

1.1 Ethics and Professional Conduct

Ethical Standards for Architects

- **NCARB Model Rules** (National Council of Architectural Registration Boards) first issued set of model rules of conduct in 1977. These rules are guided by core values as they pertain to the protection of the life, safety, and welfare of the public.
- **AIA Code of Ethics and Professional Conduct.** First established in 1909. Violation of a rule by an AIA member may be grounds for disciplinary action by the Institute. The code applies to all AIA members regardless of their membership category and is enforced by the AIA National Ethics Council. Only AIA members are obligated to comply with these standards. Important rules listed below:
 - Demonstrate reasonable care and competence
 - No payment or gift to public officials
 - Members shall not sign or seal drawings, etc.. for which they do not have 'responsible control'.
 - Members leaving a firm shall not, without the permission of their employer, take designs, drawings, etc.. Relating to the firm's work, whether or not performed by the member.
- Penalties for violating the code Include:
 - Admonition
 - Censure
 - Suspension of membership for a period of time
 - Termination of membership

4.2 Firm Legal Structure

Sole Proprietorship: An individual conducting business in an unincorporated format

- The simplest form of practice
- The individual and the unincorporated firm are legally one and the same
- Not required to file state documents and federal tax forms to conduct the practice, this is included in the individual's tax return.
- Unlimited personal liability for professional errors and omissions.
- Death or retirement of the proprietor terminates the proprietorship

Partnership: an unincorporated association of two or more persons or entities for the purpose of operating a business with the intention of making a profit.

- Most states have enacted the **Uniform Partnership Act** which establishes certain legal requirements for partners.
- Each partner has potential full liability for professional errors and omissions.
- Partnership files a separate federal tax return (called an information return), but it does not pay federal income tax on profits.
- Taxes are paid and recorded on individual income tax returns based on their share of the profits.

Corporations: separate legal entities that can conduct necessary business operations in their corporate name.

- The most complicated to establish and maintain.
- Corporation has its own federal tax number and is a separate taxable entity.
- Many legal requirements such as board of directors, shareholder meetings...
- Can be more stable because its existence transcends the individuals who own and manage it.
- 2 Types
 - **General Business Corporation:** may be formed for any legal purpose and are subject to state requirements.
 - **Professional Corporation:** established specifically to provide professional services and subject to restrictions in the professional corporation statute. Does not protect individual stockholders or employees from professional liability
- The personal assets of shareholders cannot be reached to satisfy corporations business debts but the architect can still remain professional liable.
- Ownership transition is fairly easy to achieve

- **Buy/Sell Agreement:** the usual method for compensating departing shareholders.
- **Subchapter 'S' Corporation:** shareholders are taxed on their pro rata share of the corporation's income.

Limited Liability Companies (LLC): complex hybrids of corporations and partnerships.

- Classified as a partnership for federal tax purposes
- Owners of LLC are called *Members* and they have limited personal liability.

9.4 Dispute Resolution Methods

Arbitration

- Preferred method of dispute resolution.
- AIA was one of the founding members of the **American Arbitration Association (AAA)** in 1926.
- Benefits of Arbitration:
 - Dispute is resolved by an arbitrator who is knowledgeable in the construction industry, not a judge or jury who may know nothing about construction.
 - Fee proportionate to amount of claim. (Administrative fees are high but trial fees lower than litigation)
 - Disputes can be resolved in weeks or months, rather than years for litigation.
 - Certain amount of privacy in the resolution, compared to very public trials.
- Arbitration Process:
 - One party files a "demand for arbitration"
 - The other party then has 3 options
 1. File answer in response to allegations
 2. File a counterclaim
 3. Do nothing and the AAA will consider the demand to have been denied.
 - AAA appoints case administrator and sends a list of prospective arbitrators with extensive construction industry experience. One or both parties can object to a particular arbitrator with good reason.
 - Pre-hearing conference to discuss schedule and process between both parties for upcoming arbitration.
 - Hearing is held and follows a court-proceeding type format
 - Arbitrator will "close the record" and render a decision within 30 days.
- There are very narrow, if any grounds for turning over an arbitrator's decision
- 3 Different Arbitration Procedures:
 - **Fast-Track Procedures:** For cases involving \$75,000 or less, only 1 arbitrator is selected and hearing is held within a short period of time. The entire process is completed fairly quickly, within a few months.
 - **Standard Track:** For cases between \$75,000 and \$1 million. 1-3 arbitrators are selected, hearing held 6-9 months from the prehearing conference.
 - **Large Case Track:** Involves multi-million dollar disputes. Discovery is permitted and time period is even longer

Mediation

- Emerged within the last 10 years as an alternative to arbitration.
- Mediation must be agreed upon by both parties and is also administered by the AAA.
- The Mediator assists the parties in settling the dispute to avoid court or arbitration.
- Benefits of Mediation:
 - Mediation session is very quick, typically taking only a single day.
 - Allows relationships to be maintained.
 - Privacy; there is no discovery or hearing
 - Filing fees are very minimal
- Mediation Process:
 - One party files a "demand for mediation"
 - Parties agree upon the selection of a mediator or the AAA appoints a mediator.
 - Mediator holds a pre-mediation telephone conference and schedules date for mediation (usually within 60 days of conference)
 - Within this time parties may submit information to mediator to educate him/her about the dispute, this information can be submitted confidentially without knowledge of the other party.
 - At Mediation session, parties exchange positions and mediator separates parties into different rooms to begin "**shuttle diplomacy**" during which offers are exchanged and counteroffers considered.
 - Parties must decide whether to accept or reject solutions suggested by the mediator.

- Once an agreement is reached, a written settlement agreement is drafted. If an agreement is not reached, parties may proceed to an alternate method of binding dispute resolution.

Dispute Review Board

- Very similar to arbitration except that the dispute review board is generally appointed at the beginning of the project before any disputes arise.
- Pros: The board is already familiar with the project, therefore, a decision can be reached quickly.
- Cons: High cost associated with involving these individuals from project onset; only practical on the most expensive construction projects.

11.1 Defining Project Services

Basic vs. Additional Services

- According to B101-2007, Standard Form of Agreement Between Owner and Architect:
 - Basic Services:
 - Schematic Design thru Construction Phase
 - Preliminary evaluation of the owner's program, schedule, budget, site, and proposed method of project delivery.
 - Providing an estimate for the cost of work beginning with SD and continuing through CDs
 - Assisting the owner in analyzing the bid results.
 - Includes making inspections for substantial and final completion
 - Includes site visits at "intervals appropriate to the stage of construction"
 - Reviewing RFIs and Payment Applications
 - Additional Services (added to contract at signing):
 - Site Evaluation & Planning
 - Historic Preservation
 - Commissioning
 - LEED Certification
 - Architectural Interior Design
 - Furniture, Furnishings, and Equipment Design
 - Additional Services (become necessary during the course of project... added later):
 - Revisions due to enactment of new codes, laws, or regulations
 - Revisions caused by changes in initial information from owner or non-timely decisions
 - Preparation for and attendance at public hearings or dispute resolution proceedings
 - Evaluation of substitutions
 - Preparing drawings for alternate bid or proposal requests
 - Assisting the owner in determining the qualifications of specific bidders
- 2007 Series AIA Owner-Architect Agreements
 - B102-2007, Agreement between Owner and Architect without a Predefined Scope of Architect's Services
 - B103-2007, Agreement between Owner and Architect for a Large of Complex Project
 - B104-2007, Agreement between Owner and Architect for a Project of Limited Scope
 - B105-2007, Agreement between Owner and Architect for a Residential or Small Commercial Project.
 - B201-2007, Scope of Services: Design and Construction Contract Administration.
- Never proceed with services that are considered "additional" without first requesting and receiving owner approval for further compensation.

11.2 Architectural Services and Compensation

Risk Assessment and Pricing

- Consider the following potential risks when drafting architectural services proposals:
 - Process of client decision making and approvals; who will be making the decisions and in what amount of time will a decision be reached
 - Potential for scope changes
 - Will there be involvement from a third-party project manager? This can complicate the process.
 - Fast-track and construction-driven delivery schedules are most costly and difficult to coordinate.

- If construction estimates will be provided by a third party risk increases. Architect should retain parallel estimating capability and include budget contingencies for uncertainties.
- Make sure the owner understands the standard of care for design and technical coordination... that they don't expect perfect construction documents and are willing to pay for additional costs due to normal coordination issues.
- Confirm client's financial resources and ability to pay.

Compensation Options

→ Fixed (Stipulated Sum) Fees:

- A firm compensation amount related to a particular scope of services.
- Appropriate when services can be precisely defined
- Offer the greatest profit potential to the firm.
- To avoid risk of cost exceeding fixed fee budget, a contingency amount should be included.

→ Hourly Billing Rates and Fee Multipliers:

- The most flexible fee option for architects and clients
- Preferred when no exact scope of services can be defined.
- Often used for the preliminary phases and later converted to fixed fees.
- Limited profit potential because of planned profit percentage.
- Avoid Fixed fee with hourly cap, this is a no-win option.
- **Fixed dollar rates** (e.g. \$125 per hour) to cover direct salary cost, fringe benefits, overhead & profit. Rates can be structured by staff position, allowing further flexibility.
- **Fee Multipliers:**
 - **Multiple of Direct Salary Expense (DSE):** salary expense is multiplied by a factor that covers fringe benefits, overhead, & profit.
 - **Multiple of Direct Personnel Expense (DPE):** staff fringe benefits are part of the DPE base and not the multiplier.

→ Cost plus Fixed Fee:

- An hourly fee option in which a client is billed for the actual cost of an architect's effort (base salaries, fringe benefits, and firm overhead) on a rate or multiplier basis, and a fixed fee is negotiated as the firm's profit.
- Limit profit potential but greatly reduce risk of losses
- Desirable for client because they avoid substantial contingencies in a fixed-fee proposal due to unknowns.

→ Unit Cost Methods:

- Price based on cost per square foot, room, store, building, or other unit.
- Often used for office planning, interior design, and hotels.
- Requires accurate and timely data for cost.

→ Percentage of Construction Cost:

- Ties the architect's compensation to the budgeted or actual construction cost of a project. This method is infrequently used.
- Assumes that construction cost is directly proportional to the architect's effort (often false)
- Penalize architect's for their efforts to reduce construction cost.
- Could give client impression that architect intentionally would drive up cost of construction to increase fee.
- Can create an adversarial relationship between client and architect.
- Often converted to a fixed-fee structure once scope and budget are confirmed (CD phase)

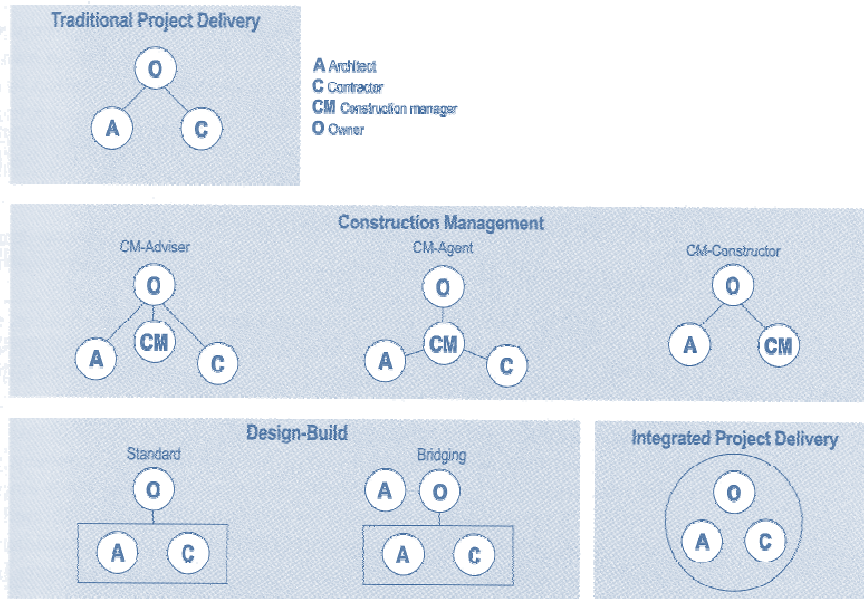
→ Outcome-Based Value Pricing:

- Architect can tie their compensation to revenue, cost, or profitability results achieved by the proposed project.
- Examples: sales in retail facilities, leasing success in housing or commercial office development.

→ Reimbursable and Non-reimbursable Direct Costs:

- Consider other direct costs that are related to the work, but not covered in the firm's overhead structure.
- Includes travel, mail and courier services, printing, photography, materials, or equipment.

11.4 Project Delivery Methods



Key Players

- **Owner:**
 - Can be an individual, organization, or other entity
 - The eventual owner or operator of the finished facility who is responsible for paying the cost of constructing the building.
- **Architect:**
 - Designs, documents, and typically administers the contract(s) for construction of the project.
- **Contractor:**
 - Responsible for the actual construction of the project.
 - Team may include subcontractors, suppliers, and fabricators.

Key Factors Affecting Delivery Choice

An increase in one parameter below implies a change to another

- Construction Cost
- Schedule; critical when interest rates are very high.
- Building Quality
- Project Scope: the combined characteristics of size and quality, often modified several times throughout the process.
- Risk: For the owner, architect, & contractor.
- Client Capabilities

Project Delivery Methods

- **Design – Bid – Build**
 - Involves a linear design sequence that results in a set of construction documents for which contractors submit fixed-price bids.
 - Lowest bidding contractor is usually selected to build the project.
 - **Negotiated Select Team:** a variation in which the contractor (and sometimes subcontractors) is selected early in the design process. Select portions of the building that may be difficult to fabricate or construct may be accelerated under this method.
 - **Cost Plus Fixed Fee:** A variation useful when the scope is unpredictable. The contractor is selected at the completion of CDs and is paid actual labor and material costs plus a fee for coordination of trades.
- **Construction Management**
 - Created in response for owner demand for detailed construction and technical advice early in the design process.
 - 3 Different Construction Management Roles:
 - **CM – Advisor:** CM consults on constructability and cost management during design and construction process but does not construct the building. Cannot act on behalf of the owner. Projects can then be delivered under any of the standard delivery methods.

- **CM – Agent:** Provides early consulting and may act on behalf of the owner. Typically provide services at a fixed fee and pass savings and overruns directly to the owner.
 - **CM – Constructor:** CM as advisor transitions into the role of contractor. Frequently use Guaranteed Maximum Price (GMP). A bit of conflicted interest in that the CM is both the estimator and the contractor; this can be eliminated by requiring the CM to provide an open book of their cost estimates throughout the process. Also known as “CM at risk”.
 - **Project Schedule:** prepared by the Architect, establishes dates for completing the design, contract documents, and construction work.
 - **Construction Schedule:** prepared by the Construction Manager during the construction documents phase. Should be included in the specifications for bidders.
 - **Architect as CM:** benefits include:
 - Reduced project costs
 - Substantially reduced construction time.
 - Daily job site representation by the architect.
 - A single source of responsibility
 - Avoidance of adversarial relationships between architect and prime contractors.
 - Increased earnings for the architect.
 - Cons: increased liability and responsibility for job site safety
- **Design Build**
- Provides the owner with a single-point responsibility for both design and construction.
 - A single contract is established between the owner and the design-build entity.
 - Typically includes a fixed price for both design services and construction costs.
 - In theory there is no true owner’s agent in this delivery method.
 - **Bridged Design-Build:** A variation in which the owner hires one architect to do the preliminary design and establish a performance spec. This concept and criteria package is then handed over to the design-build team to complete technical drawings and construction.
 - Roots of Design-Build go back to Imhotep, the Egyptian architect and master builder who designed the Step Pyramid.
- **Privately Financed Initiative**
- Becoming popular in Great Britain and Canada
 - Consolidated teams of design, construction, development, and building operations compete to deliver and operate completed buildings for extended periods up to 50 years.
 - Owner pays a yearly fee in exchange for the use of these buildings.
 - Often used when the government does not wish to spend capital on building construction and operation.
 - Also known as ‘**Build-Operate-Transfer**’ model in Canada
- **Project Alliances**
- Experimenting with a delivery model where the entire design team (designers, contractors, subcontractors) are bound together in a single contract that holds each jointly responsible for the project and rewards all for its success.
 - Full support required of all members because financial success relies on mutual cooperation.
- **Integrated Practice:** the term given to the virtual design and construction process that is made possible by Building Information Modeling (BIM)

12.1 Programming

- The research and decision-making process that identifies the scope of work for the architect’s basic services.
- Other terms for this process: “scoping” & “briefing.”
- Steps for Programming
 1. Research the project type
 2. Identify goals and objectives
 3. Gather and analyze information
 4. Identify programmatic strategies
 5. Establish Quantitative requirements
 6. Synthesize the design criteria
- **William Pena** is the father of architectural programming.
- Facility goals can be organized into categories: Time, Economy, Form, Function, & Operation
- **Flow Diagram:** A diagram developed with the client to demonstrate needed adjacencies and traffic patterns to understand how people and materials will move through the facility.

- **NASF:** Net Assignable Square Footage
- **GSF:** Gross Square Footage
- Project Cost averages 1.3 times the Construction Cost.

12.3 Construction Documents

- **Project Documents:** consists of the Project Manual and the Project Drawings
- **Project Manual:** includes bidding requirements, contract forms & conditions, & specifications.
- **Bidding Documents:** includes the project manual and drawings, as well as revisions & clarifications to them, including addenda.
- **Contract Documents:** includes everything but bidding documents.
- Construction means, methods, techniques, sequences, procedures, and site safety are the responsibility of the contractor.
- Architect's Responsibility: **assist** (not responsible for legal advice) the owner in the development and preparation of:
 - Bidding and procurement information
 - The form of agreement between the Owner and the Contractor
 - The conditions of the Contract for Construction
- Owner's Responsibility: furnish necessary legal, accounting, and insurance services to accomplish the project.
- Procedural & Administrative Information: typically found in the following locations
 - Conditions of the Contract , contains provisions common to most projects
 - Division 01 of the Specifications, expands on the information
 - Opening articles (Part I) of the specifications in Division 02 – 48, info specific to elements in that section
- Statements on quality and workmanship are made in the Specifications; notes on the drawings should be limited to the minimum needed to convey design intent clearly.
- CSI MasterFormat for Specifications:
 - 00 Procurement and Contracting Requirements
 - 01 General Requirements
 - 02 Existing Conditions
 - 03 Concrete
 - 04 Masonry
 - 05 Metals
 - 06 Wood, Plastics, and Composites
 - 07 Thermal and Moisture Protection
 - 08 Openings
 - 09 Finishes
 - 10 Specialties
 - 11 Equipment
 - 12 Furnishings
 - 13 Special Construction
 - 14 Conveying Equipment
 - 21 Fire Suppression
 - 22 Plumbing
 - 23 HVAC
 - 25 Integrated Automation
 - 26 Electrical
 - 27 Communications
- 3 Part Spec Format:
 - General
 - Products
 - Execution
- Types of Specifications:
 - **Descriptive Specifying:** describing exact characteristics of materials and products without listing proprietary names
 - **Performance Specifying:** specify the end result required and allow contractors, manufacturers, and fabricators the flexibility and creativity to meet the requirements.
 - **Reference Standards:** references standards published by industry associations and testing organizations such as:

- ANSI (American National Standards Institute)
- ASTM (American Society for Testing & Materials)
- UL (Underwriters Laboratories)
- **Proprietary Specifying:** specify specific product i.e. make & model
- **Restrictive Specifying:** determine how restrictive the spec will be; will they only permit one manufacturer's product or list approved alternates. Publicly funded projects require full and open competition.

12.4 Bidding or Negotiation Phase

- **Performance Bond:** provides a guarantee that, if the contractor defaults or fails to perform, the surety will either complete the contract in accordance with its terms or provide sufficient funds for such completion.
- **Labor and Materials Bond:** Sometimes referred to as a payment bond, a labor and material bond constitutes a guarantee that sub-contractors, material suppliers, and others providing services to the project will be paid. It protects the owner from claims.
- **Addenda:** issued to modify or interpret the bidding documents before bids are received or the contract executed.
- **Bid Bond:** Sometimes requested by the owner, a monetary amount that guarantees that, if a bid is accepted within a certain time frame, the bidder will enter into a formal agreement with the owner. If the bidder withdraws, the owner keeps the amount of the bid bond.
- The owner typically has the right to reject any or all bids.

12.5 Construction Contract Administration

- The architect makes "observations" during scheduled site visits but makes only two "inspections" to determine substantial and final completion toward the end of the project.
- **Substantial Completion:** issued when the project is complete enough to serve the owner's intended use.

16.0 Types of Agreements

- To establish liability against an architect for damages, the law requires reasonable proof that the architect failed to provide the usual and customary professional care. Therefore, the architect's professional liability insurance will only cover the architect for the consequences of the architect's "negligent" acts or omissions.
- **Boiler Plate:** A generalized piece of writing that can be used over and over again without any modification. Architect's should be leery of such provisions written in by the owner in the contract such as "the Architect shall comply with all Lender requirements." Because of the generalization and unknowns, this adds undue risk to the architect.
- Architect is **NOT** responsible for construction means, methods, techniques, and safety.
- Architect is **NOT** responsible for Hazardous Materials, including asbestos.
- Architect assumes primary contractual responsibility to the owner for the accuracy and completeness of the work of the architect's consultants.
- **Architect-Consultant Agreement** passes down the architect's rights and responsibilities to the owner and also shares risk and rewards.
- It is the owner's responsibility to provide any necessary land surveying and geotechnical engineering data to the architect.
- **Joint Venture:** a contractual union between two or more firms for one or more specific projects.
- **Associated Professional Firms:** two professional firms can choose to represent themselves as "associated" with each other to undertake a project. This can be done by either forming a joint venture or by establishing a consultant-subconsultant relationship.