



RESIDENTIAL LAWN IRRIGATION SYSTEM
A “DO-IT-YOURSELF” GUIDE
(Revised 5/20/2016)

This guide is to help homeowners who wish to do their own installation of a lawn irrigation system. The Lakeville Inspections Department is here to help you obtain a permit and to answer any plumbing code and/or construction questions you might have. The inspections department is open from 8-4:30 Monday through Friday and can be reached at 952-985-4440.

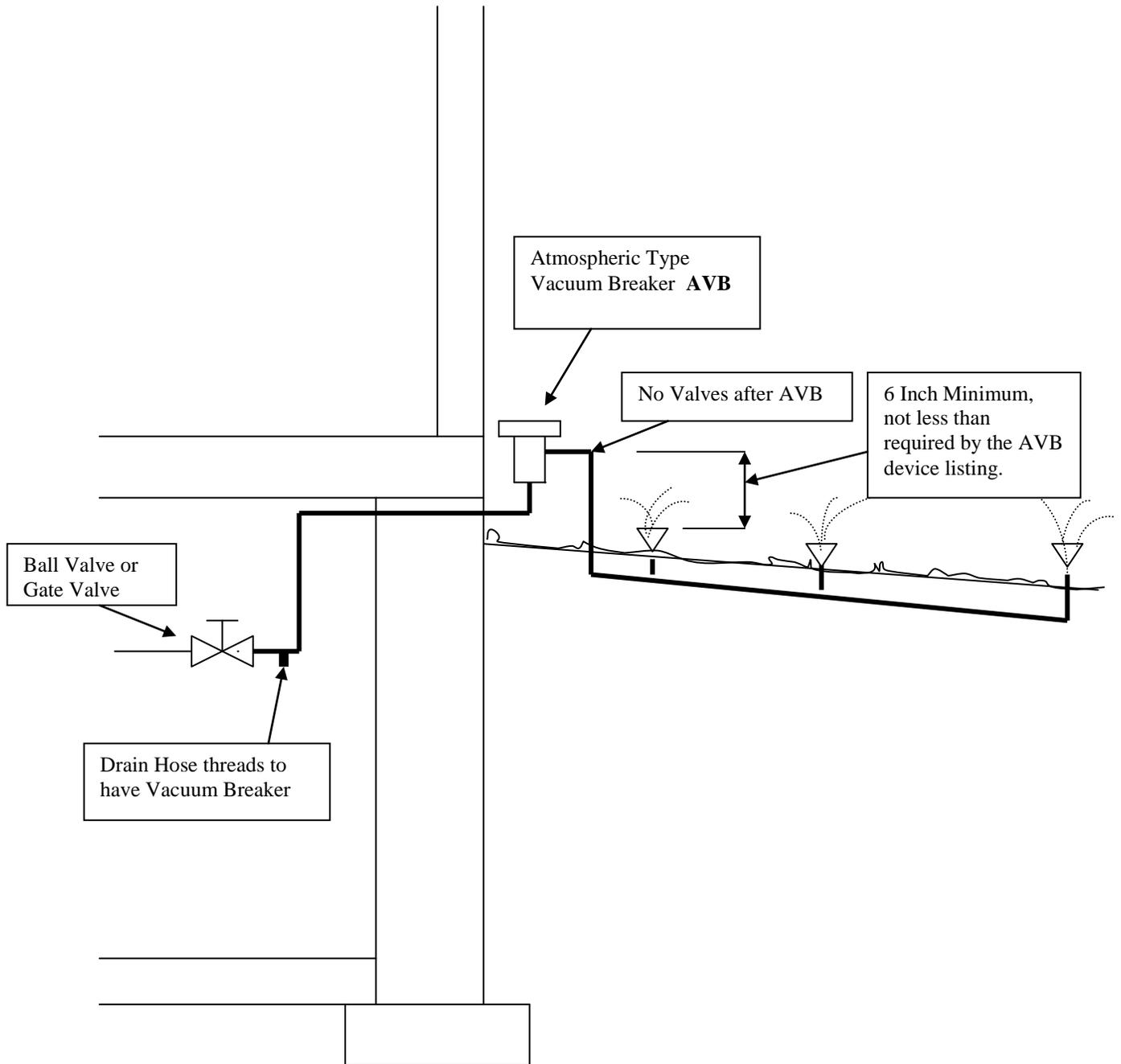
Required items for correct installation of lawn irrigation system:

1. Permits are required for lawn irrigation systems. A permit application can be obtained from the Lakeville Inspections Department.
2. Require the contractor to pull the permit if they are installing the water pipe in the home and the backflow preventer device.
3. Tie into the water line on the house side of meter, separate meters for lawn sprinklers are not allowed.
4. Use full flow ball or gate valve.
5. PVC pipe not allowed as interior water piping. Can use CPVC with proper fitting and glue.
6. Provide adequate back flow prevention with RP (Reduced-Pressure Principle), PVB (Pressure Vacuum Breaker), SVB (Spill-resistant pressure vacuum breaker), or AVB (Atmospheric Vacuum Breaker). RPs, SVBs, and PVBs **must be tested by an ASSE Series 5000 certified backflow assembly tester** at time of installation, repair, relocation, and annually. **All test reports must be submitted to the City of Lakeville.**
7. If a chemical injector is installed or if a pump is installed downstream from the backflow preventer, then an RP is required to protect the potable water source.
8. Call for inspection after you have tied into the domestic water line and run piping to the outside with the necessary back-flow prevention installed.
9. As per Minnesota Statute 103G.298, all automatically operated landscape irrigation systems shall have furnished and installed technology that inhibits or interrupts operation of the landscape irrigation system during periods of sufficient moisture (i.e., rain sensor)
10. No sprinkler heads are to be installed in the City Boulevard, which is normally 15 feet from the curb line. No sprinkler heads are to be installed within 2 feet of a City sidewalk.
11. Must install shock arrestors per manufacturers listing if required. (MSPC 609.10)

Note: **Plumbing contractors doing the installation must be licensed.
** Please use the attached illustrations as an installation reference.

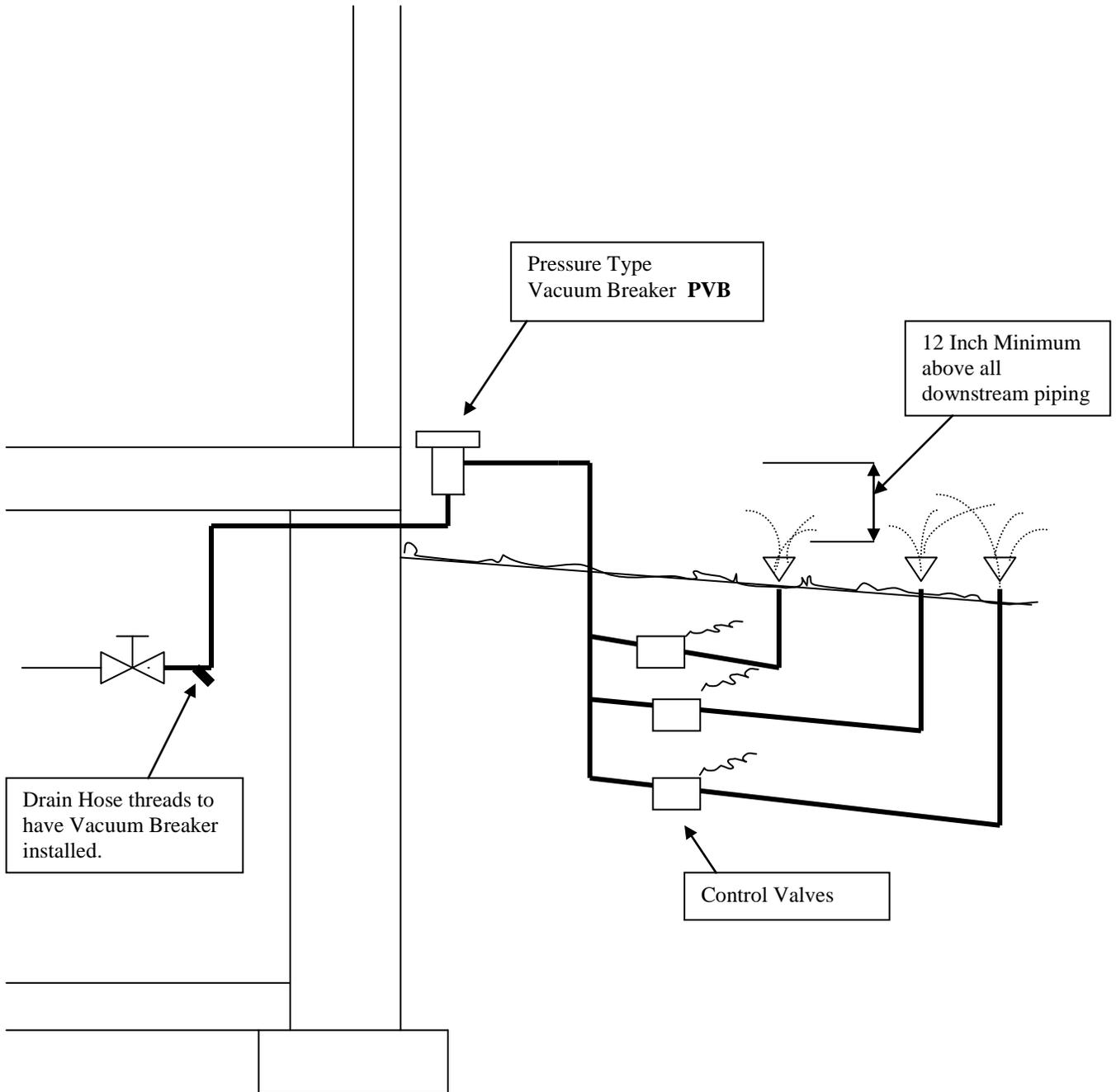
Attached are examples of various different vacuum breaker set-ups.

**Atmospheric Vacuum
Breaker Type
AVB**



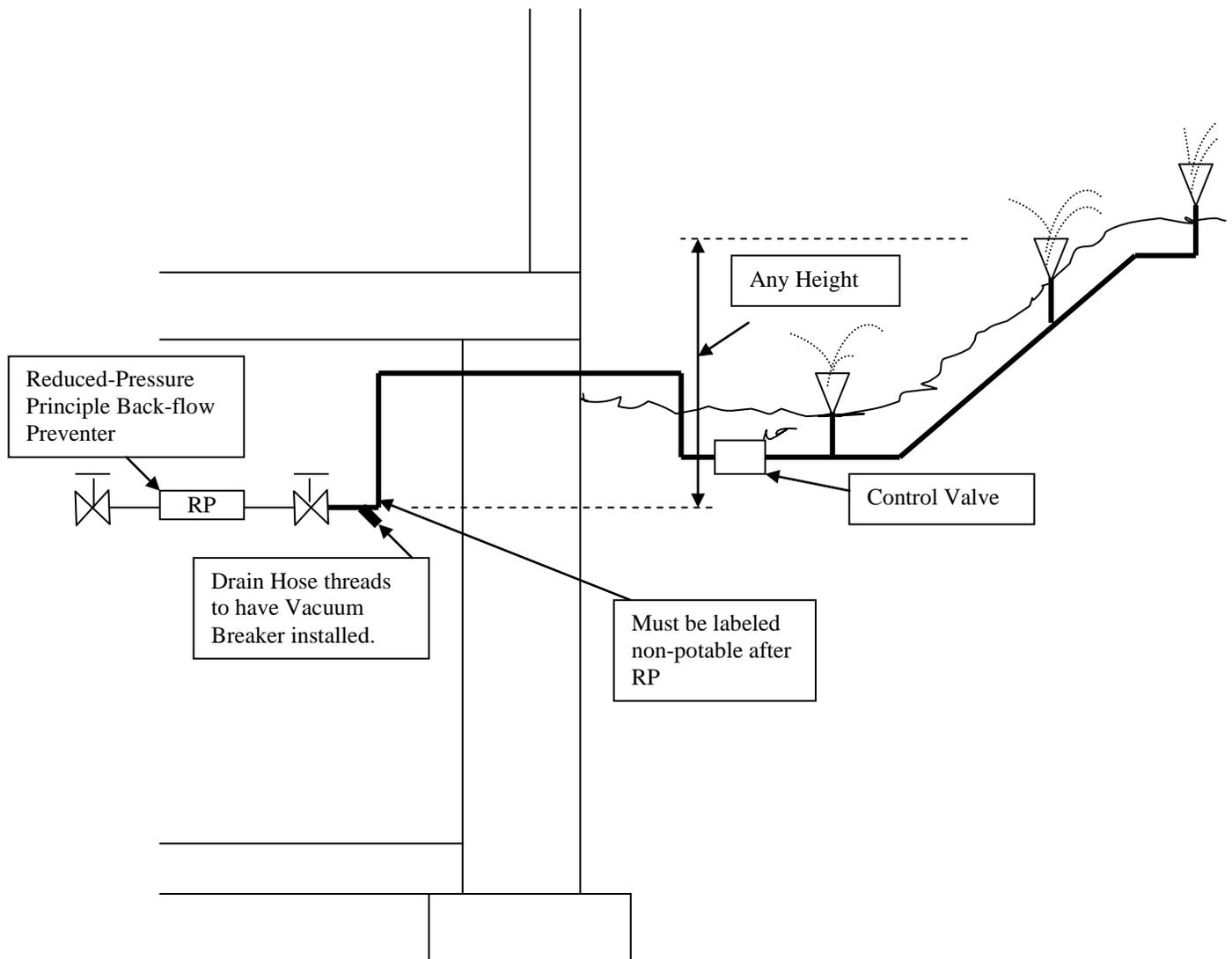
- Atmospheric Vacuum Breaker on lawn sprinkler system must be installed at least 6 inches above all downstream piping or as required by the AVB device listing, and on the non-pressure side of the last control valve. Must be installed upright.

**Pressure Vacuum
Breaker Type
PVB & SVB**



- Pressure Vacuum Breaker on lawn sprinkler system must be installed at least 12 inches above all downstream piping and may be subject to constant static pressure. Must be installed upright. **Must be tested** upon installation, repair, relocation, or at a minimum annually. **All reports must be submitted to the City of Lakeville.**

Reduced-Pressure Principle Back-flow Preventer RP



- A Reduced-Pressure Principle type back-flow preventer must be installed on lawn sprinkler systems when any sprinkler outlet is higher than the back-flow preventer, a chemical injector is installed, or a pump is installed downstream. (May be subject to constant static pressure, back pressure, and back siphonage.) Must be installed horizontal unless listed otherwise. Use RP as last resort back-flow preventer if AVB, SVB, or PVB will not work. **Must be tested** upon installation, repair, relocation, or at a minimum annually. **All reports must be submitted to the City of Lakeville.**