 609.11 of the California Plumbing Code.*
3	Insulation Protection. Piping insulation must be protected from damage, including that cue to sunlight, moisture, equipment'
	maintenance, and wind as required by §120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no
§ 150.0(j)2:	adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must
	include, or be protected by, a Class Lor Class II vapor retarder. Pipe insulation buried below grade mus; be installed in a waterproof and
	non-crushable casing or sleeve.
	Gas or Propane Water Heating Systems. Systems using gas or propane water heaters to serve individual dwelling units must
	designate a space at least 25' x 25' x 7' sui able for the future installation of a heat pump water heater, and meet electrical and
§ 150.0(n)1:	plumbing requirements, based on the distance between this designated space and the water heater location; and a condensate drain no
	more than 2" higher than the base of the water heater
	Solar Water-heating Systems. Solar water-heating systems and collectors must be certified and rated by the Sclar Rating and
§ 150.0(n)3:	Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO
	R&T), or by a listing agency that is approved by the executive director.
ucts and Fans:	
	Ducts. Insulation installed on an existing space-conditioning duct must comply with § 6040 of the California Mechanical Code (CMC). If a
§ 110.8(d)3:	contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
	CMC Compliance. All air-distribution system ducts and plenums must meet CMC §§ 6010-605.0 and ANSI/SMACNA-006-2006 HVAC
	Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to
	R-6.0 or higher; ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8)
	do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be
§ 150.0(m) 1:	sealed with mastic, tape, or other duct-closure system that meets the applicable UL requirements, or aerosol sealant that meets UL 723.
8 130.0(H) I.	The combination of mastic and either mesh or tape must be used to seal openings greater than 1/2, If mastic or tape is used. Building
	cavities, air handler support platforms, and plenums designed or constructed with materials other than sealed sheet metal, duct board or
	flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in
	these spaces must not be compressed. *
erren a	Factory-Fabricated Duct Systems. Factory-fabricated duct systems must comply with applicable requirements for duct construction,
§ 150.0(m)2:	connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive
	duct tapes unless such tape is used in comb nation with mastic and draw bands.
§ 150.0(m)3:	Field-Fabricated Duct Systems. Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes,
(5)	mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	Backdraft Damper. Fan systems that exchange air between the conditioned space and cutdoors must have backdraft or automatic

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accordance with Reference Residential Appendix RA3.1.

#### 2022 Single-Family Residential Mandatory Requirements Summary

Gravity Ventilation Dampers. Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents. Protection of Insulation. Insulation must be protected from damage due tosunlight, moisture, equipment maintenance, and wind.

cover). Cellular foam insulation must be protected as above or painted with a water relardant and solar radiation-resistant coating.

Duct System Sealing and Leakage Test. When space conditioning systems use forced air duct systems to supply conditioned air to an

Air Filtration. Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13

Clean-filter pressure drop and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service. Filter

racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters to and prevents air from bypassing the

§ 150.0(m)9: Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted banvas, or plastic

§ 150.0(m) 10: Porous Inner Core Flex Duct. Porous inner cores of flex ducts must have a non-porous layer or air barrier between the inner core and

§ 150.0(m)11: occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in

§ 150.0(m) 12: or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A.

INTO COMMISSION	2022 Onigic-i anniy residential mandatory requirements outliniary
§ 150.0(s)	Energy Storage System (ESS) Ready. All single-family residences must meet all of the following: Either ESS-ready in erconnection equipment with backed up capacity of 60 amps or more and four or more ESS supplied branch circuits, or a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0(s); at least four branch circuits must be identified and have their source collocated at a single panelboard suitable to be supplied by the ESS, with one circuit supplying the refrigerator, one lighting circuit near the primary exit, and one circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of 225 amps; sufficient space must be reserved to allow future installation of a system isolation equipment/transfer switch within 3' of the main panelboard, with raceways installed between the panelboard and the switch location to allow the connection of backup power source.
§ 150.0(t)	Heat Pump Space Heater Ready. Systems using gas or propane furnaces to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the furnace with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready," and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(u)	Electric Cooktop Ready. Systems using gas or propane cooktop to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the cooktop with circuit conductors rated at least 50 amps with the blank cover identified as "240V ready," and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(v)	Electric Clothes Dryer Ready. Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the dryer location with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready," and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Full up 240V use."

### \*Exceptions may apply.

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#### 2022 Single-Family Residential Mandatory Requirements Summary

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

§ 150.0(o) 1:	Requirements for Ventilation and Indoor Air Quality. All dwelling units must meet the requirements of ASHRAE Standard 622, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(c) 1.*
§ 150.0(o) 1B:	Central Fan Integrated (CFI) Ventilation Systems. Continuous operation of CFI air hardlers is not allowed to provide the whole-dwelling unit ventilation airflow required per §150.0(o) 1C. A motorized damper(s) must be installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed and controlled per §150.0(o) 1Biii&iv. CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance with §150.0(o) 1C.
§ 150.0(o)10:	Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses. Single-family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.0(o) 1Ci-iii.
§ 150.0(o)1G:	Local Mechanical Exhaust. Kitchens and bathrooms must have local mechanical exhaust; nonenclosed kitchens must have demand-controlled exhaust system meeting requirements of §150.0(o)1Giii,enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting §150.0(o)1Giii-iv. Airflow must be measured by the installer per §150.0(o)1Gv, and rated for sound per §150.0(o)1Gvi.*
§ 15C O(o)1H&I:	Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems. The airflow required per § 150.0(o) 10 must be measured by using a flow hood, flow grid, or other airflow measuring device at the fans inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 §7.2 at no less than the minimum airflow rate required by §150.0(o) 10.
§ 150.0(o)2:	Field Verification and Diagnostic Testing. Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented rarge hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per §150.0 (o) 1G
Pool and Spa Sys	stems and Equipment:
§ 110.4(a):	Certification by Manufacturers. Any pool or spa heating system or equipment must be cartified to have all of the following: compliance with the Appliance Efficiency Regulations and listing in MAEDbS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat satting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating.*
§ 110.4(b) 1:	Piping. Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, of dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	Covers. Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	Directional Inlets and Time Switches for Pools. Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5:	Pilot Light. Natural gas pool and spa heaters must not have a continuously burning pilot (ght.
§ 150.0(p):	<b>Pool Systems and Equipment Installation</b> . Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves. *

Lighting Controls and Components. All lighting control devices and systems, ballasts, and luminaires must meet the applicable

Luminaire Efficacy. All installed luminaires must meet the requirements in Table 150.0-A, except lighting integral to exhaust fans, kitchen

Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JAB \*

and must be sealed with a gasket or caulk. California Electrical Code § 410.116 must also be met.

range hoods, bath vanity mirrors, and garage door openers; navigation lighting less than 5 watts; and lighting internal to drawers, cabinets, and linen

Recessed Downlight Luminaires in Ceilings. Luminaires recessed into ceilings must not contain screw based sockets, must be airtight,

Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.

Blank Electrical Boxes. The unmber of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device shall be no more than the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor

**Lighting Integral to Exhaust Fans.** Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).

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§ 150.0(k) 1C:

§ 150.0(k) 1E:

requirements of § 110.9.

closets with an efficacy of at least 45 lumens per watt.



#### PLANS APPROVED BY THE CITY OF SANTEE BUILDING INSPECTION DIVISION SUBJECT TO THE FOLLOWING:

Plans are accepted for construction subject to the requirements of the California Housing Law and the building laws of the City of Santee, California. The stamping or watermarking of these plans and specifications SHALL NOT be held to permit or approve the violation of any City, County, State, Federal Laws or other restrictions.

22 California Building Standard Codes

### **Approved** 04/09/2024

Plan Reviewer: amoon Permit: B-ADU-24-0002

TITLE 24 MANDATORY MEASURES

(619) 865-723

PROJECT:

SHEET NO.