

Notice to Workshop Participants

Loss prevention involves identifying and anticipating risks in the practice of architecture and engineering. Studying claims that have actually happened can help you more readily spot risks, identify opportunities to use loss prevention techniques and decrease exposure to claims in your own firm.

The case you are about to read is taken directly from an actual claim. It is not a composite case, nor has it been embellished—it is simply a real-life situation that involves design professionals. Fictitious names, firms and locations have been used to maintain confidentiality. Any similarity to names of actual persons, firms or locations is entirely coincidental.

This publication is intended for informational purposes only and does not constitute legal advice. For legal advice, seek the services of a competent attorney.

Any descriptions of insurance provisions are general overviews only. THE INSURANCE POLICIES, NOT THIS PRESENTATION, FORM THE CONTRACT BETWEEN THE INSURED AND THE INSURANCE COMPANY. Insurance coverage in any particular case will depend upon the type of policy in effect, the terms, conditions and exclusions in any such policy, and the facts of each unique situation. No representation is made that any specific insurance coverage would apply in the circumstances outlined herein. Please refer to the individual policy forms for specific coverage details. All coverages are subject to individual underwriting judgments and to state legal requirements.

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30 Ragsdale Drive, Suite 201 Monterey, California 93940-7811 USA 800-227-8533 831-657-2500

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The Case Study Process

The case study process combines individual exercises and group discussions to examine an actual claim. Follow the steps below to determine loss prevention actions that could have been taken to avoid or reduce the problems that arose in this case and to identify new or revised loss prevention practices that may have value for your own firm.

Step 1: Individual Exercise—Review Case

- Read The Facts of the case (pages 4-6).
- As you read, note what you think is the primary problem or failure and identify

factors that may have contributed to or exacerbated the situation. You can use page 7 to record your diagnosis. You'll also want to list actions that could have been taken to eliminate, reduce or mitigate contributing factors. (Think in terms of quality assurance procedures, communications/relationships, business practices, contract language and initial responses to the problem.)

Step 2: Small-Group Discussion

- Divide into small groups as instructed by the workshop leader.
- Select a spokesperson to facilitate and summarize your small group's discussion points and present a group consensus to the main body of participants.
- As a group, discuss the case in light of each individual's analysis of the case and develop a
 consensus to be reported to the main group. The spokesperson should tabulate and record
 the group's thinking.
- Wait for directions before you turn the page.

Step 3: Group Reports, Key Points and Conclusion

- Return to main group for discussion and conclusion to case.
- Each spokesperson reports the results of his or her small group discussion. The workshop leader develops a conclusion to the case based on feedback from all groups.
- Key Points (pages 8-10) of the case are summarized.
- Wait for directions before you turn the page
- Summary of the actual settlement or judgment, The Bottom Line, is presented (page 11).



Val U

The Facts

Academia Architecture is a prestigious firm in the U.S. Northwest that markets its expertise in a diverse array of project types, including academic and hotel design. When the opportunity arose to vie for the design of a multimillion-dollar hotel on a college campus, Academia jumped at the chance. Valkyrie University (known on campus as Val U)

Cast of Characters

Valkyrie University (Val U) The Client

Phi Beta Construction General Contractor

Academia Architecture Architect

Educational Interiors Interior Design

Milldeux Engineering Mechanical Engineer

wanted a complex that would boast 250 upscale hotel rooms as well as a restaurant, gift shop, and meeting, conference and other support facilities. The project was also to include a large bookstore and additional retail space.

After a fierce design competition, Val U selected Academia Architecture to provide architectural and engineering design services for all phases of design and construction, including construction observation. The contractor would be chosen on the basis of the lowest "responsible" bid.

Val U insisted on using its own standard contract. While the principals at Academia were aware that the schedule was tight and the contract contained terms and conditions they'd not normally agree to—including a dispute resolution clause that specified mandatory arbitration—the fee was acceptable, and they believed that their experience would keep the project on track. They signed.

A first-class hotel calls for specialty interiors and high-end building systems. Academia had previously worked with two firms, Educational Interiors and Milldeux Engineering, on smaller, less complex projects. The clock was ticking, and Academia was anxious to get both subconsultants on board. To expedite the process, and because they felt confident in the quality of the subs' work, agreements were made on the basis of handshakes. Details, such as insurance, could be worked out later.

The design for the hotel called for a six-story, steel-framed 190,000 sq. ft. structure. The exterior walls would be primarily cavity-wall construction with brick cladding, backed by light gauge steel framing. The hotel guest rooms were finished with gypsum wallboard, which Education Interiors, the interior design subconsultant, later decided to cover with an expensive, impermeable vinyl wall covering.

Val U was highly cost-conscious. When faced with a cost overrun, the general contractor, Phi Beta Construction, offered to provide value engineering recommendations to reduce expenses. It identified 40 items, including the elimination of a vapor barrier originally specified by Academia Architecture. At a large meeting to discuss value engineering issues, Phi Beta claimed that the barrier represented a redundancy to the foil-faced batt insulation that was already being installed. While the Phi Beta representative agreed that the batt insulation was a less reliable system than a vapor barrier, he argued that if installed correctly, it would be an appropriate and viable barrier. The

University decided to eliminate the requirement for a vapor barrier and take a \$25,000 credit on the project's overall costs. Meeting notes reviewed later indicated that the project manager for Academia Architecture made no comment.

Academia removed the requirement for a vapor barrier from its specifications. Although the building would be relying on the batt insulation's foil face—which now required a sealed, penetration-free installation—Academia did not update its specifications to include this requirement or reevaluate the change's potential impact on the performance of the building envelope.

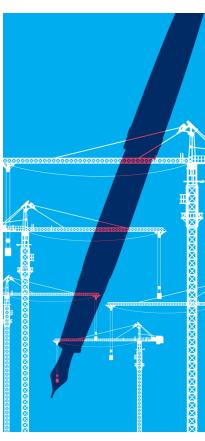
Construction was to be done in four phases, and work on the hotel began in early summer. There was a brief, last-minute preconstruction meeting with the contractor. No minutes were taken, but it was agreed later on that no mention was made of the importance of a sealed, penetration-free installation of the foil-faced batt insulation.

It was a complicated project, and Academia's project team was faced with a new challenge: its project manager was hospitalized with a serious illness. Academia scrambled to find a new project manager in-house, who was then forced to hit the ground running, with little time to review project status. Personnel turnovers continued to plague the project, and site observation was conducted by a variety of individuals—some senior, and some with little experience. Field reports made no mention of the installation of batt insulation. Indeed, during the seven-month period during which the insulation was installed, not one written site visit report was filed.

Nevertheless, the project was completed on schedule two years later and was considered a great success. It even received a prestigious national award for design excellence.

Eighteen months after substantial completion, mold was discovered in several guest rooms. Val U put Academia Architecture on notice, and further investigation indicated that mold was present behind the vinyl wall covering finishes and within wall cavities. The University retained an expert to conduct additional testing to identify possible water intrusion into the building structure; the expert also tested the HVAC system. The investigation revealed that mold existed in ducting and inside the walls in several areas of the hotel.

The University made a claim against Phi Beta Construction and Academia Architecture alleging that construction and design defects caused various components of the building's exterior wall system to leak or otherwise improperly allow water or water vapor to enter the building. Water infiltration, Val U claimed, had caused mold growth within the building.



Initially, it appeared that most of the problems were related to construction deficiencies, putting the spotlight on builder Phi Beta. The experts found the installation of the insulation to be particularly sloppy. One report listed dozens of problems, for example:

- Open laps in fabric and head flashing
- Exposed wood blocking
- Adhesion failure of membrane flashing
- Membrane flashing not adhered to window frame
- Sill membrane flashing not lapped over felt

However, the experts—including Academia Architecture's own—soon concluded that there were also problems with the design and construction administration. They found that after Academia had agreed to the deletion of the vapor barrier as a result of the value engineering effort, it never reevaluated the potential impact this change would have on the performance of the building envelope. And while the original specifications had not called for complete sealing of the insulation joints, the experts pointed out that Academia had not updated its specifications to emphasize that the building was now relying on the foil face of the batt insulation to act as the vapor barrier.

It was also alleged that Milldeux Engineering's design of the HVAC system led to negative pressurization of the building, which increased the water infiltration. (The building actually sucked.) Additionally, it was claimed that Educational Interiors' selection of the impermeable vinyl wall covering provided a material that fostered and encouraged mold growth.

It seemed that there was plenty of liability to go around.

Val U claimed damages of \$20 million, including nearly \$4.5 million for business interruption during remediation. The University didn't care who paid what; it would leave that up to the arbitrators.



Notes

Use this page to record what you think is the primary problem or failure and identify factors that may have contributed to or exacerbated the situation. You'll also want to list actions that could have been taken to eliminate, reduce or mitigate contributing factors. (Think in terms of quality assurance procedures, communications/relationships, business practices, contract language and initial responses to the problem.)

Key Points

The Design Professional unit of XL Group has analyzed its large collection of claim files to identify the technical and nontechnical Risk Drivers behind the claims. While every claim has one or more technical causes (vapor barrier and HVAC system issues are two major examples in this case), our research shows that in nine out of ten claims, a nontechnical "Risk Driver" leads to or exacerbates a claim.

45% Percentage of Claims Affected 39% 40% 35% 30% 25% 25% 23% 20% 15% 10% 6% 5% 0% Negotiation and Client Selection **Project Team** Communication Contracts Capabilities

Top Four Nontechnical Risk Drivers

On this project, while there were certainly technical issues, many nontechnical issues helped contribute to the eventual claim. For example:

Communication Issues

XL Catlin's Risk Drivers research shows that nearly 40% of the claims count (representing the frequency) and almost 30% of claims dollars paid (representing the severity) have their roots in poor project team and client communication. And a surprising number of claims can be traced to the fact that either there are no procedures in place for effective communication, documentation and coordination, or existing procedures were not followed.

The *failure to communicate* played a big role in this claim, including the *failure to manage and document decisions and changes* and to make the information available to the appropriate personnel.

After agreeing to remove the requirement for a vapor barrier from its specifications during the value engineering process, Academia Architecture apparently *never discussed with the general contractor* or the University the importance of a sealed, penetration-free installation of the foil-faced batt insulation. This guidance was necessary because the original specifications didn't call for complete sealing of the insulation joints. And even if it was Academia's intention that the insulation would serve as the vapor barrier, it was *not conveyed in writing* to anyone, including its own field personnel during the construction administration process.

The failure to document decisions was also stunning. Did the Academia project manager object or even consider the implications of the value engineering decision to eliminate the requirement for a vapor barrier? If he did, it was never documented, either in the value engineering meeting or later. And while there was a preconstruction meeting, it was last-minute and brief, with no agenda and with no minutes taken. Later project meeting minutes did not reveal discussions of any issues pertinent to the installation of the foil-faced batt insulation.

Academia's *field reports did not raise any issue of faulty installation* of the foil-faced batt insulation. Worse, while Academia staff did visit the site, they *failed to document their field visits for a full seven months*. It was during this time gap that most of the insulation was installed.

Project Team Capabilities

According to Risk Drivers research, project team capability issues are contributing factors in almost one-quarter of the claims count (and 34% of claims dollars paid). The largest contributing factor, responsible for more than half of the claims in this category, is assigning inexperienced staff to a project. There are several Project Team Capability issues that impact construction phase services, and they mostly relate to the knowledge and qualifications of the design professional's staff, to poor communication within the project team and to the inexperience of a project manager.

In this instance, the original project manager became ill and perhaps dropped the ball when it came to *updating the specifications*. There was a newly anointed project manager who was brought on board with no knowledge of the project and who did not take the time to thoroughly review the project. There were also *personnel continuity issues* and *poor communication within the project team*.

Client Selection Issues

According to Risk Drivers research, client selection issues are contributing factors in 23% of claims, representing 18% percent of claims dollars paid.

One of the risks in this category is working with clients who insist on the use of a *low-bid contractor*. This hiring method frequently results in construction being handled by a contractor who is primarily motivated to do work as inexpensively as possible, or one who is too inexperienced for the job. Having either in charge of construction spells trouble. This contractor clearly did a poor job installing the insulation.

So-called "value engineering" by the contractor and owner is a persistent source of claims and certainly proved costly in this instance. Unless performed by qualified value engineers, this process

is usually just a cost-cutting exercise to benefit the owner and contractor, and it can result in redesign and redrawing of the construction documents to reflect the changes or coordination issues. (For more information and suggested contract language, see the Value Engineering chapter in *XL Catlin's Contract eGuide for Design Professionals.*)

Negotiation and Contract Issues

According to the Risk Drivers study, negotiation and contract issues are contributing factors in 6% of the claims count and 13% of claims dollars paid.

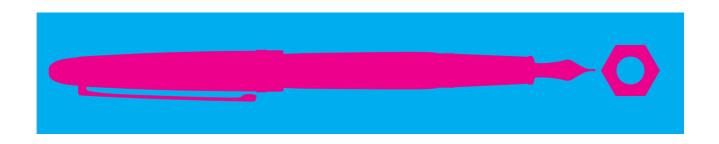
In this case, *use of a client-written agreement* was a factor. The contract lacked several important protections for the design professional. For example, the agreement called for *mandatory arbitration* rather than mediation as the first step in dispute resolution. *Lack of a mediation clause* meant that when the dispute arose, the parties were obligated to submit to mandatory arbitration. Although arbitration may be an effective tool in some limited situations, there are several drawbacks to the process—including high costs and unpredictable results—that can render it an unsatisfactory, and sometimes disastrous, remedy.

In addition, there was **no limitation of liability** in the contract. In this situation, Academia's potential liability exposure was for many millions of dollars. Even the threat of litigation can be so costly that without some limit to the damages and legal costs, a single protracted lawsuit can put a small consulting practice out of business. Any professional firm that continually accepts unlimited project risks can eventually expect huge losses and, perhaps, financial disaster.

Academia had **no written agreements with its subconsultants**, Educational Interiors and Milldeux Engineering, and had failed to ensure that the two firms carried **appropriate limits of professional liability insurance**, an error that would cost Academia dearly. Both subs contributed to the problem, but because they didn't have adequate insurance to financially respond, Academia's deductible and insurance limits were put in jeopardy.

Academia should have had written contracts with both subconsultants and addressed insurance issues in the agreements. At a minimum, Academia should have required that its subs carry insurance at appropriate limits, that they make every effort to maintain adequate insurance throughout the life of the project and that they submit certificates of insurance at policy renewal.

(For more information and suggested contract language, see the chapters on Arbitration, Insurance, Mediation, Limitation of Liability and Subconsultants in *XL Catlin's Contract eGuide for Design Professionals*.)

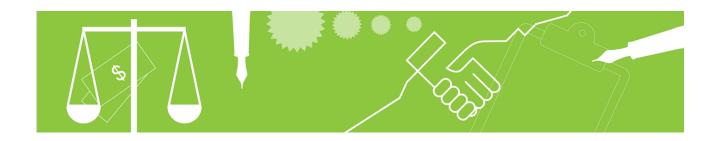


The Bottom Line

Although arbitration was stipulated in the contracts as the method for dispute resolution, the parties agreed to first mediate in light of the considerable costs estimated to arbitrate such a complex case. But the prospect of binding arbitration weighed heavily on the participants should mediation fail. Even in mediation, the costs were significant. After many months, and numerous two- and three-day mediation sessions, the case finally settled.

As part of the settlement, general contractor Phi Beta agreed to perform all needed repairs without charge, complete the remediation work on an aggressive ten-month schedule and pay more than \$6 million as its portion of the total loss.

Academia Architecture paid approximately \$4.5 million in settlement and, although its subs, Educational Interiors and Milldeux Engineering, had significant exposures, they contributed only nominal amounts due to their lack of adequate insurance coverage. Also, because Educational and Milldeux weren't obligated by contract to binding arbitration, they (and their insurers) did not feel pressured to settle in mediation.



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	For more information, go to xlgroup.com/dp
	XL Catlin
	Design Professional 30 Ragsdale Drive, Suite 201Monterey, CA 93940
	Phone: 800 227 8533 • Fax 831 649 3240
	designprofessionalUSA@xlcatlin.com