**Contractual Issues**

- Ownership of Float: Owner or Contractor?
- Consequences of using float on an activity/path
- Progress Schedules
- Progress Payments
  - Itemized breakdown of contract price
  - Schedule of payments
- Delays and Liquidated Damages
  - Unavoidable delays: Change orders

**Money and Schedules**

- Contractor’s cash flow
  - Time value of money
  - Interest rates
- Cash Disbursements
  - Material, labor, equipment, subs
  - Insurance, surety, bonds, overhead

**Contract Provisions and Cash Flow**

- Payment Schedules:
  - Unit price contracts
  - Lump sum contracts
- Retainage
  - % withheld by the owner on every payment
- Materials
  - Lead times on delivery
- Mobilization
  - Depends on the contract
  - Monthly and Final Payments

**Cash Flow Analysis**

![Cash Flow Analysis Diagram](chart)

- Cumulative Sum of Disbursements and Revenues
- Retainage
- Cash Expenditures
- Revenues
- Project Duration (months)

**Time Cost Trade-offs**

![Time Cost Trade-offs Diagram](chart)

- Total Project Cost
- Indirect Costs
- Direct Costs
- Market profit losses
- Optimum Project Duration (months)