# ECO-SYSTEMS IRRIGATION & LIGHTING

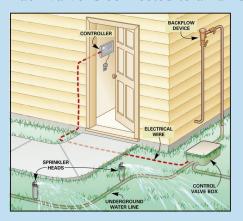
# SERVING FAIRFIELD & WESTCHESTER COUNTIES 203-438-9152

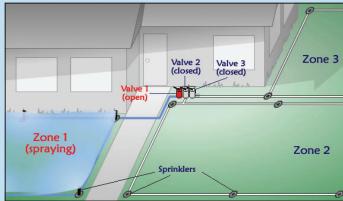
#### **ECO-SYSTEMSONLINE.COM**

Ct Lic #208694

#### IRRIGATION SYSTEMS BASICS AND INSTALLATION

The three main components of every irrigation system are the controller, station-control valve and sprinklers. The controller is the brain of the system, telling the control valves when and how long to supply water to the sprinklers. The sprinklers direct and control the water applied to the lawn and plants. Each valve controls a specific group of sprinklers called a watering zone. The stations are generally laid out and installed according to the type of plant materials to be watered, the location of the plant within the landscape and maximum amount of water that can be supplied. Each valve is connected to a numbered terminal within the controller, identifying it as zone 1, zone 2, etc. The





controller operates the valves in order, one at a time. In other words, one zone waters completely before another zone turns on. This is called a watering cycle. The information stored in the controller memory determines when and how long each zone will water.

#### **OUR INSTALLATION PROCESS**



#### 1. UTILITY MARK OUT

Once a deposit and signed contract are received, we'll proceed with a call to Call Before You Dig as required by law. All underground public utilities in the area to be worked in (service lines for phone, cable, electric, gas and internet) will be marked. Gas lines that run to pools and grills, or electric lines that run to lamp posts and sheds will not be marked by the utility companies. This process can take up to a week to complete. We will locate all private lines the homeowner discloses to us on the day of installation.



#### 2. THE DAY OF INSTALLATION

We'll arrive at your residence early in the morning and go over last minute details including controller location, plumbing location, any possible changes to the system or yard and availability for a demonstration at the end of the day. All known underground lines will be located and property lines verified. Then we will use flags to mark where the sprinklers and valve boxes will be installed.



#### 3. PLUMBING IN THE HOUSE

We will need access to your house to make the connection for the sprinkler system. The water will need to be turned off for up to 2 hours. A shut-off valve and interior drain will be installed so the system can be shut down for maintenance and winterization. This valve will be marked with a tag to prevent someone from opening it in the winter. A pipe will run to the outside of the house where a back flow prevention device and exterior drain will be installed. This device is required by law and is necessary to prevent water from coming back into the house.

#### 4. PIPE INSTALL





Once your system design is determined we will begin to install the piping. We use a vibratory plow to install the pipe which helps minimize damage to

your lawn. This machine slits the pipe into the ground without opening a trench. An average yard needs approximately 2,500 feet of piping.

#### 5. HEAD AND VALVE INSTALLATION



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After the pipe has been installed small holes are dug so connections can be made. The grass is carefully removed and the soil excavated. Then connections are made for each valve and sprinkler head in the yard. When completed the soil is returned to the hole and the grass is placed back over the hole. The spot is tamped

to compact the soil to its original density.

## 6. CONTROLLER AND RAIN SENSOR INSTALLATION



The controller is placed in an accessible locaiton outside or in a garage whenever possible. This allows you to see the system operate more easily when you have activated it. If it were in the house, you would have to run back and forth constantly. The rain sensor is installed in a sunny location on the gutter or on the house near the roof line.

#### 7. THE CLEAN UP



After all connections have been made, the entire yard is back filled and tamped. The grass and beds are raked free of debris, any trash is picked up and the hard

surfaces are swept off. All install areas in the lawn are reseeded

### 8. HEAD ADJUSTMENT AND PRESSURE TESTING



At this point, the system is ready to be tested and adjusted. The water is turned on and piping is tested for leaks. Once we know there are no leaks, the heads are adjusted for proper coverage.

#### 9. TIMER AND SYSTEM DEMONSTRATION





After completion of the system a complete zone description is made for the controller. We will give you a complete demonstration of how it works. This includes programming, working the clock and location of shut off valves. Next, we will show you the operation of each zone.

