



CITY OF PALM DESERT

Building & Safety Division

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2022 CALIFORNIA GREEN BUILDING RESIDENTIAL MANDATORY MEASURES CHECKLIST (#BLDG-CKL-23-0011)

Chapter 3 – Additions and Alterations Scope

301.1.1	<ul style="list-style-type: none"> Applies to additions and alterations of residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. Requirements only apply within the specific area of the addition or alteration. After January 1, 2014, all residential buildings undergoing permitted alterations, additions, or improvements shall replace non-compliant plumbing fixtures with water-conserving plumbing fixtures (Civil Code §1101.1).
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Division 4.106 – Planning and Design (Site Development)

SECTION	SCOPE	REQUIREMENTS
4.106.2	Storm Water Drainage & Retention	(During Construction) Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction.
4.106.3	Grading & Paving	Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings. <i>Exceptions: Additions and alterations which do not alter the existing drainage path.</i>

Division 4.106 – Planning and Design (EV Charging Requirements)

4.106.4	New Construction	<ul style="list-style-type: none"> Shall comply with Section 4.106.4.1 or 4.106.4.2, or 4.106.4.3 for future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625. <p><i>Exceptions: on a case-by-case basis as determined by the AHJ that EV charging and infrastructure are not feasible based upon one or more:</i></p> <ol style="list-style-type: none"> Where there is no local power supply, or the local utility is unable to supply adequate power. Evidence substantiating adding the infrastructure of EVSE may adversely impact costs. ADU or JADU without additional parking.
4.106.4.1 & 4.106.4.1.1	1 & 2 - Family Dwellings Townhouses with Attached private garages.	<ul style="list-style-type: none"> Install a listed raceway to accommodate a dedicated 208/240-volt branch circuit for each dwelling unit. Raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). Raceway shall originate at the main service or subpanel and terminate into a listed cabinet, box, or other enclosure in close proximity to the proposed location of an EV charger. Raceways are required to be continuous at enclosed, inaccessible, or concealed areas and spaces. <p>Service panel and/or subpanel shall provide capacity to install a 40A minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device. <i>Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the proposed location of an EV charger at the time of original construction in accordance with the California Electrical Code.</i></p> <ul style="list-style-type: none"> Service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPABLE." The raceway termination location shall be permanently and visibly marked as "EV CAPABLE."

Division 4.106 – Planning and Design (EV Charging Requirements)

4.106.4.2	(N)Multi-Family Dwellings Hotel/Motels Residential Parking Facilities	<p>When parking is provided, parking spaces shall meet the requirements of Sections 4.106.2.1 and 4.106.4.2.2. Calculations for spaces shall be rounded up to the nearest whole number.</p> <p>A parking space served by an EVSE or designated as a future EV charging space shall count as at least one standard automobile parking space for the purpose of complying with any applicable minimum parking space requirements by the City of Palm Desert.</p>
SECTION	SCOPE	REQUIREMENTS
4.106.4.2.1 (1) & (2)	Multifamily Projects with LESS THAN 20 Dwelling Units Hotels/Motels with LESS THAN 20 Sleeping Units Guest Rooms	<p>(1) EV Capable: Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical Load calculations shall demonstrate the service panel capacity, including all equipment have the sufficient capacity to simultaneously charge all EVs at a minimum of 40A. Service Panels and/or subpanels shall label the OCPD reserved for future EV use and "EV CAPABLE."</p> <p><u>Exceptions:</u></p> <ol style="list-style-type: none"> When EV chargers (Level 2 EVSE) are installed in a number equal to or greater than the required number of EV capable spaces. When EV chargers (Level 2 EVSE) are installed in a number less than the required number of EV capable spaces, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed. <p><u>Notes:</u></p> <ul style="list-style-type: none"> Construction documents shall show locations of future EV spaces. There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use. <p>(2) EV Ready: Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit.</p> <p style="text-align: center;"><u>Exception:</u> Areas of parking facilities served by parking lifts.</p>
4.106.4.2.2 (1) & (2)	Multifamily Projects with 20 OR MORE Dwelling Units And Hotels/Motels with 20 OR MORE Sleeping Units Guest Rooms	<p>(1) EV Capable: Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical Load calculations shall demonstrate the service panel capacity, including all equipment have the sufficient capacity to simultaneously charge all EVs at a minimum of 40A. Service Panels and/or subpanels shall label the OCPD reserved for future EV use and "EV CAPABLE."</p> <p>The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the <i>California Electrical Code</i>.</p> <p><u>Exception:</u> When EV chargers (Level 2 EVSE) are installed in a number greater than five (5) percent of parking spaces required by Section 4.106.4.2.2, Item 3, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed over the five (5) percent required.</p> <p><u>Notes:</u></p> <ul style="list-style-type: none"> Construction documents shall show locations of future EV spaces. There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use. <p>(2) EV Ready: Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit.</p> <p style="text-align: center;"><u>Exception:</u> Areas of parking facilities served by parking lifts.</p>

Division 4.106 – Planning and Design (EV Charging Requirements)

SECTION	SCOPE	REQUIREMENTS
4.106.4.2.2 (3)	Multifamily Projects and Hotels/Motels with 20 or MORE Dwelling Units, Sleeping Units, or Guest Rooms	<p>(3) EV Chargers: Five (5) percent of the total number of parking spaces shall be equipped with Level 2 EVSE. Where common use parking is provided, at least one EV charger shall be located in the common use parking area and shall be available for use by all residents or guests:</p> <ul style="list-style-type: none"> - When low power Level 2 EV charging receptacles or Level 2 EVSE are installed beyond the minimum required, an automatic load management system (ALMS) may be used to reduce the maximum required electrical capacity to each space served by the ALMS. - The electrical system and any on-site distribution transformers shall have sufficient capacity to deliver at least 3.3 kW simultaneously to each EV charging station (EVCS) served by the ALMS. - The branch circuit shall have a minimum capacity of 40 amperes, and installed EVSE shall have a capacity of not less than 30 amperes. ALMS shall not be used to reduce the minimum required electrical capacity to the required EV capable spaces.
4.106.4.2.2.1		<p>Electric vehicle charging stations required by Section 4.106.4.2.2.1.2, Item 3, shall comply with Section 4.106.4.2.2.1.1.</p> <p>Exception: <i>Electric vehicle charging stations serving public accommodations, public housing, motels, and hotels shall not be required to comply with this section. See California Building Code, Chapter 11B, for applicable requirements.</i></p>
4.106.4.2.2.1.1	EV Charging Space (Locations)	<p><u>EVCS shall comply with at least one of the following options:</u></p> <ol style="list-style-type: none"> 1. The charging space shall be located adjacent to an accessible parking space meeting the requirements of the <i>California Building Code</i>, Chapter 11A, to allow use of the EV charger from the accessible parking space. 2. The charging space shall be located on an accessible route, as defined in the <i>California Building Code</i>, Chapter 2, to the building. <p><i>Exception: Electric vehicle charging stations designed and constructed in compliance with the California Building Code, Chapter 11B, are not required to comply with Section 4.106.4.2.2.1.1 and Section 4.106.4.2.2.1.2, Item 3.</i></p>
4.106.4.2.2.1.2	EV Charging Space (Dimensions)	<p><u>EV spaces shall be designed to comply with the following:</u></p> <ol style="list-style-type: none"> 1. The minimum length of each EV space shall be 18 feet. 2. The minimum width of each EV space shall be 9 feet. 3. One in every 25 EV spaces, but not less than 1, shall also have an 8-foot-wide minimum aisle. A 5-foot minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet. <p>(3a) - Surface slope for this EV space and aisle shall not exceed 1 unit vertical in 48 units horizontal (2% slope) in any direction.</p>
4.106.4.2.2.1.3	Accessible EV Spaces	<p>In addition to the requirements in Sections 4.106.4.2.2.1.1 and 4.106.4.2.2.1.2, all EVSE, when installed, shall comply with the accessibility provisions for EV chargers in the <i>California Building Code</i>, Chapter 11B. EV ready spaces and EVCS in multifamily developments shall comply with <i>California Building Code</i>, Chapter 11A, Section 1109A.</p>

Division 4.106 – Planning and Design (EV Charging Requirements)

SECTION	SCOPE	REQUIREMENTS
4.106.4.2.3 (1)	Single EV Space (Required)	<ul style="list-style-type: none"> • Install listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. • • The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box, or enclosure in proximity to the location or proposed location of the EV space. • • Construction documents shall identify the raceway termination point, receptacle, or charger location, as applicable. • • The service panel and/or subpanel shall provide capacity to install a 40A minimum branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device. • • Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the location or the proposed location of the EV space, at the time of original construction in accordance with the California Electrical Code.
4.106.4.2.3 (2)	Multiple EV Spaces (Required)	<ul style="list-style-type: none"> • Construction documents shall indicate raceway termination point and proposed location of future EV spaces and EV chargers. Construction documents shall also provide information on amperage of future EVSE, raceway method(s), wiring schematics (SLD) and load calculations to verify electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at full rated amperage of EVSE. • Plan design shall be based upon a 40A minimum branch circuit. • Required raceways and related components planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction. <p><i>Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed near the location or the proposed location of the EV space, at the time of original construction in accordance with the California Electrical Code.</i></p>
4.106.4.2.4	Identification	The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as “EV CAPABLE” in accordance with the California Electrical Code.
4.106.4.2.5	Electric Vehicle Ready Space Signage	Electric vehicle ready spaces shall be identified by signage or pavement markings, in compliance with Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s).
4.106.4.3	EV Charging Add/Alters of Parking Facilities (E) Multifamily Buildings	<p>When new parking facilities are added, or electrical systems or lighting of existing parking facilities are added or altered and the work requires a building permit, ten (10) percent of the total number of parking spaces added or altered shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE.</p> <p><u>Notes:</u></p> <ul style="list-style-type: none"> - Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging. - There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

Division 4.2 – Energy Efficiency (Scope)

4.201.1

For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory standards.

Division 4.303 – Water Efficiency and Conservation (Indoor Use)

4.301.1

The provisions of this chapter shall establish the means of conserving water used indoors, outdoors and in wastewater conveyance.

SECTION

SCOPE

REQUIREMENTS

4.303

Fixtures and Fittings

Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with Sections 4.303.1.1, 4.303.1.2, 4.303.1.3 and 4.303.1.4.

4.303.1.1

Water Closets

The effective flush volume of all water closets shall not exceed **1.28 gallons** per flush. Tank-type water closets shall be certified to the performance criteria of the US EPA WaterSense Specification for Tank-type Toilets.

Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.

Division 4.303 – Water Efficiency and Conservation (Indoor Use)

SECTION

SCOPE

REQUIREMENTS

4.303.1.2

Urinals

The effective flush volume of wall-mounted urinals shall not exceed **0.125 gallons** per flush. The effective flush volume of all other urinals shall not exceed **0.5 gallons** per flush.

4.303.1.3.1

Single Showerheads

Showerheads shall have a maximum flow rate of not more than **1.8 gallons per minute at 80 psi**. Showerheads shall be certified to the performance criteria of the US EPA WaterSense Specification for Showerheads.

4.303.1.3.2

Multiple Showerheads (One-Shower)

When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed **1.8 gallons per minute at 80 psi**, or the shower shall be designed to allow only one shower outlet to be in operation at a time.

Note: A hand-held shower shall be considered a showerhead

4.303.4.1

Faucets Residential Lavatory

The maximum flow rate of residential lavatory faucets shall not exceed **1.2 gallons** per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 gallons per minute at 20 psi

4.303.1.4.2 & 4.303.4.3

Faucets Common Use Public Use Lavatory & Metering

The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed **0.5 gallons** per minute at 60 psi.

Metering faucets when installed in residential buildings shall not deliver more than **0.2 gallons** per cycle.

4.303.1.4.4

Kitchen Faucets

The maximum flow rate of kitchen faucets shall not exceed **1.8 gallons per minute at 60 psi**. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed **2.2 gallons per minute at 60 psi** and must default to a maximum flow rate of **1.8 gallons per minute at 60 psi**.

Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction

4.303.2

Submeters for Multifamily Buildings/Dwelling Units 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.

Division 4.304 – Water Efficiency and Conservation (Outdoor Use)

4.304.1

Residential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELo), whichever is more stringent.

Notes:

The Model Water Efficient Landscape Ordinance (MWELo) is located in the California Code of Regulations, Title 23, Chapter 2.7, Division 2. MWELo and supporting documents, including a water budget calculator, are available at: <https://www.water.ca.gov/>

Division 4.401 – Material Conservation & Resource Efficiency

4.401.1

The provisions of this chapter shall outline means of achieving material conservation and resource efficiency through protection of buildings from exterior moisture; construction waste diversion; employment of techniques to reduce pollution through recycling of materials; and building commissioning or testing, adjusting, and balancing.

SECTION	SCOPE	REQUIREMENTS
4.406.1	Rodent Proofing	Annular spaces around pipes, electric cables, conduits, or other openings in sole/bottom plates at exterior walls shall be closed with cement mortar, concrete masonry, or a similar method acceptable to the enforcing agency to prevent passage of rodents.

Division 4.408 – Material Conservation & Resource Efficiency

SECTION	SCOPE	REQUIREMENTS
4.408.1 4.408.2 4.408.3 4.408.4 4.408.5	Construction Waste Reduction	<p>The City of Palm Desert adopted the State of California's 2022 Green Building Standards Code as part of Palm Desert Municipal Ordinance 1388. This Code and Ordinance requires that builders/contractors recycle and/or salvage a <u>minimum of 65%</u> of the non-hazardous construction and demolition debris or meet a local construction and demolition waste management ordinance, whichever is more stringent.</p> <p>This applies to all additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. It also applies to newly constructed non-residential buildings, building additions of 1,000 square feet or greater, and/or building alterations with a permit valuation of \$200,000 or above.</p> <p>Failure to comply with Ordinance 1388 may result in fines AND/OR penalties. Failure to provide documentation from salvage, recycling and waste facilities <u>may result</u> in a final inspection not being issued.</p> <p><u>Exceptions:</u></p> <ol style="list-style-type: none"> 1. Excavated soil and land-clearing debris. 2. Alternative waste reduction methods developed by working with local enforcing agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite. <p>Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, Items 1 through 5, Section 4.408.3 or Section 4.408.4.</p>

Division 4.410 – Building Maintenance & Operation

SECTION	SCOPE	REQUIREMENTS
4.410.1	Operations & Maintenance Manual	At the time of final inspection, a manual, compact disc, web-based reference, or other media acceptable to the enforcing agency which covers 12 specific subject areas shall be placed in the building.
4.410.2	Recycling by Occupants	Where <u>5 or more multifamily dwelling units are constructed on a building site</u> , provide readily accessible area(s) that serves all buildings on the site and is identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive.

Division 4.501 – Environmental Quality

4.501.1	The provisions of this chapter shall outline means of reducing the quantity of air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of a building's installers, occupants, and neighbors.	
4.503.1	Fireplaces	Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with US 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

Division 4.504 – Environmental Quality – Pollutant Control

4.504.1	Protection of Mechanical Equipment	At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air intake and distribution component openings shall be covered. Tape, plastic, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of water, dust and debris entering the system may be used.
4.504.2.1	Adhesives Sealants Caulks	<p>Adhesives, sealants, and caulks used on the project shall meet the requirements of the following standards unless more stringent local or regional air pollution or air quality management district rules apply:</p> <ol style="list-style-type: none"> 1. Adhesives, adhesives bonding primers, adhesive primers, sealants, sealant primers, and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable, or SCAQMD Rule 1168 VOC limits, as shown in Tables 4.504.1 or 4.504.2 as applicable. Such products shall also comply with Rule 1168 prohibition on the use of certain toxic components (chloroform, ethylene, dichloride, methylene chloride, perchloroethylene, and trichloroethylene), except for aerosol products as specified in subsection 2 below. 2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than one pound and do not consist of more than 16 fluid ounces) shall comply statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of California Code of Regulations, Title 17, commencing with Section 94507

Division 4.504 – Environmental Quality – Pollutant Control

SECTION	SCOPE	REQUIREMENTS
4.504.2.2	Paints And Coatings	Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Suggested Control Measures as shown in Table 4.504.3 unless the more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4.504.3 shall be determined by classifying the coating as Flat, Nonflat, or Nonflat-High Gloss coating, based on its gloss as defined in subsections 4.21, 4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-high Gloss VOC limit in Table 4.504.3 shall apply.
4.504.2.3	Aerosol Paints and Coatings	Aerosol paints and coatings shall meet the Product-Weighted MIR Limits for ROC in Section 94522(a)(2) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Section 94522(e)(1) and (f)(1) of the CCR, Title 17, commencing with Section 94520.
4.504.3	Carpet Systems	<p>All carpet installed in the building interior shall meet the requirements of 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 1.2, January 2017 (Emission testing method for California Specification 01350).</p> <p>See California Department of Public Health's website for certification programs and testing labs. https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx</p>
4.504.3.1	Carpet Cushion	<p>All carpet cushion installed in the building interior shall meet the requirements of 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 1.2, January 2017 (Emission testing method for California Specification 01350).</p> <p>See California Department of Public Health's website for certification programs and testing labs. https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx</p>
4.504.3.2	Carpet Adhesive	All carpet adhesives shall meet the requirements of Table 4.504.1.
4.504.4	Resilient Flooring Systems	<p>Where resilient flooring is installed, at least 80 percent of floor area receiving resilient flooring shall meet the requirements of 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 1.2, January 2017 (Emission testing method for California Specification 01350).</p> <p>See California Department of Public Health's website for certification programs and testing labs. https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx</p>
4.504.5	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.) as shown in Table 4.504.5.

Division 4.5 – Environmental Quality (Interior Moisture Control)

SECTION	SHEET	REQUIREMENTS
4.505.2	Concrete Slab Foundations	Concrete slab foundations required to have a vapor retarder by the <u>California Building Code</u> , Chapter 19 or concrete slab-on-ground floors required to have a vapor retarder by the <u>California Residential Code</u> , Chapter 5, shall also comply with this section.
4.505.2.1	Capillary Break	<p>A capillary break shall be installed in compliance with at least one of the following:</p> <ol style="list-style-type: none"> 1. A 4-inch-thick (101.6 mm) base of 1/2 inch (12.7 mm) or larger clean aggregate shall be provided with a vapor retarder in direct contact with concrete and a concrete mix design, which will address bleeding, shrinkage and curling, shall be used. For additional information, see American Concrete Institute, ACI 302.2R-06. 2. Other equivalent methods approved by the enforcing agency. 3. A slab design specified by a licensed design professional.
4.505.3	Moisture Content of Building Materials	<p>Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19% moisture content. Moisture content shall be verified in compliance with the following:</p> <ol style="list-style-type: none"> 1. Moisture content shall be determined with either a probe-type or contact-type moisture meter. Equivalent moisture verification methods may be approved by the enforcing agency and shall satisfy requirements in Section 101.8. 2. Moisture readings shall be taken at a point 2 feet to 4 feet from the grade-stamped end of each piece to be verified. 3. At least 3 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. <p><i>Note: Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Manufacturers' drying recommendations shall be followed for wet-applied insulation products prior to enclosure.</i></p>
4.506.1	Bathroom Exhaust Fans	<p>Each bathroom shall be mechanically ventilated and shall comply with the following: Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidity control.</p> <p>Humidity controls shall be capable of adjustment between a relative humidity range of ≤ 50 percent to a maximum of 80 percent. A humidity control may utilize manual or automatic means of adjustment. A humidity control may be a separate component to the exhaust fan and is not required to be integral (i.e., built-in).</p> <p><u>Notes:</u></p> <ul style="list-style-type: none"> - For the purposes of this section, a bathroom is a room which contains a bathtub, shower or tub/shower combination. - Lighting integral to bathroom exhaust fans shall comply with the California Energy Code.

Division 4.5 – Environmental Quality (Environmental Comfort)		
SECTION	SCOPE	REQUIREMENTS
4.507.2	HVAC System Design	<p>Heating and air-conditioning systems shall be sized, designed, and have their equipment selected using the following methods:</p> <ol style="list-style-type: none"> 1. The heat loss and heat gain are established according to ANSI/ACCA 2 Manual J—2016 (Residential Load Calculation), ASHRAE handbooks or other equivalent design software or methods. 2. Duct systems are sized according to ANSI/ACCA 1 Manual D—2016 (Residential Duct Systems), ASHRAE handbooks or other equivalent design software or methods. 3. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S—2014 (Residential Equipment Selection) or other equivalent design software or methods. <p><u>Exception:</u> Use of alternate design temperatures necessary to ensure the systems function are acceptable</p>
END		

(REV: 05/10/23:JKF)