CSDZ Webinar

The Impact of Lessons Learned: Claims & Case Studies

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Learning Objectives

- Review common business-related mistakes design professionals make, often leading to claims
- Examine several real-life projects that experienced claims, to see if the DP could have done something different to avoid or minimize the potential for a claim
- Show that the seeds for claims are often sown much earlier than one might think
- Show that many claims don't arise due to design mistakes, but rather from communications breakdowns

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Ten Common Mistakes Design Professionals Make Leading to Claims

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The Mistakes

- No Client Due Diligence
- No Project Due Diligence
- No Control of Owner Expectations
- Not Saying "No"
- · Taking a Job for Marketing
- · "We'll Finish It In the Addendum"
- Unstated Assumptions
- Design Delegation
- "Value Engineering"
- Fee Competition

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The Case Studies: 1. Minor League Ballpark 2. Building Relocation 3. All Steamed Up



Minor League Ball Park: Background

12,000-seat minor league baseball park to be built by the team's owner. Substantial public financing for the project.

After a competitive "beauty contest," the architect is selected to prepare schematic design. The Architect is from out of town, so it hires (as a subconsultant) a local associate who will run interference politically and who will ultimately sign the construction documents.

Funds for the project are severely limited (the budgeted construction cost is \$20 million), the schedule extremely tight, and the program somewhat fluid. The current program calls for six luxury suites. There are adjacent structures, including an old brewery and a fire station, which are not officially in the program or in the Owner's budget, but which the Owner wants to incorporate into the overall project. The architect is requested to provide design services for these elements of the project.

Minor League Ball Park: Background, ct'd

The Architect's contract includes the following duties:

"[Following completion of Schematic Design] Prepare a Preliminary Engineering Report on the PROJECT. The report should include schematic layouts and sketches, cost estimates, and preliminary construction drawings for the PROJECT. ... On the basis of the approved preliminary design documents, prepare detailed construction drawings, specifications, and contract documents for the PROJECT...[and]Advise the OWNER of any adjustment of the cost estimate for the PROJECT caused by changes in scope, design requirements, or construction costs, and furnish a revised cost estimate for the PROJECT based on the completed drawings and specifications."

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Minor League Ball Park: Background, ct'd

The Architect's contract also states:

"Since the ARCHITECT has no control over the cost of labor and materials or over competitive bidding and market conditions, the estimates of construction cost provided for herein are to be made on the basis of its experience and qualifications, but the ARCHITECT does not guarantee the accuracy of such estimates as compared to the Contractor's bids or the PROJECT construction cost."

Minor League Ball Park: Schematic Design

The architect attempts to further refine the program. During this process, the Owner decides to increase the number of suites to 12, and increases the number of seats to 13,500.

The Owner asks the architect to prepare a schematic design cost estimate. The Architect' estimate is \$19.6 million. However, there are a number of unknown elements which cause the estimate to be tentative. The **Architect writes:**

- "1. The legislature may require the Owner to initiate a procurement process which could potentially delay the award of public funds until mid-summer. This could affect the schedule for design and construction since the Legislature may be uncomfortable issuing offertory letters before the award of these funds....
- "3...specific elements of the site plan have been fixed...[including]...: - The existing fire station and the Brewery Building will be retained and possibly renovated (not in this contract) "

Minor League Ball Park: Schematic Design, ct'd

- "...6. Architect reviewed the Preliminary Budget Estimate. The following comments and directives were made:
- "... f. This estimate is higher than the preliminary estimate developed during the Feasibility Study. ... [1]ncreases in the estimate can be attributed to the following key line items which are new and/or higher than originally estimated based upon specific program requirements and design concepts:
- "- Renovation of Existing Fire Station and Brewery Buildings (new item, +\$1,000,000)
- "- Three elevators (new item and additional program requirement,
- + \$192,000)
- "- Additional site fences/gates and outfield fence (+\$80,000)
- "- Additional Suites, Seats, and Press level (additional program requirement, + \$912,500)
- "- New Picnic / Tent Area (additional program requirement,

+120,000) ...

Minor League Ball Park: Schematic Design, ct'd

"8. ... Owner stated that the Owner will investigate the availability of additional monies to fund this effort. "

Apart from hard cost issues, the Owner was concerned about a potential bust in project "soft costs". In the same meeting minutes, the Architect wrote:

"Owner indicated that bond rates are going up and are exerting unanticipated fiscal pressures on the project. Work with XYZ Securities is on-going. Owner indicated that additional interest and fees associated with the financing of the project may have to be included in the project budget. This may be as high as \$800,000."

The Architect's CEO, after reviewing these minutes wrote a handwritten memo to the Architect's project manager: "It looks like costs are rising but the budget probably isn't. What are we telling the Owner re: budget control?" There is no record that the project manager ever responded to this note.

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Minor League Ball Park: Schematic Design, ct'd

Despite these concerns, and because the schematic design construction cost estimate is within the budget, the Owner approves the schematic design, and directs the Architect to proceed with Design Development.

...OK, any thoughts so far?!

Minor League Ball Park: Design Development

The Owner's CFO, still harboring some concerns about the architect's cost estimating abilities, suggests that the architect hire a construction manager to prepare a parallel estimate. Opposed to the idea, the Architect writes:

"Unless the project is large and complex or the schedule accelerated, why pay a Construction Manager to hold all the construction contracts which a general contractor does as a matter of course in a traditional process? Construction management can be an inordinate, unnecessary expense and duplication of services. ... The Construction Manager does not have accountability for overlaps or gaps in trade contracts, in contrast to the traditional approach where the general contractor is responsible for the project in total."

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Minor League Ball Park: Design Development, ct'd

At the next project meeting, the parties discuss the CM issue and the Architect writes, "Owner informed the Design Team that there will be a Construction Manager during the construction phase of this project. Issue closed."

To avoid the need for competitive procurement, the Owner "suggests" that the Architect hire a particular CM whose president is known to contribute heavily to the political party controlling the legislature (which, as noted, will be providing substantial funds for the project). Not wanting to offend the Owner, the Architect after some grumbling acquiesces. The Architect's contract is amended to reflect that the CM will act as a subcontractor to the Architect.

Minor League Ball Park: Design Development, ct'd

The following clause is also inserted into the contract at the insistence of the Architect's attorney:

"ARCHITECT shall have no liability to OWNER for the negligence, breach of contract, or other fault of the CONSTRUCTION MANAGER. Rather, in the event it suffers damage as a result of any of the foregoing, OWNER covenants not to sue ARCHITECT and instead agrees to exercise its status as a third-party beneficiary under the ARCHITECT/ CONSTRUCTION MANAGER agreement, as well as any other rights it may have at law or in equity, to assert a claim or claims directly against the CONSTRUCTION MANAGER."

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Minor League Ball Park: Design Development, ct'd

The program continues to evolve, with the Owner adding several additional features to the project including a second scoreboard, and increasing yet again the number of suites. The Architect and CM prepare parallel estimates. The estimates are, in their totals, relatively close: The CM estimates a project cost of \$19.7 million, and the Architect estimates a cost of 19.94 million. But the line item values are wildly divergent: the difference between the CM and Architect's estimates for structural steel, for example, is more than 40 percent, and the utility costs estimated by the Architect are 100 percent higher than the CM's estimate. Emails go back and forth between the Architect and the CM saying, "we should reconcile these estimates," but no definitive reconciliation is ever prepared. Again, because both estimates are still within the budget, the Owner approves the Design Development Documents and authorizes preparation of the Construction Documents.

Minor League Ball Park: Design Development, ct'd

Discussion Questions so far:

- You know those horror movies where you keep telling he heroine "Don't go down the basement stairs!!"? Yeah.
- What is the point where you decide the owner is simply in over its head, and say enough is enough?
- Was the Architect right to object to the general idea of hiring a CM on a smaller project?
- You're the out of town folks in a relatively small town...good idea to hire a CM under the Architect, much less a "pluggedin" CM?

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Minor League Ball Park: Bidding & Construction

The project is delayed due to delays in receipt of funding from the legislature. Despite this, the Owner and CM decide to bid portions of the project conditionally. To save time and money, the CM decides to break the project into packages. A new overall budget is not prepared, but the CM does issue individual cost estimates for each individual package prior to sending the package out for bid.

Bids for the first three bid packages are substantially over budget. In connection with one of the bid packages, the Architect writes: "Bids received for caissons and foundation work were approximately \$1,160,000 over estimated cost. The primary reason for this was due to lack of bidder's interest because of the funding situation at the legislature. We propose to re-bid this package once funding is in place and a revised schedule is determined. Additionally, the packages should be combined into one contract to ensure participation from the smaller drilling subcontractors who must overcome bonding issues through a General Contractor."

Minor League Ball Park: Bidding & Construction, ct'd

Despite this, , the Owner directs that the bids be accepted. The Architect confirms this direction in the meeting minutes, stating, "Although the cost of these packages exceeds the estimate, the Owner believes that the dollar amount exceeds the potential loss in revenues should the facility open later than July 1, xxxx."

Funding from the legislature is finally released, and when all the bids are in, it is clear that the project is around \$2 million over budget. In view of these overruns, the Architect writes to the Owner, stating: "We again want to re-emphasize the importance of the Owner maintaining an appropriate Change Order Contingency Fund during the construction phase. Specifically, the "Industry Standard" dollar amount appropriated for Contractor generated Change Orders ranges between 2-1/2 to 3-1/2 % of the Bricks and Mortar cost for the project. This would typically cover coordination and scoping issues inherent with Fast-Track and Multiple Bid Package delivery systems. ...

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Minor League Ball Park: Bidding & Construction, ct'd

"We caution you that this contingency is over and above monies allotted for the following:

- * General Conditions
- * Winter Protection
- * Acceleration
- * Lost Production
- * Owner Design Changes
- * Changes to Base Building to incorporate late Food Service Design
- * Testing Labs/Inspections
- * Owner Code Required Changes

We have reviewed the contents of this letter with the CM and they concur. The above information should be implemented in the preparation of the overall project cost."

Minor League Ball Park: Bidding & Construction, ct'd

The Owner writes back, stating that "The delay in project start up and associated costs in combination with actual bid values received has not provided opportunities to set aside a contingency for the construction phase of the project." The Owner directs the Architect and CM to proceed with value engineering for the project.

The Architect and CM come up with a list of value engineering items totaling \$1.3 million, but the Owner only accepts \$500,000 in suggested reductions. The Owner decides to address the remaining overages by moving certain items - such as the scoreboards, stadium seating, and concessions (which was itself more than \$500,000 over budget) -- "off-budget" through a complicated leasing scheme. This maneuver brings the construction cost, on paper, back within budget.

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Minor League Ball Park: Bidding & Construction, ct'd

Construction on the project gets underway. The Architect visits the site monthly, relying primarily on its local associate for regular site visits. The CM takes responsibility for addressing the cost of changes; the Architect through the local consultant merely issues clarifications or proposal requests when asked. Without the Architect's knowledge, the Owner is approving change order claims, usually without negotiation. However, as construction costs start to escalate, the Owner begins to send the approved change orders to the Architect, asking for comment and requesting that the Architect sign off on them. The Architect writes back, stating that it will sign the change orders to keep the project moving, but is doing so under a reservation of rights.

Minor League Ball Park: Bidding & Construction, ct'd

The final construction cost comes in more than \$6 million over budget. The Owner refuses to pay the Architect's final invoice, which is approximately \$325,000. Instead, the Owner offers to pay about half of the final bill, expressing concern about several aesthetic and functional components of the facility. The Architect refuses to settle for "anything less than \$275,000."

The Owner and Architect do not communicate for over a year, when the Architect sends a dunning letter, the Owner responds by suing the Architect for \$5 million. Among the Owner's claims are the following:

- a. [Architect] failed to provide the Owner with a revised cost estimate for the Project based upon the completed construction drawings and documents;
- [Architect] failed to exercise due and reasonable care and fell short of professional standards applicable to architects and engineers in estimating the cost of the Project;
- c. [Architect] failed to provide adequate justification for its approval or disapproval of construction claims.

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Minor League Ball Park: Bidding & Construction, ct'd

Discussion Questions:

- Is it ever a good idea to be the prime A/E, as designer, with the AoR as your subconsultant?
- What do you think about doing cost estimates as a Basic Service in an unfamiliar market?
- What is the A/E's responsibility during VE?
- What is the A/E's responsibility in connection with COs?
- Would the "no guarantee of cost" clause save the day? What about Vince's absolutely brilliant contract clause?
- Sure, hindsight is 20-20 but...



Building Relocation Background

New building, with spread footing, to be constructed a few feet adjacent to existing buried condenser water pipes. System needed to remain in operation during construction. Owner's as-builts showed approximate location of pipes; A/E recommended additional surveys to determine location more precisely. Owner refused, directed A/E to show pipes on construction drawings as shown on as-builts.

Construction documents showed approximate location of pipes, directed Contractor to hand excavate if necessary to determine actual location and to install sheet piling to protect the pipes.

During excavation, which occurred during the fall while the condenser wasn't operating, it was discovered that the footing for one of the thrust blocks restraining the underground pipes extended 21 inches into the area where the new building's foundation was to be constructed. This condition had not been shown on the as-builts.

Building Relocation Background, ct'd

Contractor stopped work and issued an RFI requesting instructions on the interference, and claimed that sheet piling couldn't have been installed so close to the existing line, anyway.

A/E maintained the sheet piling could be installed and, among other options, proposed relocating the line slightly in the area of the interference while the condenser was shut down.

Owner rejected all options, ordered A/E to move the new building. A/E verbally told Owner this wasn't necessary, but when Owner insisted, A/E consulted with CM, who told A/E the building needed to be moved four feet.

A/E revised the documents and the building was moved. Owner's total claimed cost for this series of events was about \$450,000.

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Building Relocation Discussion Questions

- 1. Do you agree the A/E did everything it could have done in this situation? If not, what more could it have done?
- 2. What does this case study say about the meaning of "professionalism"? What is appropriate "client service" in a case like this?
- 3. Is earth retention a "means and method" of construction? What is the A/E's proper role in this area?



All Steamed Up Background

Speculative building. Original mechanical spec, which had been "value-engineered" several times (including the removal of heat exchangers from the design concept) until it was more or less a performance spec, called for a boiler capable of delivering 138-foot water column to the project. ME's design intent apparently was to obtain a pressure of 80 lbs./sq. inch, but under actual building conditions the specified performance criteria would only yield about 60 psi.

In a proposed addendum issued just a day or two prior to bid submission deadline, the ME submitted to the Architect a recommendation to specify a boiler capable of delivering 125 psi, but the Architect allegedly failed to include this recommendation in the addendum.

Boiler supplier, through MEP Sub, submitted shop drawings for a boiler which would only deliver 30 psi-- clearly in violation of the original performance criteria. No one among the MEP Sub, prime contractor, ME, or Architect caught this discrepancy during the shop drawing review process.

All Steamed Up Background, ct'd

The 30 psi boiler was delivered to the site and sat unpacked in its crate for several months.

One week before the project's Fall "soft opening" date, the MEP Sub unpacked the boiler and finally discovered the discrepancy.

Owner directed contractor to install temporary boiler in hotel. This lasted six weeks, necessitating a round-the-clock boiler watch, while design and construction team tried to figure out what to do. Ultimate resolution was to -- you guessed it -- add heat exchangers to the 30 psi boiler.

Owner's ultimate claim for this item topped \$650,000.

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All Steamed Up Discussion Questions

- 1. What are the relative rights and responsibilities of the parties in this situation?
- 2. Who had the "last clear chance" to correct the problem?
- 3. How could the Owner's alleged damages have been mitigated? What role could the Architect have played?

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Thank you for your time!

Questions?

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