



Permit Number: _____

NRCC-MCH-01		Are the appropriate acceptance forms (NRCA) indicated on the NRCC?	N/A	YES	NO
MCH-02-A: Mechanical Ventilation	<i>Required for all systems having mechanical ventilation.</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCH-03-A: Single Zone Unitary	<i>Required for all constant volume, single-zone, unitary air conditioner and heat pump systems – packaged and split.</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCH-04-H: Air Distribution Ducts	<i>Required for single zone systems serving <5,000 ft² with ducts in unconditioned space.</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCH-05-A: Economizer Controls	<i>Required if the system has an economizer.</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCH-06-A: Demand Control Ventilation (DCV)	<i>Required if the system has demand controlled ventilation (DCV).</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCH-07-A: Supply Fan VAV	<i>Variable air volume (VAV) systems require outside air verification and pressure control verification.</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCH-08-A: Valve Leakage Test	<i>Required for chilled and hot water variable low systems, chiller isolation valves, boiler isolation valves, and water-cooled air conditioner and hydronic heat pump systems.</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCH-09-A: Supply Water Temperature Reset	<i>Required for chilled and hot water systems that do not use VFD pump control and exceed 500 kBtuh capacity.</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCH-10-A: Hydronic System Variable Flow Control	<i>Required for water systems >5HP that have variable frequency drive (VFD) pump control.</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCH-11-A: Automatic Demand Shed Control	<i>All systems with direct digital controls (DDC) to the zone level require demand shed capability.</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCH-12-A: Fault Detection & Diagnostics for DX Units	<i>Air-cooled unitary direct expansion (DX) units, including packaged and split systems, heat pumps and variable refrigerant low (VRF) systems greater than or equal to 54 kBtuh with an economizer, shall include a fault detection and diagnostics (FDD) system that must be Certified by the Commission.</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCH-13-A: Automatic Fault Detection and Diagnostics for Air Handling Units and Zone Terminal Units Acceptance	<i>If automatic FDD for air handling units and zone terminal units is provided.</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCH-14-A: Distributed Energy Storage DX AC Systems Acceptance	<i>Required for DX distributed energy storage (typically ice storage) systems.</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCH-15-A: Thermal Energy Storage Systems	<i>Thermal Energy Storage systems used in conjunction with chiller systems.</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCH-16-A: Supply Air Temperature Reset Controls	<i>Controls to reset supply temperatures required to minimize reheating or re-cooling.</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCH-17-A: Condenser Water Supply Temperature Reset Controls	<i>Systems including condenser supply water reset temperature control.</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCH-18-F: Energy Management System (EMS)	<i>Projects that include an energy management system (EMS) must document system testing using MCH-18A.</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A = Certified Acceptance Tester
 F = Installing Contractor (Field Technician)
 H = HERS Rater

** Items marked "no" must be corrected*



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NRCC-MCH-02 (Wet & Dry Systems)		Standards Section #	Project Notes	
			(PE can use this section to record project data, as needed) YES NO*	
CEC §110.1: Heating and cooling APPLIANCES (equipment <65 kBtuh capacity) must comply with the Appliance Efficiency Regulations, Title 20 California Code of Regulations, Section 1601, and may be installed only if the appliance fully complies with Section 1608(a) of those regulations. Space conditioning equipment must meet the Efficiency requirements of CEC §110.2(a). Equipment with more than one standard or more than one function must meet the requirements of both/all. See §110.2(a) for exceptions.				
Dry Systems				
Mandatory Measures				
Verify heating and cooling efficiencies	App. Stds. 1605 §110.1 or §110.2(a)		<input type="checkbox"/>	<input type="checkbox"/>
Setback thermostats that avoid resistance heating	§110.02(b) §110.2(c)		<input type="checkbox"/>	<input type="checkbox"/>
Forced air furnaces ≥225 kBtuh have intermittent ignition or an interrupted ignition device	§110.2(d)		<input type="checkbox"/>	<input type="checkbox"/>
Low leakage air-handling units must be HERS certified	§110.2(f) §150.1(b) §140.1		<input type="checkbox"/>	<input type="checkbox"/>
Mechanical ventilation meets the standards and if natural ventilation is used, that the area requirements are met and shown on the plans.	§120.1(b) NRCM Table 4-14		<input type="checkbox"/>	<input type="checkbox"/>
Single zone or DDC multi-zone Systems with an economizer serving spaces with less than 40 ft ² per person require DCV.	§120.1(c)3		<input type="checkbox"/>	<input type="checkbox"/>
Occupant sensor ventilation controls are required for multipurpose rooms <1000 ft ² , classrooms >750 ft ² and conference, convention, auditorium and meeting center rooms >750 ft ² (without contaminants).	§120.1(c)5 §120.2(e)3		<input type="checkbox"/>	<input type="checkbox"/>
Automatic shutoff and reset control timers unless an exception applies.	§120.2(e)		<input type="checkbox"/>	<input type="checkbox"/>
Outdoor air and exhaust damper control unless an exception applies.	§120.2(f)		<input type="checkbox"/>	<input type="checkbox"/>
Isolation zones are required for zones >25,000 ft ²	§120.2(g)		<input type="checkbox"/>	<input type="checkbox"/>
Demand shed control capability is required if the system has DDC to the zone level.	§120.2(h)		<input type="checkbox"/>	<input type="checkbox"/>
Economizer fault detection and diagnostics are required for systems >54 kBtuh with an economizer.	§120.2(i)		<input type="checkbox"/>	<input type="checkbox"/>
Duct insulation must be R-8 or better for ducts in unconditioned spaces; R-4.2 or better for ducts in indirectly conditioned spaces.	§120.4		<input type="checkbox"/>	<input type="checkbox"/>
Prescriptive Measures				
Equipment sizing calculations are provided on the plans or in the specifications.	§140.4(a)(b)		<input type="checkbox"/>	<input type="checkbox"/>
Supply fan pressure control locations must be shown on the plans.	§140.4(c)		<input type="checkbox"/>	<input type="checkbox"/>
Simultaneous heating and cooling must be minimized in accordance with §140.4(d). The method must be shown on the plans or in the specifications.	§140.4(d)		<input type="checkbox"/>	<input type="checkbox"/>

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	Standards Section #	Project Notes	
		(PE can use this section to record project data, as needed)	YES NO*
Dry Systems Prescriptive Measures <i>continued</i>			
Economizers: If cooling capacity >54 kBtuh verify a 100% water or air economizer. See §140.4(e) for exceptions.	§140.4(e)	<input type="checkbox"/>	<input type="checkbox"/>
>25% duct surface in unconditioned space including under a roof that does not meet current prescriptive insulation requirements for CAV single zone system serving <5,000 ft² require duct sealing and leak testing.	§140.4(l)	<input type="checkbox"/>	<input type="checkbox"/>
Wet Systems (Hydronic)			
Mandatory Measures			
Verify heating, cooling, and chiller efficiencies	App. Stds. 1605 §110.1 or §140.4(l)	<input type="checkbox"/>	<input type="checkbox"/>
For cooling towers ≥150 tons, verify that the Maximum Achievable Cycles of Concentration calculation, signed by the Professional Engineer of record with flow meter, overflow alarm and efficient drift eliminators addressed on plans.	§110.2(e)1, 2, 3, 4, 5	<input type="checkbox"/>	<input type="checkbox"/>
Piping insulation shown on the plans meets the requirements of §120.3 and Table 120.3-A	§120.3	<input type="checkbox"/>	<input type="checkbox"/>
Prescriptive Measures			
Cooling tower fan and low controls meeting the requirements of §140.4(h).	§140.4(h)2 §140.4(h)5 §140.4(h)3	<input type="checkbox"/>	<input type="checkbox"/>
Open Cooling Towers >900 GPM have propeller fans.	§140.4(h)4	<input type="checkbox"/>	<input type="checkbox"/>
Air cooled chillers >300 tons are not allowed. Chillers >300 tons are not air cooled unless an exception applies.	§140.4(j)	<input type="checkbox"/>	<input type="checkbox"/>
Variable low systems hot and chilled water systems with more than three control valves and 1.5 HP pumping power and include automatic variable flow.	§140.4(k)1	<input type="checkbox"/>	<input type="checkbox"/>
Automatic chiller and boiler that include more than one chiller or more than one boiler.	§140.4(k)2 §140.4(k)3	<input type="checkbox"/>	<input type="checkbox"/>
Chilled water (CHW) and Heating hot water (HHW) systems >500 kBtuh include automatic water temperature reset unless variable low is used in accordance with §140(k)1.	§140.4(k)4	<input type="checkbox"/>	<input type="checkbox"/>
Water loop heat pump (WLHP) systems over 5 HP total pumping power have two-position automatic isolation valves on each air conditioner or heat pump.	§140.4(k)5	<input type="checkbox"/>	<input type="checkbox"/>
Variable speed control (VSD) on CHW, CW, and WLHP systems over 5 HP total power.	§140.4(k)6.A	<input type="checkbox"/>	<input type="checkbox"/>
For water loop systems without DDC, VSD Pressure Sensor is located at the most remote (or limiting) heat exchanger.	§140.4(k)6.B.i	<input type="checkbox"/>	<input type="checkbox"/>
For water loop systems with DDC, VSD control pressure is reset based on the limiting valve at no less than 80% open, based on the specifications and sequence of operations.	§140.4(k)6.B.ii	<input type="checkbox"/>	<input type="checkbox"/>

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NRCC-PLB-01 (Plumbing)		Standards Section #	Project Notes (PE can use this section to record project data, as needed)	YES	NO*
Water heater system type / Configuration	§150.1(c)8	Gas storage - single dwelling unit / Gas instantaneous - single dwelling unit / Gas central recirculation - multiple dwelling units / Electric resistance - individual dwelling units /	<input type="checkbox"/>	<input type="checkbox"/>	
Building type	§140.5	Nonresidential / High-rise residential / Hotel or Motel	<input type="checkbox"/>	<input type="checkbox"/>	
Central DHW distribution type	§150.1(c)8		<input type="checkbox"/>	<input type="checkbox"/>	
Dwelling unit DHW distribution type	§150.1(c)8		<input type="checkbox"/>	<input type="checkbox"/>	
Water heater type	NRCM 4.11.9	Small storage gas / Boiler / Small storage electric / Instantaneous large gas / Large storage gas / Instantaneous large electric / Large storage electric / Instantaneous small gas / Heat pump water heater / Instantaneous small electric /	<input type="checkbox"/>	<input type="checkbox"/>	
Fuel type	NRCM 4.11.9	Propane / Gas / Electric	<input type="checkbox"/>	<input type="checkbox"/>	
Water heater information: Efficiency, standby loss, rated input, volume	§120.5(a)4 §140.4(e) NA7.5.4		<input type="checkbox"/>	<input type="checkbox"/>	
PLB-02 & 03 High-rise Multi-family / Hotel / Motel					
For systems serving multiple dwelling units, verify that the recirculation system automatic controls are shown on the plans; solar hot water meeting the requirements of §150.1(c)8 is on the plans; two recirculation systems are on the plans; and compliance with RA4 is explicitly on the plans.	§150.1(c)8		<input type="checkbox"/>	<input type="checkbox"/>	
NRCC-SRA-01 (Solar Ready)					
<i>Building type</i>	§110.10	Hotel/Motel or High-rise 1-10 stories / Nonresidential 1-3 stories	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Report type</i>		New construction / Addition increasing roof size more than 2,000 ft²	<input type="checkbox"/>	<input type="checkbox"/>	
Path pursued is indicated on plan set		A / B / C / D / E	<input type="checkbox"/>	<input type="checkbox"/>	
NRCC-SRA-02 Minimum Solar Zone					
Method pursued is indicated on plan set		1 or 2	<input type="checkbox"/>	<input type="checkbox"/>	



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