PLAN CHECK CORRECTION SHEET FOR MECHANICAL SYSTEMS 2014 LAMC

This is intended to provide uniform application of the codes by the plan check staff and to help the public apply the codes correctly.

Section: Mechanical Plan Check

Plan Check/PCIS Application No.: _____ **Date:** _____

Job Address: _____

Applicant Name: _____

Address: _____ **Phone:** _____

City/State/Zip: _____ **E-mail:** _____

Plan Check Engineer: _____

Telephone: _____ **E-mail:** *firstname.lastname@lacity.org*

Your feedback is important; please visit our website to complete a Customer Survey at www.ladbs.org/LADBSWeb/customer-survey.jsf.

Your plans have been examined and the issuance of a permit is withheld for the reasons set forth. The approval of plans and specifications does not permit the violation of any section of the Code, or other local ordinance or state law.

INSTRUCTIONS:

- Corrections with circled item numbers apply to this plan check.
- Additional corrections are at the end of the list.
- Incomplete or non-legible drawings or calculations will not be accepted.
- Incorporate all comments as marked on the checked set of plans and calculations and this correction sheet.
- For each correction indicate the sheet number and detail or note number on the plans where the corrections are made.
- **WHEN YOU HAVE COMPLIED WITH ALL CORRECTIONS, CALL OR EMAIL THE PLAN CHECK ENGINEER TO MAKE AN APPOINTMENT FOR VERIFICATION**
- **PLEASE BRING THE MARKED UP PLANS AND THE CORRECTIONS SHEET TO THE VERIFICATION APPOINTMENT**

SEE MARKED UP PLANS FOR CLARIFICATIONS OF CORRECTIONS.

GENERAL REQUIREMENTS

1. Plans shall bear the license number and signature of an architect, engineer or contractor licensed in the appropriate discipline. (Chap. 7, Div. 3, Business and Professional Code, Art. 2, Sec. 6735.4; LAMC 112.2(8))

2. Show job address on plans. (LAMC 112.3(2))

3. Plans shall be legible, and the drawing scale shall not be smaller than 1/8 inch per foot. (LAMC 112.2 (4))

4. Show equipment schedule on the plans. (LAMC 112.3(1)(D))

5. Show the make, model, cfm, horsepower, static pressure rating and weight of each fan on the equipment schedule. (LAMC 112.3(1)(D))

6. Show location, size, gages, and materials of all ducts and openings (LAMC 601.2; LAMC 602.1; LAMC 112.3 (1) (B); LAMC Table 506.2(1))

7. Ducts shall be constructed in accordance with Chapter 6 of the Uniform Mechanical Code. (LAMC 601.1)

8. Show the occupancy of each area. (LAMC 112.3(1)(I))

9. Show the intended use of each room. (LAMC 112.3(1)(I))

10. Identify all fire-rated walls and ceilings. (LAMC 112.3(1)(J))

11. Provide roof plans showing the location of all roof equipment. (LAMC 112.3(1)(C); LAMC 303.9)

12. Provide a permanent roof access. (LAMC 304.2)

13. Provide approved structural plans showing that the roof is designed to withstand all dead loads and all required live loads. (LAMC.303.9.1)

14. Where ducts penetrate a rated corridor, indicate if rated corridors are tunnel type or full height. (LAMC 112.3(1)(J))

VENTILATION

V1. Single family houses and multi-family structures of three stories or fewer above grade shall comply with ASHRAE 62.2, 2010 edition. (LAMC 402.1.2)

V2. Natural ventilation and mechanical ventilation systems shall be designed in accordance with Sections 402.2 and 403.0, respectively. (LAMC 402.2; LAMC 403.0)

V3. Exhaust ducts under positive pressure and venting systems shall not extend into or pass through ducts or plenums. (LAMC 504.1)

V4. Make-up air shall be provided for all rooms with exhaust. (LAMC 505.3)

V5. Environmental exhaust ducts shall terminate outside the building and shall be equipped with a back draft damper. (LAMC 504.1)

V6. Exhaust outlets shall terminate no less than 3 feet from property line and 3 feet from openings into the building. (LAMC 504.5)

V7. Exhaust outlets for product conveying systems shall terminate no less than 10 feet from property line, 3 feet from exterior roof/wall, 10 feet from openings into the building, and 10 feet above grade. (LAMC 506.9(2))

V8. Exhaust outlets for ducts conveying explosive or flammable vapors, fumes, or dust shall terminate at least 30 feet from property line, 6 feet from exterior roof/wall, 10 feet from opening into the building, 30 feet from combustible walls or openings into the building that are in the direction of the exhaust discharge, and 10 feet above grade. (LAMC 506.9.1)

V9. Ducts conveying explosives or flammable vapors, fumes, or dusts shall extend directly to the exterior of the building without entering other spaces. (LAMC 505.1)

V10. Provide calculations showing how the system is balanced. The system shall be designed by the constant velocity or equal friction methods. (LAMC 505.2)

V11. Systems conveying particulate matter shall be designed employing the constant velocity method. (LAMC 505.2)

AIR-CONDITIONING

A1. Provide a secondary condensate drain (watertight pan) for cooling coils installed above the ceiling or in furred spaces. The secondary drain shall terminate in a visible location. (LAMC 312.2)

A2. Flexible ducts shall not penetrate fire-rated assemblies. (LABC 717.7)

A3. Flexible ducts shall not penetrate walls. (LABC 717.7)

A4. Flexible ducts shall not penetrate any floor. (LABC 717.7)

A5. Flexible ducts shall not penetrate ceilings. (LABC 717.7)

A6. Provide listed duct type smoke detectors in the supply air ducts in every air-conditioning system with a capacity in excess of 2,000 cfm (Multiple units serving the same room, or having a common return air plenum or a common outside air duct are considered to be one system for the determination of the cfm). In lieu of duct type smoke detectors, complete coverage area detectors may be installed. (LAMC 608.1)

A7. Provide listed duct type smoke detectors in the supply and return air ducts of each air-conditioning unit. (LABC 907.2.13.1.2(1); LABC 907.2.18.1(3))

A8. Provide listed duct type smoke detectors at each connection to a vertical duct or riser serving two or more stories from a return duct or plenum of an air-conditioning system. (LABC 907.2.13.1.2(2); LABC 907.2.18.1(4))

A9. Make-up air is not allowed to be taken from the corridor. (LAMC 602.1)

A10. Do not pressurize the corridor. Corridors shall have supply air inlets and exhaust air outlets. (LAMC 602.1)

A11. Provide make-up air in the corridor. (LAMC 602.1)
   a. Provide a minimum of one air inlet and one outlet in each section of corridor isolated by doors. (LAMC 602.1)

A12. Provide listed fire dampers at all duct penetrations through fire-rated walls and barriers. (LAMC 605.2; LABC 717.6.1; LABC 717.5.1; LABC 717.5.2)

A13. Provide listed combination smoke/fire dampers at all duct penetrations through fire-rated shafts. (LAMC 605.1; LAMC 605.2; LABC 717.5.3)

A14. Provide listed fire radiation dampers at all duct penetrations through fire-rated floor/ceiling or roof/ceiling assemblies. (LAMC 605.3, LABC 717.6.1, LABC 717.6.2(2))

A15. Fire dampers shall be dynamic type. (LAMC 605.2)

A16. Install a duct type smoke detector within 5 feet of each smoke damper. (LABC 717.3.3.2(1))

A17. Provide a copy of the manufacturer's catalogs for the mechanical equipment used. (LAMC 112.2(5))

A18. Show on the plans that the air filters have a Minimum Efficiency Reporting Value (MERV) of 8 or higher. (LAGBC5.504.5.3) (Nonresidential Buildings)

TOILET ROOM VENTILATION

T1. Toilet exhaust ducts shall be made out of metal. (LAMC 504.1)

T2. Toilet exhaust ducts under positive pressure shall not extend into or pass through ducts or plenums. (LAMC 504.1; LAMC 602.1)

T3. Toilet exhausts shall terminate at least 3 feet from the property line, 3 feet from openings into any building, and 10 feet from mechanical air intakes. (LAMC 504.5; LAMC 314.3(1))

T4. Toilet rooms in commercial buildings shall have a ventilation system capable of exhausting 50 cfm per water closet or urinal. (70 cfm in assembly occupancies and schools). (LAMC Table 403.7)
   a. Provide mechanical ventilation in each bathroom. (LAMC 402.5)

T5. Toilet rooms in residential occupancies shall exhaust 25 cfm if operating continuously or 50 cfm if operating intermittently. (LAMC Table 403.7)
   a. State on the plans whether the toilet room ventilation system is designed for continuous or intermittent operation. (LAMC Table 403.7)

T6. Provide listed combination fire smoke dampers where the bathroom exhaust duct penetrates a fire-rated shaft. (LABC 717.5.1; LABC 717.5.2)

T7. Provide listed fire dampers where the bathroom exhaust duct penetrates fire-rated walls and barriers. (LABC 716.5.1; LABC 716.5.2)

LAUNDRY ROOM VENTILATION

L1. Exhaust duct for domestic dryers shall be 4 inches minimum and shall not exceed a total length of 14 feet including two 90º elbows. Two feet shall be deducted for each 90º elbow in excess of two. (LAMC 504.3.1; LAMC 504.3.1.2)

L2. Provide an approved *"Request for Modification of Building Ordinances"* form allowing the dryer vent to exceed 14 feet. (LAMC 504.3.1.2)

L3. Clothes dryer moisture exhaust ducts shall be made out of metal. (LAMC 504.3.1.1)

L4. Laundry room exhaust ducts shall be made out of metal. (LAMC 504.1; LAMC 602.1)

L5. Laundry room ventilation exhaust shall terminate at least 3 feet from property line, 3 feet from openings into the building, and 10 feet from make-up air inlets. (LAMC 504.5, LAMC 314.3)

L6. Clothes dryer moisture exhaust ducts under positive pressure shall not extend into or pass through ducts or plenums. (LAMC 504.3)

L7. Laundry room exhaust ducts under positive pressure shall not extend into or pass through ducts or plenums. (LAMC 602.1; LAMC 504.1)

L8. Calculate the laundry room ventilation requirement. (Residential occupancies up to 3 stories above grade use ASHRAE 62.2; Residential occupancies over 3 stories above grade use Title 24 Table 121-A; Hotels, motels, resorts, and dormitories use LAMC Table 402.1)

L9. Clothes dryer moisture exhaust ducts shall terminate outside of the building. (LAMC 504.3)

L10. Clothes dryer moisture exhaust ducts shall be equipped with back draft dampers. (LAMC 504.3)

L11. Provide make-up air to the laundry room. (LAMC 402.1; LAMC 504.3.1)

L12. Make-up air is not allowed to be taken from the corridor. (LAMC 602.1)

L13. Laundry room make-up air shall take into consideration the air exhausted by the dryers. (LAMC 905.3)

L14. Provide product literature for the clothes dryer showing the criteria to size the moisture exhaust duct. (LAMC 504.3.2)

L15. Provide an approved *"Request for Modification of Building Ordinances"* form allowing the use of a draft inducer. (LAMC 504.3.1.2)

L16. Provide product literature for the draft inducer showing pressure losses versus flow. (LAMC 112.3.1H)

L17. Provide combustion air. (LAMC 701.1)

L18. Provide listed combination smoke/fire dampers where the laundry room exhaust duct penetrates a fire-rated shaft. (LABC 717.5.3; LAMC 605.1; LAMC 605.2)

L19. Provide listed fire dampers where the laundry room exhaust duct penetrates fire-rated walls and barriers. (LABC 717.5.1; LABC 717.5.2; LAMC 605.2)

L20. Provide listed combination smoke/fire dampers where the laundry exhaust ducts penetrate fire-rated walls and barriers that are part of a horizontal exit. (LABC 717.5.1.1; LABC 717.5.2.1; LAMC 605.1; LAMC 605.2)

L21. Remove the fire or combination smoke/fire damper from the clothes dryer moisture exhaust. (LAMC 504.3.1.1)

CORRIDOR VENTILATION

C1. Show all fire-rated walls and ceilings where the ducts pass through. (LAMC 112.3(1)(J))

C2. Indicate if rated corridors are tunnel type or full height. (LAMC 112.3(1)(J))

C3. Provide corridor ventilation at the rate of not less than 0.06 cfm/square foot. (LAMC Table 402.1)

C4. Provide listed combination smoke/fire dampers at all duct penetrations through fire-rated shafts. (LABC 717.5.3)

C5. Provide listed fire dampers at all duct penetrations through fire-rated ceilings. (LABC 717.6.1)

C6. Provide listed combination smoke/fire dampers to isolate ducts serving rated corridors. (LABC 717.5.1; 717.5.2; 717.5.4.1)

C7. Fire dampers shall be dynamic type. (LAMC 605.2)

C8. Do not pressurize the corridor. Corridors shall have supply air inlets and exhaust air outlets. (LAMC 602.1)

C9. Provide make-up air in the corridor. (LAMC 602.1)
   a. Provide an air inlet and outlet in each section of corridor isolated by doors (LAMC 602.1)

C10. Rooms adjacent to the corridor shall not draw air from the corridor or transfer air to the corridor. (LAMC 602.1)

ENCLOSED PARKING GARAGE VENTILATION (NOT INTENDED FOR AUTO REPAIR)

G1. Provide a note on the plans stating that the garage ventilation system shall operate continuously. (LAMC 403.9)

G2. Provide make-up air to replenish the air exhausted. (LAMC 505.3)

G3. Provide verification that the carbon monoxide (CO) detectors are approved by the City of Los Angeles or a City of Los Angeles recognized listing agency. (LAMC 403.9(2))

G4. Provide approved architectural plans showing the number of parking spaces. (LAMC 403.9.1.1)

G5. Provide a floor plan showing location of all exhaust and make-up air ducts, fans, and air inlets and outlets. (LAMC 112.3(1)(C))

G6. For alternative exhaust designs as described in Section 403.9.1, the exhaust air inlets shall be distributed so that no portion of the garage is more than 50 feet from an exhaust air inlet or provide calculations and analysis based on principles of engineering and mechanics showing that the proposed air inlet distribution provides adequate ventilation. (LAMC 403.9.1.2)

G7. Provide an elevation detail showing the location of the exhaust air inlets or provide a note on the plans stating that the exhaust air inlets shall be located as stated in Section 403.9.1.2. The exhaust air inlets shall be located so that the highest elevation of the exhaust air inlet is no greater than 12 inches below the ceiling level (LAMC 403.9.1.2)

G8. Show the termination of the garage exhaust. Exhaust outlets shall terminate not less than 10 feet from property line or center line of a public alley or street, 3 feet from exterior wall or roof, 10 feet from openings into the building, 10 feet above adjoining grade. (LAMC 506.9(2))

G9. Separate the garage ventilation from all other ventilation systems. (LAMC 505.1.1)

G10. Ducts shall be made out of metal or poured in place concrete, dry wall is not acceptable. (LAMC 506.1)

G11. For fan rooms used as a plenum, the fan room walls shall be made of poured concrete and the fan room door shall be lined with sheet metal. (LAMC 602.1)

G12. Specify the fire rating of the exhaust shaft. If the shaft is less than 2 hr. rated, provide combination smoke/fire dampers where the garage exhaust ducts penetrate the fire-rated shaft. (LABC 717.5.3)

G13. In lieu of combined smoke/fire dampers, provide a dedicated 2 hr. shaft. (LABC 717.5.3 Exception 1.4)

G14. Provide calculations showing that the exhaust fan is capable of uniformly exhausting 0.75 cfm per square foot of gross area of the garage. (LAMC Table 403.7)

G15. Provide calculations for the exhaust rate based on the minimum exhaust rate based on the number of operating vehicles based on the following formula:

a. Exhaust Rate = (No. of Parking Spaces) x 0.025x14,000 cfm

b. The minimum exhaust rate calculated with the above formula shall not be less than 14,000 cfm. (LAMC 403.9.1)

G16. Provide approved structural plans showing that the roof is designed to withstand all dead loads and required live loads. (LAMC.303.9)

G17. Review the attached document titled *"Standard Corrections List - Garage Ventilation CFD modeling*". Provide the information required and complete all applicable forms. (LAMC 403.9.1.2)

REFRIGERATION MACHINERY ROOMS

R1. Provide a refrigeration machinery room for the refrigeration system. (LAMC 1107.1)

R2. Provide an unobstructed and readily accessible opening not less than 3 feet wide by 6 feet-8 inches in height for equipment maintenance. (LAMC 1106.3)

R3. Door(s) shall swing in the direction of exit. (LABC 1015.4; LAMC 1107.3)

R4. Provide two separate exits for machinery rooms exceeding 1000 square feet. (LABC 1015.5; LAMC 1107.3)

R5. Provide a dedicated mechanical exhaust system and provide calculations showing that it can achieve the minimum required ventilation for heat removal and emergency purge. (LAMC 1108.2)

R6. A switch of the break-glass type, providing off-only control of refrigeration compressors, pumps, and valves, shall be provided adjacent to and outside of each exit door. (LAMC 1108.5)

R7. Switches control fans providing emergency purge ventilation shall be provided with manual reset, and shall be located adjacent to and outside of each exit door. (LAMC 1108.5)
   a. Provide either separate fans for emergency purge or use two speed fans. (LAMC 1108.2(2))

R8. A clearly-identified switch, either of the break-glass type or with an approved tamper-resistant cover, providing off-only control of refrigeration equipment, shall be located immediately outside of and adjacent to the principle exit. (LAMC 1109.4)

R9. Show make-up air inlets and exhaust outlets on the plans. (LAMC 112.3(1)(B); LAMC 1108.1)

R10. Make-up air intake shall be provided directly from outside of the building, shall be properly distributed, and shall be equipped with backdraft dampers. (LAMC 1108.9)

R11. Exhaust shall be discharged at least 20 feet from property lines and openings into the building. (LAMC 1108.7)

R12. Only equipment essential to the operation of refrigeration system shall be allowed within the machinery room. (LAMC 1109.1)

R13. Show on plans make, model, HP, cfm, and static pressure rating of all fans. (LAMC 112.3(1)(D))

R14. Provide product literature for all fans used showing their cfm & static pressure rating. (LAMC 112.3(1)(D))

R15. State the type of refrigerant. (LAMC 1102.2)

R16. Show the location of refrigerant-vapor detectors. (LAMC 1107.4)

R17. The refrigerant-vapor detectors shall be interconnected with the refrigeration machine room exhaust fans to provide emergency purge ventilation when activated. (LAMC 1108.5)

FIRE PUMP AND GENERATOR ROOMS

FP1. Show the engine exhaust pipe from the point of connection at the engine to the point of termination. Show all wall and roof penetrations and identify which walls and roofs are fire-rated. (LAMC 112.3(1))

FP2. Provide a minimum of 9 inches clearance from combustible construction. The clearance shall be measured from the outside surface of the pipe or duct and not from the insulation around the pipe. (LAMC 802.7.3.4; Table 802.7.3.4(1); NFPA-211 8.22.1.3; NFPA-211 8.2.2.2.6)

FP3. Show that the exhaust pipe is guarded at the penetration of combustible roof by ventilated metal thimbles that extend not less than 9 inches on each side above and below the roof. The metal thimbles shall be at least 6 inches larger in diameter than the exhaust pipe or duct. (NFPA-37 8.3)

FP4. Show that the exhaust pipe is guarded at the point of penetration of combustible walls by ventilated metal thimbles. The metal thimbles shall be at least 12 inches larger in diameter than the exhaust pipe or duct. (NFPA-37 8.3)

FP5. Provide a drain at the low point of the engine exhaust system. (NFPA-37 8.1.5)

FP6. Provide at least one flexible connector in the engine exhaust system to minimize the risk of leak due to engine vibration. (NFPA-37 8.2.2)

FP7. Show that the engine exhaust system terminates at a safe location. Exhaust system shall terminate outside the building and shall not be directed towards structures or areas that contain flammable vapors, gases or combustible dust. (NFPA-37 8.2.3.1; NFPA-37 8.2.3.2)

FP8. Show that the engine exhaust is guarded where necessary to prevent personnel burns. (NFPA-37 8.2.4).

FP9. Enclose the engine exhaust pipe in a fire-rated shaft. (LAMC 802.15; NFPA-211 8.2.2.2.1)

FP10. No portion of the engine exhaust pipe shall extend into or pass through ducts or plenums (LAMC 802.3.5)

FP11. Provide installation instructions from the engine manufacturer showing the following:
   a. The amount of combustion air required.
   b. The amount of air required for radiator or room cooling.
   c. The engines exhaust CFM and the exhaust pipe back pressure.
   d. The maximum allowable room temperature. (NFPA-37 8.1.2)

FP12. Provide calculations showing that all of the manufacturer's criteria specified in item 18 above are met. (NFPA-37 8.1.2)

FP13. Provide calculations showing the pressure loss in the exhaust pipe is less than the pipe back pressure provided by the engine manufacturer. (NFPA-37 8.1.2)

FP14. Show room ventilation supply and exhaust. (LAMC 504.1; LAMC 112.3)

FP15. In absence of product literature, calculate the room ventilation according to LAMC 1108.2.

FP16. The room ventilation shall be added to the combustion air. (LAMC 701.9.1; LAMC 701.9.3)

FP17. Show point of termination outside of the building of the room ventilation. (LAMC 504.5)

FP18. In absence of product literature, size combustion air according to LAMC 701.9.

FP19. Combustion air shall be drawn from outdoors. (LAMC 701.9)

FP20. Dampers are not allowed in combustion-air ducts. (LAMC 701.12)

FURNACES

F1. Show that the flame associated to the furnace installed in the garage is located a minimum of 18 inches below the floor–ceiling assembly or 18 inches above the floor. (LAMC 911.8; NFPA-88A 6.2.2)

F2. The furnace shall not be installed in repair garages; It shall be installed in a detached room or building. (LAMC 911.8.1)

F3. Remove the furnace from the bedroom or show compliance with Section 904.1. (LAMC 904.1)

F4. Remove the furnace from the bathroom or show compliance with section 904.1. (LAMC 904.1)

F5. Show the clearances around the furnace. (LAMC 904.2)

F6. Provide product literature showing the required clearances around the furnace. (LAMC 904.2)

F7. Under floor furnace supported by the ground shall be installed on a concrete slab not less than 3 inches above adjoining space. (LAMC 904.3.1.1)

F8. Under floor furnace supported from above shall have a clearance of at least 6 inches above adjoining ground level. (LAMC 904.3.1.2)

F9. Show compliance with Section 904.3.1.3 when excavation is necessary for the installation of the furnace below the floor. (LAMC 904.3.1.3)

F10. Where the excavation exceeds 12 inches provide a seepage pan. (LAMC 912.9)

F11. Show 24 inches passage way to the furnace. (LAMC 904.10.2)

F12. State the height of the passage way to the furnace. (LAMC 904.10.1)

F13. Passage ways with height less than 6 feet shall not exceed 20 feet in length. (LAMC 904.10.1)

F14. Show the location and size of permanent access to the furnace. (LAMC 304.1; LAMC 304.2; LAMC 904.10)

F15. Provide a working platform or grade surface not less than 30 inches by 30 inches on the service side of the furnace. (LAMC 304.1; LAMC 904.10.3)

F16. Show location and size of all combustion air openings or ducts. (LAMC 701.1)

F17. Provide calculations for the combustion air. (LAMC 701.1)

F18. Combustion air duct shall be of galvanized steel. (LAMC 701.11(1))

F19. Dampers are not allowed in combustion air ducts. (LAMC 701.12)

F20. Provide a fire-rated enclosure around the vent. (LAMC 701.12)

F21. Provide an elevation of the furnace. Show the draft hood, vent size and type (e.g. double wall type B vent, positive-pressure vent, etc.), clearances and vent termination. (LAMC 802.12; LAMC 802.4; LAMC 802.8; LAMC 802.6; LAMC 802.6.2)

F22. The vent shall be type B. (LAMC 802.4; LAMC Table 802.4)

F23. The vent shall be listed positive-pressure type. (LAMC 802.3.3)

F24. The vent shall have at least the same area the draft hood, but shall not be greater than 7 times the area of the draft hood outlet area. (LAMC 802.6.3.1(3))

F25. The vent termination shall be at least 5 feet above the vent collar. (LAMC 802.7.2; LAMC 802.6.2.1)

F26. Vents shall extend above the roof and shall terminate in a vent cap. (LAMC 802.7.2(3))

F27. Vent termination point shall be at least 3 feet above any forced air inlet into the building located within 10 feet; and shall be 4 feet away from the property line. (LAMC 802.6.2.5; LAMC 802.7.2(2))
   a. Provide product literature showing that the mechanical draft system is listed. (LAMC 802.3.3)
   b. Provide calculations and supporting documentation for the mechanical draft system.

F28. The mechanical venting system shall terminate at least 4 feet below or horizontally from, and 1 foot above any opening into the building. (LAMC 802.8.2)

F29. The vent shall extend vertically, except one 60^{o} offset is allowed. (LAMC 802.6.1)

F30. The total horizontal run of a vent plus the length of horizontal vent connector shall not exceed 75% of the vertical height of the vent. (LAMC 802.6.1; LAMC 802.10.9.2)

F31. Provide manufacture brochure showing the venting criteria for the condensing furnaces. (LAMC 802.6.3.2)

F32. Vents shall not extend into or pass through ducts or plenums. (LAMC 802.3.5)

F33. Connectors entering a common venting system shall be offset. (LAMC 802.10.3; LAMC 802.10.3.1)

F34. The area of a common vent connector shall not be less than the area of the largest vent connectors plus 50% of the areas of the additional vent connectors. (LAMC 802.10.2.3)

TYPE-I KITCHEN HOODS

K1. Provide kitchen lay out plans showing location of hoods, ducts, shafts, and make-up air. (LAMC 112.3(1)(A),(B),(C),(K))

K2. Provide roof plans showing the location of the kitchen exhaust blower, property line and any openings into the building. (LAMC 510.8.1)

K3. Provide elevations showing finished floor, cooking equipment, grease exhaust hood, distance between cooking equipment and grease filters, overhang, finished ceiling, flushing, fire-rated shaft, clearance between duct and shaft, cleanouts, slope of horizontal ducts, roof, blower, diverter, distance of outlet termination above roof. In compensating hoods, show also make-up air duct and factory built-in fire damper. (LAMC 112.3(1)(K); 112.3(2); 507.2; 508.1; 508.2; 508.5; 508.5.4; 509.2; 510.1.4; 510.2; 510.3; 510.7.1; 510.7.2; 510.7.3; 510.8.2)

K4. Please note that general specifications in lieu of the actual sectional elevation views are not acceptable. (LAMC 112.3)

K5. Exhaust outlets serving grease duct systems shall terminate above the roof surface, 10 feet from property line, 10 feet from air intake openings and 10 feet above adjoining grade. Base of fan shall be 40 inches above roof surface. (LAMC 510.8.1)

K6. Provide an elevation to scale showing that the termination of the grease exhaust duct complies with Section 510.8.2. (LAMC 510.8.2)

K7. Show sizes, gauges, and materials of all ducts and hoods. (LAMC 508.1.1; LAMC 510.5.1)

K8. Each exhaust outlet within a hood shall serve not more than a 12-foot section of unlisted hood. (LAMC 508.9)

K9. Specify on plan make, model, size, free area and number of filters used. (LAMC 509.1; LAMC 509.2.3)

K10. Provide product literature for the filters showing the size, free area and friction loss, and listing. (LAMC 112.2(5); LAMC 509.1)

K11. Duct system shall have a slope not less than 1/4 inch per lineal foot toward the hood or toward an approved grease reservoir. When horizontal ducts exceed 75 feet in length, the slope shall not be less than 1 inch per lineal foot. (LAMC 510.1.3)

K12. Duct enclosures from the point of ceiling, wall or floor penetration shall be at least 1 hr. fire-rated, except it shall be 2 hr. fire-rated in buildings four stories or more. (LAMC 510.7; LAMC 510.7.1; LAMC 510.7.1.2)

K13. The duct enclosure shall be sealed around the duct at the point of penetration. (LAMC 510.7)

K14. A clearance of at least 6 inches and not more than 18 inches shall be maintained between duct and enclosure. (LAMC 507.1.3)

K15. Exposed grease duct/hood systems serving a Type-I hood shall have a clearance from unprotected combustible construction of at least 18 inches. Clearance may be reduced to not less than 3 inches when the combustible construction is protected with material required for one-hour fire-resistive construction. (LAMC 507.2)

K16. Provide product literature for the grease exhaust blower and the make-up air fan, showing cfm, static pressures, and, if required, UL listing. (LAMC 112.2(5); LAMC 112.3(1)(D); LAMC 511.0)

K17. List the type of cooking equipment on plans. (LAMC 112.3(1)(K); LAMC 508.4.1)

K18. Provide product literature for the cooking equipment showing that it is listed by AGA, UL, or approved by the City of Los Angeles or other recognized agency. (LAMC 515.1)

K19. Provide calculations for sizing exhaust fans and make-up air units. Calculations shall show that the fan is capable of providing the minimum required volume of air. (LAMC 508.4)

K20. Air velocity within the duct system shall be not less than 500 feet per minute and shall not exceed 2,500 ft/min. (LAMC 511.2)

K21. Provide make-up air. (LAMC 511.3)

K22. Provide product literature for the compensating hood. The equipment shall be listed. (LAMC 112.2)

K23. Compensating hoods shall draw not less than 20% of the required airflow from the kitchen. (LAMC 511.4)

K24. Provide product literature for the ventless/recirculating hood. (LAMC 112.2)

K25. Provide product literature showing that the ventless hood is listed in accordance with EPA 202 for reduced emissions, and operates with a total airflow of 500 cfm. (LAMC 508.1 Exception 1)

K26. Provide product literature for the recirculating hood showing it is listed to UL 710B. (LAMC 508.1 Exception 2; LAMC 516.2.2)

K27. Fire protection shall be provided in recirculating hoods. (LAMC 516.2.3)

K28. The fire-extinguishing system shall be interconnected to the fuel or current supply so that the fuel or current is automatically shut off to all equipment under the hood when the system is actuated. (LAMC 513.4)

K29. The exhaust and make-up air systems shall be connected by electrical interlock switch. (LAMC 511.3)

K30. Provide clearance from the Health Department. (LAMC 112.3(1)(K)(2))

K31. Provide clearance from the South Coast Air Quality Management District. (LAMC 112.3 (1)(K)(3))

K32. Provide access openings for cleaning, maintenance, and inspection. (LAMC 510.3)

K33. Type-I hoods for use over solid-fuel cooking equipment shall be provided with separate exhaust systems. (LAMC 517.3.1)

K34. Wall termination of solid-fuel exhaust is prohibited. (LAMC 514.4.2)

K35. Provide product literature showing that the solid-fuel cooking equipment is required to have a natural draft. (LAMC 517.1.1)

K36. Provide a spark arrester for the solid-fuel cooking equipment. (LAMC 517.5.1)

K37. Provide make-up air for the solid-fuel cooking equipment. (LAMC 517.16.1)

K38. Provide calculations showing that the solid-fuel cooking appliance is not installed in a confined space as defined in Section 205.0. (LAMC 205.0; LAMC 517.2.1)

K39. Indicate on plans what provisions have been made for fire protection in the hood and in the duct. (LAMC 112.3(1)(K)(1); LAMC 513.1; LAMC 513.1.1; LAMC 513.2)

TYPE-II KITCHEN HOODS

K40. Provide kitchen lay out plans showing location of hoods, ducts, shafts, and make-up air. (LAMC 112.3(1)(A),(B),(C),(K))

K41. Provide roof plans showing the location of the kitchen exhaust blower, property line and any openings into the building. (LAMC 112.3(1)(C), LAMC 510.8.1)

K42. Provide make-up air. (LAMC 511.3)

K43. Show sizes, gauges, and materials of all ducts and hoods. (LAMC 112.3(1)(B); LAMC 112.3(1)(K); LAMC 510.1.7)

K44. Specify on plan make, model, HP, cfm and static pressure rating of fans used. (LAMC 112.3(1)(D))

K45. List type of cooking equipment on plans. (LAMC 112.3(1)(K))

K46. Provide elevations showing the finished floor, equipment under the hood, hood, fire-rated shaft (if required), roof, blower, and distance of the outlet termination above roof. (LAMC 112.3(1)(K); LAMC 507.2; LAMC 314.3(1); LAMC 510.7)

K47. The exhaust termination shall be at least 10 feet away from air inlets. (LAMC 510.8.1, LAMC 510.8.2)

K48. Please note that general specifications in lieu of the actual sectional elevation views are not acceptable. (LAMC 112.3(1); LAMC 112.3(2))

K49. Each exhaust outlet within a hood shall serve not more than a 12-foot section of hood. (LAMC 508.9)

K50. Provide clearance from the Health Department. (LAMC 112.3(1)(K)(2))

K51. Provide product literature for the exhaust blower and the make-up air fan, showing cfm, static pressures, and, if required, UL listing. (LAMC 112.2(5); LAMC 112.3(1)(D); LAMC 511.0)

K52. Provide product literature for the cooking equipment showing that it is listed by AGA, UL, or approved by the City of Los Angeles or other recognized agency. (LAMC 515.1)

K53. Provide calculations for sizing exhaust fans and make-up air units. Calculations shall show that the fan is capable of providing the minimum required volume of air determined by formulas. (LAMC 508.4)

OSHPD 3 HEALTH FACILITIES

O1. The minimum volume of the boiler room shall be 16 times more than the total volume of the boilers installed in the room. (LAMC 303.3).

O2. Show that your design complies with the heating, cooling and humidity requirements stated in Table 325.0. (LAPC 325.3)

O3. All supply, return, exhaust fans required to maintain the positive and negative air balances as required in Table 4-A shall be on emergency power. (LAMC 326.0)

O4. All control components and control systems necessary for the normal operation shall be on emergency power. (LAMC 326.0)

O5. The ventilation air requirements listed in table 402.1 are not permitted for OSHPD facilities. Ventilation systems shall comply with sections 408 thru 418. (LAMC 402.0).

O6. Evaporative cooling shall not be used in patient areas. (LAMC 405.0)

O7. Flexible ducts that are more than 10 feet in length shall not be used.(LAMC 602.3.1)

O8. Thermal acoustical lining materials shall not be installed within ducts, terminal boxes or sound traps and other in-duct systems serving patient areas like operating rooms, delivery rooms, post anesthesia care units, etc. (LAMC 604.2)

O9. Perforated ventilating ceilings are not allowed in health facilities (LAMC 606.1.1).

O10. Design of refrigeration systems shall comply with Table 1105.1.

	ADDITIONAL CORRECTIONS	CODE SECTION

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