



11 steps to a great irrigation project

Follow this 'recipe' for working with general contractors, landscape architects and landscape designers, and you're on your way to making every large landscape irrigation installation a winner.

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IF YOU have been in the irrigation contracting business for very long, you've had successful and unsuccessful projects. There's a good chance your first unsuccessful project may have been your first irrigation system installation. Looking back, I know mine could have been done better, especially the first one. It was also the landscaper's first irrigation system installation; need I say more?

There are several keys to having a successful irrigation installation project. At the residential level, you have control, and you make all the decisions. If it's wrong, it's your fault; there is no finger pointing. However, in larger systems that you may have provided design/build services or especially professionally designed systems (irrigation consultant, landscape architect or civil engineer), there are a large number of places where things can go awry — and quickly.

In many cases, these problems may not be your fault, but you're the one left holding the bag. There's a learning curve, and you must educate yourself about these more detailed systems for them to be successful. In other words, educate yourself before bidding, not after.

Communication is vital, regardless of the size of the project. The more you communicate with whomever is overseeing your work and/or paying you, the better off the results of the project will be. You cannot over-communicate, as long as you are being professional and have legitimate questions, concerns or gripes.

Step by step

What follows is my recommended procedure to follow to make sure each project is both successful and profitable:

1 Do your due diligence. Take the time to look at the irrigation plans, read the specifications and study the details to understand exactly how to install the irrigation system. First, look for things that you and/or your crew are not used to doing. Your staff will either need to be trained on the new procedures, or be reminded to do it differently. Spend the necessary time to understand what's expected before putting shovels into the ground. You'll be surprised how much more smoothly jobs will go if you thoroughly understand the plan. It also makes it easier to get your money and get out at the end of the project.

2 Get the necessary clarifications. As you study the plans, specifications and details, look for inconsistencies between the specifications and the plans, and especially between the specifications and the details. Is there missing information? Pieces missing? Equipment not specified? Is there something on the plan that makes no sense, or makes the plan unworkable? Will you be able to install it the way it is designed or specified?

Remember, at the end of the job, it's still your responsibility to have a working system. Finger-pointing works much better at the beginning of the project, before anything is installed, than at the end — when it just plain doesn't work or no one wants to pay for it.

3 Specify your submittals and substitutions. If you're not used to professionally designed commercial work, the submittal process will be new to you. The specifications will require that you submit a product sheet for each and every product that was specified or is to be included in the irrigation system. Submittals are also where you would request substitutions from the equipment that is specified. However, submittals must be understood and prepared. Poorly prepared submittals are a red flag to both the general contractor and the professional designer that you don't understand the specifications or the design, and/or you're not qualified to install it.

Create submittals to identify the products (and the features of the products) that you are planning on install-

ing. Be as exact as possible. Substitutions aren't a good idea if the specifications detail exactly what products are to be used. If the specification says "or approved equal," substitutions might be possible.

Your supplier can help you with properly preparing submittals. Install what was approved on the submittals. It's generally a bad idea to install products other than what you submitted.

Last but not least, submittals obviously have a cost to them. Include that cost in your bid.

4 File your request for information (RFI). Once you've bid the project, the best way to ask questions is through a formal process using an RFI. File the RFI with the general contractor, and the responsible party will respond to it in writing. An RFI is still an excellent way to clarify inconsistencies or ambiguities after you have been awarded the project, but before installation. You cannot file an RFI after you have performed the work.



PROVIDING A LANDSCAPED SITE WITH IRRIGATION THAT KEEPS PLANTS HEALTHY AND ATTRACTIVE BUT ALSO MAKES EFFICIENT USE OF WATER REQUIRES A CAREFULLY CRAFTED PLAN.

5 Adjust to changes and change orders. Many times, the landscape designer or architect will change the landscape design during construction. He or she may change it slightly, or make major changes. It's not uncommon for an irrigation contractor to install a system as per the irrigation design and pay no attention to those changes. The result is an inefficient irrigation system that doesn't match the landscape. Communicate and understand potential changes before they occur, so you can adjust the irrigation system accordingly.

Make sure the landscape architect/designer understands the implications of changing the landscape before installing any irrigation. File a change order. Ideally, you'd file the change order before you do the work, but many times that isn't possible. Again, regularly communicate with the general contractor. This will help the change order process — especially when they are filed after the fact — go more smoothly. Never anticipate you will be paid for work you have done if there was not a change order approved ahead of time.

6 Flush. There's nothing worse than having a new landscape that needs to be watered if sprinklers repeatedly clog and don't properly operate. Ideally, the system will be complete and there will never be

a clogged nozzle or an inoperable sprinkler. Spend the proper time flushing the system to make sure everything is operational. This may keep you from getting called back to the site.

Also, unplug nozzles on a regular basis through the first month of operation. Specifications often require the irrigator to be responsible for clogged nozzles for 30 to 90 days after the system is complete.



Adjust arcs. Just as you properly flush the system so you do not get clogged nozzles, take the necessary time to adjust the sprinkler arcs so they're properly watering what they're intended to water. Make sure none of the arcs are watering the hardscapes. Every time you have to come back to adjust something, it costs you money, but it also shows the general contractor and/or the owner that you didn't install the job properly.

8 Create an irrigation schedule. Even though you may not be required to provide (or program into the controller) an irrigation schedule for the project, it would be prudent to do so. After all, you want the irrigation system to be properly scheduled as much as the property owner does.

9 Provide a record, normally known as built drawings, at the completion of the installation. A good record drawing gives everyone a good understanding of what was installed and where. Record drawings should indicate sprinkler model and nozzles installed, zone valve locations and wire and pipe routing and sizing.

10 Provide an operating and maintenance (O&M) manual. Most commercial projects and professionally designed irrigation systems require an O&M manual. Topics might include startup procedures, winterization procedures, approved submittals, a suggested irrigation schedule, a list of supply houses, a written warranty statement and a list of numbers to call for service. The manual may also include the controller unit's operating and maintenance instructions and any other significant items in the system.

11 Know the warranty requirements of the specifications. A one-year warranty is standard, but an extended warranty might be required. Account for the costs of any extended warranties in your bid. Be aware the warranty of many projects require you perform a first-year winterization and spring start-up.

Every item and procedure listed in this article will cost you — either financially or with your time/effort. But taking shortcuts or not following the plan may result in an even larger cost: the bad impression it leaves with a landscape architect/designer and the property owner.

Follow the plan I've laid out in this article, use quality materials, install the project as it's been designed and chances are you'll end up with a successful project — and you'll get paid. **LM**

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Next month, learn how initiatives such as Sustainable Sites (SITES) and WaterSense will shape landscape irrigation.