

Engineering Expert Witness Testimony

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Professional engineers may be retained to provide expert testimony as a witness in a legal dispute. This article will focus on expert testimony involving construction disputes. In a construction dispute, there are generally three types of cases involving expert testimony by an engineer. The first type of case is a claim involving construction deficiencies and defects. This sort of testimony is the most common, as engineers are regularly asked to determine whether and why various construction components are not performing as designed. The second type of expert testimony is related to construction scheduling, which requires expert testimony to support the claim. Scheduling claims usually involve a loss of labor productivity claim, perhaps due to an acceleration or delay of the construction project. Scheduling experts are often engineers, but with specialized construction and scheduling training and experience.

The third type of case is a claim of professional negligence of an engineer. Professional negligence is the breach of the standard of care of an engineer, most often either in the design or construction administration of a project. In North Carolina, expert testimony is generally required to sustain the burden of proof in a claim for professional negligence. Similar to the practice of specific civil engineering sub-disciplines, expert testimony on the standard of care of a geotechnical engineer, for instance, must be presented by another geotechnical engineer, or at least an engineer with sufficient geotechnical expertise. An environmental engineer, for example, would generally not be allowed to provide expert testimony about a structural engineer. The classic statement of the professional standard of care of an engineer is that an engineer must possess that degree of skill and learning ordinarily exercised by other engineers of good standing in the community and must apply that knowledge with the diligence ordinarily exercised by reputable engineers under similar circumstances. Professional negligence expert testimony either involves testimony as to why an engineer breached the standard of care, or in the defense of that engineer – why the standard of care was not breached.

There are three forums in which the engineer may find him/herself offering expert testimony. They are: (1) federal court; (2) state court; and (3) arbitration. The three forums are very different from each other and the engineer must proceed accordingly.

In federal court, the qualifications of an expert witness are determined by what is known as the *Daubert* standard. The federal judge is relied upon as the “gatekeeper” and makes the determination as to whether expert testimony is admitted. The gatekeeper is to apply a rigorous standard for admission and federal court is widely regarded as the most difficult forum for qualifying an expert witness. Expert opinion testimony is admissible in federal court if the subject matter is one where scientific, technical, or other specialized knowledge would assist the trier of fact (i.e. the federal judge or jury) in understanding the evidence or determining a fact in issue. The test of assistance to the trier of fact is comprised of two requirements. First, the opinion must be relevant. Second, the methodology underlying the opinion must be reliable. Reliability is determined by

whether: (1) the opinion is based on sufficient facts or data; (2) the opinion is the product of reliable principles and methods; and (3) the expert has reliably applied the principles and methods to the facts of the case.

In federal court, the expert must be qualified to testify by having specialized knowledge, skill, experience, training, or education on the subject of testimony. The expert must possess reasonable certainty or probability regarding his/her opinion. Mere guess or speculation is inadmissible. The expert's opinion must be supported by proper factual basis from: (1) personal observation; (2) facts presented in evidence at the trial; or (3) facts not in evidence supplied to the expert out of court as long as they are of the type reasonably relied upon by experts in the field of testimony.

The standards for admitting expert testimony in North Carolina state court are more relaxed than the *Daubert* standard. As in federal court, the judges in North Carolina state court determine whether expert testimony is admitted into evidence. North Carolina has adopted the *Howerton* standard, which contains a three-step inquiry: (1) is the expert's proffered method of proof sufficiently reliable as an area for expert testimony; (2) is the witness testifying at trial qualified as an expert in that area of testimony; and (3) is the expert's testimony relevant. The *Howerton* test was adopted to avoid the onerous gatekeeping role of judges required by *Daubert* in the federal courts. Thus, in general, it is easier to admit expert testimony in North Carolina state court than it is in federal court.

Construction disputes are frequently resolved through arbitration. Arbitration is where the parties agree to a privatized trial where an arbitrator, or panel of arbitrators, serves as the judge and jury. The parties select the arbitrator and oftentimes the arbitrator is selected because of his/her construction expertise. Arbitration generally has streamlined discovery and lower costs for litigants. The requirements for expert testimony being admitted in arbitration are not as strict as in federal and state court. The arbitrator has broad discretion on whether to admit expert testimony and will generally allow it as failure to consider testimony is one of the few grounds for overturning an arbitrator's award.

In addition to being qualified as an expert by the judge or arbitrator, there is a separate requirement before engineers may testify as experts in North Carolina. The North Carolina Board for Engineers and Surveyors ("NCBEES") considers expert testimony on engineering to be the practice of professional engineering. Thus, the engineering expert witness must be currently licensed as a professional engineer in North Carolina or risk an injunction from NCBEES. Additionally, if the engineer is providing expert witness services through his/her firm, the firm must also be licensed with NCBEES to offer professional engineering services in North Carolina.

Regardless of whether the retention of an expert is for the more common defect investigation, or the less common scheduling or professional negligence cases, the expert's services follow a similar path. Once the expert has been retained, the attorney will usually provide the expert with documents that have been produced by the parties in

the litigation. The expert will be asked to review the documents and to provide an opinion as to fault or damages, depending on the case. The expert's writings are discoverable in both federal and state court. The other side's attorney will subpoena the expert's written file. Unlike the attorney/client privilege, there is no privilege available for an expert witness even though he/she is retained by the client. Federal court requires that an expert witness prepare a written report no later than 90 days before the trial date. The report must contain: (1) a complete statement of all opinions along with the basis and reasoning; (2) the data or other information considered in forming the opinions; (3) any exhibits that will be used to summarize or support the opinions; (4) the witness' qualifications, including a list of all publications authored within the last 10 years; (5) a list of all other cases in which the expert has testified within the last 4 years; and (6) a statement of the compensation to be paid to the expert for his/her study and testimony in the case.

North Carolina state court does not require preparation of a written report, but written expert reports can be prepared by agreement of all counsel. Before trial, as part of the discovery process, North Carolina requires that the expert provide a statement of the substance of the facts and opinion as to which the expert is expected to testify and a summary of the grounds for each opinion. This statement may be contained in a report but does not need to be. In arbitration, the parties are free to determine whether experts will prepare reports or be deposed. The expert's report will serve as the basis for his/her testimony at deposition, arbitration hearing, or trial. The expert must be careful not to stray from the contents of the report during his/her testimony, or the witness' credibility will suffer.

Contrary to what one might assume, any preliminary or draft expert reports are also discoverable by the other side. This creates a dilemma for review of draft reports by the attorney. Changes in the report between draft and final form can lead to attacks of the credibility of the expert witness during testimony. The expert should be sure to review all available evidence and engage in sufficient discussion with the attorney before preparing the first draft of the report. Furthermore, all correspondence between the expert witness and the attorney, including email, is discoverable by the other party. In today's electronic age, expert witnesses need to adjust to relying on in-person meetings and phone calls with the attorney.

After an expert's report has been produced, the other side's attorney will usually want to depose that expert. The expert will experience a barrage of questions designed to impugn the expert's credibility. Questions about the expert's background, qualifications, and experience specific to the testimony can be expected. Any disciplinary action by licensing authorities such as NCBEES may be brought up by the other side's attorney.

Many construction disputes settle after depositions are taken but before trial or the arbitration hearing. If, however, the expert testifies at trial or hearing, special attention should be paid to the audience, especially when it is a jury. The expert should avoid the use of jargon and try and explain complex technical issues in a simple way that the jury can understand. In arbitration, the arbitrator may have a construction background but

may not share the specific expertise the expert is testifying to. Visual aids can be of help but beware of power point presentations that put the jury to sleep.

There are generally two types of engineer expert witnesses. The first type is the “hired gun.” Hired guns are engineers who focus exclusively on providing expert testimony. Hired guns usually have a lot of experience in design or construction but generally no longer practice in engineering design or construction. Hired guns usually offer highly polished testimony as they know what pitfalls and traps to expect from opposing counsel. The downside is that a jury may view the hired gun as a mercenary and attach less credibility to a hired gun than an expert witness currently practicing in the design or construction arena.

The second type of engineer expert witness is the “part-timer.” The part-timer provides expert testimony but also generally maintains an engineering practice. The part-timers are generally, but not always, senior personnel in an engineering consulting firm. The part-timer may appear to be more unbiased to the jury than a hired gun, but the part-timer’s less experience may cause him/her to be less savvy during examination by opposing counsel.

Many engineers are hesitant to serve as an expert witness against another engineer because they view it as tattling on their peers. Some engineers fear that negative testimony of a peer may damage the engineer’s business relationships, or worse yet, the engineer’s reputation. Professional engineers should understand that they serve an integral role in the policing of the profession, both in reporting unprofessional activity to NCBEES, and by serving as expert witnesses in construction disputes. Many highly respected engineers serve as expert witnesses, both as “hired guns” and as “part-timers.”

Bio

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