

A wooden gavel with a fluted head and a smooth handle lies diagonally across a stack of US dollar bills. The bills are fanned out, showing various denominations including \$100 and \$500. The lighting is soft, highlighting the texture of the wood and the intricate patterns on the currency. The overall tone is professional and legal.

LITIGATION CASE STUDIES AND CONCLUDING REMARKS

Vancouver, May 11, 2018

CONSTRUCTION DEFECTS

- ▶ Google search for “Construction Defects” yielded over 1,700,000 hits in less than a second.
- ▶ The first page of the “Construction Defects” Google results page includes attorney firms and insurance providers.

OVERVIEW

The Law

Categories of Construction
Defects

Submittal Case Study 1

Submittal Case Study 2

Concluding Remarks



Henry VIII

- Henry VIII gave us the original Brexit: he took England out of the Church of Rome and established the highly distinctive part-Catholic, part-Protestant national Church of England. "This realm of England is an empire", a sovereign kingdom owing allegiance to nobody, be they Pope, Emperor or anyone else. Henry had truly 'taken back control'.
- 'Henry VIII powers' allow the government to change an act of parliament, or even to repeal it, after it has been passed and without the need to go through parliament a second time. These powers are always controversial, and never more so than in this age of Brexit.
- Henry declared that all crimes were crimes against the state (in other words the king) instead of crimes against others.
- These changes would affect western law for hundreds of years.

THE LAW

CATEGORIES OF CONSTRUCTION DEFECTS

The trial courts have recognized that construction defects are tangible and can typically be grouped into the following major categories:

Design Deficiencies

- ▶ Sometimes design professionals, such as architects or engineers, design builders and systems that, from a performance standpoint, do not always work as intended or specified.
- ▶ The motivation for the design may be form, function, aesthetics, or cost considerations, but the completed design could result and/or manifest into a defect.

CATEGORIES OF CONSTRUCTION DEFECTS

Material Deficiencies

- ▶ The use of inferior building materials can cause significant problems, such as windows that leak or fail to perform and function adequately, even when properly installed.
- ▶ Example: siding, windows, roofs, plumbing, HVAC

CATEGORIES OF CONSTRUCTION DEFECTS

Construction Deficiencies (Poor Quality or Substandard Workmanship)

- ▶ Poor quality workmanship often manifests itself as water infiltration through some portion of the building structure.
- ▶ Cracks in foundations, floor slabs, walls, dry rotting of wood or other building materials, termite or other pest infestations, electrical and mechanical problems, plumbing leaks and back-ups, lack of appropriate sound insulation and/or fire-resistive construction between adjacent housing units.

CATEGORIES OF CONSTRUCTION DEFECTS

Geotechnical Problems

- ▶ Different areas of North America have had a significant amount of expansive soil conditions.
- ▶ As a result of this type of terrain, there have been many problems when housing subdivisions and/or developments are built into hills or other sloping areas where it's difficult to provide a solid and/or stable foundation.

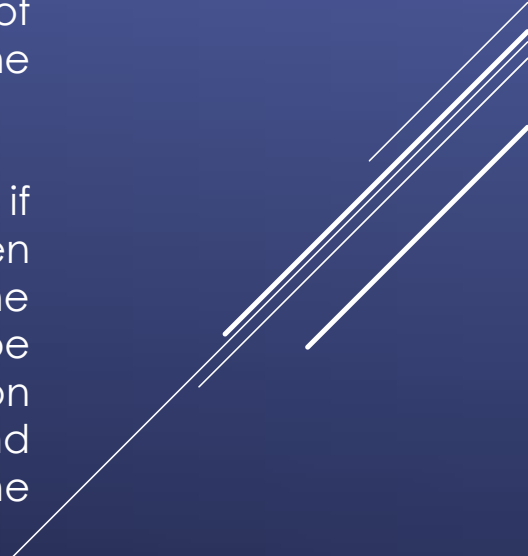
CATEGORIES OF CONSTRUCTION DEFECTS

Geotechnical Problems (cont.)

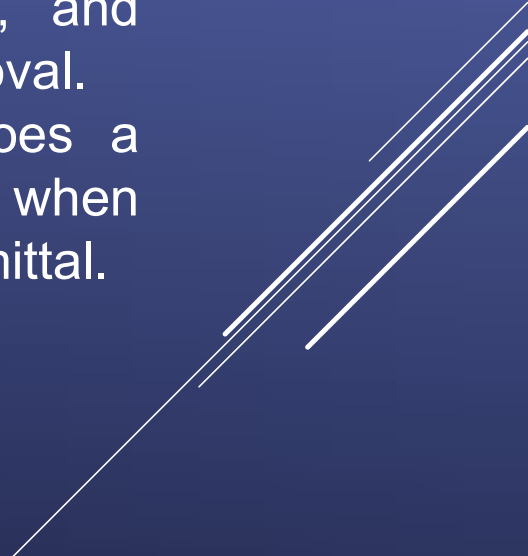
- ▶ If the subsurface conditions in these subdivisions and/or developments are not properly compacted and prepared for adequate drainage, problems will inevitably result, which can include vertical and horizontal settlement (subsidence), movement (expansion), slope failures, flooding, and in extremely wet/rainy climates, landslides, etc.
- ▶ These types of conditions typically lead to cracked foundations, floor slabs, and other damage to a building.

Case Study 1 Submittals

The Approval Process

- A general contractor is typically required to prepare a schedule of submittals. Similarly, the design professional should document, through their submittal log book, a list of those required submittals specified in each section within the project manual. Completing this task prior to the start of construction will enable the design professional to accurately track the status of submittals during the construction phase.
 - Problems may be manifested and a design professional may face liability if a project proceeds without the required shop drawings having been submitted or with shop drawings that contain errors. In both situations, the design professional's compliance with the standard of care might be questioned. If a specific aspect of the project was incorrectly illustrated on a shop drawing or if the design deviated from specified requirements, and it has been accepted by the design professional, compliance with the standard of care may again be questioned.
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Learning Objectives

1. The power of the submittal to set the standard for a project cannot be overstated. Proper submission of specified products is rare and contractors typically do not devote the time needed for this very important task. Too often substitutions, and products not listed by the architect are presented for approval.
 2. The most important questions to answer is when does a submittal actually become an approved submittal, and when does the approved submittal become an authorized submittal.
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SUBMITTAL PROCEDURES

DIVISION 1

- ▶ Contractor Review.
 - ▶ Review each submittal, coordinate with other Work, and check for compliance with Contract Documents. Verify field dimensions and conditions. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of completed Work. Note corrections.
 - ▶ Before submitting to Architect/Engineer, stamp with uniform approval stamp including reviewer's name; date of Contractor's approval; and statement certifying that submittal has been reviewed, checked, and approved for compliance with Contract Documents.

SUBMITTAL PROCEDURES

- It is the contractor's responsibility to ensure the subcontractors comply with the submittal requirements in Division 1 and in the specific divisions of work.
- The contractor must comply with the contract documents or assume responsibility of any changes that are made.

SUBMITTAL PROCEDURES

- Many contracts, including those provided by AIA, state that regardless of shop drawing and submittal approval, the contractor remains responsible to perform to the requirements of the plans and specifications.
- Section 3.12.8 of the AIA A201 contract states that the contractor is not relieved from responsibility for deviations in the contract documents by the architect's approval of submittals unless the architect has been given specific notice of the proposed deviation and gives written approval of it.
- It also provides that the contractor is not relieved of liability for errors or omissions in the submittals even if they are approved by the architect. There are many court decisions which have found work defective even though it was installed in accordance with approved shop drawings.



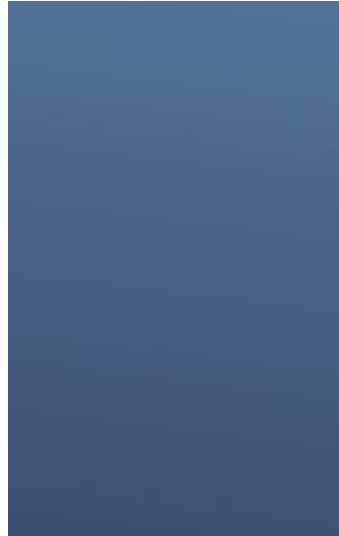
The curtainwall specification included provisions for both thermally-broken and non-thermally broken curtainwalls.

Because of cost issues, the non-thermally broken curtainwall was installed at the hospital.

Widespread condensation on the inside of the aluminum mullions occurs on colder days (frequent in the upper Midwest)

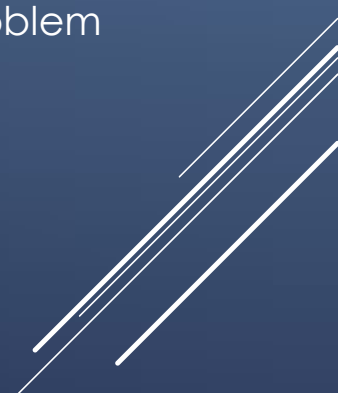
Patient complaints concerning the condensation issue have pushed the issue to the forefront of the hospital's decision makers.

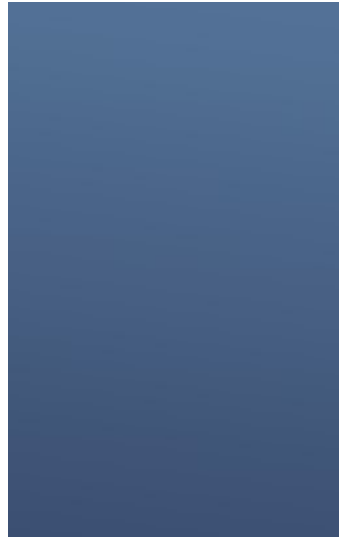
HOSPITAL FACILITY – MIDWEST CASE STUDY 1



- ▶ Condensation in spandrel area was worse than that experienced in the field of the curtainwall.
- ▶ Stained ceiling tile are regularly removed and replaced, however, the problem resurfaces quickly.

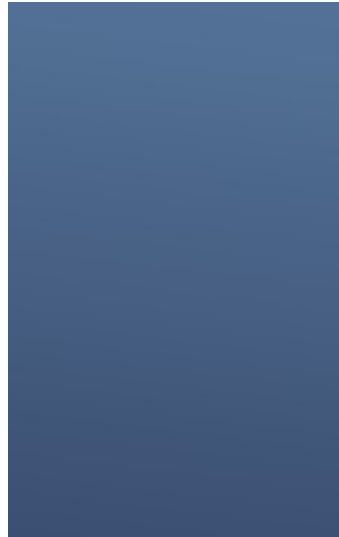
HOSPITAL FACILITY - MIDWEST





- Further investigation has revealed open flashings throughout the facility.

HOSPITAL FACILITY - MIDWEST



- ▶ Breaches in the system were exposed during visual investigations.
- ▶ A smoke pencil was utilized (destructive openings were not allowed) and the smoke infiltrated through the building envelope easily

HOSPITAL FACILITY - MIDWEST



- ▶ The General Contractor did not possess an approved submittal from the architect which authorized the curtainwall system submitted.
- ▶ In the absence of an approved submittal, the General Contractor is responsible for the products submitted.
- ▶ The products submitted do not meet the more stringent aspect of the specifications.

HOSPITAL FACILITY - MIDWEST

HOSPITAL FACILITY - MIDWEST

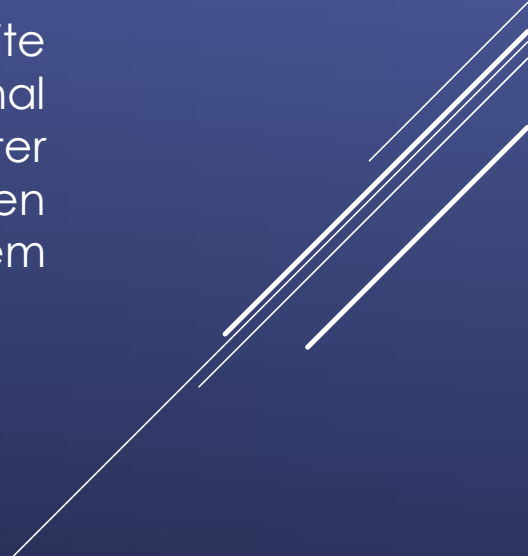
- ▶ Final notes:
 - ▶ Documentation by the designer/consultant is critically important. In this instance that documentation does not exist to support either entity.
 - ▶ A premise for the argument presented by the Contractor is that the curtainwall submitted met the budget on the project, and therefore acceptance by the design team and the owner amounts to tacit approval.
 - ▶ However, the owner did not possess the technical capabilities to make a decision such as this one. The courts have ruled that the responsibility for the under-performing curtainwall lies with Contractor (and possibly the design team).

- ▶ Remember this slide from the Session 2 presentation...
- ▶ The “fine print”...
- ▶ GC/CM Role And Responsibility
- ▶ § 3.3 SUPERVISION OF CONSTRUCTION PROCEDURES
- ▶ § 3.3.3 The contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the contractor.

CONTRACTOR'S RESPONSIBILITIES

Case Study 2 Submittals

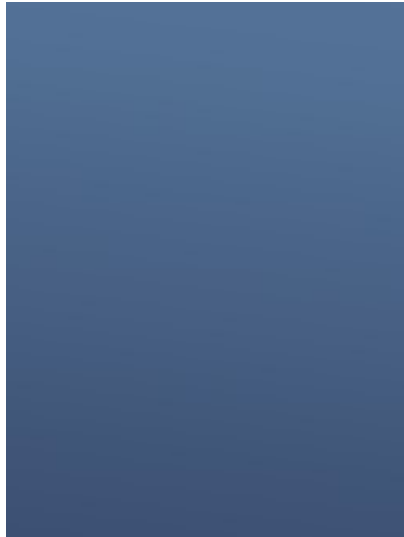
The Design Process

- What occurs when a general contractor is asked to become part of the design process? What are the legal ramifications of the general contractor and their subcontractors offering design assistance?
 - It is not uncommon for the contractors to offer details for site specific details when the need arises. However, when the original design is either rejected by the owner (which can occur after construction of the mock-up) or the design is not constructible, then design assistance by the contractor pool necessarily includes them in design liability.
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- A series of white lines of varying lengths and orientations are positioned in the bottom right corner of the slide, creating a modern, abstract graphic element.



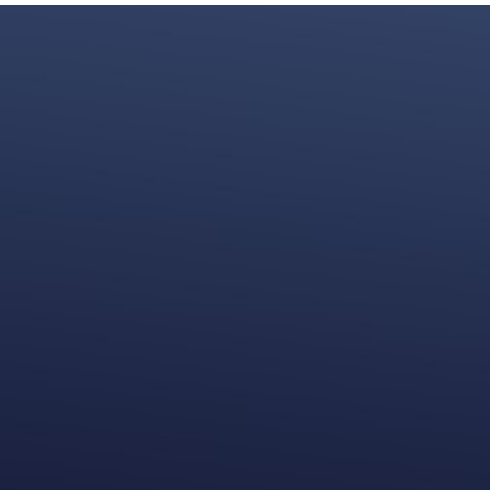
HOSPITAL FACILITY – SOUTHWEST

CASE STUDY 2

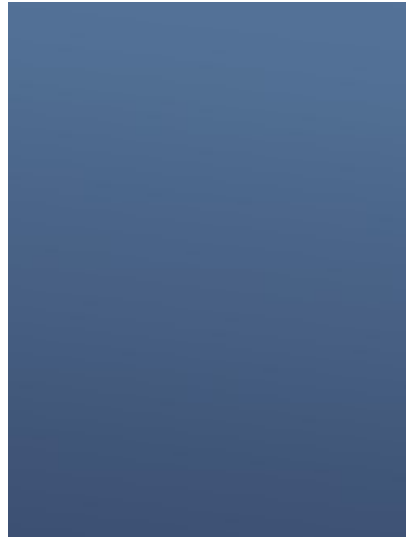


The cladding for the project consisted of copper and zinc cladding over framing and insulation

September 2010 – Massive rain event which exceeded the 500 year rain totals



HOSPITAL FACILITY - SOUTHWEST



The sheet metal subcontractor- a very experienced firm, recommended their copper shingle system

The framing for the copper was stainless steel strips fastened through the exterior insulation



HOSPITAL FACILITY - SOUTHWEST



Copper creates high heat, especially on south-facing elevations. The liquid asphaltic dampproofing was exhibiting signs of melting and breakdown

Fastening of the stainless steel framing strips through the insulation amounted to “blind fastening” with no way to repair missed holes



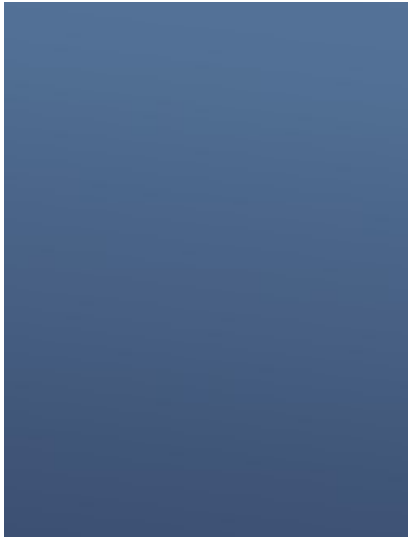
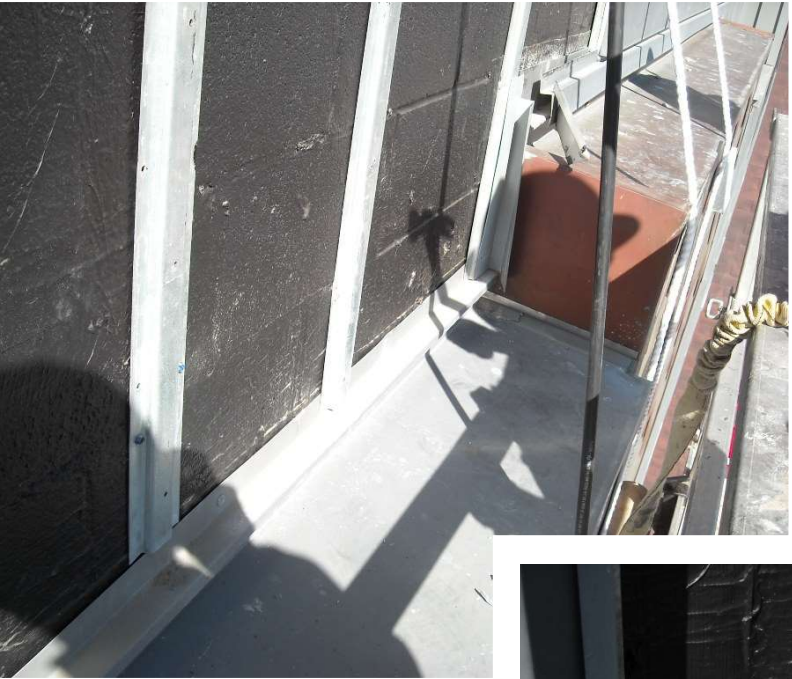
HOSPITAL FACILITY - SOUTHWEST



HOSPITAL FACILITY - SOUTHWEST

The zinc flashing at the top of the columns (and helipad connections) acted as funnel for water to enter into the cavity behind the metal cladding

The “gutter” design was not effective in draining water to the exterior of the cladding



The dampproofing for the exterior walls was actually recommended by the General Contractor and the Subcontractor

Tie-ins to the self-adhering flashing were not compatible

HOSPITAL FACILITY
- SOUTHWEST

HOSPITAL FACILITY - MIDWEST

- ▶ Final notes:
 - ▶ The design liability for the wall cladding was completely shifted from the Design Team to the General Contractor and their Subcontractors
 - ▶ The GC and their subs hired a building envelope engineer to provide calculations for wind resistance design and to evaluate the efficacy of the proposed system.
 - ▶ Even though the submittals were approved by the Architect-of-Record and the Owner's Construction Manager, the General Contractor and the Subcontractors were held liable for the final design.

CONCLUDING REMARKS

The following topics have been presented today using the “good-bad” example approach.

- Litigation Basics
- Roof Deck Considerations
- Behavior of Sealants
- Multifamily Construction
- Legal Case Studies – Concluding Remarks

Lesson learned?

Takeaways?

DISCUSSION

Open forum

Please add to the discussion by way
of example or comments

THANK YOU FOR YOUR
KIND INVITATION!

QUESTIONS?



Knowledge Experience Solutions

BUILDING EXTERIOR SOLUTIONS