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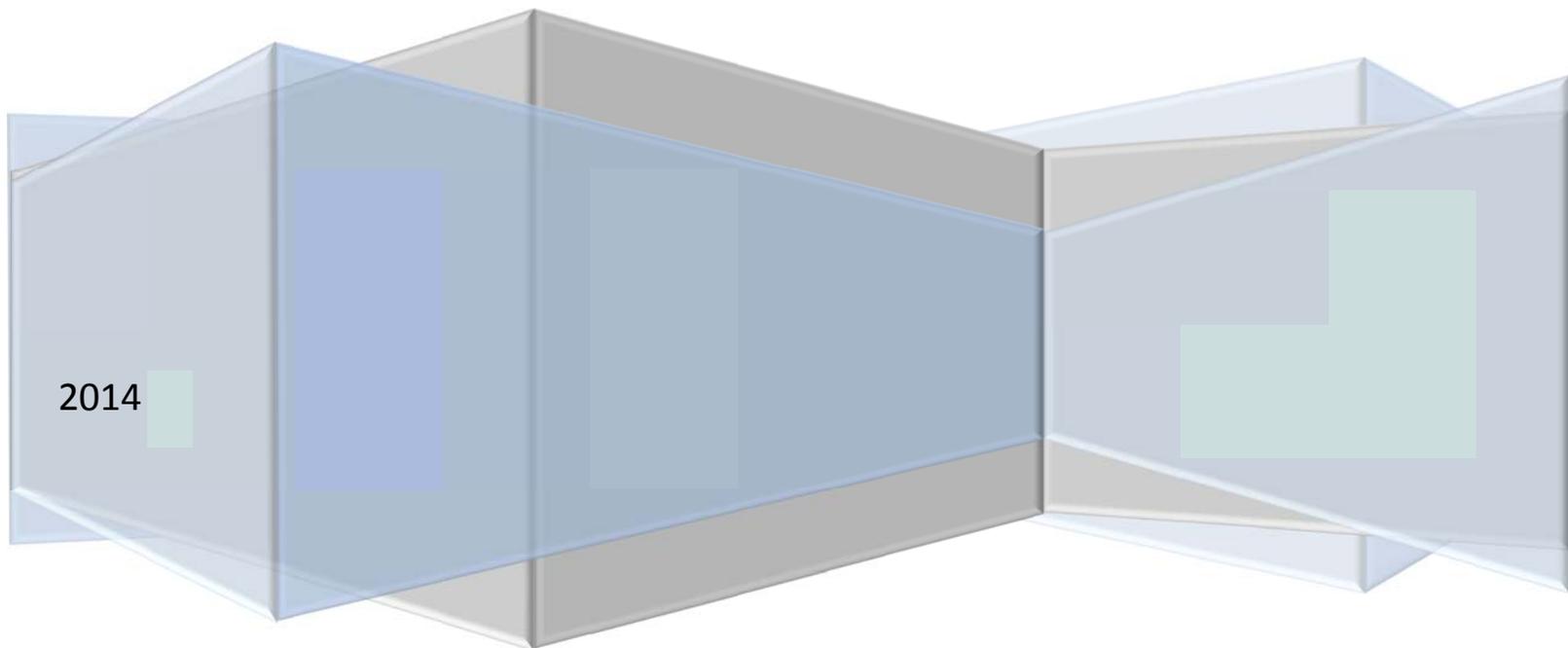
NAWIC Education Foundation

CONSTRUCTION ENVIRONS

A Certified Construction Associate course



2014



CONSTRUCTION ENVIRONS

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CERTIFIED CONSTRUCTION ASSOCIATE

Note to the Student

This CCA Textbook contains all the information needed to prepare for the examination leading to certification. Supplemental information, over and above this material, and those demonstrated in the 'Making it Practical' sections of the text may be used for reference purposes only.

Similarly, personal and professional experiences may vary or differ from the program content. For that reason, personal and professional experiences should be treated as any other supplemental information or references. Please note that any supplemental materials and those discussed in the "Making it Practical" sections of the text **are not** included in the examination leading to certification.

CONSTRUCTION ENVIRONS
Section A – Ethics and Marketing

CONSTRUCTION ENVIRONS

Section A – Ethics & Marketing

Lesson 1 - Ethics

After completing this lesson, you will be able to:

Objectives

- Define ethics
- Distinguish ethics from morality and law
- Discuss the relationship of ethics to business
- Give examples of codes of ethics

Individuals engaged in many pursuits prefer being called "professionals", or at least like being members of a "profession". Construction is no exception. While the requirements of a profession are met to varying degrees in different occupations, striving toward professionalism probably has desirable effects. Of particular interest here is the requirement of a code of ethics in a profession, but note the other requirements of a profession in this description by Lloyd Bluach in his article on professional education in the twenty-third edition of the [Encyclopedia Americana](#):

The professions are not always sharply distinguished from other vocations and occupations. In general, however, they may be described as occupations that provide highly specialized intellectual services. These occupations, at their best, possess three principal features: (1) a body of erudite knowledge, a set of attitudes and a technique which are applied to the services of mankind through an educated group; (2) a standard of success measured by accomplishment in serving the needs of the people rather than by personal gain; and (3) a system of control over the practice of the calling and the education of its practitioners through association and codes of ethics.

Even with codes of ethics, professional construction managers find a need for guidance regarding ethics. Ethics constitute one of the gray areas in business behavior; that is, answers are not always clear. This lesson will be devoted to several topics related to ethics in business. A definition of ethics will be discussed. Efforts to ensure ethical conduct will be examined, and an attempt will be made to show the relationship of ethics to profits. Finally, examples of specific codes of ethics will be presented.

Ethics Defined

Webster's Dictionary gives the definition of ethical as "conforming to professional standards of conduct". This conformity is an application of the definition of ethics itself to human behavior. Ethics are defined as "Science of moral values and duties; the study of ideal human character, action and ends". The definition continues by asserting that ethics are "moral principles, quality or practice". For the purpose of this course, a single definition of ethics suffices:

CONSTRUCTION ENVIRONS

Section A – Ethics & Marketing

Lesson 2 - Social Responsibility (Part I)

After completing this lesson, you will be able to:

Objectives

- Express a descriptive definition of social responsibility
- List representative socially responsible actions undertaken by companies in the United States
- Relate business management functions to the social responsibilities of businesses

The determination of social responsibilities is one of the most basic decisions a construction manager must reach. Practically all business functions are affected, directly or indirectly. The decision involving social responsibility lends purpose to the manager and his/her firm and helps to justify and ensure their continued success. Moreover, many lesser considerations hinge on this basic decision. The very purpose of the firm is one of the issues involved. Many individuals and groups are affected by the decision, as are the economic, political, and social systems. The issues raised do not lend themselves to precise analysis and unassailable answers, but solutions, however tentative, are imperative.

The expression, "social responsibility" is widely used and accepted. Its precise meaning is difficult to state because of its use in different contexts, but a fairly acceptable definition is that social responsibility refers to the obligations that a business has to the various elements of society (stockholders, employees, customers, the government, and others), usually over and above a single-minded dedication to profit maximization. Though these responsibilities may take many forms, and each organization will have to decide on its own contributions, a fairly comprehensive list of what companies are doing has been prepared by the Committee for Economic Development and is incorporated in the following list. Careful examination of this list will reveal the scope and variety of socially responsible actions undertaken by companies in the United States:

1. Economic Growth and Efficiency
 - a. Increasing productivity in the private sector of the economy
 - b. Improving the innovativeness and performance of business management
 - c. Enhancing competition
 - d. Cooperating with the government in developing more effective measures to control inflation and achieve high levels of employment
 - e. Supporting fiscal and monetary policies for steady economic growth
2. Education
 - a. Direct financial aid to schools, including scholarships, grants, and tuition refunds
 - b. Support for increase in school budgets
 - c. Donation of equipment and skilled personnel
 - d. Assistance in curriculum development
 - e. Aid in counseling and remedial education
 - f. Establishment of new schools, running existing schools and school systems
 - g. Assistance in the management and financing of colleges

Lesson 3 - Social Responsibility (Part II)

Objectives

After completing this lesson, you will be able to:

- List social responsibilities which pertain to managers

Certain of the social responsibilities that construction managers accept may be observed and, to an extent, their rationale may be stated. Part of this rationale is based on the source of managerial authority.

Source of Managerial Authority

The authority of managers is most realistically seen as flowing from society. Society, in attempting to operate in an organized fashion, has agreed to certain laws and their enforcement. The state was formed for this purpose, among others. The law of contract and the law of private property allow business firms to be established and employees to be hired. The force of these laws, in addition to the natural behavior of people, is generally sufficient to achieve obedience on the part of the employees. Thus, society allows business firms to operate. If managers of these firms do not exhibit socially responsible behavior, this right may be withdrawn or limited to whatever extent deemed necessary. Managers must be alert to the needs of society, from whence their authority flows. Managers can no longer justify their actions simply by claiming the rigors of competition.

Managers and Stockholders

The changing legal relationships between managers and stockholders indicate the requirement that managers represent only the stockholders is diminishing. The growth of large corporations and the consequent separation of ownership and management have also weakened the relationship of managers and stockholders. In large corporations, stockholders frequently are not very influential in corporate affairs. While most construction firms are privately held companies, it is important to understand the dynamics of publicly held firms.

Great dissatisfaction is usually expressed by selling the stock but this solution is not sufficient because of the financial loss that may result. If enough stockholders sell their stock, financial pressure is brought to bear on the managers. In general, stockholders appear to be satisfied with a dividend policy that provides cash rewards but also allows for company growth. Reasonable safety of investment, relative to rate of return, is also desired. For intelligent investing, stockholders need to be fully informed. In addition, managers should see that abuse by, or to, a minority of stockholders does not exist.

Lesson 4 - Public Relations Defined

Objectives

After completing this lesson, you will be able to:

- Define public relations
- Distinguish public relations from promotion and publicity
- Identify the role of public relations in the marketing effort

All organizations depend for their existence on the goodwill of people. This fact is much more true today than ever before and is likely to become even more important as we continue to become a more complex society. Once individuals were relatively self-sufficient; they built their own homes, provided their own food, and were able to live apart from organizations. Our greater numbers and the complexities of business, government, and society no longer make this possible. This 20th Century development of dependence has created a new function for management known as "public relations".

Public Relations Defined

What is public relations? It is a subject that is not clearly understood by the man on the street, many students of business, and some managers. Webster's Dictionary defines public relations as:

The art or science of developing reciprocal understanding and goodwill between a person, firm, or institution and the public, . . .

Another definition of public relations is: "the activities of an organization in building and maintaining sound relations with special publics and with the public at large, so as to adapt to its environment and interpret itself to society".

Public Relations, Promotion and Publicity

From these definitions it can be seen that the function of public relations is to create goodwill both internally and externally. Perhaps the confusion in identifying public relations lies in the difficulty of distinguishing it from company promotion and publicity. Company and industry promotion do, indeed, contribute to the image of the company and thus influence the credibility of the company. An overlap of promotion and public relations does exist; however, public relations is not primarily concerned with the sale of the company's goods, while promotion is. The basic purpose of any program designed to promote better relationships with any public is to promote the mutual welfare of both the company and the public.

Publicity is another means of communication that is often confused with public relations. Publicity is not the same as promotion or public relations, although it does contribute to the goals of both. It is the term used for mass media communication without charge. Publicity is less controllable than public relations or promotion but has the great advantage of credibility because a medium carries

Lesson 5 - The Publics And Public Relations Programs

Objectives

After completing this lesson, you will be able to:

- Identify the key publics to be considered in any public relations program
- Affirm the role of planning in the public relations effort

Within the general public-at-large are segments which are more or less uniform within each segment. Consider segments such as seniors, veterans, building owners, bus riders, and the like. Public relations involve all communications with all publics, and good public relations are highly dependent on understanding and acceptance by the public-at-large. The direct influence that an individual company can deliberately create on the public-at-large is limited unless the company is a giant in the industry. However, as each company identifies its publics, and establishes policies to create good communications, the impact of these actions culminate to form public opinion about the company and the industry.

Individual companies will have unique publics and use special communication tools to influence these publics. Highway construction companies will identify certain groups as being important to them while residential builders or utilities and commercial contractors will find other publics more important. The Public Relations Society of America lists the following relationships as key publics to be considered:

1. Press relations
2. Employee relations
3. Investor relations
4. Community relations
5. Educator relations
6. Consumer relations
7. Other specific publics

Press Relations

For the construction industry, the press is perhaps the most important of all publics. First, the press has the greatest influence on the public-at-large. Second, in the construction industry, advertising is not a primary marketing tool. The fact that advertising is used secondarily makes all other methods of promotion and public relations doubly important. Of particular importance is publicity, with the result that a planned program by the company of using the media to keep the community informed is a necessity. Much of the work of the construction industry is newsworthy because it so directly affects people and the community; the building industry has a differential advantage that it should exploit. Keeping the media informed should be done as a routine matter, whether the information offered is used or not. Good relations should be maintained with television and radio broadcasters, newspapers and magazines, as well as the technical and trade press.

Lesson 6 - Marketing: Definition And Overview

Objectives

After completing this lesson, you will be able to:

- Name the two concepts common to definitions of marketing
- Distinguish marketing from selling
- Identify changes in the business and economic environment which marketing has helped bring about in recent years

Marketing has numerous definitions. One of the most comprehensive is *planning, organizing, and carrying out, in an expert, scientific manner, all those things required to bring your product or service to the customer at optimum volume and profits, and at minimum expense*. This requires a factual marketing plan, a functional organizational structure, and a professionally managed operation. Other definitions include: *the performance of all activities necessary for ascertaining the needs and wants of markets, planning product (service) availability, and distributing want-satisfying products and services to present and potential customers, and the business process by which products are matched with markets, and through which transfers of ownership are affected*.

From these marketing definitions, two basic concepts emerge. First, marketing is an organized system of business activities and, second, marketing strives to match production and consumption by representing the producer to the consumer and the consumer to the producer. The marketing functions serve as the intermediary between the contractor (producer) and the client (consumer).

Treatment of modern marketing concepts must initially recognize the discipline of marketing as being of recent origin. In every application, and especially new to general companies, marketing has been moving rapidly over the past half century in order to achieve the maturity and sophistication acquired by other disciplines over a much longer period of time. As a result of the need for achieving maturity in a rapidly changing world, we have witnessed the emergence of new marketing concepts at very frequent intervals. Chronologically, 1900 to 1910 can be termed the period of discovery; 1910 to 1920, the period of conceptualization; 1920 to 1930, the period of integration; 1930 to 1940, the period of development; 1940 to 1950, the period of reappraisal; and subsequently, the continuing implementation/reappraisal/implementation process. Many of the marketing concepts that have been developed and proven in the production of consumer durable and consumer expendable goods are now being applied in construction and service industries.

Marketing took form with the first surplus of goods. If demand consistently outstrips supply, why market? But, if there is more supply than demand, those who market will survive, and the rest will fail.

Marketing v. Selling

Do not confuse marketing with selling. Selling is the implementation or the final step in the marketing process. It is true that originally, marketing did mean personal selling, but an evolution from sales management to marketing management has resulted from several forces. First, the

CONSTRUCTION ENVIRONS

Section A – Ethics & Marketing

Lesson 7 - Elements Of Marketing

Objectives

After completing this lesson, you will be able to:

- List the principle elements of marketing

The acceptance of marketing by contractors, as well as others involved in the production of the built environment such as architects, engineers, and other design professionals, has opened up a new career path for women in recent years. Opportunities for growth in these companies often dead-ended in the past with a position such as executive secretary. Today, many women have found challenging and rewarding jobs as marketing coordinators and directors of marketing. The Society for Marketing Professional Services, formed in 1973, now has over 6,000 members nationwide whose principle activities are marketing for design professionals and construction management firms. About 40% of the members are women. The women involved hold positions as marketing coordinators, marketing directors, directors of marketing communications, and other positions of higher responsibility.

The career growth path is generally from an administrative position to marketing coordinator. Once an individual is thoroughly familiar with the internal workings of the marketing department, the major opportunity for growth is into the position of business development representative or marketing manager. That individual's activities are no longer limited to work inside the office. The individual should possess the following characteristics:

- A combination of technical, administrative and human relations skills
- Construction knowledge is preferred but not mandatory
- Ability to program and coordinate work on a daily basis
- An intimate, first-hand knowledge of the major sources of construction work
- Entrepreneurial instinct
- Superior written and oral communication skills
- Optimism (dealing with rejection; taking risks)
- Competitiveness
- Conceptual ability (see patterns or trends in unrelated events)
- Empathy and ego drive

The major step in salary and responsibility increase occurs when a person has the capabilities to go outside and represent the company directly on a face-to-face basis with prospective clients. Today, familiarity with the elements of marketing can begin a career journey of enhanced responsibility and income.

It is important to understand that marketing is not simply selling, public relations, or advertising. Marketing encompasses all of the work elements required to meet the definition mentioned in Lesson 6. This lesson builds on Lesson 6 and identifies some of the principal elements comprising the

CONSTRUCTION ENVIRONS
Section B – Contract Law

Lesson 1 - The American Judicial System

Objectives

After completing this lesson, you will be able to:

- Define jurisdiction, venue, and statute of limitations
- Identify elements of state and federal court systems and steps constituting litigation in typical sequence

A basic understanding of the American Judicial System is helpful to anyone pursuing a career in construction, architecture, engineering, and related industries. It may be necessary to use the judicial system to collect on a contract, litigate and decide responsibility for negligence, or even to determine the constitutionality of zoning law.

State Court System

The judicial system of the United States is a dual system consisting of state courts and federal courts. The courts of the states, although not subject to uniform classifications, may be grouped as follows: supreme courts, intermediate courts of appeal (in the more populous states), and trial courts. Some trial courts have general jurisdiction while others have a limited jurisdiction. Each state has courts of limited jurisdiction. They may be limited as to subject matter, amount in controversy, or as to the area in which the parties live. For example, courts with jurisdiction limited to a city are often called municipal courts. Courts may also be named according to the subject matter with which they deal. Probate court, domestic relations, juvenile, traffic and criminal court are several examples of courts that deal with defined subject matter.

Federal Court System

Congress creates the courts of the United States under the authority of the Constitution, and their jurisdiction is limited by the Constitution. The Constitution creates the Supreme Court and also authorizes such inferior courts as the Congress may from time to time ordain and establish. Congress, pursuant to this authority, has created eleven United States Courts of Appeal, the United States District Courts (at least one in each state) and others such as the Court of Customs and Patent Appeals, the Court of Claims, and the Court of Tax Appeals which handle subject matter as indicated by the name of the court.

The district courts are the trial courts of the federal system. They have original jurisdiction, exclusive of the courts of the states, over all federal crimes, i.e., all offenses against the laws of the United States. The accused is entitled to a trial by a jury in the state and district where the crime was committed. The same facts may constitute a crime against both state and federal authority. Bank robbery may be tried in both the federal and state courts.

Lesson 2 - Forms Of Business Ownership

Objectives

After completing this lesson, you will be able to:

- List the common forms of business organizations
- Describe the advantages and disadvantages of each form of organization

It is important to understand the varied business associations individuals may enter into and the impact these associations have on the way they conduct their business.

The most common forms of business organizations include:

1. Sole Proprietorship
2. Partnership
3. Corporation
4. Limited Liability Corporation

Sole Proprietorship

The sole proprietorship is the simplest form in which one can conduct business. There are no formal requirements to create and operate a sole proprietorship. The sole proprietor has complete control over the business and may keep all profits and must absorb all losses. He/she contracts directly for labor and materials, and only needs to keep sufficient records to satisfy the Internal Revenue Service.

The proprietorship will continue until the sole proprietor decides to close the business or until his/her death. The proprietor should make arrangements in a will to continue the business during the period required to settle his/her estate.

The sole proprietor may sell the business at any time, and must raise all necessary capital to operate the business. The sole proprietor is directly identified with the business and any successful lawsuits brought against his/her company will expose both the business and personal assets.

The sole proprietor pays individual taxes on all business income and is allowed to take all business losses.

Lesson 3 - Contract Formation Principles (Part I)

Objectives

After completing this lesson, you will be able to:

- List the five principle kinds of contracts
- Outline common concepts behind the formation of contracts
- Describe means whereby the validity of contracts can be attacked

Contract Classifications

The creation of a contract requires that two parties mutually assent to the same bargain at the same time without any major misunderstanding. The types of contracts can be divided according to various classifications.

Express Contracts

If mutual assent is communicated by oral or written words, there is an express contract. The majority of business contracts are expressed orally and in writing.

Implied Contracts

If mutual assent is not manifested entirely by the use of words (i.e. where promises are inferred from acts or conduct), the contract is "implied" in fact. However, such agreements are just as valid as express contracts. For example, consulting a physician implies a promise to pay the reasonable value of the services, even though fees are not mentioned.

Quasi-Contract

Quasi-contracts (sometimes called "contracts implied at law") must be distinguished from contracts implied in fact. An obligation based on quasi-contract is one implied by law in order to prevent unjust enrichment or avoid inequalities, and is enforceable without mutual assent. For example, if you mistakenly pay a bill owed by someone else, your right to recover from the party who should have paid the bill will not be based on contract, but upon unjust enrichment. An explanation of the difference between bilateral and unilateral requires the definition of some commonly used contract terms. The promisor is the person who makes the promise, and the promisee is the person to whom it is made. In most two-party contracts each party is both a promisee and promisor, both making promises and having promises made. The offeror is the person who makes the offer, and the offeree is the person to whom it is made.

Unilateral Contracts

If an offer makes acceptance possible only by performing a stipulated act, a unilateral contract is contemplated. A unilateral contract is advantageous for the offeror, since the offer can be accepted only by the contract performance he/she desires.

Lesson 4 - Contract Formation Principles (Part II)

Objectives

After completing this lesson, you will be able to:

- Outline additional common concepts behind the formation of contracts
- List the kinds of contracts falling under the Statute of Frauds

Consideration as a Contract Requirement

We have seen that a contract is a promise that the law will enforce. But the law will not enforce all promises. Many promises are not intended by the promisors to be enforceable, because they are not serious promises at all.

Example: A father may make a promise to take his children to the circus. I may promise to have you over to my house for dinner, or to help you move next week.

Promises of this kind are not legally enforceable because they are not supported by consideration. The idea is that a promisee is not entitled to insist that a promisor perform his/her promise unless the promisee has given something in return, or promised to give something in return. The thing that is given up or promised in return is known as consideration. In order to be enforceable, a contract must be supported by consideration on both sides. Another way of saying this is that the promisor must get some benefit for his/her promise. To put it still another way, the promisee must suffer some detriment in order to make the promisor's promise enforceable.

In most contracts, each party is both a promisor and a promisee. If I offer to sell you my truck for \$5,000, I am promisor as to the truck and promisee as to the \$5,000. Each has a promise to the other. Each promise is consideration for the other promise. The contract has sufficient consideration.

The great majority of agreements which qualify as enforceable contracts contain a bargained for change in legal position between the parties, termed "valuable consideration". Valuable consideration consists of either (1) a bargained for promise to perform (or actual performance of) an act which but for this bargain the promisor is not legally obligated to perform; or (2) a bargained for promise to forbear (or actual forbearance from) performing any act which the promisor would be free to pursue but for the bargain.

Lesson 5 - Agency

Objectives

After completing this lesson, you will be able to:

- List the different kinds of agents
- Describe the scope of authority of the different kinds of agents

An agent is often defined as a person who acts for and on behalf of another in dealing with third persons and is subject to the control of the person for whom he/she is acting. There are three parties necessary in an agency relationship: (1) the principal, (2) the agent, and (3) one or more third persons.

To be a principal, one must have the legal capacity to enter valid contracts. Any person who has the right to perform an act for him/her may delegate its performance to another, and the contracts made for him/her by an agent will be valid and enforceable as if he/she has made them for himself/herself.

Creation

Modern business could not be carried out without agents. One person simply would not have enough time to conduct even a small business enterprise alone. This creates legal risks because, when someone else is doing your work for you, you are responsible for his/her actions.

The function of the agent is to negotiate or make contracts on behalf of the principal. If the contract is or appears to be within the scope of the agent's authority, it binds the principal. In addition the principal may subsequently approve or ratify a contract that was not within the authority of the agent to make. This makes it possible for the agency to be established or be created in three ways:

1. Intentional actual authority given to the agent by the principal
2. The agent may have apparent authority and therefore the principal would not be permitted (would be estopped) from denying the contact (often called agency by estoppel)
3. Ratification by the principal of a contract made by someone without the authority

Actual Authority

Most agency originates from the express authorization or appointment, specific authority being given to the agent who then, by the exercise of his/her given powers, binds the principal. Actual or real authority refers to the power of an agent to do that which the principal has given the agent permission to do.

Lesson 6 - Contractual Rights And Duties Contractual Interpretation And Modification

Objectives

After completing this lesson, you will be able to:

- Outline how construction agreements are prepared and interpreted
- Identify the requirements to modify them

The Agreement

The basic agreement is the document that contains the essential contract provisions. If you examine the standard form of construction contracts used in the United States, you will find it consists of two main parts: (1) the agreement and (2) the general conditions. The agreement consists of statements and the general conditions appear to be terms, or conditions. The agreement is the most important part. A Contract is an agreement plus consideration. The Agreement contains the names and addresses of the contracting parties, a description of the work, often merely the project title and address, and a list of the contract documents. The contract documents include the agreement, general conditions, drawings, and specifications, name of the designer, the contract sum or amount, the procedure for payment, and the contract time or period for completion, or a specific completion date.

In most construction contracts the owner has very few duties to perform, usually he/she is required to make periodic payments and provide specific information the contractor may need to complete his/her project (i.e., the electrical needs of equipment the owner will purchase for the building, etc.). The contractor has a vast array of duties to perform; he/she must construct a building that conforms to the plans that the architect has drawn and the specifications that the architect has prepared.

The plans express the design by graphical language and the specifications express additional details of the obligations of the contractor in writing.

Example: The plans may show that there are three washing machines in the laundry room; the specifications would describe the actual units required: Whirlpool Model 3600, White, etc.

Interpretation of Contracts

Courts are often called on to construe contracts. In construing a contract a court tries to decide what the parties meant by what they said – and did (since conduct can also establish contractual terms). When the parties disagree as to the meaning of a contract, it is the job of the court to construe the contract so as to find its true meaning.

Lesson 7 - Dispute Resolution

Objectives

After completing this lesson, you will be able to:

- List the advantages and disadvantages of negotiation, mediation, arbitration and litigation to resolve contract disputes.

Negotiation

The complexity and cost of construction litigation encourage the desire to settle disputes outside of the court system. Many contractors cannot afford the lengthy wait for lawsuits to be settled. Negotiation is the simplest and most basic form of dispute resolution. Negotiation occurs when both parties present the facts surrounding their disagreement and arrive at a mutually acceptable solution to the problem without the interference or input from any outside party. There are a number of factors that make negotiation practical and beneficial:

- Avoiding congested court dockets
- Easy and quick resolution to minor, uncomplicated disputes
- Disputes are kept private and within control of the parties
- Avoids excessive costs associated with litigation
- May help keep the disputing parties' reputation and business relationships intact

Because the negotiation process only involves the disputing parties, they must compile and present a claims brief containing the following information:

- Detailed synopsis of the basic facts in the dispute including written correspondence between the disputing parties
- Cost analysis of the various items being claimed in the dispute
- Interpretation of the applicable contractual clauses involved in the dispute

Once the facts of the dispute are presented, it is up to both parties to work out a mutually agreeable solution and to abide by their decision. Because of this, there are some disadvantages to negotiation:

- Decisions are not final nor legally binding
- Follow-through actions are dependent on good-faith actions of the disputing parties; the dispute may arise again if one party does not comply with the outcome of the negotiation
- Negotiations are not effective for complex disputes involving more than 2 parties and multiple contracts
- Both parties must be trustworthy and committed to the project's goals and objectives

Lesson 8 - Termination Of Construction Contracts

Objectives

After completing this lesson, you will be able to:

- List the different methods used to terminate contracts
- Identify conditions required to terminate a construction agreement

Termination by Defects In Contract Formation

As we discussed in our earlier lessons involving offer and acceptance in forming a contract, fraud, misrepresentation, and mistake can provide justification for terminating a construction agreement. Terminating a contract based on these legal theories reasons that the parties never came to a meeting of the minds regarding the subject matter of the contract because critical information relating to the contract was withheld, distorted or not considered.

A deliberate misrepresentation relating to the content of the contract if relied upon by one of the parties to a contract is classified as a fraud in the execution of the contract and provides grounds for terminating the agreement.

Fraud can also consist of one of the parties making false statements of facts or false promises of future performance. If the other party reasonably relies upon these statements, that party would have a legal right to terminate the contract.

Note: The false statements must be material and substantial in nature.

Misrepresentation

Misrepresentation usually lacks the intent to deceive present in fraud cases. However, courts sometimes will permit a party to relieve him/herself from a contract where he/she relied upon negligent or even innocent statements of fact generated by the other party to the contract mistake.

Performance Impossible

Suppose Andy agrees to paint Bryan's house, and when the job is fifty percent done the house burns down. It is impossible for Andy to paint a non-existent house. Therefore, Andy is exonerated from liability to complete the remodel job.

The cases concerning impossibility of performance of contracts are confusing and, to some extent, contradictory. The remedy lies in the ability of parties to devise language in contracts that will

Lesson 9 - Design Professional Determinations And Decisions

Objectives

After completing this lesson, you will be able to:

- Identify the responsibilities of the design professional in the administration and interpretation of the contract documents during the construction process

An overview:

A construction project is a close partnership between an Owner (Client), the Design Professionals (Architect and Engineers) and the Contractor. The partnership generally exists in the institutional, public and private arenas. Also involved are the financial institutions, the real estate industry, the jurisdictional entities (city, county, state and federal), various regulatory agencies (United States Environmental Protection Agency (EPA), County flood and dust control, and etc.) and Utility Companies to name a few.

The Design Professional

It is common for the construction contract to contain provisions which require the architect to determine performance of the work, extra work, and compensation due. These provisions may place the design professional in the awkward position of deciding the validity of a contractor's request for additional compensation for expense incurred because of an error or omission by the architect.

Review of Proposed Materials and Work in Place

The design professional is usually tasked to review submittals which may consist of shop drawings, product data, and samples. Shop drawings are detailed fabrication and installation drawings, sketches, instructions and specifications for various components of a project usually prepared by the subcontractor or supplier. Product data may be catalog images, dimensions, and product specifications. Samples can be in the form of color chips, panels, and scaled-down pieces of the actual product. Submittals must conform to the design professional's intent and scope of work outlined in the plans and specifications. Both the contractor and design professional review submittals in a timely manner so that materials can be purchased with sufficient lead time for fabrication and delivery to the site in time for installation.

The design professional may be required to visually observe the work and outline in writing any deficiencies or corrective measures to materials or workmanship that the contractor should take in order to conform to the contract. This duty on a major project can require the design professional to have several employees working full-time on the project.

Lesson 10 - Remedies For Breach Of Contract

Objectives

After completing this lesson, you will be able to:

- Explain the liabilities of an owner or builder if they breach a contract

Builder’s Remedy of Damages Against An Owner

Before any performance by builder

Where the owner repudiates the contract prior to any performance by the builder, damages are the builder's lost profit. These are determined by deducting from the contract price the total cost of the contemplated performance.

After full performance

Where the builder completely performs his/her part of the contract, but the owner fails to pay the stipulated contract price, the builder's sole remedy is an action for the price.

After part performance

Where the owner repudiates the contract after partial performance by the builder, one of three possible formulas for measuring damages is used:

1. The contract price less the cost of completing the contract and any salvage or partial payments by the buyer.

Example: The contract price is \$10,000 and the builder has done \$4,000 worth of work with an additional \$4,000 worth of work needed to complete performance. No partial payments have been made and there is no salvage. Recovery is computed as follows: \$10,000 minus \$4,000 equals \$6,000.

2. The contract price less the total cost of performance (which yields the profit) plus the cost of partial performance less salvage.

Using the example above, the computation is as follows: \$10,000 minus \$8,000 equals \$2,000 plus \$4,000 equals \$6,000.

3. Such proportion of the contract price as the fair cost of the work done bears to fair cost of the whole work requires; and in respect to the work not done, only such profit (if any) as the builder would have made by doing it.

Lesson 11 - Land Use And Other Issues

Objectives

After completing this lesson, you will be able to:

- Name the most common land use restrictions
- Identify potential liabilities related to the development of land

One of the first steps in the concept to design to construction continuum is the determination of the options for land use. Cities have overall plans for land use as to residential, commercial, industrial areas as well as set aside parcels for greenbelts, public works, transportation corridors and the like. Ownership of property does not equate to unrestricted use of the property. The improvements on property must be coordinated with effects on the local community, adjacent properties, drainage schemes for the surrounding area, public utilities, access, and similar issues.

Zoning

The power of counties or cities to zone is usually derived from some aspect of police power, asserted for the general welfare. A zoning regulation will be valid under the police power if it is based on a finding that zoning is necessary for the welfare of the community and is reasonably related to and reasonably necessary for the health, safety, morals, or general welfare of the community.

A zoning ordinance is presumptively valid, and the burden is on the party challenging it to overcome this presumption. As long as the zoning regulation is not arbitrary in its operation, it will usually be upheld on a constitutional ground. A zoning ordinance may be unconstitutional and subject to invalidation only when its effect is to deprive the landowner of substantially all reasonable use of his/her property.

Zoning Restrictions

There are basically four categories of zoning restrictions. These categories are:

1. The use of land
2. The height of buildings on the land
3. Minimum lot size requirements
4. Density restrictions (i.e., the number of buildings that can be located in a particular zone)

Use Zones: The basic use zones are residential, commercial, industrial, and agricultural.

Lesson 12 - The Bidding Process (Including Bonding)

Objectives

After completing this lesson, you will be able to:

- Explain the difference between negotiated and competitively bid work
- Explain the function of bonding

Negotiated Contract

An owner will often select a contractor to perform work rather than put it out for competitive bid. An owner will usually pick a contractor who has a good reputation, is financially solvent, and has completed similar projects.

The Owner may elect to set the contract amount in one of three different ways:

1. **Lump sum:** Provide the contractor a complete set of plans and specifications for the project and have the contractor submit a lump sum price to perform the work.
2. **Cost plus:** Agree to pay the contractor for actual costs plus an agreed upon fee (which includes both office overhead and profit) (e.g. Cost plus 10%, or Cost Plus a Fixed Fee).

This can be risky since the owner has no exact contract amount until the project is completed, and if the project exceeds the Owner's anticipated cost, he/she may have to borrow additional monies or be saddled with a project that is no longer economically feasible.

3. **Guaranteed maximum price:** Negotiate a percentage fee (for office overhead and profit) that the contractor will receive (i.e., 10%) and contractor agrees not to exceed a certain maximum amount.

This establishes a top end to the owner's cost exposure. These contracts are often written with the contractor getting a share of any savings resulting from the project being completed below the maximum cost figure. This provides an incentive for the contractor to attempt to minimize his/her costs.

If a study could be performed it would probably reveal that the owner who negotiates a project with one selected general contractor generally pays a premium over the price paid had the project been put out to competitive bid. However, many owners are willing to pay a slight premium to ensure the contractor will get the job done in a quality fashion and in a timely manner. Consumers often pay slightly more than absolutely necessary in order to ensure performance. Consider that people usually go with a highly-recommended doctor, dentist, or car mechanic and rarely would they put these services out to competitive bid. Many owners feel the same way about having a building

Lesson 13 – Time and Payment Considerations

Objectives

After completing this lesson, you will be able to:

- Analyze some time requirements of the construction contract
- List Progress Payment procedures

Time of Completion

It is important that any construction contract have a date to commence work and a completion date. If the Contractor does not complete the contract in the specified time frame the Owner may elect to sue the Contractor for damages resulting from the delay, such as lost rents. Since damages are difficult to prove and it is costly to litigate, many contracts provide a predetermined amount to be assessed for each day the project is delayed. This amount is known as Liquidated Damages or LDs.

Liquidated Damages

Liquidated Damages are established in advance and are based on the approximate estimated cost to the Owner or loss of income the Owner would suffer if the project is not completed on time. The Contractor knows at the time of bidding the project what the Liquidated Damages will be (e.g. \$500/day). During construction the Contractor can use that LD amount to determine whether to expend additional resources to finish the project on time. The use of Liquidated Damages has been abused at times through gross overstatement of the estimated damages and thus their use has become less common.

If the contract clause states “liable for actual damages”, the Contractor can be sued for actual damages. Actual damages can be more costly to the Contractor because the Owner can use an estimate loss of income resulting from the delay. For example, if a Contractor was late constructing a 500-room hotel on the beach, the actual damages the Owner could claim would be room tariff at the highest seasonal rate (including taxes and resort fees) multiplied by a 100% occupancy rate. Damages would fluctuate based on the season and expected occupancy rate. Actual damages are more costly to litigate and prove. The Contractor may have no idea when bidding the project nor when signing the contract of the potential damage assessments.

Time Extensions

Since a Contractor can be assessed substantial damages for delayed completion, it is important for the Contractor to get extensions of time to the contract whenever justified.

Time extensions can be obtained for various delays that occur in the construction process:

Lesson 14 - Negligence

Objectives

After completing this lesson, you will be able to:

- Understand the theory of negligence and its application to the construction industry

Definitions and Rules

Law establishes, defines, and enforces rights and duties. When a principle of law operates in favor of a party, he/she has the right to have others conduct themselves in accordance with that principle. To enforce that right, the law imposes a duty on others to abide by that principle of law. Thus, for every right held by one party, there is a corresponding duty on the part of the other. One who violates the rights of another and thereby inflicts injury must make amends. This usually means that the wrongdoer must pay money to the injured party. Money paid in this way is called damages.

Legal rules have been developed over the centuries in support of the maxim that nobody should conduct him/herself or use his/her property so as to injure another. Most of these rules are classified as the law of torts. The law of torts has two categories: (1) intentional (theft, battery, and embezzlement) and (2) unintentional torts such as negligence.

For a plaintiff to prove negligence and be awarded damages he/she must prove the following:

1. An act or omission to act by the defendant.
2. The defendant owed a duty of care.
3. Defendant breached that duty of care
4. As a result of defendant's breach the plaintiff was damaged
5. Plaintiff must prove actual damages.

If a party is negligent and as a result someone is injured, the injured party is entitled to compensation for injury.

Everyone has a duty to exercise due care in order to avoid injuring others. Negligence is failure to exercise due care.

This is not to say that everyone must be so careful or perfect that they dare not leave their house. Due care is defined as the amount of care or caution a reasonably prudent man or woman would exercise under the same similar conditions.