Denison TEXAS
Building Inspections

Irrigation Requirements

Updated January 15, 2019

A. Permit Applications

Requirements for irrigation permits are as follows:

1. All irrigation permit requests will require two (2) complete sets of plans (Must be 11x17) on a site plan, plot plan or survey of the lot indicating property lines, structures, fences and any impervious surfaces located on the property.
2. The plans must be submitted by an Irrigation or Plumbing Contractor with a current Denison registration. If submitted by an irrigator, the irrigators seal must be on the plans.
3. The plans must clearly specify the tap location, backflow device location must be within 5' of meter, the installation routing, and the type/sizes of materials to be installed.
4. All new irrigation systems must contain sensors or technology that interrupt the operation of the system during periods of moisture, rainfall or freezing conditions.
5. Installations must declare compliance with Section 1903.251, Texas Occupations Code.
6. Sprinkler heads must be located on private property with the heads oriented so as not to spray onto public roads, walls, fences, sidewalks, driveways, brick, wood or stone.
7. The name and phone number of the licensed backflow tester that will test the backflow device at the completion of the job.
8. The name, address and phone number of the licensed irrigation or plumbing contractor.
9. The value of the job.
10. Any system installed with a chemical injection system must utilize a Reduced Pressure Assembly (RP) backflow device.

B. General Information

1. When the permit has been approved, a permit fee of $125.00 for each commercial backflow device installed or $75.00 for each residential device installed must be paid.
2. Irrigation and plumbing contractors as well as backflow testers must be registered with the City of Denison prior to obtaining any permit. Registration fees are $50.00 per year for irrigation contractors. There is no registration fee for plumbing contractors, but registration is required.
3. Permits must be obtained before any work can begin. At any time work is being done, a licensed irrigator or irrigation technician — or a journeyman or master plumber must be present on the job. If the permit has been issued to a homeowner, the homeowner must do the work and be present at all times while work is being done.
4. At all times during the installation of the irrigation system, the building permit must be displayed in such a way that it is visible from the street.

C. Installation Requirements

1. A Double Check Assembly (DCA), Pressure Vacuum Breaker (PVB) or a Reduced Pressure Principle Zone (RPZ) device are the only approved backflow devices for a lawn sprinkler system. An RPZ backflow device must be used when a chemical injection system is installed as a part of the irrigation system.
2. All new irrigation systems must contain sensors or technology that interrupt the operation of the system during periods of moisture, rainfall or freezing conditions.

3. Sprinkler heads must be located on private property with the heads oriented so as not to spray onto public roads, walls, fences, sidewalks, driveways, brick, wood or stone.
4. **Double Check Assembly (DCA)**. The following provisions apply to installation requirements when a Double Check Assembly is installed:
    a. The Double Check Assembly must be installed within five feet (5') of the connection to the water supply.
    b. The Double Check Assembly must be installed in a box.
    c. There must be at least six inches (6") of pea gravel in the bottom of the box.
    d. There must be a clearance of six inches (6") between any test cock and the side of top of the box.
    e. A Y strainer must be installed pointing in the down direction.
    f. Quarter turn ball valves must be installed before and after the valve.
5. **Pressure Vacuum Breaker (PVB) or Reduced Pressure Assemblies (RP)**. The following provisions apply to installation requirement when Pressure Vacuum Breaker (PVB) or a Reduced Pressure Principle Assembly (RP) backflow device is installed.
    a. If the backflow device is installed in a box, the box must contain drain holes. Additionally, the backflow device must be placed in a meter box large enough to provide the following clearances:
        1. Twelve inches (12") between the bottom of the assembly and the highest sprinkler head in the system for a PVB and twelve inches (12") between relief valve opening and the ground for an RPZ.
        2. Six inches (6") between the assembly test cocks and any portion of the box.
    b. All plumbing lines and any backflow device located above the ground must be protected from freezing conditions. Such lines and devices must be installed in an approved hot box or wrapped with heat tape. Any electrical circuit required for the heat tape or hot box requires a separate electrical permit. The permit can only be issued to a licensed electrician or the homeowner as long as the homeowner lives at the property where the work is being done.
    c. The device must be installed within five feet (5') of the connection to the water supply.
    d. Any system installed with a chemical injection system must utilize a Reduced Pressure Principle Assembly (RP) backflow device.
    e. For RP devices, a Y strainer must be installed pointing in the down direction.
    f. For RP devices, quarter turn ball valves must be installed before and after the valve.

D. Inspection Approval

1. Inspection request can be left at (903) 464-0173 at any time. Inspections called in before 10 am will be done same day, any inspections after 10 am will be done the next business day.
2. In the case of rain or freezing weather, the inspection will be canceled at the discretion of the Building Official. If you have taken special precautions to keep the trench free of water and the tap visible for inspection purposes, please state so when you request the inspection. Otherwise, the inspection will be canceled and the contractor must recall the inspection when he has checked the site again and verified that it is ready for inspection.
3. The connection to the water line and the line from that point to the backflow device must remain open and uncovered for inspection.
4. Contractors are responsible for obtaining inspection approval of the backflow device prior to the sprinkler system being used. Contractors who have not received approval of the backflow device immediately after installation of the system will be reported to TCEQ. Contractors are subject to citations for not obtaining approval of the backflow device inspection prior to the use of the sprinkler system.

5. Required Inspections

a. **Irrigation Rough**.

1. Before any piping is covered a rough inspection verifying that the pipe was joined with a primer with purple dye and glue.
2. Piping must be installed a minimum of 6 inches below grade. The backflow device must be installed.

b. Irrigation Final.

1. All work is to be complete.
2. The certification of the backflow device must be submitted to the Building Inspections office prior to requesting this inspection.
3. The irrigator must meet the inspector on-site to run the system through each zone to verify compliance with all regulations.
4. If the backflow device is installed in a box, the irrigation contractor must invert or remove the lid to the meter box housing the backflow device prior to calling for inspection. This will allow for inspection of the assembly without the possibility of an inspector breaking a lock or cracking a box while trying to remove a box lid.

E. Re-inspection Fees

A re-inspections fee of $50.00 may be assessed for any of the following reasons. If a re-inspection fee is assessed, no further inspections will be performed on that job until the fee has been paid.

1. Inspection called for, is not ready (this could include a first-time inspection where a history has developed for deficient items on a continual or repeated basis);
2. The access cover to the backflow device is not inverted or removed;
3. The backflow device is not accessible for inspection;
4. An inspection is disapproved twice for the same item; or
5. The previous red tag has been removed from place left by inspector.