



New & Replacement Roof Top Mechanical Units (Commercial)

- Appliances designed to be on a fixed position shall be securely fastened in place. Supports for appliances shall be designed and constructed to sustain vertical and horizontal loads within the stress limitations specified in the building code. (CMC 303.4).
- Every structure, and portion thereof, including nonstructural components that are permanently attached to structures and their supports and attachments, shall be designed and constructed to resist the effects of earthquake motions in accordance with ASCE 7. (CBC 1613.1)
- Where the weight of the rooftop units (RTU) exceeds 400-lbs., structural calculations shall be provided showing that the existing structural system is adequate, or showing any improvements required to support the loads. Calculations must accompany the plans at time of submittal.

General Requirements

- In addition to the standard submittal items shown on our [Forms and Handouts](#) page, new & replacement roof top mechanical units shall also include, be not be limited to the following:
 - Obtain Planning approval prior to submitting to Building Division
 - Line of sight diagram with equipment screened by roof parapet or roof screen, if applicable.
 - Floor Plan showing location of roof access.
- Provide details for RTU, Curb and Roof Connections
- Use of curb adaptors is prohibited. Size curbs to fit equipment.
- A separate inspection of curb connection is required before unit is set.
- Smoke detector is required on the return air side if capacity is greater than 2000 CFM.
- Where more than one heating, cooling, ventilating, or refrigerating system is installed on the roof of a building or within a building, it shall be permanently identified as to the area or space served by the equipment. The identification of the equipment must be permanent labels (phenolic engraved plaque) on the unit and the disconnect switch.
- Specification sheet with weight of new unit highlighted.
- Provide the weight of existing unit.
- All abandoned and/or unused equipment shall be removed.
- A building Permit is also required if any of the following conditions exist:
 - The structural analysis shows additional framing/ anchorage is required.
 - Replacement unit exceeds the dimension of the existing unit by more than 10 percent, regardless of weight.
 - Screening requirements and roof attachments shall be included in the scope of permitted work (if needed).
 - Care shall be taken to ensure the screening does not conceal or interfere with the required clearances from combustibles, access to the appliance or vent termination requirements.



New roof top unit; roof has never had a roof top mechanical unit

- Mechanical Roof Plan (Existing/Proposed) with locations of all mechanical equipment, exhaust terminations, existing air intakes, and property lines.
- Roof framing plan
- Location of roof access
- Detail of structural connection from unit to curb and curb to roof
- Electrical information, circuit, panel ids and panel schedule
- Provide necessary structural calculations, stamped & signed by licensed architect or engineer.

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- Provide necessary specification sheet with weight of unit highlighted.
- Provide necessary California Energy Standards compliance worksheets as applicable.
 - Note: ceiling insulation will be required.

Change-out of existing roof top unit; replacement unit is less than 400 lbs.

- Provide necessary specification sheet with weight of unit highlighted.
- Provide necessary California Energy Standards compliance worksheets as applicable.

Change-out of existing roof top unit; replacement unit is greater than 400 lbs., but less than 100 lbs. over previous unit

- Provide structural calculations, stamped & signed by licensed engineer.
- Provide necessary structural details/drawings for curb attachment.
- Provide necessary specification sheet with weight of unit highlighted.
- Provide necessary California Energy Standards compliance worksheets as applicable.

Change-out of existing roof top unit; replacement unit is greater than 100 lbs. over previous unit

- Roof Framing plan with notes and details
- Detail of structural connection from unit to curb and curb to roof
- Provide necessary structural calculations, stamped & signed by licensed architect or engineer.
- Provide necessary specification sheet with weight of unit highlighted.
- Provide necessary California Energy Standards compliance worksheets as applicable

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