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2006 International Mechanical Code®

The City and County of Broomfield Building Division has adopted the 2006 *International Mechanical Code*®, effective February 28, 2008. **This handout will summarize the major changes in the 2006 IMC compared to the previously adopted 2003 IMC.**

1. Section 304.10 has added that guards now shall be installed for roof hatch openings when within 10 feet of a roof edge or open side of a walking surface located more than 30 inches above the floor, roof or grade below.
2. Sections 306.3 and 306 .4 regulating appliances in attics and under floors have a new exception #2, allowing unobstructed passageways not less than 6 feet high and 22 inches wide to be up to 50 feet long in attics and unlimited in length under floors.
3. Section 306.5.1 has added *equipment, fans or other components that require service* to the requirement for a level working platform for appliances located on a sloped roof of three units vertical in 12 units horizontal (25-percent slope) that are located more than 30 inches above grade. This section also now includes criteria for the required guards.
4. Section 307.2.3 now requires fuel fired appliances that produce condensate to have a secondary drain or auxiliary drain pan to prevent damage to any building component. A new item #4 allows a water level detection device conforming to UL 508 to shut off equipment in the event that the primary drain becomes blocked. The device shall be installed in the primary drain line, the overflow drain line, or in the equipment supplied drain pan. An exception allows fuel fired appliances that automatically shut down in the event of a stoppage to be exempt from this requirement.
5. Section 307.2.3.1 is a new section requiring a downflow air unit without a secondary drain or auxiliary drain pan to have a water level monitoring device installed inside the primary drain pan. This device will shut off the equipment in event that the primary drain becomes blocked.
6. Section [B] 401 .4 for exit ventilation has been relocated to Section 601.3.
7. Section 401.4 has added a new exception #2 allowing environmental air exhaust openings from domestic kitchen ranges, bathroom exhaust and domestic clothes dryers to be located not less than 3 feet to property lines or openings into the building.
8. Section 403.2 addressing outdoor air requirements has a new exception that allows a registered professional engineer to design a ventilation system with a rate of outdoor air less than what is required in Table 403.3.

9. Table 403.3 has a new footnote (h) which allows not more than 10 percent of exhausted air to be recirculated as supply air to spaces such as bathrooms, shower rooms and locker rooms. See also Section 403.2.1 items #2 and #4.
10. Section 404.1 has been modified to allow enclosed parking garage mechanical ventilation systems to operate intermittently where the system is arranged to operate automatically upon detection of vehicle operation or the presence of occupants by approved automatic detection devices instead of by carbon monoxide detection devices as previously required.
11. Section 501.2.1: location of exhaust outlets has been relocated here from the 2003 IMC Section 502.7.3.6.
12. Section 501.3 clarifies that adequate make-up air consisting of either supply air, transfer air or outdoor air shall be provided to satisfy pressure equalization for a room with a mechanical exhaust system. The calculated building infiltration rate shall not be used to satisfy this requirement.
13. Section 506.3.2.5 is a new section requiring a leakage test for commercial kitchen grease duct systems prior to use or concealment. An open 100 watt light bulb shall be used and passed through the entire section of ductwork to determine that all welded or brazed joints are liquid tight. Other approved equivalent test methods are allowed.
14. Section 506.3.4 has changed the minimum air velocity for a designed grease duct system serving a Type 1 kitchen hood of not less than 500 feet per minute instead of 1500 feet per minute as required in the 2003 IMC .
15. Section 506.3.12.3 has added adjacent buildings to the locations requiring a horizontal clearance of 10 feet to a grease duct exhaust outlet or 5 feet when the outlet discharges away from such location.
16. Section 507.2.1.1 is a new section requiring Type I hood systems to be designed and installed to automatically turn on the exhaust fan whenever cooking operations occur. The activation of the exhaust fan shall occur through an interlock with the cooking appliances, by means of heat sensors or other approved methods.
17. Section 507.2.2 adds two new exceptions #3 and #4 for required Type II hood systems. Exception #3 allows a single light-duty electric convection, bread, re-therm, or microwave oven without requiring exhaust ventilation. Exception #4 does not require a Type II hood for electrically heated appliances such as toasters, steam tables, popcorn poppers, hot dog cookers, coffee makers, rice cookers, egg cookers, and holding/warming ovens. Both exceptions require that the additional heat and moisture loads generated by these appliances to be accounted for in the design of the HVAC system.
18. Section 507.2.4 now requires that Type I hoods over extra-heavy-duty cooking appliances (solid fuel type) shall not cover other appliances that require fire extinguishing equipment. This section still requires this type of exhaust system to be independent of other exhaust systems.

19. Section 507.13.5 is a new section requiring Type II exhaust hoods over dishwashing appliances to have a minimum net airflow of 100 cfm per linear foot of hood length. See Section 507.2.2 for hood exceptions.
20. Section 511.1.1 has two new exceptions for collectors and separators for dust, stock, and refuse conveying systems. Exception #1 allows collectors such as 'Point of Use' collectors, spray finishing booths, stationary grinding tables, sanding booths, and integrated or machine mounted collectors to be installed indoors provided the installation is in accordance with the *International Fire Code* and the Electrical Code. Exception #2 allows collectors in independent exhaust systems handling combustible dusts to be installed indoors provided that collectors are installed in compliance with the *International Fire Code* and the Electrical Code.
21. Section [B] 601 .3 for exit ventilation has been relocated to this chapter from 2003 IMC Section 401 .4.
22. Section 603.9 now includes the same detailed requirements shown in the *International Energy Conservation Code* for securing and sealing duct joints, seams and connections with listed and labeled tapes and mastics.
23. Section 603.17.2 is a new section that prohibits diffusers, registers, and grilles in the floor or 6" up the walls of toilet or bathing rooms when these floors are required by the *International Building Code* to have smooth, hard and nonabsorbent surfaces.
24. Section [B] 607.3.2.1, item #4 has added ceiling smoke dampers in corridors shall be permitted to be controlled by a smoke detection system installed in the corridor.
25. Section [B] 607.5.5, exception #2 allows shaft enclosures in Group B and now Group R occupancies to be penetrated without requiring a smoke damper for bathroom and now kitchen and clothes dryer steel exhaust subducts complying with this section.
26. Section [B] 607.6.2.1, item #2 is a new provision not requiring a ceiling radiation damper where exhaust duct penetrations are protected in accordance with Section 712.4.1.2 of the *International Building Code* and the exhaust ducts are located within the cavity of a wall, and do not pass through another dwelling unit or tenant space.
27. Section [F] 1105.9 is a new section requiring refrigeration systems containing more than 6 .6 pounds of flammable, toxic or highly toxic refrigerant or ammonia to be provided with an emergency pressure control system in accordance with Section 606.10 of the *International Fire Code*.
28. Section [F] 1106.5.1 has a new exception for machinery rooms where only nonflammable refrigerants are used, electrical equipment and appliances, other than compressors, are not required to be provided with a power cutoff switch.