City of [NAME OF CITY]
Department of [NAME OF DEPARTMENT] – [NAME OF DIVISION OR BUREAU]
SUSTAINABILITY – ### PLAN REVIEW LIST

SUPPLEMENTAL PLAN CHECK CORRECTION SHEET FOR 2020 BUILDING ENERGY STANDARDS

(2019 California Code of Regulations Title 24, Part 6)

Plan Check #:_____ Permit Application Number: _____

Job Address: _____

Plan Check Engineer:_____ Phone: _____

This is a supplemental correction sheet. Please see the master correction sheet for instructions and additional information.

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

REFERENCE CODES AND DOCUMENTS

A copy of referenced standards above can be obtained at: http://www.energy.ca.gov/title24/2019standards/

- 2019 California State Building Energy Efficiency Standards
- 2019 Referenced Appendices
- 2019 Residential Compliance Manual
- 2019 Non-Residential Compliance Manual

PART I: ENERGY REQUIREMENTS	*Select all measures verified in the completed project*	
A. REQUIREMENTS FOR ALL BUILDINGS	**Verification by City Plan Check Staff**	**Correction Item Response**
1. Specify design package used and method of compliance: a. Prescriptive Approach b. Performance Approach	☐ ☐	
2. The following compliance documents shall be attached to plan: a. Certificate of Compliance Documents b. Mandatory Features Summary	☐ ☐	
3. Compliance documents shall be produced by up-to-date version of Energy Commission Approved computer programs. To obtain a list of Energy Commission approved compliance programs, call 1-800-772-3300 or visit their website at : https://ww2.energy.ca.gov/title24/2019standards/2019_computer_prog_list.html	☐	

4. Approved Performance software for 2019 Standards: a. Nonresidential: i. CBECC-Com Version 2019-1.1 or newer ii. EnergyPro Version 8.0 or newer version b. Residential: i. CBECC-Res Version 2019-1.1 or newer ii. EnergyPro Version 8.0 or newer version	☐ ☐ ☐ ☐	
5. Proposed fenestration U-Factor does not conform with Defaults values from Table 110.6-A. Specify on plan NFRC rated products are required for all fenestration with Non- Default U-Factors.	☐	
6. The Solar Heat Gain Coefficient (SHGC) for proposed glazing does not conform with Defaults values from Table 110.6-B. Specify on plan NFRC rated products are required for all fenestration with Non-Default SHGC.	☐	
7. The conditioned floor area shown on CF-1R form does not match with plans submitted. Revise calculation(s) accordingly	☐	
8. The window area (at_____facing wall) shown on CF-1R-(_____) form does not match with plans submitted.	☐	
9. Incorporate the fenestration SHGC and U-factors required as per CF-1R form with window schedule.	☐	
10. Provide construction details for all energy insulation assemblies. Show type of insulation on sections.	☐	
11. Buildings greater than 50,000 sq ft and all buildings with complex mechanical systems serving more than 10,000 sq ft, the signer shall be a third party engineer, architect, or contractor.	☐	
B. NON-RESIDENTIAL, HIGH-RISE RESIDENTIAL, AND HOTEL/MOTEL BUILDINGS	**Verification by City Plan Check Staff**	**Correction Item Response**
1. Prescriptive requirement for building envelope: a. Cool Roof coating is required. Note on plan all Cool Roof products shall have a clearly visible packaging label that lists the emittance and the initial and 3-year aged solar reflectance, or a CRRC approved accelerated aged solar reflectance tested in accordance with CRRC-1. *140.1, 140.2, 140.3(a)1, 141.0(b)2B, 150.1(c)11, 150.2(b)1H, 150.2(b)2* b. For buildings or enclosed spaces over 5,000 ft2 and ceiling heights over 15-0" shall meet the daylighting requirements of section.2. [140.3(c)] Combined total of at least 75 percent of the floor area shall be in the primary Sidelight Daylight Zone in accordance with Section 130.1(d)1B, the total floor area in the space within a horizontal distance of .7 times the average ceiling height from the edge of rough opening of skylights. All Skylit Daylit Zones and Primary Sidelit Daylit Zones shall be shown on building plans.	☐ ☐	

C. LOW-RISE RESIDENTIAL BUILDINGS	Verification by City Plan Check Staff	Correction Item Response
1. Prescriptive requirement for building envelope: *TABLE.150.1-A* a. Provide R-(_____) insulation at Roof/ Ceiling, R-(_____) insulation at walls, and R-(_____) insulation at floors. b. Provide radiant barrier. Show details on the plans. *c.* The maximum total fenestration area shall not exceed the percent of conditioned floor area, CFA, as indicated in Table 150.1- (A) single family or (B) multifamily. *150.1(c)3B* *d.* The maximum west facing fenestration area shall not exceed the percent of CFA as indicated in Table 150.1- (A) single family or (B) multifamily. West-facing fenestration area includes skylights tilted in any direction when pitch is less than 1:12 *150.1(c)3C* e. Installed fenestration products shall have an area weighted average U-factor and SHGC no greaterthan the applicable value in Table 150.1-(A) single family or (B) multifamily and shall be determined in accordance with Section 110.6(a)2 and 110.6(a)3. f. Heating system types shall be installed as required in TABLE 150.1-(A) single family or (B) multifamily. g. All space heating and space cooling equipment shall comply with minimum Appliance Efficiency Regulations as specified in Sections 110.0 through 110.2 and meet all applicable requirements of Sections 150.0 and 150.1(c)7A. h. Provide Whole House Fan per section 150.1(c)12. i. Water-heating systems shall meet the requirements of section 150.1(c)8. j. Duct insulation shall meet the minimum requirements of Table 150.1-A or B	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	
2. Replacement fenestration, where all the glazing in an existing fenestration opening is replaced with a new manufactured fenestration product, shall not exceed the U- factor and SHGC requirements of Package A or as determined by performance approach. *150.1(c*	☐	
3. When HERS field verification is required. The person(s) responsible for the Certificate(s) of Compliance shall submit the Certificate(s) for registration and retention to a HERS provider data registry. The submittals to the HERS provider data registry shall be made electronically in accordancewith the specifications in Reference Joint Appendix JA7. For	☐	
D. GENERAL NOTES	**Verification by City Plan Check Staff**	**Correction Item Response**
Attach the following notes to plan : *1.* Compliance Information: The builder shall leave in the building, copies of the completed, signed and submitted compliance documents for the building owner at occupancy. For low-rise residential buildings, such information shall, at a minimum, include copies of all Certificate of Compliance, Certificate of Installation, and Certificate of Verification documentation submitted. *10-103(b)1*	☐	

2. Operating Information: The builder shall provide the building owner at occupancy, operating information for all applicable features, materials, components, and mechanical devices installed in the building. Operating information shall include instructions on how to operate the features, materials, components, and mechanical devices correctly and efficiently. The instructions shall be consistent with specifications set forth by the Executive Director. a. For residential buildings, such information shall be contained in a folder or manual which provides all Certificate of Compliance, Certificate of Installation, and Certificate of Verification documentations. This operating information shall be in paper or electronic format. *10-103(b)2*	☐	
3. Maintenance Information: The builder shall provide to the building owner at occupancy, maintenance information for all features, materials, components, and manufactured devices that require routine maintenance for efficient operation. Required routine maintenance actions shall be clearly stated and incorporated on a readily accessible label. The label may be limited to identifying, by title and/or publication number, the operation and maintenance manual for that particular model and type of feature, material, component or manufactured device. *10-103(b)3*	☐	
4. Ventilation Information: The builder shall provide to the building owner at occupancy, a description of the quantities of outdoor air that the ventilation system(s) are designed to provide to the building's conditioned space, and instructions for proper operation and maintenance of the ventilation system. *10-103(b)4*	☐	
5. All systems, equipment, appliances and building components shall comply with the applicable manufacturing, construction, and installation provisions of Sections 110.0 through 110.11 for newly constructed buildings.	☐	
6. Any appliance regulated by the Appliance Efficiency Regulations, Title 20 California Code of Regulations, Section 1601 et seq., may be installed only if the appliance fully complies with Section 1608(a) of those regulations. *110.1(a)*	☐	
7. Service water-heating systems shall be equipped with automatic temperature controls capable of adjustment from the lowest to the highest acceptable temperature settings for the intended use as listed in Table 3, Chapter 50 of the ASHRAE Handbook, HVAC Applications Volume. *110.3(a)1*	☐	
8. On systems that have a total capacity greater than 167,000 Btu/hr, outlets that require higher than service water temperatures as listed in the ASHRAE Handbook, Applications Volume, shall have separate remote heaters, heat exchangers, or boosters to supply the outlet with the higher temperature. *110.3(c)1*	☐	
9. Service hot water systems with circulating pumps or with electrical heat trace systems shall be capable of automatically turning off the system. *110.3(c)2*	☐	

10. Controls for service water-heating systems shall limit the outlet temperature at public lavatories to 110°F. *110.3(c)3*	☐	
11. Unfired service water-heater storage tanks and backup tanks for solar water-heating systems shall have: a. External insulation with an installed R-value of at least R-12, or b. Internal and external insulation with a combined R-value of at least R-16, or *c.* The heat loss of the tank surface based on an 80°F water-air temperature difference shall be less than 6.5 Btu/hr per square foot. *110.3 (c)4*	☐	
12. For Nonresidential, high-rise residential, and hotel/motel buildings, space conditioning systems shall meet the efficiency standards specified Section 120.2.	☐	
13. Continuously burning pilot light shall be prohibited for the following natural gas system or equipment listed below: *110.5* a. Fan-type central furnaces b. Household cooking appliances, except for household cooking appliances without an electrical supply voltage connection and in which each pilot consumes less than 150 Btu/hr c. Pool heaters d. Spa heaters e. Indoor and outdoor fireplaces	☐	
14. Any pool or spa heating system or equipment shall: *110.4* a. A thermal efficiency that complies with the Appliance Efficiency Regulations b. Have a readily accessible on-off switch, mounted on the outside of the heater that allows shutting off the heater without adjusting the thermostat setting. c. Not utilize electric resistance heating. d. Have a cover for outdoor pools or spas that have a heat pump or gas heater. e. Have a permanent, easily readable, and weatherproof instruction card that gives instructions for the energy efficient operation of the pool or spa heater and for the proper care of pool or spa water when a cover is used. f. Have at least 36 inches of pipe installed between the filter and heater or dedicated suction and return lines, or built-in or built-up connections shall be installed to allow for the future addition of solar heating equipment. g. Have directional inlets for the pool or spa that adequately mix the pool water. h. A time switch or similar control mechanism shall be installed as part of a pool water circulation control system that will allow all pumps to be set or programmed to run only during the off-peak electric demand period and for the minimum time necessary to maintain the water in the condition required	☐	
15. Manufactured fenestration products and exterior doors shall have air infiltration rates not exceeding 0.3 cfm/ft2 of window area, 0.3 cfm/ft2 of door area for residential doors, 0.3 cfm/ft2 of	☐	

nonresidential single door area, and 1.0 cfm/ft2 of nonresidential double door area. *110.6(a)1*		
16. Fenestration products shall be rated in accordance with NFRC 100 for U-factor, NFRC 200 for SHGC, and VT or use the applicable default value. Fenestration products shall have a temporary label, for manufactured fenestration products and exterior doors, a temporary label certificate approved by the supervisory entity (NFRC) meets the requirements of this section. When Component Modeling Approach is used and for site-built fenestration products, a label certificate approved by the supervisory entity (NFRC) meets the requirements of this section 10-111(a)1. 110.6(a)2, 110.6(a)3, 110.6(a)4, 110.6(a)5	☐	
17. Field-fabricated fenestration products and exterior doors, other than unframed glass doors and fire doors, shall be caulked between the fenestration products or exterior door and the building, and shall be weatherstripped. *110.6(b)*	☐	
18. Joints, penetrations and other openings in the building envelope that are potential sources of air leakage shall be caulked, gasketed, weather stripped, or otherwise sealed	☐	
19. Insulation shall be certified by Department of Consumer Affairs, Bureau of Electronic and Appliance Repair, Home Furnishing and Thermal Insulation that the insulation conductive thermal performance is approved pursuant to the California Code of Regulations, Title 24, Part 12, Chapter 12-13, Article 3, "Standards for Insulating Material." *110.8(a)*	☐	
20. Urea formaldehyde foam insulation may only be used in exterior side walls, and requires a four-mil-thick plastic polyethylene vapor barrier between the urea formaldehyde foam insulation and the interior space in all applications. *110.8(b)*	☐	
21. Insulating material shall be installed in compliance with the flame spread rating and smoke density requirements of the CBC.	☐	
22. Insulation installed on an existing space conditioning duct, it shall comply with Section 604.0 of the CMC. *110.8(d)3*	☐	
23. External insulation installed on an existing unfired water storage tank or on an existing back-up tank for a solar water- heating system, it shall have an R-value of at least R-12, or the heat loss of the tank surface based on an 80°F water-air temperature difference shall be less than 6.5 Btu per hour per square foot. *110.8(d)2*	☐	
E. RESIDENTIAL NOTES	**Verification by City Plan Check Staff**	**Correction Item Response**
1. A masonry or factory-built fireplace shall have the following: *150.0(e)* a. Closeable metal or glass doors covering the entire opening of the firebox; b. A combustion air intake to draw air from the outside of the building directly into the firebox, 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. *(Exception: An outside combustion-air intake is not required if the fireplace will be installed over concrete slab flooring and the fireplace will not be located on an exterior wall.)*; and c. A flue damper with a readily accessible control		
2. Heating or cooling systems, including heat pumps, not controlled by a central energy management control system (EMCS) shall be equipped with a setback thermostat that meet the requirements of Section 110.2(c) 150.0(i)	☐	
3. Gas or propane water heaters shall have: *150.0(n)* a. A dedicated 125 volt, 20 amp electrical receptacle that is within 3 feet from the water heater. b. A Category III or IV vent, or a Type B vent with straight pipe. c. Condensate drain that is no more than 2 inches higher than the base of the installed water heater, and allows natural draining without pump assistance. d. A gas supply line with a capacity of at least 200,000 Btu/hr	☐	
4. All pumps and pump motors installed shall be listed in the Commission's directory of certified equipment and shall comply with the Appliance Efficiency Regulations. *150.0(p)1.A*	☐	
5. The minimum installed weight per square foot of any loose- fill insulation shall conform with the insulation manufacturer's labeled R-value. 150.0 (b)	☐	
6. The minimum depth of concrete-slab floor perimeter insulation shall be 16 inches or the depth of the footing of the building, whichever is less. 150.1(c)(1)(D)	☐	
7. Raised-floors shall be insulated such that the floor assembly has an assembly U-factor equal to or less than shown in TABLE 150.1-(A) single family or (B) multifamily 150.1(c)1.C	☐	
8. All new buildings and additions >700 sqft shall comply with the Quality Insulation Installation (QII) requirements shown in TABLE 150.1-(A) single family or (B) multifamily. When QII is required, insulation installation shall meet the criteria specified in Reference Appendix RA3.5. 150.1(c)1.E	☐	
9. Insulations are required for: *150.0(j)2.A* a. All hot water pipes from the heating source to the kitchen fixtures. b. All piping with a nominal diameter to or greater than 3/4 inch and less than 1 inch. c. The first 5 feet (1.5 meters) of hot and cold water pipes from the storage tank. d. All piping associated with a domestic hot water recirculation system. e. Piping from the heating source to storage tank or between tanks. f. Piping buried below grade.	☐	

10. Insulation shall be provided for water heaters as follows: a. Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, shall be externally wrapped with insulation having an installed thermal resistance of R-12 or greater or have internal insulation of at least R-16 and a label on the exterior of the tank showing the insulation R-value. *150.0 (j)1*	☐	
11. Lighting *150.0(k)* a. Installed luminaires shall be classified as high-efficacy in accordance with TABLE 150.0-A. b. Exhaust fans shall be controlled separately from lighting systems. c. Luminaries shall be switched with readily accessible wall-mounted controls that permit the luminaries to be manually turned ON and OFF. d. Lighting installed in attached and detached garages, laundry rooms, and utility rooms, at least one luminaire in each of these spaces shall be controlled by vacancy sensors. e. Dimmers or vacancy sensors shall control all luminaires required to have light sources compliant with Reference Joint Appendix JA8. *EXCEPTION 1: Luminaires in closets less than 70 square feet.* *EXCEPTION 2: Luminaires in hallways.* *f.* A. In a low-rise multifamily residential building where the total interior common area in a single building equals 20 percent or less of the floor area, permanently installed lighting for the interior common areas in that building shall be high efficacy luminaires or controlled by an occupant sensor.	☐	
12. In a low-rise multifamily residential building where the total interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting in that building shall: i. Comply with the applicable requirements in Sections 110.9, 130.0, 130.1, 140.6 and 141.0; and ii. Lighting installed in corridors and stairwells shall be controlled by occupant sensors that reduce the lighting power in each space by at least 50 percent. The occupant sensors shall be capable of turning the light fully On and Off from all designed paths of ingress and egress.	☐	

ADDITIONAL CORRECTIONS:
