🏛️ Law and Ethics in Engineering Practice

Lecture: Bonds, Arbitration, Lien Legislation, and Risk Management in Construction Law

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1. Bonds and International Performance Guarantees(Ch. 26)

What are Bonds?

- Surety agreements used mainly in construction and equipment contracts.
- Bonding company (surety) guarantees contractor's performance to the owner (obligee).
- If contractor defaults, surety indemnifies owner and seeks reimbursement from contractor.
- Bonds are **not insurance**; contractor's shareholders often guarantee surety's risk.

Types of Bonds:

- **Bid Bond:** Guarantees contractor's commitment to enter contract if awarded. If default, surety pays owner difference to re-tender.
- **Performance Bond:** Guarantees completion of contract obligations. If default, surety steps in to complete work.
- **Labour and Material Payment Bond:** Guarantees payment to subcontractors and suppliers if contractor fails to pay.

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2. Letters of Credit and Guarantees

- **Letters of Credit:** More common internationally; bank guarantee allowing owner to draw funds if contractor defaults.
- **Guarantees:** Parent company guarantees contractor's obligations.

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3. Arbitration and Alternative Dispute Resolution (ADR) (Chapters 28 & 29)

Mediation

- Neutral third party facilitates settlement discussions.
- Usually **voluntary** unless contract mandates or court rules apply.
- Confidential, flexible, non-binding.
- Goal: mutually beneficial resolution or narrowing issues for trial.

Arbitration

- Binding decision by a neutral arbitrator agreed upon by parties.
- More formal, involves hearings, legal arguments, evidence.
- Governed by procedural fairness and specific rules (e.g., CCDC, ICC).
- Arbitrator must be impartial, qualified, ideally knowledgeable in construction.
- Arbitration is usually private, quicker, less formal than litigation but with limited appeal.
- Costs typically borne by unsuccessful party unless arbitrator apportions differently.

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4. Dispute Review Boards (DRBs)

- Panels of impartial professionals monitoring project progress.

- Provide early dispute resolution and preliminary rulings.
- Usually three members: one appointed by each party, and a chair.
- Decisions are typically **non-binding**.
- Costs shared by parties.

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5. Lien Legislation (Chapter 30)

What is a Lien?

- A **statutory charge** against land improved by construction work.
- Protects subcontractors/suppliers who have no contract with the owner.
- Registered on title; restricts sale without lien settlement.

Purpose of a Lien

- Provides **security of payment** in construction, where work is often done on credit.
- Protects parties who supply labour/materials against non-payment.

Who Can Claim a Lien?

- Anyone supplying services or materials to an improvement (owner, contractor, subcontractor).
- Covers construction work, equipment installation, design services (e.g., engineering, architectural).
- Excludes non-lienable services like legal or property management services.

Enforcement of Liens

- Three-step process:

1. **Preserve the lien** by registration within a statutory time limit.
2. **Perfect the lien** by commencing a lawsuit and registering a Certificate of Action.
3. **Proceed with lawsuit** to enforce lien rights, potentially forcing sale of land.

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6. Substantial Performance

- Two-part test:
  1. Work ready for intended use (**Qualitative**)
  2. Cost to complete incomplete/defective work is below a calculated threshold (**Quantitative**):
     - 3% of first $1M
     - 2% of next $1M
     - 1% of remainder
- Certificate issued by payment certifier or parties, published publicly.

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7. Lien Expiry Timelines

- Vary based on claimant type (contractor vs. subcontractor/supplier) and publication of substantial performance certificate.
- Typically, liens expire **60 days after earliest of**: certificate publication, last supply date, contract completion/termination.

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8. Holdback and Trust Obligations

Holdback

- Mandatory retention of 10% payment by payers to cover lien claims.
- Maintained until lien expiry or resolution.
- Applies throughout construction payment pyramid.

Trust Obligations

- Statutory fiduciary duties requiring owners/contractors to hold funds for suppliers' benefit.
- Prevents misuse of funds before payment to entitled parties.

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9. Introduction to Risks in Construction (Ch. 25)

Project Delivery Systems:

- **Design-Bid-Build:** Traditional, owner contracts separately with designer and contractor. Fixed price easier to establish. Limited early contractor input.
- **Construction Management (Not at Risk):** Construction manager advises early, owner contracts directly with trade contractors. Good for fast-tracking. Owner becomes "constructor" under OHSA.
- **Design-Build:** Single entity responsible for design and construction. Good for fast-tracking and single-point responsibility but scope can be unclear early on.

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10. Contract Types

- **Stipulated Price:** Fixed price, design complete, risks quantifiable.
- **Unit Price:** Price per unit times quantity; quantity uncertain at signing.
- **Cost-Plus:** Contractor charges actual costs plus fee or percentage; used where risk unknown (e.g., renovations).

Summary

This module introduces key **legal tools** and **risk management strategies** in construction engineering practice — from **performance guarantees (bonds, letters of credit)** to **dispute resolution (mediation, arbitration)**, and the critical role of **liens** and **payment holdbacks** in securing contractor and supplier payment rights. Understanding **project delivery methods** and contract types helps align risk allocation and project goals.