Land Use and Environmental Service Agency
(Code Enforcement)

NC Plumbing Code

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102.4 - Question: I am designing a bathroom with multiple lavatories, do all the lavatories have to meet ADA code?

Answer: No, just one must be meet ADA height.

102.4 - Question: If I change just the lavatory top, not the cabinet, do I have to bring the lavatory height up to ADA code height?

Answer: No, as long as it is just the top, then adjusting the height would not be a requirement.

102.4 - Question: If I change just the lavatory top, not the cabinet, do I have to bring the lavatory height up to ADA code height?

Answer: No, as long as it is just the top, then adjusting the height would not be a requirement.

301.3 - Question: I am inspecting an outside shower, that does have hot water; they don't want to install a drain because they say it is just rinse off before getting in the pool. Is a drain required?

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Answer: If hot water is provided, then it is considered gray water waste and must go to the sanitary. A drain must be provided and provisions must be made to prevent rain water from entering the drain (1101.3 NCPC).

If only cold water is provided, then it is considered clear water waste and no drain is required.

301.3 Connections to the sanitary drainage system. All plumbing fixtures, drains, appurtenances and appliances used to receive or discharge liquid wastes or sewage shall be directly connected to the sanitary drainage system of the building or premises, in accordance with the requirements of this code. This section shall not be construed to prevent the indirect waste systems required by Chapter 8. All drain, waste and vent piping associated with gray water or rain water recycling systems shall be installed in compliance with this code.

1101.3 Prohibited drainage. Storm water shall not be drained into sewers intended for sewage only.

301.6 - Question: When I install a sump pump in the elevator shaft, how far up the shaft can I run with the discharge line, before exiting the shaft?

Answer: The plumbing code does not specifically address this. The exception in section 301.6 allows floor drains, sumps and sump pumps to be installed in the base of the shaft, but does not address the discharge line.

According to the NCDOL, the discharge line for the pump shall be allowed to exit the shaft between the pit and before the next floor, but not past it.

301.6 Prohibited locations. Plumbing systems shall not be located in an elevator shaft or in an elevator equipment room.

Exception: Floor drains, sumps and sump pumps shall be

permitted at the base of the shaft, provided that they are indirectly connected to the plumbing system and comply with Section 1003.4.

305.5 - Question: Does the water service line need to be sleeved when passing through the foundation wall?

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Answer: Yes, Section 305.5 states "Any Pipe". The sleeve will need to be 2 pipe sizes greater than the pipe passing through the wall and sealed on both sides.
305.5 Pipes through or under footings or foundation walls. Any pipe that passes under a footing or through a foundation wall shall be provided with a relieving arch, or a pipe sleeve pipe shall be built into the foundation wall. The sleeve shall be two pipe sizes greater than the pipe passing through the wall.

Piping installed within or under a footing or foundation wall must be structurally protected from any transferred loading from the footing or foundation wall. This protection may be provided by a relieving arch or a pipe sleeve.

When a sleeve is used, it must be sized to be two pipe sizes larger than the penetrating pipe. For example, a 4-inch (102 mm) penetrating pipe would require a 6-inch (152 mm) sleeve. This space will allow for any differential movement of the pipe. By providing structural protection to the piping system, the piping will not be subjected to undue stresses that could cause it to rupture and leak

308.3 - Question: I have been told that we cannot use plastic hanger strap in Mecklenburg County, is this true?

Answer: Yes, Sioux Chief put out a technical bulletin on June 18th stating that their extruded polypropylene hanger strap had temperature limitations. The maximum lowest temperature was 32 degrees and the maximum hottest temperature was 120 degrees. This strapping was manufactured per the standard of ASTM D5857, which is a standard for extruded polypropylene. The temperature limitations are part of the standard. All the major manufactures of plastic hanger strapping use this standard.
Currently Mecklenburg County is not accepting plastic hanger strapping until more information can be provided to use by the manufacture's about the durability of this product.
See the attached email from Bill Moeller, NCDOI and the Tech Bulletin from Sioux Chief

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308.3 - Question: Can the aluminum duct strap be used for plumbing strap?

Answer: No, Section 308.3 requires that hangers and straps be of approved material. We cannot find a standard for hangers or pipe strap. The definition of "approved" reverts back to the AHJ.

308.3 Materials. Hangers, anchors and supports shall support the piping and the contents of the piping. Hangers and strapping material shall be of approved material that will not promote galvanic action. The hangers and supports for plumbing system piping must be capable of supporting the load imposed by the piping system and not be detrimental to the pipe they support. When the hanger or strapping material is not compatible with the piping material it supports, corrosion caused by galvanic action can occur. This happens when dissimilar metals are in contact with one another and sufficient moisture is present to carry an electrical current. Such corrosion can deteriorate the hanger, anchor or piping to the point of failure.

Where metallic pipe is installed, the hangers or supports must be of similar material to prevent any corrosive galvanic action. For example, if the water distribution system is copper tubing or copper pipe, copper hangers, straps and clamps are required or such supports must be of a material or clad by a material (such as plastic) that will not react with copper. Some support devices have special plastic coatings or are made entirely of plastic to prevent contact of dissimilar metals and are acceptable alternatives

403 - Question: I am trying to calculate pool facilities at a new apartment complex in Mecklenburg County. I have used the calculation on the Meckpermit.com web site. The apartment association has submitted a code change that will reduce the number of facilities for apartment pools verses your web site interpretation. The calculation has been approved as submitted to the BCC by Bill Moeller, DOI Chief Plumbing Engineer. May we use the proposed calculation on the apartment pool facilities plans we are submitting for review in Mecklenburg County?

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Answer: I ask this question to Bill Moeller, PE, DOI Chief Plumbing Engineer. I am approving the pool facility calculations based on the information supplied by DOI below.

It is our opinion that the local jurisdictions can use the apartment association's code change proposal as a basis for an alternate method to the code, if they see fit to. We support the proposed change and expect it to pass as it is written. If in the unlikely event that the building code council completely rejects the proposal, the owner should understand that adjustments in the fixture count would then have to be made to coincide with the plumbing code.

Bill Moeller

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411.1 - Question: Does an eye wash have to have tempered water?

Answer: Yes. 411.1. Emergency showers and eyewash stations shall conform to ISEA Z358.1. This standard says water must be tempered.

412.5 - Question: Are public laundries required to have a floor drain?

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Answer: Yes. 412.5. In public coin operated laundries and in the central washing facilities of multiple-family dwellings, the rooms containing automatic clothes washers shall be provided with floor drains located to readily drain the entire floor area. Such drains shall have a minimum outlet of not less than three inches.

501.4 - Question: Can a water heater be installed, so that you first must remove a washer/dryer to get to it?

Answer: No, Section 501.4 states the water heater must be provided access. The definition of access is to remove a panel, door or similar obstruction. A washer/dryer is not a similar obstruction.

501.4 Location. Water heaters and storage tanks shall be located and connected so as to provide access for observation, maintenance, servicing and replacement.

ACCESS (TO). That which enables a fixture, appliance or equipment to be reached by ready access or by a means that first requires the removal or movement of a panel, door or similar obstruction

604.4.1 - Question: Are metering faucets required in a pool house?

Answer: Yes, the pool house restrooms serve an assembly use.

Tommy,

Good to hear from you. Metering faucets are required for the pool house restrooms because they serve an assembly use. I toyed with the idea of business use for assembly occupancy less than 50 but the plumbing fixture table 403.1 is intended to be interpreted more by the description of use. Occupancy types in Table 403.1 are secondary information, not to be used as the only basis for fixture count. The business occupancy can be used for egress and general design of the pool house if the assembly occupancy is less than 50 for the pool house, but not the plumbing fixtures.

Bill Moeller

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William H. Moeller, P.E.

Chief Plumbing and Fuel Gas Code Consultant

NCDOI/OSFM Engineering Division

604.4.1 - Question: Where are metering faucets required?

Answer: They are required in public restrooms with 6 or more lavatories, Education and Assembly occupancies. See code Section 604.4.1 NCPC
604.4.1 Lavatory faucets. Lavatory faucets shall be of the metering type when located in the following public restrooms:

1. In all occupancies in restrooms which have six or more lavatories.

2. In school occupancies in student-use restrooms.

3. In assembly occupancies in all customer or public-use restrooms.

604.4.1 - Question: I am designing an assembly occupancy, that will contain employee only restrooms. The public will have separate restroom facilities. Will the employee only restrooms be required to have metering type faucets?

Answer: No, section 604.4.1 states metering faucets are required in assembly occupancies for all customer or public use restrooms
604.4.1 Lavatory faucets. Lavatory faucets shall be of the metering type when located in the following public restrooms:

1. In all occupancies in restrooms which have six or more lavatories.

2. In school occupancies in student-use restrooms.

3. In assembly occupancies in all customer or public-use restrooms.

605.22.2 - Question: I am plumbing a commercial kitchen, there will be PVC drain piping that will be exposed under the sinks. The owner wants everything to be neat, he doesn't want the purple primer on the pipes. Is there another option besides the purple primer?

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Answer: Yes, Section 605.22.2 allows the use of ultraviolet purple primer. The primer appears clear until it is placed under a ultraviolet light. The primer still has to conform to ASTM F 656 and the installer is responsible for providing the ultraviolet light during inspections

605.22.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer or an ultraviolet purple primer that conforms to ASTM F 656 shall be applied. When an ultraviolet primer is used, the installer shall provide an ultraviolet light to the inspector to be used during the inspection. Solvent cement not purple in color and conforming to ASTM D 2564 or CSA-B137.3 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM D 2855. Solvent-cement joints shall be permitted above or below ground.

605.3 - Question: A farmer wants to run water to his barn for watering his horses not for human consumption. Can we allow him to run PVC within the barn building?

Answer: Since the water in the barn is for horses and not human consumption PVC will be acceptable for the distribution piping within the barn.

605.3Water service pipe. Water service pipe shall conform to NSF 61 and shall conform to one of the standards listed in Table 605.3. All water service pipe or tubing, installed underground and outside of the structure, shall have a minimum working pressure rating of 160 psi (1100 kPa) at 73.4ºF (23ºC). Where the water pressure exceeds 160 psi (1100 kPa), piping material shall have a minimum rated working pressure equal to the highest available pressure. Water service piping materials not third-party certified for water distribution shall terminate 5 feet (1524 mm) outside the building. All ductile iron water service piping shall be cement mortar lined in accordance with AWWA C104.

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606.2 - Question: I am designing a break room and the client doesn't want to use a cabinet that will allow a front approach to the sink. When is a side approach allowed.

Answer: Section 606.2 Except #1 of A117.1-2009 allows a parallel approach that is centered on the sink and where a cook top or conventional range is not provided. A maximum counter height of 34 inches would still be required.

606.3 - Question: Can shut off valves installed for expansion or renovation, be covered up by construction?

Answer: Yes, the intent of the code is for the valves that are required to operate, be accessible (i.e. sink, washing machine, etc). If the valves are only being installed for the purpose of pressure testing an addition or keeping the water on to the rest of the building during construction, and these valves will be abandoned; then it is acceptable to enclose them in construction.
606.3 Access to valves. Access shall be provided to all full-open valves and shutoff valves.

608.1 - Question: We valued engineered and decided to install a combo fire/water line instead of dedicated lines. The plans showed a private hydrant on the property, CMUD did not require a backflow for it, but we were turned down and required to install a backflow device between the hydrant and the combo line. Why?

Answer: CMUD requires a backflow to protect their water system, after their backflow they have now further requirements. The combo line is a water service line conveying potable water. Section 608.1 requires the potable water system be protected. The hydrant, by definition is a plumbing fixture and section 608.2 requires the supply lines for every plumbing fixture to be installed to prevent back flow.

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608.1 General. A potable water supply system shall be designed, installed and maintained in such a manner so as to prevent contamination from nonpotable liquids, solids or gases being introduced into the potable water supply through cross-connections or any other piping connections to the system. Backflow preventer applications shall conform to Table 608.1, except as specifically stated in Sections 608.2 through 608.16.10.

608.2 Plumbing fixtures. The supply lines and fittings for every plumbing fixture shall be installed so as to prevent backflow. Plumbing fixture fittings shall provide backflow protection in accordance with ASME A112.18.1.

608.13.2 - Question: Can a RPZ be installed in a vault? Who is responsible for looking at the backflow devices?

Answer: RPZs are prohibited from being installed where possible submersion can occur, section 608.13.2 NCPC. CMUD does not allow RPZs to be installed in vaults, unless the vault is open on one side, which will make it impossible for submersion.

608.13.2 Reduced pressure principle backflow preventers. Reduced pressure principle backflow preventers shall conform to ASSE 1013, AWWA C511, CAN/CSA B64.4 or CSA B64.4.1. Reduced pressure detector assembly backflow preventers shall conform to ASSE 1047. These devices shall be permitted to be installed where subject to continuous pressure conditions. The relief opening shall discharge by air gap and shall be prevented from being submerged.

701.7 - Question: Can a High Temp Commercial dishwasher, with a rinse temperature of 180 degrees, discharge into the drainage system?

Answer: Section 701.7 of the Plumbing Code states wastewater discharged into the building drainage system shall not be higher than 140 degrees.
Most dishwashers only rinse with 180 degree water and when the water is discharged indirectly, it will be between 130 and 140 degrees when entering the building drain. If the dishwasher states the discharge temperature is higher than

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140 degrees then an approved cooling method must be used, typically a tempering valve.

704.5 - Question: I recently was turned down for demolishing an existing bathroom. The plumbing was capped off and was to be coved when the slab was poured. I had to remove the cap and put a clean out in its place. Was this correct?

Answer: Yes, a dead end is defined as a branch, building drain or building sewer with a developed length of 2 feet or more by means of a plug, cap or other closed fitting.

Section 704.5 prohibits dead ends, but a cleanout extension is allowed.

704.5 Dead ends. In the installation or removal of any part of a drainage system, dead ends shall be prohibited. Cleanout extensions and approved future fixture drainage piping shall not be considered as dead ends.

708.3.5 - Question: Can I install the required clean out at the building drain and building sewer junction in the crawl space? The owner doesn't want it in the yard.

Answer: Section 708.3.5 does provided an exception. If there is a 3 inch or larger soil stack located not more than 15 feet from the building drain and sewer connection, you are allowed to utilize that cleanout if it is extended to the outside of the building.

708.3.5 Building drain and building sewer junction. There shall be a cleanout at the junction of the building drain and the building sewer. The cleanout shall be outside the building wall and shall be brought up to the finished ground level. An approved two-way cleanout is allowed to be used at this location to serve as a required cleanout for both the building drain and building sewer. The cleanout at the junction of the building drain and building sewer shall not be required if the cleanout on a 3-inch (76 mm) or larger diameter soil stack is located within a

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developed length of not more than 15 feet (4572 mm) from of the building drain and building sewer connection and is extended to the outside of the building.

713.7 - Question: Can a central vacuum pump in a dentist office be connected to the drainage system indirectly?

Answer: No, Section 713.7 requires central vacuum systems to be connected directly to the sanitary drainage system through a trapped waste.

713.7 Central vacuum or disposal systems. Where the waste from a central vacuum (fluid suction) system of the barometric-lag, collection-tank or bottle-disposal type is connected to the drainage system, the waste shall be directly connected to the sanitary drainage system through a trapped waste.

903.2 - Question: Do I have to provide a Vent Stack with a Multistory wet vent and 5 branch intervals?

Answer: Yes, Section 903.2 requires a vent stack for all drainage stacks that have 5 branch intervals or more. Table 909.4 under multistory wet venting, gives you the sizing for the vent stacks.

903.2 Vent stack required. A vent stack shall be required for every drainage stack that has five branch intervals or more.

Exception: Drainage stacks installed in accordance with Section 910.

909.4 Multistory bathroom groups. On the lower floors of a multistory building, the waste pipe from one or two lavatories may be used as a wet vent for one or two bathtubs or showers provided that:

1. The wet vent and its extension to the vent stack is not less than 2-inch (51 mm) diameter;

2. Each water closet below the top floor is individually back vented; and

3. The vent stack is sized in accordance with Table 909.4.

Exception: In multistory bathroom groups (does not apply to one- and two-family dwellings), wet vented in accordance with Section 909.4, the water closets below

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the top floor need not be individually vented if a 2-inch (51 mm) wet vent connects downstream of the water closet.

905.4 - Question: If I have an island sink or a remote fixture can apply the exception in 905.4 ?

Answer: No, the exception in 905.4 is intended for interceptors and floor drains.

Section 913 address venting of island fixtures.

913.1 Limitation. Island fixture venting shall not be permitted for fixtures other than sinks and lavatories. Residential kitchen sinks with a dishwasher waste connection, a food waste grinder, or both, in combination with the kitchen sink waste, shall be permitted to be vented in accordance with this section.

913.2 Vent connection. The island fixture vent shall connect to the fixture drain as required for an individual or common vent. The vent shall rise vertically to above the drainage outlet of the fixture being vented before offsetting horizontally or vertically downward. For multiple island fixture vents, the vent or branch vent shall extend to a minimum of 6 inches (152 mm) above the highest island fixture being vented before connecting to the outside vent terminal.

913.3Vent installation below the fixture flood level rim. The vent located below the flood level rim of the fixture being vented shall be installed as required for drainage piping in accordance with Chapter 7, except for sizing. The vent shall be sized in accordance with Section 916.2. The lowest point of the island fixture vent shall connect full size to the drainage system. The connection shall be to a vertical drain pipe or to the top half of a horizontal drain pipe. Cleanouts shall be provided in the island fixture vent to permit rodding of all vent piping located below the flood level rim of the fixtures. Rodding in both directions shall be permitted through a cleanout.

909.4 - Question: In a multi-story wet vent, you usually have the bottom bathroom group connect at the bottom of the stack, after it has turned horizontal. Do you count this bathroom for calculating the size of the multi-story wet vent?

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Answer: Yes, unless this bathroom group is vented separately, it would be calculated in the wet vent size calculation.

917.3 - Question: Are air admittance valves allowed to be used on grease interceptors?

Answer: Yes, we can find nothing in the code that prohibits the use of AAVs with a grease interceptor, provided that neither manufacture (AAV and grease interceptor) prohibit the installation.
917.3 Where permitted. Individual, branch and circuit vents shall be permitted to terminate with a connection to an air admittance valve. The air admittance valves shall vent only fixtures that are on the same floor level and connect to a horizontal branch drain. The horizontal branch drain shall conform to Section 917.3.1 or 917.3.2.

917.8 - Question: Does the IPC allow AAV's, to vent pumps or pump holding tanks of any kind?

Answer: NO. Air admittance valves shall not be installed in non-neutralized special waste systems as described in Chapter 8. Air admittance valves shall not be located in spaces utilized as supply or return air plenums. Air admittance valves without an engineered design shall not be utilized to vent sumps or tanks of any type. 917.8 Prohibited installations.

917.8 Prohibited installations. Air admittance valves shall not be installed in nonneutralized special waste systems as described in Chapter 8. Air admittance valves shall not be located in spaces utilized as supply or return air plenums. Air admittance valves without an engineered design shall not be utilized to vent sumps or tanks of any type.

1002.4 - Question: Can you still use a deep seal trap in lieu of a trap primer?

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Answer: No, Section 1002.4 requires a trap primer. Traps that do not periodically receive waste discharge will eventually lose their seal as a result of evaporation. A deep seal will not prevent the loss of a trap seal, but will simply lengthen the time it will take for it to evaporate. Section 1002.4 also limits the depth of the seal to a maximum of 4 inches.

The exception to Section 412.6 will allow hose bibbs located in rooms with nonabsorbent floors in lieu of a trap primer for floor and trench drains. We will also accept trap guards in lieu of trap primers as an alternate method

1002.4 Trap seals. Each fixture trap shall have a liquid seal of not less than 2 inches (51 mm) and not more than 4 inches (102 mm), or deeper for special designs relating to accessible fixtures. Where a trap seal is subject to loss by evaporation, a trap seal primer valve shall be installed. Trap seal primer valves shall connect to the trap at a point above the level of the trap seal. A trap seal primer valve shall conform to ASSE 1018 or ASSE 1044.

412.6 Trap primers. The water seal of floor drain traps shall be maintained in conformance to Section 1002.4, Trap seals, or another method acceptable to the authority having jurisdiction.

Exception: Hose bibbs located in rooms with nonabsorbent floors may be used in lieu of an automatic trap primer.

1003.3.4 - Question: What inspections are required on a 1000 gallon grease interceptor, located outside of the building?

Answer: Grease interceptors installed outside the building with a capacity equal to or greater than 500 gallons storage capacity are no longer covered by the 2012 North Carolina Plumbing Code. Designers may consult with the local utility or health department to see if any requirements exist for the larger capacity interceptors. The plumbing inspector will only be required to check the material and drain piping for the larger capacity interceptors. Interceptors less than 500 gallons located outside the building or any size grease interceptor located inside

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the building shall be clearly marked with the manufacturer's name and the standard with which they comply.

Manufactured concrete grease interceptors less that 500 gallons located outside the building only shall be approved by the Code Official (Plan Examiner or Inspector) under the following conditions: The interceptors shall come complete and require no internal field fabrications or modifications by the plumber. Concrete interceptors shall be clearly marked with the manufacturers name and the standard to which they comply.

1003.3.4 Grease interceptors and automatic grease removal devices. Grease interceptors and automatic grease removal devices shall be sized with PDI G101, ASME A112.14 Appendix A, or ASME A112.14.4. Grease interceptors and automatic grease removal devices shall be designed and tested in accordance with PDI G101, ASME A112.14.3 or ASME A112.14.4. Grease interceptors and automatic grease removal devices shall be installed by the manufacturer's installation instructions.

Exception: Interceptors that have a volume of not less than 500 gallons and are located outdoors shall not be required to meet the requirements of this section.

1101.4 - Question: Where in the code does it require test on storm water piping?

Answer: Section 1101.4 refers you to section 312. Section 312 requires a water test on the drainage system within the building.

1101.4 Tests. The conductors and the building storm drain shall be tested in accordance with Section 312.

312.2 Drainage and vent water test. A water test shall be applied to the drainage system within the building either in its entirety or in sections.

1103 - Question: Are drains for storm water on a parking deck required to be trapped?

Answer: Traps are required on storm drains only when connected to a combined sewer system.

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1103.1 Main trap. Leaders and storm drains connected to a combined sewer shall be trapped. Individual storm water traps shall be installed on the storm water drain branch serving each conductor, or a single trap shall be installed in the main storm drain just before its connection with the combined building sewer or the public sewer.

1105 - Question: We want to install both the primary and secondary roof drains below a paver system on the roof. The drains will be in a course fill material so there will be very little chance of the drains clogging. We have installed this system in other parts of the county and it has worked well. The plan examiner has turned the drain system down. We are looking to the Plumbing code administrator for approval of the system. See the drawings of the system in the attached PDF to this email. Can this system be approved in Mecklenburg County?

Answer: No. The roof drains and overflow drains or scuppers are required to be located on the surface of the roof. For your project the primary and overflow drains shall be installed at the paver level. The code requires ready access in case of a clog to the drains. The water from overflow drains or scuppers shall be in a visible location so building maintenance personnel can see there is a primary drain clog and have ready access to remove the clog.

Policy - Question: Is it acceptable to direct connect washing machine drain pans to the sanitary sewer?

Answer: No, washing machine drain pans are not listed fixtures. They must be piped to daylight or indirect waste into an approved waste receptor.

Policy - Question: Where can condensing water heaters discharge?

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Answer: If manufacturer states that their condensate will be below PH 6, then they must have a neutralizer. At this point they can either go to sanitary, outdoors or other approved means of disposal, as it is now PH neutral(7). It will all depend on what the manufacturer's installation instructions of the water heater says.

Policy - Question: We have gained approval for our Gindy pipe material for Refrigeration, Water and Gas piping through the ICC-ES testing service. This testing service is recognized by the Department of Insurance as an approved testing agency for material and systems in the ICC Codes. Some area contractors still do not agree that we have approval for these products. May we get a letter from Mecklenburg County Code Enforcement approving these products as tested by ICC-ES.

Answer: The department has approved the products per the test data forms submitted and sent a letter to acknowledge the product approval to Gindy. Any contractor, designer or code official wishing to obtain a copy can contact the Mechanical/Plumbing Code Administrator for a copy.

Policy - Question: I was asked this question by CMUD. Does Mecklenburg County have any written procedures for abandoning in-ground grease traps? If not, I came up with the attached guidelines and would like for you to review and make corrections or revise.

Answer: There are no requirements in the 2012 NC Plumbing code for Code Enforcement to inspect abandoned grease interceptors. You may want to contact the wastewater division for Mecklenburg County, David Hill, 704-663-1699, to see if they have any rules or regulations about

abandoned Grease Interceptors.

ADA - Question: We are in the process of up fitting several floors of a High Rise Building. The building has one drinking fountain on each floor which meets the minimum code for fixture count. We are fulfilling the handicap requirements by making the drinking fountain on one floor meet the requirements for the High HCDF and the one on the floor below will meet the Low HCDF requirements. The code does not address this issue. Will this installation be approved?

Answer: This issue was sent to Laurel Wright, HC Accessibility authority at DOI. She addressed the situation with the following comments.

From: Wright, Laurel [mailto:Laurel.Wright@ncdoi.gov]

Sent: Monday, November 25, 2013 10:59 AM

To: Horton, Willis

Cc: Barkley, John; McSwain, Lon; jsang@redlinedg.com; Moeller, Bill; Gupton, Barry

Subject: NCPC Table 403.1 - #336197 Salsarita's RTAP

Good afternoon Willis,

There are several thoughts here - it has been standard practice here to permit a hi-low drinking fountain to be separated when installed, thus allowing it in two different locations, so long as signage is also provided with each drinking fountain which directs travel to the other fountain. A minimum of one hi-low drinking fountain per floor is required (when required by the NC Plumbing Code).

Thoughts relating to the provided documentation (attached), which did not reference any specific project however, are slightly different. The issue was discussed at length with Bill Moeller, our Chief Plumbing Code Consultant, and

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verified with Barry Gupton, our Chief Building Code Consultant. Our thoughts are as follows:

1. The attached reference is from the 2006 International Building Code Commentary for IBC Chapter 11.

[It took a while to find since the year edition did not show up on the copied page.]

2. The section hi-lited contains a reference to what would have been the 2009 NCPC 403.5.

This section was never enforced by NC since the NC Building Code Council modified the language.

3. 2009 NCPC 403.5 was amended by NC to read as follows:

4. NC is currently under the 2012 Building Codes, not the 2009 edition.

5. 2012 NCPC 403.5 was amended by NC to read as follows:

The language of the 2009 and the 2012 is identical. However, the references are consistently to toilet facilities. There are no references to drinking fountains in NCBC 403.5.

6. The language in NCPC 403.5 addresses travel distance to toilet facilities, not travel distance to drinking

fountains. NCPC Table 403.1 assigns drinking fountain requirements based on the occupancy of a

building area, which is typically evaluated on a floor-by-floor basis. The installation of the drinking

fountains should be installed accordingly.

7. Please note that NCBC 1109.5 also includes requirements for drinking fountains, including NCBC

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1109.5.2, where more than the minimum number of drinking fountains are provided.

8. Distribution of hi-low drinking fountains throughout a building shall typically follow this procedure:

a. A minimum of one hi-low drinking fountain shall be installed on each floor level, when drinking

fountains are required by the NC Plumbing Code.

b. Hi-low drinking fountains may be separated when installed, provided signage is provided with

directions locating the other fountain.

c. Drinking fountains shall be installed to serve in the areas where they are required per NCBC Table

403.1.

A copy of the 2009 IBC Commentary for IBC 1109.5 is attached.

If I can be of additional assistance, please let me know.

Laurel W. Wright

Chief Accessibility Code Consultant

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Mbr: ANSI A117.1 Committee

Laurel,

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Thank you for the information and research you did to answer this email. I will contact the designer and let him know the two drinking fountains (one high and one low) are required to be on the same floor but may be separated with proper travel distance, signage and accessible path.

Policy - Question: Who looks at the condensate for a condensing water heater?

Answer: The Mechanical inspector, the condensate comes off the flue and usually goes to the floor drain or other approved location. Almost all of the condensing water heaters and condensing gas furnaces researched stated that the condensate would be slightly acidic with a pH from 3 to 5.
CMUD's policy requires waste to be between 6 and 12 pH when entering the system. If the manufacture's data states a pH lower than 6, then a neutralizing filter is required for condensate waste discharging to the drainage system or outside the structure.

Policy - Question: The inspector in another County would not allow me to use tee's on their back in an indirect drainage system. He could not find any justification for the inspectors call in the code. Would this installation be approved in Mecklenburg County?

Answer: Whether the installation is direct or indirect if it is part of the plumbing system it should meet the code.

Policy - Question: Do we issue permits for Fire Lines?

Answer: No, only the Fire reviewer, Fire inspector and backflow look at fire lines. They are not potable water and are not under the jurisdiction of the Plumbing

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code. If it is a combo line, then we would look at it, because it also serves the potable water system.

ADA - Question: Are there any limitations on the location of drinking fountains?

Answer: No, The building code does not limit the location of drinking fountains. The building code does address Toilet and bathing facilities, they must be located on an accessible route (Section 1109.2 NCBC). Therefore, if the drinking fountain is located on an accessible route, it can be any where in the building.
1109.2 Toilet and bathing facilities. Each toilet room and bathing room shall be accessible. Where a floor level is not required to be connected by an accessible route, the only toilet rooms or bathing rooms provided within the facility shall not be located on the inaccessible floor. At least one of each type of fixture, element, control or dispenser in each accessible toilet room and bathing room shall be accessible.

403.4 (Energy) - Question: What is the insulation requirements for existing structures that add a small hot water recirculation system such as a Grundfos? What water lines must be insulated?

Answer: Section 403.4 of the Energy Code requires all circulating service hot water piping to be insulated to at least R-2. Our interpretation for existing structures is any exposed piping such as in a crawl space would need to be insulated to a minimum of R-2. Piping in the walls or concealed spaces would not be required to be insulated with the installation of a hot water recirculation system. Please note that Section 403.4 NCECC is for residential only; Commercial installation at this time will have to be handled on a case by case basis.
Some pipe materials such as PEX have enough thermal resistance to meet the R value requirements of 403.4 (Residential) and 504.5 (Commercial). Attached for reference are engineering letters we have on file for certain brands of PEX. If the pipe manufacturer or an engineer can provide documentation that the pipe's

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thermal resistance will meet the energy code, no additional pipe insulation would be required in regards to sections 403.4 and 504.5 only.

403.4 Circulating hot water systems (Mandatory Requirements). All circulating service hot water piping shall be insulated to at least R-2. Circulating hot water systems shall include an automatic or readily accessible manual switch that can turn off the hot water circulating pump when the system is not in use.

504.5 Pipe insulation. For automatic-circulating hot water systems, piping shall be insulated with 1 inch (25 mm) of insulation having a conductivity not exceeding 0.27 Btu per inch/h × ft2 × °F (1.53 W per 25 mm/m2 × K). The first 8 feet (2438 mm) of piping in no circulating systems served by equipment without integral heat traps shall be insulated with 0.5 inch (12.7 mm) of material having a conductivity not exceeding 0.27 Btu per inch/h × ft2 × °F (1.53 W per 25 mm/m2 × K).

Manufacture's Installation - Question: A contractor has stated that some inspectors are requiring nail guards behind the shower pan liner if the pipes are close to the front of the framing. Does this not violate the manufacture's installation instructions?

Answer: Nail guards are not required behind the shower pan liner.

1. The nail guard itself will damage the liner.
2. There should be no nails or screws in the liner area.

Building Code - Question: A tenant upfit for a restaurant is installed on the first floor of a High Rise Building. The tenant plumbing contractor installs a vent riser in the corner of an exit star because he says there is no vent riser he can tie the restaurant venting to on the first floor. Is this an acceptable alternative?

Answer: NO. The building code will not allow the installation because nothing can be in a rated stairwell except equipment for the stairwell itself. Clearly the vent

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riser is not for the stairwell and is therefore disapproved as a means of venting the restaurant.

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