

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD
Project Name: Simas ADU
Calculation Description: Title 24 Analysis
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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
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2016 Low-Rise Residential Mandatory Measures Summary
NOTE: Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach used.
Building Envelope Measures:
Ar Leakage, Labeling, Field Fabricated exterior doors and fenestrations products, Air Leakage, Insulation Certification by Manufacturers, Insulation Requirements for Heated Slab Floors, Roofing Products Solar Reflectance and Thermal Emittance, Radiant Barrier, Ceiling and Rafter Roof Insulation, Slab Edge Insulation, Loose-fill Insulation, Above Grade Wall Insulation, Raised floor Insulation, Vapor Retarder, Fenestration Products, Vapor Retarder, In Climate Zones 14 and 16, In-Place, Decorative Cas Appliance, and Gas Log Measures, Closets Doors, Masonry or factory-bull fireplaces must have a closable metal or glass door covering the entire opening of the firebox, Combustion Intake, Flue Damper, Masonry or factory-bull fireplaces must have a flue damper with an adjustable control device, Pilot Light, Continuous burning pilot lights and the use of indoor or for cooling a firebox jacket, when that indoor air is vented to the outside of the building, are prohibited.
Space Conditioning, Water Heating, and Plumbing System Measures:
Certification, Heating, ventilation and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the Energy Commission.
HVAC Efficiency, Equipment must meet the applicable efficiency requirements in TABLE 110.2.4A through TABLE 110.2.4K.
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 outdoor temperature for compression heating is higher than the cut-out temperature for supplementary heating.
Thermostats. All unitary heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.

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Clearances, Installed air conditioner and heat pump outdoor condensing units must have a clearance of at least 5 feet from the outlet of any dryer vent.
Liquid Line Drier. Installed air conditioner and heat pump systems must be equipped with liquid line filter driers if required, as specified by manufacturer's instructions.
Storage Tank Insulation. Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, must have R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.
Water piping and cooling system line insulation. For domestic hot water system piping, whether buried or unburied, all of the following must be installed according to the requirements of TABLE 120.3.A: The first 5 feet of hot and cold water pipes from the storage tank, all piping with a nominal diameter of 3/4 inch or larger, all piping associated with a domestic hot water recycling system regardless of the pipe diameter, piping from the heating source to storage tank or between tanks, piping buried below grade; and all hot water pipes from the heating source to kitchen fixtures.
Water piping and cooling system line insulation. All domestic hot water pipes that are buried below grade must be installed in a water proof and non-combustible casing or sleeve.
Water piping and cooling system line insulation. Pipe for cooling system lines must be installed as specified in § 150.012A. Distribution piping for steam and hydronic heating systems or hot water systems must meet the requirements in TABLE 120.3.A.
Insulation Protection. Insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind.
Insulation Protection. Insulation exposed to weather must be installed with a cover suitable for outdoor service. For example, protected by aluminum, steel metal, painted canvas, or plastic cover. The cover must be water retardant and provide shielding from solar radiation that can cause degradation of the material.
Insulation Protection. Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must have a Class I or Class II vapor retarder.
Gas or Propane Systems. Systems using gas or propane water heaters to serve individual dwelling units must include all of the following: a 120V electrical receptacle within 3 feet of the water heater, a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; a condensate drain that is no more than 2 inches higher than the base of the water heater; and a gas supply line with a capacity of at least 200,000 Btu/hr.
Recirculating Loops. Recirculating loops serving multiple dwelling units must meet the requirements of § 110.30(f).
Solar Water Heating Systems. Solar water heating systems and collectors must be certified and listed by the Solar Rating and Certification Corporation (SRCC) or by a listing agency that is approved by the Executive Director.
Ducts and Fans Measures:
Ducts. Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
CMC Compliance. All air distribution system ducts and plenums must be installed, sealed, and insulated to meet the requirements of CMC §§ 601.0, 602.0, 603.0, 604.0, 605.0 and ANSIS/MANNA-006-2006 HVAC Duct Construction Standards Metal and Flexible, 3rd Edition. Portions of a supply air and return air ducts and plenums must be insulated to a minimum installed level of R-6.0 (or higher if required by CMC § 605.0) or a minimum installed level of R-4.2, when entries in conditioned space are confirmed through field verification and diagnostic testing (PAS 1.4-2.9). Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable requirements of UL 181, UL 181A, or UL 181B or a UL 181B or a UL 181B aerosol sealant that meets the requirements of UL 725. If mastic or tape is used to seal openings greater than 1/4 inch, the combination of mastic and either mesh or tape must be used. Building materials, support platforms for air handlers, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used for conveying conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms must not be compressed to cause reductions in the cross-sectional area of the ducts.
Factory Fabricated Duct Systems. Factory fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures, joints and seams of duct systems and their components must not be sealed with duct but rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
Field Fabricated Duct Systems. Field fabricated duct systems must comply with applicable requirements for pressure-sensitive tapes, mastic, sealants, and other requirements specified for duct construction.
Backdraft Dampers. All fan systems that exchange air between the conditioned space and the outside of the building must have backdraft or automatic dampers.
Gravity Ventilation Dampers. Gravity ventilation systems serving conditioned space must have either automatic or readily accessible, manually operated dampers at all openings to the interior and outlet air openings and elevator shaft walls.
Protection of Insulation. Insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service. For example, protected by aluminum, steel metal, painted canvas, or plastic cover. Cellular foam insulation must be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation.
Porous Inner Core Flex Duct. Porous inner core flex duct must have a non-porous layer between the inner core and outer vapor barrier.
Duct System Sealing and Leakage Test. When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with § 150.011 and IAPMO Residential Appendix RAS.
Air Filtration. Mechanical systems that supply air to an occupiable space through ductwork exceeding 10 feet in length and through a thermal conditioning component, except evaporative coolers, must be provided with an air filter device that meet the design, installation, efficiency, pressure drop, and labeling requirements of § 150.0112.