City of Walnut Creek

Development Review Services

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Commercial Rooftop Air-Handling Unit Replacement Submittal Requirements

- **Plan -** Provide a plan showing the location of existing equipment and the location of proposed equipment.

- **Energy Code Compliance -** Submit California Energy Code Mechanical Compliance forms or calculations showing compliance with the requirements of the California Energy Code. Forms are available from the California Energy Commission website.

- **Supporting structure –**Specify the weight of the existing equipment and the weight of the proposed equipment. Verify the adequacy of the supporting structure to support the proposed equipment. Any existing structural element for which the installation of the proposed unit causes an increase in gravity load of more than 5 percent shall be strengthened, supplemented, replaced or otherwise altered as needed to carry the increased gravity load required by the California Building Code. (California Existing Building Code, Section 503.3)

  If the supporting structure is required to be altered, structural plans are required including a roof framing plan, details of construction and specification of materials. Structural calculations are also required for the alteration to the supporting structure. Structural plans and calculations are required to be prepared, stamped and signed by a California Licensed Architect or Engineer.

- **Equipment anchorage -** Specify the means of anchorage for mechanical equipment to the roof structure including the number, location, type, length and embedment of anchors. Structural plans and calculations prepared, stamped and signed by a California Licensed Architect or Engineer are required for the anchorage of equipment weighing over 400 pounds or having a center of mass located greater than 4 feet above the roof. (ASCE 7-16, Section 13.1.4)

- **Disconnecting means –** Show the required disconnecting means on the plans. A readily accessible electrical disconnecting means shall be provided within sight of the equipment that will completely de-energize the equipment. (California Mechanical Code, Sections 301.4 and 303.8.5(1))

- **Service receptacle –** Show the required service receptacle on the plans. A 120-VAC grounding-type receptacle shall be located within 25 feet of the equipment for service and maintenance purposes. The receptacle outlet shall be on the supply side of the disconnect switch. The receptacle need not be located on the same level as the equipment. (California Mechanical Code, Sections 301.4 and 303.8.5(2))

- **Clearance –** Specify the distance from the proposed equipment to the edge of the roof. Not less than 10 feet of clearance shall be provided between a component of the equipment and the edge of the roof or similar hazard where such edge is located more than 30 inches above the roof or grade below. (California Mechanical Code, Section 303.8.4)

  If less than 10 feet of clearance is provided or the open end of the equipment platform is located more than 30 inches above the roof, floor, or grade below, rigidly fixed rails, guards, parapets, or other building structures not less than 42 inches in height shall be provided on the exposed side. This barrier shall extend not less than 30 inches beyond each end of such components and shall be constructed to prevent the passage of a sphere 21 inches in diameter. (California Building Code, Section 1015.6)

- **Working space –** Show the required working space on the plans. Not less than 30 inches in depth, width and height of working space shall be provided at the proposed equipment. Where equipment is installed on a roof having a slope of 4 units vertical in 12 units horizontal or more, a level platform of not less than 30 inches by 30 inches shall be provided at the service side of the equipment. (California Mechanical Code, Sections 304.1 and 304.2)

- **Access -** Note on the plans the location of a suitable means to access the proposed equipment and the required interior light with switch near the roof access. Buildings of more than 15 feet in height are required to have an inside means of access to the roof. (California Mechanical Code, Section 304.3)

- **Condensate line –** Show any new or relocated condensate line on the plans. Condensate lines shall meet the requirements of California Mechanical Code, Section 310.0 and California Plumbing Code, Section 814.

- **Outside air intake–** Please show the location of the outside air intake for the proposed equipment on the plans. Outside air shall not be taken from the following locations unless one of the applicable exceptions is met: (California Mechanical Code, Section 311.3)

    - Less than 10 feet in distance from an appliance vent outlet, a vent opening of a plumbing drainage system, or the discharge outlet of an exhaust fan, unless the outlet is 3 feet above the outside-air inlet.

    - Less than 10 feet above the surface of an abutting public way, sidewalk, street, alley, or driveway.

    - A hazardous or insanitary location, or a refrigeration machinery room as defined in this code.

    - An area, the volume of which is less than 25 percent of the entire volume served by such system, unless there is a permanent opening to an area the volume of which is equal to 25 percent of the entire volume served.

    - A closet, bathroom, toilet room, or kitchen.

    - Rooms or spaces containing a fuel-burning appliance therein. Where such room or space serves as source of return-air.

- **Ventilation -** Specify the amount of outside air provided by the proposed equipment. Specify the floor area of the space served by the proposed equipment. Please verify that the amount of outside air to be provided shall comply with the requirements of the California Energy Code, Section 120.1 and the California Mechanical Code, Section 403.

- **Automatic shutoff -** Specify the air flow rate of the altered air-moving system. An air-moving system is defined as a system designed to provide heating, cooling, or ventilation in which one or more air-handling units are used to supply air to a common space or are drawing air from a common plenum or space. A system includes all interconnected air handling units.

  If greater than 2000 cfm, specify that the air moving system shall be provided with automatic shutoff unless one of the applicable exceptions to California Mechanical Code, Section 609.1 is met. Automatic shut-off shall be accomplished by interrupting the power source of the air-moving equipment upon detection of smoke in the main supply-air duct served by such equipment.

  Where fire-detection or alarm systems are provided for the building, the smoke detectors shall be supervised by such systems in an approved manner. Obtain approval from the Fire District for supervision of the smoke detectors by the building fire detection or alarm systems. In occupancies not required to be equipped with a fire alarm system, actuation of a detector shall activate a remote audible/visible alarm and trouble indicator in an approved location. (California Mechanical Code, Section 609.1 and California Building Code, Section 907.3.1)

- **Gas line –** Provide a complete gas line diagram for any new or relocated gas line. Gas line sizing shall comply with the requirements of California Plumbing Code, Chapter 12.

- **Electrical -** Specify electrical requirements. If they are the same as before, provide a summary.

- **Planning Division -** Planning approval required prior to issuance. Contact Planning Division staff for further information.

- **Engineering Division -** An Encroachment Permit from the Engineering Division is required where the use of the public right-of-way is required for construction or staging. Contact Engineering Division staff for further details regarding Encroachment Permits.