

CROSS CONNECTION**PURPOSE:**

To assure that commercial and tenant-finish plans are reviewed by the Department of Water and Sewer; that they comply with backflow protection requirements; and our personnel coordinate with P&D in the permitting process.

SCOPE:

There is a 7 day turnaround to have plans reviewed.

RESPONSIBILITY:

The following plan submittal information will be required to acquire W&S approval.

- 1) Submit plans according to P&D requirements.
- 2) Backflow test must be up to date at the facility.
- 3) Water accounts must be current on payments.
- 4) Water usage must be under the reserved sewer capacity reserved for the facility.
- 5) Show all sewer usage calculations based on the Forsyth County Sewer Capacity Chart.
- 6) For restaurants, show the number of seats and number of seat previous if the last tenant was a restaurant.
- 7) Show the square footage of suite and building on plans.
- 8) Include the type business that was in the suite before.
- 9) Show all plumbing from water meters(s) and fire vaults to the inlet of facility; also show all facility internal plumbing on plans. Include equipment list of any equipment that will connect to potable water.
- 10) Incorporate the protective backflow devices as needed in drawings (i.e. moderate hazard, high hazard) as required by Georgia State Plumbing Codes, AWWA, ASSE, IPC and any other references that the plumbing codes refer to.

- 11) Any changes of the backflow protection devices must be approved by the Cross Connection Control Specialist at the Department of Water and Sewer.
- 12) Condensate cannot go to the sanitary sewer.
- 13) Show on plans if cooling towers are connected to sanitary sewer.
- 14) Show if cooling towers are connected to potable water; if so show the location of the RPZ backflow preventer to the cooling tower.
- 15) If the plans change the hazard to a high hazard use, the owner / tenant must install a RPZ backflow preventer either at the water meter or on the water supply line just as it enters the building. If the RPZ backflow preventer is installed inside the building it must be installed so a tester can test the device while standing on the floor. The device must be installed to manufactures specifications. Show on the plans the location of the RPZ backflow preventer and add a note to the plumbing notes to Test all Backflows and send the Test results to the Cross Connection Control Specialist at the Department of Water and Sewer.
- 16) Any building, facility, home, institution, plant etc. That would require uninterrupted water service should have dual / parallel water service connections. Said water service shall have 2 backflow preventers of the same type at the water service connection installed in parallel, in order to supply any aforementioned premises with uninterrupted water service. All meter and backflow assemblies that are required shall be installed per details and shown on plan.
- 17) When the discharge of water is possible from any backflow preventer, care should be taken during its installation (location, Placement and need for testing). Drainage capabilities shall be as prescribed by the backflow preventers manufactures to allow for adequate drainage in worst case scenario.
- 18) All testable non-residential backflow preventers shall be tested within 10 days of installation and annually thereafter as a minimum or more often as required by the Cross Connection Control Specialist at The Department of Water and Sewer. All tests shall be forwarded to the Cross Connection Control Specialist at the Department of Water and Sewer.
- 19) Houses or homes converting to commercial business from residential shall have at minimum a Double Check Backflow Preventer installed at the water meter. The final

approval of backflow protection will be determined by the Cross Connection Control Specialist.

- 20) Add note to the plumbing notes (Test all backflows within 10 days and send test results to the Cross Connection Control Specialist at the Department of Water and Sewer).
- 21) Paper revisions and resubmittals or approval stamps must make an appointment on Tuesday or Thursday between the hours of 8:30 AM to 11:00 AM to drop off plans or receive stamps.
- 22) It is the Owner / Contractors responsibility to make sure the backflow device is properly installed to Department of Water and Sewer guide lines after meter and backflow are set by county. If a RPZ backflow must be installed this is the owner / contractors responsibility to do so in an approved hot box or on the water supply to the building as it comes into the building.

**COMMERCIAL PLAN PERMITTING POLICY
CROSS CONNECTION**

3320.005

New Facility:

- 1) Show sewer calculations based on the Forsyth County sewer capacity chart.
- 2) Restaurants must show the number of seat on the plan.
- 3) Show the square footage of the building on the plans
- 4) Show RPZ (Reduced Pressure Zone) Backflow preventer at the water meter if the building will meet the high hazard use. . (See Below in the Backflow Prevention Guide lines) If the use does not pose a high hazard use than a double check backflow will be installed with the meter. The RPZ (REDUCED PRESSURE ZONE) device must be installed to Forsyth Co. Water and Sewer specifications see backflow preventer's specifications. The final determination will be at commercial plan review by the Cross Connection Control Specialist. We reserve the right to re-inspect and determine if the hazard has changed and may require an RPZ backflow preventer to be installed.
- 5) Fire vault that may provide fire service to more than one building and the buildings can be sold individually will need their own fire vault to provide fire service or provide a letter stating fire vaults will be installed if property is subdivided and a parcel is sold at sellers expense. Or a Management service is responsible for the backflow test of the one fire vault. A letter must be provided stating that a Management service will manage for the life of the property.
- 6) Condensate cannot go to sanitary.
- 7) Show on plans if cooling towers will be connected to the sanitary sewer.
- 8) If potable water will supply a cooling tower show an RPZ backflow preventer on the plans for the cooling tower.
- 9) Add note to the Cover sheet, (Test all backflow devices and send the test reports to the Cross Connection Control Specialist at Forsyth Co. Water and Sewer Dept.)
- 10) Must have correct address and suite number to review plan.

- 11) Any building, facility, home, institution, plant, etc. that shall require uninterrupted water service, for any reason, shall have dual/parallel water service-connections. Said water service shall have 2 (two) BACKFLOW PREVENTER ASSEMBLIES of the same type at the water service-connection installed in parallel, in order to adequately supply any of the aforementioned premises with the uninterrupted water service that is required. ALL METERS and BACKFLOW PREVENTER ASSEMBLIES that are required shall be installed per the details on the attached sheets and shall be incorporated into the final approved drawings (Per Ord 83 section VIII)
- 12) Show all plumbing drawings from water meter(s) and fire vaults to the inlet of the facility; also show all facility internal plumbing on plans. Including equipment connected to the potable water.
- 13) Add note (All testable non-residential BACKFLOW PREVENTER ASSEMBLIES shall be tested within 10 days of installation and annually thereafter as a minimum or more often as required by the Cross Connection Control Specialist. Test results shall be forwarded to the Forsyth County, Cross Connection Control Specialist at 110 E. Main Street, Suite 150, Cumming, GA 30040.)
- 14) Any changes in the location of the backflow preventer on the plans must be approved by the Cross Connection Control Specialist.

**COMMERCIAL PLAN PERMITTING POLICY
CROSS CONNECTION**

3320.005

Pool Houses, Pavilions, Storage Sheds & Mail Kiosks:

- 1) Show location of pavilion / storage building on a site plan with utilities easements shown.
- 2) Pavilion / storage building / kiosk cannot be constructed over a sewer or water easement.
- 3) Show any plumbing going to Pool Houses, pavilion / storage building mail kiosk from meters to building
- 4) Show any equipment that will be connected to the potable water including any backflow prevention required by the State of Georgia Plumbing code.
- 5) Auto pool fills must have a RPZ backflow preventer installed on the line. Show if it is on the irrigation or domestic.
- 6) Add note on plumbing page to test all backflow preventers within 10 days of being installed and send the test to the Cross Connection Control Specialist at Forsyth Co. Water and Sewer Dept.
- 7) Backwash and pool drains cannot go to the sanitary sewer system.
- 8) Show field drain system for backwash and pool drain.
- 9) Must have a correct address to review plan.

**COMMERCIAL PLAN PERMITTING POLICY
CROSS CONNECTION**

3320.005

Walls and Monuments:

- 1) Include a site plan showing right of way, setbacks, utility easements and utilities.
- 2) Show the wall footings on the plan.
- 3) If the wall is to have a water feature an RPZ backflow preventer must be installed on potable water supply. Show the RPZ on the plan. Add a note (Test the RPZ and send the test report to the Cross Connection Control Specialist at Forsyth Co. Water and Sewer Dept.)
- 4) No connection between any other sources of water is allowed. (Lake, Stream, Well, Reuse)
- 5) Permanent structure cannot be constructed over a water main without the water line in a casing under the structure. The casing must be shown on the plan. Details of the casing must be sent to Forsyth Co. Water and Sewer Dept. Engineering for approval of casing. (See details in the Forsyth Co. Water and Sewer specifications for casing.)
- 6) A permanent structure cannot be constructed over a sewer easement.
- 7) Show where water meter is to be set for construction of the wall.
- 8) Must have a correct address to review plan.

**COMMERCIAL PLAN PERMITTING POLICY
CROSS CONNECTION**

3320.005

Irrigation:

1. An Irrigation permit must be obtained at Community Development before an irrigation meter is sold.
2. Must be addressed by the Forsyth Co. Department of Engineering.
3. Show irrigation water meter and backflow on plans if one is to be used.
4. Show on the plan if the pool automatic fill will come off the domestic or irrigation line.
5. Show the RPZ on the pool fill line either from irrigation or domestic before any other connections. Add a note to the plumbing page (Test all backflow preventers and send test results to the Cross Connection Control Specialist at Forsyth Co. Water and Sewer Dept.)
6. Show on plan where the rain sensor is located.
7. No connection between any other sources of water is allowed. (Lake, Stream, Well, Reuse.)
8. Show chemical injectors if one will be used to dispense chemical through the irrigation system.
9. Any irrigation use must have a RPZ backflow preventer installed at the water meter. Show the RPZ backflow preventer on plans.
10. (Add Note) All testable non-residential BACKFLOW PREVENTER ASSEMBLIES shall be tested within 10 days of installation and annually thereafter as a minimum or more often as required by the Cross Connection Control Specialist. Test results shall be forwarded to the Forsyth County, Cross Connection Control Specialist at 110 E. Main Street, Suite 150, Cumming, GA 30040.

**COMMERCIAL PLAN PERMITTING POLICY
CROSS CONNECTION**

3320.005

Fire lines | Vaults:

1. Show on plans the fire vault and the fire lines going to the building.
2. Vaults cannot be installed in an area the water table will be above the bottom of the vault. If this is the only location the vault can be installed then it must be installed above the ground in an approved hot box with freeze protection.
3. If fire line does not have backflow protection, backflows will be required in a vault at street. Contact the Water Engineering Dept. for details in vault requirements and easements. See Water and Sewer Details 8.1 for specifications on meter, backflow and vault.
4. Show any pumps connected to the fire line.
5. No other water source can be connected with the Forsyth Co. Water and Sewer Dept. potable water.
6. Show what class fire protection the facility will have class 1-6 as per the AWWA M1 manual.
7. Backflow protection will be determined by the class of fire protection.
8. All testable non-residential BACKFLOW PREVENTER ASSEMBLIES shall be tested within 10 days of the installation and annually thereafter as a minimum or more often as required by the Cross Connection Control Specialist. Test results shall be forwarded to the Forsyth County, Cross Connection Control Specialist at 110 E. Main Street, Suite 150, Cumming, GA 30040.

**COMMERCIAL PLAN PERMITTING POLICY
CROSS CONNECTION**

3320.005

Backflow Prevention Guide Lines:

Requirements for the level of Backflow protection are based on the hazard category of the user. Hazard categories define the level of hazard potential to the potable water system from Backflow or cross-connection based on the likelihood of, and type of material subject to a Backflow or cross-connection incident. The hazard categories are described below but are not 100% inclusive of all facilities in a respective category.

CATEGORY I – HIGH RISK:

Contaminates are toxic substances or those that create a health hazard due to the nature of the product, raw materials, or processed in use by the customer. This category would include such customers as those listed below.

Premises with auxiliary water supply
Hospitals, Mortuaries, Clinics, Doctors, Dentist offices
Veterinary Clinics
Pet Grooming, Pet stores
Laboratories
Schools with Labs
Premises where inspection is restricted
Sewage treatment plants and Sewage lift stations
Restaurants
Food and Beverage processing plants
Metal plating plants
Nail & Beauty Salons
Petroleum processing or Storage plants
Radioactive material Processing plants
Car washing facilities
Premises with reclaimed water systems
Dry cleaners (ALL)
Automotive repair, Equipment repair or Body shop
Agricultural (poultry, if there is a chemically injected watering system), (watering trough for animals)
Multiple tenants shopping centers, (Grocery store with meat dept. / Pharmacies / Dry cleaners, etc.)
Irrigation Systems (chemically injected)
Swimming pools with auto fills
Dye processing
Stand- alone meat markets.
Chemical processing and Manufacturing
Photo or X-ray developers with a connection to potable water
Refuse and recycling facilities
Cooling towers with potable water supplies

Water service connections to these customers must be protected by a REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTION ASSEMBLY or an AIR GAP to provide maximum protection. The alternative to the single RPZ at the meter is one or more RPZ's inside the facility at strategic locations to provide isolation/containment protection for the municipal water system. If the DCVA/RPZ installation configuration is used then all assemblies must be tested annually with test reports sent to the Cross Connection Control Specialist.

Failure to use the check list could result in delays for approval of the submitted plan. If any questions on check list please contact the Cross Connection Control Specialist at 770-205-4559.