

## **How to Hire a HVAC or Plumbing Engineer:**

If you don't work in the construction industry, hiring an HVAC or Plumbing design engineer can be a challenge. There is very little information available on the subject. We hope this guide will help lead you to making the right decisions for your project.

### ***The Professional Mechanical Engineer***

An HVAC or Plumbing professional engineer is licensed as a mechanical engineer who specializes in building design. There are many other types of "mechanical engineers" so the reference to "building design" is important to ensure you don't end up talking to a company that designs toys for a living.

### ***The Engineers Stamp***

Your local building department will want your plans signed and stamped by a licensed professional engineer. The stamp is the certification that the engineer is licensed to practice in your state.

### ***Locating an HVAC or Plumbing Design Engineer***

- If you know someone in the construction industry ask them for a referral for an HVAC, Plumbing or Mechanical engineer that specializes in building design. Alternatively, do an internet search for architects in your area and call them up and ask for a referral. HVAC and Plumbing engineers always team up with architects to design buildings, so your local architect will be familiar with engineers in your area.
- Do an internet search for "HVAC engineer + (your area eg "Santa Rosa CA")" or "Plumbing Engineer + your area" or "Consulting Mechanical Engineer + your area". Note that business's that advertise "Mechanical Engineering" typical do both HVAC and Plumbing design. Some of them also do fire protection system design as well. Most of the websites will have a Projects page. See if they have done any projects similar to yours. They have probably done many types of projects that are not listed on their website as well, so it may be worthwhile to call and ask about their experience with your type of project.
- It is recommended you request proposals from more than one engineering company. Fees can vary widely depending on the size of the firm, their staff and how busy they are.

### ***Selecting an Engineer***

- Choose one in your area that is familiar with local design issues, codes and local contractors.
- An assessment of your present system, if you have one in place and what you are looking to achieve, will help your engineer with options and upgrades for your project.
- In your initial discussion with a potential engineering firm, explain the vision you have for your business. Is it — tight budget; cost rules? Do you want to create an upscale environment for your clientele? Or somewhere in between? How about aesthetics and noise concerns? Do you want to explore Zero Net Energy options? If the engineer has a sense of your business model it will help him in making decisions about your HVAC and plumbing systems design.

## *Hiring an HVAC or Plumbing Design Engineer*

- Ask the engineering firm to provide a project delivery schedule in their contract. Smaller clients can get pushed to the back of the production line. Having a design delivery date in your contract will help ensure you get your project when you need it.
- Ask the engineering firm for a rough-order-of magnitude construction budget for the HVAC or Plumbing construction costs. Engineers are not cost estimators and can be somewhat reluctant to give accurate cost estimates. However, they should be able to give you a rough budget number. Understand that this number may be off by a magnitude of 20% to 40%
- Ask them if they will be able to provide a list of recommended HVAC or Plumbing subcontractors. Then call a few of them and ask for their opinion of the engineering firm and the principal you have been communicating with.
- Discuss with the engineering firm the exclusions they have noted in their proposal. Make sure you understand what has, and what has not, been included in their fee. Understand that a contract is a two way street. If you agree to have something designed one way, and then change your mind later, the engineer may have a right to additional fees.
- Ask them about their services during construction. Typically referred to as “Construction Administration” or “CA”, this is the phase of your project where the contractors are installing the systems designed by the engineer. You will need to decide if you want the engineer to include CA services as part of their proposal – or whether to handle this on an additional service, time and material, basis. Typically a consultant will allow between 15% and 20% of their fee for this service. On many projects this amount of fee is not necessary and you may save money by having this service performed on T&M basis. If you do this, ask the consultant to explain in their proposal how they will document the T&M expenses. Copies of time sheets, along with the invoice, will allow you to verify the work that is being performed.
- Once the contract is signed make sure you follow up with the engineering firm on a regular basis to ensure they stay on track with your schedule. Professional engineers are required by State law to follow ethical business practices. For this reason, you will likely find them fair and reasonable in your dealings with them.

*We would love to talk with you if you would like to discuss your project. Please feel free to contact Gary, Jay or Matt at  
707-577-0363*

*www.15000inc.com*