



## Why Hire An MEP Engineer?

When most people begin thinking of a building project, they often focus on the aesthetic design. While there's no arguing that a beautiful building makes a statement, how often have we been inside those gorgeous spaces only to feel too hot or too cold? Where the air movement is as loud as an airport; or you're trading high utility bills for the views out of the expansive windows?

Why hire an engineer? Because we understand that, like people, buildings are more than skin deep. The mechanical, electrical and plumbing (MEP) systems are the blood and guts of a building, helping to maintain the proper equilibrium necessary for a building to function over its lifespan, which averages 50-70 years. Whether its a classroom or your living room, properly designed MEP systems are essential to comfortable, healthy spaces.

### Analyze. Solve problems. Find solutions.

Engineers are trained to use one of the most powerful tools in the world—our minds. Working in tandem with designers, owners and architects, an engineer helps create integrated spaces that are both beautiful and operationally efficient. In the know about the latest technologies and equipment, we can be a valuable resource for out-of-the-box solutions. Anything is possible when left brains and right brains unite!

### Engineers and Sustainability

Energy use over the lifespan of a building may be the single most important environmental and economic issue to address in building ownership. Excessive fossil-fuel energy used to heat, cool, light, and power buildings unnecessarily increases the building's annual operating and maintenance costs and results in significant environmental impacts at a local and global scale.<sup>1</sup> Our engineers focus on the proper sizing and location of equipment to significantly reduce wasted energy without sacrificing comfort.



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Indoor air quality (IAQ) is also an important issue, as well as a prerequisite in the U.S. Green Building Alliance's LEED Green Building Rating System®. Designing the mechanical system to provide for the most optimal delivery and mixing of fresh air and effective air exchange supports the safety, comfort and well-being of building occupants. IAQ optimization strategies can result in fewer complaints, lower absenteeism and illness, and higher productivity.<sup>2</sup>

### Engineer vs. Contractor

An engineered system offers owners a better integrated and coordinated system that works within the project's specific criteria for performance, equipment life expectancy, maintainability and cost. Where a design-build contractor may install a pre-engineered, off-the-shelf system, engineers take the time to analyze what's required and find solutions that best suit the construction and operation budgets, the space and ultimately, the end-users. Engineers also consider all the options available through a number of different manufacturers, while a design-build contractor typically represents a select few.

Many building owners think that design-build systems will save them time and money. Though an engineer designed system may cost 5 to 10 percent more initially, it can save up to 25 percent in operating and maintenance costs, as well as offer more flexibility in meeting future performance requirements. It may even be the case that an engineer can help increase performance without increasing construction costs.



### Why Hire IBC Engineering?

- We believe in collaboration.
- We work with a building owner to understand their needs rather than make assumptions about what they want.
- We are answer seekers and problem solvers.
- We approach building design from a holistic point of view, seeing the building as a functioning whole.
- We work from a solid foundation of Engineering, finding balance between theory and practical solutions.
- We are innovative, efficient and environmentally sensitive.

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1 *Sustainable Building Sourcebook: Energy* by the Austin Energy Green Building Program, Copyright 2003

2 *LEED Reference Guide Version 2.1*, U.S. Green Building Council

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