

A/E RISK REVIEW

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Reducing Risks When Specifying Materials

The following material is provided for informational purposes only. Before taking any action that could have legal or other important consequences, speak with a qualified professional who can provide guidance that considers your own unique circumstances.

Architects and engineers face a constant challenge of keeping current with new developments in construction technology and materials. When there is a significant change in the construction industry, such as the trend toward sustainable or green design, that challenge intensifies. Suddenly you are asked to comply with a new set of construction standards and owner expectations and there may be scant history to rely upon as design guidelines. Over time, these developments become the new standards of care to which you must comply when specifying materials.

Unfortunately, specifying materials is a part of your design responsibilities that must largely be learned on the job. Few college-level design courses focus on this important skill.

In some cases, material specifications need only be general in nature – recommending a particular type of material or technology, for example. In other cases you may be called upon to specify a specific brand or product model. Regardless, each time you specify a material you are accepting a degree of liability. You are now responsible for the material performing its intended function in an acceptable manner that is not harmful to the health or welfare of those who work on or occupy the building, highway, etc.

A Long-Term Liability

The liability related to specifying materials is both extensive and long term. Often, it takes years for a material to fail or prove harmful, by which time damages and the cost of a remedy can be astronomical. What's more, it's a professional liability that can put a designer in a precarious position even if he or she followed the prevailing standard of care at the time the material was specified.

Consider that some materials widely used in the construction industry just a few decades ago – asbestos, PCB, fiberglass and lead-based paints, for example – were eventually determined to be hazardous. Like everyone else, architects and engineers were largely unaware of any potential for serious risk and commonly specified these materials for their projects.

Who knows which of today's new and untested synthetic materials or salvaged or recycled products might eventually fail to live up to expectations or even be found to be harmful to health? Green design is a relatively new concept that calls upon new as well as old materials, technologies and systems to deliver long term cost-savings while promoting a healthy environment. Issues such as material life-cycle and environmental cost assessments come into play. Who is to say whether each new green material or technology will truly deliver on its promise?

Once a material is ultimately deemed ineffective or hazardous, clients and their team of lawyers will often try to hold design firms responsible for any financial damages or injuries that result. Never mind that these materials were widely considered safe, effective and the standard of the industry at the time they were used. These claims seem to imply that designers need to be able to predict the future. Such claims discourage

architects and engineers from specifying new products in their search for more effective and economical materials.

When specifying materials, you cannot simply rely upon word-of-mouth recommendations or manufacturer claims of quality and effectiveness. The prevailing standard of care calls for you to have personal experience or knowledge that a recommended material will perform its intended function successfully under prevailing conditions. While design firms are not expected to conduct their own physical tests of a new material or system, they are required to keep up to date of the physical properties of the materials they specify and properly apply them in a generally accepted manner.

An Illustrative Court Case

In one court case, an architect was hired by a New York school district for a renovation project. The project called for the architect to replace windows with insulation panels to improve the school's energy efficiency. The architect specified a particular brand of insulation panel and the project was completed. Within two years, the panels began to warp, bow and deteriorate, allowing water and cold air to penetrate the building. The resulting damages amounted to \$300,000.

During the trial, the plaintiff presented the testimony of a licensed engineer who stated that the panels were inappropriate because of their "dimensional instability" when exposed to the extreme weather conditions of upstate New York. The expert witness also testified that the architect deviated from the applicable standard of care by relying almost exclusively on the manufacturer's product literature. The architect was eventually found liable for specifying the unproven type of insulation panel.

The ruling was appealed. But affirming the court finding, the court of appeals found that the panels were indeed defective and the architect was held liable for failing to meet the prevailing standard of care. The court noted that the architect did not have personal experience with the product, nor had it conducted or requested laboratory tests to prove the product's effectiveness. (*Brushton-Miara School District v. Fred H. Thomas Associates*, 692 N.Y.S. 2d 551.)

How to Avoid Liabilities

Fortunately, there are measures you can take to help avoid material specification claims. First, whenever possible, specify only those materials and technologies you know will do the job, are time-tested and proven in a particular application. Ask yourself: what would other reasonable design professionals do in similar circumstances? That sets the basis for the current standard of care. Also ask yourself: how would my decision to specify the material play out in a deposition or on the witness stand? Would a judge or jury consider my actions reasonable?

When describing specified materials (as well as your services) to a client or prospect in your marketing materials, conversations and agreements, avoid using superlatives such as *best*, *superior*, *state-of-the-art*, or *guaranteed*. These words can raise your liabilities beyond the normal standard of care.

If you decide to specify a new or unproven material, or one with which you are unfamiliar, do your research. Your goal is to be able to demonstrate that you made a reasonable, professional effort to confirm the suitability and reliability of the material. At a minimum:

- Collect brochures, product specification sheets, test results, warranties and guarantees from the manufacturer and keep them for your records.
- Read all application instructions and label warnings carefully.
- Look for collaborating evidence to support the manufacturer's claims, such as test results of an independent laboratory.
- Document your conversations with the suppliers regarding the product and its application in the specific circumstances, including any reservations you might have raised.
- Require the manufacturers, suppliers and installers to give assurances that the product is suitable for the intended application.
- Go over your findings with your client and seek agreement that your choice of materials is prudent.

Don't hesitate to ask manufacturers' field representatives to be present during the installation to ensure that their material is installed properly and according to manufacturers' specifications. When feasible, ask the field rep to test the product under appropriate conditions.

When Your Client Specifies a Material

Suppose your client suggests or even insists that you specify a product you feel may not be safe or reliable. If, against your better judgment, you agree to specify a product that later proves to be flawed or dangerous, you can be liable for damages.

If your client insists on using a material that, although not life-threatening, is a product with which you are not comfortable – a question of quality, durability or ease of maintenance, for instance – put your objections in writing to your client. If the client overrules you, protect yourself by having this confirmed in writing. Ask for an indemnity. At a minimum, document these discussions and decisions.

Also, don't review any submittals that include the client's specification. That should be for the owner to approve. Going one step further, don't sign any pay applications that include the client's specifications. Deduct those items from the payout and have the owner sign.

If the material in question involves known health or safety issues, refuse to use it. You must look to the termination provisions of your contract rather than endanger the life or health of anyone.

When the Contractor Asks for a Substitution

What if the contractor, a subcontractor or other party to the construction suggests a substitution for your original material specification? Here are some tips for minimizing and, when necessary, handling requests for substitutions for your specified materials:

- Develop and regularly update specifications that clearly define performance characteristics and other project requirements.
- Use a "Substitute Request Form" that must accompany any proposed substitution. Set forth the criteria that will be used in reviewing the acceptability of a substitution.
- Include in your contract steps that must be taken to request substitutions. Spell out the approval process. Also specify that you have the right to back charge the contractor for services related to the review of proposed substitutions.

- Be responsive to any substitution requests received. Should a dispute arise, courts do not look kindly upon designers who fail to respond to or arbitrarily reject reasonable requests for substitutions.
- Address the issues of specifications and substitutions in a pre-construction review of the construction documents. Include the client and all design professionals, contractors and major subcontractors. This will help identify those specified materials that may cause concerns among one or more parties. Calls for substitutions can then be addressed before construction begins.
- Do not allow shop drawings to become quasi-substitution forms. Such attempted uses of shop drawings should be rejected and returned as not in compliance with the contract.

Additional Contractual Protection

You should address material specification issues in your contract agreement including a provision that spells out and limits your responsibility. You and your attorney should consider contract language that has the client waive all claims and indemnify you from:

1. The specification and use of materials that are permissible under current building codes but that may, in the future, be discovered to be defective or harmful.
2. The use of any materials specified by the client, the contractor or other party to the construction.

While you would ideally want a contract clause with these provisions in all of your contracts, some clients may balk at including such blanket language. In such cases, you could forego such a clause in the basic contract and add protection as an addendum in the event of a questionable product specification from the client or contractor. Regardless, make sure you coordinate any such provisions with any code compliance clause, as well as with the provision you have concerning toxic substances.

Conclusion

Contractual protection is a recommended safeguard for shielding yourself from liability for specifying materials that later prove ineffective or dangerous. The best protection, however, is taking every reasonable step

possible to make sure the products you specify will perform their intended function in a safe and effective manner. There is no substitute for experience, research and common sense when specifying materials.

A final note of caution: If you have any business association or financial interest with a supplier that could influence your judgment in specifying a material, it is always best to reveal that association or interest to your client. Otherwise, if a claim occurs, a conflict of interest can be alleged with the client claiming that you specified a material for your own interest, rather than in the interest of the client.

If an owner proposes value engineering, point out that while VE can add value, it doesn't always translate into cost savings. The process typically adds additional design development fees with no guarantee of reduced construction or maintenance costs. The goal is long-term cost-effectiveness and value, not upfront cost reduction.

Can We Be of Assistance?

We may be able to help you by providing referrals to consultants, and by providing guidance relative to insurance issues, and even to certain preventives, from construction observation through the development and application of sound human resources management policies and procedures. Please call on us for assistance. We're a member of the Professional Liability Agents Network (PLAN). We're here to help.