

2016 Energy Conservation Nonresidential Plan Review Checklist

Department of Development Services | Building & Safety Bureau
411 W. Ocean Blvd., 2nd Floor, Long Beach, CA 90802
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INFORMATION	PROJECT NO.:	EXPIRATION DATE:	STATUS:
	PROJECT ADDRESS:		
	WORK DESCRIPTION:		
	APPLICANT'S NAME:	TEL. NO.:	
	PLAN REVIEWER:	TEL. NO.:	562-570-
	ADDRESS:	411 W. OCEAN BLVD., 2 nd FLOOR, LONG BEACH, CA 90802	
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	<p>Referenced Applicable Codes: 2016 California Building Code, 2016 California Residential Code, 2016 California Building Energy Standards, 2016 Reference Appendices, 2016 Residential ACM Manual, 2016 Non-Residential ACM Manual, and Long Beach Municipal Code (LBMC).</p> <p>Numbers within the parenthesis () refer to 2016 California Energy Standards and applicable codes. Comments with circled item numbers apply to this review. Provide a written response to each comment and show where and how it has been addressed.</p>		

A All Buildings

- Specify design package used and method of compliance:
 - Prescriptive Method
 - Performance Method
- The following compliance documents shall be attached to plan :
 - Certificate of Compliance documents
 - Mandatory Features Summary
 - _____
- 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, visit their website at:
<http://www.energy.ca.gov/title24/2016standards/>
- Proposed fenestration U-Factor does not conform to Defaults values from Table 110.6-A. / Alternate Defaults values from table NI-1 (*ACM manual*). Specify on plan NFRC rated products are required for all fenestration with Non-Default U-Factors.
- 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.
- Provide construction details for all energy insulation assemblies. Show type of insulation on sections.

B. Non-residential, High-rise Residential, and Hotel/Motel Buildings

- Insulation is not allowed on T-bar ceiling. (118(e))
- Opaque portions of framed demising walls shall be insulated with U-factor not greater than 0.099 (R=11 or thicker) for wood framed wall or 0.151 (R=7 or thicker) for metal framed wall. (120.7(b)7.)
- Prescriptive requirement for building envelope:



City of Long Beach
Department of Development Services – Building and Safety Bureau
Energy- Non-Residential Review Checklist

- Cool Roof coating is required. Note on plan all Cool Roof product shall have a clearly visible packaging label that lists the reflectance and emittance tested in accordance with CRRC-1. (10-113, 110.8(i).
- Daylighting(s) are required for building over 5,000 ft² and ceiling heights over 15'-0" and lighting power density over 0.5 W/ft². (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, or Daylight Zone in accordance with Section 140.3(c)1.B. All Skylit Daylit Zones and Primary Sidelit Daylit Zones shall be shown on building plans. (140.3(c)).

C. General Notes

Attach the following notes to plan:

1. 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. 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
2. 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)
3. All systems, equipment and/or building components shall comply with the applicable manufacturer provisions and installation provisions of Sections 110.0 through 110.10.
4. 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)
5. 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)
6. Space conditioning equipment shall meet the efficiency standards specified Section 120.2.
7. Pilot lights shall be prohibited for: (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
8. Any pool or spa heating system or equipment shall:
 - 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 thermal insulation cover for outdoor pools or spas that have a heat pump or gas heater.
 - e) Have a permanent, readable, weatherproof instruction card that gives instructions for the proper, energy efficient operation of the pool or spa heater.
 - f) Have at least 36 inches of pipe 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.

City of Long Beach
Department of Development Services – Building and Safety Bureau
Energy- Non-Residential Review Checklist

- 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 by applicable public health standards.
9. 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 residential door area, 0.3 cfm/ft² of nonresidential single door area, and 1.0 cfm/ft² of nonresidential double door area. 110.6(a)(1)
 10. Fenestration products shall be certified for overall U-values and overall SHGC, and shall have a temporary label which lists the certified U-value and SHGC, and certifies that applicable air infiltration requirements are met. 110.6(a)
 11. Field manufactured 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,
 12. Joints and other openings in the building envelope that are potential sources of air leakage shall be caulked, gasketed, weatherstripped, or otherwise sealed to limit infiltration and exfiltration. 110.8(a)
 13. Insulation shall be certified by Department of Consumer Affairs, Bureau of Home Furnishing and Thermal Insulation that the insulation conductive thermal performance is approved pursuant to the California Code of Regulations. (110.8(b))
 14. 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. (110.8(c))
 15. Insulating material shall be installed in compliance with the flame spread rating and smoke density requirements of the CBC. ([110.8(c)])
 16. Insulation installed on an existing space conditioning duct, it shall comply with Section 604.0 of the CMC. (110.8(d)(3))
 17. 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)
 18. The opaque portions of framed demising walls shall be insulated with U-factor not greater than 0.099 (R=11 or thicker) for wood framed wall or 0.151 (R=7 or thicker) for metal framed wall. (120.7(b)7)

ADDITIONAL WRITTEN COMMENTS

No.	Comment	Code Sec. No.