

# Commercial Irrigation Project Challenges to Prepare For



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Is your residential/light commercial irrigation business extremely successful and profitable to the point where you think it's time to expand and move up to bigger and even more profitable large commercial projects? In order to be successful installing large commercial and athletic field irrigation systems, you need to make sure you understand all of your costs; many of which you have probably never had to think about before.

Installing large commercial irrigation systems and working with general contractors may require a different skill set than you and your employees may be used to providing. These additional requirements not only increase your costs, but also your liabilities. Failure to recognize these additional costs and liabilities that you will incur with this type of work may cost you your anticipated profit, cause a substantial loss or put you out of business.

## **Paperwork prowess**

✖ The first step in making sure you don't lose money is to make sure you have all the proper documents. This includes, but is not limited to: irrigation plans, details and specifications. Check to make sure the bid documents have no addenda that changes the documents. In the specifications, look at the general and project specific conditions for requirements that may affect you. General and project specific conditions include information such as rules, insurance requirements, site access, allowances, retainage, parking restrictions and wage rates. All of these items have a cost associated with them. Safety requirements will be a big part of these documents, and you need to adhere to them.

On larger projects, detailed paperwork is a requirement and is time consuming to provide. If you have never dealt with operating and maintenance manuals, record drawings and product submittals, you're in for a shock. These various

documents will take time to prepare and may take several attempts before they are provided to the satisfaction of the owner's representative – be it the irrigation designer, engineer, architect or project manager. Requirements for the project will most likely include proving that you have done this type of work before and you will need to provide references and possibly a résumé for your foremen or yourself.

When reading the documents, make sure you understand your responsibilities in regards to pipe sleeving, electrical, plumbing, water metering, backflow prevention devices, booster pumps, paving and restoration. Know what you are responsible for connecting water and electrical components to and what water and electrical components you are responsible for installing. If you miss even one of these items when they are your responsibility, you will lose money on the job.

## **Pricing proficiency**

Make sure you understand the payment terms associated with the project. Unlike residential/small commercial projects, deposits are rare and terms are much longer than you may be use to – many times 90 days or more. You do not get a check the day your work is complete. Understand what the approval process is for getting paid. Does the contract pay for materials on-site or just for those installed? How are payments requested? Do you invoice work when complete or by a percentage of the contract cost at various stages of the project? Is there a specific way that invoicing needs to be presented? Are release of liens forms and supplier material invoices required with your invoice? What percent retainage is held by the general contractor and for how long? Is it on both labor and materials or just one or the other? How do you get the retainage back? What is your bid price based on – the plan, specific quantities or unit prices? If you are not getting paid for a while, what is the cost to you for carrying the materials and your labor over time?



What if a change is required to the irrigation system due to problems that arise or a change in the planting or hardscape? How do you document the change and, more importantly, how do you get paid for it? Before you make a change, ensure that a change order has been executed. The change order will document the change and whether it changes the price (up or down), as well as any time extension allowed. If the original contract included unit prices, it makes the change order easier to prepare and get approved. If you have to price it on the fly, it will be carefully scrutinized.

Other aspects of commercial projects that you need to make sure you are aware of before proceeding include damage clauses, dealing with unions, wage rates, schedules and deadlines. Just because a job is not union does not mean you will not have to deal with the union for equipment operators and laborers. Who accepts materials at the site and stores them? On a big project you cannot just bring them in your truck or van every day. Who unloads the materials? Who insures the materials? Safety initiatives will require hard hats, safety vests, steel-toed shoes, safety glasses and gloves. OSHA training may be required as well as site specific safety training. Depending

on the project, hazardous training may also be required. Training has time commitments that must be accounted for in your pricing as well as the cost of new or additional safety equipment.

Does the project have noise or work ordinances that prohibit working on Saturdays or Sundays or the hours you can work per day? Make sure you understand parking ordinances. Does the project have penalties for not completing the work on time? How many times do you need to mobilize in and out of the project due to construction phasing or sequencing? Do you have extensions for bad weather? Is the schedule based on working or calendar days?

What happens if your company breaks something or, more importantly, what if another contractor damages your already installed work? Who pays you to fix it, if anyone?




Does the project require a specific license or certifications? If so, what is the cost to obtain? Do you need to hire a licensed plumber or electrician as part of your work? Are you responsible for contacting 811 and having the site marked or is that someone else's responsibility? What if you hit an old foundation or encounter rock? Do you get paid for it or is it supposed to be covered in your bid?

Do the specifications require specific tests that will need to be performed before the acceptance of the irrigation system, such as pressure tests, coverage tests and/or megging the grounds? You will be required to visit the site and perform these tests when the system is complete, and you also need to account for labor costs as well as any specialized equipment costs.

## **Employee expertise**

Are you and your crew used to having someone look over your shoulder when they are installing? On many commercial projects, not only will someone such as the landscape architect or irrigation designer begin looking at the work to make sure it is installed correctly, but they also will require that the work be installed per the plan, details and specifications. The way you are used to installing irrigation most likely will be different than required by the details and specifications. That may require some retraining of your crew and installing more expensive materials such as pressure regulating sprinklers.

 When the project is complete, there will be a punch list, and depending on who does the punch list it can be very detailed. Any deficiencies uncovered or witnessed during the punch list will have to be rectified before receiving final payment and release of your retainage. You most likely will be required to train the owner's maintenance personnel in proper operation of the system and, as always, supply a written warranty. Some projects will require irrigation system maintenance for a set period of time, such as 30 days.

Is first-year winterization and subsequent spring start-up included as part

of the bid if the project is in a cold climate? Many times they are, so the warranty is not affected. These have a cost associated with them as you are not providing them for free.

Working on large projects sounds glamorous and profitable, but brings into play a much more formal construction process that is both time consuming and expensive. Failure to recognize the dollars associated with the process during bidding will not only cost you money, but raise your stress level and can affect your core business. Make sure you're prepared for these types of projects and walk before you run.