January - December 2005

Mechanical Inspection Memo

Mechanical Inspection Memos are provided as a reference of updated procedures and code clarifications. This information does not change or replace the Pikes Peak Regional Building Code, adopted as law to provide minimum standards to protect the public health and safety. Reference the adopted Codes for exact standards. Permits for work are subject to the latest codes as amended by the Pikes Peak Regional Building Code.

The information is categorized as general information, mechanical, plumbing, and manufactured homes. Topics are alphabetized for easy reference and includes the month that it was published. You also may use word search.

PIKES PEAK REGIONAL BUILDING DEPARTMENT

General Information

2003 CODES AND AMENDMENTS ARE POSTED UNDER CURRENT INFORMATION — Amendments to the 2000 Uniform Plumbing Code, 2003 International Mechanical Code, 2003 International Fuel Gas Code and 2003 International Energy Conservation Code are posted on the web site. The 2005 Pikes Peak Regional Building Code & Codes were adopted Nov. 1, 2005.

2005 PIKES PEAK REGIONAL BUILDING CODE — Adopted by all jurisdictions served by Pikes Peak Regional Building Department, the new codes went into effect November 1, 2005. The transition period that allows use of either new or former codes ends December 1, 2005. (October - November 2005)

2003 INTERNATIONAL ENERGY CONSERVATION CODE & DUCT DESIGN LAYOUTS RESIDENTIAL PLANS — New residential master and built on-site plans will include the duct design layout for permits to be issued on the effective date of implementation of new codes by all jurisdictions served by Pikes Peak Regional Building Department. Note the following guidelines for updating residential master plans:

Master Plans approved on or after Jan. 1, 2001 will be issued permits until May 1, 2006, when plans must be updated and include duct design layouts prior to permits being issued.

Plans approved before Jan. 1, 2001 will not be issued permits without approved updated plans and duct design layouts as of January 1, 2006.

INSPECTION ACCESS CLARIFICATION — Section 16-4-102, 1999 Pikes Peak Regional Building Code, requires the contractor to provide access for all inspections. The contractor is also required to provide a ladder to enable inspections where access is difficult, including but not limited to basements, crawl spaces and attics. Failure to provide access can generate the same results as a locked house/building. (July 2005)

INSPECTION PENALTY WHEN CALLED BEFORE WORK IS READY — Effective Monday, September 26, 2005, inspections that are requested prior to work being ready will be noted in the permit history by the field inspector. Instead of a trip fee, it will result in a 48-hour delay before the re-inspection request will be processed, starting from the time and date entered into the inspection history. For example: Work that is not ready for the requested inspection is recorded into the permit history on Friday at 9:00 a.m. The contractor may request a re-inspection on Friday afternoon, but it will not be entered on inspection logs until the following Wednesday. The period of 48 hours applies to work days only — weekends are excluded in this calculation. (September 2005)

INSPECTION RECORD CARD (PERMIT PLACARD) — Section 16-4-105 requires the inspection record card, to be posted in a “conspicuous place... to conveniently make required entries...” (July 2005)

“LISTED” DEFINITION — Products/equipment are required to be “Listed” per Section 301.1.1 of the 2000 Uniform Plumbing Code, Section 301.4 of the 2003 International Mechanical Code, and Section 301.3 of the 2003 International Fuel Gas Code. Defined in Chapter 2 of these codes, a product is “Listed” when it is marked or identified with the following:

a) The appropriate standard; and
b) The agency that provides the Listing Service. Products containing the IAPMO/UPC logo or ICC logo are automatically accepted in this jurisdiction.

Products listed by other agencies are considered on a case by case basis. (October - November 2005)

Mechanical

AIR CONDITIONING INSTALLATION PERMIT — Appendix B of the 2005 Pikes Peak Regional Building Code (PPRBC) contains a new provision for "quasi-universal" permits for new and replacement air conditioning installations. The mechanical contractor's permit will cover both mechanical and electrical inspections. Mechanical inspections may be requested by the mechanical contractor who obtained the permit. Electrical inspections may be requested by a state licensed electrical contractor (registered with RBD), using the same permit number. Inspections may be requested by phone, automated system or web site. (October - November 2005)

BATH EXHAUST TRAPPING FOR MOISTURE CONTROL — Until the adoption of new codes, the Mechanical Committee recommended prohibition of trapping moisture exhaust ducts located outside the insulated building envelope. (July 13, 2005 meeting)

CLOTHES DRYER VENT INSTALLATION — Section 908.1, 1997 Uniform Mechanical Code (UMC), requires a dryer vent to be installed; this code requirement assures safety and functionality. If the terminal end of the terminal duct in the laundry room is installed in such a manner that the dryer cannot be attached to the dryer vent, the installation does not comply with code. (April 2005)

DIRECT VENT APPLIANCES THAT REQUIRE A DISK IN OUTSIDE AIR INTAKE — When a manufacturer's venting installation instructions for a 90 percent direct vent appliance require a disk in the outside air intake, the disk will be considered as part of the internal working portion of the appliance. As such, RBD will not disassemble the unit to verify. If there are questions, the inspector will contact the installer. (August & September 2005)

FIREPLACE INSTALLATIONS OF LENNOX HEARTH PRODUCTS — Lennox Hearth Products has updated information regarding installation instructions for fireplaces using a direct vent system. Unlike the information published in the December 2004 Mechanical Memo, the new instructions allow multiple direct vent terminals. As previously stated, the installation instructions specify that a decorative shroud may be installed over a vertically installed vent when using a SV4.5VTR termination. Installation must comply with the instructions amended by the manufacturer. **Note:** This does *not* apply to Terminals for Type B venting systems. (March 2005)

FLEXIBLE DUCT, AM BLUE — Manufactured by J P Lamborn Company, AM Blue Flexible duct is an approved exhaust duct for bathrooms/toilets in this jurisdiction. (December 2005)

FURNACES REPLACEMENT THAT REQUIRE NEW VENT & PERMITS — When a Category IV (90 percent +) furnace is installed as a replacement for an existing furnace, the permit should reflect the new vent as part of the scope of work. The new vent must be visible at the time of inspection to verify compliance with UMC Section 802.5. (February 2005, 2002 Memo)

FURNACES REPLACEMENT & OBTAINING COMBUSTION AIR — Combustion air, obtained through permanent supply duct openings located in the mechanical room, is only acceptable for furnace replacements when the basement is finished and the furnace room is not located on an outside wall. (March 2005, 2001 Memo)

FURNACES MANUFACTURED BY RHEEM — Two separate furnaces that share the same return air and/or supply air duct system, must be "twinned" in compliance with Rheem's installation instructions. Two furnaces on the same return air and/or supply duct system, are allowed to have separate, individual thermostats only if this is allowed in the manufacturer's installation instructions. (May 2005)

Mechanical

GAS LINE BONDING — Section 310.1, 2003 International Fuel Gas Code (IFGC), allows an option to grounding gas lines to the electrical system if the appliance is grounded. The National Electrical Code requires all furnaces/boilers to be grounded. Therefore, the Electrical Inspectors will be responsible for inspection of this code provision when new codes are adopted. (August 2005)

GAS LINE INSTALLATIONS RESIDENTIAL INSIDE — Inside-gas line installations will begin changing on March 1, 2006 when Colorado Springs Utilities (CSU) initiates the use of new gas riser brackets and meter bars for new home construction. Previously, inside-gas line installations had the pipe stubbed out to the exterior and tested to that point. The new bracket and meter bar will require the gas pipe to be run to the exterior and then extended with elbows and additional piping for proper connection to the meter bar terminal . This will be verified at the time of the RBD inside gas-line inspection. The new bracket and meter bar will eventually be installed on all new residential construction, but may not include all new homes in March. For more information or to ascertain if a specific residential site will receive the new meter, please call Bryan Gagnon of CSU at 668-7308. (December 2005)

GAS RISER REQUIREMENTS — Gas riser requirements for polyethylene (PE) pipe are located in Sections 403.6.1 and 404.14.1, 2003 IFGC. The applicable standards are: ASTM D 2513 for PE pipe; ASTM F 1948 for mechanical metal fittings; and ASTM F 1973 for factory/field gas risers. (December 2005)

Each of these standards requires material to be identified and marked with the appropriate standard, verifying the product is manufactured, inspected, stamped and tested to that standard and meets all specifications. In addition, the stated IFGC sections restrict the use of PE to below grade/underground installations only. Therefore, riser lengths are limited to a maximum 45" above grade. (December 2005)

THERMOSTAT REQUIREMENTS WHEN TWO SEPARATE FURNACES SHARING A DUCT SYSTEM — Two separate furnaces that share the same return air and/or supply duct systems are allowed to have separate, individual thermostats only if this is allowed in the manufacturer's installation instructions. Written verification of acceptance or prohibition is required for all installations of this type. (April 2005)

VENT CONNECTORS CLARIFICATION — The 2003 IFGC does not specify that all vent connectors are to be double wall vent material. This requirement is determined by proper usage of Tables 504.2 and 504.3 of the IFGC. (December 2005)

VENTILATION (OUTSIDE AIR) FOR RESIDENTIAL BASEMENT FINISH — Contractors will be referred to a mechanical plans examiner to resolve issues regarding outside air ventilation in a basement finish without a furnace or air handler in newly constructed and existing homes. (August 2005)

Plumbing

AIR ADMITTANCE VALVES MANUFACTURED BY JONES STEPHENS — Automatic air admittance valves, manufactured by Jones Stephens, have an IAPMO listing and therefore are acceptable in this jurisdiction under the same conditions as those manufactured by Studor & Oatey. (May 2005)

AIR ADMITTANCE VALVES, STUDOR AUTOMATIC — Studor automatic air admittance valves, as stated in the manufacturer's installation instructions, cannot be installed in drainage systems with pressure conditions of plus one inch of water column or more. This condition exists when a drainage stack serves four or more branch intervals. (January 2005)

CLEANOUTS ACCESSIBILITY — Cleanouts required by Section 707, Uniform Plumbing Code (UPC), are also required to be accessible. Verification is to be made at the time of final inspection of the basement finish. (January 2005, 2003 & 2001 Memos)

COUPLING CLARIFICATION — Section 705 of the UPC distinguishes between a "molded rubber coupling" (unshielded) and a "shielded coupling". Each coupling must be listed per UPC Section 301.1.1 and be installed in compliance with Section 310.4, UPC. Note: MOST "molded rubber couplings" (unshielded) listed by the IAPMO are ONLY for underground installations. (February 2005)

COUPLING FERNCO — The new unshielded Fernco coupling, designated by XJ- (pipe size) has an IAPMO Listing for above ground installation, and therefore is acceptable for that use. (September 2005)

DISCHARGE DRAIN — The discharge drain from expansion relief/shut-off valves is treated the same as the drain for the T & P valve. Refer to Section 608.5, UPC. (December 2005)

FLOOR DRAIN CLASSIFICATIONS & CODE REFERENCES — Section 412.1, UPC, states that floor drains are plumbing fixtures, and Section 413.10, as amended by the PPRBC, specifies where floor drains are required. Floor drains may be classified as "emergency" or "receptor, indirect waste," (see the definition of "receptor" in Section 220.0). Note the following: (July 2005)

a) Emergency classified floor drain must comply with Section 1006.0.
b) Receptor classified floor drain must comply with Section 804.1.
c) Floor drain in a pan serving an emergency drain for a residential clothes washing machine must comply with Section 1006.0.

HOT WATER CIRCULATING SYSTEMS — Domestic hot water circulating systems equipped with an integral programmable timer now meet the Exception of Section 504.5 of the 2000 IECC. (Board of Review approved Mechanical Committee's recommendation, January 19, 2005.)

PVC & ABS PIPES & CEMENT REQUIREMENTS — Three manufacturers produce an IAPMO Listed cement to join ABS to PVC pipe. The listing states that the cement must be produced in accordance with ASTM D 3138 that requires the glue to be green in color. Per the IAPMO Listing: "For non-pressure transition joint from building drain, this is not a universal solvent cement." (March 2005)

PVC & ABS PRODUCTS MANUFACTURED BY SIOUX CHIEF — Sioux Chief Manufacturing Company produces both PVC (889-POM) and ABS (889-AOM) offset closet flange that has IAPMO approval, and therefore is acceptable for use in this jurisdiction. (April 2005)

PVC & ABS WASTE EXTENSIONS, DUAL PURPOSE, PLASTIC TUBULAR — Listed dual purpose (solvent cement/slip-joint) plastic tubular waste extensions (PVC/ABS) are acceptable for use. When installed horizontally downstream of the trap, the only acceptable joint is solvent cement. Such installation must have the slip-joint nut removed in order to verify code compliance. (April 2005)

PIKES PEAK REGIONAL BUILDING DEPARTMENT

Plumbing

RELIEF VALVE DRAIN & THREADED JOINT — If there is any threaded joint on a relief valve drain — other than the female iron pipe (FIP) outlet on the relief valve itself — it is considered a violation of Section 608.5, Uniform Plumbing Code (UPC). (March 2005)

SHARK BITE FITTINGS — Manufactured by Cash Acme, "SharkBite" fittings are listed by IAPMO, and therefore acceptable for use in this jurisdiction when installations comply with the listings and the manufacturer's instructions. (February 2005)

SHOWER DRAINS, 3-PART MANUFACTURED BY SIOUX CHIEF — Three part shower drains, manufactured by Sioux Chief, are acceptable to use in floor drain applications when properly sealed with an adhesive/mastic and secured to the floor. (April 2005)

SHOWER (STEAM) RELIEF VALVE — Steamers serving shower vents in either new or existing homes, must have the drain from the relief valve discharge to the corner of the shower. If the unit requires a service drain, it may connect to the relief valve drain. If the steamer is located below the shower unit, it must be provided with a drain pan conforming to Section 624.8, 2003 International Fuel Gas Code (IFGC), but the drain for the pan may be reduced to 3/4". (December 2005, 2002 Memos)

WAGS COLD WATER & GAS SHUT OFF VALVE MANUFACTURED BY TACO — WAGS cold water and gas shut off valve manufactured by TACO is listed and acceptable in this jurisdiction. When a watertight pan is used in conjunction with this device — but not required by Section 510.7, 1997 UPC — a 1 1/4 inch drain is not required. The use of a WAGS valve does not waive the requirement of a floor drain. (April 2005)

WATER CLOSET CLEARANCES — The 15" side and 24" front clearances required by Section 408.6, UPC, are measured from the height of the bowl and extended vertically upward. (February 2005)

WATER METER VERIFICATION OF COMMERCIAL BUILDINGS — Verification of the water meter will be a requirement of the final plumbing inspection for commercial building; this is in response to a request by Colorado Springs Utilities and the complexity of the structure. NOTE: Either the plumbing contractor or general contractor may request a water meter set from CSU for both residential and commercial construction. For more information, call CSU at 668-7352. (January 2005)

YARD HYDRANTS MANUFACTURED BY HOEPT, MURDOCK & WOODFORD — Yard hydrants manufactured by Hoeptner, Murdock & Woodford are listed to ASSE #1057, and are acceptable in this jurisdiction. (May 2005)

Manufactured Homes

INSPECTIONS FOR MANUFACTURED BUILDINGS ON TEMPORARY SETS — The required mechanical and plumbing inspections for manufactured buildings on temporary foundations are:

Residential: Heating Inspection (HO=) and Plumbing Inspection (PO=)
Commercial: Heating Inspection (HT) and Plumbing Inspection (PT)

Each building requires all inspections set forth in Section RBC109.2.6, 2005 PPRBC. For residential manufactured sets, also review the check list in the Installation Handbook published by the Colorado Division of Housing. (December 2005)

WATER HEATER SHUT-OFF VALVE —A shut-off valve is required for the water heater serving a manufactured home and should be verified as part of the manufactured home installation. (December 2005)