Project & Practice Management Topics

AIA Contracts:
A Series: Owner + General Contractor Agreements
B Series: Owner + Architect Agreements
C Series: Architect + Consultant Agreements (including joint ventures)
D Series: Industry Standard Documents
G Series: Contract & Office Administration Forms – bid documents log, change order, construction change directive

A101: Owner + Contractor Stipulated Sum
- Documents partners with A201
- Contract Documents =
  - Agreement
  - Conditions of the Contract – General, Supplementary
  - Drawings
  - Specifications
  - Addenda
  - Other listed documents
- Contract supersedes prior negotiations, representations or agreements, written or oral
- Date of the commencement of work is date of agreement unless other date is listed
- Contract time is measured from the date of commencement
- Set the date for substantial completion
- Call out provisions for liquidated damages or early completion bonuses
- Contract sum is called out in a lump sum amount based on:
  - Alternates
  - Unit prices
- Application for payment time period = 1 month ending on the last day of the month unless specified differently
  - Pay App based on the schedule of values supplied by the contractor
  - Indicate the % of work complete
- Progress Payment = % of contract sum complete – retainage + stored materials & equipment – previous payments
- Contractor shall not make advanced payments to suppliers for materials / equipment which has not been delivered & stored on site
- Final payment issued when
  - Contractor has fully performed contract requirements except correction of work AND
  - Final certificate of payment is issued by the architect
  - Owner to pay w/in 30 days of the final certificate of payment
- Contract Termination / Suspension called out in A201
- Identify Owner’s Representative, Contractor’s representative
  - Changes in these parties require 10 days written notice
- 3 original copies executed – owner, contractor, architect
A201: General Conditions of the Contract for Construction

- Time Limits of Construction:
  - Owner is responsible for determining the time limits for construction
  - Contractor is responsible for developing a construction schedule that documents the sequence of work to allow project to be completed w/in the owner’s time frame
- Subrogation:
  - Encourages the use of a waiver of subrogation to maintain relationships among project participants & minimize the opportunity for lawsuits
B141: Parts 1 & 2 Owner + Architect with Standard Form of Architects Services

Part 1

- General details of the project:
  - Detailed description of project
  - Project parameters
    - Objective / use of project
    - Physical parameters
    - Owner’s program
    - Legal parameters
    - Financial parameters – overall budget & cost of work excluding architect’s compensation
    - Time requirements
    - Proposed procurement or delivery method
- Owner is responsible for:
  - Furnishing a program setting forth owner’s objectives, schedule & space requirements & relationships
  - Render decisions in timely manner
  - Periodically update project budget
  - Furnish tests, inspections & reports
  - Furnish all legal, insurance & accounting services including auditing
- Architect is responsible for:
  - Submit for owner’s approval a schedule for the performance of architect’s services; including allowances for owner review periods & for AHJ reviews
  - Maintain confidentiality of info specifically designated by owner as confidential
  - Design in accordance with requirements of governmental authorities having jurisdiction over project
  - Entitled to rely on accuracy & completeness of info furnished by owner
- Cost of work = total cost of project
  - Does not include compensation to architect or architects consultants, cost of land, financing costs, etc.
- Additional Services:
  - Changes in instructions or approvals given by owner that require revisions to instruments of service (IOS)
  - Changes in codes, laws or regulations which require revisions to IOS
  - Decisions by owner not rendered in timely manner
  - Significant changes in project including size, quality, complexity, owner’s schedule or budget or procurement method
  - Failure of performance by owner or owner’s consultants
  - Attendance at public hearing, dispute resolutions, legal proceeding that architect is not a party to
- Instruments of Service (IOS):
  - Include sketches, models, drawings, specifications, CAD files & any other deliverables that help move project from an idea to a real building
  - Owner granted a nonexclusive license to the instruments of service for the purpose of constructing the project
  - Owner may not assign his license to any other party w/o the architect’s consent
  - Prohibits the owner from using the instruments of service for future renovation w/o the architect’s knowledge & consent
  - If the agreement btwn owner and architect is terminated, the license is terminated and the architect retains ownership
  - If the architect is judged to be in default through court or arbitration, the owner is given a new nonexclusive right to copy and use documents to complete the project with the assistance of another architect
• Mediation required prior to arbitration or litigation
  o Mediation fees shared equally
  o Held in place where project is located unless agreed upon
  o Resolutions are enforceable as settlement agreements
• Arbitration – used when mediation does not resolve issue
  o Demand for arbitration cannot occur after legal proceedings have been started
  o Arbitration relates to owner and architect only under terms of agreement
  o Award rendered by arbitrator is final
• Architect and owner waive claim for consequential damages
• Agreement governed by law in the principal place of business of the architect unless otherwise indicated
• No responsibility for hazardous materials
• Rights to use renderings & photographs in promotional & marketing materials
• Owner to provide professional credit to architect on owner’s promotional materials for project
• Termination / Suspension:
  o Owner failure to pay is cause for suspension
    ▪ Architect to provide 7 days written notice
      • Before resuming services architect shall be paid all sums due & expenses for interruption & resumption of work
    ▪ If project suspended more than 30 days by owner architect is due compensation for all services performed prior to suspension
      • Before resuming services architect shall be paid all sums due & expenses for interruption & resumption of work
    ▪ If project suspended more than 90 days
      • Architect can terminate agreement with 7 days written notice
  o Either party can terminate agreement based on substantial non-performance
  o Owner can terminate w/ 7 days written notice for convenience
    ▪ Architect is due compensation for all prior services, reimbursable expenses + termination expenses
    ▪ Termination expenses = expenses due to the termination of the project for which architect is not otherwise compensated PLUS amount for anticipated profit on the value of services not performed by the architect

Part 2 – Design & Contract Administration
• Architect’s project administration services
  o Manage architect’s services & administer the project
    ▪ Consult with owner
    ▪ Research applicable design criteria
    ▪ Attend project meetings
    ▪ Communicate w/ project team
    ▪ Issue progress reports
  o Prepare and periodically update a project schedule
    ▪ Identify milestone dates for owner decisions
    ▪ Design services provided by architect
    ▪ Document completion
    ▪ Construction
    ▪ Substantial completion
  o Prepare conceptual budget for cost of work
    ▪ If budget for the cost of the work is exceeded by the lowest bid the owner can:
      1. Increase the budget
      2. Authorize rebidding / renegotiating
      3. Terminate agreement
4. Cooperate in revising the project scope and quality
   o If owner selects this the architect w/o additional compensation shall modify the documents

- Owner Responsibilities to furnish:
  o program
  o surveys
  o geotechnical info

- Schematic Design Documents:
  o Establish conceptual design of project
  o Illustrate scale & relations of project components
  o Conceptual site plan, if applicable
  o Preliminary building plans
  o Sections
  o Elevations
  o Preliminary selections of major building systems & construction materials; noted on drawings or described in writing
  o Optional to include:
    ▪ Study models
    ▪ Perspective sketches
    ▪ Electronic modeling

- Design Development Documents:
  o Based on approved SD docs and updated budget
  o Refine the design of the project
  o Establish scope, relationships, form size & appearance of project
  o Plans
  o Sections
  o Elevations
  o Typical construction details
  o Equipment layouts
  o Specifications to identify major materials and systems and establish quality levels

- Construction Documents:
  o Based on approved DD’s & updated budget
  o Set forth in detail the requirements for construction
  o Include drawings and specifications that establish in detail the quality level of materials & systems

- Bidding / Negotiation

- Construction Administration
  o CA services begin with award of contract for construction & terminates with issuance of final certificate for payment
  o If CA services extend 60 days after substantial completion architect would be due additional compensation

- Architect shall furnish or provide the following only if specifically designated: (in other words excluded unless noted otherwise)
  o Programming
  o Land survey
  o Geotechnical
  o Space schematics / flow diagrams
  o Existing facilities surveys
  o Economic feasibility
  o Site analysis and selection
  o Environmental studies & reports
  o Owner supplied data coordination
- Schedule development and monitoring
- Civil
- Landscape
- Interior design
- Special bidding / negotiating
- Value analysis
- Detailed cost estimating
- On site project representation
- Construction management
- Start-up assistance
- Record drawings
- Post contract evaluation
- Tenant related services
C141: Standard Form of Agreement Between Architect & Consultant

- Consultants are responsible for code compliance for their areas of work
- Signing of documents makes consultant responsible for compliance with applicable codes and regulation
- Consultants are responsible for the accurate production of their own drawings and specifications; should check own documents for consistency
- Legally architect as prime consultant to the owner is liable to the owner for the consultants work

Know which areas are multiplied by 0.5. include basement and 0.5 of covered balcony

Legal Issues:
- Mediation: not legal. Just need mediator to reach agreement between each party
- Arbitration: this is legal technique for the resolution of disputes outside the courts, wherein the parties to a dispute refer it to one or more persons (the "arbitrators", "arbiters" or "arbitral tribunal"), by whose decision (the "award") they agree to be bound. Arbitration in the United States and in other countries often includes alternative dispute resolution (ADR), a category that more commonly refers to mediation (a form of settlement negotiation facilitated by a neutral third party). It is more helpful, however, simply to classify arbitration as a form of binding dispute resolution, equivalent to litigation in the courts, and entirely distinct from the various forms of non-binding dispute resolution, such as negotiation, mediation, or nonbinding determinations by experts.
- Litigation is lawsuit

Subrogation:
- Legal technique where a insurer “steps into the shoes” of a party to whom it has made a payment
- Example – damage to a property under construction caused by a subcontractor. Insurance covers the damage claim and then "steps into the shoes“ of the owner and sues subcontractor in the owner’s name

Fees:
Traditional Consultant Fee %:
- Mechanical – 15%
- Electrical – 12.5%
- Civil – 10.5%
- Structural – 9.4%

Methods of Calculating Compensation for Architectural Services:
Time Based Methods:
1. Multiple of Direct Salary Expense:
   -
2. Multiple of Direct Personnel Expense:
   - Include the salaries of people working on the job and their required benefits PLUS overhead and profit
   - Each hour spent working on the project includes a profit factor
   - Best for new clients with speculative work / minimizes the risk to the architect
3. Professional Fee plus Expenses:
   -
4. Hourly Billing Rate:
   -

Other Methods:
1. Stipulated sum:
   -
2. Percentage cost of the work:
   -
3. Square footage:
• Best used for repetitive projects with good historical time and expense data
4. Unit cost:
•
5. Multiple of Consultant’s Billings:
•
6. Royalty

**Utilization Ratio:**
• Used by firms to determine the amount of time spent on billable work as a percentage of total time the employee is compensated
• Used in the analysis of profitability & financial standing of a firm
• UR = billable hours / total hours
• Lower level employees have higher UR’s than PA’s & Managers b/c of overhead responsibilities like marketing, firm management, etc.

**Insurance:**

**Schedules are impacted by:**
1. Size of project
2. Complexity of project
3. Number of people working on the project
4. Client action / reaction time

**Types of Project Schedules:**
1. Gantt / Bar
2. CPM – Critical Path Method – sequence of events that must happen as scheduled for project to be completed on time
   • Float – range of time during which noncritical activities may start or end w/o affecting the overall schedule
   • Total Float – individual float times added together & does not influence the critical path time
• Full wall schedule – most likely to have the best commitment from the architects project team
• Bar chart
• CPM diagram
• Milestone

**Project Scope**

**Delivery Methods:**
1. Design – Bid – Build
   • Three prime players – owner, designer, builder
   • Two separate contracts – owner + designer; owner + builder
   • Typically involves competitively bid, lump sum construction contracts based on complete and prescriptive contract documents
   • Work is conducted in a linear sequence
   • Public work has traditionally used this method
   • Final contractor selection based on lowest responsible bid or total contract price
   • Established process with legal and procedural guidelines
2. Design – Build
   • Two prime players – owner, designer-builder
   • Single Contract – owner + design-build entity
• Design-build entity can be lead by either architect or general contractor
• Timing of agreeing on GMP varies by project
• Consolidated entity provides design and construction services to the owner
• Offers the owner a single source of responsibility
• Provides continuous execution of design and construction
• Phases overlap – design and build (fast track)

3. Construction Management at Risk (CM@R, CMc, CM/GC)
• Three prime players – owner, designer, CM@R
• Two separate contracts – owner + designer; owner + CM@R
• CM@R often provides preconstruction services during the design phase then takes on the financial obligation for construction under a specified cost agreement
• Frequently based on a GMP – guaranteed maximum price
• Timing for agreeing on a GMP varies by project
• CM@R contracts with the subcontractors who are bound only to the CM@R
• No contractual relationship between the designer & CM@R
• Phases will often overlap – design & build (fast track)

Contractor Selection Approaches:
• Typically based on price, qualifications, or a combination of the 2
• Qualification Selections:
  o RFQ – request for qualifications
  o RFP – request for proposal
  o Interviews to review bidders
• Low bid – based solely on the lowest total cost
• Best Value Bid – final selection based on weighting of total cost and other criteria sus as qualifications
• Fast Track – can reduce time of project from 10-30%

Project Team
Responsibilities of Consultants during major design phases of the project:

Construction Manager benefits a project:
• with fast tracked multiple prime contracts
• joins early in the design phase, allows owner to take advantage of construction expertise to minimize risks of major revisions later in the process
• may take on the role of construction administration

CM can act as:
1. advisor to the owner – no direct financial responsibility for the project
2. construction contractor – responsible for delivering a finished product for the agreed upon price

Risk Management

Limited Liability

Project Phases:
Traditional Phase %:
 SD - 15%
 DD - 15%
 CD - 35%
Bid - 5%
CA - 30%

Cost Projections:
Cost Factors:
1. Scope
2. Quality
3. Budget

Architect’s estimates can’t account for:
- Inflation
- Market conditions
- Contractor means & methods

Preliminary Costs – SF Cost Estimates; based on occupancy, size & type of construction
Detailed Costs – Itemized break down

BOMA Office Standards:
Rentable area calculations:
- When measuring from an exterior wall which is more than 50% glass, measure from the inside face of glass
- Measure to the centerline of demising walls
- Measure to the inside face of walls
- Rentable area includes a share of common restrooms & corridors
- No deductions are made for columns or projections necessary to the building

AIA Ethical Standards
- Code applies to all AIA members regardless of membership category
- Anyone may file a complaint
- Penalties for Violations:
  o Admonition (private) – letter of ruling sent to the parties and kept in the member’s file
  o Censure (public) – letter is sent and notification of the case and ruling is published to AIA membership
  o Suspension of membership – membership is suspended for period of time; 1 or 2 years & ruling is published
  o Termination of membership – membership is terminated & ruling is published
- Common ethics violations:
  o Attribution of credit
  o Accurate representation of qualifications
  o Attainment and provision of examples of work
  o Basic honesty

Architect’s Cost Estimates – Inclusions & Exclusions

FFE
Fixtures, Furnishings and Equipment

Joint Venture Agreement
Policy board
**Project Development Issues**

**Tax Increment Financing:**
- Method cities use to issue bonds to pay for improvements (new sewers, streets) within a specified district intended to stimulate development w/in the district
- During time of redevelopment taxes are based on the assessed value of the property prior to the redevelopment
- After the development, the increase in taxes due to the development (tax increment) is used to repay the bonds

**General Obligation Bonds:**
- Typically used to fund a specific project such as a library or fire station
- Not used to encourage private development
- All taxpayers in the jurisdiction issuing the general obligation bonds must pay off the bonds through a property tax so a voter majority is required

**Developer Impact Fees:**
- Generally used to fund infrastructure improvements made necessary by new developments
- Common method of raising money but can have a negative effect b/c developers look for areas with the lowest impact fees

**Business Improvement Districts:**
- Used to fund public space improvements (streetscapes) to enhance an area’s appeal and indirectly increase property values
- Taxes assessed to property owners in the district who would benefit from the improvements
- Not intended to encourage private development

**Ad Valorem Tax:**
- Tax based on the value of the property being taxed

**Debt Service:**
- Cost to pay off the construction loan for a project
- Considered an ongoing cost over many years, not part of the original project costs

Contractor’s Overhead & Profit typically = 15% to 40% of the construction costs

**Development Loan Types:**
- Blanket loan – used for the purchase of land that the developer intends to subdivide and resell; generally includes a clause that releases each subdivided plot from the loan as it is purchased and a portion of the debt is repaid
- Bridge loan – short-term loan used to close quickly on a property or to finance a project that must begin immediately while waiting on another lender to approve a long term loan
- Hard money loan – similar to a bridge loan; based on the value of the property against which the loan is made; amount of loan depends on the quick-sale value of the property or the loan-to-value ratio
- Mezzanine loan – often used by developers; large loan with variable interest rate that increases substantially near the time repayment is due; stock in developers company is used as collateral; loan requires gamble that property will produce enough revenue to repay the loan when the interest rates escalate
- Conventional mortgage – fixed or adjustable interest rate; secured by the property purchased; when debt is repaid borrower has clear title to the property
Location Factors for Construction:
- Sub-urban areas – lowest costs typically; well connected to urban areas
- Urban areas – highest costs, higher labor rates
- Rural areas – access and transportation affect costs
- Labor unions – increase labor costs greatly over "open shop"

Eminent domain:
- in common law legal systems is the inherent power of the state to seize a citizen's private property, expropriate property, or rights in property, without the owner's consent. The property is taken either for government use or by delegation to third parties who will devote it to "public use" or in some cases, economic development.
- The most common uses of property taken by eminent domain are public utilities, highways, and railroads. Some states require that the government body offer to purchase the property before resorting to the use of eminent domain

Deed Restrictions:
- restrictions on the deed that place limitations on the use of the property
- Restrictive covenants are an example of deed restrictions.
- Usually initiated by the developers - those who determined what the land would be used for, divided the land into plots, and built homes, office buildings, or retail buildings on it.
- Come with the property and usually can't be changed or removed by subsequent owners.
- Deed restrictions such as restrictive covenants are often put in place to maintain a desired look in a neighborhood. To that end, deed restrictions may prevent owners from building more than a pre-established number of homes on one lot. Deed restrictions can also specify what materials or style a building may or may not be constructed of, and how close to the street it can be. Deed restrictions can even specify the minimum size that a house on the lot may be! Deed restrictions govern more than just the construction of buildings on a property.

Restrictive covenants:
- in a residential neighborhood dictate what types of materials fences may be made out of, or establish limits regarding pets, such as how many pets can be kept in a home or the conditions they must be kept in.
- Covenants often protect the aesthetic appearance of the neighborhood by providing a list of acceptable paint colors for the exterior of the house, regulating tree-cutting and other landscaping issues, or prohibiting the use of the lot for storage of campers, trailers, or cars that don’t run.
- Covenants might also establish road maintenance or amenities fees

Amortization:
- process of decreasing or accounting for an amount over a period of time.
- Amortization (business), the allocation of a lump sum amount to different time periods, particularly for loans and other forms of finance, including related interest or other finance charges.
- Amortization schedule, a table detailing each periodic payment on a loan (typically a mortgage), as generated by an amortization calculator.
- Negative amortization, an amortization schedule where the loan amount actually increases through not paying the full interest
- Amortization is also used in the context of zoning regulations and describes the time in which a property owner has to relocate when the property's use constitutes a preexisting Nonconforming use under zoning regulations.
Building Efficiencies by Type:

55% - Hospital
60% - College, Student Union; Court House; Retail Stores
65% - Apartments; College, Class room & Admin
70% - Auditoriums; Banks; Restaurant
75% - Jails/Prisons; Office
80% - Department Store
85% - Garage, Service