

What Engineering Firms Look for in a Forensic Engineer?

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We all know that there is no One-Size-Fits-All for any breed of Engineers, but when it comes to Forensic Engineers, there are a few common qualities that stand out from the rest and point to the makings of a Great Forensic Engineer.

Great Forensic Engineers are very well rounded and mature individuals, who possess the following:

- They are a Subject Matter Expert in a Specific Area of Engineering
- Have Strong Written & Verbal Communication Skills and Good People Skills
- They understand and enjoy the Nature of the Forensic Engineering Business.

Subject Matter Expert - Due to the nature of Forensic Engineering, these engineers must have a thorough and deep expertise in the subjects that they are investigating. They need to have the experience, confidence, and gravitas to convince their clients and perhaps a judge / jury that their opinion is accurate and can be trusted.

Three items can be quickly evaluated to determine an Engineer's Technical Expertise:

- Professional Engineering Licensure
- Advanced Degrees
- Professional Experience

Professional Engineering Licensure – Obtaining a Professional Engineering License is often the first requirement for an engineer to be considered for a Forensic Engineering Role. This is the equivalent of an attorney passing the bar exam. An attorney can work as a clerk or paralegal for a law firm for many years, but cannot represent a client in court until he or she passes the bar exam and is a practicing

attorney. Likewise, an engineer can work as an EIT at a forensic firm, but they will not be taken seriously until they pass the Exam and obtain their license.

Advanced Degrees Do Matter - Although it is not required by some forensic firms, an MS in Engineering is very important, and often indicates an engineer who is serious about their chosen profession and wishes to become an expert.

Having a PhD can often be looked upon in two different ways by Forensic firms. Some firms focus on forensic issues that are relatively rudimentary and may view PhD engineers as being too academic and “over-qualified” for the types of projects that they typically investigate.

However, other forensic firms value PhD’s and heavily recruit engineers with a PhD. So finding a company whose culture and project types are compatible with an engineer’s educational background is crucial when making a hire.

Professional Experience - It is common sense that work experience and engineering practice matters, when it comes to being a Forensic Engineer. Most firms look for the following indicators of Experience:

- 1- **Track Record of Interesting Design Experience:** Engineers with Design Experience indicates that the engineer is working as a consultant and is actively applying their engineering education and sharpening their problem solving skills in the real-world market place.
- 2- **A Pedigree of Strong Engineering Design Firms:** Engineers that work for recognized or prestigious engineering firms early in their career, certainly find more open doors throughout their career. Recruiters and companies alike understand that working for a top notch firm for several years gives the engineer the “Good Housekeeping Seal of Approval.”
The concept is: *“If they are good enough for them, then they are good enough for us.”*
- 3- **A Track Record of Promotions and Increasing Work Responsibility:** Engineers who have been recognized as producers, and who have been promoted, are certainly highly valued by Forensic Firms who are evaluating talent for their

firm. Past Performance is very often a very strong indicator of Future Performance when it comes to an individual's Career Track.

Writing Skills – On most every forensic project, one of the “deliverables” is a written report of the findings of the Forensic Engineer's Investigation. Strong writing skills and the ability to communicate nuanced technical issues in an informative and understandable way is very important.

Many engineers throughout college and their early years of practice are more focused on the calculations and drawings of a project and may write few if any reports. However, in order to transition into Forensics, the engineer must already have strong writing skills and the ability to develop an engineering report.

This skill can rarely be developed on the job. You either **“have it and can do it”** on day one, or you are not hired. Many firms will require a sample report before interviewing a Candidate for a role.

Verbal Skills: - Forensic Engineers are called upon to initiate, communicate and coordinate with dozens of different individuals in a week. Many firms quickly gauge a candidate by a simple phone call to see if the candidate can hold a conversation and articulate an idea.

People Skills and Emotional Intelligence: Many firms are beginning to focus more on an Engineer's Emotional Intelligence and ability to connect and relate to other people than just their technical accomplishments. Key facets of Emotional Intelligence are:

- Self-Awareness – Knowing your Weaknesses and Strengths
- Self-Regulation – Ability to control negative impulses and Defense Mechanisms
- Motivation – Ability to stay engaged and focused on Work Tasks
- Empathy – Ability to read others Emotions and Motivations
- Social – Ability to connect with and build a Rapport with others

The Nature of the Work: Many forensics firms and engineers considering Forensics as a specialty do not take into account the Nature of the Business and the work performed.

Of course, individual situations can vary widely depending on the work to be performed, but generally speaking, the following is a list of the key differences between typical Engineering Consulting Company environments and Forensics Firms:

<u>Engineering Consulting</u>	<u>Forensics Companies</u>
Plan Drawings and Specifications	Written Reports
Proactive	Reactive
Larger Team Collaboration	Individual or Small Team
Group Settings	Isolated Setting
Collaborative	Confrontational
Fewer Long Term Projects	More Short Term Cases
Office or Field Based	Travel based
Team or Peer Motivated	Self-Motivated
Team Directed	Self-Directed

Is that all? Seems like it is a tall order to become a Great Forensic Engineer?

Yes it is, but if you are committed to daily personal growth and open to input from peers, and mentors, you could grow to become a Great Forensic Engineer.