

4th Edition

Principles of Right of Way

Principles of Right of Way

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A list of individuals, committees, and contributors for this revised edition can be found in the back of the book.

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PREFACE

1ST EDITION

In 1972, the American Right of Way Association (now the International Right of Way Association) published the first textbook to give an overview of the theory and methods of the acquisition of real property for public use. Entitled, *Principles of Right of Way Acquisition*, for nearly 15 years this text has been used as an introduction to the right of way field.

As happens in all fields, the right of way profession has evolved over the years. Today it embraces property management, environmental concerns, and in the United States, relocation assistance, in addition to all aspects of the land acquisition process.

This textbook has been retitled, revised, and expanded to meet the needs of today's right of way professionals. It is the hope of all those involved in the project that the *Principles of Right of Way* will not only introduce specific disciplines, but will also continue to present a significant overview of what it means to be a right of way professional.

The International Right of Way Association gratefully acknowledges the authors of the original 1972 text:

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The Association thanks the many individuals and committees who worked long and hard to expand, revise, and update the original text. In some instances, entirely new chapters were written: in other cases existing materials were reworked and brought up to date. This new edition has been several years in the making. To name all those who contributed would be beyond the scope of this preface. However, to all those who were involved in this project, the Association extends a grateful "thank you."

PREFACE

4TH EDITION

The International Right of Way Association (IRWA) developed the Principles of Right of Way Textbook (PRWT) on behalf of right of way professionals and users of our members' services.

The right of way profession now encompasses more than land acquisition professionals, including, but not limited to: appraisers, acquisition agents, relocation assistance specialists, environmental specialists, project managers, pipeline specialists, property/asset managers, lawyers, engineers, and surveyors. The users of our services work for public, private and quasi-public entities that include, but are not limited to: local public agencies; federal agencies, state and provincial agencies; branches of the U.S. Armed Forces; railways; aviation; utilities; and consulting firms.

In its early years, IRWA activities were primarily focused on those in North America (United States and Canada). Recently, the association has expanded its membership internationally with members in China, a new chapter in South Africa, and affiliate members in Japan.

HISTORY

In 1972, the American Right of Way Association (now the International Right of Way Association) published the first textbook for the right of way profession. This textbook entitled, *Principles of Right of Way Acquisition* provided an overview of the theory and methods of the acquisition of real property for public use.

Over the years, PRWT has evolved in response to changes in the right of way profession. It provides an introduction to, and overview of, the right of way profession. The textbook also serves as the primary reference guide for "IRWA Course 100: Principles of Land Acquisition," as well as a refresher for those preparing to sit for the Senior Right of Way Professional (SR/WA) Designation's capstone exam.

Throughout the years, this book has been consistently updated to provide current information and to continue to meet the demands of this fast-changing profession.

REVISIONS

IRWA is proud to present the completely revised 2012 edition of the Principles of Right of Way Textbook. For the first time, it will be printed as a hardbound, "desk reference" book, which still serves as the premier source for information on the right of way profession.

Not only has the content been updated, but the formatting has also been brought up to current publication standards to make this resource more reader-friendly.

For ease of use, the book's chapters have been reorganized to coincide with the order of topics as presented in IRWA's "Course 100: Principles of Land Acquisition."

The PRWT is published with fifteen chapters, United States and Canadian glossaries, this Preface and a Table of Contents. The publication also includes a list of Contributors, along with author's biographies.

CHAPTER 1:

The Acquisition of Property for Public Use

————— **David Layne** —————

and

The International Pipeline Committee

INTRODUCTION

Modern civilization requires ready movement of people, goods and resources, and information. Today's transportation and transmission networks continue to reflect an increasingly organized society.

Development and expansion of transportation and transmission systems often necessitate the *acquisition of property, or rights of ways*. In addition, public works construction projects (for example, schools, parks, public buildings, and so forth) require the acquisition of property or property rights.

Population growth, migration, changing social priorities and technologies have contributed to the need for the continued expenditure of public and private money for right of way acquisition of roads, water and sewer systems, communications, electric, petroleum products, and natural gas energy pipeline systems.

Clearly, our style of living has evolved and continues to change. People engaged in the acquisition of private property for the public good serve a vital function in helping to effect this change. Without improvements to transportation, communication, energy systems and other public developments that require the acquisition of private property or property rights, economic growth and development would soon slow.

HISTORICAL PERSPECTIVE

The earliest recorded history of civilization provides examples of government building projects requiring land and rights of way. Historians believe that the Royal Road, built in 4500 BCE between the Persian Gulf and the Mediterranean Sea, is the oldest road in recorded history. Archeological excavations in India and Egypt have uncovered road-building projects during this same era. Later, the Via Militaris became one of the reasons for

the success of the Roman Empire. This forerunner of the modern freeway system consisted of 29 "ways." The most famous being the Appian Way.

In the Western Hemisphere, the Toltecs in central Mexico, from 752 CE to 1070 EC, built a network of roads. Later taken over by the Aztecs, the roads became the basis for the development of the Aztec' society. During this same period, in southern Mexico and Central America, the Mayans were connecting their nation with "White Ways"; named for their cement, lime, and white clay surfaces. In Ecuador, Peru, and Chile, the development of Incan commerce and culture was aided by the most extensive roadway system in the New World, much of it through the Andes Mountains.

In 1500 BCE, the first European road map was issued. England enacted the first Turnpike Act one hundred years later, and in 1747, the first engineering school in Europe opened in Paris.

One author described America's early right of way efforts this way:

"Of far more interest to the right of way profession, however, is the story of the Wilderness Road, for it is here we meet America's first great right of way agent. The fertile hills of Kentucky were the goal, and the Transylvania Company was formed for the purpose of buying land of Kain-tuck and building a right of way to open it up for colonization. The Transylvania Company hired an agent to explore the land, centerline a highway, and buy Kentucky...The name of the agent? A man by the name of Daniel Boone!"

"The great National Road extended some 700 miles from Maryland to the Mississippi River. It is notable as the first long road in the country, the first national road to cut through the Alleghenies, and the first right of way to be improved by the U.S. government."

"Rights of way in the United States developed in two other principal fashions: the canal ways and steam roadways. It was the Erie Canal, opened in 1825, that initiated the feverish canal construction throughout the East. Railroad rights of way came into their own with equal fervor. In 1831, the longest railroad in the world (135 miles) was in operation in South Carolina."

"In the West, ... three great ways became famous. One wound 2,729 miles from St. Louis, Missouri, via El Paso, (Yu)ma and Los Angeles, to San Francisco, and is called by historians the Butterfield State Route. Next was the redoubtable Pony Express Trail, some 2,000 miles across the continent, from Saint Joseph, Missouri, to San Francisco straight across the plains and mountains. (Another right of way development, telegraph, brought the Pony Express to sudden demise.) Last of the great Western right of way achievements was the connection of the two seaboard, in 1869, by the great Steam Roads of the day, (t)he Union Pacific westward from Omaha (and) the Central Pacific eastward from San Francisco..."

Canada's early transportation history mirrored that of the Aboriginal people with a reliance on natural waterways. Adopted by trappers and settlers, the waterways served as the key to opening Canada's interior. The early water routes eventually expanded to a network of canals.

First public railway in Canada, the Champlain and St. Lawrence Railroad, opened in Quebec with a 16-mile run between La Prairie and Saint-Jean-sur-Richelieu. The railroads hastened western settlement and brought British Columbia into confederation in 1871 with the promise of a Trans-Canadian railroad. The last spike of the Canadian Pacific Railway line was driven at Craigellachie, BC on November 7, 1885.

Many of the earliest land routes also followed the trails of the native people. For example, the Métis Red River oxcart trade routes, of the mid-19th century, became the locations for some of today's highway routes. Before World War I, there were almost no hard surfaced highways in Canada. The opening of the Trans Canada Highway, in 1962, was a major step in meeting the increasing demands for highways, and served as the nation's first through coast to coast road.

Some of the earliest knowledge of right of way comes from societies in which the king was believed to have divine rights, with the sovereign possessing all rights to the land. Rights were granted to nobles or rented to tenant farmers in exchange for military and economic support. If the sovereign wanted to utilize the land, he simply dispossessed the occupant. Thus, the origin of the term *sovereign rights*. The nobles' opposition to the king's absolute control over property rights began to manifest itself in the signing of the Magna Carta of 1215. This document, among many other provisions, limited the rights of the sovereign. From that beginning, the absolute right of government to property and property rights has been more and more precisely defined and limited.

Property rights were an important issue in pre-Revolutionary America and it was natural to include property right guarantees in the Constitution. The Fifth Amendment states:

"No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a Grand Jury, except in cases arising in the land or naval forces, or in the Militia, when in actual service in time of War or public danger; nor shall any person be subject for the same offense to be twice put in jeopardy of life or limb; nor shall be compelled in any criminal case to be a witness against himself, nor be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation."

The Fourteenth Amendment assures the application of this principle in the states:

"...nor shall any state deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws."

As democracy grew, so did the protection of private property rights. This protection did not lessen the rights of the government to take or use the land, but rather it required the government, when exercising its rights, to follow due process of law and to pay just compensation. The Courts continued to interpret and clarify both parties' rights and obligations under the law, including clarifications of "public use and necessity," "due process," and "just compensation."

In Canada, there is no protection for property rights embedded in the Constitution or Charter of Rights. Therefore, property owners must look to common law or statutory provisions in order to determine whether there is entitlement to a remedy. Originally, all property interests came from the Crown and the Crown retains the right to acquire property for public purposes without the consent of the owner. This right has been extended by legislation to other bodies such as municipalities, hospitals, schools, and utilities. Both the federal and provincial governments have enacted legislation dealing with procedural and compensatory rights arising out of expropriation.

THE RIGHT OF WAY PROFESSION

Historically, right of way was obtained by a member of a survey crew or, if the acquisition was a complicated one, by an engineer or highway superintendent. Obtaining the right of way was relatively easy. If the person wanted the project, which was often the case, the signature would be obtained. When land was more plentiful and lower in value and when people were more accepting of governmental authority, property owners were often willing to sign. If not, the agency might not build the project or possibly move the project's alignment or even, on occasion, enter onto the property without the right to do so.

The difficulty in acquiring right of ways increased as population changes and social and environmental considerations, along with new laws and procedures, combined to assume a greater role in the process. As time passed, agencies started to develop specialized right of way staffs. At first, the staff consisted of the same survey crew and engineering staff members who were looking for new work assignments or who could be reassigned from their former duties. Occasionally, a retired real estate salesperson or a person with some peripherally related occupation might join the staff.

The increasing pressure from many segments of the population (e.g., property owners, politicians, environmentalists, planners), new laws and court decisions, and the increasing complexity of the acquisition process created the need for agents with higher levels of technical knowledge and communication skills. Some larger agencies, usually highway or transportation departments, established land acquisition or right of way units staffed with individuals whose background was more social science rather than engineering oriented.

A group of skilled professionals knowledgeable about property acquisition in the public, quasi-public, and private sectors emerged. This group started to view its members as professionals, much like others (for example., planners, surveyors, design engineers, and so on) in their specific industry. The new right of way agents maintain and expand their

technical expertise through education. They have a set of ethical standards and standards of practice. They view themselves as career agents, and they have formed professional organizations, such as the International Right of way Association, for both personal and collective advancement.

SUMMARY

For millennia, the sovereign has had the right to use property for public and quasi-public projects. However, the methods used to obtain the needed property have changed dramatically. As constitutionally based governments emerged, the government's right to acquire property and its citizens rights to due process and compensation became guaranteed. In the United States, the Fifth Amendment to the Constitution states that "No person shall be ... deprived of ... property, without due process of law; nor shall private property be taken for public use, without just compensation." In Canada, there is no Constitution or Charter of Rights and Freedoms property rights protection, and property owners must look to common law or statutory provisions to determine whether or not there is an entitlement remedy.

Just as the acquisition process has changed, so have the people engaged in it. The first right of way agents were generally from the agency's surveying or engineering staff. As society and its laws changed, the acquisition of right of way became more difficult. Recognizing this, agencies started to develop specialized right of way staff that eventually began to utilize agents with high levels of technical knowledge and communication skills. Today's right of way agent, whether employed by a government agency, a utility company, or a consulting firm, is considered a professional; knowledgeable about property acquisition laws and processes, educated, with a set of ethical standards and standards of practice, working to advance themselves, their employers, and their profession. For the purposes of this text the term *property agent* will be synonymous with all of the other terms used for the person who negotiates to acquire rights for a public infrastructure project.

CHAPTER 2:

Real Estate Fundamentals

————— David Layne —————

and

The International Utilities Committee

INTRODUCTION

As with any profession, acquisition agents, appraisers, relocation advisors, property managers, and other right of way professionals must speak the same language. Part of that language is economic theory, in general, and the theory's application to real estate, specifically. Defining the words, terms, and concepts helps to increase the right of way professional's understanding of the relationship between theory and application.

This chapter will present many topics as they relate to real estate fundamentals. The discussions will center on economic concepts, principles, and theories with an emphasis on their relevance to real estate; the factors or forces that affect real estate and value; and real estate markets and their characteristics and uniqueness. Finally, the chapter will conclude with a discussion of real estate finance.

REAL ESTATE AND REAL PROPERTY

In some locales, real estate and real property are synonymous terms. Historically, the two terms have had different meanings. *Real estate* is the physical land and the objects that are permanently affixed to the land. Real estate encompasses three-dimensional space. In theory, real estate includes the earth's surface and both the areas below and above the surface and the improvements made to the land. *Real property* is all the rights, title, and interests associated with real estate ownership. Real property is often described as the bundle of rights. *The bundle of rights* includes the rights to bequeath, enjoy, give away, rent or lease, sell, use, or even the right not to exercise any of these rights. While subject to certain governmental limitations (e.g., escheat, eminent domain, police power, and taxation) and private restrictions, private property rights are constitutionally guaranteed.

COST, PRICE, AND VALUE

While often used interchangeably, cost, price, and value have distinct definitions. A clear understanding of each word's meaning is important to real estate valuation.

Cost, as it relates to real estate, is the amount spent to construct an improvement. While there are various types of costs, the most common ones associated with construction are direct costs (labor and materials), indirect costs (administration, fees, financing, and permits), and development costs (entrepreneurial profit).

Price is the amount paid for a good or service. In real estate, the transaction price is the amount for which a property actually sells.

Value is the worth of a good or service at a particular time. In real estate, there are several value types. However, the value type most typically considered in real estate valuation is market value. Real estate value is extrinsic. Value is created and sustained by the interaction of demand, scarcity, transferability, and utility.

DEMAND, SCARCITY, TRANSFERABILITY, AND UTILITY

Demand includes not only the desire or need for real estate, but also the financial ability to meet that desire or need. Although the desire for real estate is very strong in Canada and the United States, that desire cannot be met without the financial ability of the market participants to pay.

Scarcity is the supply of real estate in relation to demand. The greater the supply compared to demand, the lower the price. Conversely, the less the supply compared to demand, the higher the price. While land itself is not scarce, it is scarce when considered in conjunction with desirability and utility.

In order for real estate to have value it must be *transferable*; the ownership rights must be able to pass from the seller to the buyer. In real estate, various estates can be transferred. Most frequently, the *fee simple*, the total property ownership rights or the entire bundle of rights, is conveyed.

Finally, in order for real estate to have value, it must have *utility* or usefulness. It must have the ability to satisfy wants, needs, and desires.

BASIC CONCEPTS

Real estate analysis requires an examination of data from four distinct but interrelated general and specific perspectives; (1) economic, (2) environmental, (3) governmental, and (4) social. Economic factors examine the relationships among demand, supply, and utility. Both natural and developed environmental factors are studied. Governmental and legal considerations that are analyzed include building codes, economic development zones, environmental laws, uniformed protective services, and zoning laws. Finally, social trends, those factors that relate to demographics or population characteristics, are examined.

Economic Factors

Economic factors affect the management of limited resources to satisfy human needs and wants. Land is a limited resource, as are labor, capital, and management. Along with physical and legal considerations, land use depends on economic factors. Land economic theory is dedicated to understanding how land and real estate can be used efficiently to satisfy human needs and wants.

Because of linkages, the time/distance relationship between a subject property and probable destinations, location helps determine real estate value. Linkages include accessibility to the property, ease and type of transportation alternatives, and costs. By attempting to maintain a balance between supply and demand, the price system allocates land to various uses. Land with the most favorable locations will command the highest prices and rents and result in the highest values. Conversely, the least favorable locations will command the lowest prices and rents, which will result in lower values. The result of this competition is a hierarchy of land uses and values based on both the prices and rents demanded and the price and rent paying ability of market participants. While physically possible and legally permitted uses of property are important, ultimately, highest and best use is that use which results in the greatest productivity and, therefore, the highest value.

Environmental Factors

Environmental factors are the easiest value-impacts to understand. They include the natural and developed characteristics that affect value. In addition to the land itself, the natural environmental characteristics include access, climate, location, natural resources, rivers, soil, topography, water, and so on. To list a few, the developed environmental characteristics include airports, contaminants and their control, developed waterways, public utilities, railroads, and the road/street system. Coupled with environmental factors is the land's physical nature. Physical characteristics of a land parcel include its shape, size, soil fertility and type, subsoil characteristics, and topography. In addition, the availability of on-site site improvements (such as, driveways, fencing, landscaping, service walks, and so forth) and off-site site improvements (such as, roads, sewer, sidewalks, utilities, and so forth) are part of land's physical characteristics. Finally, building improvement characteristics, such as building type, building-to-site orientation, physical and functional conditions, size and shape, and style and design, add to or detract from a property's physical nature.

Governmental Factors

Governmental and legal considerations are major forces in real estate analysis. These considerations include building codes, educational systems, master development plans, tax levies, uniformed and other governmental services, wetland permits, and zoning ordinances, and so forth.

Social Factors

While environmental factors are the easiest value-impacts to understand, social factors or trends are the most difficult. In the broadest sense, social forces relate to the demographic characteristics of age and gender composition, household configuration, population, population changes, and social attitudes. When considering social impacts in real estate, an often-confusing aspect is the absolute requirement to comply with fair housing and other laws. Fair housing laws preclude the use of certain specific data related

to protected groups. *The Uniform Standards of Professional Appraisal Practice (USPAP)* in the Conduct section of the Ethics Rule states in part: “(a)n appraiser must not use or rely on unsupported conclusions relating to characteristics such as race, color, religion, national origin, gender, marital status, familial status, age, receipt of public assistance income, handicap, or an unsupported conclusion that homogeneity of such characteristics is necessary to maximize value.”

REAL ESTATE MARKETS AND CHARACTERISTICS

Market Categories

There are five broad categories of real estate markets: (1) agricultural, (2) commercial, (3) industrial, (4) residential, and (5) special purpose. Each of these categories can be subdivided into even more specific markets.

Agricultural markets can include animal husbandry, cropland, forestry, orchards, and pastureland. Commercial markets encompass a broad spectrum of uses, including financial institutions, hotels, medical facilities, office buildings, retail, and shopping centers. Examples of industrial markets include assemblage operations, manufacturing plants, and warehouses. The residential market can be readily divided into apartment buildings, condominiums, manufactured housing, single-family residences, and townhouses. Finally, special purpose or limited use properties include correctional facilities, golf courses, hospitals, religious institutions, and schools and colleges.

Real estate markets differ in several respects from most other markets for goods and services. Areas of difference include credit financing, different values, fixity of location and spatiality, heterogeneity, indestructibility, investment size, limited supply/scarcity, unused properties, and economic loss.

Credit Financing

Because real estate development and purchase usually require a large investment, real estate is most frequently purchased with a combination of debt and equity. When property yields are higher than the cost to borrow money, financial leverage results. In those instances, the equity investor is able to borrow money at lower debt rates and thereby receive a higher equity yield return. When a mortgage is obtained, the lender (mortgagee) requires the borrower (mortgagor) to sign a promissory note or bond. The mortgage document holds the borrower liable for payment of the mortgage amount at terms to which the lender and borrower agree. Sources of real estate finance include commercial banks, credit unions, individual investors, life insurance companies, mutual savings banks, pension funds, Real Estate Investment Trusts (REITs), real estate syndicates, and savings and loan associations.

Different Values

Most real estate valuations are based on market value (value in exchange). The property is analyzed and valued in relation to the property's ability to attract typical market participants who buy at prices or who pay rents at levels that the general market

commands. Sometimes a property may have a different value in use. Use value is the value a specific property has for a specific use. With use value, an appraiser is no longer concerned with the typical market reactions but is concerned with how that specific property contributes to the enterprise of which it is a part. A property can have both a market value and a use value. While they may be the same, it is not uncommon for the two values to be different.

Fixity of Location and Spatiality

Every land parcel is fixed in location. This is a significant reason why real estate location is such an important value factor. Real estate encompasses three-dimensional space. It is not only the land but also all that is attached to the land, either by nature or by people. Theoretically, real estate comprises not only the earth's surface but, similar to an inverted pyramid, land extends from a point at the earth's center outward to the surface and continues upward into the sky. Practically speaking, both the subsurface and airspace rights may be restricted.

Heterogeneity

No two parcels of real estate are exactly the same. Small or large, variations will exist in accessibility, exact location (fixity of location), shape, size, soil type, topography, etc. The result of these variations is that every parcel is different from every other parcel. The same premise is true for buildings. Even when they are new, all buildings have some variations that distinguish them from each other. Even standard development homes or manufactured housing units vary in exact construction details, in lot siting and views, and proximity to (or distance from) external forces. Properties are purchased with different financing arrangements, tenancies, and leasing considerations. These factors demonstrate heterogeneity. There are dozens or even hundreds of factors that contribute to the uniqueness of each land parcel or improved property.

Indestructibility

Land is generally considered indestructible. It may change in various ways, but it remains. This indestructibility makes real estate an attractive and sound long-term investment. Although land values may increase or decrease, the land itself is rarely physically destroyed.

Investment Size

Usually, real estate investments are made in larger dollar amounts than other investment types. A relatively modest real estate investment may cost \$100,000, while a relatively modest stock or bond investment might be \$5,000. A significant real estate investment might range from \$500,000 to millions of dollars, whereas an investment of a million dollars in a stock or bond transaction is highly unusual for the typical investor and contrary to the premise of investment diversification. The relative amount of capital required and the inherent non liquidity of real estate make investment diversification much less prevalent in real estate than in many other competitive investment types.

Limited Supply/Scarcity

While land is generally abundant, there is still a fixed supply. This fixed supply coupled with an even more limited supply of usable land results in scarcity. Scarcity is reduced somewhat by an increase in the “economic” land supply. The economic land supply is the quantity of land available for development. An increase in the economic land supply results from higher utilization of the usable land. For example, in densely developed areas, it is usual to build up rather than out, thereby increasing the economic land supply. The extension of the transportation network and the installation of public utilities can impact the economic land supply, and land that previously had limited utility can become useful.

Unused Properties and Economic Loss

Once land is improved, the buildings must be occupied. A vacant building creates a negative cash flow. That is, while no income is generated, fixed expenses, such as real estate taxes and property insurance, continue. Vacant buildings have several impacts on both supply and price. Knowledgeable developers will not construct buildings unless they determine that there is a market for the space at profitable prices or rents. This consideration tends to limit supply. Once a building is constructed, however, developers anticipate receiving prices or rents at the current market-established schedules. Just as vacant buildings can adversely impact the developers’ resources, vacant land can also produce a negative cash flow, and for many of the same reasons.

Another important consideration in holding property is the lost opportunity of earning a return from an alternative investment. In an attempt to avoid such a low return or yield, a property owner may develop the land for an interim use. An interim use is the current property use until the property is ready for its future highest and best use. The purpose of this interim use is to allow the property to produce sufficient income to pay the holding costs and produce a return on the investment.

REAL ESTATE MARKET FRAMEWORK

Like any good or service, real estate operates in a market framework. Exploring the nature of this framework (such as., its functions and imperfections) improves the understanding of real estate and its place in the overall economy.

Functions

Adjusting Land Use Quantity and Quality

Zoning laws control property uses and development. Controls apply to all property owners and, while they allow owners to develop their property in an effective way, the zoning laws also protect area property owners and the community at large by fostering uniform and consistent development. Some communities have instituted zoning restrictions based on aesthetics with architectural standards, building materials, and signs controlled. The type and degree of land use also results from the marginal productivity of capital inputs to the land. In other words, land will be put to a specific use when that use is considered economically feasible.

Allocating or Distributing Space among Alternative Users

Limited in part by governmental forces (land use requirements, transportation networks and services, permits, and zoning), market factors are main determinants of land uses. Various users of space choose land in accordance with their need for the specific site and the price they can afford or are willing to pay. For example, within a specific market area, retail outlets and shopping centers choose locations convenient to the transportation systems that provide the linkages to customers. As a specific area becomes an acknowledged retail hub, more developers and retail enterprises pay higher prices for the increasingly scarce available space. In some communities, specialized commercial market areas develop with a single business type predominant in the area. A classic example of such concentrated commercial development is a group of automobile sales showrooms clustered together. One land use may affect adjacent property uses. For example, court buildings and municipal offices attract banks, bail bond offices, law offices, restaurants, and title insurance companies to serve either the buildings' occupants or the people who deal with government. Similarly, office buildings, residential areas, and transportation centers create a demand for retail stores.

Zoning regulations and master development plans specify the location, the number, and type of land use activities within a community. Depending on the local community, land use regulations may either anticipate and control development or lag behind the market-driven economic development patterns. At times, provincial, state, and federal governments establish special programs that affect enterprise zones, mortgage lending, or types of development. In metropolitan areas, the use of air rights can be an important factor in the development of land for multiple uses. This concept has special relevance in high-density urban areas where demand exceeds supply and assemblage opportunities are often more successful in multiuse applications.

Establishing Price

Supply and demand affect market prices. The principle of supply and demand states that price varies directly, but not necessarily proportionately, with demand and inversely, but not necessarily proportionately, with supply. (The Appraisal of Real Estate, p. 36). In other words, when demand goes up, prices go up, and when supply goes up, prices go down. The price of real estate responds to more than this basic economic principle. However, Price also responds to other factors. Business cycles, construction activity, employment, factory production, and general business volume all impact prices. Government's taxing policies and availability of money are major price considerations. The relatively large dollar value of real estate makes the industry dependent on the financial market for both construction loans and mortgages. The amounts available for loans, interest rates, and terms of agreements all have an impact on real estate prices.

Exchanging Properties

In a marketplace, buyers and sellers transact exchanges. The more easily real estate can be transferred, the more likely individuals will participate in the market. The relative price, ease, and speed with which any good or service can be transferred are considered in measuring its liquidity or its ease of conversion to cash. Real estate ranks very low

on the liquidity scale. The legal, financial, and marketing considerations in real estate transactions help to create a costly and slow process.

Even in the five broad categories of real estate markets (agricultural, commercial, industrial, residential, and special purpose) and in their subdivided categories, varying degrees of liquidity exist. For example, in the broad residential category, a single-family residential property is generally considered to have a relatively short marketing time. Yet, even under the best marketing conditions, it can take several months to complete the property transfer. A second residential type, for example a vacation timeshare resale, may have little or no liquidity.

Multiple Real Estate Markets

The multiplicity of real estate markets concurrently may produce both exceedingly slow and extremely active markets. There may be slow activity in new apartment building construction or in the sale of existing apartment buildings, while at the same time and in the same market area, there may be an extremely active market in the sale of office building sites and office buildings. A major factor in this multiplicity of market activity is market demand strength. For example, an industrial operation in a small community closes its 250,000 square foot manufacturing plant. Locating a purchaser or tenant for the entire building, or for even a portion thereof, building may be very difficult. The same building located in a larger community might quickly adapt to numerous potential purchasers, or tenants due to a greater demand.

Similarly, a multitenant investment property in a community that is distant from major investment markets may have few potential buyers. The typical local buyers may not have capital available for this investment type. Likewise, investors with sufficient capital from outside the immediate area may, from a management perspective, consider it too costly to invest in a distant property. Consequently, the market for smaller investment properties and smaller parcels of speculative land may be restricted to local investors. On the other hand, larger properties may have a national or even international market.

Imperfections

Real estate's imperfections are based on assumptions about market participants' behaviors and the characteristics of real estate. Some of the imperfections include the inexperience of some market participants, lack of qualitative and quantitative data, non-real estate motivations of some participants, slow reaction to changes in supply and demand, and relatively lengthy transaction time.

Inexperience of Some Market Participants

Real estate transactions are relatively infrequent, in comparison to other capital transactions. This fact, coupled with the even more infrequent involvement by most individuals, results in a relatively inexperienced group of participants. As a result, many inexperienced individuals purchase real estate or build structures without the full knowledge and experience needed for these difficult and complicated activities.

Lack of Qualitative and Quantitative Data

From qualitative and quantitative perspectives, data may be unavailable, or inaccurate when it is available. Sale prices, mortgage terms, lease information, and other information relative to real estate transactions are often considered confidential, and market participants are not always willing to share information. Published information sources, while improving in their reliability, are not always entirely accurate, even in jurisdictions where real estate transaction fees or taxes are imposed. In jurisdictions where no transfer fees, or taxes are imposed, determining transaction price can be very difficult. Under normal circumstances, the income and expense information on properties is not provided to third parties. Even when available, the information may not represent typical conditions. Property income may be based on leases that are nearing the end of their term and may not reflect current market rent. A higher than typical yearly maintenance schedule for a property will reflect an aberration rather than a normal year's maintenance charges. Sample property studies or market surveys may vary greatly from actual properties within the same real estate classification they purport to represent.

Non-Real Estate Motivations of Some Participants

If all buyers entered the real estate market for carefully studied economic returns, the real estate market would be easier to understand. However, investor motivation is not always understood or predictable. This observation is most apparent in the single-family residential real estate market. For example, a builder may include features that appeal to a specific buyer's needs, perceptions, or wants, but these same features may not appeal to the typical residential purchaser. The specific features may or may not result in an economic benefit, or may even result in a distorted economic impact, either negative or positive. Even in commercial property, companies may desire features to aid in their corporate identity which do not reflect the same needs as another potential occupant. Commercial tenants in office buildings may pay additional rent if the building contains features the tenants deem desirable. As previously noted, governmental policies may impact market motivations. Businesses may enter or exit a specific market area because of governmental taxation policy, the existence or nonexistence of economic development zones, or even the perception of business as to whether or not the community is business-friendly.

Slow Reaction to Changes in Supply and Demand

Real estate reacts slowly to changes in supply and demand, and the two are seldom in balance. There are several reasons for this market imperfection:

- A considerable time period may be necessary prior to construction for plan approval, permitting, financing, and site development.
- Building construction usually requires several months.
- Past market conditions and patterns influence owners and tenants, potentially making it difficult for market participants to accept current rent and lease terms.
- Locating new rental space, lease negotiations and preparation, and relocation time can be lengthy.

- Developers often do not enter the market until the shortage of space becomes obvious. Conversely, developers may continue to build after the market's demand has been satisfied.
- Imperfections: Relatively Lengthy Transaction Time.

Real estate transactions are lengthy. They usually include a binder, or sales contract, which provides for contract closing a month or months in the future. During this time period, the title will be reviewed. The title search may reveal claims or issues that require satisfaction prior to closing. If a title company is used, the company may agree to assume liability for only a limited number of legal concerns that may arise in perfecting title. The money necessary to complete the purchase, usually in the form of a mortgage, may be unavailable, or unavailable on terms acceptable to the buyer, or if available, time-consuming to obtain. For leased properties, the lease document may be lengthy and include complicated or involved clauses, which may become the subject of prolonged negotiation. Building construction normally requires many months. Upon completion, the building must receive a certificate of occupancy from the local building department. In addition, many other local, provincial, state, and federal permits and other requirements must be satisfied.

REAL ESTATE ECONOMICS

Economics is a field of study concerned with the laws and theories pertaining to the creation and distribution of wealth. Economics deals with the efficient use of limited resources for the production, distribution, and consumption of goods and services, and with the implied objective to maximize the satisfaction of human needs and wants. Land is a limited resource, as are labor, capital, and management. In real estate economics, the objective is to combine the agents of productions in the most productive manner and to use land in an efficient manner. The economic framework relates to business competition and marketing methods, lenders and finance, wage and employment levels, government programs and trade, and production and consumption. Some of the topics are directly related, while others are tangentially related.

The general tendencies of human nature must be considered in economic analysis. Individuals and organizations generally act rationally and in their own self-interest. Individuals attempt to maximize personal satisfaction, and business organizations try to maximize profits. Further, individuals must work and business organizations must produce goods or services to earn income or profits to satisfy needs and wants. The ideal result is an economy in which all goods and services produced are wanted by individuals or firms, all individuals are constructively occupied, and a general state of economic equilibrium exists. In reality, the world is a dynamic and not so ideal place. A dynamic economy results in population shifts. Individuals move both within their community and to other locales. As a result, some areas decline in population (and income) while other areas expand in both population and income base. In an area that experiences a population decline, property values usually remain unchanged or decline. In an area that experiences population and income growth, property values generally increase. In their decision-making capacity, individuals occupy a key position between the general economy and land use. Economic growth and development involves continual adjustment.

BASIC CONCEPTS AND PRINCIPLES INCREASING AND DECREASING RETURNS

Productivity involves a combination of the four agents of production; (1) labor, (2) capital, (3) management, and (4) land. In any fixed-combination of the agents, frequently, a threshold exists below which the agents cannot profitably be combined. Above this threshold and with addition of more units of input, output increases, thereby increasing return. A point can be reached; however, when additional units of input do not result in a further increase in output, meaning equilibrium. Finally, if even more units of input are added, the output will actually decrease, thereby decreasing return.

Opportunity Costs

Opportunity costs serve as a basis for rational decision-making. Cost, in this context, means that which is lost or foregone—what individuals are willing to give up to obtain something else that is needed or desired. When rational individuals make choices, they attempt to maximize benefits or returns and to minimize costs or losses.

The agents of production can only be used one way at any one time. For example, lumber used to build a structure cannot be used simultaneously to manufacture furniture. The lumber dealer sells to the individual or firm that will maximize benefits to the seller. An option not taken is a lost, or foregone, opportunity. Another example, a property owner receives two offers to purchase, one offer for \$150,000 with a property closing in thirty days and a second offer for \$160,000, but contingent on the buyers selling their present property. Whichever choice the seller selects, the other is the opportunity lost or the choice foregone.

Price System

Prices can be affixed to any good or service, from apples to medical services. With a general knowledge of the prices of alternative ways to spend income, individuals have a basis for making economic decisions. If people act rationally, they spend income first for the goods and services they need (clothing, food, and shelter) and then for the goods and services they want (those goods and services that provide the greatest satisfaction or utility..) Prices serve as a common denominator for decisions as to how people will spend income. Individuals maximize their satisfaction by purchasing goods and services that provide the greatest utility per dollar spent. Thus, the increment of total utility added by the last unit of a good, at any point of consumption, per dollar for alternatives under consideration tends to be equal. If one alternative offers greater satisfaction or utility per dollar spent, more of that good or service is usually purchased until its marginal utility is in balance with that of other possible alternatives.

Productivity and Income

In economic terms, production means the process whereby goods or services that have economic value are created. When an agent of production results in an increase in productivity, income tends to rise and the higher the income, the higher the value of that agent. Thus, a backhoe that can excavate two foundations per day will generally be regarded as twice as valuable as another machine that can excavate only one foundation per day.

Similarly, a residential site that offers a homeowner the opportunity to enjoy more amenities and is closer to employment and other services will normally be considered more valuable than a site with fewer amenities located farther away from employment and services.

Rates of Return

Rates of return are the annual percentage investment returns. In real estate, investors expect to receive a return of the amount of capital invested and a return on the amount of capital invested. There are two categories of rates of return, income rates and yield (either discount or interest) rates. *Income rates* reflect the relationship between one year's income and the corresponding capital value of that investment. For example, the *overall capitalization rate (Ro)* is an income rate that reflects the relationship between one year's net operating income (Io) and the total property price or value (Vo). The overall capitalization rate (Ro) is determined by dividing one year's net operating income (Io) by the total property price or value (Vo) or $Ro = Io/Vo$. Another example is the *equity dividend rate (RE)*, which is an income rate that reflects the relationship between one year's pre-tax cash flow or equity dividend (IE) and the total amount of the equity investment (VE). The equity dividend rate (RE) is determined by dividing one year's pre-tax cash flow (IE) by the amount of the equity investment (VE) or $RE = IE/VE$.

Yield rates reflect the relationship between each and every year's income during the holding period, including the net proceeds from the sale of the investment at the end of the holding period. For example, in real estate, the *overall yield rate (Yo)* is a rate of return on the total invested capital. This rate reflects the relationship between each and every year's net operating income over the holding period and the net proceeds from the sale of the property at the end of the holding period. Another example is the *equity yield rate (YE)*, which is a rate of return on the equity investment. It reflects the relationship between each and every year's pre-tax cash flow or equity dividend over the holding period and the net equity proceeds from the sale of the property at the end of the holding period.

Rent

Rent is a payment to the property owner by a lessee, tenant, or other user for the temporary possession and use of property. In real estate, there are many types of rent including *base rent* (the minimum rent stated in a lease), *contract rent* (the actual rent stated in a lease), *deficit rent* (the amount by which market rent exceeds contract rent), *excess rent* (the amount by which contract rent exceeds market rent), *ground rent* (the rent paid to occupy land), *market rent* (the rent a property will command in the open market), *overage rent* (the rent paid in addition to the base rent), and *percentage rent* (the rent paid based on a percentage of sales, usually in addition to the base rent).

Supply and Demand

In economics, the price of a good or service varies directly, but not necessarily proportionately, with demand and inversely, but not necessarily proportionately, with supply. The supply and demand diagram as shown in Figure 2.1: Supply and Demand helps to explain the principle. The horizontal axis shows the quantity of a good or service

demanded or supplied. The vertical axis reflects the price per unit, demanded or supplied. The line, "DD," represents the demand curve and the line, "SS," is the supply curve.

The demand curve shows that, at a higher price per unit, a lesser quantity will be demanded and as the price per unit decreases, a greater quantity will be demanded. The supply curve demonstrates that, at a lower price per unit, a lesser quantity will be supplied and as the price per unit increases a greater quantity will be supplied. The diagram represents a schedule of individuals or firms who prefer the good or service at various prices and a schedule of individuals or firms who will sell the good or service at various prices. At the point where the two lines ("DD" and "SS") intersect (p,q) the number of buyers equals the number of sellers. In a market economy, equilibrium will be established at that price where the quantity supplied equals the quantity demanded. By keeping supply and demand in balance, the price system determines which goods or services will be produced and in what quantities.

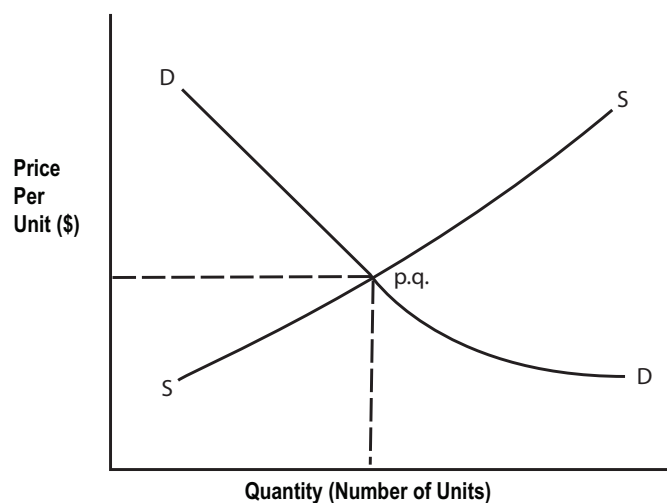


Figure 2.1: Supply and Demand

The price of a good or service varies directly, but not necessarily proportionately, with demand and inversely, but not necessarily proportionately, with supply. In an economic sense, *demand* refers to the various quantities of goods or services that buyers are willing and able to purchase at different prices at any given time. Demand is closely tied to the ability to buy, or the possession of sufficient income. *Supply* refers to the various quantities of goods and services that sellers are willing and able to supply at different prices at any given time. A critical point in supply and demand theory is the opposing behavior a change in price will have for buyers and sellers. As prices increase, there is a willingness and ability for sellers to provide more goods and services, but a decrease in the willingness and ability of buyers to purchase them.

Utility and Marginal Utility

In economics, utility is the ability of a good or service to satisfy a need or want. Individuals' ability or willingness to buy more of a good or service reflects the marginal utility that another unit of that good or service adds at any point in time. According to marginal utility theory, the general tendency is that additional units of the same good or service, within a stated time period, will result in smaller and smaller increments of satisfaction. This general tendency is the principle of diminishing marginal utility. The units of goods and services individuals continue to buy are not smaller; instead the satisfaction derived with each additional unit purchased is smaller.

Value

Value is the worth, usually monetary, of a good or service at a particular point in time. Value depends on the productivity or the ability of the agents of production (labor, capital, management, and land) to produce needed or desired goods and services. In real estate, there are several possible value types including, assessed, going concern, investment, market, salvage, and use.

VALUE PRINCIPLES

Real estate appraisal is based on several fundamental economic principles. These principles help to explain market behaviors and their influence on value. The following are some of the basic principles that are evident throughout the valuation process.

Anticipation

Present value is created by the expectations of future benefits. In owner-occupied residential properties, the economic anticipation is a higher resale value. The main anticipation for owner-occupied residential properties is noneconomic however; and includes the enjoyment, lifestyle amenities, and uses the property provides. For income producing property, the anticipation is primarily economic. It includes the anticipation of periodic income plus the net resale proceeds at the end of the holding period. The principle of anticipation is basic to the income capitalization approach.

Balance

Value is created and sustained when contrasting, interacting, and opposing forces are in equilibrium. The "forces in equilibrium" can apply to the property components (land, site improvements, and building improvements), to the agents of production (labor, capital, management, and land), to the relationship among property types and services in a market area, or to supply and demand factors.

Change

While change may be slow or fast, it is inevitable. It results from cause and effect relationships among the economic, environmental, governmental, and social forces that influence value. Changes in supply and demand, market conditions, and market areas are all examples of the dynamics of the principle of change. In real estate valuation, analyzing past, current, and anticipated changes are necessary in order to forecast value impacts.

Competition

Competition is the rivalry among market participants for real estate. Buyers and lessees compete with sellers and lessors, and each property competes with a similar property type, all within the context of supply and demand. In the short run, profit breeds competition and excess profit breeds ruinous competition. In the long run however, the market forces will limit profit through competition.

Consistent Use

For an improved property, land cannot be valued for one use and the improvements valued for another use. Land has value and improvements contribute to value. In the application of the principle of consistent use, the land value is based on its highest and best use, and the difference between the property value and the land value is the contributory value of the improvements.

Contribution

The value of a particular component is measured by its marginal utility or its contributory value to the property, or by the amount its absence detracts from the value of the whole.

Externalities

Value may be affected by influences outside a property. These externalities may be locational or economic, short or long term. Because real estate is fixed in location, externalities can be a significant value influence.

Highest and Best Use

Highest and best use is “(t)he reasonably probable and legal use that is physically possible, appropriately supported, and financially feasible, and that results in the highest value.” (*Uniform Standards of Professional Appraisal Practice, USPAP*).

Market Value

As defined in USPAP, *market value* is “(t)he most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from the seller to buyer under conditions whereby:

1. buyer and seller are typically motivated;
2. both parties are well informed or well advised, and acting in what they consider their best interests;
3. a reasonable time is allowed for exposure in the open market;
4. payment is made in terms of cash in United States dollars or in terms of financial arrangements comparable thereto; and,
5. price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.”

In the fourth condition, substitution of another currency for United States dollars is appropriate in other countries or in reports addressed to clients from other countries.

Opportunity Costs

Opportunity costs are those costs lost or foregone, what individuals give up to obtain something else needed or desired. Opportunity costs serve as a basis of rational decision-making.

Substitution

When several similar goods or services are available, the one with the lowest price will attract the greatest demand. The principle of substitution is basic to the three approaches to value. In the cost approach, the principle states that a buyer will not pay more for a property than the cost to purchase a site and construct a building, assuming equal utility and no undue delay. In the income capitalization approach, the principle holds that property value is established by the investment required to purchase a substitute income property that will produce a comparable net income. In the sales comparison approach, the principle’s application is that a buyer will pay no more for a property than the price to acquire an equally desirable substitute property.

REAL ESTATE FINANCE

Usually real estate is purchased with a combination of debt and equity. Therefore, the use of financing is essential to the real estate market. Because a real estate investment requires such large amounts of money, credit often must be used to facilitate the transaction. The following is a brief discussion of fund sources, instruments, and loan patterns.

Fund sources

Funds for real estate construction, development, and purchase are obtained from many sources, both private and public. In addition, the primary mortgage market lends directly to borrowers, and the secondary mortgage market buys and sells mortgages originated in the primary mortgage market. Sources of real estate finance are numerous and include chartered banks, commercial banks, credit unions, individual investors, insurance companies, joint ventures, loan companies, mortgage bankers, mutual savings

banks, partnerships, pension funds, Real Estate Investment Trusts (REITs), savings and loan associations (S&Ls), savings banks, and syndicates. Canadian and United States government guarantors, loan sources, and secondary lenders include the Canada Mortgage and Housing Corporation (CMHC), Farm Credit Corporation (FCC), Federal Agricultural Mortgage Corporation (Farmer Mac), Federal Business Development Bank (FBDB), Federal Home Loan Mortgage Corporation (Freddie Mac), Federal Housing Administration (FHA), Federal National Mortgage Association (Fannie Mae), Government National Mortgage Association (Ginnie Mae), Housing and Urban Development (HUD), Veteran's Administration (VA), and the Veteran's Land Administration (VLA).

Instruments

Insurance companies, pension funds, and, at times, some individuals and firms can finance real estate from their own funds. This is termed 100% equity financing. However, and for numerous reasons (that is., purchasers do not have sufficient funds to self-finance, buyers hope to use financial leverage to earn a higher rate of return on their equity investment, or purchasers want to lessen the risks of ownership), most purchasers borrow funds to acquire real estate. The two main lending instruments in real estate financing are the mortgage and trust deed.

Mortgages

A *mortgage* is a two-party contractual arrangement whereby real estate is pledged as security for a debt. The borrower, who grants the mortgage, is the *mortgagor*. The mortgagor retains title to the real estate. The lender, who receives the mortgage, is the *mortgagee*. Two legal documents are usually involved in a mortgage, the mortgage, which pledges the property, and the *promissory note*, which sets forth the amount of the debt and the debt terms. If the lender is not paid according to the terms of the *promissory note*, the lender can execute the lien or foreclose. The mortgage must be made part of the public record to protect fully the lender's (mortgagee's) interest. Until the instrument is recorded, other liens and interests may develop and claim priority over the lender's rights in the pledged property. Tax liens and special assessments against the real estate may take priority over the mortgage lien.

Trust deed

A trust deed, or trust deed in the nature of a mortgage, is an instrument whereby a disinterested third party holds legal title to the real estate as security for the loan. When the borrower pays the debt, the trustee returns title to the borrower, or trustor. If the borrower defaults, the lender may instruct the trustee to sell the property. Other loan instruments include the construction loan, land contract, the sale and leaseback agreement, and various other mortgage types.

Construction Loan

A *construction loan* is short term financing for construction purposes. The lender makes a loan based on the value resulting from the development, and the loan proceeds are disbursed at specific construction stages. Upon construction completion, the lender closes the construction loan and the property owner can either convert the loan to permanent

financing or obtain financing elsewhere. Generally, the construction loan amount will be lower than the permanent mortgage commitment.

Land Contract

In a *land contract*, the seller retains title to the real estate until the buyer pays, through installments, the purchase price. The seller, or *contract vendor*, agrees to relinquish possession of the real estate, to accept installment payments, and to transfer the real estate when the buyer completes the payments. The buyer, or *contract vendee*, agrees to be responsible for the installment payments, real estate taxes, insurance, and maintenance.

Sale and Leaseback Agreement

A sale and leaseback agreement is a transaction whereby a property owner sells real estate to a second party, and the second party agrees to immediately lease back the real estate to the seller for a specified amount and term. Typically, the lease terms are net to the lessor with the lessee responsible for all expenses, including insurance, maintenance, and property taxes. In some sale and leaseback agreements, the lessee has the right to repurchase the property upon expiration of the lease at an agreed upon price.

Other mortgage instruments

Some examples of other types of conventional mortgages are the adjustable rate mortgage, balloon mortgage, blanket mortgage, fully amortizing mortgage, interest only mortgage, junior mortgage, second mortgage, and wraparound mortgage.

The *adjustable rate mortgage* provides for a variable mortgage rate. The rate adjusts periodically based on a standard index. The *balloon mortgage* provides for the periodic payment of principal and interest but with a final, or balloon, payment that is substantially larger than any of the previous payments. A *blanket mortgage* provides that two or more real estate parcels are pledged as loan security. The *fully amortizing mortgage* requires a periodic payment (usually monthly) that includes a partial repayment of the principal and payment of interest on the remaining loan balance.

With an *interest only mortgage*, the borrower pays the interest only for a specified term and at the end of the term, the principal is due. A *junior mortgage* is a subordinate mortgage. Two or more mortgages may be placed against the same real estate. In form, the mortgages may be identical; however, their priority of claim against the real estate pledged as security depends on the time of recording. The mortgage first recorded has the higher or highest priority. Any mortgage not having first claim is known as a junior mortgage, or second, or third mortgage, depending on its relative priority. Finally, a *wraparound mortgage* is a subordinate mortgage that is inclusive of existing mortgages.

Loan patterns

There are a number of conditions that affect financing. These conditions, or loan patterns, include the interest rate, loan amount, and loan duration. Each element will affect the repayment schedule.

Interest rate

Obviously, the higher the interest rate, the greater the cost to borrow money. For example, a 7-1/2%, 25-year term (monthly payment), \$200,000 principal mortgage amount results in a monthly payment of \$1,477.98 and total payments over the twenty-five year term of \$443,394.71. If the loan conditions remained the same except for an increase in the interest rate to 8%, the monthly payments will increase to \$1,543.63 with total payments over the 25-year term of \$463,089.73. A 1/2% increase in the interest rate results in a total increase in payments of \$19,695.02 over the loan term.

Loan amount

The loan amount or value is the amount the lender will accept as a mortgage. Lenders have two primary methods to determine the loan amount that they will advance: the debt coverage ratio and the loan-to-value ratio.

The *debt coverage ratio* is determined by dividing the property's first year's net operating income by the annual mortgage payment amount or annual debt service.

$$\text{Debt Coverage Ratio (DCR)} = \frac{\text{Net Operating Income (NOI)}}{\text{Annual Debt Service (ADS)}}$$

For example, a commercial property produces an annual net operating income of \$150,000. The purchaser applies for a \$1,000,000 loan with a 15-year term at 8% interest with monthly payments. The annual debt service on this loan is \$114,678.25 and a resulting debt coverage ratio is 1.32

$$\text{Debt Coverage Ratio (DCR)} = \frac{\text{Net Operating Income (NOI)}}{\text{Annual Debt Service (ADS)}}$$

$$\text{DCR} = \frac{\$150,000}{\$114,678}$$

$$\text{DCR} = 1.31$$

Whether or not the lender will enter into this loan will depend on the lender's policies. In addition to the debt coverage ratio, other lender considerations may include the location, property type #, improvement age, or the borrower's financial position.

The *loan to value ratio* is determined by dividing the loan amount by the property value.

$$\text{Loan-to-Value Ratio (M)} = \frac{\text{Loan Amount}}{\text{Property Value}}$$

For example, the same commercial property illustrated in the above example can be purchased for \$1,250,000 and the purchaser applies for a \$1,000,000 loan, the loan-to-value ratio is .80 or 80%.

$$\frac{M = \$1,000,000}{\$1,250,000}$$

$$M = .80 \text{ or } 80\%$$

A significant impact of the loan amount to the borrower, or mortgagor, is financial leverage. Leverage is the impact of borrowed money on the return to the investor. Borrowing money at a mortgage interest rate that is below the overall yield rate (Y_o) results in positive leverage. On the other hand, if the addition of more loan money decreases the return to the borrower, the addition will result in negative leverage. Generally, the higher the loan-to-value ratio, the higher the yield rate to the borrower.

Loan duration

The loan term is another factor that impacts mortgage lending. All other factors remaining the same, the longer the term, the lower the periodic payment, but the higher the total payment amount over the loan term. For example, a \$200,000 mortgage with a 25-year loan term (monthly payment) at a 7 1/2% interest rate results in a monthly payment of \$1,477.98. Total payments over the 25-year term are \$443,394.71. If the loan conditions remain the same, except for a decrease in the loan term to 20-years, the monthly payments will be \$1,611.19. Total payments over the 20-year term are \$386,684.73. Therefore, a 5 year decrease in the loan term results in a decrease of \$56,709.98 in payments over the loan term.

SUMMARY

This chapter presented several topics to assist the right of way professional to better understand real estate fundamentals. The chapter discussed various economic concepts, principles, and theories with an emphasis on their relevance to real estate. Distinctions were made between the definitions of real estate and real property, cost and price and value, and the importance of a clear understanding of each word's meaning to real estate professionals. Basic economic principles, and how they help to explain market behavior, were presented. Particular emphasis was placed on the principle of supply and demand. The principle is at the core of a complete understanding of real estate fundamentals and real estate valuation. A critical point in supply and demand theory is the opposing behavior a change in price will have for buyers and sellers. As prices increase, there is a willingness and ability for sellers to provide more real estate, but there is a decrease in the willingness and ability of buyers to purchase it. Closely affiliated with the principle of supply and demand is the fact that land is a limited resource and, as such, its combination with the other agents of production (labor, capital, and management) is important to the maximization of its utility.

The chapter offered the view that any analysis of real estate necessitates an examination of data from four distinct but interrelated general and specific perspectives: economic, environmental, governmental, and social. The contrasts between real estate markets and markets for other goods and services were drawn. In addition, the nature of the real estate market framework was explored.

Finally, as real estate is usually purchased with a combination of debt and equity, the chapter included a presentation on financing, its potential impact on market participation and decision-making, and its importance in real estate transactions.

CHAPTER 3:

Legal Aspects of Real Estate

————— Todd Amspoker —————

and

The International Ethics Committee

INTRODUCTION

Right of way practitioners are expected to be knowledgeable about a great many disciplines related to the acquisition of property. One area of particular interest to the right of way agent is law. In order to serve the interests of the agency, the property owners and their representatives, and others, it is imperative for agents to have a good working knowledge of the legal aspects of real estate.

DEFINITIONS

Real Property and Personal Property

In the legal sense, there are two basic property classes, real property and personal property. In general, *real property* is all the rights, title, and interests associated with real estate ownership. In contrast, *personal property* is all the tangible property that is movable without damage to itself or the real estate. In more specific terms, there are other distinctions between real property and personal property. For example, title to real property is conveyed by means of a legal document, a deed. An item of personal property, also referred to as *chattel*, is commonly transferred by a bill of sale or simply by delivery of possession. Another difference is that each real estate parcel is considered unique while a personal property item, within its type, is usually considered exchangeable, one for another within its type.

Real Estate, Fixtures, and Trade Fixtures

Real estate is the physical land and the objects that are permanently affixed to the land, whether through the course of nature or as a result of human construction. However, real estate is more than that. The U.S. Supreme Court case *United States v. Causby*, 328 U.S. 256 (1946), stated:

“Under the old common law doctrine . . . a landowner not only owns the surface of his land, but also owns all that lies beneath the surface even to the bowels of the earth and all the air space above it even unto the periphery of the sky.”

In theory, property ownership resembles an elongated inverted pyramid with its apex at the center of the earth, then rising to the earth's surface and the base extending skyward. This view of real estate ownership is broader than generally accepted today. For example, aircraft fly over property without violating property owner rights. Under a strict interpretation of the Causby decision, the overflights could constitute a trespass; however, that is not the case. Today, in real estate law, the element of control is an important factor in determining ownership.

The degree to which ownership extends is regulated or governed by the extent to which a property owner can maintain control over a parcel. For example, if a person constructed a house with a roof overhanging the adjacent property, the overhang would be considered a trespass and the encroachment would have to be removed. In a similar manner, if a person drilled a well under an adjacent property, that person would be subject to an action in trespass for violating the adjacent property boundaries. These two examples are considered trespasses because both the builder and the well driller are exercising control within the same areas that are under the rightful control of the property owner.

Fixtures are an integral part of the definition of real property. Fixtures are a property type lying along the dividing line between real and personal property. A fixture is an item that was originally personal property but which, by reason of its attachment, intention, and adaptation to the real estate, has become part of the realty. The first fixture criterion or test is attachment; the manner by which the item is affixed to the real estate. If the method of attachment is of a permanent nature, usually the item is considered part of the real estate and has lost its character as personal property. The second criterion is intention; Did the person who made the attachment intend the item to become permanently part of the real estate? The third test is adaptation; Has the item or real estate been changed or adapted to accept the item? In this case, the item may still retain its separate physical identity, but it has become so connected with the property that a disinterested third party would consider it to be part of the real estate.

At times, it is necessary to determine whether or not an item is a fixture and thus part of the real estate or an item of personalty, and therefore not part of the real estate. If an item of property has changed its character from personal to real and has become a fixture, then the sale of the real estate will include title to that item. On the other hand, if the chattel has not become a fixture, then the sale of the real estate would not include title to the item.

A *trade fixture*, while seemingly meeting the definition of a fixture, is personal property. A trade fixture is an item of personal property that has been attached to the real estate and may even be adapted to the real estate by a tenant but without the intention that the item will remain permanently affixed. Unless specifically otherwise agreed to by the parties, trade fixtures remain personal property and may be removed by the tenant at the end of the occupancy. Usually, the tenant is required to repair any damage to the real estate caused by the removal of the item.

ESTATES AND RIGHTS IN PROPERTY

A real property estate represents the degree, nature, quality, or extent of a person's interest in property. A number of types of interests in, and rights to, real estate can be created. The most common real property estates or interests are freehold estates (the fee simple, fee tail, and life estate).

In the English feudal system, the major estates in land were referred to as freehold estates and were transferred from the owning lord to another noble through a formal ceremony. During the ceremony, the lord would solemnize the conveyance by passing to the grantee a twig or clod of earth from the land being conveyed. This passing of a token piece of the real estate was referred to as livery of seisin (the act of delivering the possession of a freehold estate in land). The traditional freehold estates of fee simple, fee tail and life estate all share the common characteristic of being real property interests of unlimited or indefinite duration.

Fee Simple Estate

Fee simple real estate ownership is the highest and most complete ownership in law. The person claiming fee simple ownership is referred to as the real estate's *fee owner*. A *fee simple absolute* refers to absolute ownership of an unlimited duration subject to no conditions, limitations, or encumbrances. *Fee simple estates*, which are subject to conditions, limitations, or encumbrances, are often referred to as *defeasible fees* or *determinable fees*. A defeasible fee is a real property interest that is not absolute and which may be voided if a subsequent event or action occurs. An example of a defeasible fee would be the conveyance of a fee simple interest to a grantee so long as the real estate is used for park purposes. If the park use ends, so does the fee interest.

Nevertheless, with these limited qualifications, the fee simple estate may be freely conveyed or transferred during the fee simple owner's lifetime or transferred upon the owner's death by will or intestacy. In many jurisdictions, unless the conveyance document expressly states otherwise, the estate granted by a conveyance is considered to be a fee simple estate.

Fee Tail Estate

In common law, a *fee tail estate* was created by a grant to the grantee "and to the heirs of his or her body." A fee tail grant conveyed a life estate to the grantee with successive life estates to each generation of the grantee's heirs. Since the fee tail estate holder, at any given time, possessed only a life estate, the estate was not freely transferable during the holder's lifetime. The fee tail estate was only inheritable by the grantee's heirs for their lifetimes. While some jurisdictions still recognize the common law fee tail estate, most governments have enacted statutes that remove much of the inflexibility inherent in the common law fee tail estate by creating a life estate in the initial grantee and a fee simple estate in the grantee's heirs.

Life Estates

The *life estate* tenant is entitled to certain real estate uses and enjoyments for life. At death, all right, title, and interest in the property pass to the *remainder interest*, the person who is entitled to the estate after the life estate has ended, or to the *reversionary interest*, the grantor. The life estate owner can transfer the interest; however, the estate terminates at the original life estate tenant's death.

Certain life estates such as, life estates pur autre vie are estates of which the duration are measured by the life of another person. For example, grantor "A" may grant property to "B" for the life of "C." Therefore, "C's" life span is the duration of "B's" estate. If "B" dies before "C," then "B's" heirs inherit the life estate pur autre vie. The estate terminates on "C's" death.

The life estate tenant enjoys certain specific rights and duties. Usually the life estate interest is entitled to all ordinary uses and profits from the real estate. However, the life tenant cannot lease or encumber the property beyond the holder's life span. Also, the life estate interest cannot damage or waste the property to the detriment of the remainder interest or reversionary interest. Usually, the life estate tenant has a duty to repair items that exhibit normal physical deterioration, to pay interest on any mortgages or indebtedness (with the remainder interest or reversionary interest responsible for paying the principal), and to pay taxes in an amount not to exceed the fair market value of the life estate.

LEASES

A lease is a contract whereby the owner transfers the right of possession and use of the real estate to another for a specified time period and on the payment of a consideration, usually rent. In many jurisdictions, leases with a term longer than one year are considered interests in real estate and must be in writing to satisfy the Statute of Frauds. Once a lease is entered into, two estates are created, the *leased fee interest* (owner or lessor) and the *leasehold interest* (tenant or lessee). Each party to the lease has certain basic rights. The lessor has the right to receive consideration, usually rent, and the right to recapture the real estate at the end of the lease term. The lessee has the right to possess, use, and quietly enjoy the real estate for the lease term.

Leasehold Estates

The traditional leasehold estates are estate for years, periodic tenancy, tenancy at will, and tenancy at sufferance. The *estate for years* (term tenancy) is a leasehold estate for a specified term or duration, (for instance, a lease for a specific number of months, years, and so forth, or a lease with a specific termination date). In common law, an estate for years expires without notice and at termination, the lessee must surrender possession of the property to the lessor. In a *periodic tenancy* (tenancy from term to term), the real estate term is automatically renewed for an indefinite number of successive terms such as, month to month, or year to year. A periodic tenancy may be created by express agreement, or more commonly, by implication. At the expiration of the rental period, either party can terminate a periodic tenancy by giving notice to the other party.

A *tenancy at will* has no fixed term and can be ended at will by either party. A tenancy at will remains in force only as long as the owner and tenant wish for it to continue. A written notice, by either party, is usually required to end a tenancy at will. Finally, a *tenancy at sufferance* exists when a tenant remains in possession of the real estate after the expiration of a term tenancy lease or after an owner has rightfully terminated any other type of agreement or lease. As the holdover tenant wrongfully continues to possess the real estate after the termination of an agreement or lease, the owner can evict without notice. However, if the owner accepts a rent payment from the tenant, the tenancy at sufferance may be transformed into a periodic tenancy.

EASEMENTS

An *easement* is a nonpossessory interest one has in the property of another for a specific purpose. Easements may involve the right to use the property's subsurface, the airspace above the real estate, its surface, or any combination of the three. Easement rights may be granted exclusively to one user or nonexclusively to benefit many users. They may be affirmative or negative. An *affirmative easement* conveys an affirmative right to the grantee to enter on the real estate of another for a specific purpose such as for the construction and maintenance of a transmission line. A *negative easement* restricts the real estate owner whose property is burdened by the easement; for example, an easement that prohibits the grantor from blocking the grantee's view).

Easement Appurtenant and Easement in Gross

An easement may be classified as either an *easement appurtenant* or an *easement in gross*. An easement appurtenant is an easement for the benefit of another real estate parcel. For example, the easement right to cross "A's" property to get to "B's" property. The parcel of land ("B's" property) served by the easement appurtenant is the *dominant estate* or *dominant tenement* and the parcel of land ("A's" property) burdened by the easement is the *servient estate* or *servient tenement*. An easement appurtenant generally passes with the title and continues to benefit the dominant estate and burden the servient estate. The easement appurtenant cannot be separated from the dominant tenement and an assignment or conveyance of the easement alone will normally terminate the easement.

Unless the terms of the document creating the easement in gross expressly states otherwise, an easement in gross is an easement that benefits a person or company, rather than benefiting another real estate parcel and only the person or company to whom the easement in gross is granted may use the easement. This easement classification is neither transferable nor inheritable. Most courts make an exception to this nontransferability provision for utility and other commercial easements.

Easement Creation

Easements are created by:

- express grant
- express reservation
- express exception
- implication
- prescription
- statute

As the express grant creates an interest in real property, it should be set forth in a written document containing all the elements of a deed and conforming to the Statute of Frauds. An express reservation or exception is created with language specifically reserving or excepting a specific easement in a conveyance. An easement by implication arises where a person who conveys a portion of a real estate parcel had used the retained real estate for the benefit of the conveyed property prior to the conveyance. In this case, the grantee's right to use part of the grantor's retained property as an easement is implied. In order to allow an easement by implication, most courts require its use prior to the conveyance and to have been open, continuous, and necessary to the use and enjoyment of the dominant tenement. An example of an easement by implication would be one in which a property owner, prior to subdividing and conveying a portion of the property, had used the retained real estate for a road to the conveyed property. If the property conveyed did not enjoy any other reasonable access, most courts would allow the grantee of the conveyed property to utilize the road across the real estate retained by the grantor.

An easement may be created by prescription or by occupancy of another's property. In most jurisdictions, a person asserting rights to an easement by prescription must meet the tests required for *adverse possession*. The possession must be open, notorious, continuous, and hostile for a statutory time period. In some jurisdictions, the user claiming prescriptive rights must also demonstrate *color of title*, that is, the appearance of good title but with some actual defect). Finally, easements may be created through statute, through the exercise of the power of eminent domain. Easements created by *statute* require public use, necessity, the payment of just compensation, and due process of law.

Easement Termination

Merger, release, or abandonment are the three basic means by which easements are terminated. Merger terminates easements appurtenant when the easement owner acquires title to the servient estate. Easements may be terminated by release (e.g., deed, conveyance, or other written evidence) in conformance with the Statute of Frauds. Finally, the easement holder may abandon an easement. In order to establish abandonment, most courts require both intent to abandon and some physical act demonstrating the intention. Usually, mere non use of an easement does not constitute abandonment.

OTHER RIGHTS IN REAL ESTATE

Profit a Prendre

A *profit a prendre* is the right to take, for example, minerals, timber, or oil from the soil. In most jurisdictions, a profit a prendre is considered a property interest and must be in writing. A profit a prendre is similar to an easement in that it may be either an easement appurtenant or easement in gross and generally created and terminated in the same manner as an easement.

License

A *license* is permission, either expressed or implied, given by a property owner to another to allow the performance of some activity on the owner's property. A license is not a property interest but only a limited right to use the real estate. Licenses are often created

by oral permission from the property owner. Unless expressly stated, licenses are usually revocable at the discretion of the licensor and are personal to the licensee. Therefore, licenses are nontransferable and non inheritable. An exception to the ordinary revocable nature of a license is a *license coupled with an interest* or an *easement by estoppel*. While these terms differ in minor ways, they generally refer to a situation where the licensee has relied on the permission of the property owner to make improvements to the licensed property. Once the improvements have been made in reliance on the license, many courts will estop, or prohibit, the property owner from revoking the license for the reasonable life of the improvement.

Covenants

Covenants are assurances set forth in a deed, conveyance, lease, and so forth, by either the grantor or implied by law. The covenant may provide that certain actions be performed or that certain actions not be performed on the real estate affected by the covenant. While some jurisdictions consider covenants to be interests in property requiring them to be in writing, other jurisdictions do not. Today, covenants are most prevalent in subdivision developments, when the subdivision plat or a separate written series of restrictive or protective covenants are recorded by the developer. By placing the covenants on the record, the developer binds each of the buyers to the covenants. If created properly, the private covenants will attach to the property and the subsequent real estate buyers will also be benefited or burdened by the covenants. In order for covenants to attach, they must touch and concern the real estate to be benefited or burdened and the parties must have intended that the covenant append to the property. The parties to be bound by the covenant must either enjoy *privity of estate* that is, mutual or successive property rights affected; such as landlord- tenant, grantor-grantee, fee holder-easement holder, and so on, or have *notice of the covenant*. Notice can be constructive, through the recording of the covenant, or actual. Unless enforced by the parties benefiting from the covenant, covenants can be waived and terminated. In many jurisdictions, where privity of estate is between the party benefiting from the covenant and the party breaching the covenant, monetary damages may be awarded for breach of covenant. When privity of estate is lacking, but when a party breaching a covenant had notice of the covenant, those benefiting from the covenant can seek an order to require compliance.

Water Rights

There are two primary *water rights* doctrines: the *riparian rights doctrine* and the *appropriation doctrine*. The riparian rights doctrine recognizes that property owners adjacent to a stream or lake may have certain rights for the reasonable use of the water that flows across or is contiguous to their property. Basically, a riparian owner has a right to the flow of a stream or lake in substantially its natural condition, subject to authorized use by other riparian owners. However, the riparian owner does not have the right to materially diminish either the quantity or the quality of the water for other riparian owners.

Most states in the western part of the United States subscribe to the appropriation or prior appropriation doctrine. The basic premise supporting this doctrine is that the water belongs to the residents of the state, but a preferred right to use the water may be acquired by the entity that first appropriates the water and applies it to a beneficial use.

In many cases, a property's legal description may be linked to a variable boundary line, such as a body of water. *Accretion* occurs when the land area is slowly and almost imperceptibly added to by the deposit of silt, sand, gravel, or other materials. *Reduction* or *avulsion* occurs if the water body recedes, resulting in an increased land area.

Accession

Accession is an equitable or fairness doctrine that may result in a property owner gaining title to additions or improvements that are attached to the owner's property, either by nature or by construction. While this doctrine is not universally applied, it is used when a trespasser has placed minor improvements, such as a fence, on the property of another. In some cases, primarily when the improvement cannot be removed easily, courts may award title to the improvement to the innocent property owner.

TYPES OF OWNERSHIP

Ownership of real property may reside with one person or entity or with many people or entities. When one person owns property, that sole owner is known as the *owner in severalty*. However, most real estate is owned by multiple or concurrent owners. The usual forms of ownership are joint tenancy, tenancy by the entirety, tenancy in common, and community property.

Joint Tenancy

Perhaps the most common type of multiple or concurrent ownership is *joint tenancy*. A joint tenancy is an undivided interest in real property held by two or more people. The interests are equal and obtained by the same deed or conveyance. On the death of a joint tenant, the interest passes equally to the surviving joint tenants automatically without regard to the decedent's will, if any, or the intestacy laws. For example, if "A," "B," and "C" are joint tenants, they each own a one third undivided interest. Upon "A's" death, "B" and "C" succeed to "A's" interest automatically by right of survivorship and each ("B" and "C") now owns an undivided one-half interest. In common law, although presently modified by many jurisdictions, a joint tenancy can only exist when the unities of time, title, interest, and possession are present. The unity of time requires that each joint tenant's interest begins at the same time as the other joint tenants. Unity of title requires that each joint tenant derive the interest through the same conveyance. Unity of interest requires that each joint tenant possess the same fractional interest and the same duration of estate as the other tenants. Unity of possession requires that each joint tenant has the right to enjoy the premises in its entirety.

There are several methods to sever a joint tenancy. A joint tenant may sever an undivided interest by a conveyance to another joint tenant or someone other than a joint tenant. The grantee of the conveyance will become a tenant in common, rather than a joint tenant, with the remaining joint tenants. For example, if "A," "B," and "C" are joint tenants, a conveyance by "A" of the undivided one-third interest will result in the grantee ("D") becoming a tenant in common with "B" and "C." "B" and "C" will remain as joint tenants

with each other. If “B” subsequently dies, “C” will then own an undivided two-thirds interest and the grantee (“D”) from “A’s” sale, will continue to own an undivided one-third interest; both parties (“C” and “D”) are now tenants in common. A second method to sever a joint tenancy is through a court petition. This action may result in the court ordering the sale of the property with the net sale proceeds divided among the joint tenants equally or the court may order the subdivision of the real estate among the joint tenants. Finally, a joint tenancy may be severed by foreclosure of liens placed on the property by a joint tenant.

In most jurisdictions, unless a deed or conveyance to two or more people expressly specifies that the grantees acquire title as joint tenants, the grantees are considered as tenants in common.

Tenancy by the Entirety

A *tenancy by the entirety* is a form of joint tenancy that exists between a husband and wife. On the death of one spouse, the other spouse, by right of survivorship and without probate, is entitled to the entire property. Tenancy by the entirety can be terminated only by mutual agreement of the husband and wife, through divorce, or by death of one of the spouses. Many jurisdictions have abolished the separate ownership rights established by tenancy by the entirety and treat the parties as any other joint tenancy.

Tenancy in Common

A *tenancy in common* is an undivided interest in real property held by two or more people. The interests need not be equal nor obtained by the same deed or conveyance. On the death of a tenant in common, the surviving tenants in common have no right of survivorship.

Community Property

In many jurisdictions, laws provide for *community property* or *common ownership* of property acquired during marriage. It is necessary to distinguish between *separate property* and *community property*. *Separate property* is property acquired before the marriage, property acquired during the marriage through gift or inheritance to one spouse, or property conveyed from one spouse to the other spouse with the intent of making the property separate. Proceeds, interest, or profit from separate property also remain separate as long as it is not commingled with community property funds. For the most part, all other property acquired by a husband or wife during the marriage is considered community property. Community property generally belongs one-half to each spouse and cannot be conveyed in its entirety by the signature of only one of the spouses. Community property with right of survivorship is now allowed in some jurisdictions. This combines the automatic succession feature of joint tenancy with property of a marriage.

Transfer of Title

Usually, a real estate parcel or a real property interest is transferred by a conveyance. The most common type of conveyance is a *deed*; a written instrument that conveys real estate or an interest in real property. At a minimum, statutes require that the grantor and

the grantee be identified clearly, that the property conveyed be described clearly, and that the grantor sign the conveyance. In addition, the deed will be effective only after it is delivered to the grantee or the grantee's agent or an escrow agent. The common types of conveyances are warranty deed, quitclaim deed, bargain and sale deed, and patent.

Warranty Deed

A *warranty deed*, or *grant deed*, contains certain covenants or title guarantees. Warranty or grant implies that the person signing the document as grantor has not previously conveyed the real estate to another person and that the property conveyed is free from encumbrances or other title defects that could impair the validity of the transfer. Some jurisdictions further distinguish warranty deeds as *general warranty deeds* or *special warranty deeds*. The general warranty deed usually contains title covenants against all defects, regardless of when they came into existence; before or after the grantor acquired title to the property. A special warranty deed warrants title only against defects arising after the grantor acquired title to the property.

Quitclaim Deed

A *quitclaim deed* is one in which the grantor transfers title without conveying any warranty of a valid interest. A quitclaim deed conveys only that title, if any, which the grantor has in the property at the time of conveyance. A quitclaim deed is often used to clear title where a person has a questionable interest in or claim to property. A seller who is uncertain as to whether or not the title is good may use a quitclaim deed to convey an interest.

Bargain and Sale Deed

A *bargain and sale deed* is a conveyance of which the terms fall somewhere between a quitclaim deed and a warranty deed. A bargain and sale deed may convey the property without any guarantee or title warranty. However, a bargain and sale deed may contain guarantees and title warranties stating that nothing to harm the title has occurred during the grantor's ownership. Guardians, trustees, and estate representatives often utilize bargain and sale deeds.

Patent

A *patent* is an instrument or conveyance by which a government grants public lands to another party. Often, the patent will reserve water and/or mineral rights and some were automatically subject to prior laws reserving public easements.

Security Interest Conveyance

Related to title conveyances are instruments which involve the conveyance of a security interest in real estate. When money is borrowed to secure the purchase of real estate, the lender usually requires the borrower to secure the loan with either a mortgage or deed of trust. A *mortgage* is a contract and conveyance by which the *mortgagor* (borrower) gives certain rights in the real estate to the *mortgagee* (lender). In many jurisdictions, a mortgage is considered a conveyance and provides the mortgagee legal title to the real estate. In

other jurisdictions, the mortgage provides the lender only a lien or encumbrance with title continuing to reside with the borrower. In the event that the borrower fails to repay the mortgage debt, the mortgagee has the right to initiate a foreclosure action.

A *deed of trust* conveys the *trustor's* (borrower's) title to a trustee (a public or private entity who holds legal title) in favor of the *beneficiary* (lender). The trustee has the right in the event the trustor fails to repay the debt, to sell the property. Usually, the sale of property under a deed of trust is through an administrative rather than a judicial proceeding.

In many jurisdictions, real property transactions are accomplished through the use of an escrow. An *escrow* is an agreement between a buyer and a seller to complete the real estate transaction through a third person, an *escrow agent*. By agreement between the parties to the transaction, the escrow agent is instructed as to when and under what circumstances to complete the transaction. In return for a fee, the escrow agent receives and holds the deed from the grantor and receives and holds the payment or other documents from the grantee. In compliance with the escrow agreement terms, or escrow instructions, when the title is in such condition as to satisfy the escrow terms, and all the payment deposits have been made, and all documents prepared, the escrow agent will deliver the deed to the buyer and/or record the deed and will deliver the consideration to the seller.

ADVERSE POSSESSION

Under certain conditions, a real estate title can be acquired through *adverse possession*. While the specific legal provisions dealing with the establishment of title by adverse possession depends on each jurisdiction's statutes, certain general rules apply. For a person to acquire title by adverse possession, the possession must be actual, continuous (for a time period established by statute), exclusive, hostile, notorious (the other ownership claimant has notice of the possession and its extent), open, and under claim of the title. Some jurisdictions also require that the adverse possessor hold the property under color of title, the appearance of good title but with some actual defect. Other jurisdictions may require that the adverse possessor pay real estate taxes for the adverse possession term. The person who acquires title by adverse possession has the burden of fulfilling all the requirements of the jurisdiction. Until an action to quiet title is initiated and title awarded by court order or judgment, the adverse possessor will not have title to record.

ENCUMBRANCES AND LIENS

Other terms used in connection with real estate title transfers are encumbrances and liens. An *encumbrance* is any claim, lien, or liability attached to real estate held by someone other than the property owner. An encumbrance may take many forms, including a mortgage, unpaid tax lien, mechanic's lien, deed restriction, judgment lien, easement, right of way, etc.

A *lien* is more restrictive than an encumbrance. A lien is a right conferred to or held by certain creditors permitting them to be paid from the proceeds of the property sale. A lien may be created as a result of a judgment rendered by a court against the property owner. The property serves as security for the debt payment. The lien is usually enforced by foreclosure in somewhat the same manner as a mortgage foreclosure.

RECORDING STATUTES AND THEIR EFFECTS

Notice

All jurisdictions have provisions for recording deeds and other title documents. The recordation of a deed transferring title provides constructive notice that an action has occurred. *Constructive notice* assumes that once an instrument becomes part of the public record and is accessible to the public, all people have notice of the instrument's existence and should act accordingly.

At times, a person will take delivery of a deed but not record it. If that occurs, a subsequent deed to another person could be delivered and recorded and possibly, negate the first purchaser's interest. For a first example, "A" holds title to a real estate parcel and conveys it to "B." "B" fails to record the deed. "A" executes a new deed to "C" and "C" records the deed. If "C" is without notice that "B" holds an earlier deed, "C's" title, in most jurisdictions, will prevail against an action by "B." For a second example, "A," while the owner of the property, executes and delivers a deed to "B." Again, "B" fails to record. "A" dies, and the heirs, not knowing that the real estate had been conveyed previously to "B," transfers the property to "C." "C" records the deed. As in the first example, and in most jurisdictions, "C," if an innocent purchaser, would prevail in an action brought by "B." Although a subsequent buyer, who records a deed first, may prevail against an earlier buyer who did not record, the first buyer may be able to recover damages from the seller. The rationale behind the necessity to record title is that the transfer should be disclosed to all by a reference to and reliance on the public record. The recordation of property documents gives the public constructive notice of the title transfer or of other interests held in property. In addition to deeds, such as any other instrument that affects the title to real estate, trust deeds, mortgages, assignments and leases are recorded.

In most jurisdictions, if a person has *actual notice*, notice that is expressed or implied, that an earlier deed has been executed and delivered but not recorded, that second person's recordation of a subsequent deed does not preclude the previous buyer from prevailing in a legal action for damages or recovery. In the case of the sale of improved real estate, a buyer has the responsibility to investigate the property to determine the rights, if any, that may be claimed by a person in possession. If the buyer does not investigate and it is determined later that the person in possession holds an unrecorded deed to the property, the second buyer might well be assumed to have had knowledge of the interest of the person in possession.

Recording Status

Recording statutes vary but they are of three basic types: a *notice statute*, a *race statute*, and a *race-notice statute*. A notice statute is a statute which holds that an unrecorded instrument affecting title is invalid against a subsequent bona fide purchaser who pays value and takes without notice, either constructive or actual, of the prior conveyance. A race-statute is one in which the first grantee to record has priority, regardless of any notice of the prior instrument. Finally, a race-notice statute holds that an unrecorded instrument is invalid against a subsequent bona fide purchaser of the same property who pays value and takes without notice if the subsequent purchaser is the first to record the instrument.

Certain jurisdictions have a land registry or Torrens System. A *Torrens System* establishes a real estate title registration procedure where the governmental authority issues title certificates showing the title status and in whom it is vested. Where real estate is transferred under a registry system, the registrar of titles issues a certificate of ownership, which, usually constitutes evidence of title. The Torrens System provides for the maintenance of a register, the *Register of Title*. Each page or folio of the Register of Title contains a certificate of title to a specifically described property parcel, with each certificate containing the facts relative to the parcel's title. A prospective purchaser, lessee, or mortgagee can examine the title, and with some degree of confidence, accept a conveyance or mortgage from the registered owner. Usually, adverse possession and prescriptive rights can not be established against a Torrens System or Register of Title.

Traditionally, real estate titles are researched in the public record and an *abstract of title*, a summary of the conveyances, liens and encumbrances, and other documents relating to the title of a real estate parcel, prepared. The title abstractor may research the entire *chain of title*, the conveyances from the original patent to the present owner, or may research a shorter time period. Today, title insurance companies make it possible for a new buyer to obtain an insurance policy that will insure the property title and provide for payment of certain damages in the event that subsequent investigation determines that the title was, in some way, defective.

SUMMARY

The chapter definitions and explanations are basic to real property law and to a general understanding of freehold estates, estates and rights in land, leasehold estates, easements, profits a prendre, other property rights, types of ownership, transfers of title, liens and encumbrances, adverse possession, and recording statutes and their effects. A thorough knowledge of the words, terms, and concepts is important to the right of way agent who is expected to negotiate knowledgeably with property owners and their representatives.

It is likely that, between one venue and another, there may be differences in definitions and terms in the various governing statutes concerned with real and personal property. It is important that right of way agents be aware of this possibility as they proceed through a project.

CHAPTER 4:

Contracts

————— Todd Amspoker —————

and

The International Ethics Committee

INTRODUCTION

In general, the study of the acquisition of rights of way or real estate requires a basic knowledge of contract law. Although the parties to a transaction may not be consciously aware of this fact, their oral and written negotiations, as well as their general conduct with respect to the transaction, are governed by contract law. The procurement of a fee, easement, lease, license, or other interest in real estate constitutes a contract between the parties; the terms of which may be set forth in writing or may be imposed by contract principles established by the legislature and/or the courts. Similarly, the framework of contract law controls settlements of trespass and damage claims. Simply stated, any real estate transaction involving an offer and an acceptance is a contract.

This chapter provides a general background on contract law, concentrating primarily on the required elements of a contract and the nature of the contractual relationship.

DEFINITION OF A CONTRACT

A contract is an agreement between parties creating an obligation for which the law provides a remedy for breach. More formally, the term *contract* has been defined as “a promise or set of promises for the breach of which the law gives a remedy, or the performance of which the law in some way recognizes as a duty.”

CLASSIFICATION OF CONTRACTS

The law of contracts utilizes many different terms and phrases when referring to the various types of contracts. The most frequently used terms are: express contract, implied contract, quasi-contract, executory contract, bilateral contract, unilateral contract, valid contract, void contract, voidable contract, and unenforceable contract.

An *express contract* is formed by language, either oral or written.

An *implied contract* is formed by the conduct of the parties (other than by the language).

A *quasi-contract* is not a true contract in that it is formed without satisfying all of the essential requirements of a traditional contract. Quasi-contracts are created by the courts to provide a remedy when one person has been unjustly enriched to the detriment of another party. For example, “A” trespasses on and constructs a transmission line of “B’s” property. Despite the absence of a traditional contract, most courts would require “A” to pay “B” actual damages, if any, and the reasonable rental value of the use of “B’s” property during the term of use.

An *executory contract* is one which has not yet been performed. A contract in which some performance remains to be done by one or both parties.

An *executed contract* is a contract which has been performed fully by both parties.

A *bilateral contract* is one in which a promise is given in exchange for another’s promise.

A *unilateral contract* is a contract in which a promise is given in exchange for another’s performance.

A *valid contract* is an enforceable contract containing all of the elements necessary to form a binding contract.

A *void contract* is an agreement which lacks one or more of the necessary elements of a binding contract and which is without legal effect from the creation of the agreement. An example of a void contract is an agreement between two parties to perform an illegal act.

A *voidable contract* is an agreement which one or both parties may elect either to void or to ratify. An example of a voidable contract is an agreement between an adult and a minor. The minor may void the contract but the adult cannot.

An *unenforceable contract* is one which contains all of the necessary elements to form a binding contract but which may not be enforced by the courts because of a technical defense raised by one of the parties. For example, a contract which violates the Statute of Frauds (which requires certain contracts to be in writing) or which has not been enforced prior to the running of the applicable statute of limitations will not be enforced if defenses are raised by one of the contracting parties.

CONTRACT ELEMENTS

In order for a contract to be valid, it must contain certain essential elements. The parties to the contract must mutually agree to be bound by certain terms and conditions; the agreement must be supported by a consideration; the parties must have the legal capacity to contract; and the purpose and subject matter of the contract must be lawful. In addition, to be enforceable, the contract must comply with the Statute of Frauds.

The parties to the contract are the *offeror* (the person who makes the offer) and the *offeree* (the person who receives the offer and has the right to accept or refuse the offer). An agreement is reached between the offeror and offeree when they have mutually assented to be bound by the terms of their negotiations. The courts will uphold the agreement

if a reasonable person would have interpreted the contracting parties' words and acts of negotiation as constituting an offer and acceptance. This objective interpretation of the parties' words and acts from the viewpoint of the hypothetical reasonable person is referred to as the *objective rule of contracts*.

An offer may be either oral or written but it must be communicated by the offeror in a manner as to indicate an intent to contract. The offer must be definite and certain as to the essential terms of the proposed transaction. It must include the identity of the parties, price or cost, a time for performance, and a description of the subject matter. Traditionally, the courts have refused to enforce agreements unless their essential terms are complete and unambiguous. For example, most courts would not enforce a real estate contract if the property is not adequately described or if the price is not stated.

There are several ways to terminate a valid offer to contract. For whatever reason, an offeree may decide to reject the offeror's offer. Rejection terminates an offer only when it is actually received by the offeror. While a counter offer constitutes a rejection that will terminate an offer, an inquiry or request for additional or different terms is not a counter offer and does not reject the offer. An offer may be terminated by revocation of the offer by the offeror. The revocation must be communicated to the offeree either by the offeror or by some other reliable means. Revocation, like the offeree's rejection, is only effective when received.

An offer may also be terminated merely by lapse of time. If the offeror specifies that the offer is valid for a given period of time or until the occurrence of a particular happening or event, the offer will terminate unless the offeree has accepted it prior to that point in time. For example, if an offer to purchase a right of way is stated to be open for 30 days and is not accepted during that time period, the offer is no longer valid and cannot then be accepted. If an offer does not specify the period of its validity, the court will presume it will be effective for a reasonable time only.

In addition, an offer may be terminated if either the offeror or offeree dies or becomes mentally incapacitated prior to acceptance. Finally, an offer may be terminated if the subject matter of the offer is destroyed prior to acceptance or the purpose or subject matter of the proposed contract becomes illegal.

The offeree may manifest acceptance either orally, in writing, or through conduct (in the case of a unilateral contract). An offer may be accepted only by persons to whom it was directed and who accept with knowledge of the offer. Silence may never constitute a valid acceptance unless both parties, through a previous agreement or past dealings, establish silence of the offeree as a valid means of acceptance. Traditionally, an acceptance must be communicated in the manner specified in the offer. If the offer does not specify the means by which an acceptance may be sent, such as mail or telephone, an offeree may use the same method of communication used by the offeror or any other reasonable method.

If made according to the means specified or implied by the offeror, an acceptance is effective when sent. On the other hand, an offeror's revocation and an offeree's rejection are effective only when received by the other party.

Consideration is an act, forbearance, or a promise given by one party to induce the other party to enter into an agreement. In lay terms, consideration is that for which the parties bargain during their negotiations. To be enforceable, all contracts must be supported by a consideration or a consideration substitute. The consideration test is whether or not a contracting party has suffered a legal detriment in that the party has agreed to do something that the party is not otherwise legally required to do. For example, if “A” gives up smoking in return for “B’s” promise to refrain from eating desserts, there is a contract even though “A” and “B” do not suffer any economic detriment and may actually benefit from the agreement. Their forbearance from smoking and eating desserts constitutes a legal detriment and is a valid consideration to support a contract.

Generally, courts will not question the adequacy of the consideration so long as it results in a legal detriment to a party. In other words, a contract does not have to be completely fair to both sides to be enforced. Therefore, contracts supported by nominal sums of money have been enforced in the absence of fraud, duress or observable mistake. However, some courts have refused to enforce such contracts on the theory that the nominal sum was not actually “bargained for” by the party receiving only a token payment.

Past consideration (consideration given for a prior act, forbearance, or promise) is not a valid consideration to support a present contract. Similarly, a promise to perform a preexisting legal duty for example, a promise by “A” to paint “B’s” house for \$500 when “A” had previously promised to paint the same house for a lesser sum under the same terms and conditions) does not constitute a valid consideration. Moral obligations are not a valid consideration unless they involve a promise to pay a voidable debt such as a debt incurred by a minor, a promise to pay a debt barred by the statute of limitations, or with certain restrictions, a promise to pay a debt barred by bankruptcy.

An important consideration substitute involves the doctrine of *promissory estoppel*. Promissory estoppel holds that the promisor is estopped, or prohibited, from alleging lack of consideration for a promise when that promise involves a statement of fact which was reasonably relied upon by the other party and resulted in damage to the relying party. An example of promissory estoppel would be when “A” promises to help a charity pay for new medical equipment. Although the charity gave no consideration in return for “A’s” promise, most courts would estop or prohibit “A” from reneging on the promise once the charity relied on “A’s” promise by purchasing the new medical equipment. In essence, promissory estoppel is a doctrine utilized by the courts to promote fairness in situations where traditional contract elements are lacking.

In most jurisdictions, contracts entered into by minors are voidable at the option of the minor. While an adult contracting with the minor is held to the contract, the minor, upon reaching majority, may either void or ratify the contract. If the minor does not affirmatively void the contract within a reasonable time after becoming an adult, the contract will usually be enforced. An exception to the voidable nature of minors’ contracts is a contract for necessities such as food, clothing, shelter, and perhaps education. Such contracts are usually enforced to collect the reasonable value of such goods or services provided to the minor.

People without the mental capacity to understand the nature and significance of a contract may not be held to their contractual agreements. Contracts with people who have been adjudicated mentally incompetent are usually deemed void from their inception. Contracts with people who are mentally incompetent at the time of contracting but who have not yet formally been adjudicated incompetent are usually deemed voidable by the incompetent person. Contracts with intoxicated people who can prove lack of contractual capacity are usually deemed voidable by the intoxicated person unless they involve contracts for necessities.

The courts will not enforce a contract if either the consideration or the subject matter of the agreement is unlawful. Contracts may be illegal because they violate federal, provincial, or state constitutions, statutes, ordinances, regulations or other laws, or are against public policy. Examples of illegal contracts include agreements to commit a crime or *tort* (a civil rather than a criminal wrong), usurious contracts, and contracts in restraint of trade. Such contracts are void and are unenforceable by either party.

While many oral contracts are valid, the Statute of Frauds requires certain contracts to be in writing to be enforceable. Agreements concerning an interest in real estate must be in writing. Therefore, agreements must be in writing if they involve the sale or purchase of real estate or create or relate to most easements, leases, fixtures, mortgages, standing timber or minerals in place, and any other interests in property. The Statute of Frauds also requires promises that cannot be met within one year to be in writing. The one year time requirement starts on the date of contract execution. Therefore, if "A" contracts orally with "B" on January 1 to lease "B's" office space for a one year term commencing July 1, the contract violates the Statute of Frauds and is unenforceable at the option of "A" or "B" since, even though the lease term is only one year, the contract runs for a year and a half.

Contracts for goods valued at \$500 or more are usually in writing. Most jurisdictions have codified this requirement by either adopting the Statute of Frauds or enacting the Uniform Commercial Code. The Statute of Frauds also requires a writing for secondary or contingent promises to pay the debts of another. If "A" tells "B" that "A" will pay "B" for goods delivered to "C" if "C" does not pay, such a promise must be in writing to be enforceable against "A." If "A" tells "B" that "A" will pay "B" for goods delivered to "C," such a promise is a primary promise rather than a secondary promise and need not be in writing. Finally, a promise by an executor or administrator to pay the debts of a decedent's estate from the executor's or administrator's funds must be in writing.

Contracts which violate the Statute of Frauds may still be enforced by a party if the party has rendered sufficient part performance under the contract. In the case of contracts involving an interest in property, possession of the property plus either valuable and permanent improvements or payment of the purchase price or a substantial portion will entitle the performing party to enforce the oral contract. Thus, in most jurisdictions, if an oral contract to purchase property can be proven by a utility company, the utility company will be able to enforce the contract if it has possessed the property and either made valuable improvements, such as power lines or buried cable, or paid the purchase price.

When the sale of goods is involved, part payment or acceptance and receipt of part of the goods will entitle a party to enforce the contract to the extent performed. Of course, full performance of a contract not performable within one year of its execution will also entitle the performing party to enforce the agreement. Contracts required by the Statute of Frauds to be in writing need not be formal. Any written form of offer and acceptance may be adequate (e.g., a writing on the back of a napkin, a receipt, or a letter). However, the following essential elements usually must be in a writing:

- the identity of the parties;
- identification of the subject matter;
- the terms and conditions of the agreement;
- recital of the consideration, and,
- the signature of the party sought to be bound (while it is not necessary for both contracting parties to sign, the contract can only be enforced against the party whose signature appears on the writing).

In addition to the above defenses, a contract may be voidable because of fraud or misrepresentation, mistake, duress, or it is found to be unconscionable. If a party has been induced to enter into a contract by another party's fraud or misrepresentation of a material fact, the defrauded party may usually void the contract. Where one party to a contract is mistaken about the contract's essential term or condition, the contract will usually be enforced unless the party seeking to enforce the contract knew or should have known of the other party's mistaken position. In cases of mutual mistake, courts are more willing to invalidate an agreement. Contracts induced by duress or coercion, like those induced by fraud or misrepresentation, are also voidable if not affirmed by the party under duress. Finally, some courts have refused to enforce certain contracts which are so unfair or one sided as to be deemed unconscionable. While the word "unconscionable" is difficult to define, the attributes of most unconscionable contracts include one party with substantially superior bargaining power, a take it or leave it approach, onerous or oppressive terms and conditions, a very unsophisticated party, or an impoverished debtor.

ASSIGNMENT OF RIGHTS AND DELEGATION OF DUTIES

Generally, in the absence of a contractual provision prohibiting assignment or delegation, all contractual rights may be assigned and all contractual duties may be delegated. Rights may be assigned without delegating duties, and vice versa, and assignments and delegations may be accomplished in whole or in part. An assignment of a contract is commonly construed as both an assignment of rights and a delegation of duties of a given party. The following contractual rights and duties constitute exceptions to the general rule and may not be assigned or delegated:

- Contracts requiring personal services, credit, trust or confidence for example, services to be provided by lawyers, investment advisors, doctors, artists and so forth. Such services are deemed to be unique rather than routine.

- Contractual rights which, if assigned or delegated, would substantially alter the risk or obligations of the other party (insurance contracts or contracts requiring one party to purchase the entire output of another party).
- Assignment of future rights. The assignment of a right expected to arise under a contract not presently in existence is unenforceable.
- Assignments and delegations prohibited by law.

In the case of a valid assignment of contractual rights, the *assignee* (the person to whom the assignment was made by the assignor) may enforce rights directly against the *obligor* (the person who owed certain duties to the assignor under the original contract). Of course, the obligor may raise defenses against such enforcement that the obligor may have had against the assignor, such as failure to perform, minority, or incapacity).

In the case of a valid delegation of contractual rights, the *obligee* (the person to whom the delegator owed a duty under the original contract) must accept performance from the *delegatee* (the person to whom the delegator delegated the original contractual duty). However, the delegator remains liable to the obligee for performance if the delegatee fails to perform as required by the original contract. For example, if a tenant rightfully assigns a lease to another, the lessor must accept performance from the new tenant but may hold the original tenant liable if the new tenant defaults.

DISCHARGE OF CONTRACTUAL OBLIGATIONS

Once a contract has been formed, each party to the contract incurs an obligation to perform some act or forbearance to act. Most contractual obligations are discharged and satisfied by a discharge by agreement, discharge by impossibility or illegality, discharge by performance, or a discharge by breach of contract.

A contracting party's obligation to perform may be discharged by various types of subsequent agreements. Most simply, the parties may agree to revise or modify their respective obligations to perform by a contract amendment or a substitute contract or performance (accord and satisfaction). The contract could also be discharged by one party's voluntary release of the other party or the covenant not to sue, given for a new valid consideration. Mutual rescission (mutual agreement to cancel the contract) could also remove each party's duty to perform. Similarly, a party's obligations may be discharged by novation, an agreement among three parties wherein the obligations owed by one original contracting party may be removed from that party and shifted, without recourse, to the new third party for performance.

Contractual duties will be discharged where it becomes impossible or illegal to perform them. Examples of this discharge method include the death or physical incapacity of a party whose skills are unique, or the supervening illegality or destruction of the contract's consideration or subject matter.

The duty to perform under a contract may be absolute or conditional. The duty to perform is absolute when there are no conditions to be met before performance is due. If the duty to

perform is conditioned upon some happening or occurrence (e.g., the requirement in a real estate contract that title must be proven to be marketable prior to the buyer being obligated to pay the purchase price), the condition must be satisfied, usually before performance is due or at the same time performance is tendered. Under the doctrine of substantial performance, a party's duty to perform will be discharged if the party has substantially performed, if the defects or deviations in performance are minor, if the party has acted in good faith, and if the defects or deviations may be fairly compensated for with money damages paid by the party substantially performing.

In most cases, rather than performing as required by the terms of the contract, a party may elect not to perform and require the other party to seek satisfaction from a common law remedy for breach of contract. The remedy awarded by the court will usually be determined by the severity of the breach and the facts of the situation. Of course, remedies for minor or partial breaches will be less harsh than remedies for total or material contract breaches. In determining whether a minor or major breach of contract has occurred, the courts will usually consider the amount of benefits received by the nonbreaching party, the extent of part performance by the breaching party, the hardship to the breaching party if the breach is deemed major, the adequacy of money damages, and the behavior (good or bad faith) of the breaching party.

REMEDIES FOR BREACH OF CONTRACT

Methods to remedy a breach of contract include rescission, specific performance, and damages.

Rescission involves a mutual cancellation or annulment of the contract. This remedy returns the parties to their precontract positions. When contracts have been performed in part prior to rescission, courts will usually grant the remedy of restitution, a return of any consideration transferred to the other party.

Specific performance is a breach remedy that requires the breaching party to perform according to the requirements of the contract. Specific performance is often awarded when real estate or unique personal property is the contract's subject. The courts do not usually award specific performance unless money damages are inadequate to compensate the nonbreaching party. Specific performance is enforced by an order of the court, which may, if violated, result in the imprisonment of the party in contempt of the court order.

Damages are the most common breach remedy. The basic theory of damages is that the nonbreaching party should be placed in the same position that would have resulted had the contract been performed. In essence, the courts want the nonbreaching party to recover the benefit of the bargain. The basic damage award is referred to as compensatory damages, the amount of money necessary in fairness to compensate the nonbreaching party for the other party's failure to perform. Compensatory damages may include a selling party's lost profits or a buying party's difference in cost to secure substitute goods.

In addition to compensatory damages, the courts may award consequential damages to the nonbreaching party. Consequential damages include all those incidental damages, which were foreseeable at the time of the breach. For example, if “A” delivers the wrong perishable goods to “B,” “B” should be entitled to recover compensatory damages equal to the cost differential, if any, involved in securing substitute goods, as well as consequential damages equal to the cost of returning the nonconforming goods to “A” or the cost of preserving the perishable goods, whichever is reasonable under the circumstances.

Often parties to a contract provide in the agreement a specific damage amount or a formula for determining damages to be paid in the event of a future breach of contract by one of the parties. This type of contractual stipulation is liquidated damages. As long as the amount of liquidated damages bears a reasonable relationship to the actual damages incurred by the breach and is not intended as a penalty, most courts will enforce such liquidated damage provisions.

In the event of a breach of contract, the law requires the nonbreaching party to act reasonably to limit or mitigate the damages accruing from the breach. Thus, the nonbreaching party may be required to incur additional expenses (reimbursable as consequential damages) or perform additional duties to lessen the burden on the breaching party and to avoid waste. Therefore, “A’s” delivery of the wrong goods to “B’s” shipping dock will not justify “B’s” abandonment of the nonconforming goods. Most courts will require “B” to take possession of the goods and to act reasonably to store or return the goods to the breaching party.

Damages awarded in the case of quasi-contracts are different from damages awarded for other contract breaches. Again, a quasi-contract is not a true contract as it does not contain all of the elements of a traditional contract. However, the courts will infer the existence of a contract whenever one party has been unjustly enriched to the detriment of another party. In these situations, the measure of damages is based on a quantum meruit doctrine. In essence, the doctrine requires that the damaged party be reimbursed for the reasonable value of services performed or goods delivered. For example, if “A” trespasses on “B’s” property and expropriates “B’s” minerals, most courts would impose a quasi-contract and require “A” to pay “B” all the profits, or at least a reasonable royalty fee, from the sale of the minerals.

STATUTE OF LIMITATIONS

Statutes of limitations are legislative enactments which require legal action to be taken within specified statutory periods to enforce contract breaches. In most jurisdictions, the statute begins at the time that the cause of action arises. In the context of contract law, a cause of action usually arises at the time the breach of contract occurs. Unless a lawsuit is commenced prior to the end of the statutory period, a breach of contract will be unenforceable. In certain situations, the statute of limitations may be tolled by suspending or extending it. Generally, the statutory period will be suspended or extended when the nonbreaching party is a minor or mentally incompetent at the time the breach occurs.

PAROL EVIDENCE RULE

The *parol evidence* rule is a common law rule which states that a written agreement intended by the parties to be an integrated or final and complete contract may not be contradicted by prior or contemporaneous oral or written evidence. Often, written contracts will contain a provision stating that the parties intend the contract to supersede all prior negotiations and agreements. If the written contract appears to be a final and complete agreement, the courts will not allow the parties to deny, modify or revise its terms and conditions. However, there are exceptions to the parol evidence rule. First, extrinsic evidence — evidence apart from the contract document itself — may be introduced to prove the invalidity of the contract (because of fraud, duress, failure of consideration, and so on). Extrinsic evidence may be submitted to supplement the written contract with terms not inconsistent with the writing. Extrinsic evidence is admissible to explain terms and conditions of the contract which are ambiguous on their face. Second, the parol evidence rule does not apply to subsequent agreements. Both oral and written agreements made after the original written contract may be introduced to contradict or modify the prior written contract.

RULES OF CONTRACT INTERPRETATION

If it is evident that the parties intended to contract and they have set forth in reasonable fashion all the essential terms and conditions of a contract, most courts will attempt to enforce the contract despite minor irregularities. Over the years, the courts have adopted a number of common law rules of contract interpretation to assist in enforcing contracts. One common law maxim is that courts will construe contracts as a whole. Thus, wherever certain provisions of the contract appear to be inconsistent with other provisions in the contract, the courts will attempt to determine the overall intent of the contracting parties and interpret the apparently inconsistent provisions in light of that overall intent. Unless the parties clearly intend otherwise, courts interpret the terms and conditions of a contract according to the terms' ordinary and accepted meanings. Whenever a contract is composed of typeset, keyboarded, and handwritten provisions, which appear to be inconsistent with one another, the courts will usually give the handwritten terms precedence over keyboarded terms and keyboarded terms precedence over typeset terms. This approach presumes that the most current or casual provisions contain the true and most recent intent of the contracting parties. In addition, if there are certain minor terms and conditions missing from the agreement, many courts will look to custom in the community or usage in the particular trade involved to complete the missing contractual provisions.

UNIFORM COMMERCIAL CODE

Most jurisdictions have enacted the Uniform Commercial Code or a modified version of it. Article 2 of the Uniform Commercial Code sets forth a detailed body of law regarding contracts for the sale of goods. In essence, the Uniform Commercial Code has rewritten the principles of contract law relating to personal property. In some ways, the Code adopts the traditional common law contract principles. However, in many significant ways, the Code modifies traditional contract principles to conform to the practices of the modern commercial world. Among other provisions, the Uniform Commercial Code

allows courts to be more flexible in “filling in the gaps” of agreements between parties who intended to contract but did not complete their negotiations in every respect. While the Code controls contracts for the sale of personal property, the traditional common law contract principles still control transactions involving real estate, fixtures, and services.

SUMMARY

This chapter provided a general overview of contract law. The chapter started with a definition of contract. Simply stated, a contract is an agreement between parties creating an obligation for which the law provides a remedy for breach. The most commonly referred to contract types are the express contract, implied contract, quasi-contract, executory contract, bilateral contract, unilateral contract, valid contract, void contract, voidable contract, and unenforceable contract.

In order for a contract to be valid, it must contain certain essential elements. The parties to the contract must mutually agree to be bound by certain terms and conditions; the agreement must be supported by a consideration; the parties must have the legal capacity to contract; and the purpose and subject matter of the contract must be lawful. In addition, to be enforceable, the contract must comply with the Statute of Frauds.

Unless the contract states otherwise, most contractual rights may be assigned and most contractual duties may be delegated. Rights may be assigned without delegating duties and assignments and delegations may be accomplished in whole or in part. An assignment usually assigns the rights and delegates the duties.

Once a contract has been formed, each party incurs obligations to perform. However, most contractual obligations can be discharged and satisfied by a discharge by agreement, discharge by impossibility or illegality, discharge by performance, or by a discharge by breach of contract. If a contract is violated or breached, it can be remedied. Methods to remedy a breach of contract include rescission, specific performance, and damages. If legal action is taken to enforce contract provisions, it must be done within the statute of limitations. Usually the statute starts at the time that the cause of action arises.

Over the years, courts have adopted common law rules to assist in contract enforcement and usually courts will construe contracts as a whole and attempt to determine the overall intent of the contracting parties.

CHAPTER 5:

Eminent Domain Theory

————— Todd Amspoker —————

and

The International Ethics Committee

INTRODUCTION

The right to acquire private property for a public use is millenniums old. Legal historians point to the biblical story of King Ahab and Naboth's vineyard, in 1 Kings 21:1-2, as the first recorded use of eminent domain:

"Now Naboth the Jezreelite had a vineyard in Jezreel, beside the place of Ahab, King of Samaria. And after this Ahab said to Naboth, Give me your vineyard, that I may have it for a vegetable garden, because it is near my house; and I will give you a better vineyard for it; or, if it seems good to you, I will give you its value in money."

A similar intent is expressed in the Magna Carta of 1215:

"No constable or other bailiff of ours shall take anyone's grain or other chattels, without immediately paying for them in money, unless he is able to obtain a postponement and the goodwill of the seller."

Historically, the right of eminent domain is the sovereign's right. The concept developed from the common law doctrine that all real estate in the realm belonged to the Crown. A citizen was permitted to occupy or hold a real estate parcel only at the sufferance of the ruler. Today, people have far more rights in the ownership of real estate. However, the government has the legal authority to restrict those rights. One of the restrictions is the right of eminent domain.

EMINENT DOMAIN DEFINED

Eminent domain is the right of the government to acquire private property for a public use on the payment of just compensation and following due process of law. Legal decisions have endorsed this or similar definitions. For example, in *Beekman v. Saratoga Railroad Company*, the US Supreme Court said:

"Eminent Domain is the highest and most exact idea of property remaining in the government, or in the aggregate body of the people in their sovereign capacity. It gives a

right to resume the possession of the property in the manner directed by the Constitution and the laws of the state, whenever the public interest requires it.”

The state of Illinois Supreme Court stated the same proposition somewhat differently in the *South Park Commissioners v. Montgomery Ward & Co.* ruling:

“The right of eminent domain is an inherent attribute of the sovereign, existing independently of written constitutions or statutory laws, although it is regulated by appropriate legislation. It is the power of the sovereign to appropriate private property to the public use, limited only by the constitutional provision for compensation.”

In California, the courts, in establishing jury instructions, defined the power of eminent domain as:

“Under the law all private property is subject to the right of eminent domain. Public entities have the right to take private property for a public use upon payment of just compensation. This right is exercised through proceedings commonly called a condemnation action.”

The act or process of taking property for public use with or without the owner’s consent, but following due process of law and on paying just compensation is *condemnation or expropriation*.

ORIGIN AND HISTORY OF THE RIGHT OF EMINENT DOMAIN

For centuries, rulers exercised their sovereign right to take the property of its citizens for public use. In times past, when armies foraged for food, private citizens were required to give of their property in order that the ruler and the army might subsist. Also, a change in the ruler often resulted in one noble losing land so that another could be rewarded for supporting the new sovereign. History is replete with similar situations. However, little mention is made of any right of the private citizen, so deprived of property, to collect compensation. By the end of the Middle Ages, the individual’s rights began to emerge and the government’s rights started to become more restricted. Hugo Grotius’, *De Jure Belli et Pacis*, published in 1625, contains, what is believed to be, the first use of the term eminent domain:

“The property of subjects is under the eminent domain of the state, so that the state or he that acts for it may use and even alienate and destroy such property, not only in the case of extreme necessity, in which even private persons have a right over the property of others, but for ends of public utility, to which ends those who founded civil society must be supposed to have intended that private ends should give way. But it is to be added that when this is done the state is bound to make good the loss to those who lose their property . . .”

Over time, the use of the term eminent domain became more and more common and, although the term itself did not appear in common law, the right and its limitations were recognized in the governing documents of many North American governments.

DEVELOPMENT OF CONDEMNATION PROCEDURES

In developing a body of eminent domain law, jurisdictions concluded that the acquisition of a specific private property parcel for public use was a legislative decision. However, jurisdictions did not agree as to the need for judicial proceedings to effect the actual title transfer; some favored an administrative, rather than a judicial, approach. In the judicial approach, the court decides the public use and necessity. In the jurisdictions that adopted an administrative procedure, usually an administrative board or tribunal addresses the right to acquire and the transfer of title decisions. Under an administrative method, the governing body, through legislation, provided for the filing of acquisition documents, the transfer of title, and taking possession.

Virtually all jurisdictions adopted some form of quick take procedure. In general, a *quick take* allows the condemner to obtain title or possession of property required to advance a public project prior to the final just compensation determination. Usually, the condemner is required to deposit the amount of its just compensation determination and provide notice to the property owner of its actions. With the requirement that a private property owner be paid just compensation came the necessity to develop methods to determine the amount. In most jurisdictions, if the acquiring agency and property owner are unsuccessful in reaching a negotiated settlement, the judiciary decides. In some jurisdictions, a judge hears the compensation claim and renders a decision. However, in most cases, a jury of the property owner's peers makes the compensation determination with its decision enforced through a court order. In other jurisdictions, the determination of compensation and payment resides with an administrative commission or tribunal of qualified commissioners or arbitrators.

CONDEMNATION AUTHORITY IN THE UNITED STATES

The Fifth Amendment to the United States Constitution, established the right of a property owner to receive just compensation for the taking of private property:

“No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a Grand Jury, except in cases arising in the land or naval forces, or in the Militia, when in actual service in time of War or public danger; nor shall any person be subject for the same offense to be twice put in jeopardy of life or limb; nor shall be compelled in any criminal case to be a witness against himself, nor be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation.” (Emphasis added.)

While this amendment applies only to the United States government, the Fifth Amendment's guarantees and protections, including due process and just compensation, were made applicable to state actions by the Fourteenth Amendment. In addition, most state constitutions contain language similar to that contained in the U.S. Constitution.

EXPROPRIATION AUTHORITY IN CANADA

In Canada, there is no protection for property rights imbedded in the Constitution or Charter of Rights. Therefore, property owners must look to common law or statutory provisions in order to determine whether there is an entitlement to a remedy. Originally, all property interests came from the Crown and the Crown retains the right to acquire property for public purposes without the consent of the owner. This right has been extended by legislation to other bodies such as municipalities, hospitals, schools, and utilities. Both the federal and provincial governments have enacted legislation dealing with procedural and compensatory rights arising out of expropriation.

EMINENT DOMAIN RATIONALE

The economic principle of supply and demand, while basic to private enterprise, could be problematic if applied to the acquisition of property for public purposes. For example, assume that the government needs to acquire property for the construction of a highway. According to the *principle of supply and demand* (price varies directly, but not necessarily proportionately with demand, and inversely, but not necessarily proportionately, with supply), if all the owners were willing to sell, except one, that one owner could demand a payment considerably in excess of market value and considerably more than the amounts received by the other affected owners. This owner could simply say “no” to the acquiring agency and thereby prevent construction of the public improvement. The government’s right of eminent domain precludes such an action. Eminent domain mandates that the property owner must convey the property for public use or the government may seize the needed land. This governmental power is not absolute and is tempered by the equal mandates that the government follows due process of law and pay just compensation. The term just compensation means “just” not only to the property owner but “just” to the government and “just” to its citizens.

BASIC ELEMENTS OF EMINENT DOMAIN

Taking, Damages, Benefits

A *taking* is the acquisition of property through condemnation or expropriation. The taking may be the entire property or a part of it, a partial acquisition, or the taking may be all or some of the property owner’s rights.

Damages are a loss in value to the remainder property as a result of a partial taking. Damages may be further divided between compensable/noncompensable and consequential damages. *Compensable damages* require payment and *noncompensable damages*¹ do not. *Consequential damages* are a loss in value to a property, no part of which is acquired, as a consequence of the project and, depending on the jurisdiction, may or may not be compensable.

¹ There are four general limitations to the payment of damages, when the damages sustained are suffered by the general public, when the damages sustained are not generally recoverable under common law, (the doctrine of *damnum absque injuria*, the loss, harm, or hurt without injury, in the legal sense applies), when the damages claimed are too speculative or conjectural, and when the damages sustained result from the exercise of police power.

Benefits are an increase in value to the remainder property as a result of a partial taking and the construction of the public improvement. Benefits may be further divided between general benefits and special benefits. *General benefits* are benefits resulting from the construction of the public improvement that are shared by the general public, the larger community. *Special benefits* are specific to the remainder property as a result of a partial taking and the construction of the public improvement. The distinction between general and special is both a factual and a jurisdictional and legal determination. In addition to the difference between general and special benefits, there are also differences among jurisdictions as to the inclusion of benefits in the just compensation determination. There are several possible combinations as to the offset of benefits:

- General and special benefits may be used to offset damages to the remainder property.
- Special benefits may be used to offset damages to the remainder property only.
- General and special benefits may be used to offset the value of the take and damages to the remainder property.
- Special benefits may be used to offset the value of the take and damages to the remainder property.
- No provision for the offset of either general or special benefits.

The laws and legal decisions in each jurisdiction must be referred to for specific guidance. However, with all the possible scenarios, a few general points are applicable. In the United States jurisdictions that have adopted the Federal (Before and After) Rule, benefits can offset both the value of the part taken and damages to the remainder property. In the jurisdictions that utilize the State (Summation) Method, benefits can only be offset against the damages to the remainder property. Under the State (Summation) Method, the acquiring agency must pay the value of the part taken.

Fair market value and just compensation are applicable in both instances when a property is acquired through the exercise of the power of eminent domain and also when the parcel is purchased through negotiation, before the initiation of condemnation proceedings becomes necessary.

The definition and determination of just compensation also differs among jurisdictions. When the entire or whole property is acquired, the determination of just compensation is almost universally considered to be the fair market value of the property, as defined in that jurisdiction. However, the just compensation payment is more complex when only a part of the property is acquired.

There are two basic methods to determine just compensation when only a part of the property is acquired, the Federal (Before and After) Rule and the State (Summation) Method.

FEDERAL (BEFORE AND AFTER) RULE

The Federal (Before and After) Rule computes the payment due the property owner as the difference between the value before the acquisition and the value after the acquisition. Under the Federal (Before and After) Rule, benefits arising from the construction of the public improvements may offset both the value of the part taken and damages to the remainder.

$$\begin{array}{r} \text{Before Value} \\ - \text{After Value} \\ \hline \text{Just Compensation} \end{array}$$

For example, assume that before the government's acquisition, the subject property was a 5-acre vacant parcel of land with a value of \$2,500 per acre. The taking is 1.5-acres, acquired in fee. The remaining property (after the acquisition) contains 3.5 acres, also with a value of \$2,500 per acre. In this example, the just compensation, under the Federal (Before and After) Rule is \$3,750.

Before Value

$$5 \text{ acres} \times \$2,500 \text{ per acre} = \dots\dots\dots \$ \quad 12,500$$

After Value

$$3.5 \text{ acres} \times \$2,500 \text{ per acre} = \dots\dots\dots - \quad 8,750$$

$$\text{Total Appraised Value} = \dots\dots\dots \$ \quad 3,750$$

Analysis of Total Appraised Value

Value of the Part Taken

$$1.5 \text{ acres} \times \$2,500 \text{ per acre} = \dots\dots\dots \$ \quad 3,750$$

Now assume that the 3.5 acres remaining after the government's acquisition is *landlocked* (property without legal access to a public right of way). In this example, assume further that the value of landlocked parcels is \$250 per acre. In this second example, the just compensation, under the Federal (Before and After) Rule is \$11,625.

Before Value

$$5 \text{ acres} \times \$2,500 \text{ per acre} = \dots\dots\dots \$ \quad 12,500$$

After Value

$$3.5 \text{ acres} \times \$250 \text{ per acre} = \dots\dots\dots - \quad 875$$

$$\text{Total Appraised Value} = \dots\dots\dots \$ \quad 11,625$$

Analysis of Total Appraised Value

Value of the Part Taken

$$1.5 \text{ acres} \times \$2,500 \text{ per acre} = \dots\dots\dots \$ \quad 3,750$$

Damages to the Remainder Property

$$3.5 \text{ acres} \times \$2,250 \text{ per acre } (\$2,500 - \$250) = \dots\dots\dots \quad 7,875$$

$$\text{Total Appraised Value} = \dots\dots\dots \$ \quad 11,625$$

Finally, assume that the 3.5 acres remaining after the government's acquisition has access to the widened road, which results in a change in highest and best use of the property from agricultural to commercial. In this third example, assume that the per acre value after the government's acquisition is \$25,000. The just compensation, under the Federal (Before and After) Rule would be \$0.

Before Value

5 acres × \$2,500 per acre = \$ 12,500

After Value

3.5 acres × \$25,000 per acre = — 87,500

Total Appraised Value = \$ 0

Analysis of Total Appraised Value

Value of the Part Taken

1.5 acres × \$2,500 per acre = \$ 3,750

Damages to the Remainder Property

3.5 acres × - \$22,250 per acre (\$2,500 - \$25,000) = — 78,750

Total Appraised Value = \$ 0

Under the Federal (Before and After) Rule, benefits may offset the value of the part taken and the damages to the remainder property. However, in no event can the compensation be less than zero dollars.

The Federal (Before and After) Rule is premised on the theory that the owner is entitled to compensation only to the extent that there is a loss. Since, in the third example, the remaining property is more valuable than the entire property before the acquisition, the property owner has not suffered a loss and since there is no loss, there is no compensation.

STATE (SUMMATION) METHOD

The State (Summation) Method provides for the payment for the part taken plus damages to the remainder minus benefits to the remainder. The damages to the remainder minus benefits to the remainder amount cannot be less than zero dollars. In no event, can the just compensation be less than the value of the part taken.

Just Compensation = Value of the Part Taken + (Damages to the Remainder - Benefits to the Remainder [which cannot be less than 0]).

Utilizing the data from the first example above, the just compensation, under the State (Summation) Method is \$3,750, the same as the compensation under the Federal (Before and After) Rule.

1. Value of the Larger Parcel 5 acres × \$2,500 per acre = \$ 12,500

2. Value of the Part Taken (as part of the whole)

1.5 acres × \$2,500 per acre = \$ 3,750

3. Value of the Remainder (as part of the whole [1-2])		
\$12,500 – \$3,750 =	\$	8,750
4. Value of the Remainder (after the taking and disregarding benefits)		
3.5 acres × \$2,500 per acre =	\$	8,750
5. Damages to the Remainder Property (3-4) \$8,750 – \$8,750 =	\$	0
6. Value of the Remainder (after the taking and considering benefits)		
3.5 acres × \$2,500 per acre =	\$	8,750
7. Benefits to the Remainder Property (6-4) \$8,750 – \$8,750 =	\$	0
8. Net Damages or Net Benefits (cannot be less than zero) (5-7) \$0 – \$0 = ...	\$	0
9. Just Compensation (2 + 8) \$3,750 + \$0 =	\$	3,750

Now assume, as in Example 2 above, that the 3.5 acres remaining after the acquisition are landlocked. Further assume that the values in the earlier example are also applicable. The just compensation, under the State (Summation) Method is \$11,625, again, the same as the compensation under the Federal (Before and After) Rule.

1. Value of the Larger Parcel 5 acres x \$2,500 per acre =	\$	12,500
2. Value of the Part Taken (as part of the whole)		
1.5 acres × \$2,500 per acre =	\$	3,750
3. Value of the Remainder (as part of the whole [1-2])		
\$12,500 – \$3,750 =	\$	8,750
4. Value of the Remainder (after the taking and disregarding benefits)		
3.5 acres × \$250 per acre =	\$	875
5. Damages to the Remainder Property (3-4) \$8,750 – \$875 =	\$	7,875
6. Value of the Remainder (after the taking and considering benefits)		
3.5 acres × \$250 per acre =	\$	875
7. Benefits to the Remainder Property (6-4) \$875 – \$875 =	\$	0
8. Net Damages or Net Benefits (cannot be less than zero)		
(5-7) \$7,875 – \$0 =	\$	7,875
9. Just Compensation (2 + 8) \$3,750 + \$7,875 =	\$	11,625

Finally, as in the third example under the Federal (Before and After) Rule, assume that the 3.5 acres remaining after the acquisition is benefited by the widened road and the change in highest and best use from agricultural to commercial. The just compensation, under the State (Summation) Method is \$3,750 as compared to the zero dollars of compensation under the Federal (Before and After) Rule.

1. Value of the Larger Parcel 5 acres × \$2,500 per acre =	\$	12,500
2. Value of the Part Taken (as part of the whole)		
1.5 acres × \$2,500 per acre =	\$	3,750
3. Value of the Remainder (as part of the whole		
[1-2]) \$12,500 – \$3,750 =	\$	8,750
4. Value of the Remainder (after the taking and disregarding benefits)		
3.5 acres × \$2,500 per acre =	\$	8,750
5. Damages to the Remainder Property (3-4) \$8,750 – \$8,750 =	\$	0
6. Value of the Remainder (after the taking and considering benefits)		
3.5 acres × \$25,000 per acre =	\$	87,500
7. Benefits to the Remainder Property		
(6-4) \$8,750 – \$87,500 =	-\$	78,750
8. Net Damages or Net Benefits (cannot be less than zero)		
(5-7) \$0 – (– \$78,750) =	\$	0
9. Just Compensation (2 + 8) \$3,750 + \$0 =	\$	3,750

As demonstrated by the above examples, the compensation for the taking, damages, and benefits may vary with the jurisdiction, its laws, the authority under which the jurisdiction is exercising its eminent domain power, and relevant judicial decisions.

Some jurisdictions, particularly local governments, have the ability to assess remainder properties for benefits created by the public improvement. These are considered as special assessments and are independent of the land acquisition.

OTHER LOSSES AND BENEFITS

Business *goodwill* and business loss are intangible asset categories usually composed of elements such as name or franchise reputation, customer patronage, location, products, and similar factors, such as the Uniform Standards of Professional Appraisal Practice (*USPAP*). Historically, while a taking of property from a business might result in a loss of income or possibly even a business closure, the loss of business was not compensable under eminent domain. The situation is changing. Currently, several jurisdictions have statutes providing for the monetary recovery of loss of business goodwill. The Uniform Eminent Domain Code provides for compensation for loss of goodwill. Also, some courts have allowed compensation for business losses.

Relocation assistance benefits and services, a means to provide uniform and equitable treatment for people displaced by a federal or federally-aided project, have resulted in a significant change in the compensation paid to owners and occupants of acquired

property. With the passage of the United States *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and the Uniform Relocation Act Amendments of 1987*, numerous benefits and services are available. The services apply to displaced people (individuals, families, partnerships, associations, and corporations), businesses, farms, and nonprofit organizations. The benefits may include relocation counseling, moving cost reimbursement, replacement housing payments, and/or payment for direct loss of tangible personal property, searching and reestablishment expenses, or in lieu of (moving) payments.

WHO MAY EXERCISE THE RIGHT OF EMINENT DOMAIN

The power of eminent domain is a constitutionally guaranteed right of the sovereign. As a general premise, all governments, from federal, provincial, and state to counties, municipalities, cities, school districts, and other political subdivisions and agencies have rights and responsibilities associated with eminent domain proceedings. In addition, most jurisdictions allow for the exercise of the power of eminent domain by quasi-public agencies, such as utility companies, and by other public and private nonprofit organizations such as industrial development agencies. The extent to which quasi-public agencies such as utility companies and other organizations are legally allowed to exercise the power of eminent domain is dependent on the constitutional grant of authority or statutory enactment of the specific jurisdiction.

Historically, the right of eminent domain has been limited to cases where the proposed use had been established as a “public” use. Under most circumstances, the public or quasi-public agency could establish the public use and necessity for the acquisition of a real estate parcel or a real property interest. Whether or not a particular parcel is needed for a specific public or quasi-public use is sometimes a matter of dispute and may require a legislative or judicial decision. Many jurisdictions attempt to reduce or eliminate challenge to the public use and necessity by establishing criteria under which the finding of necessity is both conclusive and unassailable. However, questions arise when a governmental agency seeks to take property in the public’s name for the eventual transfer to a private developer or when the acquisitions itself seems to benefit private rather than public interests. Jurisdictions justify this type of acquisition in economic development terms such as job creation and increased tax revenues.) When legal challenges to this type of acquisition are instituted, the court bases its decision, as to whether or not the eminent domain action is appropriate, on the factual situation of the specific case and legal precedents.

LEGISLATIVE ACTIONS AFFECTING EMINENT DOMAIN

In the United States, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and the Uniform Relocation Act Amendments of 1987 are efforts by the federal government to ensure that all people affected by an acquisition of private property will be treated in a uniform and equitable matter and that all acquiring agencies using any federal funds will attempt to acquire property through good faith negotiations rather than through condemnation.

Specifically, the Uniform Act mandates basic acquisition requirements for agencies receiving federal financial assistance:

- Personally contact each real property owner or the owner's designated representative to explain the acquisition process, including the right to accompany the appraiser during inspection of the property.
- Provide the property owner with a written offer of just compensation for the real property to be acquired and a summary statement of the offer's basis.
- Give the property owner an opportunity to consider the offer.
- Conduct negotiations without any attempt to coerce the property owner into reaching an agreement.
- Provide at least 90 days written notice of the date by which the move is required.
- Pay the agreed purchase price before requiring the property owner to surrender possession of the property being acquired.

SUMMARY

Eminent domain is a power that has existed for centuries and is most certainly necessary to a government. In the United States, the Fifth and Fourteenth Amendments to the Constitution and most state constitutions guarantee this right. In Canada, the Crown retains the right to acquire property for public purposes without the consent of the owner. This right has been extended by legislation to other Canadian bodies.

The procedures in respect to eminent domain and condemnation/expropriation, although having the same general goal, vary greatly from jurisdiction to jurisdiction. The facts of each case must be applied in conformance with the jurisdiction's laws to determine whether or not the power of eminent domain has been properly exercised and whether or not the property owner's rights have been protected. In the United States, property owners have constitutional guarantees of due process and the right to receive just compensation for the taking of private property. In Canada, while there is no property rights protection imbedded in the Constitution or Charter of Rights; property owners can look to common law and federal and provincial statutes for their procedural and compensatory rights arising out of expropriation.

CHAPTER 6:

Environmental Considerations

Philip Elson

and

The International Environmental Committee

INTRODUCTION

The right of way professional must be familiar with the basic requirements of the environmental assessment and permitting process. This includes federal and state laws, due diligence standards, major environmental legislation and environmental risk management as they may affect project development and the acquisition of property.

ENVIRONMENTAL HISTORY

During the colonization and development of North America, the continent's resources seemed inexhaustible. The early settlers were few and their requirements so modest that it was possible to live with a minimum of environmental conflict and disruption. Today, the increasing population is placing maximum demands on the land and its resources. While there is a greater awareness of the negative impacts that unrestrained human activity and development poses for nature, there are also significant attempts to protect the quality of the remaining natural environment.

In most countries, resource and land development is the mainstay of the economy. It is a principal factor in a nation's decision as to the allocation and use of resources with conflicts arising between logging and recreation, dams and fisheries, agriculture and urban expansion, development and preservation, and so forth. In the 1960s and 1970s, the conflicts led to the environmental revolution. In its early stages, the disparity of viewpoints between developers, agencies, and environmentalists, at times, seemed insurmountable. However, efforts to reconcile the two divergent views increased in the United States and Canada with the passage of significant environmental protection legislation.

In the United States, the *National Environmental Policy Act (NEPA)* and in Canada, the *Canadian Environmental Protection Act (CEPA)* are the principal legislative acts that address the project development process and the environment. The procedures resulting from these laws established the requirements necessary to address the environmental impacts of projects or resource management plans resulting from federal or agency decisions.

ENVIRONMENT DEFINED

Environment is the combination of conditions (for example physical, social, and cultural, and so on) that affect and influence the growth, development, and survival of living things. Some environmental categories include the natural environment, the human environment, and the cultural environment. Natural environment issues are the physical (land, water, and elements) and the organic (plants and animals). Human environment relates to the social factors and economic uses of land. Cultural environment concerns include, among others, archaeological, historical, and ethnographic (such as, Native American and First Nation) factors.

Much of the environmental analysis that occurs under current legislation relates to the human environment, the relationship between people and the environment in its totality. When an environmental analysis is undertaken, an immense range of items and relationships, from the physical to the social to the economic to the cultural, are studied and the proposed project's impacts on them analyzed.

Based on current legislation, environmental analysis considers and identifies the relationships between the physical and the human. Environmental studies may include the project's effects on:

- water bodies, wetlands, and water source quality;
- air quality;
- the general ecology, wildlife and habitat;
- parks and recreation facilities;
- historical resources
- agriculture;
- transportation patterns;
- the economy;
- archeological resources; and,
- cultural resources.

The relationships between humans and their physical, social, economic, and cultural environments are as significant as the relationships between other organisms and their environments. Society recognizes that there is a need to balance the human environment with the total environment and that there are consequences to both with every proposed development.

THE ENVIRONMENTAL PROCESS

The environmental process involves incorporating environmental considerations into the project development study and plan. The process includes defining a sound and viable project located so as to minimize environmental harm, and constructed using the best management practices.

While this is the standard approach to all projects, there are usually many factors (such as, cost, socioeconomic issues, political concerns, and so forth), which necessitate a balancing of needs and outcomes. In many cases, the environmental process is required under federal, provincial, or state statute or regulation. In other cases, the process is left to the project sponsor and state/provincial and local agencies to choose the role that environmental considerations plays in the right of way decision-making process.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

In 1970, President Richard M. Nixon signed into law the *National Environmental Policy Act (NEPA)*, one of the most significant pieces of environmental legislation ever passed by congress. This brief, but far reaching act, established a national charter for environmental protection and directed all federal agencies to consider environmental impacts in their project decision-making process. A requirement of the legislation was that each agency proposing a project or resource management plan or action prepare a statement of the environmental impact of their action and take this into account in their decision making. The Act also established the *Environmental Protection Agency (EPA)* and the *Council on Environmental Quality (CEQ)* to oversee this process.

While mandating the consideration of environmental impacts and their significance in federal agency decision making, the law provided little guidance as to what the required Environmental Assessment (EA) or Environmental Impact Statement (EIS) should contain. It also did not address what the process for preparing one should be. As a result, each federal agency developed its own process to comply with the law. In a landmark action, the Sierra Club sued the EPA over the adequacy of the EIS prepared for the Trans-Alaska Pipeline System.

Because of that lawsuit, agencies began to develop a more standardized and lengthy EIS process. In 1978, the CEQ published regulations that established a standard format and process for all NEPA documentation and agency decision making. The regulations established the types of actions that would require an EA or EIS, the content and format of the required documents, time frames for carrying out the process, and the public's role in the process. They also established how such documentation would be considered in federal decision making including; in the case of an EA, a finding of no significant impact FONSI or EIS decision a record of decision (ROD) and the identification of the least impact alternative.

However, since the activities or decisions of each federal agency are somewhat different, they were directed to establish their own NEPA related regulations including the type of individual actions or decisions which require EAs, EISs and Categorical Exclusions (CAs). In doing so they must conform to the requirements of the CEQ regulations. On March 16, 1981, the CEQ issued a memorandum addressing the forty most asked questions and answers to NEPA regulations. This document and other subsequent written guidance provide important clarification of the NEPA process.

The NEPA process applies only to federal actions or decisions. Examples of federal actions might include the siting and design of a specific federally aided project (such as a highway), the granting of an easement across federal lands, a permitting action taken by a nonfederal entity (wetland permit), the crossing of navigable waters or providing financial assistance (grants or loans) to other agencies or groups. Federal agencies can be assigned as a lead or cooperating (NEPA) agency. If a project is determined not to be a federal action, then CEQ regulations NEPA does not apply.

The Council of Environmental Quality (CEQ) Regulations also address compliance with other federal environmental laws, which many times result in permits or decisions granted by other federal agencies or where delegated by state and local agencies.

OTHER MAJOR (UNITED STATES) ENVIRONMENTAL LAWS, EXECUTIVE ORDERS, AND AGENCY DIRECTIVES

There are many laws, executive orders and agency regulations or directives which must be addressed in the environmental process. The following are a few of the major ones that may be applicable. A more comprehensive list follows below:

Clean Air Act (CAA)

The *Clean Air Act (CAA)*, found at 42 U.S. Code § 85, is the comprehensive federal law that regulates air emissions by establishing pollution control requirements administered through State Implementation Plans (SIPs) and a series of emissions permits issued through state government. The CAA establishes *National Ambient Air Quality Standards (NAAQS)* for pollutants, including particulate matter (PM), which endanger public health and welfare, and protects against known adverse effects of exposure to air pollutants. Under each SIP, statewide emissions standards and goals are established. Activities that generate air pollutants, such as dust and PM from construction sites, or smokestack emissions are regulated through operating permits that limit the quantity of pollutants that may be emitted. New sources of air pollutants are more highly regulated than existing sources. In areas where air pollutant levels are already high, new sources of regulated pollutants may not be allowed. Early consideration of current air quality and determination of the permits required to construct a project are an important part of the siting process. More information is available at: <http://www.epa.gov/air/caa> and <http://www.fws.gov/endangered/esa/content.html>.

The *Resource Conservation and Recovery Act (RCRA) of 1976* found at 42 U.S.C. §6901, gave the EPA the authority to control hazardous waste from the “cradle-to-the-grave.” Control included the generation, transportation, treatment, storage, and disposal of hazardous wastes that are specifically defined and then permitted under state administered RCRA programs. RCRA limits the amounts of waste that can be stored at a site, how those wastes must be labeled and transported, and finally how they are to be re-purposed or disposed of. Compliance with RCRA requirements is demonstrated through careful recordkeeping, waste management, and site monitoring.

Conservation and recycling are encouraged by RCRA. Disposal of wastes meeting the RCRA definitions of “Hazardous Waste” is only allowed at specially permitted facilities. Active facilities that have generated RCRA wastes in the past are cleaned up under the corrective actions and remediation requirements of the act. RCRA also regulates underground and above ground storage tanks through state licensing, inspection, and clean-up and removal standards. RCRA focuses on active and future facilities. The *Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)*, discussed next, addresses abandoned or historic sites. More information is available at: <http://www.epa.gov/lawsregs/laws/rcra.html>.

Clean Water Act (CWA)

The *Federal Water Pollution Control Act*, found at 33 U.S.C. §1251 et seq., and is commonly called the *Clean Water Act (CWA)*, sets the basic structure for regulating discharges of pollutants into waters of the United States. The CWA gave the EPA the authority to set effluent standards on various industries and continued the requirements to set water quality standards for all contaminants in surface waters. Under the CWA, it is unlawful for any person to discharge any pollutant from a point source into navigable waters unless a National Pollution Discharge Elimination System (NPDES) permit has been obtained. NPDES permits are issued at the state level and include stormwater permits, which are required for most construction sites. The CWA broadly defines “pollutant” to include both obvious wastes such as sewage, dredged spoil, discarded equipment and chemicals, but also any material that affects toxicity, acidity, temperature, or appearance of surface waters. Navigable waters of the United States, are also broadly defined and generally include even the tiniest streams, rivers, lakes, and adjacent wetlands. In addition to NPDES permits, work on or around wetlands, floodways, floodplains, and river banks is regulated by the U.S. Army Corps of Engineers through the 404 Permit System. The Corps of Engineers has also promulgated a Nationwide Permit System designed to speed up the permitting of ordinary activities, such as some utility crossings and municipal waterway improvements. Review of available Nationwide Permits is always the first step in determining permitting requirements for a project near a waterway or wetland. More information is available at: <http://www.epa.gov/oecaagct/lcwa.html>.

Comprehensive Environmental Response, Compensation, and Liability Act

Congress enacted the *Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)*, commonly known as *Superfund*, found at 42 U.S.C. §103 et seq. on December 11, 1980. This law created a chemical and petroleum industries tax and provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. The money collected established a (Superfund) trust fund to clean up abandoned or uncontrolled hazardous waste sites that are ranked and collected on the *National Priorities List (NPL)*. CERCLA deals only with closed and abandoned hazardous waste sites. CERCLA authorizes emergency removal actions as well as long-term site cleanups that are generally very expensive.

Continuing joint and several liability for CERCLA cleanups means that causing a release of a quantity of a CERCLA hazardous substance, (which includes most anything that presents a substantial danger to public health, welfare, or the environment), or acquisition of an interest in a site listed on the NPL should generally be avoided. One possible exception to this precept is the redevelopment of Brownfields designated sites. Brownfields are cleaned up sites that could be reused, but for the stigma of prior contamination. Under CERCLA, these sites can be redeveloped and liability for past contamination limited through cooperation with the EPA.

CERCLA also addresses environmental risk assessment, environmental justice, and community relations and involvement through the Emergency Planning and Community Right-to-Know Act (EPCRA).

More information is available from the following:

- Swamp Lands Act 1850
- Homestead Act 1862
- Pacific Railway Act of 1862
- Mining Act 1872
- Rivers and Harbors Act 1899
- Supercedes Antiquities Act 1906
- Migratory Bird Treaty Act 1918
- Historic Sites Act 1935
- Clean Air Act 1963
- National Historic Preservation Act 1966
- National Environmental Policy Act of 1969 (NEPA)
- Clean Water Act 1972
- General Mining Act 1972
- Endangered Species Act 1973
- Safe Drinking Water Act 1974
- Hazardous Materials Transportation Act 1975
- Archaeological Resources Protection Act 1979
- Comprehensive Environmental Response, Compensation and Liability Act 1980 (CERCLA, or Superfund)
- Native American Graves Protection and Repatriation Act 1990
- Archaeological and Historic Preservation Act
- Bald and Golden Eagle Protection Act

- Resource Conservation and Recovery Act (RCRA)
- Toxic Substances Control Act
- Wild and Scenic Rivers Act
- <http://www.epa.gov/superfund/index.htm>
- US <http://www.epa.gov/lawsregs/laws/index.html>

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA)

Originally proclaimed in 1988 and updated in 1999, the *Canadian Environmental Protection Act (CEPA)* governs a variety of environmental activities falling with federal jurisdiction such as the evaluation and regulation of toxic substances, ocean dumping, cross-border air and water pollution, inter-provincial and international movement of hazardous wastes and recyclable materials, waste disposal into oceans, and imposes requirements for pollution prevention planning and emergency plans. Regulations under the Act include those governing the storage, treatment, destruction, and export of polychlorinated biphenyls (PCBs) materials, as well as regulations relating to the use and consumption of ozone depleting substances. CEPA is administered by Environment Canada. The Act contains provisions for the regulation of environmental activities that take place on lands and operations owned or under the jurisdiction of federal agencies.

OTHER MAJOR (CANADIAN) ENVIRONMENTAL LAWS

Canadian Environmental Assessment Act (CEAA) of 1992 requires that proponents of a federal project to assess the potential environmental impact of the project early in the planning stages. Federal projects include federally financed projects, projects requiring disposal of federal lands, projects requiring specific federal regulatory approval, and projects undertaken directly by the federal government.

If *environmental effects* are likely to be significant, federal authorities cannot allow a project to proceed until an assessment has been completed. The Act outlines the requirements of the environmental assessment process, which is guided by the level of assessment required. CEAA is administered by the Canadian Environment Assessment Agency. The majority of projects can be assessed satisfactorily with a basic screening level assessment process, but the CEAA provides for three other assessment processes: (1) a comprehensive study, (2) a panel review (public hearing), or (3) mediation.

Transportation of Dangerous Goods Act

The 1992 Transportation of Dangerous Goods Act regulates the handling and transportation of dangerous goods according to strict safety measures, including requirements for specific documentation and emergency response plans. To minimize danger to the public, this Act requires the reporting of releases of dangerous goods and in the case of a release, the implementation of emergency measures.

Canadian Fisheries Act

The *Fisheries Act* prohibits the deposit of harmful substances into waters where fish are found and prohibits activities that damage fish habitat, unless otherwise authorized through regulation.

The purposes of the Fisheries Act are to prevent Canadian indigenous species, subspecies, and distinct populations from becoming extirpated or extinct, to provide for the recovery of endangered or threatened species, and encourage the management of other species to prevent them from becoming at risk.

Canada Wildlife Act

The *Wildlife Act*, originally proclaimed in 1973 and updated in 1985, enabled the federal government to conduct research and to protect endangered species. It serves to protect all Canadian wildlife, and it establishes and protects specific National Wildlife Areas. The Wildlife Act is of particular relevance to departments with large land holdings.

PROVINCIAL LEGISLATION

In Canada, neither the federal or provincial governments have exclusive jurisdiction over the environment, rather there is “concurrent jurisdiction,” meaning that both provincial and federal regulations must be complied with. The provinces take the lead with respect to environmental conservation and protection, addressing such issues as the development of contaminated land. Therefore, the right of way agent must be aware of federal and provincial environmental legislation, as well as municipal bylaws. A more comprehensive list of federal, provincial and territorial legislation is as follows:

Canada

- <http://www.ec.gc.ca>

Federal Examples:

- British North American Act 1867
- Clean Air Act 1970 (replaced by CEPA) and Clean Air Act 2006
- Migratory Birds Convention Act 1994
- Canada Water Act 1985
- Fisheries Act 1985
- International Boundary Waters Treaty Act 1985
- National Energy Board Act 1985
- Navigable Waters Protection Act 1985
- Petroleum Resources Act 1985
- Canadian Environmental Assessment Act (CEAA) 1992

- Transportation of Dangerous Goods Act 1992
- Canadian Environmental Protection Act (CEPA) 1999
- National Parks Act 2000
- Pest Control Products Act 2002
- Wildlife Act

Examples of Provincial and Territorial Legislation:

- New Brunswick Clean Environment Act 1973
- Prince Edward Island Land Protection Act 1982
- Manitoba Environment Act 1987
- Northwest Territory Environmental Protection Act 1988
- Northwest Territory Forest Protection Act 1988
- Northwest Territory Pesticides Act 1988
- Prince Edward Island Environmental Protection Act 1988
- Ontario Aggregate Resources Act 1990
- Ontario Conservation Authorities Act 1990
- Ontario Crown Timber Act 1990
- Ontario Drainage Act 1990
- Ontario Gasoline Handling Act 1990
- Ontario Lakes and Rivers Improvement Act 1990
- Ontario Niagara Escarpment Planning and Development Act 1990
- Forestry Act 1990
- Ontario Environmental Assessment Act 1990 (other provinces have this Act also)
- Ontario Environmental Protection Act 1990 (other provinces have this Act also)
- Ontario Planning Act 1990
- Ontario Water Resources Act 1990
- Ontario Waste Management Act 1992
- Ontario Environmental Bill of Rights 1993
- Ontario Fish and Wildlife Conservation Act 1997
- Ontario Energy Board Act 1998
- Alberta Environmental Protection and Enhancement Act 2000
- Newfoundland and Labrador's Environmental Assessment Act 2000
- Yukon Environment Act 2002
- Yukon Noise Prevention Act 2002

- British Columbia Environmental Management Act 2003
- Yukon Environmental and Socio-Economic Assessment Act 2003
- Ontario Provincial Parks and Conservation Reserves Act 2006
- Ontario Endangered Species Act 2007
- New Brunswick Environmental Trust Fund Act 2011
- New Brunswick Topsoil Preservation Act 2011
- Mining Act (several provinces have this Act)
- Public Health Act (several provinces have this Act)

ENVIRONMENTAL RISK MANAGEMENT

One of the most significant environmental challenges facing the right of way professional is the management of environmental risks associated with the acquisition, sale and use of land. Legal responsibility for environmental conditions results from the CERCLA, and as amended, by the *Superfund Amendments and Reauthorization Act (SARA)* together with state statutes and case law. CERCLA and SARA are the United States laws that create the potential for liability for the assessment and cleanup of hazardous substances. CERCLA and SARA apply to the parties who are potentially responsible for the contamination, including an owner or operator of a facility whether or not the owner or operator was responsible for the release and ultimate contamination of the subject property. Construction or maintenance activities of a utility that has existing or new easement rights on contaminated land can result in allegations of exacerbation of existing conditions and legal liability. There are many types of environmental site conditions that may exist on land, some of the risks are:

- asbestos,
- lead-based paint,
- underground storage tanks,
- known historic releases of hazardous substance or petroleum products,
- petroleum or other hazardous liquids,
- indoor air quality (for example, radon gas and biological hazards [mold, bacteria, viruses]),
- storm water and waste water discharges,
- regulated hazardous and solid waste,
- abandoned pipes or utilities,
- electromagnetic field (EMFs), and
- public health exposure, and third-party claims.

While not all-inclusive, this list makes it quite apparent that there are many environmental issues that can negatively affect a proposed property use and its value.

Legal liability for environmental conditions can be avoided, mitigated or transferred by various means. This complex area of law requires the analysis of an environmental attorney. Typical methods involve: Innocent landowner defense through due diligence inquiries and investigations that meet the “All Appropriate Inquiry standard”; terms of the purchase agreement and deed; Bona Fide Prospective Purchaser Agreement; Remediation and site closure; No Further Action Letters association finding by the regulatory agencies that have jurisdiction; Deed restrictions, reservations or exceptions; Disclosure; Restrictive covenants; Institutional controls and Pollution insurance.

Environmental risks can expose an agency, company or client to significant long-term liability and financial problems. The resolution of environmental risk issues can require significant capital expenditures and an inordinate amount of time. To be successful, an environmental risk management program must have the commitment and visible support of senior management. It must provide training, technical support, and other resources to the people responsible for its implementation. Finally, the program must be reviewed periodically to ensure performance quality, use of the most current technology, and compliance with the latest laws and regulations.

THE ENVIRONMENTAL SITE ASSESSMENT PROCESS

ASTM International, formerly the *American Society for Testing and Materials (ASTM)*, has developed a series of standards, which can be used to form the basis of an environmental risk management program for contaminated property. These standards include *ASTM E1528 - 06 Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process*, *ASTM E1527 - 05 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*, *ASTM E1903 - 97(2002) Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process*, and *ASTM E2247 - 08 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property*. The standards define processes pertaining to the inspection, investigation, and evaluation of property as they relate to the presence of environmental contamination. The standards’ purpose is: “to define good commercial and customary practice in the United States of America for conducting ... environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and petroleum products.”

The ASTM practices are also intended to satisfy “all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial practice,” and to fulfill one of the requirements for the “innocent landowner’s defense” to CERCLA liability. Successful use of the innocent landowner defense can curtail CERCLA liability for past contamination that is not discovered, despite ASTM compliant inquiry. E1527-05 also defines certain environmental considerations, beyond the scope of the practice that may warrant further evaluation based on “business environmental risk,” as defined by the parties involved in the transaction.

RECOGNIZED ENVIRONMENTAL CONDITION

Recognized Environmental Condition is broadly the condition of the site including the presence of any hazardous substance or petroleum product. A more exact guideline can be found in *E1527-00 Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process*. Revised in 2005, Part 1, the “Scope,” and more particularly Part 1.1.1 defines recognized environmental conditions as “the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws.”

If there are no hazardous materials or petroleum products present on the site, a Phase I Environmental Site Assessment is probably not necessary. However, environmental due diligence is still recommended prior to any property transaction.

THE ROLE OF THE RIGHT OF WAY PROFESSIONAL

The role of the right of way professional may vary by project. Most companies that have the need to acquire large amounts of right of way will also have the need to do large amounts of environmental work and will have an environmental compliance and/or engineering department.

In any case, it would be beneficial for the right of way professional to be able to identify environmental concerns, know the applicable laws, and be able to identify the proper government agencies to work with to acquire any necessary permits. Many times a right of way agent may work with a property owner or agency to acquire the proper land right necessary for the proposed installation but may need to deal a separate entity to address environmental concerns. For example, you may get a right of way to build a project across land that is privately owned but find out later that you also need a permit from the U.S. Army Corps of Engineers because of the close proximity of a waterway or levee.

Along with knowing how to identify and work with environmental concerns, the right of way agent will also be dealing with concerned neighbors, many of whom he or she will also need to acquire right of way from. If those neighbors don't appreciate all the company is doing to keep the environment safe, they may be less likely to negotiate a fair deal when approached for their property. It is up to the right of way professional to be able to communicate the ecological, social, cultural and economic factors of the project while assuring the landowner(s) that the impacts will be kept minimal. Keeping impacts to a minimum may mean re-routing the job to avoid potentially large environmental concerns.

The right of way professional's initial assessment and ability to identify problems, as well as his or her ability to communicate any concerns or questions to the proper agencies, goes a long way in determining the success of a project.

THE PUBLIC PARTICIPATION PROCESS

At all phases of a project, the right of way agent can influence its success by encouraging the agency, company, or client to communicate openly with the public. The agent should offer to conduct public meetings or participate as a team member, with the engineers, planners, and environmentalists. In the early project meetings, information gathering and listening to the resident's views may be of greater importance than advancing the project's objectives. For the meetings to be successful, the public must be assured that its concerns are important and will be considered. Other means of including the public and gaining consensus and acceptance of project goals include paper and electronic newsletters and websites. While publishing a notice in the local newspaper may satisfy regulatory notice requirements, successful outreach generally requires more creativity. The right of way agent can consider posting flyers at community gathering spots such as trash collection facilities, hosting information desks at community gatherings, and liaison with existing communications networks in neighborhood groups, sporting clubs, and religious organizations.

National Environmental Policy Act (NEPA) of 1969 and Canadian Environmental Assessment Act (CEAA) require scoping meetings. They are intended to address the issues and concerns of the agency and the public. While the agency will have the opportunity to present the project, the public is often able to identify and articulate important issues, provide what may otherwise be unavailable data, and suggest feasible project alternatives that could minimize adverse project impacts and possibly contribute to agency cost savings. Consideration of other alternatives is a NEPA and CEAA requirement.

Public participation does not guarantee the successful resolution of issues and concerns. However, open communications and the willingness to meet and discuss all aspects of the project improves the public's understanding, which may eventually lead to the acceptance of the project, or at least get closer to that goal. Sometimes understanding and having knowledge as to the reasons behind a decision, while not agreeing with the decision, will result in its acceptance. If agencies are willing to conduct workshops, informal meetings, and hearings, it is an acknowledgment of the importance of the public's input. The right of way professional, as a communicator and facilitator, can contribute greatly to the success of the public participation process. Agents, with their extensive experience in working with diverse groups, are an excellent choice to coordinate and guide the process.

Regardless of the outcomes from the public participation process, the data are incorporated into the environmental assessment and are available to the public and project sponsors. Specific to right of way, the environmental assessment studies can help the appraiser to better understand the general and specific economic, environmental, governmental, and social forces impacting the region. The data might alert the appraiser to sensitive issues or situations, which may be confronted during the valuation process. The environmental assessment is also an asset to acquisition and relocation agents. The information can aid in negotiating settlements. The negotiator may uncover problems relating to a specific parcel or group of parcels, which could be mitigated or eliminated by a location, design,

or construction change. The data may help the negotiator understand the project's history and to be in a position to explain it to the property owners.

Finally, right of way management can demonstrate to the area's citizens, politicians, and to the agency staff, the efforts taken to involve the public in the decision-making process. Management's positive attitude toward creative environmental problem solving shows that the agency has an aggressive forward thinking staff that will balance, as far as possible, all interests.

SUMMARY

The right of way agent must understand and sometime coordinate environmental matters to assure: (1) the easement or fee site is suitable for its intended purpose; (2) it can be used without the need for unanticipated environmental cost; (3) there is maximum public acceptance, and (4) the needed site work can start and end on schedule. This requires a basic understanding of the environmental law and regulations, the environmental assessment and review process as well as the ability to speak the language of the environmental industry and understand methods to mitigate or risk-transfer adverse effects. As a process leader, the right of way agent is positioned to achieve a successful project, and be able to recognize the importance of and be able to facilitate public involvement. The right of way agent is the appropriate professional to assist agencies, companies, clients, the community, and property owners in evaluating the project's impacts and to facilitate the decision-making process. As a process leader, the agent can help ensure that the completed project has the smallest adverse environmental impacts and the greatest public acceptance.

CHAPTER 7:

Interpreting Engineering Plans

Ron L. Williams

and

The International Surveying and Engineering Committee

INTRODUCTION

In any project development, the design engineer's prime objective is to conceive of and develop a plan that will be readily understood by others. This plan, which consists of a series of lines and symbols, is used by appraisers, negotiators, attorneys, land surveyors, contractors, and the public.

DEVELOPMENT AND USE

An engineer, with a particular project in mind, will supervise the preparation of the technical drawings, collectively referred to as the construction plans. Usually, a complete plan set includes sufficient data for construction cost estimating, right of way acquisition, and project construction.

It is common, especially for highway projects, for a separate set of plans to be prepared for right of way acquisitions. These *right of way plans* address the project's right of way and property acquisition issues. Although few right of way practitioners are involved in the development of engineering or right of way plans, most find it necessary to understand and explain portions of a plan.

The appraiser must be able to identify property boundaries and dimensions, size and type of improvements, and other significant property features. In acquisitions involving the appraisal of a partial taking, information on grade changes, drainage provisions, and other construction features may have an impact on the appraised value and on the just compensation amount.

The negotiator must be conversant with the construction details and their impact on the individual properties. For example, during negotiations with a property owner, the

acquisition agent must understand the content of the plans and must be able to explain them to the owner in nontechnical terms. The proposed construction project, the necessity of acquiring the property, and its impact on any remainder property must be communicated effectively.

An attorney uses the plans and property descriptions to prepare the legal documents necessary to acquire and transfer the property. In a condemnation case, the acquiring agency's attorney must defend the need for acquiring the property, its proposed use, and the specific property rights to be acquired. To be effective, the attorney must be able to read, interpret, and correctly present engineering plans.

Many other people, with varying backgrounds, interests, and abilities, utilize the design engineer's plan. Since words often have different meanings to different people, certain standards and symbols have been developed to express graphically the designer's ideas.

THREE-VIEW-CONCEPT

Construction plans consist of variations of the *three-view-concept*, a separate view of the project from three directions. The three views are the plan view, the profile view, and the cross-section view.

The *plan view* provides the top, or bird's-eye, view from directly above and indicates the length and width of project features. The *profile view*, or side view, indicates the length and height of the features and provides information related to centerline elevations. The *cross-section view*, or end view, provides width and height information and shows elevations left and right of centerline. Each view is drawn on a flat plane, perpendicular to the other two views, and shows existing and proposed features. A combination of the information contained in all three views provides a three-dimensional picture of the proposed project.

Complete information cannot be presented in any single view; therefore, when reading a plan, care must be taken to study and combine the details of all three views. The right of way practitioner must study the entire picture before reaching any conclusions. Once the fundamentals of the three-view-concept are learned, a person will be able to understand plans for highways, utility lines, rail, or other project types.

PLAN DEVELOPMENT

Plans for a major project will include a construction plan and a right of way plan. The construction plan contains construction details, and the right of way plan shows the necessary properties to be acquired. The main components of any engineering plan include the plan view, profile view, typical sections, cross-section drawings, general notes, standard drawings, and a summary of quantities of materials required. A fully detailed set of construction plans will show existing topographical features, including surface and subsurface facilities.

THE PLAN VIEW

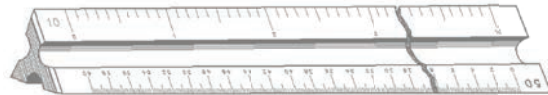
The *plan view* shows the horizontal alignment of the proposed construction project, and the shape and dimensions of existing and proposed features on the ground surface as viewed from above. Dashed lines normally indicate existing features and solid lines represent proposed construction elements. Graphic symbols represent common objects and a north arrow is included for drawing and project orientation.

All plans are drawn to a specific *plan scale*. Lines on the plans are drawn to an exact length, which represents an actual distance on the ground or an actual dimension of an object. Usually, a proportional relationship is developed between one inch and a specified unit of length. For example, a 1"=50' plan scale means that one inch on the plan represents fifty feet on the ground. The distances scaled or indicated in the plan view are flat or level distances and are not measured along the ground surface.

As shown in Figure 7.1: Scales used in plan preparation, the *Engineer's Scale* is used most often on construction plans and is divided into 10, 20, 30, 40, 50, or 60 parts to the inch. Any drawing scale that is a multiple of these divisions can be used for the direct layout and measurement of distances on a drawing. For example, the 10 scale can be used to represent 1"=10', 1"=100', 1"=1000', and so on. The architect's scale, also shown in Figure 7.1, is used for the layout of bridges and other structures, displays fractions of an inch to represent one foot (for example, 1/4"=1'-0"; 3/8"=1'-0").



ARCHITECT'S SCALE



ENGINEER'S SCALE

Figure 7.1: Scales Used in Plan Preparation

The *architect's scale* is also shown in Figure 7.1: Scales Used in Plan Preparation. Metric plans utilize a *ratio scale*, where one unit on the plan represents a corresponding number of units on the ground. Ratio scales are generally represented in multiples of 1, 2, and 5, that is 1:100, 1:200, 1:500. For example, for a scale of 1:500, one centimeter on the plan represents five hundred centimeters (five meters) on the ground, or one meter on the plan represents five hundred meters on the ground. For comparison purposes, a 1"=50' engineer's scale is the same as a 1:600 ratio or metric scale ($50' \times 12''$ per foot = 600"), and a 1"=100' engineer's scale is the same as a 1:1200 ratio or metric scale ($100' \times 12''$ per foot = 1200").

For most construction and right of way plans, any scale may be used as long as all the necessary details can be adequately shown. The actual scale used will depend on the amount of detail to be shown and the size of the plan sheet used. A rural project involving farmland may use an engineer's scale of 1"=100' or a ratio scale of 1:1000 or 1:2000. In an urban area, where the land use is more concentrated, an engineer's scale of 1"=20' or a ratio scale of 1:200 or 1:500 would be appropriate.

The scale used in preparing a plan is shown on the plan's title sheet. Routine verification of the scale is recommended. First, distances indicated on the plans are subject to error if, as sometimes happens, the paper shrinks or swells. Second, maps are often photographically reproduced in varying sizes and unless the reproduction duplicates the original size or an exact proportional size to the original drawing, scaling will be confusing or difficult. Use of a graphic scale on the original drawing will facilitate verification of the actual scale of reproduction.

Metric Linear Conversion Factors

Since plans are prepared in both Imperial (English) and metric plan scales, converting from one type unit to the other is often necessary, the following conversion factors are provided:

LENGTH

Metric Units	Metric to English	English to Metric
1 meter = 100 centimeters 1000 meters = 1 kilometer	1 millimeter = 0.03937 inch 1 centimeter = 0.3937 inches 1 meter: = 39.37 inches = 3.2808 feet = 1.0936 yards 1 kilometer = 0.6214 miles	1 inch = 2.54 centimeters 1 foot = 0.3048 meters 1 yard = 0.9144 meters 1 mile = 1.6093 kilometers

Table 7.1: Centerline Stationing and Orientation

Centerline and Centerline Stationing

The *project centerline* is the basis from which all other locations are referenced and is the control line for project construction. This centerline is divided into distance intervals, or *stations*. On English or Imperial plans, 100 feet is the distance interval and on metric plans, the stations are usually at 100 or 1000 meter intervals. Each station is consecutively numbered, using positive numbers. The project's beginning station may be an arbitrary number, or it may be tied to the ending station of a preceding project. Stationing is progressive from the beginning of the project to the project's end. Station numbers usually run from south to north or from west to east. The preceding station number, followed by a plus sign and the distance from the preceding station to the point, designates an intermediate point between two stations. Therefore, the exact location of a specific point on the centerline is located by stating the previous station number and the plus distance (usually expressed to the nearest one-hundredth of a foot [about 1/8 inch] or one-hundredth of a meter [about 3/8 inch]) to the point. For example, a point on the centerline that is 200 feet from the initial or beginning point (initial point equals station 0+00) would be identified as station 2+00 (see Figure 7.2).

A point that is 225 feet from the initial point would be identified as station 2+25. A point that is 375.61 feet from the initial point is described as station 3+75.61. In metric units, a point on the centerline that is 200 meters from the initial or beginning point (initial point equals station 0+000) would be station 0+200. A point that is 1325 meters from the initial point would be station 1+325, etc. Station numbering identifies the exact beginning and ending point of each project. Although the remaining examples in this chapter are given in feet, metric units are treated in the same manner.

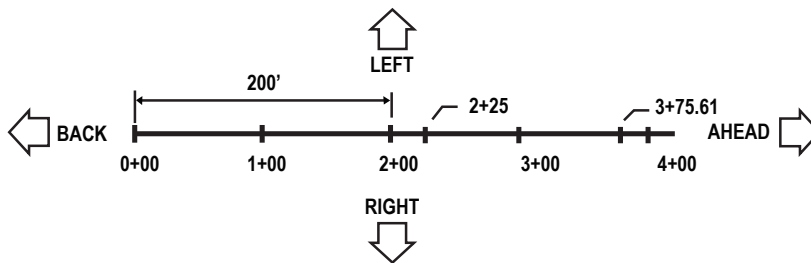


Figure 7.2: Centerline Stationing and Orientation

The direction in which station numbers increase is said to be in the “ahead” direction (*AH*), or from left to right as shown in Figure 7.2: Centerline Stationing and Orientation. The direction in which stations are decreasing is said to be the “back” direction (*BK*), or from right to left as shown in Figure 7.2. The length of the project may be determined by disregarding the plus sign and subtracting the beginning station number from the ending station number. For example, if a project begins at station 8+45 and ends at station 35+49.80, the project’s length is 2,704.80' (3,549.80– 845.00). This distance can be converted to miles by dividing the 2,704.80' by 5,280' (per mile) or 0.5123 miles.

Stationing is not always continuous. Sometimes a new survey line connects to an old survey line, or two projects are tied together at a common point. When this situation arises, the distance between the last full station on the back line and the first full station on the ahead line is usually not exactly 100.00 feet. This point, common to both projects, has two station numbers: one when referring to the back project and one when referring to the ahead project. Since both station numbers identify the same point, the station number of the back line equals the station number of the ahead line, or, as shown in Figure 7.3, station 4+00 BK = station 6+00 AH. The expression of the relationship of the station numbers for this common point is called a *station equation*, or *equality*.

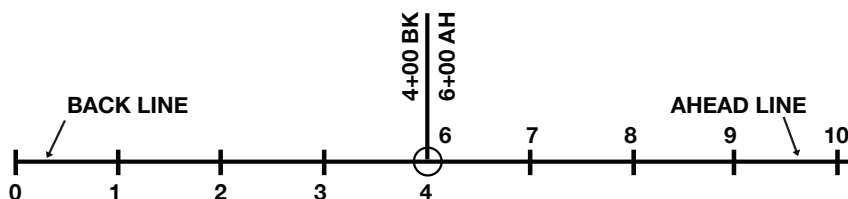


Figure 7.3: Station Equation

If there is a station equation between two points on the centerline, the station equation must be considered when calculating the distance between the two points. To calculate the distance between the two points, the following procedure is used. Calculate the individual segment length on each side of the equation and add the two resulting numbers together to arrive at the total length. In Figure 7.3: Station Equation, the actual length between station 1+00 and station 8+00 can be verified by determining the length of the “back” line (station 1+00 to station 4+00=300 feet), and adding that number to the length of the “ahead” line (station 6+00 to station 8+00 = 200 feet). The resulting length is a total distance of 500 feet between station 1+00 and station 8+00.

As shown in Figure 7.4: Station Equation – Gas Line, revisions to existing survey lines will produce equations. In the figure, the relocated gas line is approximately 500 feet shorter than the old gas line. *Cross-road equations* occur when two or more separate survey lines cross or intersect, and the station number of each survey line is identified.

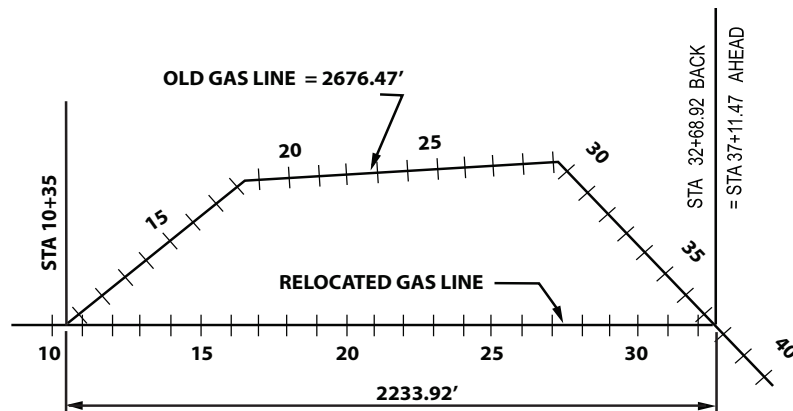


Figure 7.4: Station Equation – Gas Line

Since all plan features are drawn in relation to the centerline, any point on the plan, but not on the centerline, can be located by determining its station number and the perpendicular distance left or right of centerline to that point. This perpendicular distance from the point to the centerline is called an *offset*, and is further designated as being right (RT) or left (LT) of centerline, as shown in Figure 7.2. Right or left is determined with respect to the ahead stationing direction. On curved centerlines, offsets are measured along a radial line.

Therefore, the location of any point can be specified by stating the station number and the specific offset distance right or left of the ahead centerline. The precise distance between any two points can then be determined by considering the difference in stations and offsets between the points.

Alignment

When it is necessary for tangent survey lines to change direction, as in the case of a utility line, an angle of deflection, or a delta angle (designated as Δ), is established at the point where the line changes direction. This point, where the line changes direction, is the Point of Intersection (PI). The relationships among the tangent survey lines, the delta angle, and the point of intersection are shown in Figure 7.5: Point of Intersection. The centerline of a highway project is shown by a series of straight and curved lines, referred to as tangents and curves. The *tangents* and *curves* proceed in the ahead direction from left to right across the plan sheet.

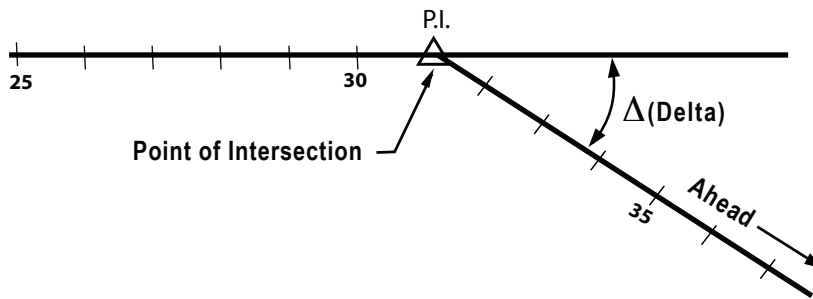


Figure 7.5: Point of Intersection

Horizontal Curves

On highway projects, *horizontal curves* are used at the Point of Intersection (PI) to change direction. Horizontal curves, classified as simple, reverse, compound, or spiral, are arcs of circles and provide for the vehicular traffic to easily change direction. A *simple curve* is a segment (arc) of a circle with a specified radius. The point at which the straight line (tangent) meets the curve is designated as the *Point of Curvature (P.C.)*. The point at which the curve returns to the ahead tangent is designated as the *Point of Tangency (P.T.)*. The plan view also shows other horizontal curve elements, such as the length of the curve (L), radius or the curve (R), and the delta angle (Δ). The delta angle at the P.I. is the same angle as the central angle formed by radii extending from the center of the curve to the P.C. and the P.T. See Figure 7.6: Simple Curve.

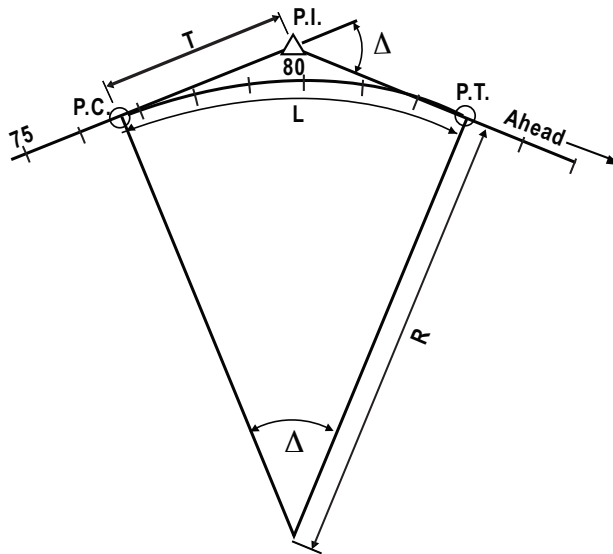


Figure 7.6: Simple Curve

A *Reverse Curve* consists of two adjacent simple curves with one curve in reverse direction to the other, as shown in Figure 7.7. The point at which the first simple curve ends and the second simple curve begins is designated as the *Point of Reverse Curvature (P.R.C.)*.

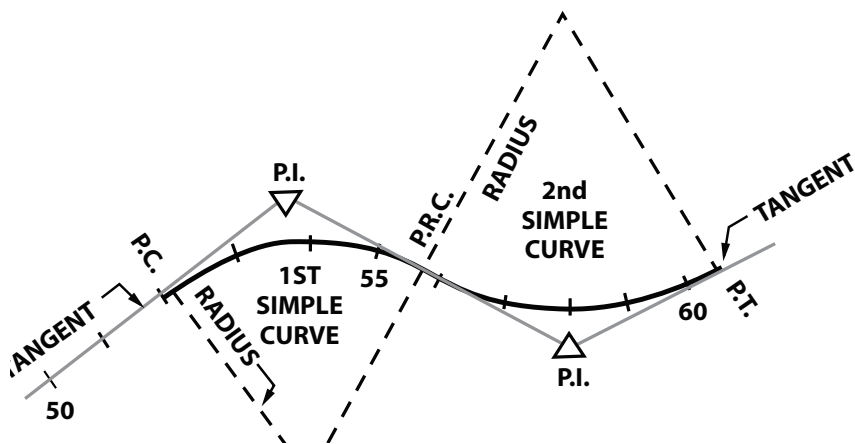


Figure 7.7: Reverse Curve

A *Compound Curve* consists of two adjacent simple curves, each having a different radius, turning in the same direction. See Figure 7.8: Compound Curve. The point at which the first simple curve ends and the second begins is identified as the *Point of Compound Curvature (P.C.C.)*.

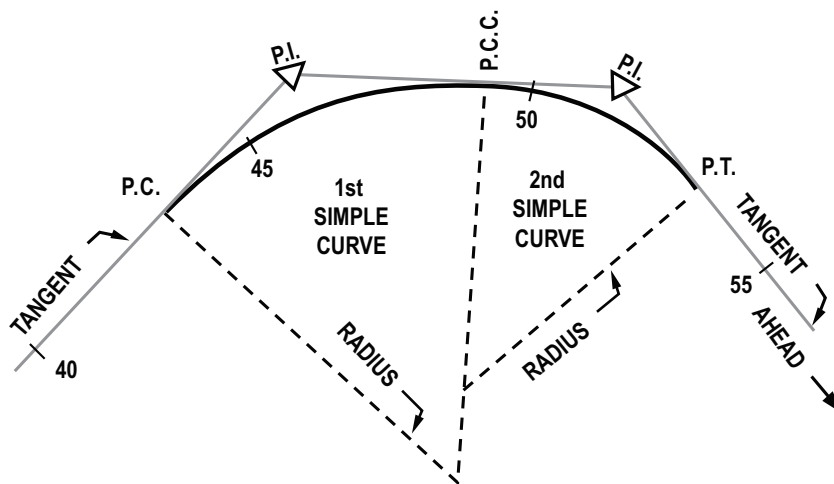


Figure 7.8: Compound Curve

A *Spiral Curve* is a transition curve between a tangent and a simple curve and is an arc with a constantly increasing or decreasing radius. See Figure 7.9: Spiral Curve. Spiral curves are used in high traffic and high-speed highway alignments so vehicular traffic and passengers are gradually subjected to the centrifugal force caused by changing direction. It eases vehicles into and out of the simple curve. Points on a spiral curve are designated as tangent to spiral (T.S.), the point where the tangent ends and the spiral curve begins, the spiral to curve (S.C.), the point where spiral curve ends and the simple curve begins, curve to spiral (C.S.), the point when the simple curve ends and the spiral curve begins, and the spiral to tangent (S.T), the point where spiral curve ends and the tangent begins.

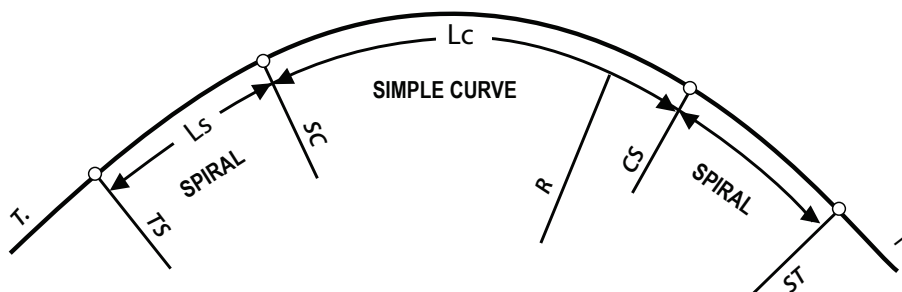


Figure 7.9: Spiral Curve

Other abbreviations used in centerline alignments are P.O.C. for a specific *point on the curve* and P.O.T. for a specific *point on the tangent*. The stationing of the centerline progresses around a curve in the same manner as along a tangent (See Figures 7.6 through 7.8.)

Degree of Curvature

The sharpness of a horizontal curve is indicated by a numerical value for the *degree of curvature* (Δ). See Figure 7.10: *Degree of Curvature Section*. The degree of curvature is the angle at the center of a curve, between two radii, extending from the center of the curve to points 100 feet (1 station) apart as measured along the arc of centerline. The sharpness of a curve may be expressed by stating either the degree of curvature or the length of the radius. The degree of curvature is not used on metric projects where the sharpness of the curve is indicated by the length of the radius. The lower the degree of curvature, the flatter the curve and the longer the radii; the higher the degree of curvature, the sharper the curve and the shorter the radii. The radius of a curve varies inversely with the degree of curvature. For example, a 1° curve has a radius of 5,729.58 feet, and a 10° curve has a radius of 572.96 feet. High-speed traffic requires a low degree of curvature and for low-speed traffic, the degree of curvature will be higher. Note that on railroads, the degree of curvature is defined by a chord distance of 100 feet, rather than an arc distance of 100 feet.

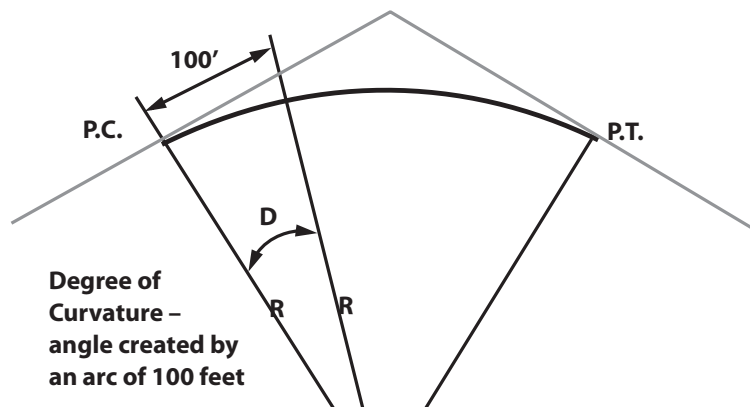


Figure 7.10: Degree of Curvature Section

Contour Lines

Contour lines on the plan view indicate the shape and slope of the land surface and points of equal elevation. A *Contour Line* is an imaginary line of constant elevation on the ground surface, such as would be created by the edge of a lake. Close contour lines indicate steep slopes, whereas contour lines that are far apart indicate flat slopes. Contours are usually labeled with every fifth line stating the elevation. The vertical distance between each contour line is called the *Contour Interval*. Contours can be used to determine profiles and to calculate earthwork volumes.

THE PROFILE VIEW

The *Profile View* shows the project from the side, as though it were sliced vertically along the centerline. See Figure 7.11: Profile View. The design engineer illustrates the existing ground elevation by a dashed line and the proposed final elevations along the path of the proposed centerline as a solid line. Elevations should always be reported in relation to some reference datum. In the past, “Sea Level Datum” was used, but that rather ambiguous term has been replaced by specifically defined datums, the most recent of which is the North American Vertical Datum of 1988 (NAVD 88). The previous datum, still widely used, was the National Geodetic Vertical Datum of 1929. Points of known elevation are called *benchmarks* and are used as references for vertical control of the project. Vertical lines are drawn at each station to provide horizontal reference points. *Horizontal lines* provide elevation reference points. The station number lines and elevation lines form grids upon which the profile view is shown. Elevations are labeled along the sides of the grid and station numbers are shown on the bottom of the grid. The horizontal scale of the profile view is the same as the plan view scale. The vertical scale is usually exaggerated in order to show, more clearly, variations in elevations. For this reason, the drawings in the profile view may look out of proportion.

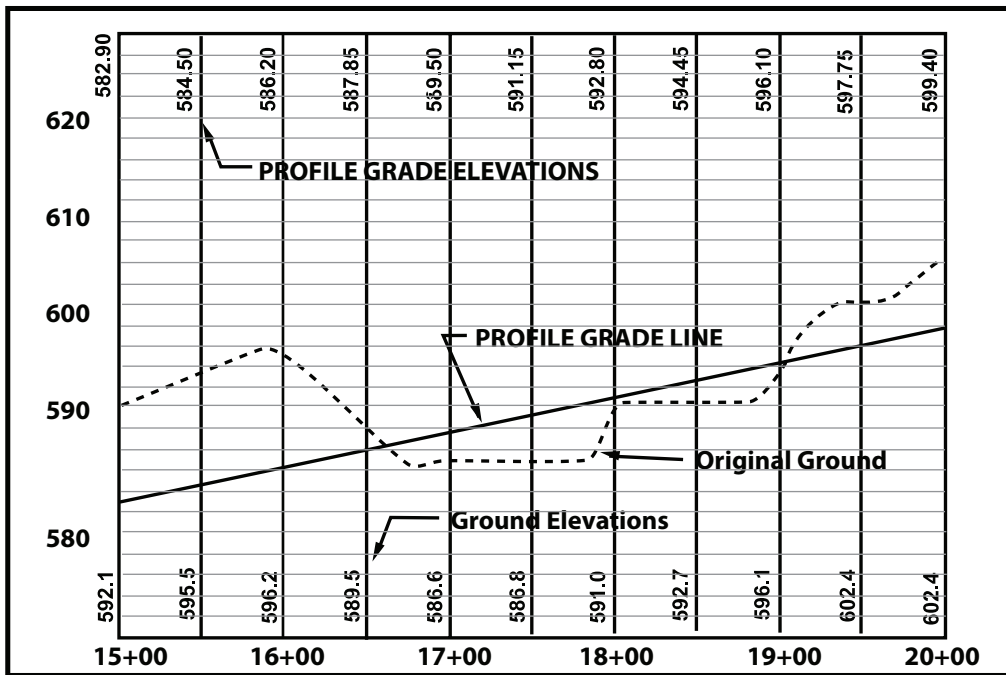


Figure 7.11: Profile View

The profile view for a highway project shows vertical changes at the project centerline, the depths of cut or fill at the centerline, span length of bridges, and vertical elevations. The profile view for an overhead utility shows ground elevations, wire or cable elevations, pole or structure locations and heights, span lengths, sag, and vertical clearance measurements. The profile view for an underground utility shows ground elevations, depth of bury, diameter of pipe or conduit, types and depth of various backfill elements, and elevations along the ground surface and the trench centerline.

Vertical Alignment

The relationship of elevations along the project centerline is called *vertical alignment*. Since a roadway changes elevations and rises and falls at various points along the centerline, the vertical alignment control points are defined by stating their stations and elevations. On highways and railways, adjacent vertical tangents are connected by a curve to provide a smooth transition in the vertical direction for vehicles moving between the tangents.

Vertical Curves

The curved part of the profile is a *vertical curve* and is in the form of an arc of a parabola, as shown in Figure 7.12: Vertical Alignment Curves. A *crest curve* goes over a hill and a *sag curve* goes in a dip. There is no interrelationship between a vertical curve and a horizontal curve. The beginnings and endings of vertical curves are designated in a manner similar to horizontal curves. The *Point of Vertical Intersection (P.V.I.)* is the point where the two vertical tangents intersect. The *Point of Vertical Curvature (P.V.C.)* is the point where the vertical curve begins. The *Point of Vertical Tangency (P.V.T.)* is the point where the vertical curve ends and the tangent begins. The length of the curve is the difference in stations between the P.V.C. and the P.V.T. The station and elevation of each P.V.I. and the length of each curve are shown on the profile.

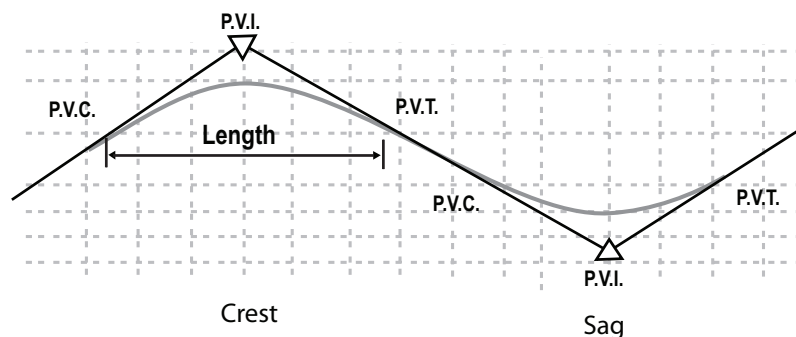


Figure 7.12: Vertical Alignment Curves

Profile Grade Line

The profile of the original ground on centerline, before construction, is shown as an irregular dashed line. The proposed roadway centerline elevations are represented by the *profile grade line*, a solid line shown on the profile view. Each line is plotted on the grid according to station and elevation. A sloping profile grade line indicates a change in elevation. When the profile grade line is above the existing ground, the roadway is said to be in *fill*. When the profile grade line is below the existing ground, the roadway is said to be in *cut*. Both the original ground line (dashed) and the profile grade line (solid) are shown in Figure 7.13: Profile Grade Line.

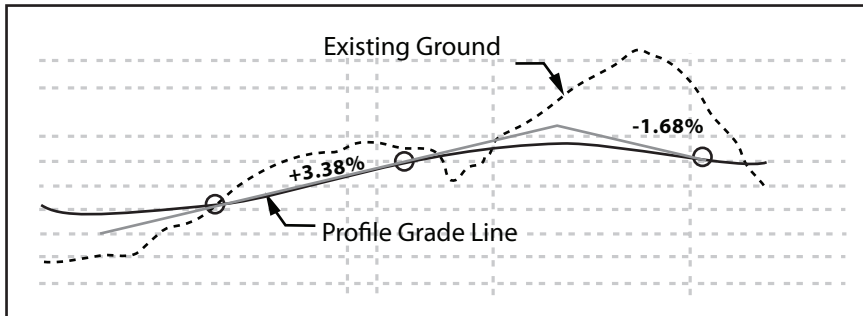


Figure 7.13: Profile Grade Line

A profile grade is designated plus (+) if ascending, or minus (-) if descending in the ahead direction (increasing station numbers). The rise and fall of the profile grade line is expressed as a percentage of the horizontal distance traveled. For example, a +2% grade indicates an ascending grade that rises at a rate of 2 feet in each 100 feet of horizontal distance. A -2% grade indicates a descending grade at a rate of 2 feet in each 100 feet of horizontal distance. This concept is illustrated in Figure 7.14: Profile Grades. If the stations and elevations of two points on centerline are known, and the line between them is a tangent (straight line), the profile grade line can be calculated and expressed as a percentage. The percent of profile grade is determined by using the formula:

$$\% \text{ Grade} = \frac{\text{Vertical Distance}}{\text{Horizontal Distance}} \times 100$$

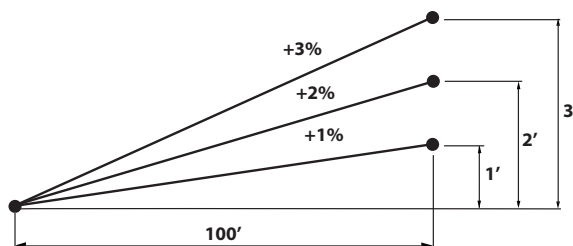


Figure 7.14: Profile Grades

The Plan-Profile View

The plan sheet may be divided in half with the upper half showing a plan view and the lower half showing the profile view for the same location. This *Plan-Profile Sheet* provides two-dimensional information in both pictorial and numeric form. A typical plan-profile sheet for a highway project is shown in Figure 7.15: Plan-Profile Sheet.

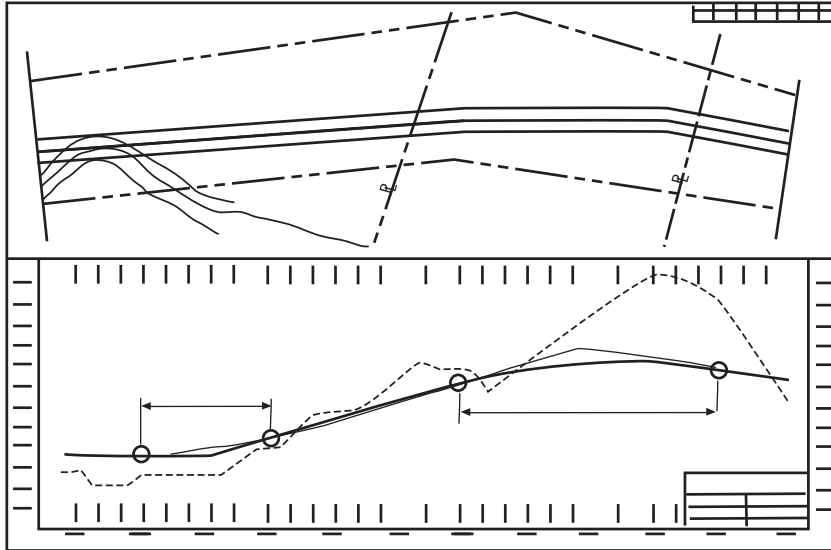


Figure 7.15: Plan Profile Sheet

The Cross-Section View

The third view used in engineering drawings is the end or cross-section view. A cross-section is a view of the project sliced at right angles (perpendicular) to the survey centerline at a particular station and shows elevations left and right of centerline, looking in the ahead direction. Cross-sections for overhead utility lines show structures or towers, spacing of cables, and types of foundation support. Cross-sections for an underground utility indicate trench width and depth, thickness of various backfill and bedding layers, diameter and wall thickness of pipe or conduit, and depth of bury or cover. For highway plans, there are three types of cross-sections: original ground, typical sections, and roadway cross-sections.

Original Ground, Typical Sections, and Roadway Cross-Sections

During the project design, elevations, at various points along the *original ground* and left and right of the centerline, are determined and plotted at each cross-section, as shown in Figure 7.16: Cross-Section of Original Ground.

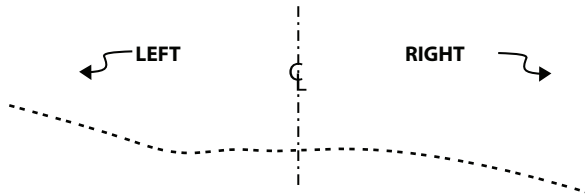


Figure 7.16: Cross-Section of Original Ground

Typical sections provide information on finished roadway elements such as the pavement and shoulder width and depth, cut and fill slope ratios, and base and surfacing courses, which establish the final shape of the roadway, as shown in Figure 7.17: Typical Selection.

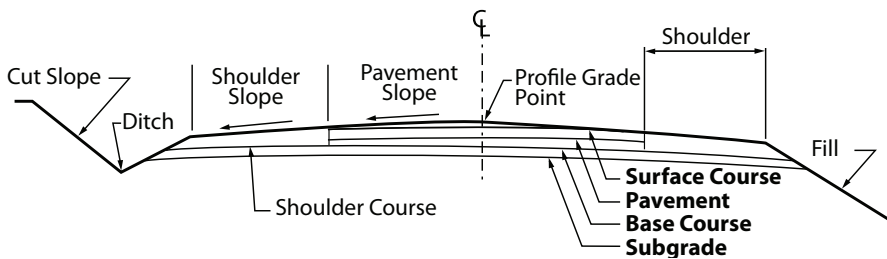


Figure 7.17: Typical Section

Typical sections are developed for tangent and curved sections of the roadway over a specific range of stations. The *profile grade point* is the final surface elevation of the completed highway. The elevation used for the profile grade point at any station is obtained from the profile grade line, as shown in Figure 7.18: Comparison of Profile Grade Line and Profile Grade Point Line.

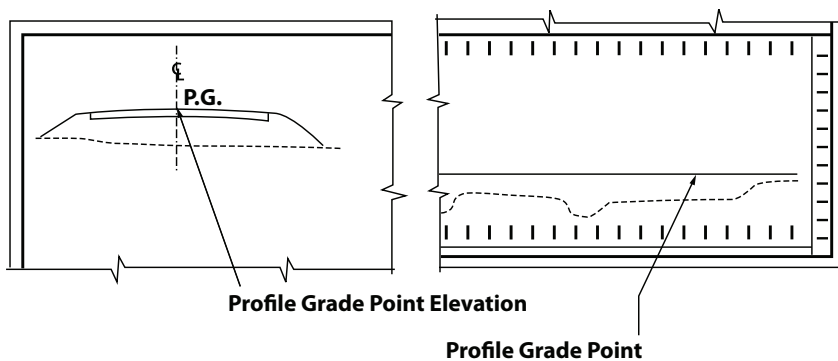


Figure 7.18: Comparison of Profile Grade Line and Profile Grade Point

Roadway cross-sections show the typical section for a specific station superimposed onto the original ground cross-section at that same station. Figure 7.19: Roadway Cross-Section, combines the information shown in Figures 7.16 and 7.17 to represent a typical Roadway Cross-Section.

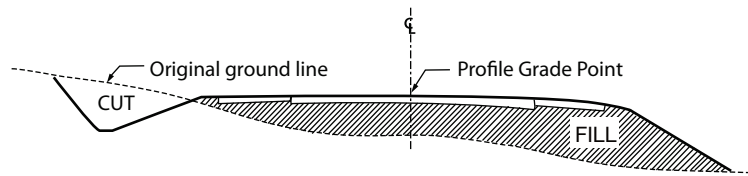


Figure 7.19: Roadway Cross-Section

Full-sized plan sheets with standard graph paper markings are used for drawing cross-sections, with the vertical center of the sheet usually representing the survey centerline. On contemporary plans, computer, and computer-aided design and drafting, or CADD software, most often prepares the cross-section sheets. Cross-sections show the elevation of existing and proposed features left and right of centerline at a specific station. The existing ground surface is shown as a dashed line and the proposed finished surface is shown as a solid line. The cross-section will indicate the station number of the specific cross-section and the elevation of the profile grade point for that station.

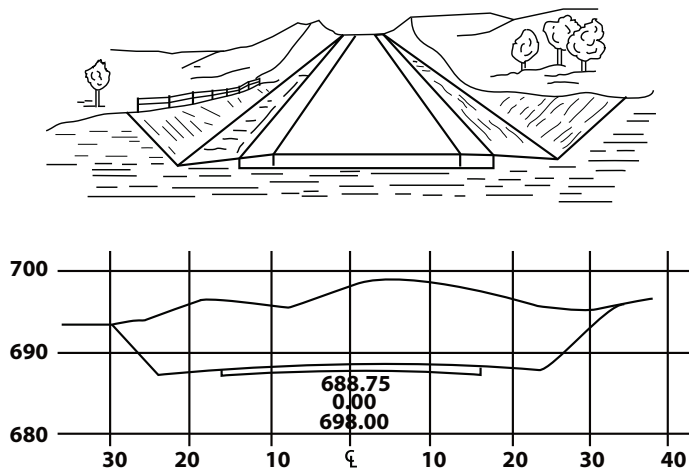


Figure 7.20: Cross-Section View Earth Cut Area

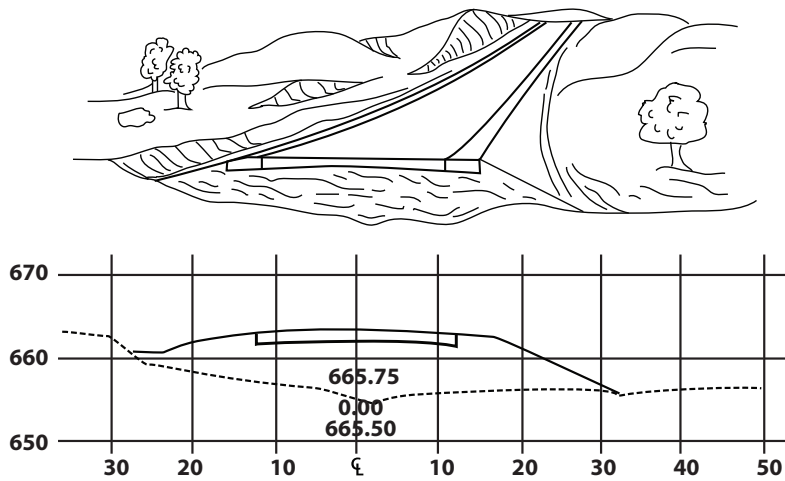


Figure 7.21: Cross-Section View Earth Fill Area

Several sections may be drawn on a single sheet, each appearing in sequence from a lower station at the bottom of the sheet to a higher station at the top, and arranged as though looking ahead, up the sheet, as shown in Figure 7.22: Cross Section-Sheet.

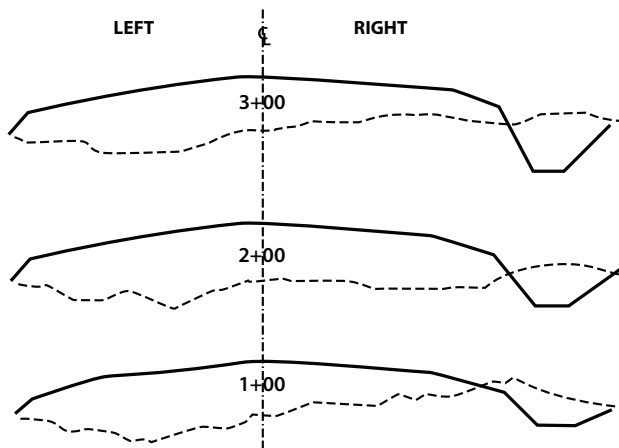


Figure 7.22: Cross-Section Sheet

The cross-sections are used in right of way negotiations to show how the remainder property will be affected by the project. The offset distance to the limit of the cut or fill on the right and left of each cross-section is plotted on the right of way plan sheet. The offset points, which represent the limits of construction at each station, are connected in the plan view with a dashed line called the *construction limits*. From the construction limits, the decision is made as to the width of right of way required for construction and maintenance of the facility.

Slope Ratio

The steepness of the embankment slope (from the shoulder of the highway to the ditch line) or the excavation slope (behind the ditch in a cut section) is expressed as the slope ratio of horizontal distance to vertical distance. This relationship is shown by the formula:

$$\text{Slope Ratio} = \text{Horizontal Distance} : \text{Vertical Distance}$$

The first number in the slope ratio is the horizontal unit of length and the second number, the vertical unit of length, without reference to any unit. A slope ratio is usually expressed so that the second figure is the number "1". For example, a sloping line that falls or rises one foot for each three feet of level distance is said to have a slope ratio or slope of 3:1. A 4:1 slope would be less steep and a 2:1 slope would be steeper than a 3:1 slope. The larger the first number, the flatter the slope. Examples of slope ratios are shown in Figure 7.23: Cross-Section Slope Ratio.

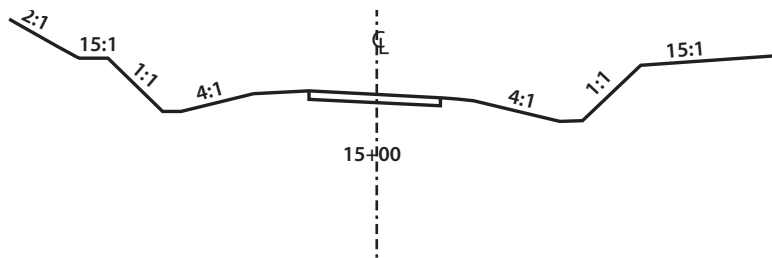


Figure 7.23: Cross-Section Slope Ratio

For a metric project, the reverse is true. The steepness of the slope is expressed in terms of a slope ratio of vertical distance to horizontal distance. This relation is shown by the formula:

$$\text{Slope Ratio} = \text{Vertical Distance} : \text{Horizontal Distance}$$

The first number in the ratio is the vertical unit of length and the second number, the horizontal unit of length. A slope ratio is usually expressed so that the first figure is the number "1". For example, a sloping line that falls or rises one meter for each three meters of level distance is said to have a slope ratio or slope of 1:3. The larger the second number, the flatter the slope. The slope ratio can be used to calculate desired elevations. For example, considering the information shown in Figure 7.24: Slope Ratio, the ditch elevation is three feet lower than the edge of shoulder.

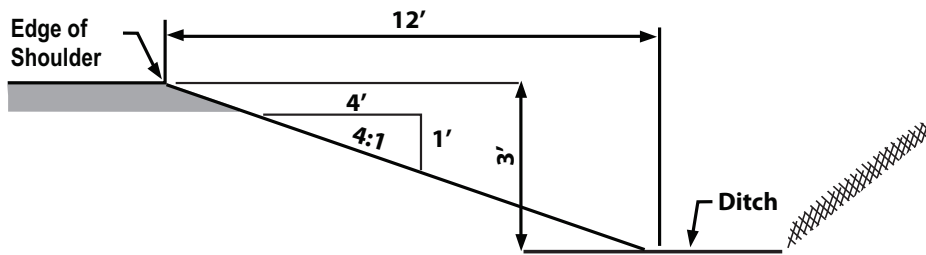


Figure 7.24: Cross-Section Slope Ratio

Superelevation

If the roadway's outside edge on a horizontal curve is higher than the inside edge, the roadway is said to be superelevated and the entire roadway surface slopes down toward the inside of the curve, as shown in Figure 7.25: Superelevation. A roadway is superelevated to lower the centrifugal force on the vehicle and occupants and to ease the transition through the curve.

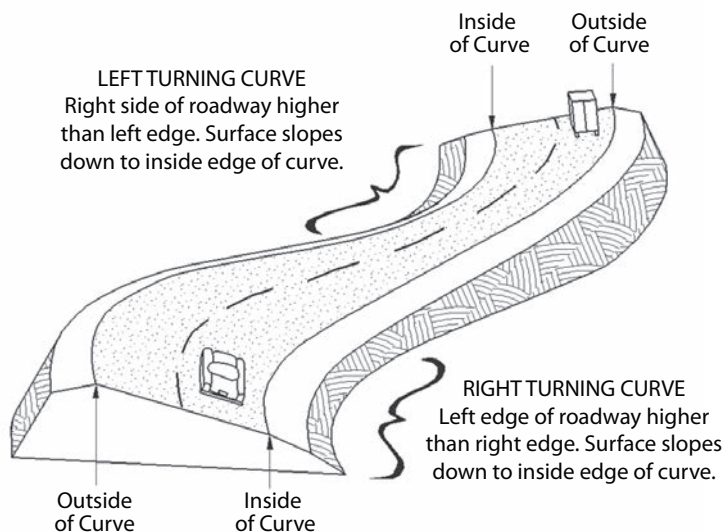


Figure 7.25: Superelevation

The rate of super elevation can be expressed in inches per foot or as a percentage. On a right-turning curve, the left edge of the roadway is higher than the right edge. On a left-turning curve, the right edge of the roadway is higher than the left edge.

Earthwork

Cross-sections are used to determine the quantity of earth to be moved, called *earthwork*, on a project. When the proposed elevation (solid) line is shown on a plan in a position beneath the existing ground (dashed) line, (as in Figure 7.20: Cross-Section View Earth Cut Area), excess earth must be cut away to achieve the planned results, and the cross-section is said to be in “cut.” Conversely, when the solid line is above the dashed line, (as in Figure 7.21: Cross-Section View Earth Fill Area), fill must be added to raise the land to the desired elevation, and the cross-section is said to be in “fill.” Earthwork quantities are expressed in cubic yards (CY) or cubic meters (CM), and most construction projects are a combination of many cut and fill areas. The quantity of excavation (cut) or embankment (fill) required is calculated by averaging the areas of cut or fill at adjacent cross-sections, multiplying this average area by the distance between the stations, and then converting the total volume to CY or CM.

One of the goals of a highway designer is to balance or equate the amount of “cut” available on the project, to the amount of “fill” needed. When this goal is achieved the project is said to be balanced. Borrow is required when roadway excavation does not supply sufficient suitable materials to construct the embankment. Waste occurs when more material is excavated than is used to construct the embankment.

UTILITY ALIGNMENTS MAPS

Although methods to present engineering and right of way plans vary, the basic three-view-concept and the centerline and stationing system are standard. The following examples are from utility companies plans, and demonstrate the plan concepts, that are used in this chapter.

Pipeline Location Maps

A pipeline location is shown in Figure 7.26: Pipeline Plan and Profile. The most noticeable feature on the map is the synchronization of property owner information with the plan view. The plan view indicates the location of property boundaries, fence lines, existing roads, streams, and governmental subdivision boundaries. The north arrow indicates that the crossroads and property lines generally follow a north-south and east-west pattern. The proposed 14" (356 cm) diameter pipeline generally runs in a northeast-southwest direction. At the intersection of Lowe Plank Road and 30 Mile Road, the numbers 10, 11, 14, and 15 identify the common corner of four section corners of the Public Lands Survey System.

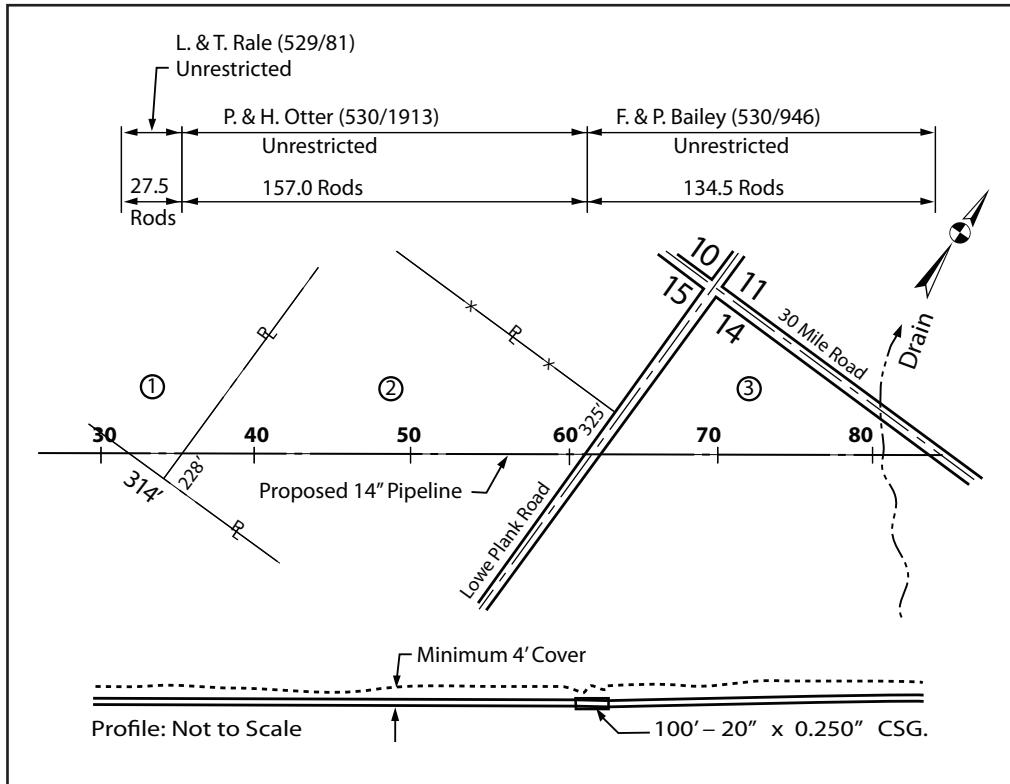


Figure 7.26: Pipeline Plan and Profile

A careful study of the entire plan reveals much information. Immediately above the plan view, the length (in rods) of the pipeline on each affected property is listed. Although somewhat outdated as a unit of measurement, the rod (16.5 feet) is still used in rural areas and in the pipeline industry. The name of the property owner is shown on the top line, along with the deed book and page number of the official record of right of way acquisition. Below this line is the type of right of way obtained.

The pipe alignment is shown with dimensions to the pipeline in feet from recognizable corner points along a fence or other established line. Crossing points of major landmarks, such as streams and roads, are also identified. The profile view shows the vertical location of the proposed pipeline and indicates a minimum of 4 feet of cover over the top of the pipe. The length, diameter, and wall thickness of the pipe casing that crosses under Lowe Plank Road are indicated. Figure 7.27: Pipeline Plan and Profile shows the proposed construction of a concrete-coated 12" (350 mm) diameter gas pipeline under White Creek. This plan-profile sheet shows the profile stations, elevations, depth of cover, the beginning and ending stations of the concrete coating, width of temporary work area for construction, the datum (that is, mean sea level) for all elevations, and the name of the titleholder of the affected property.

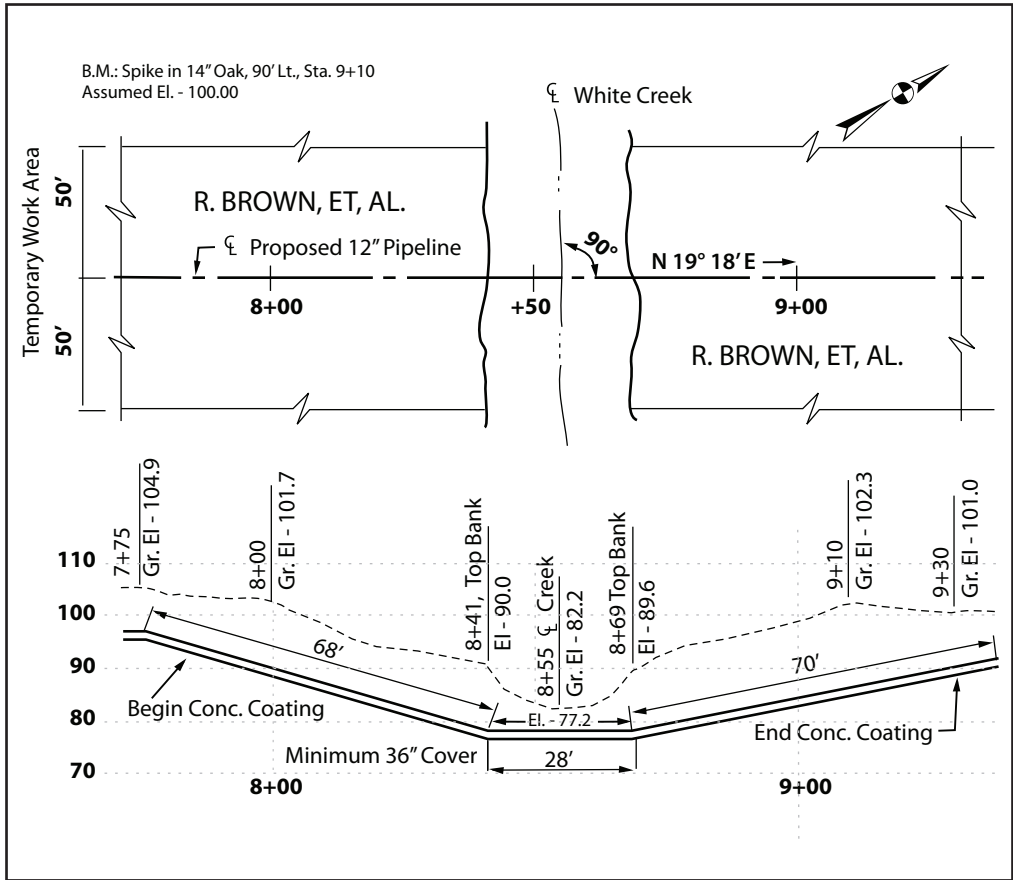


Figure 7.27: Pipeline Plan and Profile

Overhead Transmission Line Location Maps

Figure 7.28: Overhead Electric Power Transmission Line is a plan view of an alignment map for the location of a proposed 138 kV electric transmission line. The top half of the sheet contains the plan view with the centerline as a reference. The bottom half of the sheet is a profile view corresponding to the above plan view. The station numbers, at 1,000 feet intervals, and the specific station of each transmission line structure are shown across the top of the profile view.

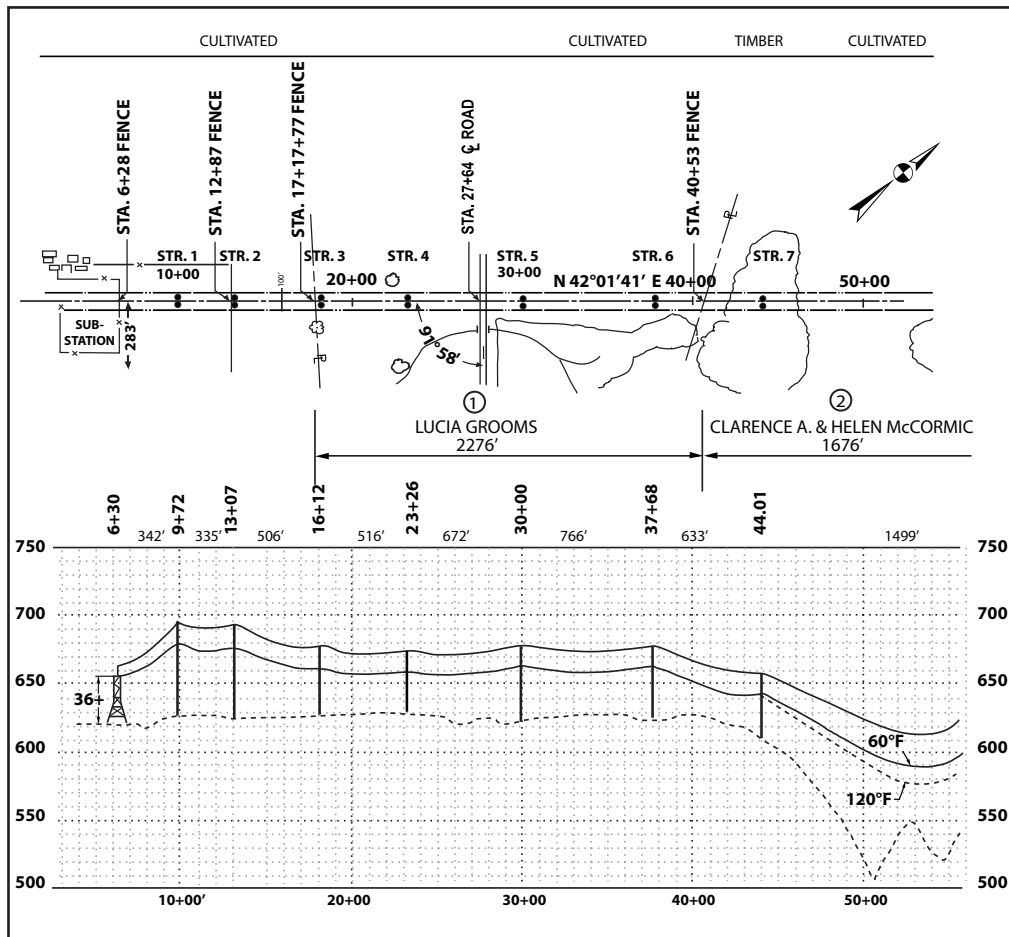


Figure 7.28: Overhead Electric Power Transmission Line

The length of the span between structures is also provided. The vertical scale for the profile view is 8 times the horizontal scale to emphasize the vertical differences along the ground surface and to show clearly the overhead line clearance. Other details are basically the same as described previously, including the method of showing property ownership and type of ground cover. Another electric transmission line location plan is shown in Figure 7.29: Electric Power Transmission Line Plan Sheet. The corresponding profile view for this installation is shown in Figure 7.30: Electrical Transmission Line Profile.

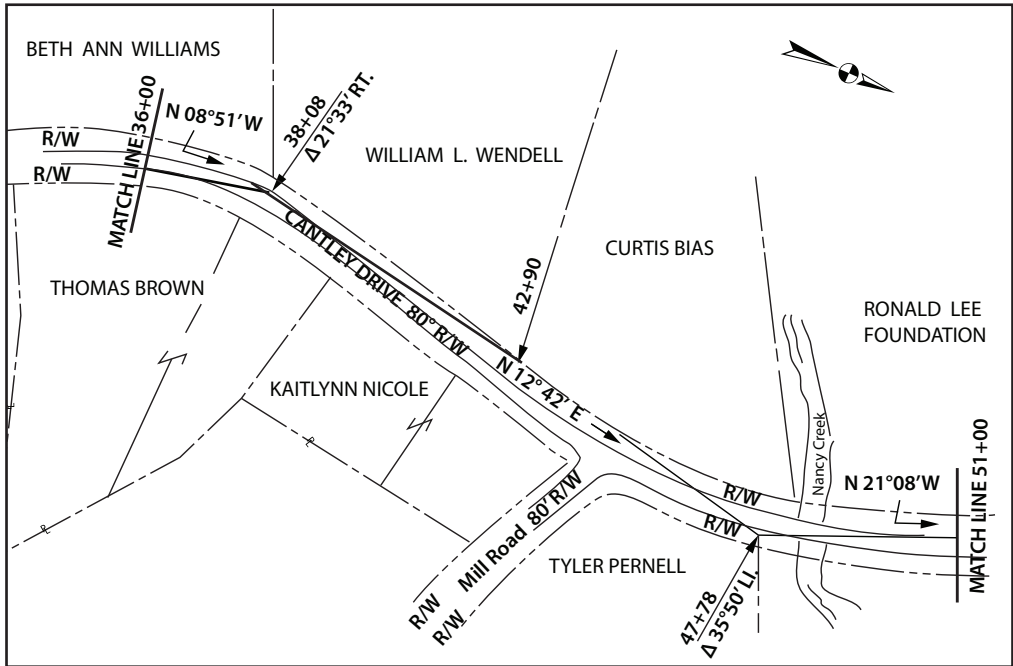


Figure 7.29: Electric Transmission Line Plan Sheet

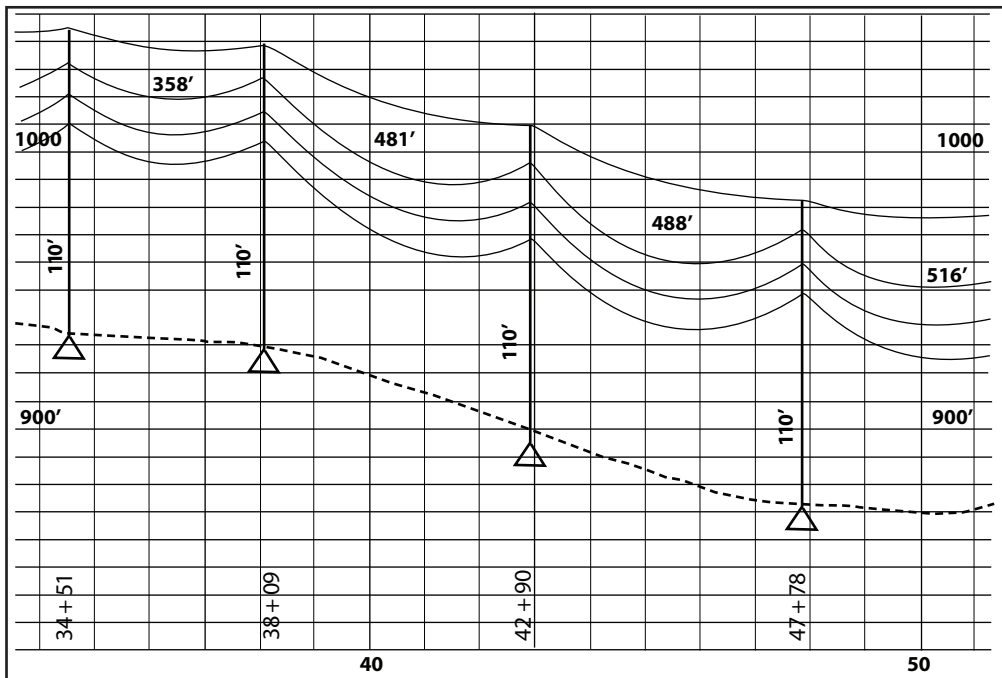


Figure 7.30: Electrical Transmission Line Profile

HIGHWAY CONSTRUCTION PLANS

A single plan cannot demonstrate all the variations in common practice, nor does space allow for the presentation of examples from all fields. However, the techniques and procedures presented are adaptable to other situations. When working with construction plans, the entire plan should be scanned to better understand the format of the plan and to gauge the project's scope. The engineer, through the use of symbols, abbreviations, and standards, attempts to reduce the volume of detail without sacrificing accuracy and clarity.

OTHER PLAN COMPONENTS

Title Sheet

The title sheet for a set of plans, shown in Figure 7.31: Title Sheet for Highway Project, is comparable to a textbook's cover, preface, and table of contents. The title sheet provides the name of the agency responsible for the project, lists the project's type and length or distance for which the plans were prepared, provides project identification numbers, and includes the names of the people who were responsible for plan preparation. Other information, such as the project's location, the north arrow, plan scale, list of standard construction drawings, table of conventional signs, and index of sheets is included.

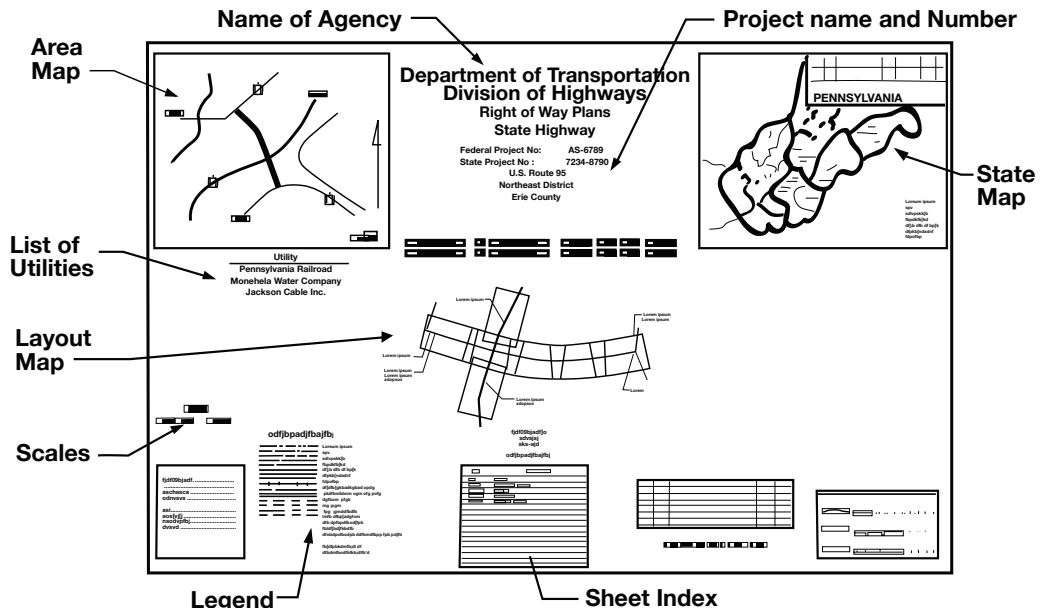


Figure 7.31: Title Sheet for Highway Project

Scale information is often provided, as shown in Figure 7.32: Scale Table. Paying special attention to scale is important as the actual scale shown may differ from that of the original plan. Major differences emerge when a plan is photographically reproduced. In photo reproductions, the scale statement reads the same but the actual distance represented by 1 inch changes. The original drawings may have a scale of 1" = 50' and if the reduction is to half size, 1 inch will now represent 100 feet. For this reason, a bar scale is useful as it changes proportionately when reduced.





Scales		
Plan	1" = 50'	0'  50'
Profile-Horizontal	1" = 50'	0'  50'
Profile- Vertical	1" = 5'	0'  5'
Cross-Sections	1" = 10'	0'  10'

Figure 7.32: Scale Table

The table of conventional signs contains information that must be understood to read the plan. Conventional signs are a graphic, rather than a narrative, representation of common objects. Examples of conventional signs are shown in Figure 7.33: Conventional Signs.

Conventional Signs

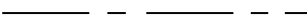


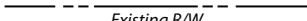
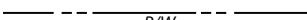







Centerline.....	
Property Line	
Work Limits (Cut, Fill)	
Existing Right of Way	
Proposed Right of Way	
Controlled Access	
Fence Line	
Pole Line (Power, Telephone)	
Underground Pipeline (Gas, Water, Sewer)	
Swamp	
Existing Trees	
Trees to be Removed	

Figure 7.33: Conventional Signs

The title page usually includes a sheet index and affords a quick reference for the location of a particular series of drawings.

Schematic Plan

To understand the overall scope of a large project, it is helpful to view the entire project on a sheet or two and note certain primary topographical and design features. The Schematic Plan achieves this objective. See Figure 7.34: Schematic Layout Plan. The north arrow (top left) and the bar scale in feet (bottom right) show that the proposed project proceeds in an east-west direction and is several miles in length. Viewing the schematic plan from left to right; the project begins at station 330+0, just west of Deer Creek, and ends at station 530+80. Bridge #0643 will carry Township Road 110 over Highway 70. County Road 5 (Bridge # 0715) and Highway 29 (Bridge #0961) will be handled in a similar manner. An interchange with Highway 42 involving Bridge #1071 will be constructed as indicated by the configuration of lines where Highway 42 crosses Highway 70. Design features shown on a schematic plan are limited to key items of the specific project that helps to give the project definition. A change in alignment of Highway 70 is indicated under "Curve Data," where the deflection angle ($\Delta = 8^\circ 09'$) and station location of the point of intersection (P.I. = 438+00.00) are listed. An indication of the severity of the change in direction is indicated by the degree of curvature ($\Delta = 0^\circ 28'$) and length of radius ($R = 12,277.67$).

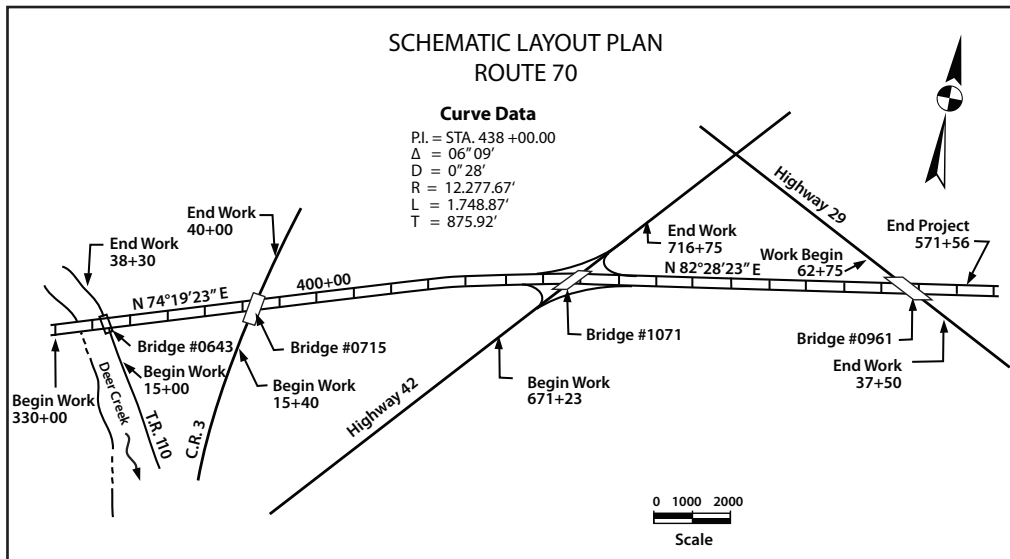


Figure 7.34: Schematic Layout Plan

Typical Section Drawing

To further establish a clear image of the proposed project, the design engineer usually prepares a typical section drawing that depicts the finished roadway structure from an end view. Figure 7.35: Typical Section Drawing and Legend represents a typical section for a two-lane highway. In addition to pavement details, the treatment of side slopes in a cut section is shown on the left, and side slopes for a fill are shown on the right. Placing both a cut section on the left and a fill section on the right illustrates both situations on one

drawing. In this case, the steepness of a cut slope depends on the total height of the cut. Pavement width is 10 feet (3 m) on each side of the centerline, for a total pavement width of 20 feet (6 m). The profile grade point is located on the centerline of survey. Particular attention should be given to the horizontal dimensions for the pavement, shoulders, and ditches. Since these dimensions represent a level distance, the surface itself has a slightly greater actual length. The typical section contains a legend with item numbers corresponding to the reference numbers in the typical section drawing. Each item is given a code number and a description that refers to the construction and material specifications that accompany the set of plans.

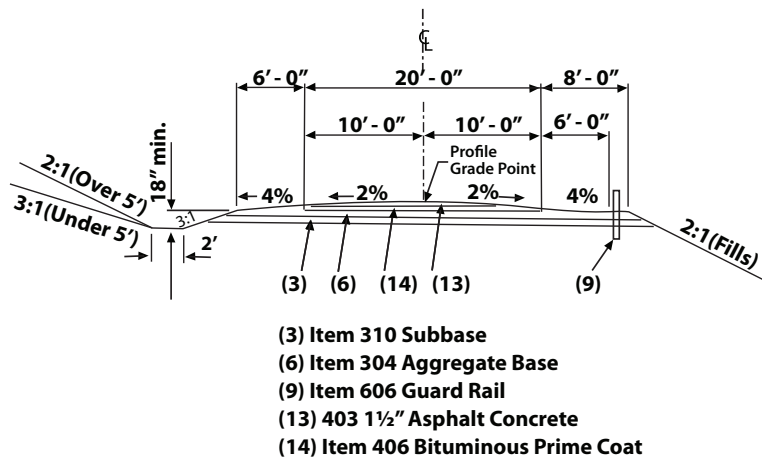


Figure 7.35: Typical Section Drawing and Legend

General Notes

General notes sheets contain a description of certain methods and procedures that do not lend themselves to presentation in graphic form as shown in Figure 7.36: General Notes Sheets. The general notes section contains information for the administration and construction of the specific plan and takes precedence over any instructions of a general nature found in other applicable sources. Because the general notes are often less technical and detailed than other plan specifications and are associated with larger, usually project-wide, controls, information contained in general notes is of interest to the right of way agent. For example, it might be beneficial for the agent to advise the property owner that, for the project shown in Figure 7.38: Cross-Section Sheet, the driveway locations for home sites and private drives into open fields can be adjusted by the engineer during construction. Therefore, driveway locations are not rigidly set at the locations shown on the plan. The same arrangements are noted for mailbox approaches. Other notes may explain traffic maintenance through a detour, provide time limitations and routing; specify surface type for temporary roadways; provide procedures for handling temporary sanitary flow; expand on dust control provisions; provide information about the relocation of underground utilities, etc.

GOVERNING SPECIFICATIONS	UNDERGROUND UTILITIES
<p>The Department of Transportation STANDARD SPECIFICATIONS AND BRIDGES, dated July 1, 2000, and any supplemental specifications, thereto, are the governing provisions applicable to this project.</p>	<p>The locations of the underground utilities shown on the plans has been obtained by diligent field checks and searches of all available records. It is believed that they are essentially correct but their accuracy or completeness is not guaranteed.</p>
NOISE RESTRICTIONS	REMOVAL OF EXISTING PIPE
<p>Work within 650 feet of a residence is prohibited between the hours of 10:00 PM and 6:00 AM. All internal combustion engines shall be equipped with a properly maintained muffler.</p>	<p>The removal of all existing pipe drains that would normally be removed in excavation shall be included in payment for the respective excavation items, unless otherwise itemized.</p>
DATUM AND ELEVATIONS	MAILBOX APPROACHES
<p>All elevations shown refer to sea level datum, National Vertical Geodetic Datum 1998 (NADV 88).</p>	<p>Mailbox approaches shall be placed as directed by the engineer and shall be constructed as per Standard Drawing BP-6.</p>
HORIZONTAL CONTROL	DRIVE LOCATIONS
<p>All horizontal control points and benchmark locations refer to North American Datum of 1983 (NAD 83).</p>	<p>The location of residence and field drives may be adjusted by the Engineer during construction.</p>

Figure 7.36: General Notes

General summary sheets provide a tally of all the pay and work items in the plan and details the quantities of all materials to be used on the project. This information is used by the contracting agency to develop a cost estimate for the proposed work. The contractor uses a general summary sheet to estimate the cost for each item and then tabulates the costs before bidding on the project. The successful bidder also uses this sheet to prepare progress billings and to invoice for final payment.

Plan and Profile Drawings

Plan and profile drawings are prepared for the entire highway project. The top half of each sheet presents the plan view, while the bottom half shows the corresponding profile view. Each sheet is drawn to the same horizontal scale to reflect a direct vertical. In Figure 6.36, two different scales are used for the profile view: the horizontal scale is $1'' = 50'$, and the vertical scale is $1'' = 5'$. As this figure represents a half-size reduction plan sheet, the scale labeled $1'' = 50'$ actually represents $1'' = 100'$, and the scale labeled $1'' = 5'$ is $1'' = 10'$.

Plan View

In Figure 7.37: Plan-Profile Sheet, the north symbol indicates that the project is in a general southeast direction. The centerline on this sheet begins at station 21+00 and extends to station 30+00, a distance of 900 feet. Any other point in the plan view can be located and described by giving the station number, and by specifying the perpendicular distance left or right of the centerline to that point. Driveways, channel relocation, bridge construction, and right of way width changes are indicated.

Profile View

The drawing on the lower half of Figure 7.37: Plan Profile Sheet shows the profile for the plan view directly above it. Station numbers are listed along the bottom edge of the drawing and appear directly below the same station numbers in the plan view. Elevations are given at 10 feet (3 m) intervals along the left edge of the profile drawing to provide easy interpolation of the elevation for any given point. Original ground centerline elevations are shown along the bottom edge at half-station intervals. The elevations are plotted on the drawing and are connected by a dashed line to indicate the existing ground profile along the centerline of the survey before construction of the highway. Similarly, across the top edge of the same drawing, the calculated elevations of the profile grade line of the proposed highway are listed. The profile grade line indicates that the highway is descending from the north on a -6.55% grade, then changing to a -2.90% grade, and then to a slight ascending grade of $+0.40\%$.

The plan-profile sheet provides information about both existing features and proposed improvements. Curve data, drainage treatment, structures, guardrails, tree removal, and driveway arrangements are but a few of the plan-profile sheet details. An examination of both plan and profile views will provide a greater understanding of the nature of individual project components.

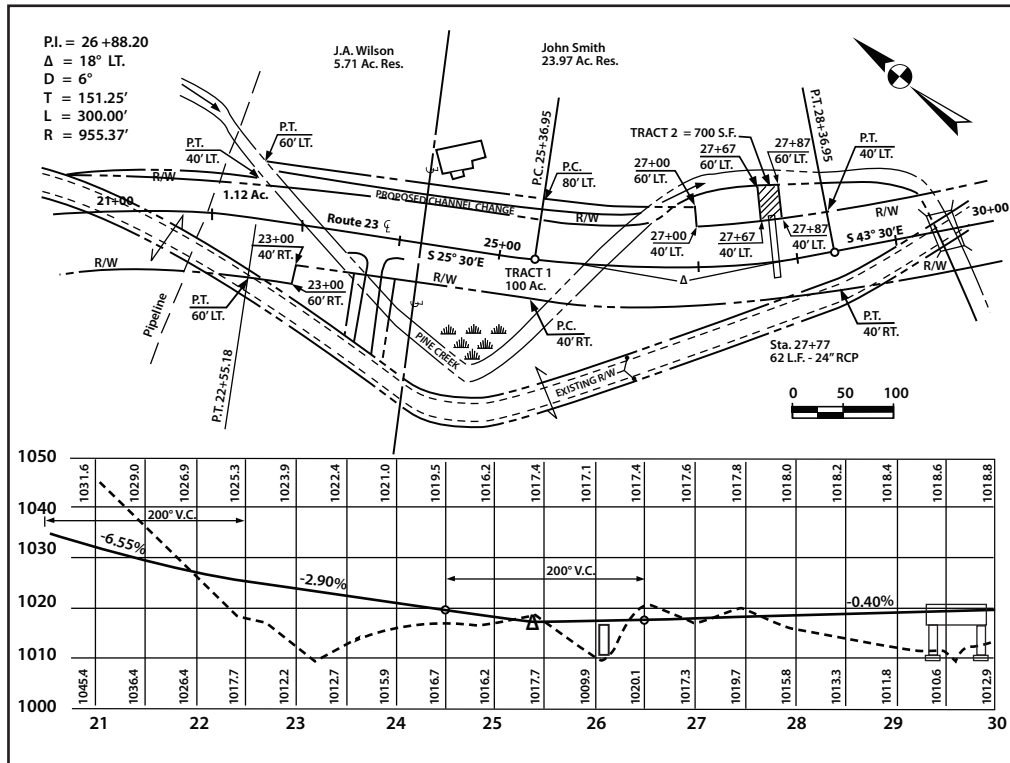


Figure 7.37: Plan-Profile Sheet

Cross-Section View

As mentioned previously, cross-sections (or sections) show the elevations left and right of the centerline at a specific station. Cross-sections are important as they provide an understanding of proposed vertical changes for the full width of the right of way. Cross-sections are drawn at regular intervals, usually at 50 or 100-foot intervals, and are located at half or whole stations throughout the length of the project. Additional cross-sections are provided at special locations such as bridges, ditches, or at locations where the shape of the ground changes rapidly. In areas of flat or gently rolling terrain, vertical differences often fall within a 10-foot (3 m) range; therefore, several cross-sections can be shown on a single sheet. Each cross-section is a complete drawing, independent of the other cross-sections on the same sheet.

In Figure 7.38: Cross-Section Sheet, three cross-sections are shown on one sheet. Beginning at the center bottom of the sheet and reading upward, a set of three numbers is given under each cross-section. In each section, the middle number designates the station at which the cross-section is drawn. The centerline is understood to be at the vertical center of the page, progressing from bottom to top. Along the bottom margin, labeled at 10-foot intervals, is the distance from the centerline. Elevation information is presented along the right edge of the graph paper for each cross-section. Therefore, any point on the cross-section can be identified in terms of its distance left or right of centerline and its elevation above sea level.

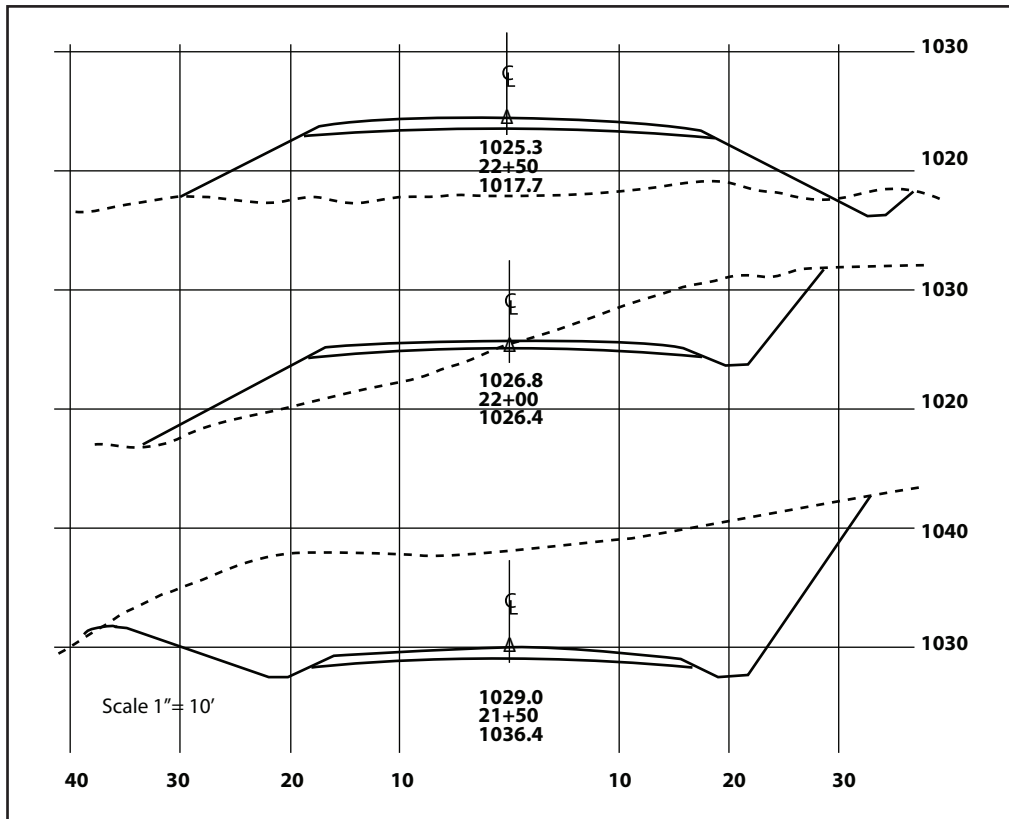


Figure 7.38: Cross-Section Sheet

Cross-sections are viewed in the ahead direction, toward increasing station numbers. The cross-section for station 21+50 reveals that, at this location, the proposed improvement is primarily in a “cut” area, because the dashed line (existing ground) is above the solid line (final surface). The elevation of the profile grade point (1029.0) at station 21+50 is shown above the station number, and the existing ground elevation (1036.4) is given below the station number. The two elevations, 1036.4 feet and 1029.0 feet, are the same as those presented in the profile view (Figure 7.37) for station 21+50. The cross-section for station 22+00 is a side-hill cut section. Note that even though the profile grade line (on the profile view) shows approximately “zero” cut or fill, both exist at this station. The fill slope contacts

the existing ground at a distance of 33 feet left of centerline. On the right, which is in a cut section, the two-foot flat bottom ditch is shown at an elevation of about 1023 feet, and the construction limit is 28 feet right of centerline. Station 22+50 is a “fill” section, except at the extreme right where some cut is required for a ditch.

The construction limits for this station are at 30 feet left and 37 feet right. In evaluating the adjacent residue property right of centerline at this station, it is important to recognize from the cross-section detail that the new pavement surface will be about 7 feet above the existing ground. To this point, discussion has centered on the plan, profile, and cross-section views, independent of each other. In practice, all three views are used simultaneously. Only through the combination of the plan, profile, and cross-section views can an accurate picture of a project be achieved.

Many items are further clarified by reference to the typical section and general notes, which provide even more specific detail than the three-view approach. No one data source supplies enough information to describe the proposed construction. The same information may appear in more than one view, but all the information is not fully detailed in any one view. Therefore, it is necessary to use the plan as a total unit, with constant cross-referencing between the various sections.

HIGHWAY RIGHT OF WAY PLAN

During construction plan development, many specifications and standards guide the design engineer. Also, external constraints play an important role, with property acquisition being a key factor. Consideration is given to all construction factors in preparing right of way plans. As decisions are reached regarding construction methods, facility length, width and depth, future expansion potential, maintenance requirements, and so forth, attention is given to existing land ownership, land use, property zoning, type of title to be acquired, and the acquiring agency’s legal authority. The design engineer is confronted with the necessity of providing adequate room for the project to be constructed and maintained, while attempting to minimize adverse impacts on adjacent properties.

Right of way limits are dependent on the proposed construction and maintenance requirements. An agent or negotiator, using a right of way plan, must refer to the construction plan in order to understand fully the right of way requirements. The right of way practitioner uses the entire engineering plan as a single unit. The right of way plan is developed on the same centerline as is used for the construction project. Construction features are superimposed on a map of properties for the area. The resulting right of way plan describes the property boundaries and dimensions, identifies areas and rights to be acquired, and may serve as the official acquisition record. Adequate information must be included in the plan for preparation of the necessary property descriptions, and sufficient construction details must be included to demonstrate the need for various fee or easement acquisitions. As with construction plans, right of way plans vary in form across industries and regions, but the content is similar. Plan requirements vary as a result of the project’s scope and local legal requirements.

Title Sheet

It is common to use the same title sheet for both the right of way plan and the construction plan. Positive identification of a project's location and limits, list of participating agencies, and conventional signs are equally important to right of way interests.

Summary Sheet or Ownership Index

On many projects, there are several pages of detailed right of way summary sheets, or ownership indices. Figure 7.39: Summary Sheet shows a table by parcel numbers, with appropriate column headings to indicate other data. The owner's name is listed as it appears in the deed of record. Under the column "Recorded," the deed book or volume and page of the source deed reference for each titleholder, as found in the land registration office, is shown. A deed area is listed for each owner, in accordance with the recorded instruments and reflects the entire area presently held by each owner. The column headed "Total Take" gives the area for the parcel of land to be acquired.

SUMMARY OF RIGHT OF WAY REQUIRED								
Parcel No.	Titleholder	Recorded		Deed Area Ac.	Total Take	Net Residue		Remarks
		Book	Page			Left Ac.	Right Ac.	
26 26D	Paul H. Gum	621	231	75	6.6	25.5	42.1	
27 27R 27D	Charles H. Gray	580	201	155	7.5	10.7	133.6	
28 28R 28D	Gary D. Lanham	485	401	220	18.9	115.4	81.3	
29	Richard L. Smith	715	139	160	3.0	157.0	0.0	

Figure 7.39: Summary Sheet

Net residue areas are listed according to their location, left or right of the centerline. Discrepancies between deed area, calculated area, and field measurement are common and, if they occur, notations are made in the "Remarks" column. Summary sheets serve as indices for many users. With a summary sheet, specific facts can be established to support and document the appraiser's or the negotiator's efforts. The summary sheet is also used as a basis for general record keeping and administrative controls.

CENTERLINE SURVEY PLAT OR LAYOUT MAP

Just as the schematic layout provides a general introduction to the overall construction project, a *centerline survey plat*, sometimes referred to as a *layout map*, provides a general reference for the entire right of way project. The project centerline is referenced to existing surveys and new monuments are established in conjunction with the proposed project. These data must be sufficient to allow a surveyor to re-establish right of way lines, affected property corners or other references. Furthermore, the alignment must be detailed enough to permit local recording authorities to locate and transfer the new centerline to existing official records. The centerline survey plat, Route 70 shown in Figure 7.40: Centerline Survey Plat contains the project designation and location in terms of county, township, or other political subdivision identification. The centerline is drawn to scale and labeled with bearing designations for tangent portions of the line. Curve data is given wherever there is a change in direction.

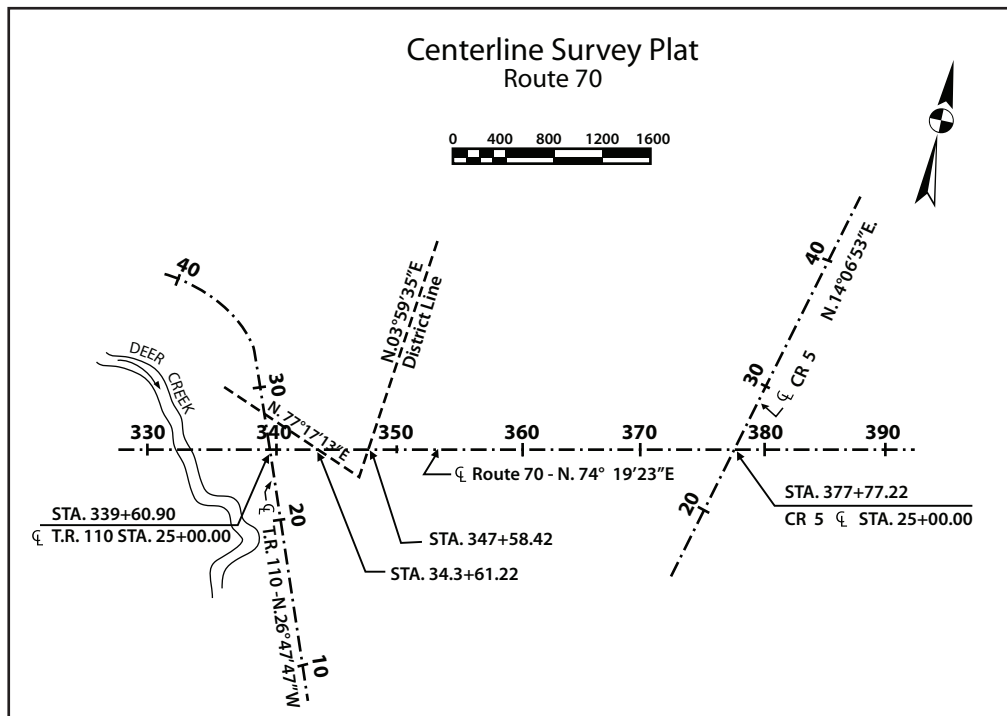


Figure 7.40: Centerline Survey Plat

The same treatment is given to all boundaries, such as county, range, township, section, city, municipality, corporation, and individual properties within the scope of the project. Corner points and points of intersection between legal lines are identified by an offset distance from a centerline station. Legal boundaries are noted and major geographic features (such as, roads and streams) that are crossed or are in close proximity to the centerline are referenced by a bearing, station number, or suitable combination of reference designations. The centerline survey plat is often part of the permanent legal record filed with the local land registration office. The legal significance of a centerline plat varies extensively, but even in areas where the plat may not have official acceptance its importance should not be underestimated. Right of way monuments and structures built within the right of way may quickly become accepted points of reference. Abstractors, private surveyors, land developers, and government agencies depend on the accuracy and completeness of the right of way centerline survey plat.

Property Map

The *Property Map* often begins in the form of a tax map or an aerial photograph, on which the proposed project centerline has been drawn. Since one of the objectives of a property map is to depict the entire area of all properties affected by the proposed right of way limits, the map is drawn with a large-scale factor. All property lines in the immediate vicinity of the proposed right of way are shown. Major project features may be carried over from the construction drawings and land details such as streams, roads, and fences are shown. The information presented on a property map shows the extent and effect of the proposed improvement on each property affected. Finally, a typical property map contains the designation of the type of title to be acquired from each owner.

Figure 7.41: Property Map illustrates a typical property map. Only a few of the many possible details to be found on property maps are included in this illustration. The first detail to note is the location and stationing of the centerline of survey and the generally parallel lines on both sides of the centerline that denote the limit of the proposed property acquisition. The lines are designated “C/A R/W,” meaning that the right of way will be acquired as controlled access. *Controlled or limited access right of way* means that vehicular access to the highway is limited to specified locations. The centerline stations are labeled at 100-foot intervals. Local roads are shown and identified by name and number, and natural watercourses are labeled according to their name and direction of flow. The project centerline and right of way lines and the area topographic features are labeled at 100-foot intervals. Local roads are shown and identified by name and number, and natural watercourses are labeled according to their name and direction providing a reference for location and identification of properties affected by the proposed improvement. Each property owner’s name is usually shown within the area of the property, and may be identified by a code number, or parcel number.

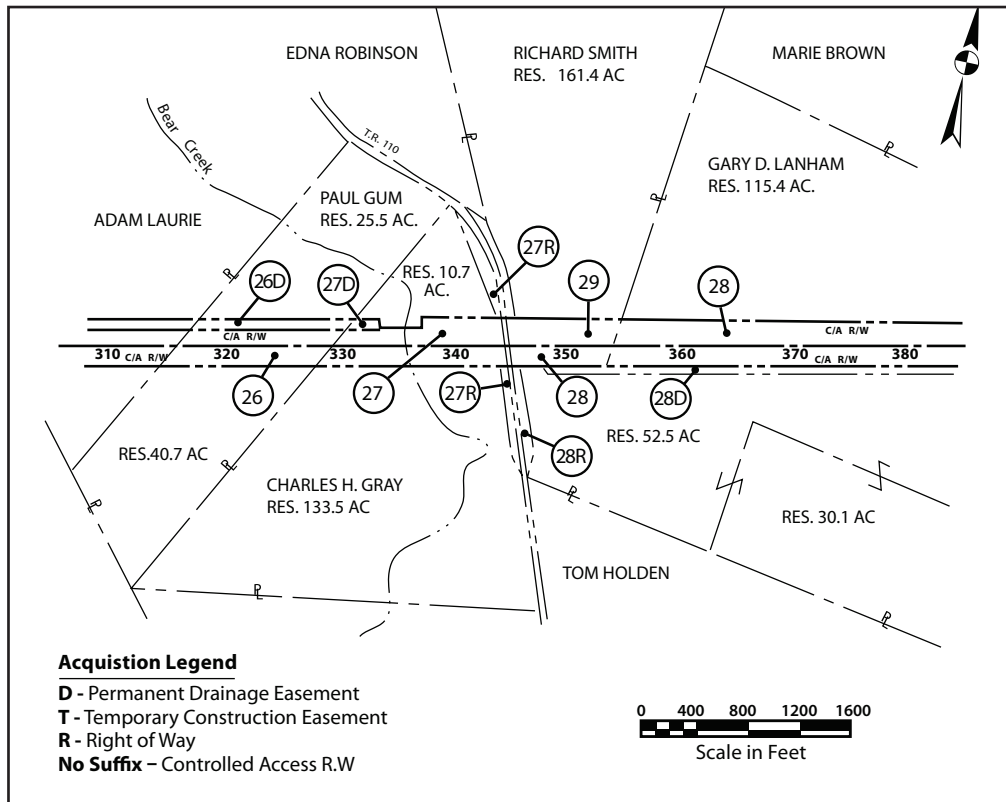


Figure 7.41: Property Map

The titleholder may also be cross-referenced and listed elsewhere on the plans. Parcel numbers generally start with number “1” at the beginning of a project. The parcel number coding in Figure 7.40 consists of a number and letter that are used to identify the name of the owner and type of title to be acquired. Property lines are labeled with the symbol “PL”. When an owner has more than one tract of land, such as Parcel 28, the boundary between contiguous parcels carries the symbol “Z,” and is called a *land hook or land tie*, to denote continuous ownership. If the proposed right of way does not require that the entire property be acquired, the residual area is noted by showing the amount of the remaining acreage and on which side of the centerline it is located. Appraisers and negotiators can benefit from property map information. Particularly in rural areas, on site inspection of a property will not always reveal the extent or location of property lines because of vegetative growth, terrain, or the absence of any markings, such as fences. With the aid of a property map, the size and configuration of a property can be determined accurately and project influences such as separation, landlocking, and access provisions can be identified. The same information is useful when explaining a project to interested individuals, since the picture shows large areas that can be readily identified.

Detail Sheet

A right of way plan uses a *detail sheet* as the major source of information in much the same manner that a construction plan uses the plan-profile sheet. Just as a construction plan contains certain basic right of way data, the right of way plan also includes relevant construction details. The detail sheet in a right of way plan shows how construction details affect a specific property and the size of the areas and rights to be acquired from each owner. For small or simple projects, a right of way map that shows only a centerline and right of way limits may be sufficient for acquisition purposes. Such maps may include some topographic information and indicate the owners' names, parcel numbers, property lines, and the rights to be acquired. In many jurisdictions, no distinction is made among the words "map," "plan," or "plat." Regardless of nomenclature, the objective is to illustrate clearly and accurately the relative location of project features to the affected property and to provide sufficient information to meet the needs of people performing right of way acquisition. The Right of Way Parcel Detail Sheet, illustrated in Figure 7.42: Parcel Detail Sheet is for the area shown as Parcel 29 in Figure 7.41: Property Map. Note the details in the vicinity of station 343+50. Pavement edges are delineated, showing the location of the 48" culvert and existing fence intersection. Work limits, surface drainage provisions with flow arrows, and necessary tree removal also are indicated. The construction features that have a direct bearing on land acquisition are shown in the right of way plan. One of the main uses of a right of way plan is to prepare a legal property description for the parcels to be acquired. Distances and bearings of boundary lines are shown, and angle points or intersecting points are referenced to the centerline by station and offset. The property owner's name and parcel number, the land survey information, and the area to be acquired are shown on each sheet.

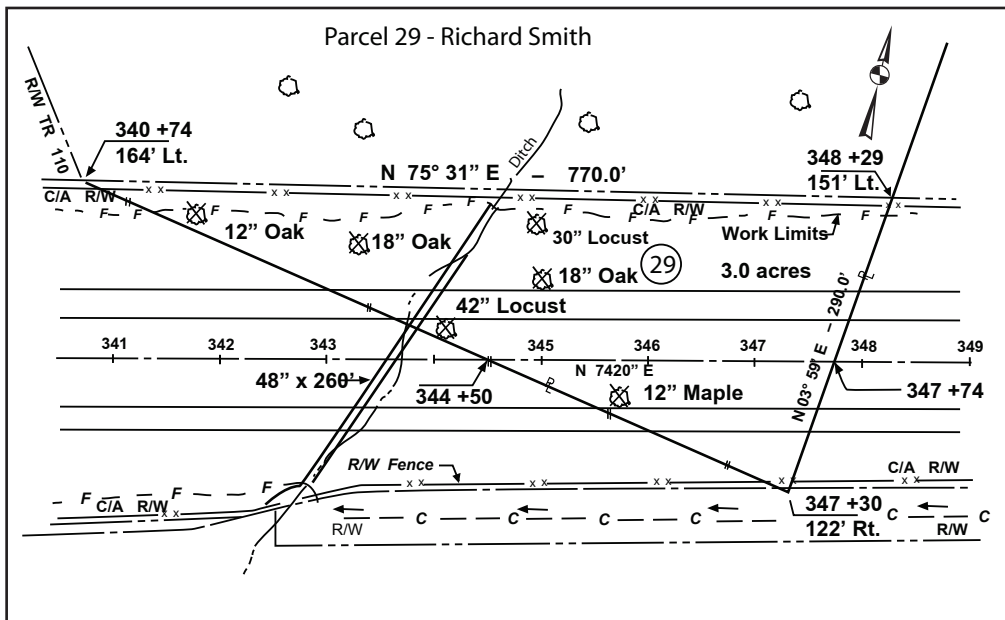


Figure 7.42: Parcel Detail Sheet

AERIAL PHOTOGRAPHY

The acquisition of land across great distances dictates the necessity for efficient methods to locate, identify, and describe a right of way. Large construction programs demand fast and complete information with great accuracy. As a result, *aerial photography* is an integral part of engineering design and construction. In right of way applications of aerial photography, the objective is to obtain an accurate map of the project alignment, with accurate dimensions of all features.

Photogrammetry is the process of obtaining three-dimensional measurements of a subject from stereo photographs. A number of federal, state or provincial, and other public and private agencies throughout the United States and Canada have completed extensive aerial photography and mapping.

The value of the photographs and maps is that the apparent limits of individual property ownership are often visible. Preliminary estimates of the boundaries of affected properties can be obtained by plotting existing deed descriptions and overlaying the properties and proposed right of way on the photographs or maps, which can then be scanned and imported into the CAD drawings. In addition to providing dependable data for engineering use, aerial photography and the corollary techniques of photo reading, photo interpretation and photogrammetry are invaluable sources of information for the right of way agent in dealing with property owners and lay people. By studying an aerial photograph, an appraiser can estimate the size of parcels to be acquired; view any residue, locate access provisions, and identify land use and neighborhood characteristics. It is easier for a negotiator to explain the proposed improvement and its technical justification when an owner can see the alignment, drainage, landlocked residues, and other property impacts. For an attorney making a court presentation or a company official making a presentation, the benefits of aerial photography are significant.

A photograph is more easily understood and more recognizable than a map or plan. Aerial photographs can facilitate determination of right of way lines. They are also helpful in discussions with local officials, with the review of assessment maps and general boundary locations, and negotiations with owners.

SUMMARY

The ability to read and interpret construction and right of way plans is a basic skill necessary in all phases of right of way work. The construction plan is a combination of lines, symbols, and dimensions developed in a standard form to represent the ideas and intentions of a design engineer that are to be implemented by others. The standard plan form shows the actual property and project features from three points of view, at right angles to each other.

The typical construction plan shows the horizontal alignment of the proposed work in a plan view. Directly beneath the plan view, the corresponding profile view may be shown. In both cases, the centerline provides the main reference for orientation. When detail is needed to describe elevations to the right or left of centerline, the cross-section view is added to give full three-dimensional information.

A right of way plan employs the same concepts. A detail sheet is provided for specific parcel information. Titleholder, parcel number, deed information, and areas are compiled in a summary sheet. Project and property information are provided on a plan or plan-profile view. The cross-section provides information about the impact of the project on a particular parcel.

Within the framework of the three-view concept, certain standards are basic to plan interpretation. All plans are drawn to specified scales. The scale used depends on the amount of detail to be depicted and the accuracy desired. Drawings use a centerline graduated in stations. A series of tangents and curves are used to illustrate the path of existing and proposed construction centerlines. A change in elevation along the path of a line, its profile grade line, is expressed as a percent. This technique of plan presentation is remarkably uniform throughout the United States and Canada and is common among both private and public agencies. Differences that do exist are primarily a function of the amount of detail illustrated, symbols used, and the artistry of the design engineer.

CHAPTER 8:

Property Descriptions

————— Ron L. Williams —————

and

The International Surveying and Engineering Committee

INTRODUCTION

Throughout history, the process of locating, identifying, and describing land has been of critical importance. The ancient Chinese, Egyptians and Romans all used methods to establish and re-establish property corners and boundaries.

Land has traditionally been considered one of the most stable and valuable commodities that can be possessed, and its ownership and transfer has been the subject of extensive regulation. The formality and legal significance of land title transfer documents lend importance to each detail and necessitate a high degree of accuracy in all stages of the transfer process.

An understanding of the methods of identifying and describing land is necessary and useful in right of way acquisitions. In right of way acquisition, the basic unit of identification to acquire property is the *parcel*. The right of way parcel is used for the right of way plan preparation, title and appraisal assignments, right of way records management, and for negotiation and legal proceedings. The importance of understanding methods of parcel identification and description arises from the number of independent descriptive techniques now in use, the historical variations in original surveying, and the types of descriptions acceptable for use in transfer documents.

Since the original survey lines established by private and government surveyors are still used, either directly or by reference in land transfers, knowing the historical differences among the ways that properties have been described is important to an understanding of the current process. Land descriptions in the original thirteen United States colonies and the eastern Canadian provinces were typically written as *metes and bounds* descriptions. However, notable exceptions existed even then; for example, when a rectangular system of division into townships and lots was used for the Holland Purchase in New York State. The state of Ohio is unique in that no fewer than nine survey types were employed to partition the land. Similarly, in the eastern provinces of Canada a number of different systems of

township subdivisions were employed. Farther west in the United States, the *Public Land Survey System*, described later in this chapter, was commonly used for land descriptions. In western Canada a similar system, called the *Canada Lands Survey System* was used.

Again, notable exceptions exist, primarily due to the need to define the land claimed by the original settlers before a standard system was created. In parts of California, the Rancho Simi is a familiar land division. In Missouri, the New Madrid survey lands have their origin in the Louisiana Purchase and the original Spanish and French land grants. Some Texas land divisions were established by decree of the Mexican government in units called *varas* and *siletos*. Exceptions to both the original and newer systems of survey are often found where pre-existing boundary lines intercepted. For instance, parcels of irregular size and shape were inevitable when a body of water formed part of a boundary. Indian or First Nations Territory, roadways, and other surveys resulted in similar irregularities and the creation of many fractional parts.

IMPORTANCE AND USE

The property description is first encountered in the records that identify existing land ownership. Deed records are a public record and are generally located in the county registry of deeds. In the deeds, the right of way practitioner will read and help interpret many varied descriptions. Property ownership maps are prepared and a determination is made of the extent and location of the proposed project right of way. A new property description is then used to define the precise boundary of the right of way to be acquired. A cross-reference index is maintained by year and identifies the grantee (purchaser) and the grantor (seller).

Property Description

The *property description* is the portion of a legal transfer document that describes the boundaries of a particular parcel. The three parts of a property description are the caption, sometimes called the preamble, the body, and reservations and/or exceptions. The *caption* sets forth the general relationship of the local area to the greater geographic location. The *body* contains an explicit description of the specific tract. The *reservations and/or exceptions* section lists the areas or rights which do not pass with the title, such as areas reserved for easements, ingress and egress, utility right of ways, outsales, mineral rights, and so on.

The main objective of a property description is to describe a land area in definitive, accurate, and detailed terms sufficient to permit a competent person, having no familiarity with the land, to locate the tract's boundaries. A properly prepared property description eliminates confusion and controversy in locating the boundaries of the tract at the present time, as well as in the future. The following six important features are included in a land transfer document and are usually considered a necessary part of the property description:

Intent

The parties in a real estate exchange each have a certain location in mind. The legal description must delineate this intent with sufficient clarity so that both parties to the agreement, as well as those who may be entirely unfamiliar with the property, can read and understand the intent of both the buyer and the seller.

Location

A real estate parcel has a unique physical position in relation to its surroundings. The property description must associate the point of beginning of the description with a fixed monument, such as a recorded concrete or steel marker, an established highway centerline, or some other adequately described parcel or physical object. Further reference is made to the local area or municipality, county, state or province in which the land is located. Reference is made to the larger system of survey of which the parcel may be a part; for example, the Public Land Survey System, the state coordinate system, or a recorded subdivision.

Geometric Shape

The property description must completely describe the specific boundaries of the parcel. A parcel of any shape can be clearly defined. For an irregularly shaped parcel, a description may state the measured length of lines and the angles between them.

Size

The area within the boundary of the property description must be stated, to an acceptable degree of accuracy, in words and terms such as acres, square feet, hectares, or square meters.

Ownership

The complete legal name of the current titleholder of the property should be a part of the property description.

Source of Title

Reference to the specific public land record by which the present owner claims title is often another general requirement of the property transfer document. Many jurisdictions require that the name of the person who conducted the land survey also be included in the description.

Care must be exercised to avoid language in property descriptions that is broad or general in scope. Describing rights as being “over,” “through,” or “across” a property may cause uncertainty regarding location. It is preferable to give specific horizontal and vertical locations that refer to well-known existing points. The instrument of conveyance should clearly identify the extent of rights being transferred, particularly with respect to physical location and type of use. A description for a property conveyance can, in fact, go beyond the land surface to describe a three-dimensional property when the intent is to convey limited vertical dimensions. Language that may cause possible questions or confusion should be anticipated and reworded in such a manner as to remove doubt as to the extent of a conveyance.

PROPERTY DESCRIPTIONS

Various methods for describing property are commonly in use, such as the Public Land Survey System, state plane and provincial coordinate system, metes and bounds, subdivisions, centerline description, and point description.

PUBLIC LAND SURVEY SYSTEM

Following the American Revolutionary War, the United States government had vast tracts of undeveloped and uninhabited land with few natural characteristics suitable for monuments. In 1785, the Continental Congress adopted and implemented the Public Land Survey System. This system, sometimes referred to as U.S. Rectangular Grid System, is in use today in thirty of the fifty states. Excluded from this system are the thirteen original U.S. colonies, and lands that later comprised West Virginia, Kentucky, Tennessee, Hawaii, and Texas. Florida is the only Atlantic Coast State that is included in the rectangular grid system. A similar system, the Canadian Lands Survey System, is in use in western Canada.

As land sales occurred, individual systems designated by name or number were established on a regional basis. A total of 35 individual regions or systems were created, each of which is contained within definite geographical boundaries, as shown in Figure 8.1: The Public Land Survey System of the United States.



Figure 8.1: The Public Land Survey System of the United States

Initial Point

Since a property description must have a point of beginning, the original surveyors located a substantial landmark for each of the 35 systems. This point, called the *initial point*, as shown in *Figure 8.2: Standard Lines and Quadrangles*, was marked, designated with a “monument,” and referenced to a specific latitude and longitude. Due to available technologies and procedures of the day, these initial points are generally in the vicinity of but not exactly at their intended latitudes and longitudes.

Baseline

An east-west axis line (a true parallel of latitude) through the initial point is designated as the *baseline* for the that system. See Figure 8.2. In some instances, previously established baselines were extended westward into adjacent regions and the same baseline served for more than one system. This base line extension resulted in the use of 32 baselines for the 35 systems. The 2nd and 3rd principal meridians share the same baseline, and the Louisiana, St. Helena, and St. Stephen principal meridians also share a common baseline.

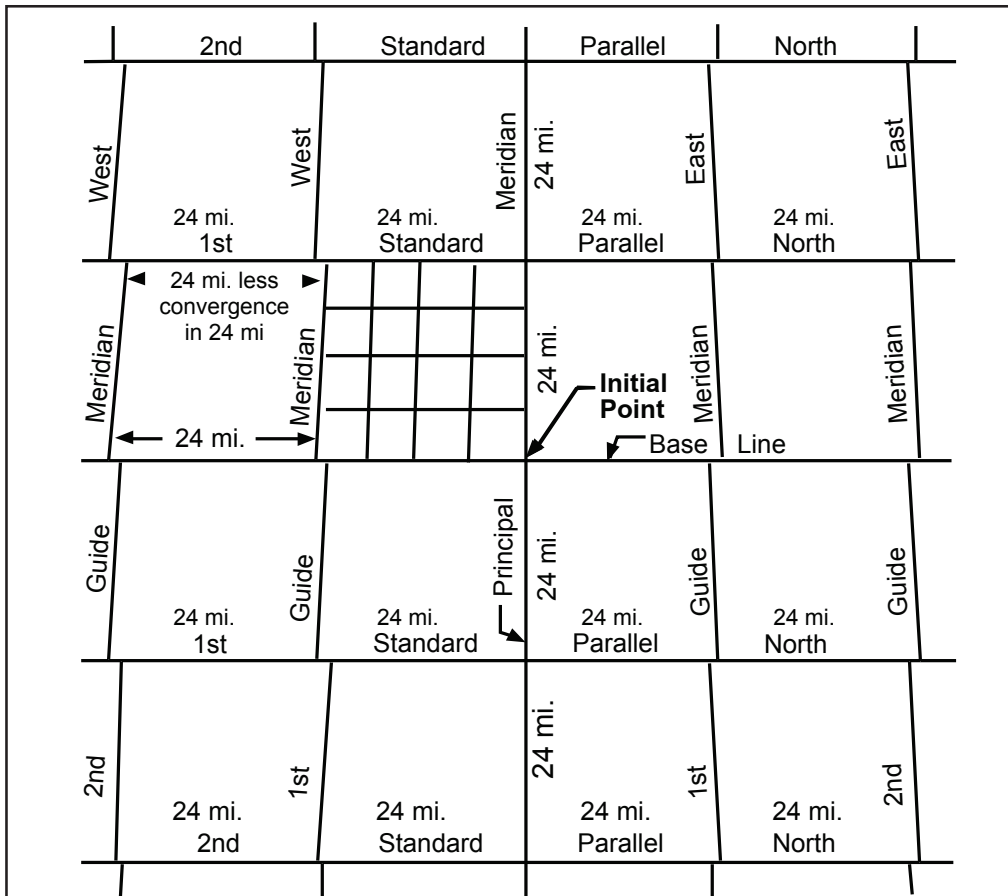


Figure 8.2: Standard Lines and Quadrangles

STANDARD PARALLELS

As the public land system evolved, certain procedures were developed to improve the accuracy of the surveys. Additional parallels of latitude were run parallel to the base line at 24-mile intervals north and south of the base line. These *standard parallels* or *correction lines* are named “first standard parallel north,” “second standard parallel north,” and so forth, depending on whether they are located north or south of the baseline, as shown in Figure 8.2.

Principal Meridian

A due north-south axis line, a true meridian, through the initial point is designated as the *principal meridian* for that system. See Figure 8.2: Standard Lines and Quadrangles. The principal meridian is given a number or name to which all property descriptions in that system are referenced.

Guide Meridians

North lines called standard parallels, *guide meridians*, were established on each base line and standard parallel, at 24-mile intervals, east and west of the principal meridian. See Figure 8.2. Since true meridians converge toward the north, the guide meridians were established to avoid excessive effects of convergence. Guide meridians were designated as east or west of the principal meridian; for example, “1st Guide Meridian West,” or “2nd Guide Meridian West,” depending on whether they were located east or west of the principal meridian.

Standard Lines

The principal meridian, baseline, standard parallels, and guide meridians are called *standard lines*. Each of the 35 systems has its own series of standard lines.

Quadrangles

The approximately 24-mile square blocks, formed by standard parallels and guide meridians, are called *quadrangles* and are the large squares shown in Figure 8.2. The south, east and west boundary lines of each quadrangle were to be 24 miles long, while the north boundary is 24 miles, less the convergence of the guide meridians over 24 miles. The north line becomes shorter the farther north it is located; thus at each standard parallel, the 24 mile distance was “reset.”

Townships and Ranges

The quadrangles are further divided into smaller units called *townships*. The township is the primary system unit and each township is bounded by meridional and latitudinal lines and is, as nearly as possible, 36 miles square. Townships are formed by running township lines east and west, parallel with the base line at 6-mile intervals and by running range lines north to the next standard parallel, at 6-mile intervals along each standard parallel or base line.

The rows of townships north and south of the baseline are tiers of townships and the columns of townships east and west of the principal meridian are ranges. The row of townships immediately north of, and parallel with the baseline is numbered Township 1 North (T1N), the second row north is numbered Township 2 North (T2N), and the third, fourth, and fifth, are T3N, T4N, and T5N, and so on. The rows of townships south of the baseline are similarly numbered, T1S, T2S, T3S, and so on.

Range numbers are assigned in the same manner to each column of townships east and west of the principal meridian. The first column east is numbered Range 1 East (R1E), the second column east is R2E, and the third column east is R3E, and so on. Because of the convergence of the range (north-south) lines, the width of the townships in each quadrangle becomes progressively narrower proceeding north, with the rate of convergence dependent on the latitude. The length of the south line of the most southern townships in a quadrangle is 6 miles. The length of the north line of the most northern townships is 6 miles less the convergence of the range lines over 24 miles.

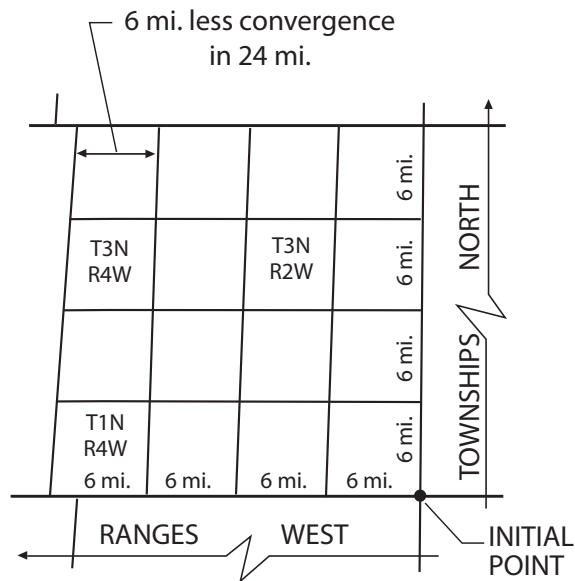


Figure 8.3: Townships and Ranges

The township and range lines in each quadrangle form a grid of 16 townships, each approximately 6 miles square. Figure 8.3 shows the first quadrangle northwest of the initial point. A township is identified by its tier number, range number, and the name of the principal meridian, as shown in Figures 8.3: Townships and Ranges, and 8.4: Townships Identification. For example, T7S, R8W, of the 3rd Principal Meridian describes the location of a particular township that is 7 tiers south and 8 ranges west of the initial point of the 3rd Principal Meridian.

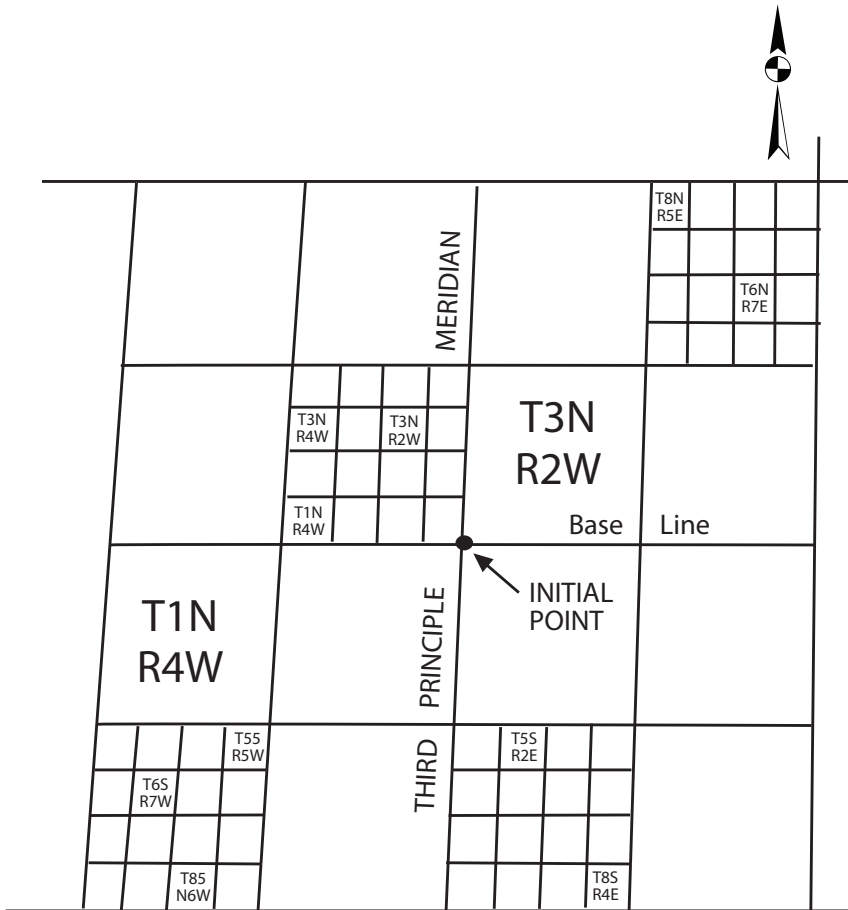


Figure 8.4: Townships Identification

Sections

The Public Land Act of 1785 required only township surveys. The original government surveys marked the outside of the township boundaries and placed monuments at each mile on the township lines. In 1796, the U.S. Congress decreed that the townships of 36 square miles be further subdivided into 1-mile-square sections, containing 640 acres. Within each township, lines were run at 1-mile intervals, west of, and parallel to, the principal meridian. Lines also were run at 1-mile intervals, north of, and parallel to, the baseline. These *section lines* divide each township into 36 sections.

The resulting sections are numbered from 1 to 36, with section number 1 located in the northeast corner of the township. The section numbering then proceeds alternately west and east in serpentine fashion, ending with section number 36 in the southeast corner of the township, as shown in Figure 8.5. A section is legally described by the section number, the tier and range numbers of the township, and the name of the principal meridian.

For example, Section 22, T7S, R8W, of the 3rd Principal Meridian, describes the location of a particular 1 mile square tract of land, which is shaded in Figure 8.5.

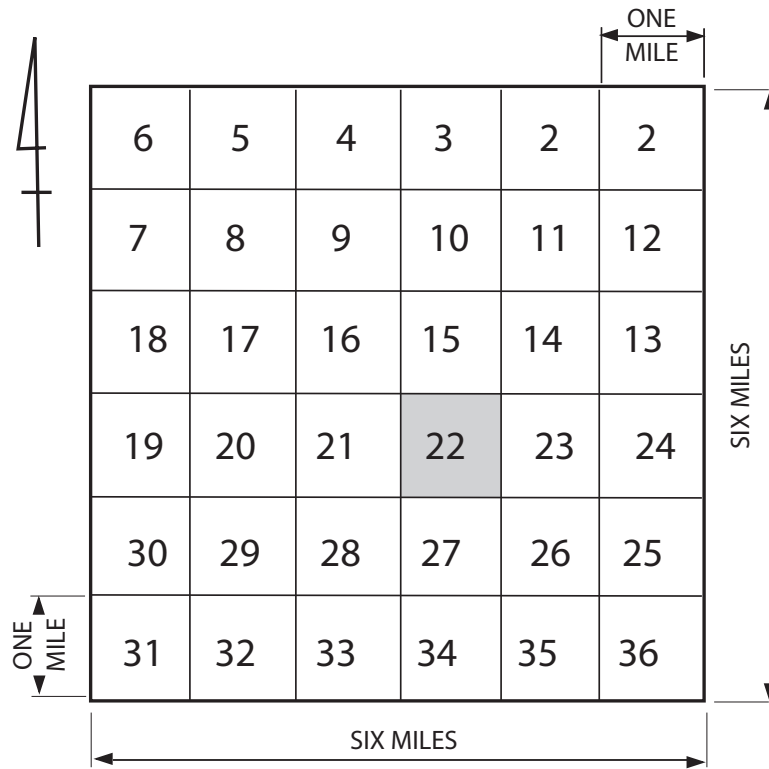


Figure 8.5: Division of Township into Sections

FRACTIONAL SECTIONS

From 1800 to 1832, additional U.S. Congressional acts provided for the subdivision of sections into smaller units, as shown in Figure 8.6: Fractional Parts of A Section; half-sections (80 chains \times 40 chains, [N 1/2, S 1/2, E 1/2, W 1/2]) containing 320 acres, quarter sections (40 chains \times 40 chains, [NE 1/4, NW 1/4, SE 1/4, SW 1/4]) containing 160 acres, and quarter-quarter sections (20 chains \times 20 chains) containing 40 acres. The quarter-quarter section is the smallest statutory division of regular sections, although smaller units can be created by partitioning further the quarter-quarter sections.

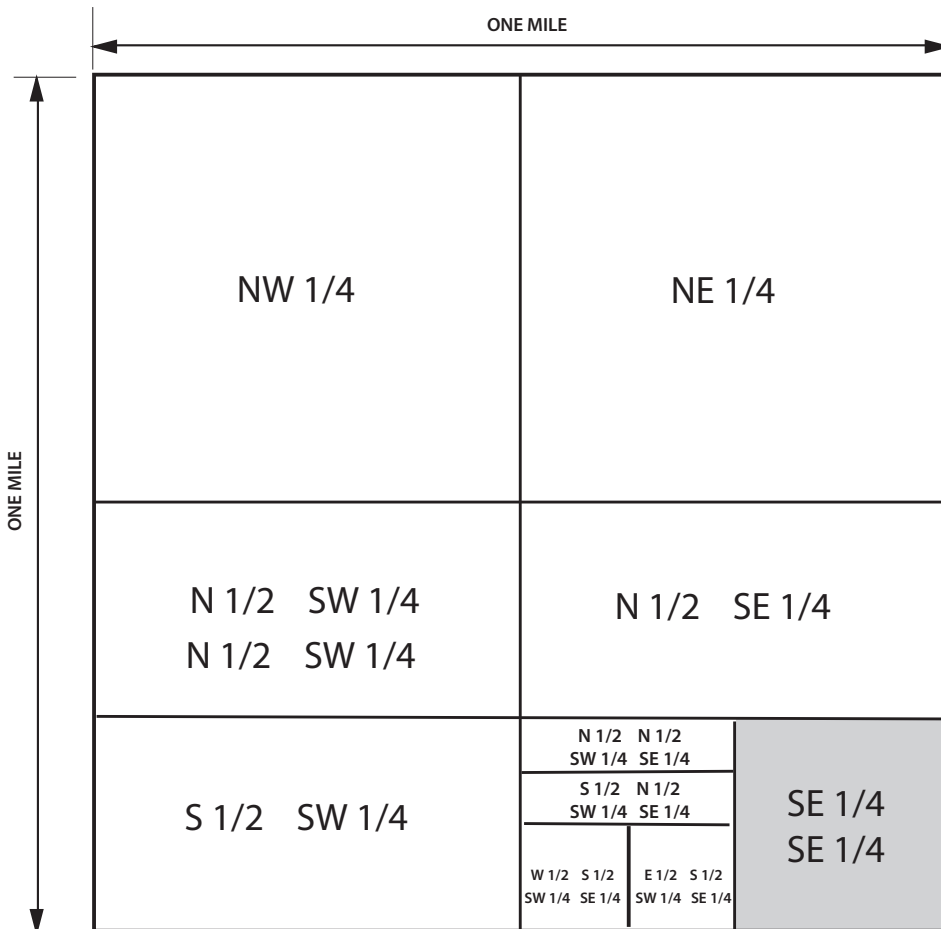


Figure 8.6: Fractional Parts of a Section

At the time the rectangular grid system, Figure 8.6, was originally established, technical instruments were relatively inaccurate and terrain obstacles were not always surmountable. As a result, many local and regional variations of the standard Public Land Survey System emerged. When large rivers or lakes were encountered or earlier lines of ownership (for example, land grants, Native American lands, or mineral claims) were in the path of the survey, *fractional townships* and *fractional sections* were established. Some irregularities came from the earth's curvature or resulted from establishing boundary lines to fit existing ground features such as the meander of a waterway. The original corners established by the government surveyors stand as true corners, whether correctly placed or not. Therefore, reference should always be made to the official plat records at a local office to determine local variations within the specific system.

Using this system, a property can be easily described in abbreviated fashion by a series of letters and numbers. Thus, “the southeast 1/4 of the southeast 1/4 of Section 22 of Township 3 North, Range 2 West (written SE 1/4 SE 1/4 of Section 22 of T3N, R2W), of the 3rd Principal Meridian” is an accurate, albeit abbreviated, description of one specific 40-acre tract in the United States.

The area of a property described by this system can be easily calculated. As there are 640 acres in a section, the area can be determined by multiplying all the fractions in the description by 640 acres. In the preceding description, the property area calculation is $1/4 \times 1/4 \times 640 = 40$ acres. To locate a tract identified by the rectangular grid system, the listed description items are considered in the reverse order of presentation.

Refer to Figure 8.4: Townships Identification, 7.5: Division of Townships into Sections, and Figure 8.6: Fractional Parts of A Section to locate the 40-acre property described in the previous paragraph. Figure 8.4 shows the quadrangles surrounding the initial point of the 3rd Principal Meridian, which is the last item listed. Continuing in the reverse order of the description, the previous item identifies a specific township, which is shaded in Figure 8.5. The information “Range 2 West” (R2W) refers to the second column of townships west of the 3rd Principal Meridian, and “Township 3 North” (T3N) refers to the third row or tier of townships north of the base line. The next reference is to “Section 22,” which is shaded in Figure 8.5. The next previous reference is “the southeast 1/4,” which describes the lower right-hand quadrant of section 22. The final item of information, which appears as the first item of the property description, is “the southeast 1/4.” In this instance, the description is for the lower-right quarter of the preceding quarter section, which is the shaded portion of Figure 8.6. Since a section contains 640 acres, simple arithmetic computes to 40 acres in the previously described tract. Property also can be described by stating the area (East 40 acres of NE 1/4 of Section 17) or by linear measurement (East 20 chains of the NE 1/4 of Section 17).

Township Convergence Corrections

Since township meridians form the east and west boundaries of each township, corrections for the convergence of these lines, township convergence corrections, must be applied. Except for the south boundary line of the townships that are on the standard parallel, the north and south township boundary lines are all less than 6 miles long, The north-south section lines are run at 1-mile intervals, west of, and parallel with the east boundary line of the township. The east-west section lines are run at 1-mile intervals, north of, and parallel with the south boundary line of the township. Therefore, all sections, except those adjacent to the west line of the township will be 1-mile square. The sections adjacent to the west township line will be less than 1-mile wide by an amount equal to the convergence and, of course, subject to the accuracies achievable with the equipment and procedures of the era.

Other factors may affect the north-south distances in a township. Therefore, the sections adjacent to the north and west boundaries of a township are further divided into fractional sections and lots, as shown in Figure 8.7: Sections & Lots. The corrections for convergence and other factors affecting the north-south distance are applied to the top (north) tier of 40-acre lots in sections 1, 2, 3, 4, 5, and 6, as well as to the west column of 40-acre lots in sections 6, 7, 18, 19, 30, and 31. The Canadian system is essentially the same, although nomenclature and details differ slightly.

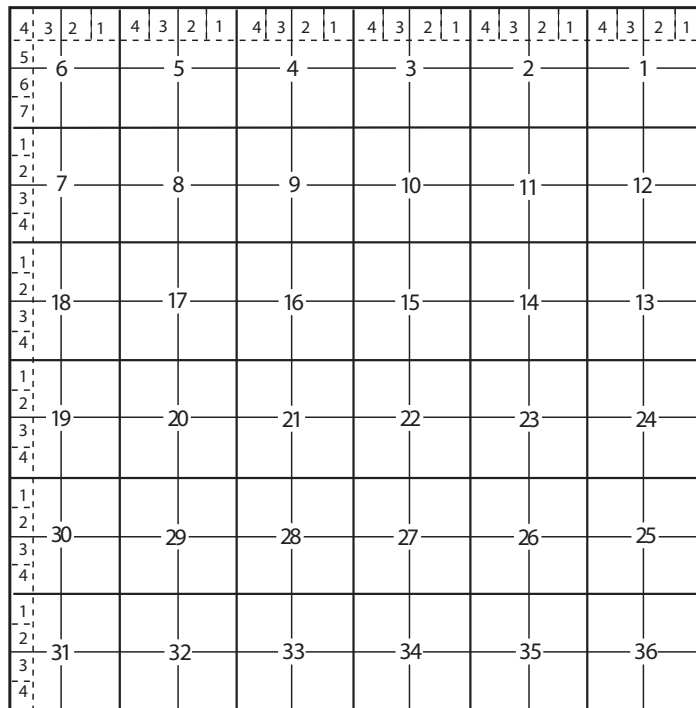


Figure 8.7: Section and Lots

STATE AND PROVINCIAL PLANE COORDINATE SYSTEMS

Today, the U.S. Bureau of Land Management (BLM) and the Geodetic Survey of Canada (G.S.C.) are continuing the process of surveying and measuring the territories of the United States and Canada through the *plane coordinate systems*, and are filling in the many previously unsurveyed areas. In Canada, the provinces have established their own unique systems, but all of those systems are based on the North American general framework so that all are interrelated and provide a means for scientific location and description of land boundaries.

In any large-scale survey, the size and spheroidal shape of the earth must be considered. Consequently, geodetic surveying is highly specialized and requires special equipment and extensive mathematical calculations, for which the typical land surveyor is not always trained. The systems represent the surface of the earth projected mathematically on cones or cylinders and then flattened into planes. In this way, a strip of the earth's surface can be represented on a single plane projection. However, representing the curved surface of the earth on a flat plane causes an error of scale. This error will not exceed one foot for every two miles, or one part in ten thousand, which is generally sufficiently accurate for property surveying.

In order to make the geodetic data of the national survey readily available to land surveyors and engineers, the United States National Geodetic Survey established the State Coordinate Systems. Today, two horizontal and two vertical survey networks are in use. The original horizontal network, established in 1927, is the *North American Datum of 1927 (NAD 27)*. A re-survey was performed and resulted in the *North American Datum of 1983 (NAD 83)*. Since equipment and methods had improved considerably between 1927 and 1983, a different set of data was obtained.

Similarly, a vertical network established in 1929, called the *National Geodetic Vertical Datum (NGVD 29)*, was resurveyed and resulted in the *North American Vertical Datum of 1988 (NAVD 88)*. Again, a different set of values was obtained. Since both sets of data are in use for each network, the acquisition agent should be certain as to which network is involved when working with the state plane coordinate system. A professional surveyor should be consulted if questions or problems arise.

The description of the position or location of any point in this system consists of two numbers or *plane coordinates*, which are expressed in feet and decimals of a foot or meters and decimals. One of the numbers is the *X-coordinate* (called Easting) and gives the position in the east direction from the origin. The other number is the *Y-coordinate* (called Northing) and gives the position in the north direction from the origin. The coordinates relate to the state plane or G.S.C. coordinates established for each state or province.

For every geographic position stated in latitude and longitude, there is a corresponding plane-coordinate position obtained by accurate and precise mathematical procedures. *Monuments* are set and described so that they may be readily located and used as starting points for local surveys. Each monument consists of a bronze disk, bearing identification information, on top of a four to five-foot long concrete shaft set nearly flush with the ground. A small hole in the disk represents the exact point being described. The land surveyor who ties or relates survey points into these national monuments defines the position of the land corners by giving their plane coordinates on a state or provincial system, thus providing indisputable evidence for their accurate restoration, if necessary.

In combination with GPS electronic distance measuring devices and other modern instrumentation, the plane coordinate system affords a high degree of accuracy, efficiency, and economy to right of way location surveying. The system is particularly useful in connection with long-distance utility line construction, where the system makes possible the independent development of several sections of line, and assures that the individual portions fit together.

Although this system of describing property is valid and accurate, adoption has not been widespread. The system's biggest limitation is that, when used alone, plane coordinate systems provide no indication to the nonprofessional as to the property's location. Because of this, a coordinate description may be used in conjunction with another method of description, or with supplementary reference material. For illustrative purposes, the following description is based on the parcel depicted in Figure 8.8: Coordinate System (Entire Taking).

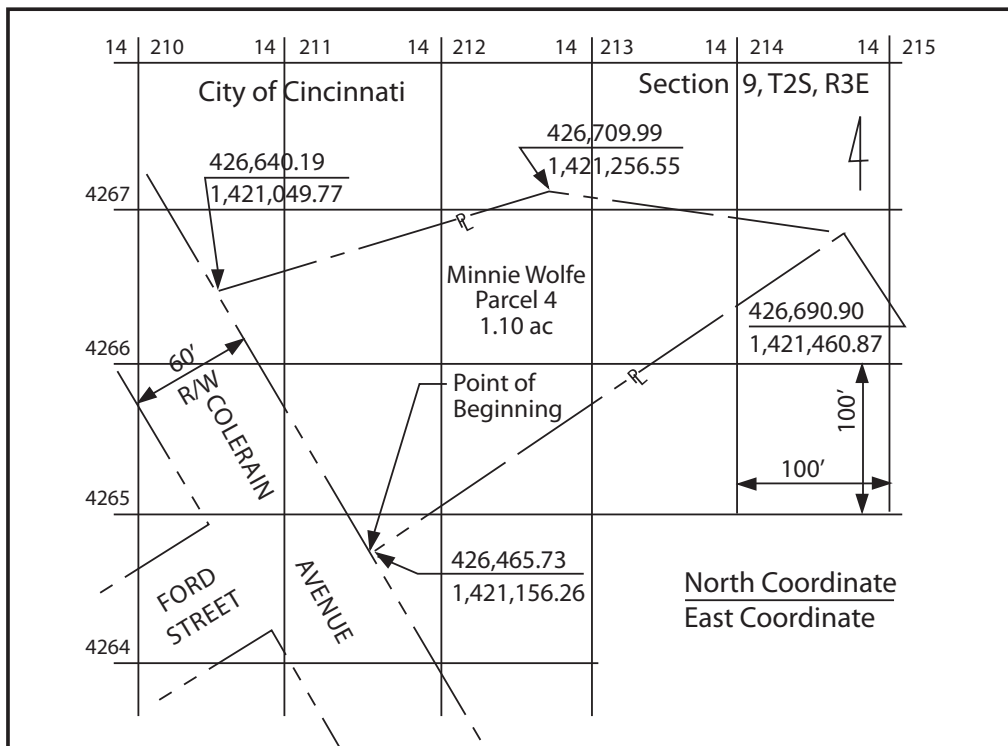


Figure 8.8: Coordinate System (Entire Taking)

Parcel No. 4 - Minnie Wolf, Owner

Situated in Section 9, T2S, R3E, Hamilton County, Ohio, and being more fully described as follows:

Beginning at a point in the easterly line of Colerain Avenue, said point being 426,465.73 North and 1,421,156.26 East, and being the most southerly corner of the property; thence,

northwesterly, along the easterly line of Colerain Avenue, to the most westerly corner of the property, said point being 426,640.19 North and 1,421,049.77 East; thence, easterly, to the most northerly corner of the property, said point being 426,709.99 North and 1,421,265.55 East; thence, easterly, to the most easterly corner of the property, said point being 426,690.90 North and 1,421,460.87 East; thence, southwesterly, to the point of beginning, containing 1.10 acres, more or less.

METES AND BOUNDS

Metes and bounds, one of the oldest methods of describing land, literally means describing the measurements and boundaries of a tract of land. This method consists of beginning at some point in the boundary of the tract to be described, and then describing the courses and the distances from point to point for each successive line around the entire perimeter of the tract. In many old deeds, property lines were described by metes (direction and distance) or bounds (call to adjoining property owner) or a combination of both.

Two items are very important in a metes and bounds property description. First, the description must begin at some known point that can be easily located and readily identified. This point must be of substantial character and so established and witnessed that it can be accurately relocated with certainty, even if the monument that identifies the point should be destroyed or removed. Second, the description must close; that is, if the courses and distances of the description are followed in order, step-by-step from corner to corner, the description must return to the place of beginning.

If the last line of a property description fails to return to the point of beginning, the discrepancy is the *error of closure*. The error of closure is expressed as a ratio of the discrepancy distance to the distance around the property perimeter, with the first number converted to "1." For example, a 1:10,000 error of closure indicates that an error of 1 foot would be obtained if the perimeter distance were 10,000 feet. In the past, rural farmland surveys were acceptable with an error of closure of 1:1,000. However, modern equipment can produce surveys with an error of closure of 1:200,000 or better. By plotting a deed and computing the error of closure, it can be determined whether or not that deed's property description is reliable. Monuments may be natural or artificial. *Natural monuments*, as the term signifies, are created by nature (for example., ridgelines, trees, streams, and lakes). *Artificial monuments* are created by people (for example., highways, section corners, quarter-section corners, an "X" on a stone, or some other permanent marker). Monuments must be located properly and referenced to enable location at a later date. Special attention must be paid to identifying the elevation or stage of water level when lakes, streams or tidal waters are used as monuments. Since monuments are easily lost or destroyed, the problem with any monument is lack of permanency.

The beginning point for a description is often an existing geographical point or a known landmark that was established by a previous official land survey and is a matter of public record. Frequently, the beginning point is not on the perimeter of the tract to be described. Therefore, the first series of lines or courses to be described will follow the path from this point, the *point of commencement*, to the true *point of beginning*, which can be any

convenient point on the perimeter of the tract being described. From this true point of beginning, the description is written as though a person is traversing the perimeter of the tract in a continuous path, describing each line in a clockwise or counter-clockwise direction, until returning to the point of beginning.

A property line seldom runs due north, south, east or west. The angular deflection from due north or due south, or the bearing of each line, is described in terms of a compass direction, and is expressed in terms of degrees, minutes, and seconds, as measured from the north or south and toward the east or west. Each quadrant of the compass, the northeast, southeast, southwest, and northwest, is divided into 90°, with 0° at due north and due south, and 90° at due east and due west. Each degree is divided into 60 minutes and each minute into 60 seconds, as shown in Figure 8.9, providing for each quadrant to be divided into 324,000 individual segments, for accuracy in measuring or specifying an angular direction. For example, in the bearing N 33° 20' 16" E, the letter "N" indicates that the bearing measurement is from the north. The letter "E" indicates that the bearing measurement is toward the east, thus falling in the northeast quadrant at a clockwise angle of 33 degrees, 20 minutes, 16 seconds, from the north.

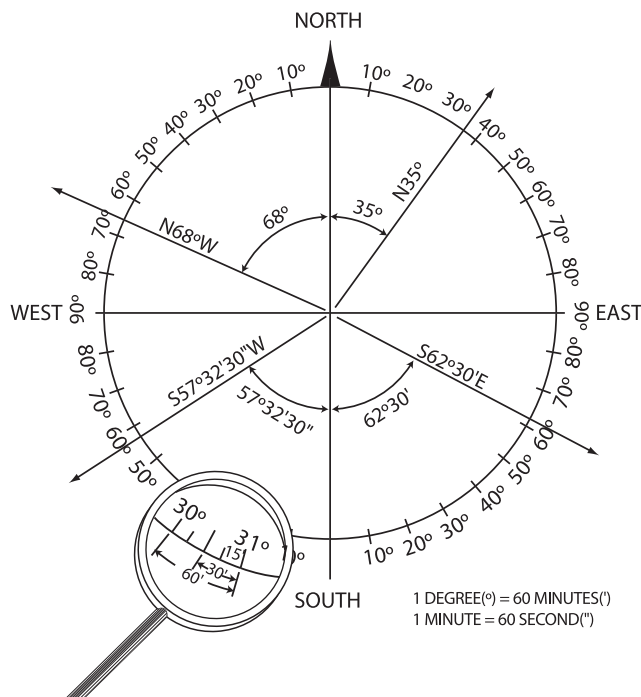


Figure 8.9: Bearing Angles

The terms “northerly,” “westerly,” and so forth, are common in older surveys but should be avoided in current descriptions, since their intent is unclear. “Northerly” originally may have been meant to depict a general direction and to avoid giving a specific compass bearing or

the intent may have been to describe a due north direction. In cases of dispute, the courts have generally adopted the latter position.

The direction “north” can be defined in at least three ways; true north, magnetic north, and datum north. True north has the North Pole as its point of origin. *True north* never changes and can be determined by a surveyor through measurements of the location of the sun and Polaris (the North Star) or through the use of modern equipment such as global positioning systems. True north bearings are the most desirable. True north lines are not parallel throughout their length, since they converge at the North Pole.

Magnetic north is the direction indicated by the north arrow of a magnetic compass needle. The magnetic north pole is in slight, constant movement and in a significantly different location than the true North Pole. The bearing obtained from a magnetic compass varies with the location of the observer and the time of observation. Thus, a magnetic bearing observed on a property line will be different when observed at a later date.

The angular difference between true north and magnetic north is the *magnetic declination*. A compass reading is unreliable unless magnetic *declination* is considered. If a compass needle points east of true north, it is said to have an east declination and if the needle points west of true north, it is said to have a *west declination*. Further discrepancy in a compass reading may result from the influence of local magnetic attraction, which may be caused by magnetic material or metal objects nearby, or located underground. Since the magnetic compass of a transit, or surveying instrument, read by an experienced surveyor provides a reading within several minutes of a degree at best, differences of several feet left or right, in following a bearing for one mile are not unusual.

Datum north references are common and usually consist of the north direction established by a previous survey or as set on a regional or local basis. A highway or a city survey may have established a datum north. Various grid systems exist with descriptions referring only to parallel and perpendicular grid lines and with seemingly no reference to a north direction. However, in such descriptions, the entire grid should be referenced to show its relationship to true north. In any event, this datum north must be used as a basis of comparison when trying to re-establish property lines.

In the past, measurements were often stated in terms of chains, links, rods, poles, and perches. Measurements were made with an actual metallic *chain*, composed of 100 *links* of iron or heavy steel wire. The length of the chain was 66 feet and each link was 1/100 of a chain (being 7.92 inches). Because the links had a tendency to wear and stretch and the chain had a propensity to twist and knot, accurate surveying was difficult. A *rod* is a length of 16 1/2 feet and is equal to 1/4 chain. Other names in common use for this distance are *pole* or *perch*. The surveyor’s chain was phased out around 1900 and since then, surveyors used steel ribbon tapes of various lengths, divided into feet and hundredths of a foot until the routine use of electric equipment over the last several decades.

Parcel No. 78

Situated in Section 28, T4N, R2E, Lincoln County, State of Ohio, and being more fully described as follows:

Commencing at the southwest corner of Section 28: thence, North 5° 43' East, along the west line of said section, 2934.94 feet, to a point in the centerline of the Baltimore and Ohio Railroad; thence, South 68° 17' East, along centerline of said railroad, 888.21 feet, to railroad station 587+54; thence, North 21° 43' East, 20.00 feet, to a point in said railroad's northern right of way line, said point being the True Point of Beginning for the land herein described; thence, North 28° 05' East, 57.91 feet to a point; thence, North 5° 13' East, 65.18 feet to a point; thence, South 68° 17' East, 89.74 feet to a point; thence, South 27° 20' West, 120.58 feet, to a point in the said right of way line; thence, North 68° 17' West, 71.09 feet, with said right of way line, to the true Point of Beginning, and containing 8,778 square feet, more or less.

Superiority of Calls

Over the years, there have been many property line disputes. Unclear and ambiguous property descriptions have contributed significantly to the problem. The courts have established an order of reliability of the elements of a property description, generally due to their relative precision. This order of reliability is the *superiority of calls*. In the event of a discrepancy in the location of the boundary of a tract, the greatest credence is given (in descending order of credibility) to: (1) monuments, (2) distances, (3) bearings, and (4) areas. Thus, if a monument is found at a distance other than that which is indicated on the deed, the monument location will generally overrule the location indicated by either a distance or a bearing.

POINT DESCRIPTION

A point description method is used primarily for acquiring irregular, strip-shaped parcels for highway right of ways. The centerline of the survey must be fully described and referenced and, preferably, properly recorded in the appropriate county records. Boundary corners are described and identified by specifying the centerline station and the perpendicular offset distance from the centerline to each corner. The description is written by identifying the location of each corner point of the tract by its station and offset relationship to the centerline. See Figure 8.11: Plat of Parcel 12.

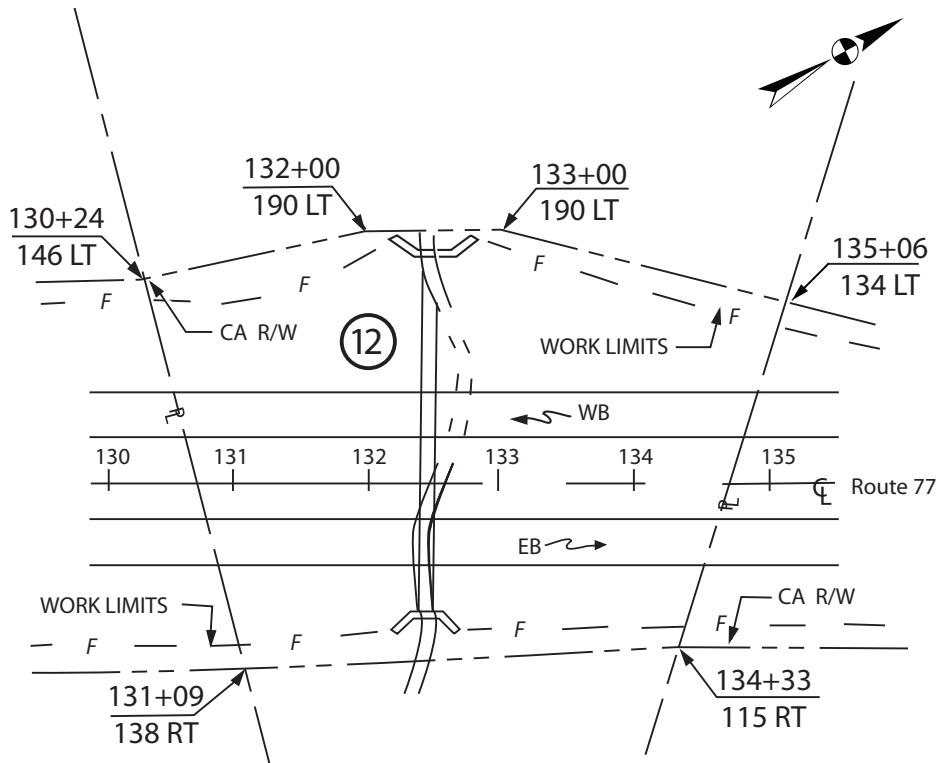


Figure 8.11: Plat of Parcel 12

Parcel No. 12

Being a parcel of land situated in Washington District, Jackson County, West Virginia, and being more particularly described as follows:

Beginning at a point in the western controlled access right of way line of Route 77, said point being 146 feet left of station 130+24; thence, northerly, with said right of way line, to a point 190 feet left of Station 132+00; thence, northeasterly, continuing with said right of way line, to a point 190 feet left of Station 133+00; thence, northeasterly, continuing with said right of way line, to a point 134 feet left of Station 135+06; thence, southeasterly, crossing said route, to a point in the eastern controlled access right of way line, said point being 115 feet right of station 134+33; thence, southwesterly, with said right of way line, to a point 138 feet right of station 131+09; thence, westerly, crossing said route, to the point of beginning, and containing 2.95 acres, more or less.

When a boundary line described by either metes and bounds or point description encounters another boundary line, right of way line, or any other line established by public division of land (such as, section line, township line, monument, property corner, centerline of street or highway, and so on) this information should be recited in the description to ensure establishment of full intent. The area of the tract described customarily is included at the end of the description.

CENTERLINE DESCRIPTION

Many utility installations are constructed within a uniform width right of way or easement that follows the path of a described centerline. Since the project centerline serves as the centerline of the easement area, an accurately drawn and preferably recorded plan of the centerline alignment becomes the basis for a centerline description. The centerline is usually described by metes and bounds and may be calibrated in stations. The width of the right of way is specified with reference to the centerline stations. The area of the right of way is calculated by multiplying the length of the centerline by the uniform width of the right of way. See Figure 8.12: Centerline Plat for Aerial or Underground Utilities in connection with the following centerline description.

Easement A

An easement for the construction, maintenance, and operation of a pipeline, situated, lying, and being in the City of Wilson, Hamilton County, Ohio, and having a uniform width of 40 feet, 20 feet on each side of the following described centerline: Commencing at the intersection of the southern right of way line of Third Street and the western right of way line of Mill Street; thence, South 15° 30' East, along the western right of way line of Mill Street, 147.00 feet to the true Point of Beginning; thence, South 74° 30' West, 185.00 feet to a point; thence, North 82° 30' West, 234.24 feet, to the eastern right of way line of Baymiller Street, said point being South 7° West, 61.02 feet, of the intersection of the said eastern right of way line, with the southern right of way line of Third Street, and containing 16,770 square feet (0.385 Acres).

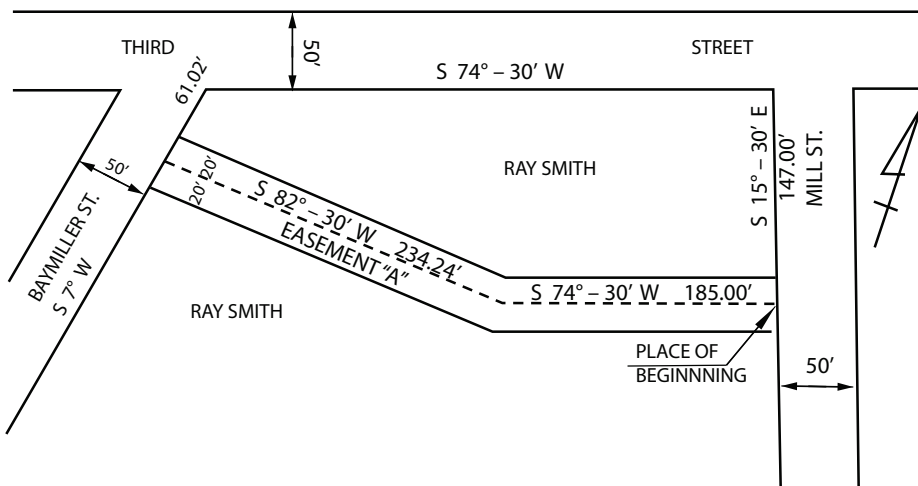


Figure 8.12: Centerline Plat for Aerial or Underground Utilities

REFERENCE DESCRIPTIONS

The lot number or reference description is used in urban areas or subdivisions when a large tract has been divided into smaller units, with each unit having been assigned a lot number. The original plan is given a block or subdivision name and is recorded. In most cases, the description of the subdivision lot is illustrative rather than narrative and is in the form of a block and lot, or subdivision plan, on which all periphery and interior boundaries are identified. The linear measurements and bearings are stated for each of each boundary line. The outer limits of the entire subdivision are legally described and “tied in” to established and recorded points of reference. The plan is filed with the local registrar of deeds. Transfer of the smaller parcels or lots is dependent on the successful recording of the larger plan. When property is conveyed as a unit, or as part of a unit of a recorded plan, the plan and data become as much a part of the description as if they were copied into the conveyance instrument.

When a lot is conveyed, reference is made to the lot number, name of the subdivision, and volume, page and location of the recorded subdivision plan. Generally, such limited wording is acceptable as a property description. If only a portion of a lot is acquired for right of way purposes, the description might recite the size of the strip being conveyed by giving the length along each boundary, the name of the subdivision, the lot number, and the volume and page of record of the subdivision plan.

The following example is a description for Lot #44 of the subdivision plan shown in Figure 8.13: Subdivision Plan.

Lot #44: Situated in the NE 1/4 of Section 36, Township 5 South, Range 15 East, Marion County, Ohio, and being more particularly described as follows:

Being all of Lot #44, University Heights 1st Subdivision, as shown on plat of same by Stults and Associates, dated April 4, 1970, and recorded in Map Book 27 at Page 39 in the County Recorder’s Office of Marion County, Ohio.

METRIC CONVERSION

In the mid 1990s, as required by federal law, most U.S. states began to convert to the System International (SI) method of measurement, commonly referred to as the *metric system*. Some states decided to use a dual measurement system, both the English and metric measurements, for the transfer of property rights. Either a “soft” or a “hard” conversion accomplished the conversion of these measurements.

A *soft conversion* is one in which the English measurement is mathematically converted to its exact metric equivalent. The right of way plans include an ownership index on which all land areas are listed in acres or square feet. Also, the areas are shown using their metric equivalents; specifically, acres converted to hectares and square feet converted to square meters. A *hard conversion* involves converting the English measurement to a new, rounded, rationalized, convenient metric number. “Established intended precision” determines the number of digits that are retained after the conversion. With hard conversions, converted values are rounded to the minimum number of significant digits needed to maintain the required accuracy.

A few years later, the metric mandate was dropped and the states reverted to the English system. Metric linear conversion factors were presented in Chapter 6. With the recent emphasis on metrication of units of measurements. The following are additional conversion factors:

SURVEYOR'S MEASURES

Length

1 link = 0.66 foot = 1/100 chain = 7.92 inches

1 rod = 1 pole = 1 perch = 16 1/2 feet = 1/4 chain

1 chain = 66 feet = 100 links = 4 rods

1/4 mile = 1320 feet = 20 chains

1 mile = 5,280 feet = 80 chains = 1.609344 kilometers

1 kilometer = 328 feet = 49.71 chains = 0.6214 miles

Area

1 square meter = 10.7639 square feet = 1.196 square yards

1 square foot = 0.1111 square yards = 0.0929 square meters

1 hectare = 10,000 square meters = 2.471 acres

1 acre = 43,560 square feet = 208.7 feet square = 0.4047 hectares
= 160 square rods

10 chains × 10 chains = 10 acres

80 chains square = 1 square mile = 640 acres

SUMMARY

Property descriptions are an essential element in the right of way acquisition process. Historical influences dating back to the earliest settlers are incorporated in descriptions used in current property transfers. Thoroughness, accuracy, and clarity of expression are essential in preparing acceptable property descriptions. The description must be written in such a way that the property can be clearly identified and located by a competent person, now or in the future, and local requirements can be satisfied regarding the transfer of an interest in the land. So that its regional location can be found, a property description usually identifies the largest survey system of which the property is a part. The description begins at a point of legal record (either a known landmark or other established geographic point) and then is followed by a detailed, precise explanation of the specific land boundaries. Specific descriptions in terms of linear and angular measurements are preferred to terms of a general nature. Three-dimensional descriptions for property above or below ground level must specify height or depth limitations.

Several methods are used to describe property. The Public Land Survey System and the State or Provincial Coordinate System are standard methods used across most of the United States and Canada. In the eastern part of the United States and the eastern Canadian provinces, metes and bounds is the most frequently used description method. Metes and bounds identify each line in the perimeter of a parcel by its length and direction in terms of a compass bearing.

A point description method is often used for irregularly shaped right of way parcels, in which the end points of each right of way line are identified by a centerline station number, as well as the perpendicular offset distance left or right of the centerline. Utility companies most frequently use the centerline description to delineate a uniform-width right of way, where the centerline is described and recorded and the uniform width is specified.

A brief and easily understood method is the reference description, which description identifies a single lot in terms of a larger subdivision of land, which has been previously plotted and recorded. Identifying a parcel by referencing the recorded plat is a well-accepted method of property description, with the subdivision plan taking the place of a narrative description.

A combination of two or more description methods, or one of the numerous other types of descriptions, can be used to adequately express the intent, location, geometric shape and size of a property.

CHAPTER 9:

Planning and Zoning

_____ Todd Amspoker _____

and

The International Surveying and Engineering Committee

INTRODUCTION

Planning is the process by which the characteristics of a community are studied to develop a set of guidelines and recommendations for its future. Planning includes data collection and analysis about the economy, environment, people, land use, utility and transportation systems, as well as other factors that affect the area under study. For governmental bodies and private entities engaged in public and quasi-public projects, the planning process provides the basis for project development, design, property acquisition, and construction.

The right of way agent must be knowledgeable about the planning process to understand the decisions that affect the project's location, its design, the right of way requirements, and the construction schedule. In addition, the right of way professional must be familiar with the specific project features which may impact the community, its residents, and property owners.

BASIS OF PLANNING, ZONING, AND REGULATIONS

The planning, zoning, and regulatory activities of federal, provincial, state, and local governments affect property rights. By regulating the ways in which people may use and develop property, governmental planning has a major impact on an area and its development.

All governmental jurisdictions recognize the need for project planning and most have enacted legislation or regulations detailing the planning process. In its regulation development, governmental planning needs to meet due process requirements and balance the public interest with those of private property owner's rights. The planning process can vary greatly by jurisdiction, so it is important for the right of way professional to be familiar with any Federal, State, Provincial, or local requirements.

PLANNING AND ECONOMICS

Governmental planning helps to allocate resources to achieve a balanced community. As the resources and capacity of any community are limited, planners seek to create the best

development plan to meet both the economic and noneconomic needs of its constituency. On the micro level, a project proposer, in the feasibility study, estimates the project's capital costs, which are measured against the anticipated operating costs and profits. On a macro level, the proposer weighs the anticipated project costs and benefits against the economic, environmental, governmental, and social impacts to the community.

BASIC PLANNING STUDIES

At times, there are different magnitudes of detail required at each governmental planning level. At the local level, the planning content tends to be detailed and specific. At the state or provincial level, a more global approach is often applied to transportation and transportation-related planning studies.

A comprehensive planning document directs the long range growth and development of the community. It sets forth the current state of the community and endeavors to forecast a vision for the area that is consistent with the wants, needs, and desires of those affected by the plan. Usually, a well devised and inclusive study will result in orderly community development. Basic planning studies deal with demographics, economic base, land use and transportation, resource inventories, and environmental impacts affecting a community or area and its land utilization.

Demographics

A demographic study relates to population characteristics including, total population, population changes, and its composition and attitudes (e.g., education, employment, gender, age, and household composition).

Births, deaths, and migrations across an area's boundaries are the major causes of an area's population change. For any given population, if the age gender distribution is known, births and deaths can be predicted with reasonable accuracy. Projection of population migration requires more complex analysis. For many areas, migration tends to be a function of economics or climate. Expanding areas offering economic opportunity attract working age people. Areas with mild climates tend to attract a variety of people across many age categories.

Economic Base

Related to a demographic study is an *economic base study*, which examines the ability of a community to attract money from outside its area. It is an analysis of the employment, income, and income levels and helps to predict employment, income, and population changes.

Typically, an economic base study provides employment and income data for a community. These data are used to chart past performance and to forecast future projections of economic activity. The study provides background information on the community, what the principal economic agents are, and what, if any, imbalances exist. An economic base study will also relate the structure of the economy to community strengths and weaknesses and their opportunities and threats.

Studies of employment by industry group, income level, and other economic characteristics of the planning unit provide insight into the local community and its trends. Economic base activity produces goods or services that can be exported outside the local area and attracts money and people to the area by offering economic opportunity. Planners prepare economic base studies to educate local public officials, developers, and area business people about the area's future economic activity. Planning groups frequently publish economic studies to improve the coordination of developmental activities and to attract capital.

Land Use and Transportation

A *land use and transportation study* relates to an analysis of land use regulations, zoning ordinances, building codes, utilities, and the transportation network that supports the land uses. *Land use regulations* are any regulations, either public or private, which controls real estate use. The regulations may be contained in a master development plan, zoning ordinance, or other control document. *Zoning ordinances* (statutes and regulations that allow a government to regulate real estate use for the public's health, safety, and general welfare) identify and define the uses to which property can be put, establish building requirements and restrictions, and set forth the procedures to obtain zoning variances and changes. *Building code requirements* relate to a building's construction, alteration, and repair. They control both a structure's features (for example, design, size, condition and so forth) and use (current and proposed). A *utility survey* contains information about electrical, telephone, cable, television, fiber optics, water, and waste management. Finally, *transportation patterns* (streets and highways, local mass transit, rail, and air) are identified. The initial consideration in any land use survey is the present use of land. This current use survey provides the basis for planning future land uses. The suitability of land for various alternative uses requires the analysis of soil conditions, natural habitats, wetlands, and environmentally impacted areas. Transportation networks, schools and other public buildings, and retail and industrial facilities will attract or repel other land use types.

The area's transportation facilities tend to reflect the community's land use. Generally, urban areas require a much more highly developed transportation system than rural areas. Industrial areas may require rail service and access to major highway networks. Retail and office space usually require good road and mass transit linkages to residential areas.

Transportation facilities for a planning area are viewed as a total system. Streets and highways (local, collector, arterial, and freeway) are only one part of the system. Rail lines, local mass transit network, and airports must also be included. Typically, and in addition to taking an inventory of the existing transportation facilities and their capabilities, transportation planners conduct origin destination surveys to determine the area's travel patterns.

Through the development of a land use and transportation study, future requirements can be more easily projected. The ultimate function of a land use and transportation study is to enable people to understand more about what exists and to use that data to prepare for and direct decisions as to the community's future.

With the size and density of metropolitan areas, there is pressure for development of open spaces to provide for additional growth. This pressure, coupled with a heightened awareness of environmental issues, has resulted in a change in the government's decision making process. At most government levels, from federal to local, environmental laws and regulations require the completion of environmental impact studies. The environmental factors studied are both the natural and artificial ones. Topographical features, plant and animal life, water resources, public utilities, transportation patterns, parks and recreational facilities, open space, historic and cultural resources, environmental liabilities, and environmental nuisances and hazards are just a few of the areas studied.

PLAN IMPLEMENTATION

Community leaders, educators, real estate brokers and developers and other interested professionals, and the community's citizens review and discuss the plan and its data prior to the plan's adoption. A successful planning effort requires an open, explorative communication process.

Once the public accepts the comprehensive master plan, the emphasis of the planning process shifts to implementation. The comprehensive plan now serves as the basis for zoning, subdivision, and other land use and development decisions. Transportation, public works, and capital facilities projects are considered against the plan.

ZONING

Zoning is the governmental regulations that control the type and extent of real estate use by establishing areas (zones) specifying allowable uses. Zoning ordinances control the nature of development such as agricultural, residential, commercial, industrial and so on, (building size and height, minimum lot size, floor area ratios, setbacks, etc.). Zoning is the predominant method used by communities to implement its development plans.

Sources of Zoning Power

In 1926, the United States Supreme Court case, *Village of Euclid v. Ambler Realty Company*, established the validity of comprehensive zoning. The zoning ordinance in the Euclid case, among other provisions, regulated the location of various property types (such as agricultural, residential commercial and industrial), specified minimum lot sizes within each zone, and regulated building sizes and heights. Since the Euclid decision, courts have upheld zoning laws as a police power with the government having the right to regulate property to promote public health, safety, and welfare. While zoning laws may restrict the use and the value of property, they do not constitute a taking of private property and do not require the payment of just compensation.

Zoning Limitations and Police Power

While government possesses great discretion in the manner and extent of its zoning effort, there are legal limitations to this zoning power. The most important limitation is the

requirement that the zoning can not be so burdensome or restrictive as to constitute a taking of property. In addition, zoning requirements must be rationally based. Properties, in a specific zone, must be treated equally and the property owners afforded equal protection under the law. Finally, zoning regulations must not be unreasonable, arbitrary, or oppressive.

Zoning Enactment and Administration

While the responsibility to enact a zoning ordinance resides with the government, it is common to establish a zoning commission to study, prepare, and recommend a comprehensive zoning ordinance.

Zoning ordinances, in addition to establishing real estate controls, provide for boards of adjustment, review, or appeal to consider applications concerning the applicability or reasonableness of the zoning ordinance with respect to specific property. Zoning boards of adjustment consider requests for special use permits, use and area variances, and permits to expand legally nonconforming uses. A *special use*, or *special exception permit* allows a property use as a special exception to the zoning. As they are conditioned on the approval of the zoning board, special use permits are often referred to as conditional use permits. The rationale behind a special use permit is to allow flexibility within the zoning ordinances to consider unusual or unique situations. For example, while the zoning ordinance may allow for houses of worship in residential districts by special use permit, the zoning board of adjustment may impose conditions on the facility to control, for example; traffic congestion, parking, or other negative impacts on the residential character of the zone.

Most zoning boards of adjustment are authorized to issue variances when a literal interpretation of the ordinance would result in an unnecessary hardship or present severe practical difficulties to a property owner. For example, a board of adjustment usually will accept a non-complying setback, if that condition resulted from a partial acquisition for a highway widening.

A *legally nonconforming use* is a use that was once lawful but which is no longer so, under the current zoning ordinance. As an example, a commercial structure located in an area that is subsequently zoned for residential use. Most zoning ordinances allow a legally nonconforming use to continue under the new zoning requirements but prohibit the continuation of the use if it is substantially destroyed or abandoned. Planned additions or modifications to the legally nonconforming use are reviewed and acted on by the zoning board of adjustment.

Finally, many zoning ordinances provide for administrative and enforcement officials to issue building permits, issue stop orders where construction is inconsistent with the zoning, inspect property for zoning violations, and commence legal proceedings against zoning ordinance violators.

SUBDIVISION REGULATIONS

A *subdivision* is the division of a large tract of land into smaller parcels or lots. While a subdivision is usually residential, commercial, office, industrial, and other subdivisions

are possible. Subdivision regulations establish the application, design requirements, review standards, and approval process that developers must follow.

Generally, the review process requires the developer to submit a preliminary plan to the regulator for review, comment, and recommendations. When the developer receives comments and makes any necessary changes, the final development plan is submitted to the controlling agency for final review and decision. If approved, the developer records the plat map, which, in effect, constitutes an agreement between the developer and the community.

Subdivision regulations balance the developer's plans with the community's long-range objectives. The regulations, prepared from the community's perspective, may mandate actions or improvements that the developer would not otherwise undertake. For example, many jurisdictions require a developer to dedicate a portion of the subdivision to the public for open space, streets, or for other community uses. Generally, there must be proportionality between the demands of the government and the community and the developer's expectations.

MISCELLANEOUS CONTROLS

Other governmental controls can influence the planning process. Building and occupancy codes, eminent domain, and taxation are a few examples. *Building and occupancy codes* control the design, construction and alteration, quality, use, and occupancy of improvements. Eminent domain impacts private property through infrastructure improvements and other public development projects. Taxation and tax abatements or concessions policies influence project affordability and profitability.

SUMMARY

A growing and shifting population, along with urbanization and suburbanization trends, have led to the acceptance of regional, community, and municipal planning. The planning process consists of collecting information about an area, analyzing the data, and then relating it to the community's future growth and development. Demographics and economic base studies provide information concerning the current state and the trends and needs of a planning area. Studies of land use and transportation, resource inventories, and the environment provide a current inventory of the area in order to meet its projected population and economic needs.

The planner determines what, where, when, and how additional facilities and services are to be provided to satisfy community wants and needs while minimizing harmful effects on the community, its people, and the environment.

A comprehensive planning document directs the long range growth and development of the community. It sets forth the current state of the community and endeavors to forecast a vision for the area that is consistent with the objectives of those affected by the plan.

CHAPTER 10:

The Appraiser and the Valuation Process

David Layne

and

The International Valuation Committee

INTRODUCTION

The *Uniform Standards of Professional Appraisal Practice (USPAP)* defines appraisal as “the act or process of developing an opinion of value.”¹ It is an unbiased opinion of the nature, quality, utility, or value of a real estate interest.

An *appraiser*, is one who is expected to perform valuation services competently and in a manner that is independent, impartial, and objective.² An appraiser provides their client with an opinion as to highest and best use, land values, building costs, property values, rates of return, rents, and so forth, based on pertinent market evidence. The appraiser collects and analyzes market data as they relate to the specific property being valued. The result of this analysis is an opinion of the subject property’s value.

Among many other functions, appraisal reports are used in the acquisition of real estate or specific rights in real estate for public and quasi-public purposes. Most appraisal reports develop an opinion of market value. *Market value* is a type of value, stated as an opinion, which presumes the transfer of a property (that is, a right of ownership or a bundle of such rights), as of a certain date, under specific conditions set forth in the definition of the value term identified by the appraiser as applicable in an appraisal. These conditions may vary from definition to definition but generally fall into three categories:

1. The relationship, knowledge, and motivation of the parties (that is, seller and buyer).
2. The terms of sale (such as, cash, cash equivalent, or other terms).
3. The conditions of sale (for example, exposure in a competitive market for a reasonable time prior to sale).³

¹ The Appraisal Foundation, *Uniform Standards of Professional Appraisal Practice (USPAP)*, 2010-2011 ed. Definitions, p. U-1.

² *Ibid.*, p. U-1.

³ *Ibid.* Definitions p. U-1.

VALUATION PROCESS

The *valuation process* is the model the appraiser uses to develop a value opinion, approach of appraisal problem, describe property, data collection and analysis, which leads to the conclusion and reporting, of a value opinion.

Steps in the valuation process are:

- Define the appraisal problem.
- Determine the scope of work needed to solve the appraisal problem.
- Data collection and subject property analysis.
- Subject land value opinion.
- Perform as appropriate, each of the three approaches to value.
- Reconcile the results of the valuation approaches to a final, value opinion.
- Report an opinion of value.

DEFINE THE APPRAISAL PROBLEM

The first step in the valuation process is to identify the appraisal problem to be solved. USPAP's Scope of Work Rule states that an appraiser must properly identify the problem to be solved in order to determine the appropriate scope of work.⁴ This step frames the problem and provides the client and other intended users with a clear understanding of the basic issues. The appraisal problem statement includes the purpose of the appraisal (including the definition of the value to be developed), the value opinion date, identification of the client and other intended users and the intended use, identification of the subject property characteristics, identification of the property rights to be valued and statements of extraordinary assumptions and hypothetical conditions.

Identification of the client and other intended users and the intended use

An appraisal must identify the client and other intended users, by name or type, who utilize the appraisal and the intended use, or the function to which the appraisal will be put.

Purpose of the appraisal (including the definition of the value)

In real estate, there are several possible value types: assessed, going concern, insurable, investment, salvage, use, and so on. However, the value opinion most typically developed is market value. As there are several considerations when developing a market value opinion, the term must be defined clearly.

Value opinion date

An appraisal report includes two dates: the report date and the appraisal effective, or value opinion, date. The report date is simply the date of the report signature; it informs the reader of the appraiser's perspective in the market study. The appraisal effective date is the date for which the appraisal results are concluded. The appraisal effective date

⁴ Ibid. Scope of Work Rule, U-13.

can be retrospective, current, or prospective. In a retrospective appraisal, the appraisal effective date is prior to the report date; in a current appraisal, the appraisal effective date is concurrent, or reasonably proximate to the report date (for example, the date of inspection); and in a prospective appraisal, the appraisal effective date is at some specified point in the future.

The Valuation Process

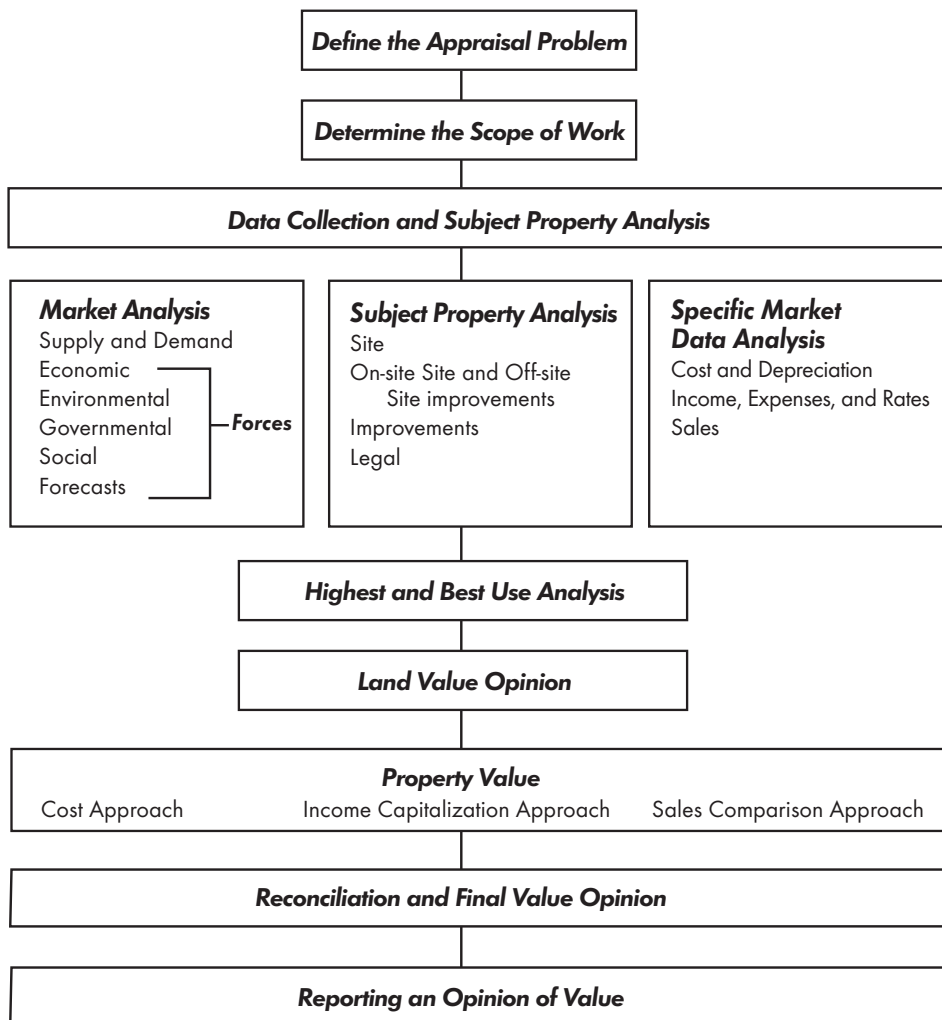


Figure 10.1: The Valuation Process Model

Identification of the subject property characteristics

A property must be clearly and accurately identified by its physical, legal, and economic characteristics, and by its address, legal description or reference location. In Canada and the United States, there are many types of legal descriptions to include, but not limited to:

lot and block, section-township-range, tract, survey, towns, metes and bounds, reference plans, registered plans, and concession. The legal description utilized will be the one that is appropriate in the specific subject property locale.

Identification of the property rights to be valued

Typically, an appraisal values the fee simple interest that is, all the rights, title and interests inherent in the ownership of real estate. An appraiser can also value fractional interests created by the division or ownership (leased fee estate, leasehold estate, life estate, mineral rights, permanent or temporary easements). In many right of way appraisals, partial acquisitions involve the valuation from the taking of easement rights.

Statements of extraordinary assumptions and hypothetical conditions. USPAP requires the clear disclosure of any extraordinary assumptions or hypothetical conditions. An extraordinary assumption is "...directly related to a specific assignment, which, if found to be false, could alter the appraiser's opinions and conclusions."⁵ Hypothetical conditions assume conditions that are "...contrary to what exists but (are) supposed for the purpose of analysis."⁶ Regulations and court-made law, also would affect the assignment conditions. A common condition in eminent domain appraisals would be that any increase or decrease in the market value of real property prior to the date of valuation caused by the public improvement for which the property is acquired, must be disregarded in estimating the market value of the property.⁷

DETERMINE THE SCOPE OF WORK

The appraisal scope of work is the amount, and type of information researched, and the analysis applied to an appraisal assignment that is necessary to develop a credible result. The scope of work includes the extent to which the subject property is identified and inspected, the type and extent of research and the type and extent of analysis to arrive at opinions and conclusions. The scope of work must meet or exceed the expectations of regularly intended users of similar assignments, and must be consistent with what the appraiser's peers' actions would be, in performing the same or similar assignment for solving the appraisal problem. Some clients may have a specific scope of work requirement to be incorporated in the appraisal. However, the appraiser must not allow the client's objectives to cause the assignment's results to be biased. Any special legal instructions provided to the appraiser should be referenced in the appraisal report. The appraiser must not allow the intended use of the assignment, or a client's objectives, to cause results to be biased.⁸

⁵ Ibid. p. U-3

⁶ Ibid. p. U-3.

⁷ Uniform Appraisal Standards for Federal Land Acquisitions, Interagency Land Acquisition Conference, Washington, D.C 2000, Appraisal Institute (in cooperation with the U.S. Department of Justice), Chicago, 2000, p. 46, Footnote 193.

⁸ The Appraisal Foundation, Uniform Standards of Professional Appraisal Practice (USPAP), 2010-2011 ed. Scope of Work Rule, p. U-14.

DATA COLLECTION AND SUBJECT PROPERTY ANALYSIS

The third step in the valuation process is data collection and analysis. An important action by an appraiser is to inspect the subject property and its immediate market area. This preliminary survey helps the appraiser develop tentative plans as to the solution of the valuation problem. Next, data are collected about the general market area and about specific comparable properties. Once data collection has been completed, the appraiser can begin the preliminary analysis.

Market Analysis

General data comprise information on the immediate market area and the larger community. The larger community is the area where all factors and forces influence the value of the subject property. Because the valuation process utilizes deductive reasoning, the general market analysis proceeds from the most general information, which may be international, national, regional or local, to the specific market area or neighborhood of the subject property. The specific area of influence on the subject property is the immediate market area, or neighborhood, which may conform to natural or developed boundaries, and depends on the property type.

The market area analysis includes data on supply and demand, economic, environmental, governmental and social forces and forecasts. Identifying trends from historic data is a useful tool in the analysis of the general market.

Supply and Demand: These data relate to the competitive supply and demand factors as they impact the subject property. In real estate, supply and demand, are seldom in balance. The availability of vacant land, new construction activity (for rent and for sale), properties currently available (for rent and for sale), population changes, purchasing power, rent levels and vacancy rates are examples of supply and demand data the appraiser studies.

Economic, Environmental, Governmental and Social Forces: These forces are examined to determine their interaction and influence on the market, generally, and on the subject property, specifically.

Economic: Simply stated, economic forces are concerned with money. The economic forces may be international, national, regional and local economic conditions and trends. If the analysis is international in scope, the appraiser may consider international production levels, the monetary exchange rates, trade agreements and trade balances. On a national level, economic factors may include the consumer price index, fiscal and tax policies, the gross national product, growth rate, interest rates and the national economy. Regional and local economic indicators are principally concerned with construction and development activity, employment levels, employment types, income levels, real estate rents and real estate values.

Environmental: Environmental forces are both the natural and developed characteristics that affect value. In addition to the land itself, the natural environmental characteristics include access, climate, location, natural resources, plant and animal life, rivers, topography, soil, water, etc. The developed environmental characteristics, to list a few, include airports, contaminants and their control, developed waterways, public utilities, railroads and the road/street system.

Closely linked to the market area environmental forces are the subject property's specific characteristics. The subject property's soil type and fertility, subsoil characteristics and topography are important considerations. In addition, the availability of on-site site improvements (such as, driveways, fences, landscaping, service walks, and so on) and off-site site improvements (such as, roads, sewer, sidewalks, utilities, and so on) are environmental forces that affect value. Finally, building improvements, including their type, site orientation, physical conditions and functional utility, size and shape, style and design are considered.

Governmental: Governmental forces relate to laws, regulations and tax policies. Influences range from the broad national impacts to those of the local governmental unit. In addition, governmental forces may include the availability, or lack of availability, of governmental services (government provided utilities, schools, uniformed protective services), building codes, land use regulations, master development plan requirements, permitting requirements, environmental, transportation, other controls, local tax burden (both personal and real estate) and zoning regulations.

Social: In the broadest sense, social forces relate to demographics or people characteristics. Social forces consider market participants and inhabitants' attitudes and behaviors. Social forces include age and gender composition, household configuration, population changes and social attitudes.

Objectivity: Objectivity is a critical consideration in the analysis of social forces. The appraiser must support conclusions relating to social forces and must demonstrate their impact on value. More importantly, under USPAP's Ethics Rule, "An appraiser must not use, or rely on unsupported conclusions relating to characteristics such as race, color, religion, national origin, gender, marital status, familial status, age, receipt of public assistance income, handicap, or an unsupported conclusion that homogeneity of such characteristics is necessary to maximize value."⁹

Forecasts: Forecasting is, "To estimate, calculate, or indicate in advance. Forecasts made by appraisers are based on past trends and the perceptions of market participants concerning their continuation or alterations."¹⁰ The ultimate goal in analyzing supply and demand and the economic, environmental, governmental and social forces, is the determination of how they have affected value in the past, and credibly forecast their impact on value in the future.

SPECIFIC PROPERTY ANALYSIS

Specific subject property data pertain to information about the site, the improvement(s) and legal considerations.

Site: In a site description, the appraiser identifies the site's significant physical aspects. Because the site characteristics influence utility, the most significant factors to consider include size and shape, soil and drainage, site orientation, topography and on-site and off-site site improvements.

⁹ Ibid., Ethics Rule, p. U-7.

¹⁰ *The Dictionary of Real Estate Appraisal. 5th ed.* (Chicago; Appraisal Institute). 2010 pg 82.

Size and Shape: Any description of a site's size and shape also includes a consideration of the parcel's frontage and depth, as it applies to configuration. At times, a parcel may be too small, or its shape may be disproportional for development at its highest and best use. Through assemblage, or the physical combining of two or more parcels, development becomes possible and a plottage value may result. *Plottage* is the added, or incremental, value created by the physical assemblage.

At other times, a parcel may be too large for the specific highest and best use. If this occurs, the "extra" land is classified either as excess or as surplus. In precise terms, excess land may have its own highest and best use and may have marketable value independent of the utilized land. Surplus land refers to a portion of the tract, while not supporting the existing improvements, does not have its own highest and best use, nor does it have marketable value apart from the larger site.

Soil and Drainage: The surface and subsurface soil characteristics may influence use and development. Soil characteristics include load bearing capacity, permeability, stability, erosion, soil composition and soil type. Drainage (or the ability to remove surface and subsurface water from the property) and the property's location relative to a flood way or floodplain, are considerations. A flood way is the area usually covered by water on an annual basis, and a floodplain is the area subject to periodic flooding.

Site Orientation: Site orientation includes access, site types, transportation patterns and visibility considerations. Usually, access is considered in respect to its highest and best use of the property. Site types may include interior lots, corner lots, T-intersection lots, and so forth. No particular lot type is universally considered better than another. The desirability of lot type and its relative utility and development potential will depend on market perceptions and on the site's highest and best use. Visibility is the ability of the property to be seen and it is often a function of highest and best use. Transportation, and transportation patterns relate to the means of transportation, and the relative ease to and from the site.

Topography: This describes the parcel's surface features, terrain, or its contours. It is variously and subjectively classified by words and terms such as level, gently sloping, rolling sloping, steeply sloping. Topography can be quantified or measured with elevation levels or ranges.

On-site Site and Off-site Site Improvements: In an analysis of site improvements, the appraiser considers both on-site site and off-site site improvements. Typically, on-site site improvements include driveways, fences, landscaping, on-site drainage facilities, parking lots, service walks, signs, and so on. Off-site site improvements include curbs, lighting, drainage facilities, roads, sanitary sewers, sidewalks, utilities, and so on.

Improvements: In an improvement the appraiser identifies the general characteristics, size, components, conformity, condition and quality.

General Characteristics

Building Classification: The first step in describing an improvement is to classify it as to type. There are five major property categories; (1) agricultural, (2) commercial, (3) industrial, (4) residential, and (5) special purpose.

Architectural Style: Next, the building's design or style is considered. In addition to describing it in relation to standard and local custom, the style is considered in accordance with its utility and appeal by market standards, as of the appraisal effective date.

Construction Type: Improvements are built of many different materials, and can be constructed utilizing various construction techniques. Usually, improvements are constructed by five different methods, based primarily on load bearing capacity, local custom and material availability. The typical construction types are wood frame, heavy steel frame, masonry, prefabricated metal and reinforced concrete.

Size: There are numerous ways to measure an improvement's size. The gross building area (exterior measurements) is the most common. Other size measurements include the gross leasable area (total area designed for occupancy), gross living area (total above grade finished area), total finished area, net leasable area (total rental area) and net usable area (the occupied area). Important considerations in measuring an improvement's size are the industry's standard, local custom and property type and use.

Components

Exterior: The exterior description includes the substructure (footings, foundation), and the superstructure (exterior walls, framing, roof, and windows).

Interior: The interior description includes ceilings, electrical, floor structure and coverings, heating-ventilation-air conditioning, insulation, plumbing, wall structure and coverings and other features (for example, alarm and sprinkler systems, balconies, elevators, fireplaces, and so on).

Condition and Quality: Both the physical and functional characteristics are considered in the condition analysis. The physical condition is divided into items that require repair (physical deterioration, curable), items that while showing evidence of deterioration are not in need of immediate replacement (physical deterioration, incurable short lived) and items that while showing evidence of deterioration are not practical to replace (physical deterioration, incurable long lived). In considering the improvement's functional utility or inutility, the improvement is viewed as to its ability to satisfy market participants' needs and standards as they relate to design, material, and workmanship, as of the appraisal effective date.

Quality considerations include not only the materials used and workmanship in installing the materials, but the quantity of materials used and the improvement's size. There are various, and somewhat subjective, quality ratings including low cost, fair, average,

good and excellent. For some property types, quality is typically rated on a “class” basis; for example., Class A versus Class B and Class C office buildings.

Legal: The final area of specific subject property analysis pertains to legal considerations. These legal considerations include government regulations such as zoning ordinances, land use plans, and building codes, and private legal considerations such as deed restrictions, reservations covenants, encumbrances, easements/servitudes or leases.

Land use that could be regulated includes, but is not limited to the following:

- i. General Use (Commercial, Residential, Industrial, and so forth)
- ii. Density, Floor Area Ratio (FAR), Height, Size (No. of Units, Area);
- iii. Parking, Sign, Landscaping Requirements;
- iv. Building Setbacks, Drainage Detention, Open Space, Floodplain Wetlands;
- v. Building Moratoriums, Historic, Environmental, Rent Control Noise; and,
- vi. Any legal factors that affect the highest and best use.

Existing uses can be conforming, legally non conforming or non conforming. Additionally, variances or special use permits may be part of a government’s regulations. It may be appropriate for an appraiser to conclude and report that a probability exists that the property under appraisal could be rezoned.

Property History: In addition to legal descriptions, both the Canadian Uniform Standards of Professional Appraisal Practice and the United States Uniform Standards of Professional Appraisal Practice require the analysis of any prior subject property sales that occurred within three years prior to the appraisal effective date.

SPECIFIC MARKET DATA ANALYSIS

The primary reason to collect and select specific comparable market data is for use in the valuation steps of the process. Cost and depreciation information are utilized in the cost approach; rents, expense and rates information form the basis for the income capitalization approach and the comparable sales data, are utilized in the sales comparison approach. In developing a market value opinion, all the data and all approaches to value reflect typical market participants’ actions.

Cost and Depreciation: One definition of the principle of substitution states that a buyer will not pay more for a property than it would cost to purchase a substitute site and construct a building upon it, assuming equal utility and no undue delay. The appraiser ascertains the cost to construct an improvement and determines the difference between the cost to construct the improvement and its contributory value. The appraiser gathers information from builders, suppliers and other sources to document the cost to construct specific improvements. The appraiser surveys users for information on current market standards. The appraiser seeks sales and rental data that illustrates contributory value of improvements.

Income, Expenses, and Rates: Investment property is purchased based on the property's ability to provide an income stream. The research and collection of income, expense and rate data reflect the market participants' actions and are basic to the income capitalization approach. In a market value appraisal, the appraiser capitalizes net operating income (gross income less vacancy and collection loss, and all real estate related expenses) by a capitalization rate into an indication of value.

Sales: Nowhere is the principle of substitution more applicable than in specific comparable sales data collection. In this context, the principle of substitution states that a buyer will pay no more for a property, than the price to acquire an equally desirable substitute property. In sales data collection and selection, the appraiser searches for competitive property sales that are a reasonable substitute, or an alternative for the subject property, are open market transactions, and sold within a reasonable time of the appraisal effective date.

While no two properties are exactly the same, the appraiser collects data on sales properties that are proximate in location and time of sale and comparable in financial arrangements, sale conditions and physical and economic characteristics to the subject property. After analysis and consideration of comparable sales data, an opinion of value can be concluded. The laws governing eminent domain and the resulting valuation may limit the sales data that may be considered. The appraiser should check the admissibility of sales data when the scope of work calls for eminent domain proceedings and an opinion of market value. Data that may be inadmissible could be sales to government entities with power of eminent domain, listings, offerings, unexercised options, or a sale that does not meet the criteria of an arm's length transaction.

Highest and Best Use Analysis

While all the steps in the valuation process are important, the determination of highest and best use is critical. The highest and best use analysis directly determines which comparable specific market data are most appropriate and which approach or approaches to value are applicable. While the highest and best use of the property is most frequently the present use, this case is not always so. Any highest and best analysis requires a detailed examination of market conditions and the subject property.

Highest and best use, as defined by the Canadian Uniform Standards of Professional Appraisal Practice, is the "...reasonably probable and legal use of a property which is physically possible, appropriately supported, financially feasible, and that results in the highest value."¹¹ The highest and best use analysis of the site, as if vacant, and the property, as improved involves four questions, or tests:

1. Is the use legally permitted?
2. Is the use physically possible?
3. Is the use financially feasible?
4. Is the use maximally productive (results in the highest value)?

¹¹ *Canadian Uniform Standards of Professional Appraisal Practice (CUSPAP), 2010 Ed.*, Appraisal Institute of Canada. 2.29, p. 4.

Is the use legally permissible? The primary legal considerations are zoning, use regulations, permits and private restrictions that affect the real property . Further legal constraints can include density, setbacks, historic district ordinances and environmental regulations. The question is more easily answered if the proposed highest and best use conforms to existing zoning. However, there are occasions when the proposed highest and best use is not in compliance with the property’s zoning. In those instances, another question is necessary. “Is there a reasonable probability of a zoning change?”

The appraiser should not assume that a change would occur without substantial evidence to support that conclusion. A second issue, as it relates to highest and best use, arises when the existing property improvement does not conform to the current zoning, because the improvement was constructed prior to the current zoning regulation. Usually, this pre-existing use is allowed to continue, but a change in use is normally not allowed, unless it conforms to the zoning regulations and restrictions in place at the time of the change.

Is the use physically possible? Traditionally, this is the first question asked and the easiest to answer. Considerations include the site’s size, topography, shape, unit availability, flood plain and the property improvements subject to the legal uses.

Is the use financially feasible? If the uses are non-income producing, the financially feasible analysis will determine if the value created is equal to, or greater than, the cost to develop or to market the property. In income producing properties, this test can be met by an analysis to determine whether the property will produce a positive financial return. Is the use maximally productive (results in the highest value)? The fourth and final test determines if the use produces the highest value.

For example, a vacant land parcel is under development consideration for either office or retail use. The parcel is large enough for either use and the zoning and other legal requirements allow for either use. The questions that remain include: Are both uses financially feasible? Which use is maximally productive (results in the highest value)? An analytical process can be performed to find the tracts’s highest and best use.

Retail Office				
Improvement Construction Cost	\$600,000		\$700,000	
Net Operating Income	\$90,000		\$105,000	
Improvement Income (12%)	(\$72,000)	(1)	(\$84,000)	(2)
Land Residual Income	\$18,000	(2)	\$21,000	(4)
Land Value (10%)	\$180,000	(5)	\$210,000	(6)

Table 10.1: Depicts the highest and best use analysis for retail versus office development using the land residual method.

- (1) $\$600,000 \times .12$ Building Cap Rate - Market Derived = $\$72,000$
- (2) $\$700,000 \times .12$ Building Cap Rate - Market Derived = $\$84,000$
- (3) $\$90,000$ (Retail NOI) - $\$72,000$ (Income Attributed to Retail Building) = $\$18,000$
- (4) $\$105,000$ (Office NOI - $\$84,000$ (Income Attributed to Office Building)) = $\$21,000$
- (5) $\$18,000$ (Residual Income to Land)/.10 (Land Cap Rate-Market Derived) = $\$180,000$
- (6) $\$21,000$ (Residual Income to Land)/.10 (Land Cap Rate-Market Derived) = $\$210,000$

Because both uses will produce a positive financial return, both uses are financially feasible. The highest and best use of the land is for office development because that use produces the highest land value. Consider another example: an investor purchases a single-family three-bedroom 1 1/2 bath residential property for \$95,000. The use of the property could be as a single-family residential rental unit or, as the property is located in proximity to a university, it could be rented to students on a per-bedroom basis. Both uses are physically possible, and the zoning regulations allow for both as permitted uses. Again, the questions that remain include: Are the uses financially feasible? Which use is maximally productive?

Single Family				
Purchase Price	\$95,000		\$95,000	
Potential Gross Income	\$13,200	(1)	\$18,000	(2)
Vacancy and Collection Loss	(\$265)	(3)	(\$3,000)	(4)
Effective Gross Income	\$12,935	(5)	\$5,000	(5)
Expenses				
Management	(\$260)	(6)	(\$750)	(7)
Utilities	0		(\$2,100)	(8)
Maintenance	(\$500)		(\$2,000)	
Total Expenses	(\$760)		(\$4,850)	
Net Operating Income	\$12,175	(9)	\$10,150	(9)
Investment Return	12.82%	(10)	10.68%	(10)

Table 10.2: The highest and best use analysis of alternative improved uses is illustrated

- (1) $\$1,100/\text{month (market rent)} \times 12 \text{ months} = \$13,200$ Single Family Annual PGI
- (2) $\$1,500/\text{month (market rent)} \times 12 \text{ months} = \$18,000$ Student Housing Annual PGI
- (3) $\$13,200 \times .02$ (2% typical vacancy and collection loss at this use) = \$265 (R)
- (4) $\$1,500/\text{month} \times 2 \text{ months [vacant during July and August]} = \$3,000$
- (5) Potential Gross Income – Vacancy and Collection Loss = EGI
- (6) 2% of Effective Gross Income (Rounded) Management Fee Single Family
- (7) 5% of Effective Gross Income (Rounded) Management Fee Student Housing
- (8) $(\$200/\text{month} \times 10 \text{ months}) + (\$50/\text{month} \times 2 \text{ months}) = \$2,100$ Utility Expense Student Housing
- (9) Effective Gross Income – Expenses = NOI
- (10) Net Operating Income/Purchase Price = Overall Capitalization Rate

Because both uses produce a positive financial return, both are financially feasible. The highest and best use of the property, as improved, is for single-family rental. This use produces the greater rate of return (12.82% versus 10.68%).

A “special” highest and best use consideration is interim use. *Interim use* is the use to which a property is put until it is ready for its highest and best use. The interim use is the highest and best use at the appraisal effective date, with the expectation that the use will change in a relatively short period of time. In the appraisal of properties for the purposes of eminent domain, be careful that the future use does not enter the realm of speculative, as this type of use is typically inadmissible.

For example, a residential street is undergoing a transition to commercial development. Currently, there are mixed uses with some vacant parcels, other sites are developed for commercial purposes, and others are improved residential properties -- some still in residential use and others converted to commercial uses. Economic change continues to make this street desirable for commercial development. However, assume as of the appraisal effective date, there is a value for improved residential use and it will continue to be residential, in terms of highest value, until the site value, as if vacant, exceeds the property value, as improved. Once this occurs, the highest and best use will be commercial. However, in the interim, the highest and best use, as improved, continues as residential. How is interim highest and best use analysis different from a typical highest and best use analysis? One difference may be in the allocation of the property value components. The principle of consistent use states that an appraiser cannot value the land at one highest and best use and the improvement at another highest and best use, disregarding the actual land value “as if vacant.”

For example, assume the land, as if vacant, has a highest and best use as commercial development with a \$140,000 value. Assume further, that the highest and best use of the property, as improved, is residential with a total value of \$170,000. If this use was a typical

residence in a residential (nontransitioning) neighborhood, the allocation might be land value at \$50,000 and improvement value at \$120,000. The principle of consistent use holds that an appraiser cannot develop a total property value of \$260,000 (\$140,000 land value and \$120,000 improvement value). Rather, the proper allocation is \$140,000 to land and \$30,000 to the improvements, because the sum of the parts cannot exceed the value of the whole. The total property value is \$170,000; but how that value is allocated between land and improvement demonstrates the principle of consistent use. In order to reflect the interim highest and best use of the \$170,000 total property value, the proper allocation of the land value: \$140,000 and improvement value: \$30,000.

	<i>Commercial Allocation</i>		<i>Residential Allocation</i>		<i>Combined Allocation</i>	
Land Value	\$140,000		\$50,000		\$140,000	
Residence Value	\$30,000	(2)	\$120,000	(4)	\$120,000	
Property Value	\$170,000	(1) (3)	\$170,000	(1)	\$260,000	(5)

Table 10.3: Illustrates the consistent use theory of highest and best use analysis.

- (1) Regardless of the allocation of the total property value, the sum of the components cannot exceed the value of the whole.
- (2) An improvement that does not represent the land's highest and best use, may have a contributory (interim use) value.
- (3) Allocating the total property value in this manner reflects the transitional, or interim highest and best use of the property.
- (4) Allocating the total value based on a residential use, does not reflect the transitional, or interim nature of the residential use.
- (5) This clearly violates the principle of consistent use. This allocation values the land at one highest and best use (commercial) and the improvement at another highest and best use (residential).

LAND VALUE OPINION

The separate valuation of the land is often a requisite step in an appraisal. This is particularly so in the appraisal of properties for public or quasi-public acquisitions. Partial takings generally require a separate land value, as a partial interest of the fee or easement, are typically acquired in eminent domain situations.

There are six techniques to its valuation: (1) allocation, (2) extraction, (3) ground rent capitalization, (4) land development method, (5) land residual technique, and (6) the sales comparison approach.

Allocation: Allocation involves the determination of a typical land to property ratio with that ratio applied to the subject property or other comparable property to determine the land value.

The technique is not used often. There usually are more credible methods available. However, when there is a lack of recent land sales of similar type and location to the subject property, if properly employed, allocation can provide some basis of division between land and improvement values. How does allocation work? First, the appraiser locates improved comparable property sales with land or site characteristics similar to the subject property. Next, the appraiser develops a ratio of land value to property value. The appraiser may rely on ratios developed in other similar areas for other similar properties, or the appraiser may rely on assessment developed land value to property value ratios. For example, assume that the assessment records support a land value to property value ratio of 25%. Therefore, a \$250,000 improved property sale would indicate a site value of \$62,500.

Sale Price	\$250,000	
Land Value	25%	
Allocated Site Value	\$170,000	(1)

Table 10.4: Depicts the method of land valuation via the allocation.

$$(1) \$250,000 \times .25 = \$62,500$$

Extraction: In developing an opinion of land value by the extraction method, the appraiser deducts the depreciated, or contributory improvement value, from the total property value to arrive at a land value.

Like allocation, this technique is used infrequently because there are usually better, and more reliable methods available to the appraiser. The developed land value opinion may not accurately reflect the site’s value at its highest and best use and it can be very speculative, particularly if the improvements are older or do not represent the site’s highest and best use.

How does extraction work? First, the appraiser locates improved comparable property sales with land or site characteristics similar to the subject property. Next, the appraiser deducts the depreciated or contributory improvement value from the total property value to arrive at a land value. For example, the appraiser locates a recent sale of a neighborhood diner for \$135,000. The appraiser determines the depreciated, or contributory value of the improvement at \$90,000; the site value is \$45,000.

Sale Price	\$130,000
Depreciated or Contributory Improvement Value	\$90,000
Extracted Site Value	\$45,000

Table 10.5: Depicts the method of land valuation via extraction.

Ground Rent Capitalization: In ground rent capitalization, the appraiser capitalizes the ground rent into an indication of value, with a rate. The capitalization may either be by direct or yield (discounted cash flow) capitalization. Ground rent capitalization is most applicable if the land is leased or rented and there are adequate comparable lease or rental data available. As with any income capitalization technique, the potential shortcomings of this method are the lack of rental or lease data and the difficulty in developing a land capitalization rate (RL) or land yield rate (YL). How does ground rent capitalization (direct capitalization) work? One year's net operating income is capitalized into value through the application of a land capitalization rate (RL).

For example, the subject land is leased for 5 years at \$25,000 a year. The rent is market rent and the tenant pays all expenses associated with the property. From the market, the appraiser develops a land capitalization rate (RL) of 11%. The land value is \$227,275 (R).

Annual Net Ground Rent	\$25,000	
Land Capitalization Rate	11%	
Land Value	\$227,275	(1)

Table 10.6: The method of land valuation via ground rent capitalization is depicted

$$(1) \$25,000 / .11 = \$227,275 (R)$$

How does ground rent capitalization based on yield capitalization work? Each year's net operating income is discounted to present value through the application of a land yield rate (YL).

For example, the subject land is leased for 5 years at \$25,000 a year. The rent is market rent and the tenant pays all expenses associated with the property. At the end of the determined 5 year holding period, the property will be sold for \$250,000 (net to the owner). The appraiser develops a land yield rate (YL) of 12.5%. The land value is \$227,750. (R).

Year	1	2	3	4	5
Annual Net Ground Rent	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
Resale Value					\$250,000
Total Cash Flow	\$25,000	\$25,000	\$25,000	\$25,000	\$275,000
Land Yield Rate	12.50%				
Present Value Factor	0.88889	0.79012	0.70233	0.6243	0.55493
Discounted Cash Flow	\$22,222	\$19,753	\$17,558	\$15,608	\$152,606
Total Present Value	\$227,750 (R)				

Table 10.7: The method of land valuation via the discounted cash flow analysis and yield rate capitalization is illustrated

Land Development Method: The land development or subdivision development method discounts the future net cash flows to present land value by an appropriate land yield rate (YL). This method can be used when there is a lack of land sales with the same highest and best use as the subject property, when the highest and best use of the land is for subdivision or when a detailed analysis or projection of a development project is needed. A shortcoming of this method is the difficulty associated with developing accurate, unspeculative projections or forecasts.

Another is the difficulty in ascertaining data, either about income and expenses or for land yield rates (YL) for similar subdivision development projects. How does the land development method work? The first step in the land development method is to estimate the number of subdivided lots and the projected sellout period.

Next, the anticipated finished lot prices are estimated. The costs, or expenses associated with the development, are determined and deducted from the gross lot sale prices for each year of the sellout period. Developer's profit is accounted for as a line item cost. A cash flow projection, or forecast based on these data, is prepared. A land yield rate (YL), that reflects the typical rate required by investors in subdivision development projects similar to the subject property, is developed. Each year's net operating income for the projected sellout period, is discounted to present value through the application of the land yield rate (YL).

Year	1	2	3	4
Number of Lot Sales	5	15	15	15
Price Per Lot	\$55,000	\$60,000	\$65,000	\$65,000
Total Gross Sales (\$)	\$275,000	\$900,000	\$975,000	\$975,000
Expenses				
Direct	\$250,000	\$50,000	\$250,000	\$50,000
Indirect	\$225,000	\$75,000	\$75,000	\$75,000
Developer's Profit		\$100,000	\$115,000	\$115,000
Total Expenses	\$475,000	\$225,000	\$440,000	\$240,000
Net Annual Cash Flow	-\$200,000	\$675,000	\$535,000	\$735,000
Land Yield Rate - 15.0%				
Present Value Factor	0.8695652	0.7561437	0.6575162	0.5717532
Present Value of Cash Flow	-\$173,913	\$510,397	\$351,771	\$420,239
Total - Land Value	\$1,108,500 (R)			

Table 10.8: Depicts the format for calculating the present value of land for a proposed subdivision. The land value as calculated using the land development method is \$1,108,500 (R).

Land Residual Technique: In developing a land value opinion by the land residual technique, the appraiser develops an estimate of net operating income and deducts that part of the net operating income attributable to the improvement; the remaining income is attributable or residual to the land. This land income is capitalized into a land value with a land capitalization rate (RL). This technique is used rarely today. It can be used if there are no vacant land sales and the improvement value can be reliably estimated. While once popular, the technique is based on two assumptions generally not held today: (1) land value remains constant and (2) building value declines. The technique can be very speculative, particularly if the improvements are older or do not represent the site's highest and best use, as it is difficult to develop an improvement capitalization rate (RB).

How does the land residual technique work? First, the property's annual net operating income is estimated from comparable market rental data. A building value is determined. A building capitalization rate (which includes a return of, and return on) the building value is estimated. The net income applicable to the improvement is computed and deducted from the total net operating income. The remaining income to land is capitalized into value with a land capitalization rate (RL).

Assume		
Net Operating Income	\$75,000	
Building Value	\$500,000	
Building Capitalization Rate	14.00%	
Land Capitalization Rate	10.00%	
Therefore,		
Net Operating Income	\$75,000	
Income to Building	\$70,000	(1)
Income Residual to Land	\$5,000	(2)
Land Value	\$50,000	(3)

Table 10.9: Summarizes the process of calculating land value from the land residual method.

$$(1) \$500,000 \times .14 = \$ 70,000$$

$$(2) \$75,000 - \$70,000 = \$ 5,000$$

$$(3) \$5,000 / .10 = \$ 50,000$$

The land value by the land residual technique is \$50,000.

Sales Comparison Approach: In the sales comparison approach, the appraiser compares recent, similar land sales to the subject land. The sales are adjusted for their dissimilarities to the subject and an indicated value opinion for the subject property is developed. The comparison elements may include:

- Property Rights
- Financing
- Sale Conditions
- Market Conditions
- Location
- Physical Characteristics

Usually, the land sales are analyzed by relative units of comparison. The comparison units can be price per acre, price per front foot, price per hectare, price per square foot, price per square meter, or total price per lot. The adjustments to the land sales can be made either on a qualitative, or more commonly, on a quantitative (dollars or percentages) basis. The benefits of this approach are many. It is easily understood by both knowledgeable and novice market participants. It is direct and systematic. Usually there are sufficient land sales data to support the value conclusions. In most cases, it is how the market participants react. For these reasons, the sales comparison approach is generally the

favored approach. The major shortcomings of the approach are that, at times, there may be a lack of availability of land sales data; and since the approach utilizes properties that have already sold, the data utilized in the approach can lag behind the market. Finally, it may be difficult to support fully the adjustments for dissimilarities between the land sales and the subject site.

How does the sales comparison approach work? The appraiser researches the market for recent similar land sales to the subject site and determines and analyzes relevant comparison units. Next, the appraiser compares the land sales to the subject site and adjusts the sales for dissimilarities (property rights, financing, sale conditions, market conditions, location and physical characteristics), as necessary. Then, the appraiser reconciles the value indications developed for each of the sales into a final value opinion for the subject land.

	Subject	Sale No. 1	Sale No. 2	Sale No. 3	Sale No. 4
Sale Price		\$78,750	\$47,500	\$71,875	\$67,500
Size (acres)	1 Acre	1.5 Acre	1 Acre	1.25 Acres	1.5 Acres
Price Per Acre		\$52,500	\$47,500	\$57,500	\$45,000
<i>Property Rights</i>	Fee Simple	Fee Simple	Fee Simple	Fee Simple	Fee Simple
Adjustment		0	0	0	0
<i>Financing</i>	Normal	Normal	Normal	Normal	Normal
Adjustment		0	0	0	0
<i>Sales Conditions</i>	Arm's Length	Arm's Length	Arm's Length	Arm's Length	Arm's Length
Adjustment		0	0	0	0
<i>Market Conditions</i>	Current	Current	12 Months Ago	Current	Current
Adjustment		0	0	0	0
<i>Location</i>	Here	There	Here	There	Here
Adjustment		– \$7,500	0	– \$7,500	0
<i>Physical Characteristics</i>					
Topography	Level	Gently Sloping	Level	Level	Gently Sloping
Adjustment		+ \$5,000	0	0	+ \$5,000
Net Adjustments (per acre)		– \$2,500	+ \$2,500	– \$7,500	+ \$5,000
Indicated Subject Land Value		\$50,000	\$50,000	\$50,000	\$50,000

Table 10.10: Sales comparison adjustment grid and analysis for an indication of Land Value. As all the sales indicate a value for the subject property at \$50,000, the subject site's value, by the sales comparison approach, is \$50,000.

PROPERTY VALUE

The appraiser uses one or more of the three approaches to develop a property value opinion. Each approach (cost, income capitalization and sales comparison) has its applicability and its strengths and weaknesses.

Cost Approach: In developing a property value opinion by the cost approach, the appraiser:

1. Develops a value opinion for the land/site.
2. Estimates the cost (new) of the improvement, as of the appraisal effective date.
3. Deducts depreciation from the cost (new) of the improvement.
4. Adds the land/site value opinion and the depreciated improvement value to arrive at a value indication for the subject property by the cost approach.

The following is a more detailed explanation of the cost approach steps.

First, the appraiser develops a value opinion for the land/site. The previous discussion, Land Value Opinion, provides several methods to develop a land/site value. The sales comparison approach, which compares recent similar land sales to the subject land, is generally the preferred approach.

Second, the appraiser estimates the cost new of the improvement. As of the appraisal effective date, the cost (new) may be estimated by either determining the improvement's reproduction or replacement cost new. Reproduction cost new is the construction cost of an exact duplicate, or replica of the subject property improvement.

The improvement is an exact copy in every aspect: construction standards, design, functional utility, layout, materials, and workmanship. Reproduction cost new can be used for new, or nearly new improvements that represent current construction techniques, functional utility, and highest and best use. Replacement cost new is the construction cost of an improvement having equivalent or similar utility, but the improvement is constructed with modern materials at current standards' design and layout. Replacement cost estimates eliminate many forms of functional obsolescence. While there may be specific reasons to use one cost new method over the other, both will develop accurate cost new estimates. Today, replacement cost estimates are more often developed. The typical improvement costs include direct costs, indirect costs and entrepreneurial profit. Direct, or hard, costs include the contractor's profit, equipment charges, labor and material. Indirect, or soft, costs are administrative charges, fees (such as, architectural, appraisal, financing, insurance, legal), marketing costs and taxes. Finally, entrepreneurial profit, the developer's return for their contribution to project and risk, is included. There are several methods to estimate the cost new, either replacement or reproduction, of the direct, indirect, and entrepreneurial profit. They include the comparative-unit method, segregated cost method and the quantity survey method.

The *comparative-unit method* is used to develop a cost new in dollars per unit of improvement area (dollars per square foot, dollars per cubic foot, dollars per square meter, dollars per linear foot, or per each). This is the simplest and most often used method. It is appropriate for most improvements when a cost new estimate is desired. While comparative-unit costs can, and are developed from the market directly by the appraiser, the more frequently used method is to reference a cost estimating service. For example, assume the appraiser is estimating the replacement cost new of a one story, wood framed, vinyl sided, average quality residence containing 2,000 square feet of gross living area. The residence contains six rooms, three bedrooms, one and one-half baths and a fireplace. The structure has an attached garage containing 400 square feet.

In developing a cost (new) by the comparative-unit method, the appraiser could rely on local building costs, actual cost, contractor's estimate, the appraiser's data files, or what is most common, a cost estimating manual, guide or service, such as Marshall & Swift Valuation Service. This publication provides costs based on class and type of structure, a local multiplier for different geographical locations and a current cost multiplier to update the published historic cost estimate.

REPLACEMENT COST NEW (COMPARATIVE-UNIT)

Base Cost per Square Foot (Residence):	\$	107
Base Cost: (Residence) 2,000 s.f. × \$107.00/s.f. =	\$	214,000
Additions (subtractions): One-half bath:	+	\$ 650
Fireplace:	+	\$ <u>3,250</u>
.....	\$	5,900
Base Cost per Square Foot (Garage):	\$	25
Base Cost: (Garage) 400 s.f. × \$25.00/s.f. =	\$	<u>10,000</u>
	\$	229,900
Time/Location Multiplier:		<u>× 1.05</u>
Replacement Cost New by the Comparative-Unit Method:	\$	241,395

The *segregated cost method* is a more detailed method. The appraiser estimates the installed unit costs of the improvement components. Typical components are: ceilings, floors, foundation, heating and plumbing, roof and walls. This method is utilized when the improvement's characteristics and components are more unique, in finish, size, style, quality and quantity. As with the comparative-unit method, the appraiser can develop costs directly from the market, or the appraiser can employ data from a cost estimating service. For example, assume the appraiser is estimating, by using the segregated cost method, the replacement cost new of the above-cited one story single-family residence.

REPLACEMENT COST NEW (SEGREGATED COST METHOD)

Foundation:	\$ 3.00/s.f.
Basement:	\$ 9.25/s.f.
Frame:	\$ 3.25/s.f.
Floor Structure:	\$ 9.50/s.f.
Exterior Walls:	\$ 58.50/s.f.
Ceiling:	\$ 1.50/s.f.
Roof:	\$ 4.25/s.f.
Interior Construction:	\$ 11.00/s.f.
Heating, Cooling, Electrical (including fireplace):	\$ 5.00/s.f.
Plumbing:	\$ 4.75/s.f.
Total (Residence): \$110.00/s.f. × 2,000 s.f. =	\$ 220,000
Total (Garage): \$ 25.00/s.f. × 400 s.f.+	\$ 10,000
Total:	\$ 230,000
Time Location Multiplier:	× 1.05
Replacement Cost New by the Segregated Cost Method	\$ 241,500

The *quantity survey method* is the most accurate, comprehensive and detailed cost estimating method. In this method each cost item (e.g., fees, labor, materials, permits, profit) is identified and its cost estimated separately. The quantity survey method is sometimes called the contractor's method, as it imitates what a contractor should do in preparing a cost estimate for a construction bid. While this cost estimating method is the most accurate, the appraiser seldom uses it, as it is difficult to obtain for each assignment. The method is highly specialized and is beyond the typical appraiser's expertise. Additionally, the scope of work rarely necessitates such a detailed analysis.

Third, the appraiser deducts depreciation from the cost new of the improvement. Depreciation is a loss in value from any and all causes. It is the difference between the cost new and the depreciated or contributory improvement value as of the appraisal effective date. Depreciation results from three causes: physical deterioration, functional obsolescence and external obsolescence.

Physical deterioration is a loss in value to an improvement caused by wear and tear from age and use, lack of maintenance, neglect, use, vandalism and weather. Physical deterioration is further divided into physical deterioration curable, physical deterioration incurable short-lived, and physical deterioration incurable long-lived. *Physical deterioration curable* includes items that should be fixed, repaired or replaced, as of the appraisal effective date, are curable. They are commonly referred to as items of deferred maintenance, or items that are broken and need to be replaced, or repaired in order for the building to be

functional. Examples of physical deterioration curable include pointing up brick facings, painting, repairing leaking plumbing and replacing broken windows. *Physical deterioration incurable* are items that are not economically feasible to cure, as of the appraisal effective date. Physical incurable items are either short-lived or long-lived. A short-lived item is one that will need to be replaced before the improvement reaches the end of its economic life. Examples of physical deterioration incurable short-lived are hot water heaters, furnaces, plumbing fixtures and roofs. Finally, physical deterioration incurable long-lived are items that will never be replaced. They have a remaining life as long as the improvement itself. Examples of physical deterioration incurable long-lived, are the foundation and the improvement's framing.

Functional obsolescence is a loss in value as a result of design, materials or workmanship inadequacy or super adequacy, by standards as of the appraisal effective date. As is the case with physical deterioration, functional obsolescence may be either curable or incurable. The test to curability is whether the cost to cure (the cost to fix or replace) is less than/equal to, or more than the value added. For example, assume the appraiser is valuing a warehouse. Today's warehouse standards provide for 14' overhead doors. The subject improvement has 12' overhead doors. While a functional obsolescence deficiency (defect in design by today's standards) exists, the question remains as to whether it is curable or incurable. Applying the test, if the cost to replace the overhead doors is less than/equal to the value added, the functional obsolescence is curable. If the cost to cure exceeds the value added, the cure will not be made, and the functional obsolescence is incurable.

External obsolescence is a loss in value caused by factors external to the property. As the impacts are generally beyond the subject property's control, external obsolescence is usually incurable. External incurable obsolescence may be economic, caused by adverse market conditions, or locational, caused by proximity to adverse environmental influences, or incompatible property uses. External obsolescence affects both land and improvements. However, the current value of the land reflects any external obsolescence. Therefore, external obsolescence is to be measured for the improvements, because real estate is fixed in location, external obsolescence is always incurable.

There are three basic methods to estimate depreciation. They are the age-life method, the market extraction method and the breakdown method.

The age-life method is the simplest and most direct method to estimate total depreciation. In the age-life method, to determine the depreciation percentage, the appraiser develops a ratio between the effective age of the improvement and the improvement's economic life.

$$\frac{\text{Effective Age}}{\text{Economic Life}} = \text{Depreciation Percentage}$$

The age-life method is premised on the theory that all improvements have a total economic life that can be accurately projected. *Economic life* is the time period over which the improvement contributes value to the property.

In the age-life method, depreciation is assumed to be straight line; that is, that depreciation occurs at a constant annual rate over the improvement's economic life, and depreciation is assumed to be directly proportional to the improvement's economic life. For example, if an improvement has an economic life of fifty years, the improvement will depreciate at the rate of 2% a year (100% divided by 50 years equals 2% per year).

The age-life method depends on accurately determining the improvement's effective age. *Effective age* is the age of the improvement in comparison to similar structures in condition and in utility. The effective age may be equal to, less than, or greater than the improvement's actual, or chronological age. Buildings with the same actual age can have widely varying effective ages. For example, assume that two buildings were each constructed 20 years ago; each building's actual age is 20 years. Assume that one of the buildings has been very well maintained, has been modernized, and remodeled over the years and, therefore, it is as if the building was constructed 15 years ago. The first building's effective age is 15 years. The other 20-year-old building has not been well maintained and exhibits a great deal of physical deterioration and some functional obsolescence. This building is comparable to an improvement constructed 25 years ago. Therefore, 25 years is the second building's effective age. Thus, two improvements, while having the same actual or chronological age, have different effective ages.

There is one more component necessary to the age-life method: remaining economic life.

The *remaining economic life* is the time period over which the improvement will continue to contribute to value. For example, if an improvement has an economic life of 60 years and an effective age of 15 years, the remaining economic life is 45 years. The sum of the effective age and the remaining economic life equals the economic life. While the age-life method is widely used and simple to understand, shortcomings exist. Estimating the economic life of an improvement is often difficult and estimating the improvement's effective age is often even more difficult. Finally, while the method assumes straight-line depreciation, the loss in value is not usually so direct. Depreciation is typically more severe in the early years of a building's existence than in its later years.

Utilizing the previous residential replacement cost example, the age-life method works like this:

Replacement Cost New by the Comparative-Unit Method: \$ 241,395

Depreciation by the age-life method:

Economic Life: 60 years
 Effective Age: 15 years
 Remaining Economic Life: 45 years

$$\frac{\text{Effective Age}}{\text{Economic Life}} = \text{Depreciation Percentage}$$

$$\frac{15}{60} = 25\%$$

Accrued Depreciation

(\$241,395 × .25)	(\$	60,349)
Depreciated Improvement Value.....	\$	181,046

A second method to develop a depreciation estimate is by market extraction. Data derived from the market are the best data. In this method, similar sold properties are analyzed to determine depreciation. The *market extraction* method is most easily explained through example. Assume the appraiser located a property similar to the subject property that sold recently. The sale improvement is similar to the subject property in many respects and has a comparable effective age. Therefore,

Sale Price:	\$	237,500
Minus Land Value:	(\$	50,000)
Depreciated Sale Property Improvement Value:	\$	187,500
Cost New of the Sale Property Improvement (as of the sale date):	\$	250,000

$$\text{Depreciation \%} = \frac{1 - \text{Depreciated Improvement Value}}{\text{Cost New of the Improvement}}$$

$$\text{Depreciation \%} = \frac{1 - \$ 187,500}{\$ 250,000}$$

$$\text{Depreciation \%} = 1 - .75 \text{ Depreciation \%} = .25 \text{ or } 25\%$$

Again, utilizing the previous residential replacement cost example, the market extraction method works like this:

Replacement Cost New by the Comparative-Unit Method:	\$	241,395
Depreciation by the market extraction method: 25% (see above):		
Accrued Depreciation:		
(\$241,395 × .25)	(\$	60,349)
Depreciated Improvement Value:.....	\$	181,046

While this method reflects the actions of market participants, its major shortcoming is that there are not always an adequate number of sales to analyze to extract meaningful depreciation percentages. The most detailed and comprehensive method to estimate depreciation is the breakdown method. The breakdown method isolates and estimates separately every form of depreciation. The “breakdowns” in the breakdown depreciation method include physical deterioration (physical deterioration curable, physical deterioration incurable [short-lived], physical deterioration [long-lived], functional obsolescence (functional obsolescence curable [deficiency], functional obsolescence curable [super adequacy], functional obsolescence incurable [deficiency], functional obsolescence incurable [super adequacy], and external obsolescence incurable [economic], external obsolescence incurable [locational]).

The method's strength is also its greatest shortcoming. The method is very complete and provides full disclosure of all items of depreciation; however, it is usually not necessary to go to such lengths to estimate depreciation.

Fourth, the appraiser estimates contributory value of the site improvements. Site improvements typically add relatively little to the total property value, so may command less appraiser attention than the land and buildings. Note, however, that site improvements will be involved in many partial acquisitions appraisals.

Common methods of estimating the value of site improvements are: (1) allocation (see land valuation above); and (2) replacement cost less depreciation. The important concept here is contributory value — the value of site improvements should relate to the overall property.

The contributory value of landscaping is a frequent partial acquisitions appraisal problem. Cost does not always equal value. The appraiser might consider replacement cost as the measure of value for a limited number of items (e.g. shrubs, sodded lawn), but when valuing mature landscaping on an entire property, allocation of landscaping contributory value, based on comparison to sales of comparably improved properties may more realistically reflect market actions.

The final step in the cost approach is to add the land value opinion and the depreciated improvement value to arrive at a value indication for the subject property by the cost approach.

Concluding and summarizing with the same example:

Land Value (Developed in Example 9.10)	\$	50,000
Site Improvements (Contributory Value).....	\$	7,500
Replacement Cost New (Comparative-Unit Method)	\$	241,395
Accrued Depreciation, from all causes (Age-Life Method):	\$	<u>(60,349)</u>
Depreciated Improvement Value	\$	181,046
Indicated Value of the Subject Property by the Cost Approach.....	\$	238,546

The cost approach is most applicable if the improvement is new, or newer, and the property is developed to its highest and best use. Frequently, the approach is used to develop a value opinion for proposed construction, when there is insufficient sales comparison data for special purpose properties. The approach is weakest when the improvements are older, exhibit functional and external obsolescence or fail to represent the property's highest and best use. The approach is often a secondary, or backup approach, used as a check on the results from other approaches.

Income Capitalization Approach

The income capitalization approach recognizes that the value of a property is a function of its ability to command rent or income. The appraiser converts income into value through the application of a rate. The basic steps are:

1. Estimate the subject property's annual potential gross income (PGI).
2. Determine a vacancy and collection loss (V&C).
3. Subtract the vacancy and collection loss from the potential gross income to arrive at the effective gross income (EGI).
4. Estimate annual property expenses and subtracts the expenses from the effective gross income to arrive at the net operating income (NOI).
5. Develop a rate.
6. Convert the net operating income into value through the application of the rate.

A more detailed explanation of the income capitalization approach steps follows :

The first step in developing a value opinion by the income capitalization approach is to estimate the total *annual potential gross income* at full, 100%, occupancy. Included in the calculation is rent income, at an assumed full occupancy, and miscellaneous other income. If the value to be developed is market value, which is usually the case, the annual potential gross income will be market derived. *Market rent* is defined as the most probable rent a property will command if available on the open market, as of the appraisal effective date. Market rent should not be confused with contract rent. Contract rent is the actual rental income specified in a lease.¹² For example, the subject property contains a net leasable area of 25,000 square feet. Currently, 20,000 square feet are leased at a contract rent of \$20 per square foot per year and 5,000 square feet are leased at \$25 per square foot per year. The appraiser's analysis of the market results in the decision that the market rent, as of the appraisal effective date, is \$25 per square foot per year. There is no miscellaneous other income.

The annual potential gross income is:

Potential Gross Income: 25,000 s.f. × \$25/s.f. = \$ 625,000

Determine a *vacancy and collection loss*. It is usual that a property will experience either or both a vacancy or collection loss. In estimating a vacancy and collection loss, the appraiser should utilize a typical rate for the property type being appraised in the subject property's market area. Usually, vacancy and collection loss is expressed as a percentage of potential gross income. The vacancy and collection loss is estimated at 7%.

\$625,000 × .07 = \$ 43,750

¹² The Dictionary of Real Estate Appraisal, 5th ed., (Chicago; Appraisal Institute), 2010 pg. 44.

Subtract the vacancy and collection loss from the potential gross income to arrive at the *effective gross income (EGI)*.

Effective Gross Income = \$ 581,250

Estimate *annual property expenses* and subtract the expenses from the effective gross income to arrive at the *net operating income (NOI)*. As with income, the expenses are annualized and applied to the effective gross income. Operating expenses include fixed expenses, variable expenses and replacement allowances.

Fixed expenses are operating expenses that do not vary with occupancy levels. Typical fixed operating expenses include real estate taxes and property insurance. Variable expenses are operating expenses that do vary with occupancy levels. There are many different types of variable operating expenses. They can include administration and management (usually expressed as a percentage of effective gross income), accounting fees, air conditioning and heat, janitorial, leasing fees, maintenance and repairs, miscellaneous (garbage removal, ground maintenance, security, and so on), and payroll and utilities. In determining which of the variable operating expenses are applicable to the subject property, the appraiser will consider the subject property's contractual rent arrangements, the types of expenses that are typically paid by the lessor and the types of expenses that are typically paid by the tenant for the subject property type.

Finally, the appraiser considers replacement allowances, an annual allowance that provides for the replacement of building elements that have a shorter physical life than the building's remaining economic life. The reserve amount recognizes that some improvement components will require future replacement, before the end of the main structure's remaining economic life. The reserve items are usually the same as the physical deterioration incurable short-lived items in the cost approach.

For example, reserve items can include air-conditioning and heating units, equipment, floor coverings, painting, paved areas, roof and water heaters.

There are various methods to determine the reserve amount. The reserve can be based on:

- An amount equal to today's replacement cost divided by the remaining physical life of the component. For example, assume a roof will need to be replaced in ten years.
- The replacement cost today is \$20,000. The annual reserve amount for this item is \$2,000 (\$20,000/10).
- An amount equal to the replacement cost in the year of replacement divided by the remaining life of the improvement. Again, assume a roof will need to be replaced in ten years. The replacement cost in ten years will be \$25,000. The annual reserve amount for this item is \$2,500 (\$25,000/10).
- When using discounted cash flow analysis, deduct a lump sum payment in the replacement year. In the roof example cited above, a holding period of at least ten years will be necessary. An expense of \$25,000, the full roof replacement cost, will be charged against the tenth year's effective gross income.

- Provide for no reserve allowance but consider a reduction in the resale price.
- Estimate the replacement cost in the year of replacement and establish a sinking fund payment to grow to that amount. Again, assume a roof will need to be replaced in ten years. The replacement cost in ten years will be \$25,000. The annual sinking fund reserve amount for this item is \$2,075 ($\$25,000 \times .083$,¹³ sinking fund factor for ten years at 4% annual interest). This method is a preferred one.

Effective Gross Income	\$	581,250
Operating Expenses:		
Fixed:		
Real Estate Taxes:	\$	63,540
Insurance:		6,400
Total =	\$	69,940
Variable:		
Management ($\$581,250 \times .05$):.....	\$	29,063
Maintenance:	\$	4,500
Janitorial:.....	\$	15,000
Utilities:.....	\$	30,000
Miscellaneous:	\$	6,500
Total =	\$	85,063
Replacement allowances:		
Painting ($\$5,000 \times .184$):	\$	920
Paving ($\$15,000 \times .126$):	\$	1,890
Roof ($\$25,000 \times .083$):	\$	2,075
Total =	\$	4,885
Total Operating Expenses: =.....	\$	159,888
Net Operating Income =	\$	421,362

The next step is to develop a rate. The typical investor expects two returns from an investment: a return of the capital investment, and a return on the capital investment. In developing a rate, the appraiser can derive either an income rate or a yield/discount rate. An *income rate* is the ratio between one year's income and its corresponding value. There are several income rates, including building capitalization rate (RB), equity dividend rate (RE), overall capitalization rate (Ro), land capitalization rate (RL) and mortgage capitalization rate or mortgage constant (RM). This rate is reflective of a return on or of the investment.

¹³ HP 12c Keystrokes - OPV, 1FV, 4i, 10n, solve for PMT

A *yield or discount rate* is more complicated. A yield or discount rate is a rate that discounts all the cash flows over the holding period to the amount of the original investment. There are several yield or discount rates, including equity yield rate (YE), mortgage yield rate (YM) and overall yield rate (Yo). This rate reflects the return on the investment.

There are several methods to derive *overall capitalization rates* including band of investment [debt and equity or land and building], debt coverage ratio, effective gross income multiplier and market extraction. Two methods, the band of investment (debt and equity) and market extraction will be explained.

As most property is purchased with a combination of debt and equity, the overall capitalization rate (Ro) must satisfy both components.

The *band of investment* method is a weighted average of the mortgage capitalization rate, or mortgage constant (RM) and the equity dividend rate (RE). Remember that the *mortgage capitalization rate* or mortgage constant (RM) is *not* the same as the mortgage interest rate (YM). The RM is an income rate and is defined as the ratio between *one year's* total loan payments (annual debt service) and the loan amount. The *mortgage interest rate* (YM) is a yield or interest rate that discounts all the annual loan payments over the term of the mortgage to the amount of the original loan.

The formula to develop an overall capitalization rate utilizing the band of investment (debt and equity) is:

$$Ro = (M \times RM) + (E \times RE),$$

M = the loan to property value ratio

E = the equity to property value ratio

The sum of M and E is 1.0 or 100%

For example, assume that mortgage money is available for a loan to property value ratio of 75% (Note: the equity investor is required to contribute 25%.) Also assume that loans are available at a 7.5% interest rate (YM) for twenty years with monthly payments. These loan terms result in a 0.0967 mortgage capitalization rate (RM)¹⁴. Finally, assume that typical equity investors expect an equity dividend or equity capitalization rate (RE) of 13%. Therefore,

$$Ro = (M \times RM) + (E \times RE)$$

$$Ro = (.75 \times .0967) + (.25 \times .13)$$

$$Ro = (.0725) + (.0325)$$

$$Ro = .1050 \text{ or } 10.50\%$$

¹⁴ HP 12c Keystrokes: 1PV, 7.5gi, 20gn, solve for PMT x 12

The band of investment or “weighted cost of capital” technique to develop overall capitalization rates has advantages. Usually, the debt component (M) is relatively easy to determine and the equity investment (E) is easy to ascertain. The difficulty with this method, and hence its major weakness, is in the derivation of an equity dividend rate (RE). Often market data to support this rate are insufficient, or unavailable and investor surveys may not be reliable for the particular property type or close in location.

The preferred method to develop an overall capitalization rate (RO) is from the *market*. To use this method, the appraiser analyzes recent sales of similar property with similar income and other characteristics. To develop an overall capitalization rate by this method, divide the sale’s annual net operating income by the sale price. With the use of several sales, a reliable overall capitalization rate (RO) will be developed.

Sale No.	1		2		3		4	
Sale Price	\$4,050,000		\$4,095,000		\$4,910,000		\$3,500,000	
Net Operating Income	\$425,000		\$430,000		\$540,000		\$375,000	
Overall Capitalization Rate	10.50%	(1)	10,50%	(1)	11.00%	(1)	10.70%	(1)

Table 10.11: Illustrates the calculation of capitalization rates from market sales comparables

$$(1) \text{ Overall Capitalization Rate (RO)} = \frac{\text{Net Operating Income (Io)}}{\text{Sale Price (Vo)}}$$

Assuming all other characteristics are similar, if Sale No. 1 and Sale No. 2 have similar net operating incomes to the subject property (\$421,362, see above), an overall capitalization rate from the market of 10.5% is reasonable. While developing an overall capitalization rate from the market has shortcomings (e.g. a lack of comparable data), it is the preferred method.

As is the case with developing overall capitalization rates (RO), there are several methods to derive overall yield rates (YO). Some common methods are from comparisons with alternate investments, market extraction, market surveys, and published surveys. The market extraction method will be discussed. As previously stated, the overall yield rate (YO) is a rate, or internal rate of return (IRR) is a rate that discounts all the cash flows over the holding period, to the amount of the original investment. The resulting sum equates to the Net Present Value. The net present value is the difference between the present value of all expected income cash flows (positive) and the present value of capital outlays (negative).¹⁵

¹⁵ The Dictionary of Real Estate Appraisal, 5th ed., (Chicago; Appraisal Institute). 2010 p. 134.

Overall Yield Rate Analysis of Real Estate Investment							
Year	0	1	2	3	4	5	
Purchase Price	(\$4,050,000)						
Net Operating Income		\$425,000	\$437,750	\$450,883	\$464,409	\$478,342	(1)
Net Resale Proceeds						\$4,631,798	(2)
Total Cash Flow	(\$4,050,000)	\$425,000	\$437,750	\$450,883	\$464,409	\$5,110,140	
Yo = 13.3266635							
Present Value Factor	1.000000	0.882875	0.779468	0.688172	0.607570	0.536408	
Present Value	(\$4,050,000)	\$375,222	\$341,212	\$310,285	\$282,161	\$2,741,120	
Net Present Value	\$0						

Table 10.12: The analysis of deriving an overall yield rate from the cash flow and capital outlays of real estate investment is depicted

(1) The first year's net operating income has been projected to increase 3% per year compounded over each year of the 5 year holding period.

(2) The sale price at the end of the 5 year holding period is based on a 4% annual compounded property value increase, and a deduction of 6% for sale expenses.

Therefore, 13.3% is the overall yield rate (Yo), because it is the rate that discounts all the cash flows to the amount of the original investment (\$4,050,000).

The last step is to convert the net operating income into *value* through the application of the rate.

The rate (for example, Ro, RE, YE, Yo, and so on) that the appraiser uses in the income capitalization approach will depend on the method the appraiser selects (direct or yield capitalization) and the value opinion sought (e.g., market, equity). Usually, the value sought is market value. If this is the case, the rate will be an overall capitalization (Ro), used in direct capitalization, or overall yield (Yo) rate, used in yield capitalization.

Direct Capitalization is the income capitalization method that converts a single year's income into value. The general formula is:

$$\text{Value} = \frac{\text{Income}}{\text{Rate}}$$

When determining market value of the property, the formula is:

$$\text{Property Value (Vo)} = \frac{\text{Net Operating Income (Io)}}{\text{Overall Capitalization Rate (Ro)}}$$

For example, assume that the appraiser developed an overall capitalization rate of 10.5%. Using this rate and the net operating income developed above (\$421,362) results in a property value of \$4,000,000 (R).

$$\text{Property Value (Vo)} = \frac{\text{Net Operating Income (Lo)}}{\text{Overall Capitalization Rate (Ro)}}$$

$$\text{Property Value (Vo)} = \frac{\$421,362}{.105}$$

$$\text{Property Value (Vo)} = \$4,012,971 \text{ or } \$4,000,000 \text{ (R)}$$

Yield Capitalization is the income capitalization method that discounts *all* the cash flows over the holding period to present value. The general formula is:

Value =

$$\frac{\text{Cash Flow 1}}{(1+Y)} + \frac{\text{Cash Flow 2}}{(1+Y)^2} + \frac{\text{Cash Flow 3}}{(1+Y)^3} + \frac{\text{Cash Flow 4}}{(1+Y)^4} + \frac{\text{Cash Flow N}}{(1+Y)^N}$$

When determining market value of the property, the formula is:

Property Value (VO) =

$$\frac{\text{Cash Flow 1}}{(1+Yo)} + \frac{\text{Cash Flow 2}}{(1+Yo)^2} + \frac{\text{Cash Flow 3}}{(1+Yo)^3} + \frac{\text{Cash Flow 4}}{(1+Yo)^4} + \frac{\text{Cash Flow N}}{(1+Yo)^N}$$

For example, using an overall yield rate of 13.3% and annual net operating incomes¹ of: \$421,362, \$434,003, \$447,023, \$460,434, and \$5,048,862 results in a property value of \$4,000,000 (R).

Discounted Cash Flow Analysis						
Year	1	2	3	4	5	
Net Operating Income	\$421,362	\$434,003	\$447,023	\$460,434	\$474,247	(1)
Net Resale Proceeds					\$4,574,614	(2)
Total Cash Flow	\$421,362	\$434,003	\$447,023	\$460,434	\$5,048,861	
Yo = 13.3						
Present Value Factor	0.882613	0.779005	0.687559	0.606849	0.535612	
Present Value	\$371,900	\$338,091	\$307,355	\$279,414	\$2,704,231	
Present Value	\$4,000,989					
Rounded	\$4,000,000					

Table 10.13: The discounted cash flow analysis of a real estate property.

1. The first year's net operating income is projected to increase 3% per year compounded over each year of the 5 year holding period.
2. The sale price at the end of the 5 year holding period is based on the assumption of 4% annual compounded property value increases with a 6% deduction for sale expenses.

Direct capitalization is typically used when the property is operating on a stable basis (e.g., five-year-old apartment project). Yield capitalization is used when the property's income is expected to vary, e.g., a recently built office property that has not yet leased up, or an older shopping center where the anchor tenant has announced plans to vacate.

Gross Multiplier: A third type of capitalization is the relationship expressed as income or rent and value. This relationship is expressed as income or rent multipliers: including potential gross income multipliers (PGIMs), effective gross income multipliers (EGIMs), and gross rent multipliers (GRMs). In its most generic forms, a multiplier is the ratio between value or sale price and gross income or gross rent.

$$\text{The general formula is: } \frac{\text{Gross Multiplier} = \text{Sale Price}}{\text{Gross Income or Gross Rent}}$$

The PGIM and EGIM are usually considered sales comparison approach techniques. Typically, PGIMs and EGIMs are developed on an annualized basis. The potential gross income or effective gross income multiplier expresses the relationship between value or sale price and the particular type of gross income.

$$\text{For example: Potential Gross Income Multiplier} = \frac{\text{Sale Price}}{\text{Potential Gross Income}}$$

To develop a gross income multiplier, the appraiser researches the market for comparable properties that are leased. Next, the gross income multiplier is determined by dividing the sale price by the gross, either potential or effective, income. The resulting multiplier is multiplied by the subject property's gross income, either potential or effective, to arrive at a value opinion of the subject property. For example, assume that, through market analysis, the appraiser develops a PGIM of 6.4. The indicated value of the subject property (from the above example) is \$4,000,000 ($\$625,000 \times 6.4 = \$4,000,000$).

The use of a PGIM is most effective when the subject property and comparable properties have the same real property interests (e.g., fee simple, leased fee) and the improvement efficiency ratios of the comparable and subject properties are similar.

$$\text{Effective Gross Income Multiplier} = \frac{\text{Sale Price}}{\text{Effective Gross Income}}$$

For example, assume that, through market analysis, the appraiser develops an EGIM of 6.9. The indicated value of the subject property, (again, from the above example) is \$4,010,625 ($\$581,250 \times 6.9 = \$4,000,000$ (R)).

The use of an EGIM is most effective when the subject property interest being valued is the same as the comparable market data and the subject property lease terms are the same as the comparables lease terms. The GRM applies to rental income only, and is frequently described as the income capitalization approach for residential properties. In this instance, the gross rent multiplier is generally based on monthly rent.

To develop a gross rent multiplier, the appraiser researches the market for recent similar sales comparables that were rented or available for rent at the time of sale. Next, the gross rent multiplier is determined by dividing the sale price by the gross rent. The resulting multiplier is multiplied by the subject property's gross rent to arrive at a value indication of the subject property. For example, The subject one story, average quality single-family residence is currently rented for \$2,150 per month. The appraiser located the following recent similar sales that were rented at the time of sale.

	Subject	Sale No. A	Sale No. B	Sale No. D
Sale Price		\$225,000	\$265,000	\$242,500
Sale Data	Current	One month ago	Current	Current
Gross Rent (Monthly)	\$2,150	\$2,000	\$2,400	\$2,200
Gross Rent Multiplier		112.5	110.4	110.2

Table 10.14: The comparative analysis of GIM's

Subject Gross Income	GIM's	Indicated Value
\$2,150	112.5	\$241,875
	110.4	\$237,360
	110.2	\$236,930

Table 10.15: Depicts an array or the analysis in calculating value from GIM's. The gross rent multiplier range results in a value range for the subject property from \$236,930 to \$241,875. Using a GRM, a value of the subject property, based on Sale Nos. B and D, is \$237,000.

Sales Comparison Approach

In the sales comparison approach, the appraiser compares recent similar property sales to the subject property. Then the sales are adjusted for their dissimilarities to the subject and an indicated value opinion for the subject property is developed. The sales comparison approach involves several steps. First, the appraiser researches the market for recent sales, that are comparable to the subject property. Next, relevant comparison units are determined. Then, the appraiser compares the sales to the subject property and adjusts the sales for dissimilarities. Finally, the appraiser reconciles the value indications developed for each sale into a final value opinion for the subject property.

Comparison units aid the appraiser in identifying the significant value influences to help bring order to the adjustment process and to make the comparisons between the sale properties and the subject property easier. The appraiser can consider several relevant physical and economic comparison units. Their selection will depend on the appraisal problem and the scope of work.

Examples of physical comparison units include price per square foot gross living area (residential), price per square foot net rentable area (office), price per square foot net leasable area (retail), price per unit (apartments), price per boat slip (marinas) and price per pad (manufactured housing community). Examples of economic comparison units include GRMs, PGIMs, and EGIMs. Basic to the sales comparison approach is the consideration of various “elements” between the comparable properties and the subject property. When warranted, the elements of comparison that should be considered and adjusted are:

- Property Rights
- Sale Conditions
- Location
- Other
- Financing
- Market Conditions
- Physical Characteristics

Property Rights

This is the first adjustment considered. While the property rights to be valued are usually the fee simple and the comparable sales data usually represent fee simple transactions, this should not be assumed. Various interests can be valued and transferred from life estates to lease interests. If a difference exists between the interest transferred by the comparable property and the subject property, consideration must be given to the possible need for an adjustment.

Financing

Sale prices may be influenced by property financial arrangements. Nonmarket, favorable or unique sale financing can result in a purchase price that is higher, or in some cases, lower than typical, so, an adjustment for this element may be warranted. Some examples of financial arrangements that may influence sale price include assumed loans or mortgages, seller financing and seller paid points. If a market value opinion is being developed, the sale terms must represent the normal consideration for the property sold unaffected by special or creative financing.

Sale Conditions

Sale conditions or sale participant motivations. Usually, this adjustment is framed in terms of whether or not the sale was an arm's-length transaction (a sale between unrelated parties neither of whom was under duress). If the sale was atypical, for any reason (for example, the buyer or seller was under undue duress, the parties to the transaction were related or a reasonable exposure time in the open market was not allowed), then the sale's reliability as a comparable is questionable. A market value opinion needs to ensure that the buyer and seller are typically motivated.

Market Conditions

Market conditions is sometimes referred to as a “time adjustment,” represents the adjustment for changes in market conditions between the comparable property’s transaction date and the appraisal effective date. The market adjustment may be positive (values increasing) or negative (values declining).

Location

Because real estate is immobile, location is a key adjustment element to consider. In determining if a location adjustment is warranted, the appraiser analyzes accessibility, current neighborhood land uses and potential changes, neighborhood amenities, government services and utilities, possible negative environmental impacts and other nuisances, view and all the other economic, environmental, governmental and social forces that can impact value.

Physical Characteristics

Many of the physical characteristic adjustment considerations were discussed earlier in this chapter. Examples of some physical elements include land adjustment considerations (shape, size, topography), and improvement adjustment considerations (amenities, condition, design, effective age, functional utility, site improvements, size and quality).

Economic Characteristics

This comparison element relates to the characteristics that may affect income. It includes such factors as expenses, lease terms and concessions, management and tenant mix.

Other

This “catch-all” comparison element considers all other possible comparison characteristics between the comparable and subject properties. Items in this category that should be considered and adjusted (when warranted) are nonrealty items, use and zoning.

Once the comparison elements are identified and the necessity for specific adjustments determined, there are several methods the appraiser can use to measure the adjustments. The adjustments may be either qualitative or quantitative. Qualitative adjustments are expressed in the relative terms “inferior to,” “equal to” or “superior to.” Quantitative adjustments may be developed in either dollars or percentages. While there is no rule as to whether or not quantitative adjustments should be made in dollars or percentages, there are some general guidelines. The property rights, financing, and sale conditions adjustments are frequently expressed in dollars. Market conditions and location adjustments are calculated with percentages. Physical characteristics and other adjustments are made with either dollars or percentages.

There are several techniques to support quantitative adjustments. The appraiser can use capitalization techniques, depreciated cost adjustments, graphic analysis, paired data

analysis and regression analysis. Depreciated cost adjustments, graphic analysis and paired data analysis will be discussed further.

In using the depreciated cost adjustments technique to calculate adjustments; the appraiser first selects the attribute requiring an adjustment. Next, the additional cost to include that attribute in the improvement construction cost is determined. Then the appraiser deducts a depreciation amount. Finally, the comparable sale property is adjusted considering the depreciated cost amount. This technique is beneficial when an adjustment for a particular physical attribute is sought. Major shortcomings with the technique are the difficulty in accurately measuring depreciation and the possible assumption that cost equals value.

For example, the recent comparable sale properties in a subject neighborhood are improved with one story, wood framed, vinyl sided, average quality, single-family residences containing approximately 2,000 s.f. of gross living area. None of the comparable sales have garages. The sale properties are similar to the subject property, except the subject is also improved with an attached garage containing 400 s.f.

Replacement Cost per Square Foot (Garage)	\$	25.00
Base Cost (Garage)		
400 s.f. × \$25.00/s.f. =	\$	10,000
Time/Location Multiplier:		× 1.05
Replacement Cost New (Garage)	\$	10,500
Depreciation (Age - Life Method): (\$10,500 × .25)	\$	2,625
Depreciated Improvement (Garage) Value.....	\$	7,875

Once the depreciated cost amount is learned, that calculation can be used to aid in determining the adjustment for the attribute. Comparison units can be analyzed through graphic analysis. A graph is prepared, and the appraiser indicates the comparable sale prices (or comparison units) on the vertical scale, and the property characteristic being analyzed on the horizontal scale. Each comparable sale, as plotted, reflects a point that coordinates its price and characteristic. A “best fit” line connecting as many of the points, or that balances the points on either side of the line, is drawn. Finally, the appraiser analyzes the data and determines the subject property’s placement on the line. This point will indicate a value for the subject property or for a specific characteristic in the subject property. Any number of characteristics can be analyzed in this manner. While the technique is straightforward, it requires a significant quantity of data to be meaningful. Additionally, price changes may depend on several related rather than on a single variable. Finally, this technique assumes a linear relationship between price and a given variable.

Table 10.2 illustrates the graphical analysis or linear relationship between price per square foot, and building area. This technique is most useful where differences between the subject and comparables are isolated to one important factor, for example, the subject and comparables are vacant lots differing primarily in lot size. Appraisers sometimes use multiple regression analysis, a statistical modeling technique, to analyze the influence on

value of several factors of difference between properties. This method is becoming more common with increasing availability of computerized statistical packages. This method relies on access to many sales observations. Paired data analysis also involves the isolation of property variables. This technique measures the contributory value of a comparable property attribute in comparison to another comparable property without that specific attribute. Once the contributory value of the specific attribute is determined, a comparison can be made to the subject property. In cases where more than one variable is involved, the appraiser will need to analyze several sets of paired data to isolate each attribute.

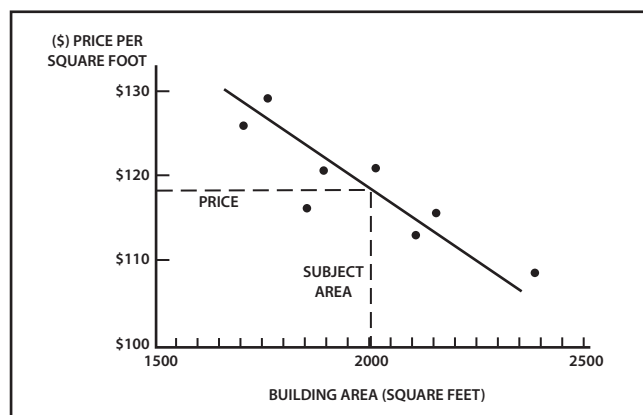


Figure 10.2: Graphic Analysis

Figure 10.16 illustrates a paired sales analysis for location in the comparison from land sales. In its simplest application, the appraiser locates two comparable property sales that are similar in all significant aspects except one. The difference in sale price is the contributory value of that attribute. Any number of specific characteristics can be analyzed in this manner. While the technique is straightforward, locating two sales that are similar in all significant aspects except one is often difficult.

Using a portion of the data arrayed in Figure 10.16, paired data analysis can be illustrated. The appraiser locates two comparable property sales (Sale No. 1 and Sale No. 4) that are similar in all significant aspects except one (location). The difference in sale price \$11,250 or \$7,500 per acre ($\$78,750 - \$67,500 = \$11,250$ or $\$52,500$ per acre – $\$45,000$ per acre = $\$7,500$ or 9.5%) is the contributory value of that attribute (location).

	Sale No. 1	Sale No. 4
Sale Price	\$78,750	\$67,500
Size (acre)	1.5	1.5
Price per acre	\$52,500	\$45,000
<i>Property Rights</i>	Fee Simple	Fee Simple
<i>Financing</i>	Normal	Normal
<i>Sale Conditions</i>	Arm's Length	Arm's Length
<i>Market Conditions</i>	Current	Current
<i>Location</i>	There	Here
<i>Physical Characteristics</i>		
Topography	Gently Sloping	Gently Sloping
Difference	\$7,500	Per Acre
	9.5%	

Table 10.16: A paired sales analysis for location in the comparison from land sales.

Another form of sales comparison is ranking. Once arrayed and analyzed, a rank comparison is made.

Table 10.17 illustrates an array analysis of land sales based on a bracketing and ranking. Referring again, to the one story, average-quality single-family residence cited above, the entire sales comparison approach looks like this:

Rank	Sale No.	Sale Price
Superior	1	\$ 78,750
Superior	4	\$ 71,875
Superior	3	\$ 67,500
	Subject	
Inferior	2	\$ 47,500

Table 10.17: An array analysis of land sales based on a bracketing and ranking.

Table 10.18 illustrates a Sales Comparison adjustment grid and analysis for an indication of residential improvement value using quantitative analysis. Based on an analysis of the data and using the sales comparison approach, the subject property has a value of \$233,750. Sale No. C indicates this value. Sale No. C, which required the least gross and least net adjustments and is supported by Sale Nos. A, B, and D. At times, qualitative adjustments are considered to recognize the inexact nature of real estate transactions. Instead of quantitative dollar and percentage adjustments, the appraiser rates, or ranks the comparable sales on a qualitative basis. One common technique is to array the

comparable and subject property data, analyze the data on a qualitative basis in relative terms (for example “inferior to” “equal to,” “superior to” the subject property) and, finally, rank the data. The ranking can be accomplished on the basis of the entire property or on comparison units.

	Subject	Sale No. 1	Sale No. 2	Sale No. 3	Sale No. 4
Sale Price		\$78,750	\$47,500	\$71,875	\$67,500
Size (acres)	1 acre	1.5 acres	1 acre	1.25 acres	1.5 acres
		Superior	Equal	Superior	Superior
Property Rights	Fee Simple	Fee Simple	Fee Simple	Fee Simple	Fee Simple
Adjustment		Equal	Equal	Equal	Equal
Financing	Normal	Normal	Normal	Normal	Normal
Adjustment		Equal	Equal	Equal	Equal
Sale Conditions	Arm's Length	Arm's Length	Arm's Length	Arm's Length	Arm's Length
Adjustment		Equal	Equal	Equal	Equal
Market Conditions	Current	Current	6 Months Ago	Current	Current
Adjustment		Equal	Inferior	Equal	Equal
Location	Here	There	Here	There	Here
Adjustment		Superior	Equal	Superior	Equal
Physical Characteristics					
Topography	Level	Gently Sloping	Level	Level	Gently sloping
Adjustment		Inferior	Equal	Equal	Inferior
Overall Comparability		Superior	Inferior	Superior	Superior

Table 10.18: A Sales Comparison adjustment grid and analysis for an indication of residential improvement value using quantitative analysis.

Table 10.19 illustrates a Sales Comparison adjustment grid and analysis for an indication of land value using qualitative analysis. The benefits of the sales comparison approach are many. The approach is easily understood by both knowledgeable and novice market participants, the method is direct and systematic, usually there are sufficient sales data to support the value conclusions and, in most cases, the sales comparison approach is how the market participants typically react. The major shortcomings of the approach are that, at times, there may be a lack of comparable sales data and since the approach utilizes properties that have already sold, the method tends to lag behind the market. Finally, the sales comparison approach may be difficult to support fully the adjustments for dissimilarities between the comparable sales and the subject property.

Sales Comparison Adjustment Grid-Improved (Residential)					
	Subject	Sale No. A	Sale No. B	Sale No. C	Sale No. D
Sale Price		\$225,000	\$265,000	\$240,000	\$242,500
<i>Property Rights</i>	Fee Simple	Fee Simple	Fee Simple	Fee Simple	Fee Simple
Adjustment		\$0	\$0	\$0	\$0
<i>Financing</i>	Normal	Normal	Normal	Normal	Normal
Adjustment		\$0	\$0	\$0	\$0
<i>Sale Conditions</i>	Arm's Length	Arm's Length	Arm's Length	Arm's Length	Arm's Length
Adjustment		\$0	\$0	\$0	\$0
<i>Market Conditions</i>	Current	Current	6 Months ago	Current	Current
Adjustment		\$0	+\$7,000	\$0	\$0
<i>Location</i>	Here	Here	Here	Here	Here
Adjustment		\$0	\$0	\$0	\$0
<i>Physical Characteristics</i>					
<i>Land</i>					
Size (Acres)	1 Acre	1.5 Acres	1 Acre	1.25 Acres	1.5 Acres
Topography	Level	Gently Sloping	Level	Level	Gently Sloping
Adjustment		-\$17,500	\$0	-\$12,500	-\$17,500
<i>Site Improvement</i>	Average	Average	Average+	Average	Good
Adjustment		\$0	-\$2,500	\$0	-\$5,000
<i>Building</i>					
Stories	One Story	One Story	One Story	One Story	One Story
Exterior	Frame/Vinyl	Frame/Vinyl	Frame/Vinyl	Frame/Vinyl	Frame/Vinyl
Condition	Average	Average	Average	Average	Average
Area (SF GLA)	2,000	1,775	2,450	2,000	1,850
Adjustment		+\$18,500	-\$37,500	\$0	+\$12,500
	6/3/1-1/2	6/3/1-1/2	6/3/1-1/2	6/3/1-1/2	6/3/1-1/2
Adjustment		\$0	\$0	\$0	\$0
Fireplace	Fireplace	No Fireplace	Fireplace	No Fireplace	Fireplace
Adjustment		+2,500	\$0	+2,500	\$0
Garage	2-Car Attached	1-Car Attached	2-Car Attached	1-Car Attached	2-Car Attached
Adjustment		+3,750	\$0	+3,750	\$0
<i>Other</i>	N/A	N/A	N/A	N/A	N/A
Gross Adjustment		\$42,250	\$47,000	\$18,750	\$35,000
Net Adjustment		+\$7,250	-\$33,000	-\$6,250	-\$10,000
Indicated Subject Property Value		\$232,250	\$232,000	\$233,750	\$232,500

Table 10.19: Sales Comparison adjustment grid and analysis for an indication of land value using qualitative analysis.

RECONCILIATION AND FINAL VALUE OPINION

In reconciliation, the appraiser brings together the data to develop a final value opinion. The appraiser reviews the appraisal procedures followed in developing the appraisal, analyzes the data quality and quantity, reviews the reasoning and reaches conclusions about the applicability and credibility of each value approach. While reconciliation takes place throughout the valuation process, it is at this point where the final value reconciliation occurs. To reconcile the value opinions derived from one or more of the three approaches, the appraiser analyzes the indicated values and examines their range to understand the reasons for the differences. This analysis requires a critical examination of the elements of each approach used, and reconciliation evaluates the relative reliability of the three approaches.

For example, considering the single-family residence, one last time. The three approaches to value indicate the following:

Cost Approach: _____ \$ 238,546

Income Capitalization Approach: _____ \$ 236,500

Sales Comparison Approach: _____ \$ 233,750

While all three approaches to value provide a reasonably close value range, most reliance is placed on the sales comparison approach. This approach utilized an adequate number of comparable sales to support the conclusions, the data were verified for accuracy and adjustments were made based principally on paired sales and cost less depreciation methods. For this property type, the sales comparison approach is considered most reliable and best reflects the action of market participants. The cost approach provides support for the value developed by the sales comparison approach.

While reliable for this residential property, the approach is accorded less weight because of the difficulty in measuring depreciation. The income capitalization approach is given the least consideration. Again, while it supports the sales comparison approach, it is the least reliable approach in valuing single-family residences, as they are not usually purchased for their income producing potential. The final value opinion, generally takes the form of a point value although a range of values can also be presented. This opinion represents the appraiser's conclusion regarding a specific value as of the appraisal effective date. Usually, the value sought is market value, the most probable price in an open and competitive market.

REPORTING AN OPINION OF VALUE

An appraisal report may be either oral or written. In an oral report, USPAP requires the appraiser to maintain a work file with a signed and dated certification along with the documentation, data and analysis necessary to support the appraiser's opinion.¹⁶

¹⁶ The Appraisal Foundation, Uniform Standards of Professional Appraisal Practice (USPAP), 2010-2011 ed. Ethic Rule-Record Keeping p. U-9.

Regardless of the type, the report must clearly and accurately set forth the appraisal in a manner that will not be misleading, must contain sufficient information to enable the client and other intended users to understand the report properly, and must disclose clearly and accurately any extraordinary assumptions and hypothetical conditions that affect the appraisal.

Written appraisal reports may be self-contained, summary, or restricted use. The essential difference among the three options is in the content and level of information provided.¹⁷ For example, a *self-contained appraisal report* will describe the appraisal in a way that allows the client and intended users to find all the significant data comprehensively included in the report. A *summary appraisal report* will summarize the appraisal in a way that allows the client and intended users to find all the significant data in either a tabular or abbreviated format.

A *restricted-use appraisal report* states the appraisal without the client expecting to find all the significant data in the report. If a restricted-use appraisal report format is used, the appraiser must maintain a specific, coherent work file in its support.¹⁸ Notwithstanding the written appraisal report type, the report must include:

- the client's and any intended user's identity, by name or type;
- the appraisal's intended use;
- sufficient information to identify the real estate and any relevant physical and economic characteristics;
- the real property interest being appraised;
- the type and definition of value and its source;
- the appraisal effective date and the appraisal report date;
- a description of the scope of work;
- the information analyzed, the appraisal methods and techniques used and the reasoning applied to support the analysis and conclusions;
- the reasons why any of the approaches to value were excluded from the appraisal, if any approaches were excluded;
- the real estate use, as of the appraisal effective date, and the real estate use reflected in the appraisal and the support and rationale for a highest and best use opinion, if developed;
- extraordinary assumptions and hypothetical and limiting conditions and a statement that their use might affect the assignment results; and
- a signed certification.¹⁹

¹⁷ Ibid. S.R. 2-2 p. U-21.

¹⁸ Ibid. Ethics Rule, p. U-928.

¹⁹ The Appraisal Foundation, Uniform Standards of Professional Appraisal Practice (USPAP), 2010-2011 ed. S.R. 2-3 p. U-28.

SUMMARY

The valuation process is the model appraisers use to develop a value opinion. Valuation is a classic problem-solving technique that follows a systematic, or step-by-step approach of problem identification, data collection and analysis, leading to a value opinion and a report. The valuation process consists of appraisal problem definition, scope of work, data collection and analysis, land value opinion, the three approaches to value, reconciliation and final value opinion and the defined value opinion report. The appraisal problem definition frames the problem and provides the client and intended users with a clear understanding of the basic issues. Data are collected about the general market areas, using specific comparable properties and about the subject property. Once data collection has been accomplished, an analysis is made. While all the steps in the valuation process are important, none is more so than the determination of highest and best use. Highest and best use is “That reasonably probable and legal use of vacant land, or an improved property, which is physically possible, appropriately supported, financially feasible, and that results in the highest value.”²⁰ The valuation of the land is often a requisite step in an appraisal, especially for appraisals involving partial takings. The appraiser uses one or more of the three approaches to develop a value opinion. Each approach (cost, income, capitalization and sales comparison) has its applicability, strengths and weaknesses. The cost approach involves the development of a land value opinion, the estimation of the improvement’s cost new, a determination and deduction of depreciation from the cost new, and finally, the addition of the land and depreciated improvement costs to arrive at a cost approach value indication. The income capitalization approach is the conversion of income into value through the application of a rate. To develop a value opinion by the income capitalization approach, the appraiser estimates the subject property’s annual potential gross income (PGI), determines a vacancy and collection loss (V&C), subtracts the vacancy and collection loss from the potential gross income to arrive at the effective gross income (EGI), estimates annual property expenses, and subtracts them from the effective gross income to arrive at the net operating income (NOI). Next a rate is developed and, with the rate, the net operating income is converted into value. In the sales comparison approach, the appraiser compares recent similar property sales to the subject property. The sales are adjusted for their dissimilarities to the subject property and an indicated value opinion is developed. The sales comparison involves several steps. First, the appraiser researches the market for recent similar sales comparable to the subject property. Next, relevant comparison units are ascertained. The appraiser compares the sales to the subject property and adjusts the sales for dissimilarities. Then, the appraiser reconciles the value indications developed for each sale into a final value opinion. In the reconciliation and final value opinion step, through reconciliation, the appraiser brings together the value indications, to develop a final value opinion. Finally, the defined value opinion report is prepared. While an appraisal report may be either oral or written, the report must clearly and accurately set forth the appraisal in a manner that will not be misleading, must contain sufficient information to enable the users to understand the report properly and must clearly and accurately disclose any extraordinary assumptions hypothetical or limiting conditions that directly affect the appraisal.

CHAPTER 11:

The Appraisal of Partial Acquisitions

David Layne

and

The International Valuation Committee

INTRODUCTION

The primary function of an appraisal for right of way purposes is to assist the acquiring agency in establishing just compensation. Under law, the payment of just compensation is required for the acquisition of private property for public use. To be effective in right of way valuation, the appraiser must have a thorough knowledge of appraisal fundamentals and the valuation process, the appraisal techniques specific to partial acquisitions, a basic understanding of engineering plan reading, and a knowledge of the controlling laws and jurisdictional requirements.

BASIC TERMINOLOGY

Like other professions, right of way appraising uses specific language and terminology. Some of the more frequently used words and terms are: benefits, compensable damages, condemnor, condemnation or expropriation, cost-to-cure, damages to the remainder, eminent domain, general benefits, larger parcel, part taken, remainder, and special or specific benefits.

Benefits, either general or special, are an increase in value to the remainder property subsequent to a taking for a public improvement. *Compensable damages* are the legally obligatory damages that are included in just compensation. The condemnor is the agency with the power of eminent domain. *Condemnation* or *expropriation* is the process that implements the agency's eminent domain power. A *cost-to-cure* is the amount of money necessary to restore a property component to its pretaking utility. *Damages to the remainder* (or damages, indirect damages, proximity damages, severance damages) are the loss in value to the remaining property as a result of a partial taking. The power of *eminent domain* is the right to take private property for a public purpose following due process of law and upon the payment of just compensation. *General benefits* are value increases that accrue to the community, in general, and the properties in the community as a result of the public

project. The *larger parcel* (or entirety) is the total property before the taking. Considerations in determining the larger parcel include contiguity, unity of ownership, and unity of use. The *part taken* is the portion of the larger parcel that is acquired. The *remainder* is the portion of the larger parcel that remains after a partial taking. *Special* or *specific benefits* are value increases to the remaining property as a result of a partial taking.

In concept, the valuation of a partial acquisition, or the acquisition of less than the fee interest, is relatively simple. The larger parcel is appraised before the acquisition, the value of the property after the acquisition is determined, and the difference represents just compensation; the total amount due the property owner. In addition, many agencies require the appraiser to allocate the just compensation amount among (1) the value of the taking, (2) damages to the remainder property, (3) benefits to the remainder property, and (4) cost-to-cure.

THE LARGER PARCEL

The first step in the appraisal of a partial acquisition is to determine the larger parcel. The larger parcel, or entirety, is the total property before the taking. Once determined, the valuation of the larger parcel is similar to the valuation of other properties for other uses.

The appraiser must understand and accurately determine what constitutes the larger parcel. If the process isn't completed correctly, a wide range of value opinions could result. Legal requirements and different jurisdictions influence the determination of the larger parcel. General considerations in determining the larger parcel include contiguity, unity of ownership, and unity of use. Historically, *contiguity* was defined as abutting parcels, or parcels in physical contact with one another. However, over time, legal decisions have expanded contiguity to include separated parcels, as long as the parcels have an interdependence. *Unity of title* includes ownership and legal control and, depending on the jurisdiction, may include property that is "held by a single entity, even if the real estate is divided into more than one estate owned by more than one individual or entity." (*The Dictionary of Real Estate Appraisal*.) *Unity of use* means that the parcel has a single use or one highest and best use. An analysis of the larger parcel, in addition to other factors, includes an understanding of the appraisal effective date and the possible impacts of the project on property value before the appraisal effective date.

The valuation (or appraisal effective) date is legally determined, and may be the date of last property inspection, the date the action or taking is filed, the date of entry or possession, or possibly, the trial date. The appraisal effective date will be determined either by the agency, or legal or jurisdictional decisions. With only the rarest of exceptions, in valuing the larger parcel "before" a taking, the appraiser must disregard decreases or increases in value due to the public improvement project. The exception is for items of physical deterioration within the reasonable control of the property owner.

VALUE ALLOCATIONS

The allocation of values among land, land improvements, and building improvements is usually necessary in eminent domain appraising. Because partial acquisitions acquire only a portion of the land or only some of the improvements, the right of way appraiser allocates the value of each of the property's major components. This enables the appraiser to identify and isolate the specific areas of the property that are affected by the partial taking and helps to ensure that the appraised value will reflect the correct relationship between the components acquired and the parts remaining.

A market study will aid the appraiser in determining the typical comparison units or contributory values for the specific property type. Once the relevant comparison units have been identified, the unit values can be estimated, usually through a study of market data, and the contributory value of the units to the whole, or larger parcel, can be estimated. For example, if the larger parcel contains a total area of 40 acres, consisting of two different land types, the values, based on market analysis, might be allocated as follows:

Irrigated pasture: 30 acres @ \$750/acre =	\$	22,500
Dry pasture: 10 acres @ \$250/acre =		<u>2,500</u>
Total Value of the Larger Parcel: =	\$	25,000

An improved property's value may be allocated in a similar manner. For example, based on the sales comparison approach, the appraiser develops a value opinion of \$650,000 for a commercial property improved with two buildings. Based on each component's contributory value, the allocated values may be:

Land: 40,000 s.f. @ \$6.50/s.f. =	\$	260,000
Site Improvements: =	\$	40,000
Building Improvements:		
Building Number One:	\$	300,000
Building Number Two:	\$	50,000
Total Building Improvement Value: =	\$	<u>350,000</u>
Total Value of the Larger Parcel: =	\$	650,000

RIGHTS TO BE ACQUIRED

Crucial to the right of way taking valuation process is an understanding of the property rights (fee or easement) to be acquired. To develop a value opinion, the appraiser needs to understand the applicable laws and the nature of the rights taken.

Fee Takings

The fee taking involves the acquisition of the fee simple estate, the full bundle of rights. It represents 100% of all the property rights.

Easements

An easement is a nonpossessory interest, which one has in the property of another. An easement restricts but does not abrogate the underlying fee owner's rights. There are three broad easement classes: (1) overhead, (air rights, aviation, utilities), (2) sub-surface (utilities, pipelines, storage), and (3) surface (access, conservation, flowage, right of ways).

The easement rights to be acquired necessitate an understanding of the nature of the easement, the acquiring agency's uses, the term of the easement (temporary or permanent), and the rights remaining to the property owner.

VALUE OF THE PART TAKEN

Fee Takings

To determine the value of a fee taking, the appraiser multiplies the quantity taken (number of acres, hectares, square feet, square meters, and so forth) by the before unit value for the item. For example, assume the agency will acquire from a 300-acre tillable land parcel, 3 acres in fee. The appraiser located the following market data: Sale No. 1 sold recently for \$275,500. The sale includes 290 acres of tillable land. Sale No. 2 also sold recently for \$332,500. This sale contains a total of 350 acres of tillable land. Therefore:

Sale No. 1:

290 acres @ \$950/acre = \$ 275,500

Sale No. 2:

350 acres @ \$950/acre = \$ 332,500

Therefore, the value of the 3-acre fee taking from the subject property is \$2,850 (3 acres tillable land × \$950/acre).

At times, once the larger parcel is identified, the appraiser may be able to establish zones of value. A zone of value may result from different uses (such as, present or highest and best), variations in the property's physical characteristics (such as, soil type, topography), or physical separation by environmental factors, either natural or artificial (such as, streams, roads) that result in different values for each component. As a result, each zone is valued based on its specific characteristics with different comparable sales data or by the analysis of the contributory value of that zone of value to the larger parcel.

For example, assume the agency will acquire from a 300-acre (200 acres tillable and 100 acres pasture) land parcel a total of 3 acres; 2 acres tillable land and 1 acre of pasture, in fee. In addition to the two sales cited above, the appraiser located two additional sales: Sale No. 3 sold recently for \$50,000. The sale consists of 125 acres of pasture. Sale No. 4 also sold recently for \$30,000. This sale contains a total of 75 acres of pasture.

Therefore,

Sale No. 3:

125 acres @ \$400/acre =\$ 50,000

Sale No. 4:

75 acres @ \$400/acre =\$ 30,000

Therefore, the value of the 3-acre fee taking from the subject property is \$2,300 ([2 acres tillable land × \$950/acre] + [1 acre pasture × \$400/acre]).

Allocation of land values is often applicable with agricultural or rural properties when property characteristics such as soil types, topography, use, zoning, and so on lend themselves to logical property divisions.

At other times, it may be administratively, legally, and physically possible to use a “front land/back land” theory valuation method. When appropriate, this technique allows the appraiser to pay back land values even though frontage is acquired. At times, this approach is appropriate with narrow land strip takings that are required for road widening projects. In applying this method, the appraiser views the taking as an acquisition of back land, with the front land remaining constant and unaffected by the take. This results in the payment for the take at the back land value.

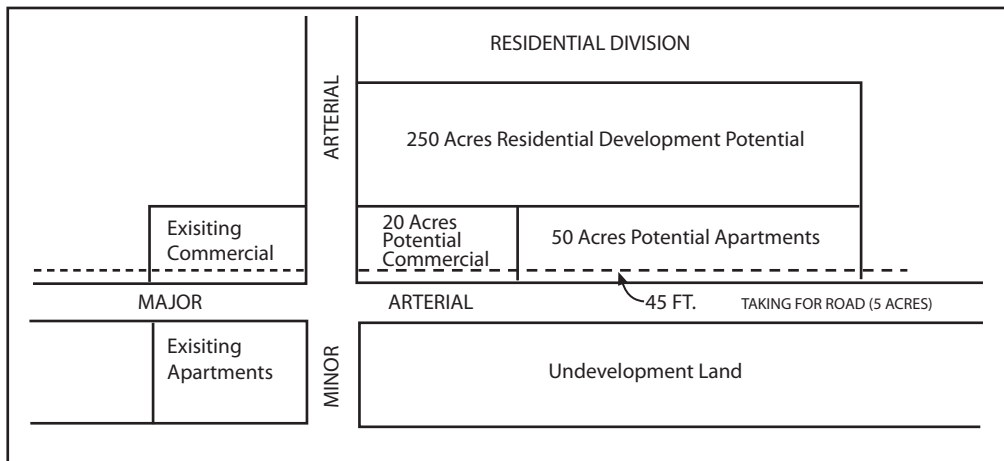


Figure 11.1: “Front/Back Land” Theory

For example, Figure 11.1 illustrates the “front land/back land” theory. Assume the larger parcel contains 320 acres and has a multiple highest and best use: (1) potential residential development, (2) commercial use, to a 200 prime’ depth, and (3) apartment use, also to a 200 prime’ depth. The public project is to widen the major arterial. The project will require the taking of a strip 45 prime’ in depth along the property’s major arterial frontage. It may be feasible that after the taking, the commercial potential can continue to exist for a 200’ depth from the new right of way line. If in fact, that premise is correct, under the “front land/back land” theory, the appraiser could value the take at the rear residential development land value.

In some instances, the front land simply cannot “move back,” because of agency policy, building improvements on the property, zoning regulations, judicial decisions, or topographic features. In the instances when the front land cannot “move back,” values will be developed based on the highest and best use for each area as indicated in Figure 12.1 without any possibility of utilizing the “front land/back land” theory.

Easements

The easement value depends on the nature of the easement, the rights taken, the easement term, and the rights that remain with the property owner. Some easement takings have only minimal effect on property values, while others can result in a significant value loss. Easements rarely transfer in the marketplace, and consequently, direct market support is generally not available. At times, the appraiser may be able to support easement values through an allocation process. For example, assume the appraiser located two sales. The sale properties are comparable to the subject property and to each other, with the exception that one sale contains an easement area and one sale does not. The difference in sale price between the two sales will represent the contributory value of the easement area to the sale price. This technique involves classic paired data analysis. Continuing, Sale No. 1 sold recently for \$275,500. The sale includes 290 acres of tillable land. Sale No. 5 also sold recently for \$308,750. This sale contains a total of 340 acres of tillable land, of which 25 acres are encumbered with an electric transmission line easement. Therefore,

Sale No. 1:

290 acres @ \$950/acre = \$ 275,500

Utilizing Sale No. 1 to assist in the allocation of Sale No. 5 between the unencumbered tillable acreage value and the encumbered tillable acreage value results in the following:

Sale No. 5:¹

315 acres @ \$950/acre = \$ 299,250

25 acres (encumbered) @ \$380/acre = \$ 9,500

340 acres \$ 308,750

Often agencies apply administratively derived percentages based on their determination of the percentage of rights acquired and on the basis of previous judicial decisions. For example, a highway taking for the installation of a drainage ditch effectively requires almost the full bundle of rights. In such a case, the agency may apply a 90% rate to the fee simple value. For example, an acquisition of 2 acres of tillable land in a permanent easement, with an unencumbered fee simple value of \$950/acre, would result in the following:

2 acres × \$950/acre × .90 = \$ 1,710

¹ \$308,750 - (315 acres x \$950/acre) = \$9,500. \$9,500/25 acres (encumbered) = \$380/acre. The \$380 represents the contributory value of an acre of tillable land encumbered by an easement.

Finally, assume that the highway acquisition is for the installation of a drainage pipe and appurtenances. Again, based on its determination as to the percentage of rights acquired and on the basis of previous judicial decisions, the agency might conclude that a 50% rate to the fee simple value is appropriate. Therefore, based on this example, the agency would value the permanent easement at \$950 (2 acres × \$950/acre × .50 = \$950).

EFFECTS OF THE TAKING ON THE REMAINDER

The specific impacts of the acquisition on the remainder must be considered in a right of way appraisal. When analyzing the impact of the taking on the remainder, the appraiser should visualize the remainder property as if the public improvement has already been constructed. This visualization is aided by an analysis of the project plans, profiles, and cross-sections and discussions with the engineering staff to help the appraiser understand fully the use to which the acquired area will be put and its relationship to and impact on the remainder.

The appraiser's analysis of the impact of the proposed improvements on the remainder may include consideration of decreased functional utility, drainage change, grade change, highest and best use change, improvement to site orientation change, loss of parking, loss of or limitation of access, loss of view, nonconforming use, reduction in usable area, setback change, topography change, and uneconomic remnants.

THE REMAINDER PARCEL

The appraisal of the remainder parcel involves the valuation of the new, remainder property. Remainder valuation involves the reanalysis of the valuation process as if the take has been accomplished and the public project completed. This reanalysis may require the analysis of additional or new market data that are comparable to the after, or remainder, property. It is important to note that the remainder value must be supported to the same extent as the larger parcel valuation.

DAMAGES AND BENEFITS

An important concept in the determination of damages and benefits is that both must be legally compensable and measurable.

Compensable damages are the legally obligatory damages that are included in just compensation and represent the loss in value to the remainder property as a result of a partial taking. Benefits, either general or special, are an increase in value to the remainder property subsequent to a taking for a public improvement. General benefits are value increases that accrue to the community in general and to the properties in the community as a result of the public project. Special benefits are value increases to the remainder property as a result of a partial taking.

In the analysis of damages and benefits, the appraiser must be able to accurately visualize the property after the taking. If the appraiser is unable to do so, a distorted and inaccurate after property appraisal can result. There are various methods the appraiser can use to analyze damages and benefits to the remainder. In income producing properties, changes in rents and capitalization rates may be considered. Depreciation changes may result if the taking results in changes in functional and external obsolescence factors. The use of different sales data—from the valuation of the larger parcel—is an excellent method to analyze possible damages and benefits.

The use of cost-to-cure estimates is often employed in order to weigh the relationship between the damage amount and the cost-to-cure estimate. Finally, an analysis of highest and best use after the taking may demonstrate whether or not the acquisition will cause either damages or benefits to the remainder property. In developing estimates of damages to the remainder, care must be exercised to ensure that the value of the taking is not duplicated in the calculation of damages. For example, the rent loss between the larger and remainder parcels can reflect the rent loss resulting from both the taking and damages to the remainder. If the capitalized rent loss is used to measure damages only, the rent loss attributable to the part taken must be excluded. Similarly, calculations of a cost-to-cure should not contain an amount for items included in the value of the part taken. There are times when the impact of the acquisition on the remainder can be mitigated, in full or in part, through a cost-to-cure, an expenditure to fix or restore an item to its pre-take utility. A cost-to-cure analysis involves the identification of the item that is considered for a cure, the cost to effect the cure, and the damage to the remainder should the cure not be made. Examples of items that are frequently valued on the basis of a cost-to-cure are agricultural fencing, parking areas, septic systems, and water wells.

As stated previously, the appraiser in the application of a cost-to-cure must exercise care. The appraiser must not include a duplication of payments by paying for the item, as part of the value of the part taken, and paying for the item again, by providing for the full replacement cost under a cost-to-cure.

The test of whether or not the cost-to-cure is economically feasible is its cost in comparison to the damage that will result to the remainder property should the cure not be made. If the cost-to-cure is less than, or equal to, the damage amount if the cure is not effected, the cost-to-cure is feasible and should be undertaken. If the cure is higher than the damage amount to the remainder property, then the compensation will include the damage amount.

UNIQUE RIGHT OF WAY CONSIDERATIONS

The right of way appraisal presents special issues or problems not usually encountered in other appraisal assignments. Because of the appraisal function, different treatments or considerations may be required. Some unique right of way concerns include contaminated properties, fixtures, landlocked remainder parcels, special purpose properties, specialty reports, and tenant owned improvements.

Contaminated Properties

In eminent domain cases involving suspected or actual contamination, it is necessary that the appraiser notifies the retaining agency official, or attorney if they are not already aware of this observation. Additionally, for any potentially (or actually) contaminated property, the state licensed appraiser is highly encouraged to be guided by *the Uniform Standards of Professional Appraisal Practice's (USPAP) Advisory Opinion 9 (AO-9), The Appraisal of Real Property That May Be Impacted by Environmental Contamination*.

Usually, the remediation or compliance cost estimation involves knowledge beyond that of most appraisers; therefore, reliance is placed on estimates provided by other experts. While not always the case, at times the remediation cost estimate for properties that are involved in involuntary conversions (condemnation or expropriation) are the costs that the property owner may typically be expected to incur rather than the agency. In the valuation of property as impaired, the possible change in cost use, and *environmental risk* (the additional or incremental risk of investing in, financing, buying and/or owning property attributable to its environmental condition, (USPAP) and the remediation lifecycle, must be considered. Therefore, the possible basic formula to value environmentally impaired property is: value impaired (VI) equals value unimpaired (VU) minus remediation costs (R) minus stigma (S) minus environmental risk (ER), or $VI = VU - R - S - ER$.

Fixtures

The definition of a fixture is relatively straightforward, but its interpretation in law can be complex. Classically, a *fixture* is a personalty item that has become part of the real estate. There are three traditional fixture tests: (1) the manner in which the item is affixed, (2) the item's adaptation to the real estate, and (3) the intent of the entity who attached the item. When confronted with a possible fixture issue, the appraiser should consult the agency and its attorney to determine the correct treatment.

Landlocked Remainder Parcels

Another unique situation results from the landlocking of a remainder property. Some agencies are mandated to offer the property owner the opportunity to sell the landlocked or uneconomic remnant to the agency. Other agencies may acquire the landlocked parcel as excess right of way.

Special-Purpose Properties

A special-purpose property is one that has only limited or no marketability potential because of its construction, design, functional utility, or highest and best use. Common examples are auditoriums, educational facilities, religious institutions, museums, and other public buildings. Market data is limited or not available in the forms of either comparable sales or income and expense data for special purpose property. Therefore, the cost approach generally constitutes the only applicable approach to solving the valuation problem. Utilizing the cost approach in special purpose property situations requires a more

detailed and exacting determination of both the cost new, possibly through the use of the quantity survey method, and a far more detailed analysis of depreciation, possibly through the use of the breakdown method.

Specialty Reports

At times, the use of specialty reports, or a specialized expert's value opinion of a portion of the property is included in the appraisal report. Specialty reports assist the appraiser in determining the contributory value of specialty property items. Specialty items may include equipment and machinery, fixtures, minerals, timber estimates, and remediation costs. Contractor prepared cost-to-cure estimates, may or may not be in writing, and depending on their complexity, may or may not be considered to be specialty reports.

Unless the appraiser has competence in the subject matter area addressed by the specialty report, the appraiser should consider having the specialty report reviewed by a subject matter expert before its inclusion in the appraisal report.

Tenant Owned Improvements

Tenant owned buildings, structures, and improvements that will be acquired or affected are usually appraised. The valuation is usually based on their contributory value, as if they would be allowed to remain for their typical life expectancy, or valued on a salvage value basis, whichever is greater.

APPRAISAL REPORTS

The eminent domain appraisal report may differ little from an appraisal report for any other appraisal function. The report must clearly and accurately set forth the appraisal in a manner that will not be misleading, that contains sufficient information to enable the users to properly understand the report properly, and clearly and accurately disclose any extraordinary assumptions, and any hypothetical or limiting conditions that directly affect the appraisal (*USPAP*).

The report may be self-contained, summary, or restricted use. The difference in formats is in the content and reporting level (*USPAP*). Notwithstanding the written appraisal report type, it must include the identity of the client and any intended users, the appraisal's intended use, sufficient information to identify the real estate and any relevant physical and economic characteristics, the real property interest being appraised, the appraisal's purpose including the type and definition of value and its source, the appraisal effective date and the appraisal report date, the appraisal scope, and any assumptions, hypothetical and limiting conditions. In addition, the report must include the procedures followed, the information analyzed, and the reasoning employed to support the analysis, opinions, and conclusions. Also, the appraisal report needs to include the real estate use (as of the appraisal effective date) and the real estate use reflected in the appraisal, a highest and best use statement and rationale (if the purpose of the valuation is to develop a market value opinion). The appraisal report should contain, if necessary, a

statement and explanation of any departure from specific *USPAP* requirements. Finally, a signed certificate should be included.

Appraisal reports that relate to eminent domain may follow a value finding, a short form, or a detailed format. Generally, a value finding appraisal format can be used when the appraisal problem is uncomplicated and the total acquisition value is low. Specifically, the format is appropriate if land only, or land with minor improvements, and damages to the remainder property are nominal or can be measured by a cost-to-cure. Also, this format can be used if the highest and best use is the present use, and provided that use will not be significantly affected by the proposed improvement. Finally, a value finding appraisal can be used if there is adequate data to develop a value opinion by the sales comparison approach. This report type has both benefits and weaknesses. The benefits include cost and timesaving, reduced paperwork, simplicity, and speed. The major weaknesses in a value finding appraisal format are that it may not meet minimum standards, the format may not reflect a before and after appraisal, and appraisers may expand the format beyond its intended design.

The short form appraisal format may be used when the appraisal problem is uncomplicated, and a complex specialty appraisal report is not required. In addition, and, as with the value finding appraisal, the format is appropriate when the highest and best use is the present use and will not be significantly affected by the proposed improvement. The short form appraisal format is appropriate when there is adequate data to develop a value opinion by the sales comparison approach, and damages are nominal and can be either measured by the cost-to-cure or by fully explained reasoning. The benefits to a short form appraisal format include the avoidance of unnecessarily long appraisal reports, the format expedites the appraisal report and appraisal review report preparation, it reduces paperwork, and speeds up the process. The major weaknesses in a short form appraisal format are that it may not be adequate for court purposes, the format may not reflect a before and after appraisal, and the short form appraisal may possibly expand the format beyond its intended design.

The detailed appraisal format should be used when the appraisal problem is complex and/or a complex specialty appraisal report is required. This format will also be used when the highest and best use is not the present use, when damages, other than a cost-to-cure, are not nominal, and when there are decreases or increases in value due to the proposed improvement. Additionally, this format is used when market data for a sales comparison approach are inadequate and consideration must be given to the cost and income capitalization approaches, the other formats are inappropriate, or there is a probability of an eminent domain proceeding.

The benefits of a detailed appraisal format include acceptance by the courts, it provides maximum documentation, and the format usually meets or exceeds agency standards. The major weaknesses of this format are that it may encourage excessive documentation, the format may encourage reliance on an approach other than the sales comparison approach when adequate market data are available, and a detailed appraisal format tends to increase

appraisal costs. The overriding question that the agency and the appraiser should ask and answer is: "Does the appraisal report format adequately address the scope of work?"

METHODS TO REPORT VALUE COMPONENTS IN THE APPRAISAL REPORT

Right of way appraisers are usually required to allocate the various components of the total appraised value. The following examples provide the appraiser with techniques to isolate the several possible value components such as part taken, cost-to-cure, damage to the remainder, and benefits to the remainder in developing an appraised value. The examples may assist the appraiser in understanding better the State (Summation) Method and the Federal (Before and After) Rule, which will be discussed in greater detail later. However, whatever format the appraiser uses, it is crucial to have a complete understanding of compensability, including damage and benefit offsets in the specific jurisdiction.

State (Summation) Method

One format that may be used includes the following items:

1. Value of the Larger Parcel (before the acquisition).
2. Value of the Part Taken.
3. Value of the Remainder (as part of the whole).
4. Value of the Remainder (after the taking and disregarding benefits).
5. Damages to the Remainder Property.
6. Value of the Remainder (after the taking and considering benefits).
7. Benefits to the Remainder Property.
8. Net Damages or Net Benefits.
9. Total Appraised Value.

The following are two examples of the State (Summation) Method.

Value of the Larger Parcel (before the acquisition)

Using the above format and examples cited earlier in the chapter, the values of the larger parcel are as follows:

Example 1:

The larger parcel contains a total area of 40 acres, consisting of both irrigated and dry pasture.

Irrigated pasture: 30 acres @ \$750/acre =	\$	22,500
Dry pasture: 10 acres @ \$250/acre =	\$	2,500
Total Value of the Larger Parcel =	\$	25,000

Example 2:

The larger parcel is an improved property with a site area of 40,000 s.f. and improved with typical land improvements and two building improvements.

Land: 40,000 s.f. @ \$6.50/s.f. =	\$	260,000
Land Improvements =	\$	40,000
Building Improvements:		
Building Number One	\$	300,000
Building Number Two	\$	50,000
Total Building Improvement Value =	\$	350,000
Total Value of the Larger Parcel =.....	\$	650,000

Value of the Part Taken (as part of the whole)

To determine the value of the part taken, or the portion of the larger parcel that is acquired, multiply the quantity taken by the before unit value of that particular item.

Example 1:

Assume that 2 acres of irrigated pasture and 1 acre of dry pasture are acquired. The value of the part taken, as part of the whole, is:

Irrigated pasture: 2 acres @ \$750/acre =	\$	1,500
Dry pasture: 1 acre @ \$250/acre =	\$	250
Value of the Part Taken (as part of the whole) =	\$	1,750

The value of the land taken is the per acre value, developed through a market study of similar land sales multiplied by the quantity taken.

Example 2:

Assume that 10,000 s.f. of land, land improvements with a contributory value of \$12,500, and building number two are included in the take area. The value of the part taken, as part of the whole is:

Land: 10,000 s.f. @ \$6.50/s.f. =	\$	65,000
Land Improvements =	\$	12,500
Building Improvements:		
Building Number Two =	\$	50,000
Value of the Part Taken (as part of the whole) =	\$	127,500

The value of the land taken is the per square foot value, developed through a market study of similar land sales multiplied by the quantity taken. The land improvement taken value is the contributory value of the land or site improvements to the property. The building

improvement value is the contributory value of the improvement, usually determined through a comparison of comparable sales to the subject property. All buildings, structures, and improvements that will be acquired or affected must be appraised, whether or not they are owned by the fee owner or a tenant. Usually, tenant-owned improvements are appraised based on their contributory value, as if they would be allowed to remain for their typical life expectancy, or valued on a salvage value basis.

Value of the Remainder (as part of the whole)

Calculation of this value is simply the arithmetic difference between the value of the larger parcel (before the acquisition) and the value of the part taken (as part of the whole).

Example 1:

Value of the Larger Parcel (before the acquisition) =	\$	25,000
Value of the Part Taken (as part of the whole) =	\$	(1,750)
Value of the Remainder (as part of the whole) =	\$	23,250

Example 2:

Value of the Larger Parcel (before the acquisition) =	\$	650,000
Value of the Part Taken (as part of the whole) =	\$	(127,500)
Value of the Remainder (as part of the whole) =	\$	522,500

Value of the Remainder (after the taking and disregarding benefits)

In this format, the next step is to value the remainder as a separate parcel. This valuation is an entirely new appraisal and is the total value of the property remaining, after the taking, but disregarding benefits. Because this appraisal is new, care must be taken to ensure that highest and best use has been analyzed carefully, and that the comparable data are truly comparable to the remainder property. Ideally, when damages to the remainder are anticipated, the valuation of the remainder (after the taking and disregarding benefits) will include the use of different data from that which was used in the valuation of the larger parcel (before the acquisition). The purpose of using different data is to minimize the impact of subjective conclusions.

Example 1:

Irrigated pasture: 28 acres @ \$750/acre =	\$	21,000
Dry pasture: 9 acres @ \$250/acre =	\$	2,250
Value of the Remainder (after the taking and disregarding benefits) =	\$	23,250

Example 2:

Land: 30,000 s.f. @ \$5.50/s.f. ² =	\$	165,000
Land Improvements =	\$	27,500

² An analysis of additional comparable land sales, after the taking, indicated the subject land value at \$5.50 per s.f.

Building Improvements:		
Building Number One =	\$	300,000
Value of the Remainder (after the taking and disregarding benefits) =	\$	492,500

Damages to the Remainder Property

To determine damages to the remainder, simply calculate the difference between the value of the remainder (as part of the whole) and the value of the remainder (after the taking and disregarding benefits).

Example 1:

Value of the Remainder (as part of the whole) =	\$	23,250
Value of the Remainder (after the taking and disregarding benefits) =	\$	(23,250)
Damages to the Remainder Property =	\$	0

Example 2:

Value of the Remainder (as part of the whole) =	\$	522,500
Value of the Remainder (after the taking and disregarding benefits) =	\$	(492,500)
Damages to the Remainder Property =	\$	30,000

Value of the Remainder (after the taking and considering benefits)

In this example, the procedure followed is similar to the value of the remainder step (after the taking and disregarding benefits) with the remainder valued as a separate parcel. However, at this point in the process, benefits are considered.

Because this appraisal is new, it is important for the appraiser to consider a possible change in highest and best use, and data that are different from that which was previously considered.

Example 1:

Irrigated pasture: 28 acres @ \$750/acre =	\$	21,000
Dry pasture: 9 acres @ \$250/acre =	\$	2,250
Value of the Remainder (after the taking and considering benefits) =	\$	23,250

Example 2:

Land: 30,000 s.f. @ \$5.50/s.f. ² =	\$	165,000
Land Improvements =	\$	27,500
Building Improvements:		
Building Number One =	\$	300,000
Value of the Remainder (after the taking and considering benefits) =	\$	492,500

Benefits to the Remainder Property

This step involves simply calculating the mathematical difference between the value of the remainder (after the taking and disregarding benefits) and the value of the remainder (after the taking and considering benefits).

Example 1:

Value of the Remainder (after the taking and disregarding benefits) =	\$	23,250
(after the taking and disregarding benefits)		
Value of the Remainder (after the taking and considering benefits) =	\$	(23,250)
Benefits to the Remainder Property =	\$	0

Example 2:

Value of the Remainder (after the taking and disregarding benefits) =	\$	492,500
Value of the Remainder (after the taking and considering benefits) =	\$	(492,500)
Benefits to the Remainder Property =	\$	0

Net Damages or Net Benefits

This is a mathematical computation and is the difference between the damages to the remainder property and the benefits to the remainder property.

Example 1:

Damages to the Remainder Property =	\$	0
Benefits to the Remainder Property =	\$	0
Net Damages or Net Benefits =	\$	0

Example 2:

Damages to the Remainder Property =	\$	30,000
Benefits to the Remainder Property =	\$	0
Net Damages =	\$	30,000

Total Appraised Value

Example 1:

Value of the Part Taken (as part of the whole)		
2 acres @ \$750/acre =	\$	1,500
1 acre @ \$250/acre =	\$	250
.....	\$	1,750

Because the total damages represent the value of the part taken, and there are no damages or benefits to the remainder, the total appraised value is \$1,750.

Example 2:

Value of the Part Taken (as part of the whole).....	\$	127,500
Damages to the Remainder Property	\$	<u>30,000</u>
.....	\$	157,500

The total appraised value is the sum of the value of the part taken (as part of the whole) and the damages to the remainder property (as there are no benefits to the remainder property).

Example 1:

Before Value

Irrigated pasture: 30 acres @ \$750/acre =	\$	22,500
Dry pasture: 10 acres @ \$250/acre =	\$	<u>2,500</u>
Total Before Value =	\$	25,000

After Value

Irrigated pasture:28 acres @ \$750/acre =	\$	21,000
Dry pasture: 9 acres @ \$250/acre =	\$	2,250
Total After Value =	\$	23,250

Total Appraised Value

Total Before Value =	\$	25,000
Total After Value =	\$	<u>23,250</u>
Total Appraised Value =	\$	1,750

Analysis of Total Appraised Value: Value of the Part Taken:

2 acres @ \$750/acre =	\$	1,500
1 acre @ \$250/acre =	\$	250
.....	\$	<u>1,750</u>

Because the total damages represent the value of the part taken, and there are no damages or benefits to the remainder, the total appraised value is \$1,750.

Example 2:

Before Value

Land: 40,000 s.f. @ \$6.50/s.f. =	\$	260,000
Land Improvements =	\$	40,000
Building Improvements:		
Building Number One:	\$	300,000
Building Number Two:	\$	50,000
Total Building Improvement Value =	\$	350,000
Total Before Value =	\$	650,000

After Value

Land: 30,000 s.f. @ \$5.50/s.f. =	\$	165,000
Land Improvements =	\$	27,500
Building Improvements:		
Building Number One =	\$	300,000
Total After Value =	\$	492,500

Total Appraised Value

Total Before Value =	\$	650,000
Total After Value =	\$	492,500
Total Appraised Value =	\$	157,500

Analysis of Total Appraised Value: Value of the Part Taken

Land: 10,000 s.f. @ \$6.50/s.f. =	\$	65,000
Land Improvements (\$40,000 – \$27,500) = 12,500 Building Number Two = ...	\$	50,000
.....	\$	127,500
Damages to Remainder Property: Land: 30,000 s.f. @ \$1.00/s.f. =	\$	30,000
(\$6.50/s.f. – \$5.50/s.f.)		
Total Appraised Value =	\$	157,500

**THE FEDERAL (BEFORE AND AFTER) RULE AND THE STATE
(SUMMATION) METHOD**

There are two methods used to value partial acquisitions; the Federal (Before and After) Rule and the State (Summation) Method. The Federal (Before and After) Rule provides for the payment of the difference between the value before the acquisition and the value after the acquisition. With the Federal Rule, benefits can offset both the value of the part taken and damages to the remainder. The State (Summation) method allows payment for the part taken plus any damages to the remainder minus any benefits to the remainder. The amount for damages minus the amount for benefits cannot be less than zero.

Federal (Before and After) Rule

1. Before Value: 5 acres @ \$2,500/acre =	\$	12,500
2. After Value: 3.5 acres @ \$3,000/acre =	\$	10,500
3. Total Appraised Value (before value – after value) =	\$	2,000

State (Summation) Method

1. Value of the Larger Parcel: 5 acres @ \$2,500/acre =	\$	12,500
2. Value of the Part Taken (as part of the whole) 1.5 acres @ \$2,500/acre =	\$	3,750
3. Value of the Remainder (as part of the whole [1–2]) \$12,500 – \$3,750 =	\$	8,750
4. Value of the Remainder (after the taking and disregarding benefits) 3.5 acres @ \$2,250/acre =	\$	7,875
5. Damages to the Remainder Property (3–4) \$8,750 – \$7,875 =	\$	875
6. Value of the Remainder(after the taking and considering benefits) 3.5 acres @ \$3,000 /acre =	\$	10,500
7. Benefits (6–4) \$10,500 – \$7,875 =	\$	2,625
8. Net Damages or Net Benefits (cannot be less than zero) (5–7) \$875 – \$2,625 =	\$	0
9. Total Appraised Value (2 + 8) \$3,750 + 0 =	\$	3,750

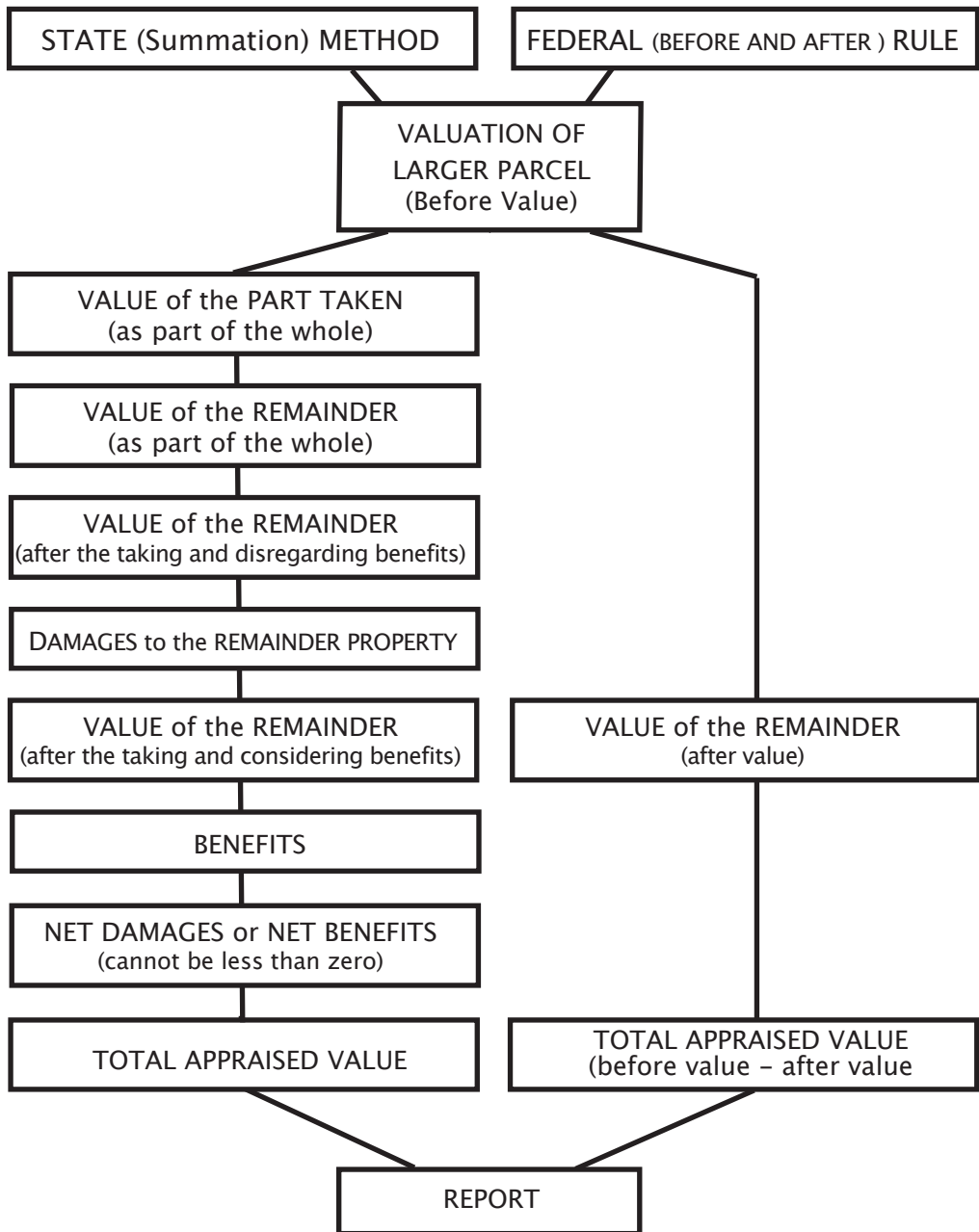


Figure 11.2: The Federal (Before and After) Rule and the State (Summation) Method

SUMMARY

The right of way appraiser is concerned with the change in value that results when only a part of the property or only some of the bundle of rights are acquired. The appraiser must be able to visualize and analyze the property changes to develop a value opinion of the compensable value loss. The appraiser will consider the value of the part taken and damages and benefits to the remainder property. However, the amount that is ultimately established as just compensation will depend on the jurisdiction's laws, regulations, and judicial decisions as they may relate to compensability.

While the valuation process is the basic framework of any appraisal, the right of way appraiser must understand and employ the specific appraisal techniques that relate to partial acquisitions. In addition, the appraiser must have a basic knowledge of engineering plan reading, the laws and regulations of the jurisdiction in which the property is located, and agency specific requirements.

CHAPTER 12:

Skills and Attitude for Successful Negotiation

———— Donna Harrison, Tamara Benson, and Janet Cruppi ————

and

the International Relocation Committee

INTRODUCTION

The negotiation skills so critical to success in property acquisition are the product of each individual's background, training, and experience. This chapter discusses basic negotiation skills and provides a foundation for individual development. For the novice negotiator, the information may be invaluable and help prevent the occasional negative consequences of a trial and error approach. Another purpose of this chapter is to provide an understanding of the relationship between skills and attitudes, since a property agent's performance is a product of both.

It is always possible to improve skills through practice; but attitudes are changed through new understandings. To change an attitude, it is necessary to "unfreeze" or become open to change. By being aware that a specific attitude may block effectiveness, a person can consider whether or not to change. The next step is to "change" and learn, hopefully, how the new attitude improves effectiveness. Finally, by "refreezing," a person receives reinforcement of the new attitude, such as positive acknowledgment from a peer or manager.

ATTITUDES ASSOCIATED WITH SUCCESSFUL NEGOTIATION

There is no one, fixed set of attitudes that are necessary to become a successful property agent. The ideal set of attitudes for working successfully with one property owner might be quite different from that which is needed to work effectively with another owner. However, there are some attitudes that are generally helpful in improving negotiation effectiveness, particularly integrative negotiation.

Self-Trust

A variety of attitudes can contribute to self-trust. Self-trust may manifest itself as self-respect, self-knowledge, and self-confidence. A property agent who has self-trust can more easily trust other people.

Creativity and Conformity

An effective property agent usually has a healthy and balanced attitude toward creativity and conformity. In problem solving negotiation, a property agent must be able to present creative suggestions to a property owner. However, most public, quasi-public agencies, and private corporations have policies and procedures dealing with property agent conduct, which tends to force conformity. Conformity is also maintained by laws governing eminent domain and by complex systems of checks and balances on the expenditure of public and corporate funds. As a result, most property agents work in situations where the freedom to act creatively may be limited. To be successful, property agents must possess attitudes that prevent conformity from completely interfering with or limiting their creativity in problem solving. Property agents must develop a tolerance and understanding for rules that are beyond their control; rules that are imposed by the norms of the environment in which they operate.

People Orientation

Property agents who are comfortable with others often enjoy listening. In addition, they are concerned about the property owner's problems and are stimulated by the chance to help solve them. Because of their listening skills, these property agents establish an interpersonal environment in which the property owner wants to communicate.

Self-Motivation

A successful property agent must be self-motivated and enjoy working independently. Most right of way agents do not operate under constant supervision and while the agreements that a property agent enters into are reviewed and approved, most managers do not have the time, desire, or need to monitor closely the property agent's actions or to provide constant supervisory feedback.

In addition, a person who prefers a structured "9 to 5" work schedule may have difficulty adjusting satisfactorily to being a right of way agent. Many of the contacts with property owners are in the evening or on weekends. A successful property agent must be one who is willing to meet with the owner on the property owner's schedule and for as long as the property owner wants to talk.

A successful property agent must have the ability to work under pressure. A common pressure is the time constraint to meet project construction schedules. In addition, there may be pressure from a property owner who presents obstacles to the negotiation process, such as the unwillingness to arrive at a mutual agreement.

Adaptability to Change

If an agent has a tendency to resist change, it may be difficult to deal with the same resistance when exhibited by a property owner. Positive attitudes toward change help property agents listen with more empathy to suggestions, ideas, and concerns from the owner. An attitude that resists change greatly interferes with the effectiveness of an agent in integrative or problem solving negotiation.

Closely associated with attitudes toward change are a property agent's attitudes toward conflict. An agent who either avoids conflict or, at the other extreme, aggressively enters into conflict situations may have difficulty in integrative negotiation. An agent must view conflict as a normal reaction to change and an opportunity to use their professional skills to solve problems caused by the change.

Ethical Sensitivity

Ethical sensitivity is the ability to make decisions that are consistent with high moral principles or values. Before a property agent can do an effective job of integrative negotiation, there must be a belief that the technical determinations of the organization (e.g., the just compensation) are correct. If this belief does not exist, ethics dictate that the agent be willing to negotiate within the organization to bring about a change or, if that is not possible, to decline to undertake the specific task.

Property agents who are insensitive to job related ethical considerations might have difficulty understanding the property owner's point of view. On the other hand, there are property agents who become so concerned about ethical considerations that they lose their objectivity. An ethically sensitive property agent can develop empathy, understanding the property owner's concerns, without having to sympathize or agree with the property owner. An agent's effectiveness in integrative negotiation depends on developing empathy with ethical considerations.

Thoroughness in Recordkeeping

Since all right of way acquisition decisions are subject to audit and legal review, a successful agent must be diligent in completing contracts and keeping records. Any agent who has a strong dislike for paperwork will be less than effective in performing the necessary documentation. Required documentation varies among organizations. Each project tract or parcel record will probably include a title report or title policy, an appraisal report, correspondence, forms, a record of contacts, and copies of completed documents. The tract or parcel record must be kept current and complete and include concise, accurate property owner contact notes. Data of a sensitive nature, which has no relevance to the acquisition, should not be included. Personal opinions or speculations should never appear in the record. All correspondence and recommendations for actions must be well written and based on empirical data and information gleaned from interviews, meetings and other sources and supported by documents of record and with legal or regulatory citations, when appropriate.

COMMUNICATION SKILLS NEEDED FOR SUCCESSFUL NEGOTIATION

Successful negotiation depends on a number of verbal and nonverbal communication skills. The skills allow the property agent and the property owner to maintain an open, interactive, and trust based relationship. Two important basic communication skills are showing empathy and engaging in feedback.

Empathy and Feedback

Empathy is understanding and being sensitive to the feelings, thoughts, and experiences of another person. Some people confuse empathy with sympathy. Sympathy goes far beyond empathy, and means agreeing with what the other person feels, thinks, and experiences. Negotiators may hesitate developing the ability to empathize with an owner as they think empathy may be confused with sympathy. The specialist needs a great deal of skill in demonstrating empathy without having it misunderstood as sympathy for the owner's position. Most people in a communication situation are simply seeking understanding or wanting to be heard, and do not necessarily expect agreement. Many times, when the property owner recognizes that the property agent really does empathize with the point of view, the property owner will also become more understanding, making it easier to deal with that issue and others, as well.

Some property agents are reluctant to provide a supportive reaction to a property owner's comment, believing that such a reaction might place them in a weakened bargaining position. This assumption is false. First, even in bargaining negotiation, some sharing of information is required and showing that a person understands another's feelings about a topic or issue may actually increase the property agent's leverage. Second, if the property agent shows little or no reaction to a comment, there will be little chance that communications will continue toward a solution. In many cases, it might be difficult for a person to refrain from giving feedback to a message. There are many nonverbal cues the property agent can send (such as, a raised eyebrow, frown, fidgeting, pulling back, and looking away). When a property agent sends this type of nonverbal signal, the property owner may interpret it as a negative or defensive reaction to what was said. When a property owner senses these signals and mentally processes them, the property owner may begin to respond in a similar manner.

Empathy requires skills for monitoring feedback. There are cues, from both the property owner and from the property agent, that give information indicating whether or not the parties understand each other. Monitoring feedback includes looking for signs; signs either that the property owner understands or does not understand what has been communicated. There are several techniques for monitoring feedback.

Empathetic Listening

In the process of monitoring feedback, a skilled agent will employ empathetic listening. Empathetic property listening involves listening for understanding and providing appropriate feedback to show sensitivity to the owner's feelings, thoughts, and experiences.

The first step in empathetic listening is to ask good primary questions. A primary question is, as the word implies, the first question asked on a topic. Except in cases where the agent desires to get a specific response (for example, "Are you the owner of this property?"); primary questions should be open ended. An open-ended question gives the owner the opportunity to direct the answer in any way the owner believes appropriate. Also, with

open-ended questions, more information is obtained, as the property owner is provided the freedom to expand on the answer to the extent desired. Open ended questions begin with “what,” “where,” “when,” “why,” and “how.” For example, the agent might begin a series of questions relating to a property owner’s future plans for the property by asking, “What plans do you have for the use of the property?”

This open-ended primary question gives the property owner the opportunity to explain fully what are the property’s future uses. In addition, as the property owner speaks, points might be raised that lead the negotiator to meaningful follow-up questions. However, the agent might have begun with a binary primary question. Binary questions direct an owner toward a categorization of responses. These questions begin with phrases such as: “are you,” “do you,” “have you,” “can you,” and “is it.” Binary questions usually result in a “yes” or “no” response. For example: “Do you have any plans for the future use of this piece of property?” As this question is very likely to be answered “yes” or “no”; it will fall to the agent to keep the conversation moving forward. When asking open-ended questions, the agent must be prepared for responses that are incomplete, unclear, irrelevant, untrue, or non-responsive. If this occurs, it is an ideal time to follow-up to clarify, correct, and to otherwise engage the property owner. Even if the property owner has provided a straightforward answer, the agent might want to follow-up to verify that there is a mutual understanding. Follow-up questions help build relationships by showing interest in the owner. There are at least three objectives in asking a follow-up question: (1) to check for understanding, (2) to let the owner know that what was said was heard correctly, and (3) to maintain the flow of the conversation. This process involves the use of probe or secondary questions. The following are descriptions and examples of seven situations where it may be necessary to obtain additional information from an owner. Included are specific types of probing questions or statements that would be appropriate.

1. Completion Probes

Completion probes are necessary when the property owner’s response is too general, vague, or incomplete to be useful, or when the agent wants the property owner to expand on the response with more details. Examples of completion probes include:

- “Please tell me more about that particular situation.”
- “I would like to know more about that, because it would help me know how to determine the value.”
- “If I understand you correctly, you are saying ... ” “Can you expand on that a bit more, please?”

2. Clarity Probes

Clarity probes are needed when a property owner’s response is unclear or does not make sense in the context of the primary question. Examples of clarity probes include:

- “I’m not sure that I really understand; could you please explain?”
- “What do you mean by ... ?”
- “Can you provide me with an example?”

3. Irrelevant Answer Probes

Irrelevant answer probes are necessary when an owner’s response is unrelated to the primary question. Responses to irrelevant answer probes include:

- “I am not sure how that relates to my original question. Can you explain?”
- Rewording the original question.

4. Channel Probes

Channel probes are needed when a response is a generality or refers vaguely to another person as the source of the property owner’s belief. The purpose of channel probes is to discover the basis or source of the belief, statement, or attitude. Examples of channel probes include:

- “Why do you believe that?”
- “Is that opinion shared by your neighbors?”
- “When did you first hear that?”

5. Reactive Probes

Reactive probes are necessary when a response is generalized and the property agent is not sure how strongly the owner feels about a certain idea, belief, or attitude. Examples of reactive probes include:

- “How do you personally feel about... ?”
- “How would you deal with the problem of ... ?”
- “How strongly do you feel about that?”

6. Confrontation Probes

Confrontation probes are necessary when a property agent suspects that the property owner’s response is false or that the response covers up important feelings or information. These probes should be used carefully, and only when they are very necessary. The property agent should always imply the possibility that there may have been a misunderstanding. Examples of confrontation probes include:

- “Is that what you really feel?”
- “In a previous answer you stated... ” “Now I think I hear you saying something different.”
“Can you explain it all to me?”

7. Nonresponse Probes

Nonresponse probes are needed when an owner does not respond to the property agent's primary question. A lack of response frequently indicates a misunderstood question or that the owner did not hear the question or the landowner mistrusts the agent. It may also be felt that any question will put the landowner in an unfavorable position. Response to non-response probes include:

- Building the property owner's ego with a sincere compliment. Then re-ask the question in a more neutral manner. (Avoid questions, which tend to box an owner into a corner or that try to force the property owner to answer.)
- Remaining silent. The property agent should not think that a response is necessary to everything the property owner says or doesn't say. (Silence is one of the best probe techniques for any need.)
- Rewording the question.

Nonverbal Communication

Words and actions are so intertwined that in order to convey a consistent message the two must be congruent. While it is relatively easy to intentionally misspeak, it is very difficult to send misleading nonverbal signs. For example, if a person lies, the eyes, body movements, voice characteristics, and other nonverbal cues might convey to an active listener the fact that the speaker has not been truthful.

Trust and credibility are very difficult to establish and maintain if a person's spoken word and nonverbal messages are in disagreement. Whenever there is a conflict between a person's words and the person's nonverbal actions, the listener will invariably give more weight to the nonverbal cues. One study reported that the total impact of a message develops from a combination of communication skills that may be as extreme as 10% for the words spoken, 40% for the vocal tones, and 50% for the other nonverbal cues. Some of the more common nonverbal communications are nonfluencies, body language, eye contact, proxemics, and attire.

Nonfluencies

Nonfluencies or non-words are the vocal sounds and utterances that help convey a message. Nonfluencies include such things as throat clearing, repetitive sounds (such as, "ah-hah," "ok?", "umm"), stammering nervously, rapid speech patterns, speech repetitions, an incomplete or unorganized sentence. The use of nonfluencies tends to increase as the speaker's discomfort or anxiety level increases.

Body Language

Many experts consider body language as the most important type of nonverbal communication. An individual not only receives from others positive or negative body language cues but sends them as well. It is important to be aware of the body projections not only of the owner, but also of one's own.

Individual gestures are comparable to individual words; they are difficult to interpret in isolation. Just as many words make up a sentence, many gestures make up a picture and it is the picture that is most meaningful in any communication. Some of the major areas of definition in body language include the eyes, face (especially the lips), hands, arms, legs, posture, and gait. They can be combined in different gesture clusters to indicate openness, evaluativeness, indifference, rejection, frustration, nervousness, confidence, and so forth.

Connotative meanings can be inferred from the words spoken by considering changes in voice intonations. A person's voice quality is characterized by such factors as stress, resonance, speed, inflection, clarity, rhythm, and volume. Simple changes in any of these patterns can change the meaning of a word or sentence. In listening for voice intonations, particular attention should be paid to changes in tone as these changes usually mean a change in meaning.

A person's posture, while speaking or listening, signals meaning. A person leaning toward another person may convey interest or agreement. And leaning away may indicate disinterest or disagreement. A relaxed posture may convey comfort with the other person and that the communication is going well. People also tend to relax more when the other person is seemingly of lower status or power and, conversely, relax less when the other person is viewed as more important. Excessive body movement while the other person is speaking might communicate that the person is uncomfortable with what is being said and/or that the person is anxious to respond.

Eye Contact

Everyone has a base rate of tolerance for eye contact; the more threatened a listener feels, or the more disinterested the listener becomes, the less eye contact there is. The greater the trust and positive relationship engendered, the greater the eye contact. This however, varies from one culture to another. While direct and continual eye contact is viewed as threatening or discourteous in some cultures, most North Americans place great reliance on the ability or inability of the other person to make and sustain eye contact.

Proxemics

Proxemics is the study of personal distance and territoriality. Everyone has distance zones and territorial needs. Research indicates that there are four boundaries of interaction: intimate (within 2 feet), personal or casual (2–4 feet), social or consultative (4–12 feet), and public (12 feet or more). Of course, these distances vary with each individual and among different cultural groups. Initially, when meeting the property owner a social distance would be appropriate and as the trust relationship develops, the distance might decrease to the personal or casual range.

Attire

Representatives need to dress appropriately and common sense is the primary consideration in a person's employment wardrobe. What may be appropriate for one setting might be entirely inappropriate for another.

ADDITIONAL TRAITS AND SKILLS NEEDED FOR SUCCESSFUL NEGOTIATION

In addition to the basic communication skills discussed previously, there are other traits and skills that are important for successful negotiation. They include the following:

Credibility

To develop credibility, the property agent must make a good first impression and communicate in an open, forthright, factual manner. An agent, in making a good first impression, will plan for the initial contact. The initial contact will probably occur over the telephone, as the property agent attempts to arrange the first meeting. The telephone call should be made when the property agent has adequate time to discuss any issues the property owner is immediately concerned with and at a time when the property agent is not too stressed with other issues. The telephone call should coincide with normal working hours or early evening; but certainly not during dining times. The conversation should be brief and to the point. The property owner may be asked to suggest the time and location of the meeting or the agent may make the suggestion. The property agent should indicate the likely length of the meeting.

The agent should reflect on the sound of the owner's voice, their speech pattern, and word use in considering how to best communicate with the owner. They should also ask others on the project team who may have met the owner (appraisers, engineers, and so on) for their impressions of the owner and how to best relate to them.

There are many perceptions that contribute to an initial impression. Some, a person has no control over such as age, gender, race, and so forth, while others are within the person's control; for example, appearance, confidence, friendliness, preparedness, and so forth. The property agent must consider carefully the type of initial impression that is desired, then do what is in the person's control to enhance that impression.

Common courtesies, of course, are important to the initial impression. The property agent should make an appointment in advance at a time that is convenient to the property owner. The property agent should be on time or call if for some reason there will be a delay. The property agent should be respectful of the owner's property.

At the initial in person contact, introductions should be made, hands shaken, and business card presented. The property agent's demeanor should be friendly and business-like. The property agent should appear relaxed, self-confident, and convey the impression that the experience will be a positive, beneficial one for both parties. Early during the first property owner contact, the purpose of the meeting should be explained in a clear, concise, and orderly way. Words and actions should convey that the property agent is there to work in a fair manner and with all due respect for the property owner's concerns and problems to reach a mutually acceptable agreement. If there is an expectation of closing an agreement on the first call, then that expectation should be made clear to the property owner.

What the property agent does and how it is done must be genuine and in the property agent's normal character. The property agent should monitor the property owner's verbal and nonverbal communications for cues to changing attitudes, and the property agent must be aware of the messages that are being sent. The property agent's speech patterns will influence a property owner's initial impression. If the agent speaks clearly, concisely, and with purpose, the owner should have a positive impression. If the property agent mumbles, speaks too softly, or rambles, the owner, obviously, will question the property agent's abilities. A property agent's mannerisms while speaking will convey how relaxed, confident, experienced, professional, and worthy of trust the property agent may be. Also, the property agent's voice intonations and manner of speaking may indicate attitude. Finally, the initial impression affects how quickly the agent can open a dialogue and establish rapport.

Another skill area for establishing credibility is the ability to answer questions accurately and concisely. Generally, it is considered better to allow facts to speak for themselves rather than to editorialize about them. If the facts substantiate the conclusion, then the owner should be trusted to arrive at the same conclusion as the agent. However, if the property agent, through effective listening, senses that the property owner is actually inquiring about other information than the question would seem to be asking, the agent should ascertain if this assumption is correct. This requires the property agent to utilize some of the probing techniques addressed earlier. Answers to questions should avoid ambiguous terms or jargon. If the answer is complex, it should be addressed in a logical sequence. In all situations, the property agent should ensure the property owner understands the answer to the question.

Making Complex Ideas Clear

An agent must have expertise in all right of way disciplines. Each discipline has its own body of knowledge; however, the more a property agent utilizes common terms rather than technical terms in explaining the project and the acquisition, the greater the chances are that the property owner will understand and accept the proposal. There are times when technical concepts must be explained. There are several congruency principles involved in making these concepts clear:

- The property agent must have a specific reason to use technical rather than common words and concepts. The property agent should ask himself/herself if the owner really needs to know the concept, or will it just demonstrate the property agent's knowledge? At times, property agents assume too much and, at other times, not enough. A property owner may feel insulted if the property agent appears to be talking down; but on the other hand, the property agent's use of common words and terms may be sufficient to answer the question.
- Visual aids can be especially useful in explaining technical concepts. The use of drawings, illustrations, photographs, or even a reference to a similar already completed project can make the complicated easier to understand.

- The property agent should avoid covering too much material or going into too much detail. If an effective job of explaining a concept in as simple a way as possible is done, an property owner will probably ask follow-up questions that are specific to the property owner's interests. Unless the property owner is taking notes, it is unlikely that more than two or three specific points will be remembered. The property agent should summarize the major topics for the property owner.
- People understand well only those things that fit into their frame of reference. Therefore, if the property agent needs to clarify an idea, it is best to relate it to something that an owner already knows.
- Analogies help the owner relate new ideas to ideas that are already understood. An analogy is an illustration or example that connects the two ideas.

Problem Solving

Acquisition problems can be divided into three general categories: (1) complaints based on prior problems with a project or the organization, (2) those based on misinformation and/or a lack of adequate information, and (3) those issues based on differences of opinions. Complaints based on past grievances should be resolved as soon as they arise. Problems that result from misinformation and/or lack of adequate information should be dealt with, as far as practical, during the information giving stage of the acquisition process. This would include addressing the owner's concern as to what the owner believes are the adverse effects of the project on the property. Once these two problem types are addressed, it is possible to deal exclusively with the problems that are based on differences of opinion.

Defining the problem is aided by asking probe questions or making probing statements. The agent should control the interaction until certain that the problem is clearly understood by both parties. At times, during the problem definition stage, the owner may decide that a problem does not, in fact, exist or its seriousness is not as significant as originally thought. It's helpful for agents to know which "problems" are real obstacles to agreement.

Once a problem has been defined, the next step is to understand its causes. The agent should listen and question for clarity and without judgment. The agent might ask, "Why do you believe that?" Usually, a recitation of the problem's causes will emerge.

Finally, several issues may remain that cannot be resolved through the development of a mutual understanding of the problem. More difficult problem solving may be approached in one of the following ways: helping the owner gain a new perspective, eliminating the objection, using extrinsic motivators, and using "comparative advantages." See the following list:

1. Helping the owner gain a new perspective

With this first approach, an agent helps an owner place the relationship between the one issue of disagreement and the total agreement in perspective. The agent may ask the owner: "In the run long, is this one issue that important?" or "Isn't this one issue small when compared to all the other, much larger problems we were able to resolve?"

2. Eliminating the objection

This approach attempts to discover answers to the owner's objections that are acceptable both to the owner and the agency. Success depends on the agent's ability to create an atmosphere in which both parties are willing to consider hypothetical solutions. Both parties must be able to suggest and explore reasonable, as well as what may appear initially to be unreasonable, hypothetical solutions. With this approach, if either party is not able to think in abstract terms, little progress can be made toward developing an integrative solution with this approach.

In a situation when neither party is able to develop more than one possible solution, there is very little chance that mutually acceptable alternatives will be discovered. The property agent should make it clear that suggestions made at this stage do not have to be ultimately practical or acceptable. By suggesting other alternatives, the agent may stimulate the property owner to become equally creative. When a number of possible solutions or ideas for a solution have been identified, each of them should be explored, no matter how impractical or unacceptable they might initially seem. Even if an idea initially does not sound workable, a discussion of it may stimulate another idea that eventually leads to an acceptable solution. At this point, every solution that is proposed should be noted, examined, analyzed, and tested against the problem. Important questions are: "What would be involved in implementing this solution?" and "What are the benefits and what are the negative effects that might result if this particular solution were accepted?"

3. Using extrinsic motivators

The third approach attempts to make use of extrinsic motivators. *Extrinsic* means objections can be eliminated either by resolving the objection or by compensating for it with rewards. Although the property agent may not have too many concrete motivators to use (for example, organizational policy may limit the amount of money that can be offered); the agent may be able to appeal to the owner's sense of the "public good." The agent may point out to an owner the relationship of the right of way project and the owner's part in it. Also, the agent may be able to show how the project, in the long run, might increase the value of the owner's remaining property.

It also may be possible to increase the compensation offer. The property agent should review the appraisal report and the market data. If appropriate, the negotiator might review both the appraisal report and the property owner's concerns with the appraiser. There may be areas in the report or additional market data, or even reinterpretation of the data that might warrant a value increase.¹ The owner may also have information that calls for a review of the valuation.

4. Using "comparative advantages"

The fourth approach is the "comparative advantages" method. It consists of helping an owner explore other available alternatives including, if appropriate, the use of

¹ In the United States, agencies under the jurisdiction of The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended are required to offer a property owner just compensation and that the amount offered the property owner must be at least the amount of the approved appraisal.

condemnation or alternative dispute resolution if available. When all other attempts to solve a disagreement have been unsuccessful, the last resort is for the agent to help the owner see clearly the advantages and disadvantages of taking alternative steps available to resolve the disagreement. The property agent might say, “On this issue, I don’t feel there is any real hope for finding a solution that is mutually acceptable. All of the proposed solutions we’ve discussed have both advantages and disadvantages.”

(Then enumerate the advantages and the disadvantages.) Advise the owner that, “If you are not able to accept the disadvantages, here are the options open to you.” At this point it is appropriate to cite the alternatives available to the owner, such as consultation with an independent appraiser or attorney, or, where appropriate, seeking just compensation through legal means.

PREPARING TO WORK WITH THE PROPERTY OWNER

More than any other single device, technique, strategy, or approach, the thoroughness of an acquisition agent’s preparation seems to differentiate the most effective from the less effective negotiator. There are three areas in which a property agent should prepare to work with the property owner: (1) background information (getting to know all that can possibly be known about the project and the affected properties), (2) ascertaining the property owner’s potential frame of reference or mental set (getting to know as much about the property owner before the interview as possible), and (3) getting to know the property owner personally during the initial stages of the interview (building rapport).

Background Information

The questions of how much background information to have available and how much the owner needs to know can only be answered in general terms. Every property owner’s expectations and needs are different, and the agent can only determine the answers to the two questions in discussion with the specific owner. Problems may result when a negotiator discovers that the owner wants information that the property agent is unprepared to provide. This situation can lower trust and credibility because in not knowing, it gives the appearance of being unprepared.

An experienced acquisition agent will be prepared to respond appropriately to all possible questions. Previous experiences with property owners help the agent to anticipate what questions are likely to arise. Among the many issues that seem always to be of interest to owners are the project’s general description, its schedule, the size of the acquisition, what improvements are included in the acquisition area, value, and the impacts of the acquisition on the remainder property. Other potential issues will surface when the agent and the owner start the communication process.

An area that is of interest to some property owners is the project background, or project planning phase. Many people like to know the “why” of the project and about the “why here and why not there” decisions. Excellent sources for this type of information are the project report, public hearing record, route location study, and the community and environmental impact studies. Other property owners may be interested in the project’s design. Property

owners who have previously commented on the project will want to know if their specific suggestions were adopted and if not, why. With a thorough knowledge of the decisions that lead up to the selected design, the property agent should be able to answer these questions. Also, this information (public comments and agency responses) may be contained in the various project reports. Another of background preparation includes specific engineering information. The agency's engineering group can usually provide the property agent with maps that explain the project design and the specific design features for individual properties. The maps may include route location maps, aerial photogrammetry, and construction maps. The engineering group will usually interpret the mapping, should the agent need assistance. In some organizations, the engineering staff may prepare computer generated "before" and "after" depictions.

The appraiser and the appraisal report are resources to help explain the valuation process and the appraised value. A brief inspection of the neighborhood, including the subject property and the comparable sales utilized by the appraiser, will help the property agent understand the appraisal report. A discussion with the appraiser often will elicit information obtained in the process of developing the appraised value, and may provide added insights in the property appraisal report and even into the owner's attitudes and expectations. Many owners are likely to be interested in knowing, in addition to the appraised value, who appraised the property and how the appraisal report was prepared.

Relocation needs and potential reimbursement entitlements, legal requirements and processes, and terminology are additional areas of preparation that can be useful in an effective and successful negotiation. Although there may be other staff members who deal with these specific issues directly, the negotiator should be able to explain the basics to the owner. For example, the agent should be familiar with the general requirements and entitlements in the relocation assistance program. Also, the agent should have a basic grounding in the legal requirements, the property closing process, and the condemnation procedures.

Understanding the Probable Mental Set of the Owner

The more a property agent knows about the property owner and the way the property owner may possibly respond to questions (their mental set), the more relaxed and self-confident the agent can be during the acquisition process. The more the agent can relax and listen to the owner's questions and meet their need for information and understanding, the greater the trust level. By being able to discuss information and to ask questions that are relevant to the specific property owner, there is a higher probability of meaningful communications occurring.

Finally, by knowing as much as possible about the property owner before the first contact, the agent can better identify potential areas of conflict and be prepared to effectively address those areas with the property owner. For many people, the natural tendency is to avoid conflict, so by being aware of and alerted to, areas of possible difficulty, the agent can determine the best strategy for dealing with any potential conflict. It is much easier for an agent to respond constructively to conflict when there has been adequate preparation.

There are a number of sources that may help the property agent learn more about the property owner. The property agent should review the agency's records to determine if other staff members have had contacts with the owner. If the agency has acquired right of way from this property owner before, either from the subject property for a previous project or at another location, there probably are tract or parcel records available for those acquisitions. The agency may have dealt with the owner at public meetings or hearings. Possibly the survey crews or the appraiser had contact with the property owner. The property agent must avoid predetermining an owner's mental set based on stereotypical (a conventional opinion or prejudiced attitude about a person based on a mental picture of a group to which the person is a member) assumptions. It is very risky and will probably result in incorrect conclusions. It is incompatible with the precept of treating a person as an individual, and possibly, it may be illegal.

Getting to Know the Owner as a Person

Essentially, this is rapport building and can be achieved only after the negotiator and the property owner meet. This is the first real opportunity for the two parties to begin to establish common ground and to build trust and rapport. At this meeting, the agent will be able to mentally refute or validate much of the mental set of information about the owner. If the information proves to be accurate, the property agent can build on it. If there are inaccuracies and misconceptions, then the property agent must immediately discard them and replace them with accurate data.

SUMMARY

Certain skills and attitudes are helpful to an agent in improving the effectiveness of integrative negotiation with property owners. Some of the more important attitudes for an agent are self-trust, a healthy and well-balanced attitude toward creativity and conformity, an enjoyment of working with people, self-motivation, a positive attitude toward change, thoroughness in record keeping, and ethical sensitivity.

Successful negotiations also depends on a number of verbal and nonverbal communication skills. Some of the more important basic communication skills are demonstrating empathy and monitoring feedback, making use of empathetic listening, and recognizing nonverbal cues. In addition to these basic communication skills, there are other skills that have been found helpful including establishing credibility, making complex ideas clear, and problem solving.

An important characteristic of most successful agents is thoroughness of preparation. The process that an effective agent goes through in preparing to deal with an owner involves three separate stages: (1) becoming familiar with the details of the proposed acquisition, (2) determining the probable mental set of the owner, and (3) establishing rapport. The manner by which the agent establishes rapport with the property owner is also important. The agent should be exceptionally observant and sensitive to the owner's conduct, attitudes, and knowledge and the agent must provide a supportive structure that will result in mutual problem solving and agreement.

CHAPTER 13:

Negotiation With Property Owners

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and

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INTRODUCTION

One measure of the effectiveness of the planning, design, and appraisal efforts is the ease with which the property owner accepts the project; that is, addressing problems and agreeing to solutions related to the project and the project's effects on the owner's property. However, no matter how much expertise was used in the preliminary project stages, if the acquisition process is not managed effectively and appropriately, time, money, and public support are at risk of being lost.

NEGOTIATION DEFINED

Any time two or more people work together to reconcile different attitudes, points of view, or opinions they are engaged in the negotiation process. While people may use different approaches, they are still negotiating. Professional negotiators recognize this and attempt to adjust their style to the situation. Further, while the initial position and the results may be different, the negotiation may still be successful.

Some people define negotiation as a process of bartering or making trade-offs in order to achieve a settlement. Others describe it as a way people work together to reach an agreement. While both perspectives are correct, neither is sufficiently precise as a basic premise from which to engage in negotiation. The imprecisions allow for too many variations in the application of the negotiation process. Too many variations in approaches may result in numerous inconsistencies and incompatible strategies between the parties. Negotiation is the exploratory search for areas of agreement and disagreement with the goal of developing an acceptable resolution of the disagreements. For this chapter, negotiation is defined as the process by which two or more people resolve differences to reach a mutually acceptable agreement. For negotiation to be successful the:

- issues must be negotiable;
- participants must be willing and able to negotiate; and,
- participants must have the level of trust to carry out their deliberations.

Issues Must be Negotiable

The first condition is that the issues between the right of way agent and a property owner must be negotiable. In the abstract, with the possible exception of an agency's right to acquire under eminent domain, all issues are negotiable including:

- the just compensation amount;¹
- ways to minimize the negative project impacts (additional landscaping);
- the timing of the purchase;
- possible changes in the size of the acquisition; and,
- design feature modifications.

Participants Must be Willing and Able to Negotiate

Both parties must have an interest and a willingness to compromise or to reach consensus. It is important that both the agent and the property owner approach the process with open minds. There is a good chance that negotiations will be successful if the:

- acquiring agency has been effective in the planning and design stages;
- the offer is equitable;
- the right of way agent is well prepared with specific information that is helpful to the property owner; and,
- the property owner is knowledgeable and receptive.

Even with all the above conditions seemingly met, there are times that negotiation is still not successful. In those instances, both parties must be willing to continue looking for areas of compromise or better yet, areas of consensus. For example, even if the agent believes that the offer is equitable, the property owner may be able to provide additional information to show that the offer should be increased. The agent may be able to satisfy the owner's request for more money while, at the same time, complying with the agency's regulations and maintaining equitable treatment of all affected property owners on the project. In fact, if the owner can demonstrate that the offer is not "fair," then it is the agent's responsibility to present the data to the agency for consideration.

Participants Must Trust Each Other

The agent and the property owner must maintain sufficient trust to solve outstanding problems. As trust may be the single most important contributor to successful negotiation, the agent has a primary responsibility to gain the trust of the owner. The acquisition policies of most organizations are based on the assumption that the right of way agent can establish adequate trust to enable the property owner to accept the agency's offer as being fair and that the owner is being treated in an honest, open, and equitable fashion.

Negotiation should be viewed as a form of problem solving. Working together, the agent and the owner will be able to develop alternative solutions, select the best course of action, and reach an agreement.

NEGOTIATION STYLES

There are at least four different negotiation styles related to the acquisition process: (1) bargaining, (2) integrative, (3) attitudinal, and (4) intra-agency.

Bargaining Negotiation

In bargaining negotiation, negotiators view the process as a tool they can use to achieve the outcomes that were determined before negotiation started. The process is used to advocate positions. Many times, it is premised on the belief that the two interests are in conflict, so as one party wins, the other party loses. It is a “zero-sum” game, for every point the negotiator “wins,” the property owner “loses” and vice versa. Bargaining negotiation involves the use of power with successful negotiation achieved through compromise.

Integrative Negotiation

In *integrative negotiation*, negotiators view the process as one of identifying and attaining outcomes that are mutually beneficial to all parties. It is often referred to as the problem solving approach. Negotiation is a process of inquiry and finding ways for all parties to optimize their outcomes. Research has shown that when negotiators are considerate of both their own and the other party’s outcomes, significant information sharing and joint efforts at problem resolution occurs. It is generally accepted that when property owners are highly involved and committed to the decision-making process, they will likely commit themselves to the support necessary to sustain the decision. The primary reason a negotiator neglects to engage in integrative negotiation is the failure to perceive of the situation as having integrative potential; rather, the negotiator views the situation as one they can use to achieve the predetermined outcomes. A negotiator may also fail to use an integrative negotiation style because of the following:

Past experiences

The process that was followed in the past is likely to be followed in the future. For example, if negotiation was a highly competitive process in the past, the next negotiation session will generally assume the same character. Even if there is no historical basis, some negotiators expect the property owner to act in a certain way (adversarial), and will enter the negotiation with that assumption.

Belief that issues can only be resolved distributively

A bias or orientation toward either-or, right-wrong, or win-lose. The process becomes one of maximizing gain and minimizing loss.

Belief that bargaining negotiation is easier

While usually untrue, some negotiators believe negotiation is more successful if approached from a set position with well planned outcomes rather than approach negotiation from mutually developed outcomes. Care must be taken to ensure that the issues of greatest concern are being addressed in the most appropriate manner. As a rule, conflict and competitiveness tend to drive out cooperation and trust, making it difficult for negotiators to find a common ground.

CHARACTERISTICS OF INTEGRATIVE AND BARGAINING NEGOTIATION

Given the fundamental differences in the two major negotiation styles, the characteristics of the two styles are different, as well. See Figure 12.1: Basic Differences in Negotiation Styles.

Elements of Integrative Negotiation

There are four critical processes that negotiating parties must be able to engage in for problem solving to occur:

(1) Attempt to understand the other negotiator's real needs and objectives

Even though they differ, both negotiators must know the other party's wants and needs and must understand their relative importance. Once determined, the two parties can engage in discussions that deal with preferences in an attempt to reach agreement.

Characteristics of Integrative Negotiation	Characteristics of Bargaining Negotiation
<ul style="list-style-type: none">• Inquire about owner's interests• Mutual interests are the goal• Collaboration of owner and agent• "Win-Win"• Acceptance• Open communication	<ul style="list-style-type: none">• Advocate for particular interests• "My interests" are the goal• Competition between the owner and agent• "Win-Lose"• Agreement• Restricted communication

Table 13.1: Characteristics of Integrative and Bargaining Negotiation

(2) Create a free flow of communication

This entails an open and honest appraisal of all the issues, concerns, interests, and preferences of all parties involved. In order to know and understand another person's interests, objections, wants and supporting reason, there must be open communication. Open communication is unencumbered by fear, resistance, lack of trust, and a win-lose attitude toward resolving differences.

(3) Emphasize commonalities and minimize differences

The negotiator's usual approach tends to maximize differences, primarily by ascertaining what they are and how wide the discrepancy. This is consistent with a win-lose or bargaining approach to negotiation. Effective integrative negotiation requires negotiators to search actively for commonalities to create a "win-win" approach. This means that individual interests need to be viewed as part of a collaborative effort to achieve a larger goal.

(4) Search for alternatives that satisfy both parties' needs, interests, and goals

Most often, when discussions about what might be satisfactory to each party are open to alternatives, more than one answer to any one question will emerge. This allows for choosing not only what is possible but also what is best, while at the same time, maintaining the major focus on achieving the agreed upon common goal. For successful integrative negotiation to occur, negotiators must probe below the surface of the other person's positions to identify important interests. This requires an open, free flowing, trusting communication climate.

Necessary Conditions for Integrative Negotiation to Proceed

Following are preconditions necessary to accomplish integrative negotiation.

Common goal

Everyone involved must be committed to the belief that they will benefit more through cooperation and collaboration than they will working only for their own self-interest.

Faith in abilities to solve problems

Having problem solving skills and knowing when to use them can lead to a successful negotiation. Successes builds a belief that more successes are possible.

Commitment to mutuality

There must be a commitment to search for the common goal, one that benefits all the negotiating principals. There must be a willingness to develop an interpersonal relationship that is congenial, open, trusting, and flexible—a communication climate that provides for the disclosure of interests, as well as, expression of differences.

Trust

Trust is at the heart of success. When people trust each other they are more likely to communicate their interests, concerns, and ideas than when they do not trust. Defensiveness diminishes trust. Defensiveness causes the negotiators to build walls, screen statements, employ manipulative strategies, withhold information, and bind the participants to positions that they might not otherwise accept.

Communication

Communication is the medium through which people negotiate. It must flow both ways with each person dedicated to listening.

Belief in the validity of the other's position

There must be a belief that the other persons' attitudes, beliefs, values, and interests are valid. They must not only be accepted in the negotiating process, but also used to make the process stronger. The purpose of integrative negotiation is not to question or challenge

the other's viewpoints; rather, to understand each others interests, and so forth, and reach an agreement beneficial to all concerned.

Integrative Negotiation and Problem Solving: A Four-Step Process

Integrative negotiation uses a process to identify issues and interests, concerns and questions, and to search for ways that best address them. By viewing integrative negotiation from this perspective, it is synonymous with problem solving in process and procedures. There are four basic steps to integrative, or problem solving, negotiation.

Step 1: Define the problem

This is often the most difficult step. In negotiation, it seems to be assumed by the parties involved that the problem is "How do I get my interests served?" However, in most negotiation there is more than one problem. The task involves not only identifying what all the problems are, but agreeing that these are the problems that need to be addressed. The following may help to identify the problems:

- Define the problem mutually and once defined, restate the problem using words that both parties agree represent their perceptions of the problem.
- Keep the problem statements as clear and as simple as possible.
- Think of problem identification as a goal and identify obstacles to obtaining the goal.
- Separate the problem from the positions. The problems are what the negotiators are trying to resolve.
- Separate the problem from the people. Depersonalize the problem and recognize that there are differences in people that may have nothing to do with the problem.

Step 2: Develop alternative solutions

The task involves creating a list of as many ways as can be thought of that could satisfy the interests or be acceptable resolutions for all parties involved. Some suggestions are:

- Delay making judgments about any solution until all the possible solutions have been presented. Evaluating solutions as they are presented usually inhibits the presentation and exploration of more creative solutions.
- To arrive at one good idea, present a lot of ideas. To get a lot of ideas, involve a lot of people. It is highly probable that an idea will trigger another, and then another, and so on.

Step 3: Involve people

Generally, groups tend to be better problem solvers than individuals. Groups give a broader range of perspectives and generate more alternatives.

Step 4: Evaluate and select the alternative

The negotiators need to compare a given alternative to criteria developed by the parties involved and ascertain which is best suited, or which best solves the identified problem. The following may be helpful:

- Develop objective criteria as to what the alternative must do in order to be accepted as a viable alternative.
- Identify the options that have the most potential as viable alternatives.
- Evaluate each solution on the basis of its acceptability and quality. Acceptance relates to how fair and equitable the alternative is to each of the parties. Quality relates to what is best, what is most rational, and what is most logical.
- Even if a rational and clear consensus seems to develop immediately, try to keep it conditional until the whole scenario has been analyzed.

Attitudinal Negotiation

It is imperative that acquisition agents perceive their task as one transcending that of providing information and requesting an agreement with their position. It is preferred that the agent negotiates from an integrative (inquiry) style rather than from a bargaining (advocacy) style. As part of that integrative style, the negotiator should consider and include attitudinal negotiation.

In attitudinal negotiation, the agent creates the relationship pattern with the property owner. This relationship can range from one that is restricted, tentative and suspicious, to one that is honest, trusting and open. Attitudinal negotiation involves resolving differences over such issues as the ground rules for negotiation, the degree of openness expected, the need to eliminate (or at least to minimize) stress and hostility, the desire to foster friendliness, the development of a shared frame of reference, and the nurturing of trust and empathy. Probably the most important reason for attitudinal negotiation is that many property owners will see the acquisition interview as a bargaining session to get as much as possible from the agent and the agent's organization. However, most owners are ill-equipped to be effective bargainers and this lack of negotiating skill places them in a vulnerable position against a professional right of way agent. If the negotiation proves unsatisfactory to the property owner, the owner will likely leave the negotiation settlement, assuming one has been reached, with a hostile attitude, a dissatisfaction with the agency and the negotiator, and a low commitment to the agreement. Furthermore, most acquisition agents are not in a position to bargain. There are many policies, procedures, and statutes limiting proposals, counter proposals, and concessions an agency negotiator can make.

Finally, since right of way acquisitions are so involved with public service and the public good, it is only ethically correct that the agency and the acquisition agent offer every opportunity to the owner to be involved thoroughly in the negotiation, to voice objections knowing that they are important and will be addressed and resolved.

Intra-Agency Negotiation

The first three types of negotiation (bargaining, integrative and attitudinal) take place between an acquisition agent and a property owner. The fourth type, intra-agency negotiation involves the acquisition agent and some unit or units in the organization. The most common use of intra-agency negotiation occurs when the agent uncovers new information or a different point of view, which needs to be discussed at the agency level. The ability to negotiate with the planners, designers, right of way mappers, and so forth, is helpful if the relationship between the agent and the property owner is based on an integrative negotiation style. Intra-agency negotiation is also important if the relationship between the agent and the property owner is in a bargaining negotiation style as it may give the agent a sense of confidence that the agency will accept the agreement tentatively worked out with the property owner.

Usually, intra-agency involves a different process than the other three negotiation styles. An exception would be an agent who must negotiate with the appraisal unit to obtain an increase in the appraised compensation (essentially trying to persuade the appraiser to see the owner's point of view). In this case, one of the other styles will be used as well. Ideally, intra-agency negotiation should not be viewed as bargaining negotiation nor should it always involve the more time consuming attitudinal negotiation process. Rather, the best results are achieved when the organization fosters a culture that values teamwork, where necessary changes can be negotiated using a problem solving approach.

The four styles of negotiation previously discussed are all related, each representing a unique process, which can be used to achieve an agent's goal. Success in attitudinal negotiation will place the negotiator in a better position to determine whether to use bargaining negotiation or integrative negotiation in resolving differences of opinion on other substantive issues. Success in bargaining or integrative negotiation builds credibility and confidence, and as a result, enhances success in intra-agency negotiation.

POWER AND THE ACQUISITION PROCESS

Power is often thought of in a disparaging way. People talk about "power plays," "power hungry people," "power politics," and "power tactics." All of these phrases have implications of inequity or game playing. They stand in contrast to the concepts of "fair play" and "merit." Yet, if an agent is not aware of, sensitive to, and knowledgeable about power and its uses, the negotiator could, at times, find themselves in difficult and uncomfortable circumstances.

Power and influence play an important role in the acquisition process. The negotiator must be constantly aware of the need to use power ethically and justly, while never forgetting its role in acquiring real estate and property rights.

Sources of Power

When an agent asks a property owner to do something, the agent is attempting to exert power. If there is the perception that the negotiator has no power, there is the likelihood that the request will not be granted, unless granting it appears advantageous to the property owner.

There are at least five sources of power available to an agent in trying to influence an owner: (1) legitimate power, (2) coercive power, (3) reward power, (4) personal (charismatic) power, and (5) normative power.

Legitimate Power

Legitimate authority becomes a source of power when an individual who requests something of another individual is perceived of as having legitimate responsibility and authority. For example, many people automatically obey a police officer without thinking about the consequences, either negative or positive. People obey the officer's request because of the belief that the person has authority to exercise power. Thus, legitimate power is defined as a condition where one person accepts another person's power based upon some generally accepted law, principle, or source of legitimacy. Legitimate power is one of the most readily accepted sources of power the acquisition agent possesses. Experiments suggest that there is a strong tendency for many people to obey even those with very limited authority. Most people tend to obey another person who has even the simplest trappings of authority, even when it is obvious that no significant sanctions can be imposed by that individual for another's refusal to comply.

Coercive Power

Coercive power is based on the agent's ability to give or withhold something the owner either desires or fears. The property owner must perceive of the action as coercive before the agent is imbued with this type of power. For example, in the past, agents frequently used condemnation as a threat and, therefore, a source of power. However, many owners do not perceive of condemnation as a threat, but as an opportunity to achieve a larger settlement.² The attempt to coerce may not work for other reasons. For example, an agent may misjudge the relevance of the threat or may have misjudged the owner's vulnerability. The owner may think that there is enough support from other sources that negates the agent's ability to carry out that threat.

Personal Power

Initially, personal or charismatic power described the unique powers possessed by a monarch, a religious leader, or a military leader. It is the indescribable magic of leadership that arouses loyalty. Just as it is rare in society, it is equally rare in the right of way profession. There are few property owners who will allow an agent to exercise personal power over them. However, there are agents who do possess personal power. They are usually people with commanding or pleasing personalities and persuasive styles that engender a sense of trust and safety in the owner.

Reward Power

Reward power relies on the agent's ability to give or withhold something that the property owner values. An important element in reward power, beyond the obvious necessity of being able to give or withhold the reward, is that the owner perceives that what the agent is offering has value. Money may or may not be viewed as a reward by the property owner. The owner may believe that money is not a reward, but what the owner can do with the money is the source of power. Rewards may be tangible (for example, money, reducing the size of the acquisition, additional project supplied landscaping), or intangible (for example, a feeling of importance, a sense of involvement in the agency's decision-making processes).

Normative Power

Norms are the principles of right action binding upon the members of a group which serve to guide, control, or regulate proper and acceptable behavior. Norms are generally accepted voluntarily for the good of the whole. Therefore, an agent may have normative power over a property owner to the extent that the agent can equate what the agency wants with what the property owner believes is beneficial to the neighborhood or the community, as a whole.

For an agent who is strongly committed to integrative negotiation, legitimate power, personal power, and normative power are the most relevant. However, power exists only if it is conveyed to the agent by the property owner. No matter how much power the agent seems to actually possess, it is the owner who ultimately makes the final decision and decides whether or not to reach an agreement.

ESTABLISHING AN EFFECTIVE PSYCHOLOGICAL BASIS

Any successful problem solving between an agent and a property owner depends on building a line of communication and with it a climate of trust and openness. This is, of course, a primary goal of attitudinal negotiation, which is a prerequisite for integrative negotiation. Trust is related to faith or confidence in another person. An owner who trusts an agent is more likely to accept the information that the agent provides. Also, trust building is important if the two parties are to participate in an open, honest exchange of ideas about solution alternatives. Unless the owner trusts the agent, the owner will be less than completely open and honest. This may result in the tendency for both parties to want to engage in bargaining rather than integrative negotiation. Trust is not static; it is either increasing or decreasing in a relationship.

When a trust relationship is high, misunderstanding is low. Perhaps this is so because there is less defensiveness and more openness; to trust another person, one must first know that person. When one knows another person, there is a greater desire to empathize with and move toward the other person's position. When the parties move toward agreement, the messages become more congruent and communication improves. Another part of increased trust is an increase in tolerance, that can help the problem solving process.

DEVELOPING TRUST

Some of the factors which impact an agent's trustworthiness with the property owner include: the expectation of trust, stressing equality of status, showing personal concern, exhibiting honesty, being factual, developing common goals, facing conflict, observing nonverbal cues, showing common courtesies, listening effectively, and possessing self-trust.

Expectation of Trust

The development of trust depends on at least one of the parties having an expectation of trust. The expectation of trust will be enhanced if the agent's role is perceived by the property owner as that of a problem solver. On the other hand, if the agent's role is perceived as that of a salesperson, the owner may be less trusting.

Equality of Status

Having power over another person usually decreases the chance of developing trust. Some agents believe that they must control the interview or they will lose influence over the owner. These agents think that if they really listen to an owner's problems and concerns, that they will somehow be forced into the position of accepting the owner's ideas. Their attitude seems to be "Unless I can maintain control over the situation, the owner will take advantage of me."

However, owners tend not to trust agents who they believe have a strong desire to control them. Agents who seek control appear to talk down to owners, use technical language/jargon, or cite the law/policy as the basis for refusing to discuss an issue. Such behavior limits the development of trust.

Agents use a number of phrases, both consciously and unconsciously, to maintain their position above that of a property owner. Although the phrases may make an agent feel more comfortable, it does little to increase an owner's trust level.

The following phrases should be avoided:

- "You do understand this, don't you?"
- "You can't possibly expect us to ..."
- "In all my years of experience ..."
- "Don't you know that ..."

Misusing Technical Terms (Jargon) and Shared Codes

Technical terms or jargon often hamper effective communication. All professions have jargon, technical terminology and idioms, that identify the technical aspects of the profession. Because agents live in a world of work where they must coordinate efforts and use information prepared by a variety of other specialists (such as, engineers, appraisers, attorneys, and so on) it is difficult to avoid the use of technical terms. Most agents are unaware of how often they use technical terms in conversations with others.

The probability that meanings are assigned accurately by the receiver of the message increases when the words or other symbols used are directly related to a meaningful referent and set of shared experiences between the communicating parties. Unless the property owner is familiar with right of way's technical language, the owner will usually not have as accurate and precise understanding as the agent has. This situation can create confusion between the two parties, as each party will have arrived at different meanings of what was communicated and what was received. Also, it might have a detrimental effect on the relationship between the two parties if one person uses terms the other person does not understand. The second person may think that the other person is trying to confuse or deceive. It can destroy rapport and trust. Shared codes aid both parties in attaching the same meaning to words and terms. For example, instead of using the term *just compensation*, an agent may use the term *market value* and then relate the term to typical real estate transactions, with which the owner would have more knowledge.

Showing Personal Concern

Trust is developed to the extent that an owner sees an agent as personally concerned. An agent can show concern by being friendly, open, and receptive. On the other hand, trust may be inhibited if an owner believes the agent is "hiding behind the rules." The agent who appears as a bureaucrat to the owner will seldom be trusted. An agent who overuses "we" and "our" with reference to the transaction only reinforces the bureaucratic impression.

To establish a meaningful trust relationship with an owner, the agent should be direct, specific, and explicit. For example, stating that "The appraiser valued the property at..." or "I think that..." or "The offer is..." are more direct than statements such as "We valued the property at..." or "We think that..." or "We have determined the offer to be..."

Trust is far more easily achieved when the agent is an individual who has ideas, beliefs, values, and who is not just the employer's messenger. If an agent is explicit about who determines what and who does what and differentiates facts from opinions, the owner will be able to separate the person from the organization and negotiate on a more personal basis.

Exhibiting Honesty

For an agent, honesty involves providing accurate and complete information to the property owner, with forthrightness, and clarity. However, there may be occasions when the negotiator finds it necessary to withhold information because to do otherwise might, at that moment in time, cause confusion or disrupt the orderly flow of information. The criterion of whether or not an agent should withhold information should be based on the timing of the presentation and not on the belief that revealing the information might interfere with or even destroy the chances of reaching an agreement. Honesty is basic to any trust relationship.

Being Factual

Property owners view agents who are a source of factual, consistent, complete, and unbiased information as trustworthy. On the other hand, the property owner will perceive

an agent as untrustworthy who provides only general information, gives opinions rather than facts, offers inconsistent information and statements, and cannot or will not answer questions with specific factual information.

Developing Common Goals

An effective and quick method to resolve a conflict between individuals is to find a common goal. The best method for an agent to identify a common goal is through active communications, discussing issues, problems, concerns asking probing questions, and listening attentively to the answers.

Facing Conflict

Some agents adopt the position that if they ignore conflict it will go away. In most cases, that is incorrect. Some people will raise a conflict situation to test the other person's reaction and to determine if that person is honest and trustworthy enough to face issues. For example, an owner may try to put the agent on the defensive with a challenging or difficult question. Owners who do this may be, consciously or unconsciously, testing the agent to observe the agent's reaction. If such a situation arises, the agent should respond directly, in an open, nonthreatening manner, to the challenge or question. Unfortunately, some agents either ignore the comment or go on the defensive. Neither reaction helps to build trust. The owner does not want the negotiator to ignore the situation or to be defensive; the owner usually wants the agent to show concern and interest.

Observing Nonverbal Cues

Establishing trust can be aided or hindered by a whole series of physical characteristics. For example, an agent who exhibits nervous mannerisms, fails to look at the owner directly, or greets the owner with a weak handshake may find it difficult to establish a trust relationship. People usually place more significance in the way a person acts than in the words a person speaks.

Showing Common Courtesies

An agent who exhibits common courtesies can facilitate trust. These may include:

- making appointments,
- being on time,
- confirming appointments,
- explaining the meeting's purpose and its probable length,
- presenting a business card at the outset of the first meeting, and
- showing respect for the person and the person's possessions.

Listening Effectively

An agent can pay the owner no greater compliment than to listen carefully and genuinely try to understand the owner's point of view. It is important that an agent listen to the owner

without judgment or defensive reactions. In building and establishing a trust relationship, the agent should be sure that the owner's position is understood before engaging in a discussion about it. Frequently, if a person paraphrases another's comments or asks follow-up or probing questions, the owner's response will provide insight into how best to proceed.

Possessing Self-Trust

People who seem to be naturally distrustful of others (e.g., their employer, property owners, engineers, and so on) are often insecure about their own abilities or conduct. They may lack self-trust, and as a result, avoid taking even limited risks that a trust relationship requires. In contrast, some agents trust their abilities and judgments to such an extent that they are willing to take significant risks to establish a relationship with others. There is a middle ground and it is from there that the agent should operate.

MOTIVATION AND PROBLEM SOLVING: AN EXAMINATION OF USEFUL CONCEPTS FOR INTEGRATIVE NEGOTIATION

Motivation is a major factor to attend to during right of way negotiation. There are many views about motivation and the assumptions and attitudes underlying these views, the relationships between motivation and the communication process, and how motivation is incorporated into the negotiation process. Motivation and compliance are not the same. Motivation is the psychological characteristics that arouse people to act and compliance is a yielding to a force. Under certain conditions, rewards and threats may produce behavior that appears to be motivated; but this behavior is only compliance. It will usually last only as long as the reward or threat remains.

Motivation Theories

An early belief about motivation portrayed it as an external force that makes a person act a certain way. Numerous theories are founded upon this assumption. Behavioral conditioning, as espoused by B.F. Skinner and others, rests on the assumption that a person can change another's behavior with relative ease and in predictable ways. The essence of conditioning relies upon a controlled environment where reinforcements or rewards are provided for demonstrations of the desired behaviors. Through repeated reinforcement of the desired behaviors, the tendency to act in ways consistent with getting rewarded is increased. This assumption has led to the belief that people can motivate other people by reinforcing or rewarding the desired behaviors.

Those in disagreement with this concept of motivation have determined that in order for a reward to be effective (motivating), it must be seen as something valuable to the person receiving it. In other words, people must see the reward as something desired before they will take any action to obtain the reward. The assumption is that motivation is an internal force acting upon people.

Many theories about motivation have developed from this internal force assumption. An example is shown in Figure 13.1; A. H. Maslow's hierarchy of needs theory. According to Maslow, all people have five basic needs that must be fulfilled if survival and growth are to occur.

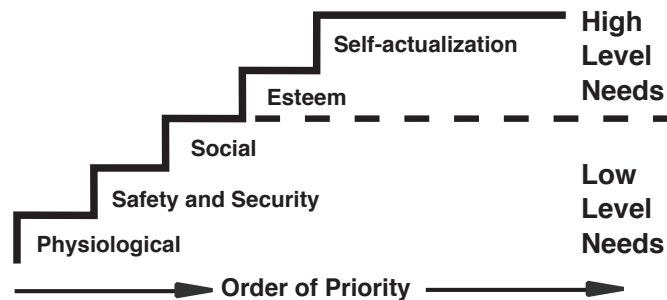


Fig. 13.1: A.H. Maslow's Hierarchy of Needs Theory

The first in the hierarchy of needs is the need for self-preservation and survival. When a person's physiological needs for food, water, air, and so forth, are sufficiently satisfied, new and different needs emerge. These safety and security needs include preferences for a safe, orderly, predictable, lawful, and organized world that can be relied upon and in which unexpected, unmanageable, chaotic, or other dangerous situations do not happen. Social needs follow the satisfaction of safety and security needs. These needs include the desire for love, affection, and belonging. People with these needs desire a place in a group, friendships, family, love relationships, and children.

Following the satiation of social needs, there arise needs related to esteem or ego. Included in these needs are the desire for achievement, adequacy, mastery, confidence, independence, and freedom. For others, ego needs are manifested by a desire for reputation or prestige, status, fame, dominance, recognition, attention, dignity, or appreciation.

Finally, when a person's esteem and ego needs are satisfied, the needs for self-actualization emerge. This includes the desire for self-fulfillment and achievement. This desire relates to a person progressing toward the fullest potential possible.

Maslow's theory holds that one of the five sets of needs is the primary influential factor on a person's behavior at any given time and it assumes that the lower order needs have been met. Generally, when one set of needs is satisfied, new and different ones emerge. However, even though a set of needs may be satisfied, it is not true that it will remain so forever. Events and life changes occur that may bring about a regression to a previous level. For example, a natural disaster may cause the loss of a person's home with the resultant need to again satisfy the physiological need of shelter and the other basic life needs. The essential point of this theory is that people are constantly working toward needs satisfaction and that different actions are prompted from different needs. Therefore, need satisfaction is an internal force that motivates a person to behave in a given way.

A Point of View

A first step in building effective negotiation skills is to examine certain assumptions held about basic human nature. We organize knowledge and our actions around assumptions of what we believe to be true about our world, our role in it and other people in that world. At one time in history, knowledge was organized in a fashion to support the assumption that the world was flat. Accordingly, ships were warned to steer near shore to avoid falling off the world's edge.

The following assumptions about motivation are most appropriate for successful integrative negotiation:

All people are motivated

By accepting this premise, the agent can look for the individual motivation already existing in each person. However, existing motivations may result in behavior that is either positive or negative in negotiation. A property owner might be motivated to assist the agent in completing the acquisition as soon as practical because the owner wants to relocate to another area of the country. Another property owner may be motivated to be as difficult as is humanly possible to compensate for what the owner believes is an unnecessary project. The question is not whether people are motivated or not; but rather what is the motivation and how can it be used to resolve the negotiation.

People motivate themselves

Sometimes an agent may think the property owner is not motivated because the reaction to a situation does not seem typical given the circumstances. The truth is that the person is doing what is best for them at that moment. The owner is acting in a way that, for whatever reason, is viewed as a benefit or gain. This concern with self must not be underestimated in importance, especially within the context of right of way negotiation. Negotiators know that people pursue their own interests. During integrative negotiation, the agent must determine how to satisfy those interests.

In negotiation, agents organize knowledge around assumptions and then act accordingly. Some assumptions prove to be true, others do not. One assumption that is false is that one person can motivate another person. A fairly common complaint is that some people are just not motivated. Under this assumption, some people take on the duty to motivate. They may try to inspire, support, manipulate, or even coerce the other person in an attempt to provide the motivation that the first person believes is lacking. It does not work, and it does not work because people motivate themselves and the best one can hope to do is to develop ways of creating environments in which people motivate themselves.

Creating Self-Motivating Environments

If an agent wants to be engaged with a property owner in problem solving then the agent must function on the basis of the owner's interests. The owner's interests are what motivates that particular owner, and the agent must create the environment to motivate the property owner to reach an agreement.

The key to creating a motivating environment is to make it possible for the owner to use the negotiation process to satisfy the owner's interests and needs. This is not the same as giving an owner everything the owner demands regardless of the consequences; rather it means to involve the owner in contributing to the achievement of the common goals through the use of that person's unique abilities.

People who are effective in creating such environments are also effective communicators. They have the skills and capabilities to make themselves heard and understood. Also, they have the ability to help others to express themselves in ways that they can be heard and understood.

Having and demonstrating these skills help people around them to develop confidence and trust which carries over into other relationships. In the final analysis, creating self-motivating environments is about both effective communication skills and attitudes of trust. It is a belief that people are capable and willing to engage in a process that is fair and directed toward their best interests.

An important communication technique related to creating self-motivating environments lies within the principle of congruency. A person will be motivated to do what is asked when the request is seen to be congruent, or in harmony, with the person's needs, wants, desires, expectations, and so on. In negotiation, congruency means that the agent's message is congruent, or consistent, with the owner's interests.

The communication process is a method for creating an environment in which people will motivate themselves. The following are some suggestions that may help engage the property owner in meaningful conversation and possibly result in self-motivation.

The communicator must promote conditions required for motivational forces to be realized.

Examples of such conditions required for basic motivating forces to surface and be satisfied include the freedom to speak, the freedom to do as one wishes as long as doing it is not at the expense of another person, the freedom to express oneself, to defend oneself and to have a sense of justice, fairness, and honesty.

The communicator must remember that perception and intellectual capacity are tools, which have as one of their functions that of satisfying motivational forces.

Clearly, any blocking of these tools will be seen as a threat to the satisfaction of the motivational forces. Therefore, secrecy, censorship, dishonesty, and restricted communications are detrimental to creating environments for motivation. The communicator must be an effective listener. It is through listening effectively that people learn of other's needs, interests, wants, and desires.

The communicator must ensure that explanations, presentations, answers to questions, positions, and so forth, are clearly pictured in the mind's eye of another person.

This technique is most successful when explanations fit into the listener's mind-set. Even in the process of creating understanding of something new, people try to build a word picture or use examples about which the other person is already familiar. This helps make the new ideas congruent with earlier held ideas, beliefs, and values.

A MOTIVATION MODEL FOR ACQUISITION SPECIALISTS-PROPERTY OWNER COMMUNICATION

The following is a motivational model that should aid the negotiator in preparing for negotiation.

Step 1: Understanding the owner

1. Information about the owner as a person. (Who is this person? What have been some of the owner's experiences?)

- personal history or background especially the owner's history with the property, previous experiences with other acquisition specialists.
- assumptions, values, beliefs.
- needs, interests, motivations.

2. Owner's attitudes that may be expected to reveal themselves in the first contact.

- probable attitudes toward the negotiator as a person (separate from the task or the proposal) based on first impressions and past experiences with the acquisition process.
- anticipated owner's attitudes toward the proposal. What will be the owner's probable anticipated degree of agreement or disagreement? To what degree will the owner's ego be involved?
- attitudes toward decision making (for example, objective, rational, impulsive, emotional). The owner's preferred negotiation style.

Summary: How will the negotiator's ideas appear to the owner? People filter what they hear and see to make it congruent with what the person expects and wants to hear and see.

Step 2: Adapting to the owner

1. Adapting to the probable causes of unfavorable attitudes.

- Apathy may be based on misunderstanding or unawareness of the connection between the proposal and the owner's interests.
- Condescension towards the negotiator may be based on past experiences with the agency or the acquisition process or a previous experience with the negotiator that was less than a positive one.

- Opposition or hostility toward the proposal may be based on past grievances, misunderstanding, or honest disagreement. Recognize that defensiveness by the owner may be a result of feeling helpless or inadequate on the negotiation process. The negotiation process should work to empower the owner as a partner in the negotiation process, while maintaining the greater good of the project as a goal.
2. Connect the explanation of new information to what is already familiar to the owner.
 3. Connect the proposal to the owner's active wants, needs, and interests. Help the owner understand how interests can be satisfied through the proposal.
 4. Protect the owner's ego by making it easy to disagree, while realizing that the negotiator may have to disagree with the owner at times.
 5. Avoid arguing, lecturing or preaching; but, correct errors. Encourage discussion and even disagreement, but separate issues from personalities. Start with agreements and proceed to disagreements. Show thoughtful, fair consideration to all points of view. Try to understand the owner's perspective. Involve the owner in solving the problem, answering questions, identifying issues, and so forth. Ask questions, ask for suggestions, ideas, or possible solutions
 6. Reduce the proposal's scope. Avoid attempting to accomplish too much, too soon, or too quickly.
 7. Listen. Encourage the owner to talk.
 8. Demonstrate a sincere interest in the owner. Show interest in the owner's concerns, perceptions of what the issues are, and the questions that need to be answered.

Summary: All motivation occurs within the property owner. No matter how necessary and "correct" the negotiator's proposal may be, or how skillful the agent is in presentation, no agreement will occur until the owner develops a satisfactory connection between what is already known or believed and what the agent is asking the owner to know, believe, and do.

Listening is the vital connection in the process of communication. Unless the wants, needs, and interests of the owner are satisfied, or at least are seen as having been accounted for, there will be little chance for agreement with commitment.

A PROBLEM SOLVING MODEL FOR NEGOTIATION: THE FUNNEL TECHNIQUE

Negotiation is the process by which two or more people resolve differences to reach a mutually acceptable agreement. As such, in right of way acquisition settings, it is useful to view it as a problem solving process. The primary function of an acquisition agent, then, is to manage the problem solving through the negotiation process.

In order to be successful in managing the process, many skills are required. The first, and most important, is the ability to communicate effectively. Communication includes problem identification, problem solution criteria, knowledge and skills in the application

of negotiation styles (such as, bargaining, integrative), and the ability to think clearly, to analyze, and to reach logical conclusions.

Another set of negotiation skills relates to human relations. Whenever two or more people engage in problem solving tasks, attitudes, values, beliefs, and assumptions come into play. Human relations factors have a marked influence on the perceptions people have about what the problems and issues are, how to proceed in resolving differences, what is important and needs to be accounted for in reaching agreements. In other words, these human relations factors operate simultaneously with the functional tasks in problem solving and can have a negative or positive effect.

Skills needed to develop positive human relations include: the ability to express oneself coherently; to listen effectively to the other party; to be able to empathize and accept other's attitudes, values, and beliefs; to have integrity; to be able to take risks; and to exhibit patience and self control, especially in the face of adversity and ambiguity.

H.C. Pyron conceptualized the "funnel technique" as a problem solving negotiation sequence. The process presented as "the funnel" is relevant to negotiation in which the parties involved show some willingness to cooperate in the search for an agreement.

Some Assumptions:

The funnel is based on certain assumptions. A major one is that, unlike bargaining negotiators who are more successful when they focus on their own goals and needs, integrative or problem solving negotiators are more successful when they are concerned about and responsive to both the agency's interests and the property owner's interests.

The word "funnel" is used to characterize the technique because just as the utensil-funnel is wider at the top than at the bottom, so is the negotiator-funnel. The approach assumes that negotiation will be more successful if communications proceeds, over time, from the more general topics to those which are more specific. Also, the approach assumes that communications will be improved if less controversial issues are considered first. This allows time for the negotiating parties to discover areas of agreement and to develop greater trust in each other before addressing topics which are more threatening. Finally, the shape of a funnel represents a time perspective. It is assumed that as one spends more time and is more thorough in the early stages of the negotiation process, the latter stages will require less time.

The Funnel's Five Stages

Figure 13.3 shows the five steps in Pyron's funnel technique. However, planning and preparation are prerequisites to this process and success. Planning and preparation include knowledge about the project (for example, purpose, alternatives considered, location, benefits, costs, schedule, number of properties affected, values, and so forth) and the property owner (e.g., attitudes, assumptions, project knowledge).

The purpose of the planning and preparation is to determine what and how best to communicate with the property owner. It is at this stage that a plan is devised. Any plan developed prior to the interview is tentative, and subject to alteration and even abandonment, depending on the direction of the interview.

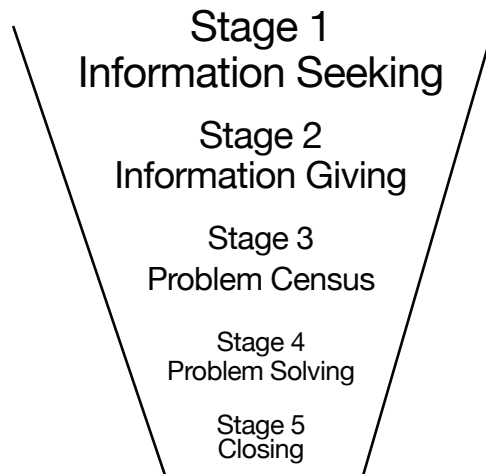


Figure 13.3: Pyron's Funnel Technique

Stage No. 1: Information Seeking

There are two types of information that negotiators need to obtain. First, what does the owner know or not know about the project and how it relates to the owner's property? Once determined, the acquisition agent can seek the additional information needed that is of benefit to the owner. Second, what is the property owner like as a person? This information can be helpful to develop a foundation for effective and successful communications.

Finally, during the information seeking step, an important goal is to start involving the owner in the process of negotiating. This means developing some trust, demonstrating an interest in the owner's concerns and issues, fostering rapport, and beginning to work in a cooperative relationship to resolve differences.

Stage No. 2: Information Giving

The negotiator presents the proposal during the information giving step. Obviously, modifications to what information is included and how the proposal is communicated are influenced by the outcome of the information seeking step. The goal here, is to give project information that increases the owner's knowledge or clarifies, replaces or corrects inaccurate information. Also, the presentation should relate, as far as practical, to the owner's interests, using language and concepts that the owner understands and that are likely to infer meanings consistent with the agent's intent.

Stage No. 3: Problem Census

After the information giving step, there will likely be concerns, questions, disagreements, counter proposals and objections expressed by the property owner. While it is tempting to address each point as the owner raises it, an alternative is to develop a list, or census, of all the issues. Once this problem census of the concerns, questions, disagreements, and so forth, has been completed, it is time to ask, “Here is a list of all the concerns, objections, and disagreements you have communicated. Is that correct? Are there any others?” If the property owner answers “Yes,” then the additional items are added to the census. If the owner says “No,” then the agent might want to ask; “If we can find solutions that satisfy your interests and mine, I assume both of us will be ready to sign an agreement. Is that right?” If the owner agrees, then the two parties should set about resolving the issues. If the property owner disagrees, then the problem census process is not finished.

Stage No. 4: Problem Solving

During this step the parties will utilize one or more of the negotiation styles to solve the problem. Preferably, the predominant style will be integrative, satisfying the interests of both parties. While the funnel technique appears linear, it is more circular with the agent and property owner revisiting all the steps — information seeking, information giving, problem census, and problem solving — until they reach agreement. Problem solving involves searching for solutions or resolving issues, concerns, and questions identified in the problem census. The issues may carry varying degrees of significance and importance, and are likely to be equally varied in terms of degree of difficulty.

It is usually best to begin with an enumeration of all the items to which the negotiating parties agree. This starts the discussion on a positive step and reminds the negotiators that they do have some or even many points in common. More important, the areas of agreement might be relied upon as cues for resolving areas of disagreement. For example, are the areas of agreement more significant than the areas of disagreement? If they are, then the other issues should be more easily resolved. If the reverse is true, are there themes (e.g. most problems relate to the project or most problems relate to the property) that can be discerned and then dealt with as a group.

It may be helpful to organize the areas of disagreement along a continuum of difficulty, and then work along the continuum from the easiest issues to the most difficult ones. This teaches both parties the effectiveness and benefit of working together, thus building confidence that issues can be resolved.

Finally, at this step, the two parties should focus on the interests rather than on the positions. A person’s position is something decided upon, while the interest is what caused a person to decide. Interests are motivators and help to explain why a person behaves a certain way and what it will require to reach an agreement. Part of the reason the agent should focus on interests versus positions is that the agent, while not being able to accept the owner’s position, may be in a position to satisfy the interest.

Stage No. 5: Closing

Taking a formal action step normally concludes negotiation. In right of way negotiation, this means a formal process of signing a legal document. Even given the thoroughness of the preceding steps, and the seemingly positive relationship that developed between the negotiating parties, special care must be taken during this closing process. This special care is needed to ensure that something has not been inadvertently overlooked. This is important if what has been overlooked could surface later and have a detrimental effect on either the relationship that developed or the owner's commitment to the agreement. Prior to signing the agreement, it is a good idea to review the agreed-on points. Also, it may be beneficial to recite the advantages of signing for both parties. Now, it is time to sign.

Closing Techniques

A closing technique is a method for prompting someone with whom agreement has been achieved to take an action. Most often, assuming that a collaborative and trusting process developed, all that is required is to offer the owner a pen, show the owner where to sign, and sign. There are many other ways to close:

Summary technique

Usually, at the end of the discussion, it is advisable to review the key benefits for the property owner, and all of the items that have been agreed upon. The owner may have forgotten some of the reasons why it would be advisable to sign, but of even more importance, a review builds the psychological atmosphere in which it is easy for the agent to ask for a signature and difficult for the owner to say "no."

The "yes" technique

This is a variation of the summary technique. When encountering an owner who has been relatively quiet and noncommittal throughout the process, it is often a good idea, as each advantage and agreement is reviewed, to pause and ask the owner: "Am I correct on this?" Provided the agent is in fact correct, the owner should answer "yes" to each question. Then the property owner should be ready to say "yes" when asked the final question: "Will you sign the agreement?"

Ego boost technique

As the closing progresses, the agent may get the impression that the owner is one who appreciates ego support. In such a case, when the agent begins to review the agreement, the agent might acknowledge the owner's role in the process. For example, if the owner suggested a solution that resulted in an agreement on a specific issue or if the owner conceded a point that advanced the negotiation, remind and thank the owner at the closing.

Narrow the choice technique

Very simply, the agent may say: “Since we are essentially in agreement on the issues, if you will sign here we can move on to the payment procedures. Is that OK?” Another choice may be: “Would you rather close on Thursday or Friday morning?”

Standing room only technique

This technique works well with a person who, during the negotiation, indicated a strong social need, such as a need to get along with neighbors or others in the community. A statement such as: “This project is certainly going to benefit the community in so many ways and it’s been a real pleasure working with you and your neighbors to make it happen.”

Implied consent

This involves simply reviewing the agreement, handing the pen to the property owner, and showing where to sign.

Just ask the owner to sign

If both parties have established a trust relationship and have mutually resolved all interests and the time is right, just ask.

CHALLENGES ASSOCIATED WITH SELECTING A NEGOTIATION STRATEGY

In an ideal world, all land acquisition agents should use an integrative negotiation style. However, an agent’s ability to use problem solving techniques may be either limited or enhanced by individual skill-sets and attitudes, the skills and attitudes of the owner, and the organization’s policies and procedures.

The Agent’s Personal and Organizational Public Relations Philosophy

Some agents believe that their objective is to make the property owner “happy” about the settlement. A more realistic negotiation objective is to help the owner feel “satisfied.” For successful integrative negotiation, the agent must assure the owner that fairness and equity under the law have been observed. Fairness can be demonstrated by:

- making clear to the owner that the compensation being offered is comparable to what other people are receiving;
- showing the owner that the price being offered is, to the best ability of a professionally trained appraiser, the amount of money that the property would normally sell for on the open market; and,
- ensuring that acquisition related problems are minimized, resolved, or compensated.

Organizational Willingness to Accommodate New Information

A one-offer requirement or policy should not imply inflexibility on the part of an acquiring organization. The premise underpinning a one-offer system is that the amount offered by the agent represents the highest price that can be substantiated by objectively collected and analyzed market data. However, an organization should be willing to modify an offer if new evidence justifies a change. Modifications should be based on variables such as an oversight in the collection of the data, a difference of opinion in the original interpretation of these data, or reanalysis of highest and best use.

AGENT'S SKILL IN NEGOTIATING

Integrative negotiation is successful only to the extent that an agent has the ability and skills to effectively use attitudinal negotiation and an agent is effective in intra-agency negotiation on behalf of the owner. If an agent has the skills needed for integrative negotiation, a one-offer policy is the best way of protecting the rights of all the property owners affected by the project, the integrity of the acquiring organization, and the taxpayer or ratepayer.

THE USE AND STRUCTURE OF ADMINISTRATIVE SETTLEMENTS

An administrative settlement occurs prior to an agency invoking its condemnation authority. An administrative settlement should be considered when reasonable efforts to negotiate an agreed acquisition price have failed but there appears to be the potential for agreement. It typically is for an amount that exceeds the agency's approved just compensation offer. An administrative settlement goes beyond the appraisal and appraisal review process and should consider all pertinent information (such as., appraisals, including the owner's appraisal if available, recent court awards, estimated trial costs, and valuation problems).

WILLINGNESS TO USE THE COURT

An administrator can find any number of reasons to offer a property owner more money rather than going to court (for example, the added cost of processing the case through the court system, the delays and administrative costs associated with further negotiation). However, integrative negotiation works best in organizations that adopt the position that court costs may be necessary in order to maintain the integrity of the just compensation concept. If an organization rewards an owner who holds out for additional compensation and if this amount of money has no relationship to objective data, then that agency has a system that is unfair to the owners who do cooperate and accept fair market value as a basis for settlement. Unsupported settlements are unfair to the taxpayer or ratepayer, as they will increase costs. An agent cannot be expected to operate in good faith under a one-offer system when the organization is reluctant or unwilling to use the court as a means of resolving differences.

Also, the court should be used in situations where there is a philosophical difference of opinion on the appraised value (such as, highest and best use, damages to the remainder property) and where the court's determination may provide the basis for a more effective future legal interpretation. Use of the court system has been established as the method for achieving settlements where there are irreconcilable differences between the owner and condemner. The effectiveness of a court settlement is, to a degree, based on the ability of the agent. If the agent has a good understanding of the owner's position and interest and has obtained the facts of the case, the organization's attorney will be aided in preparing the court presentation.

SUMMARY

At least four different negotiation styles (bargaining, integrative, attitudinal, and intra-agency) are relevant in the acquisition process. Bargaining negotiation is used, often in conjunction with another style, but its use in property acquisition should be limited. Integrative negotiation, which is highly dependent on establishing a trust relationship between the parties, should be the predominant negotiation style used in the purchase of most property or property rights. This style provides a rational method of resolving differences with a property owner; especially given the need for most agents to acquire property or property rights at a fair market value. Attitudinal negotiation is a prerequisite for the other negotiation styles. Its major goal is to establish the ground rules (attitudes) by which the parties will negotiate. Intra-agency negotiation deals with problem solving between the agent and the agent's organization.

There are at least five major sources of power (legitimate, coercive, reward, personal, and normative) that are available to an agent in attempting to influence an owner. However, no matter how much power an agent may possess, the owner controls the final decision; whether or not to sign an agreement. There has been much research dealing with the nature of human motivation and behavior and many of the findings are important to an agent's activities. A valuable tool for problem solving is the funnel technique. The five stages of this technique are information seeking, information giving, problem census, problem solving, and closing.

The factors that influence an agent's choice of a negotiation strategy include the restraints imposed by the one-offer system, the agent's personal and organizational public relations philosophy, the organization's willingness to accommodate new information, the agent's negotiating skills, the effective use of the administrative settlement process, and the organization's willingness or ability to use the court system.

CHAPTER 14:

Relocation Assistance in the United States

————— Lisa Harrison, Lee Hamre, —————
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and
The International Relocation Committee

Much of the material in this chapter has been extracted from the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, 42 u.s.c. 4601 et seq., (the Uniform Act) as implemented by 49 CFR Part 24.

INTRODUCTION

In 1971, Public Law 91-646, the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970* was signed into law. With enactment, the United States adopted uniform measures whenever the federal government acquired real property. In addition, state and local agencies, using federal funds in any aspect of a project, were required to comply with the Uniform Act.

The Uniform Act, as amended, sets the minimum standards for compensation and relocation assistance for the appraisal and acquisition of real property. Also, the Uniform Act sets the minimum standards for relocation advisory services and financial assistance for residential individuals, families, businesses, farms, and nonprofit organizations that must relocate as a result of the public acquisition of the real property. This chapter will discuss the general aspects of the relocation advisory assistance program and residential and nonresidential (generally businesses and farms) relocations. In addition to the Uniform Act provisions, relocation assistance is subject to the rules and regulations of various federal, state, and local agencies that acquire property or provide financial assistance to others that do. Several state and local agencies have enacted laws that require advisory and financial assistance benefits that are greater than those required by the Uniform Act. Many states have extended the Uniform Act requirements to programs and projects involving the right of eminent domain, even if federal funds are not involved.

RELOCATION PLANNING

During the early stages of project development, federal and federal aid programs or project sponsors must consider the impacts associated with the displacement of individuals, families, businesses, farms, and nonprofit organizations, and develop a plan to minimize the project's adverse impacts on displacees. The planning, which precedes any agency action that will cause displacement, includes an evaluation of available program resources to complete the relocations in a timely and orderly manner. Such planning may involve a relocation survey or study, which may include, but is not necessarily limited to:

- an estimate of the number of households to be displaced, including information on residential owner/tenant status, estimated property values and rental rates of properties to be acquired; family composition, and special consideration, when applicable, of the impacts of the project on minorities, the elderly, large families, and persons with disabilities.
- an estimate of the number of comparable replacement dwellings in the area (including prices and rental rates) that are expected to be available to meet the needs of the displaced households. If it is anticipated that an adequate supply of comparable housing will not be available, consideration of last resort housing should be addressed.
- an estimate of the number, type, and size of the businesses, farms, and nonprofit organizations to be displaced and the approximate number of employees affected.
- consideration of suitable replacement sites for displaced businesses. When an adequate supply of replacement business sites is not expected to be available, the impacts of displacing the businesses should be considered and addressed. Planning for displaced businesses that are reasonably expected to involve complex or lengthy moving processes or small businesses with limited financial resources and/or few alternative relocation sites should include an analysis of business moving problems.
- consideration of any special relocation advisory services that may be necessary from the acquiring agency and from other cooperating social service agencies.
- an evaluation of the time and staff requirements to complete the project relocations and the anticipated time frame and staff available for the project.

RELOCATION ASSISTANCE AND ADVISORY SERVICES

The Uniform Act requires an agency to utilize a relocation assistance and advisory services program that meets Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et seq.) requirements. This requirement is consistent with Title VIII of the Civil Rights Act of 1968 (42 U.S.C. 3601 et seq.) and Executive Order 11063 (27 FR 11527, November 24, 1962). If an agency determines that a person occupying property adjacent to the real property acquired for the project suffers substantial economic injury because of the acquisition, the agency may also offer advisory services to that occupant.

An advisory program should include the measures, facilities, and services that are necessary or appropriate to determine the relocation needs and preferences of each displacee. Also, advisory services must include an explanation of the relocation payments, the related eligibility requirements, and the procedures for obtaining the financial assistance for which the displacee may be eligible. For nonresidential displacements, this must include a personal interview with each business prior to or at the time of the appraisal during which the following items are discussed:

- replacement site requirements and capacity of the business to accomplish the move.
- need for outside specialists.
- identification and resolution of personality/realty issues.
- estimate of the time required for the business to vacate the site and anticipated difficulty in locating a replacement property.

For residential displacements, a personal interview is also required during which the following items are discussed:

- a determination of relocation needs and preferences.
- an explanation of payments and other assistance for which the person may be eligible.

Residential displacees should also be provided with current and continuing information regarding comparable replacement dwellings throughout the process. An agency should inform the person in writing of the specific comparable replacement dwelling, the price or rent used for establishing the upper limit of the replacement housing payment for which a residential occupant may be eligible, and the basis for the determination. Displacees must be made aware of the maximum replacement housing payment for which they may qualify, as soon as that amount can be determined. Whenever possible, minorities should be given reasonable opportunities to relocate to decent, safe, and sanitary replacement dwellings that are within their financial means and not located in an area of minority concentration. However, this policy does not require an agency to provide a person or family with a larger payment than would otherwise be necessary to enable the relocation to a comparable replacement dwelling. All displacees, especially the elderly and persons with disabilities, must be offered transportation to inspect housing to which they are referred.

RELOCATION NOTICES

The Uniform Act requires that certain written notices be provided to the displacees. The notices are a General Information Notice, notice of relocation eligibility, and 90-day notice.

General Information Notice

As soon as feasible, the General Information Notice must be delivered to the person, family, business, farm, or nonprofit organization scheduled to be displaced. The notice should include a general description of the displacing agency's relocation program. In addition, the notice must inform displacees that they:

- may be displaced by the project and may be eligible for relocation payments. (The notice includes the basic eligibility conditions and the procedures to obtain payments.);
- will be given reasonable relocation advisory services, including referrals to replacement properties, assistance in filing payment claims, and other necessary assistance to relocate successfully;
- will not be required to move without at least a 90 day advance written notice, and for residential displacees, assurance that they cannot be required to move permanently unless at least one comparable replacement dwelling has been made available;
- inform any person who is an alien unlawfully present in the United States that they are ineligible for relocation advisory services and relocation payments. However, if the ineligibility would result in an exceptional and extremely unusual hardship to a qualifying child, spouse, or parent, additional consideration will be given; and,
- have the right to appeal the agency's determination regarding eligibility and entitlement to assistance and reimbursement.

Information may be provided in a brochure that is appropriate for the type of relocation being addressed (residential, business, farm, nonprofit organization, or personal property only).

Notice of Relocation Eligibility

Relocation assistance eligibility begins on the date of a written notice of intent to acquire, the initiation of negotiations, or the actual acquisition whichever occurs first. When this occurs, an agency is required to notify promptly and in writing all occupants of a subject site regarding their eligibility for relocation assistance.

90-Day Notice

The 90-day notice assures the property occupants that no lawful occupant will be required to vacate the property being acquired, unless they have received at least 90-days advance written notice of the earliest date by which they may be required to move. Further:

- the notice should state the earliest date by which the occupant may be required to vacate the subject site. The agency may state that the occupant will receive a further notice at least 30 days in advance, which identifies the specific date by which the property must be vacated;
- in the case of a residential occupant, if a 90-day notice is issued before a comparable replacement dwelling is made available, the notice must state clearly that the occupant will not be required to move any earlier than 90 days after a comparable replacement dwelling has been made available;
- in unusual circumstances, an occupant may be required to vacate a property with less than 90-days advance written notice. The displacing agency may determine that a 90-day notice is impracticable, as in the case when the person's continued occupancy of the property would constitute a substantial danger to health or safety, and appropriate supporting documentation of this determination must be included in the case file.

Aliens Not Lawfully Present

Persons seeking relocation reimbursement payments or relocation advisory assistance services must certify that they are either citizens or nationals of the United States, or aliens who are lawfully present in the United States. In the case of a family, the head of household may certify that each family member is either a citizen or national of the United States or an alien who is lawfully present in the United States. For an unincorporated business, farm, or nonprofit organization, the principal owner, manager, or operating officer certifies that each person with an ownership interest is either a citizen or national of the United States or an alien who is lawfully present in the United States. For an incorporated business, farm, or nonprofit organization, the corporation is authorized to conduct business within the United States if that entity has appropriately filed corporate documents in the state in which it is operating.

No relocation payments or relocation advisory assistance services are provided to a person who has not provided the certification described, or who has been determined to be unlawfully present in the United States. However, if the person can demonstrate that denial of relocation benefits will result in an exceptional and extremely unusual hardship to a member of the immediate family legally residing in the United States, the agency may reconsider the claim for eligibility. Residential relocation payments are computed based on the number of eligible household members. Payments for an unincorporated business, farm, or nonprofit organization are based on the ratio of ownership between eligible and ineligible owners. The displacing agency will consider the certification provided by an individual for a household, business, farm, or nonprofit organization to be valid, unless the agency has reason to believe, based on credible evidence, the certification is invalid. In such cases, the agency must obtain additional information before making a final determination.

RESIDENTIAL RELOCATION

Individuals and families legally in occupancy of a subject property at initiation of negotiations (the point in time the first written offer to purchase the property is made to the fee owner) may be eligible to receive relocation advisory services, replacement housing payments, and reimbursement of move cost expenses. While referred to by several different names, replacement housing payments and moving cost reimbursement payments are the major reimbursement types for eligible residential occupants under the Uniform Act.

Residential Advisory Services

Relocation advisory services are the foundation of the Uniform Act. Advisory services planning should begin at the same time as a project undergoes final corridor determination. A data bank, adequate to meet the potential needs of a displaced resident or family, should be developed and maintained. The bank may contain community information (such as, real estate market resources, school district maps, public transportation routes, hospital and medical center locations, shopping facilities, houses of worship, and so on). Additionally, community service resources need to be identified. Community services may include information on assistance and transportation services for disabled persons, location and contact information for day care facilities, senior activities and counseling center addresses and contact names, subsidized housing information, financial counseling services, veteran

affairs contacts, and so forth. While a comprehensive resources list may not be needed for each project, awareness of a community's resources allows an agency to act expeditiously and efficiently without losing opportunities when needs arise. Relocation agents must understand the organization of the community service agencies, their missions, the names and contact information for its personnel, the services provided, and the service delivery methods and procedures. Relocation agents must understand the community's real estate industry. For example, agents should know the:

- typical length of time from the signing of a purchase contract to the title transfer, along with the following:
- local customs and procedures when purchasing property privately;
- availability of mortgage money;
- general zoning provisions;
- local terminology (for example., condominium, co-operative, townhouse, manufactured housing, zero lot line, setbacks, and so on);
- the types of professionals (for example., attorney, broker, appraiser, title searcher, rental agents, property inspector, and so on) who typically participate in residential real estate transactions;

The agent should also be aware of the acquiring agency's policies and procedures for advance payment if a displacee does not have the means to make a purchase without it.

Relocation agents are often called upon to work with people who have very limited experience with moving, or the purchase/lease of a home. Those possibilities, along with the complexity of the Uniform Act, may create an overwhelming and uninviting impact on the displaced person. A prepared relocation agent, working with individuals and families facing a project relocation — a move that they did not initiate, plan for, or choose — can minimize the impacts of the displacement and maximize the benefits for which the displacees are eligible.

Replacement Housing

No residential occupant to be displaced is required to move from a dwelling unless at least one *comparable replacement dwelling* has been made available. When possible, three or more comparable replacement dwellings must be provided. A comparable replacement dwelling is considered to have been made available when:

- the unit meets federal, state, and/or local housing codes for occupancy of the specific individual or family;
- the person is informed of the selected comparable replacement dwelling's location;
- the person has sufficient time to negotiate and enter into a purchase agreement or lease for the property (the 90-day minimum period of time); and,
- the person is assured of receiving the entitled relocation assistance and acquisition payment in sufficient time to complete the purchase or lease of the property.

The definition of a comparable replacement dwelling for purposes of relocation assistance is a dwelling that is:

- decent, safe, and sanitary;
- functionally equivalent to the displacement dwelling;
- adequate in size to accommodate the occupants;
- in an area not subject to unreasonable adverse environmental conditions;
- in a location with similar facilities and reasonably accessible to the persons place of employment;
- on a site typical in size for residential development;
- currently available on the private market;
- within the financial means of the displaced person.

Replacement Housing Payments

Replacement housing payments are available to homeowners who have occupied the dwelling for 180 days or more prior to the initiation of negotiations, and to residential occupants of 90 days or more from the initiation of negotiations. Replacement housing payments are also available to mobile home occupants. A mobile home occupant's eligibility status is based on their occupancy of the dwelling as either an owner or a tenant. In addition, replacement housing payments are available to residential occupants under the provisions of last resort housing whenever a project cannot proceed on a timely basis because comparable replacement dwellings are not available within the statutory monetary limits for owners or tenants or for displaced persons who fail to meet length of occupancy requirements. To be eligible for a replacement housing payment, the displacee must purchase or rent and occupy decent, safe, and sanitary housing within 1 year. Payment must be claimed within eighteen months.

Homeowner-Occupants of 180-Days or More

A 180 day homeowner-occupant is eligible for:

- Advisory Assistance (previously discussed)
- Replacement Housing Payment
 - Price Differential
 - Increased Mortgage Interest Cost
 - Incidental Expenses
- Moving
 - Self Move
 - Actual Cost

The price differential portion of a replacement housing payment for a 180-day homeowner-occupant may be referred to as a purchase additive, purchase supplement, purchase differential, or other similar name. Regardless of the label an agency attaches to this

entitlement, the basis for the reimbursement is the same. Each replacement housing payment is to be determined in accordance with the Uniform Act implementing regulations. Exclusive of the fact that the total of the three payments may not exceed \$22,500 without lapsing into last resort housing, each potential reimbursement is to be considered independent of the other two reimbursements and ineligibility for any one or two types of payments does not necessarily mean ineligibility for the other reimbursements.

Price Differential

The computed price differential is the amount that must be added to the acquisition cost of the displacement dwelling to provide the financial means for the displacee to acquire a comparable dwelling. The upper limit of a price differential is based on the listing price of the most comparable dwelling selected from three or more available comparable dwellings.

Example A

Listing price most comparable	\$	115,000
Acquisition Price.....	\$	100,000
Maximum Price Differential.....	\$	15,000

If the site of the comparable replacement dwelling lacks a major exterior attribute that the displacement dwelling site has, such as a swimming pool, the value of this attribute is subtracted from the acquisition cost of the displacement dwelling for purposes of computing the payment.

The actual price differential to be paid is the amount that must be added to the acquisition cost of the displacement dwelling to provide a total amount equal to the lesser of:

- the listing price of the comparable used to compute the price differential; or,
- the purchase price of the decent, safe, and sanitary replacement dwelling actually purchased and occupied by the displaced person.

Example B

Listing price most comparable	\$	115,000
Actual Price of Replacement dwelling.....	\$	120,000
Acquisition Price of Displacement dwelling	\$	100,000
Maximum Price Differential Payment	\$	15,000

Example C

Listing price most comparable	\$	115,000
Actual Price of Replacement dwelling.....	\$	110,000
Acquisition Price of Displacement dwelling	\$	100,000
Price Differential Payment.....	\$	10,000

Increased Mortgage Interest Cost

The payment for increased mortgage interest cost is the amount that will reduce the new mortgage balance to an amount that could be amortized with the same monthly payment for principal and interest over the same time period as that for the mortgage, or mortgages, on the displacement dwelling. In addition, payments shall include other debt service costs, if not paid as incidental costs. The increased mortgage interest cost payment will be based on bona fide mortgages that were valid liens on the displacement dwelling for at least 180 days prior to the initiation of negotiations. Of course, this payment is contingent upon a mortgage being placed on the replacement dwelling. The payment is based on the unpaid balances and remaining terms of any mortgages on the displacement dwelling. However, in the event the person's new mortgage principal is less than the mortgage balance computed in the buy down determination, the payment will be prorated and reduced accordingly. In the case of a home equity loan, the unpaid balance will be that balance that existed 180 days prior to the initiation of negotiations or the balance on the date of acquisition, whichever is less. The Uniform Act provides further insight and direction regarding this computation.

The computation requires that the interest rate on the new mortgage used in determining the amount of the payment not exceed the prevailing fixed interest rate for conventional mortgages currently charged by mortgage lending institutions in the area in which the replacement dwelling is located. Purchaser's points and loan origination or assumption fees may be included, but not the seller paid points. As soon as the facts relative to the person's current mortgage or mortgages are known, the displaced person must be advised of the approximate amount of this payment and the conditions that must be met to receive the payment. In order to reduce the new mortgage, which is the intention of the payment, the payment will be made available at or near the closing date on the replacement dwelling

Incidental Expenses

The incidental expenses to be reimbursed to the 180-day owner-occupant are those necessary and reasonable costs actually incurred by the displaced person incident to the purchase of a replacement dwelling and customarily paid by the buyer. The expenses may include, but are not necessarily limited to, legal, closing, and related costs (for example, preparation of the conveyance instruments, notary fees, preparation of surveys and plats, and recording fees). Also, they may include lender application and appraisal fees, loan origination or assumption fees (that do not represent prepaid interest), professional home inspection fees, certification of structural soundness and termite inspection when required, credit reports, title insurance, escrow agent's fee, state revenue or documentary stamps, and sales or transfer taxes.

When there is no mortgage on the acquired property, costs incurred in connection with securing mortgage financing are not considered necessary to enable the displaced person to relocate to comparable housing and should not be considered as an eligible incidental expense. Costs incurred securing a larger mortgage on the replacement dwelling than

would be required on a comparable dwelling would not be considered a necessary expense. However, if the displacing agency determines that the displacee needs to obtain a loan in order to relocate, the cost of obtaining the loan could be considered “necessary” and would be an eligible incidental expense. A 180-day homeowner-occupant, who may be eligible for a replacement housing payment but elects to rent a replacement dwelling, may be eligible for a rental assistance payment. However, the rental assistance payment may not exceed the maximum price differential calculated for purchasing a replacement home, whichever is less. For this type of rental assistance payment calculation, it is necessary to use the fair market rent for the displacement dwelling.

Occupants of 90 Days

A 90-day occupant is eligible for:

- Advisory Assistance (previously discussed)
- Replacement Housing Payment
 - Rental Assistance
 - or
 - Downpayment Assistance
- Moving
 - Self Move
 - Actual Cost

A 90-day occupant displaced from a dwelling is entitled to a rent supplement or rent differential payment. Again, this nomenclature varies throughout the country. A displaced 90-day occupant may be eligible for down payment assistance to purchase replacement housing instead of the rent supplement payment.

Rental Assistance

An eligible displaced 90 day occupant who rents a replacement dwelling is entitled to a payment not to exceed \$5,250 for rental assistance without lapsing into provisions of last resort housing. The maximum rental assistance calculation is the amount that must be added to the base monthly rent for the displacement dwelling to provide the displacees with the financial means to rent a comparable dwelling . The upper limit of the rental assistance is based on the listed rent of the most comparable dwelling selected from three or more available comparable dwellings. The base monthly rental is a specific relocation term from the regulations defined as being the lesser of:

- the average monthly cost for rent and utilities at the displacement dwelling for a reasonable period of time prior to displacement, as determined by the agency. (For an owner-occupant, the fair market rent for the displacement dwelling is used. For a tenant who paid little or no rent for the displacement dwelling, the fair market rent is also used, unless its use would result in a hardship because of the person’s income or other circumstances); or;

- 30% of the person’s average gross household income if the amount is classified as “low income” by HUD’s Annual Survey of Income Limits. If the person refuses to provide appropriate evidence of income or is a dependent, the base monthly rent shall be the average monthly cost for rent and utilities at the displacement site. A full-time student or resident of an institution may be assumed to be a dependent, unless the person demonstrates otherwise, or;
- the total of the amounts designated for shelter and utilities if receiving a welfare assistance payment from a program that designates the amounts for shelter and utilities.

Example Rent to Rent

1. Rent and Utilities at Displacement Dwelling	\$1,200.00
2. Annual Household Income	\$50,000.00
3a. Number of Occupants of household	5
3b. Location of displacement dwelling:	Clintonville
3c. Low income threshold	\$47,250
4. 30% of monthly household income (\$50,000 divided by 12 x 30%)	N/A
5. Base monthly rental (lesser of 1 of 4)	\$1,200.00
6. Comparable rent and utilities	\$1,250.00
7. Computation of payment	
\$1,250.00 minus \$1,200	
\$50 x 42 months =	\$2,100.00

Example – Low income

1. Rent and Utilities at Displacement Dwelling	\$1,200.00
2. Annual Household Income	\$46,000.00
3a. Number of Occupants of household	5
3b. Location of displacement dwelling:	Clintonville
3c. Low income threshold	\$47,250
4. 30% of monthly household income (\$50,000 divided by 12 x 30%)	\$1,150.00
5. Base monthly rental (lesser of 1 of 4)	\$1,150.00
6. Comparable rent and utilities	\$1,250.00
7. Computation of payment	
\$1,250.00 minus \$1,150	
\$100 x 42 months =	\$4,200.00

Table 14.1: Examples of Rental Assistance Payment Calculation

The actual payment will be 42 times the amount obtained by subtracting the base monthly rental for the displacement dwelling from the lesser of:

- the monthly rent and estimated average monthly utility cost for a comparable replacement dwelling; or,
- the monthly rent and estimated average monthly cost of utilities for the decent, safe, and sanitary replacement dwelling actually occupied by the displaced person.

As determined by the agency, a rental assistance payment may be disbursed in either a lump sum or installments. However, the full amount vests immediately, whether or not there is any later change in the person's income or rent, or in the condition or location of the person's housing.

Downpayment Assistance

An eligible displaced 90-day occupant who decides to purchase a replacement dwelling is entitled to a downpayment assistance payment in the amount of the maximum rental assistance calculation. At the discretion of the agency, a downpayment assistance payment may be increased to any amount not to exceed \$5,250. To ensure equal treatment, an agency's discretion to provide the maximum payment must be exercised in a uniform and consistent manner. The full amount of the replacement housing payment for downpayment assistance must be applied to the purchase price of the replacement dwelling and related incidental expenses.

Mobile Home Occupants

There are several possible occupancy combinations for mobile home occupants. A displaced mobile home owner-occupant may have owned the displacement mobile home and the site or may have owned the displacement mobile home and rented the site. A tenant-occupant may have rented the mobile home and the site or may have rented the mobile home and owned the site.

If the mobile home is owned and occupied, the displacee is considered an owner (even if the land is occupied as a tenant). If the mobile home is rented and occupied, the displacee is considered a tenant. Also, the displacee may be considered a residential tenant if the mobile home is rented but situated on tenant owned land. The status of the displacees' occupancy of the mobile home determines their eligibility requirements and application for determining their replacement housing payment.

Moving a Mobile Home

If the mobile home is not acquired as real property by the agency, an owner-occupant displaced from a mobile home or mobile home site is entitled to a payment for the cost of moving the mobile home on an actual move-cost basis. A nonoccupant owner (that is, landlord) of a rented mobile home is also eligible for actual move cost reimbursement. Costs for moving the mobile home include, but are not necessarily limited to, disassembling, moving, and reassembling any attached appurtenances (such as, porches, decks, skirting, awnings, unit anchoring), and utility connection charges. Additionally, the mobile home

owner may be entitled to reimbursement for a non-refundable mobile home park entrance fee, providing the fee does not exceed the fee at a comparable mobile home park, if the agency determines that payment of the fee is necessary to effect relocation. If it is determined that the mobile home cannot be moved, the mobile home owner-occupant may obtain a replacement housing payment to purchase or lease a replacement dwelling. If so, entitled, the owner will not be eligible for reimbursement of expenses to move the mobile home. However, the displacee may be eligible for a reimbursement for moving the personal property inside the subject mobile home. In either event, the displacee is entitled to reimbursement for the cost of moving other personal property on the acquired site, but outside the mobile home. Each displacing agency may have specific policies regarding the treatment of the mobile home as real or personal property.

Replacement Housing Payment Calculation

Both the mobile home and mobile home site must be considered when computing a replacement housing payment whether owner or tenant-occupied. The total replacement housing payment shall consist of a payment for a dwelling and a payment for a site. Each payment will be computed under the applicable section of 49 CFR Part 24. However, the total replacement housing payment may not exceed the maximum payment of either \$5,250 for tenants or \$22,500 for owners without entering into the provisions of last resort housing. If a comparable replacement mobile home is not available, the replacement housing payment shall be computed on the basis of the reasonable cost of a conventional comparable replacement dwelling.

Replacement Housing of Last Resort

When a program or project cannot proceed on a timely basis because comparable replacement dwellings are not available within the monetary limits of \$5,250 for tenants or \$22,500 for owners, the agency shall provide additional or alternative assistance. Any decision to provide last resort housing assistance must be adequately justified on a case-by-case basis, for good cause, with appropriate consideration given to:

- the availability of comparable replacement housing in the program or project area;
- the resources available to provide comparable replacement housing;
- the individual circumstances of the displaced person,

or by a determination that:

- there is little, if any, comparable replacement housing available to the displaced persons within an entire program or project area; and, therefore, last resort housing assistance is necessary for the area as a whole;
- the program or project cannot be advanced to completion in a timely manner without last resort housing assistance; and,
- the method selected for providing last resort housing assistance is cost effective, considering all elements which contribute to total program or project costs.

Basic Rights of Displacee

Notwithstanding any provision of last resort housing, no person shall be required to move from a displacement dwelling unless comparable replacement housing is available, nor may they be deprived of any rights under the Uniform Act.

Methods of Providing Comparable Replacement Housing

Agencies have broad latitude in implementing last resort housing; but implementation shall be at reasonable costs, determined on a case-by-case basis unless a project exception is justified. The methods of providing replacement housing of last resort include, but are not limited to, a replacement housing payment in excess of the limits of \$5,250 for tenants or \$22,500 for owners. Rental assistance subsidies under last resort housing may be provided in installments or in a lump sum, at the agency's discretion. The agency may elect to rehabilitate and/or make additions to an existing replacement dwelling, construct a new replacement dwelling, or provide a direct loan, which requires regular amortization or deferred repayment, as prescribed in 49 CFR Part 24.

Also, the agency will provide assistance under last resort housing to displaced persons or families who are not eligible to receive a replacement housing payment because of failure to meet the length of occupancy requirements (90-day occupant).

Seasonal Occupants

Displacees owning or renting seasonal residences are generally entitled to moving expenses only. A seasonal residence can be distinguished from a domicile in that a domicile is the person's permanent and established home and to which place the person, when absent, has full intention of returning.

Moving Expenses

Residential moves are reimbursed on an actual incurred cost basis or on the basis of the residential moving expense and dislocation allowance payment schedule, sometimes referred to as a residential fixed payment or a combination of the two.

Reimbursable Expenses

Any residentially displaced owner-occupant or tenant-occupant, who qualifies as a displaced person under the Uniform Act, is entitled to reimbursement of actual moving and related expenses as the agency determines to be reasonable and necessary. The following list of reimbursable move expenses, while extensive, is an overview of the scope and range of expenses to be considered for reimbursement.

The expenses may include:

- transportation of personal property for a distance not to exceed 50 miles, unless the agency determines that relocation beyond 50 miles is justified;
- packing, crating, unpacking, and uncrating the personal property;

- disconnecting, dismantling, removing, reassembling, and reinstalling relocated household appliances and other personal property;
- storage of the personal property for a period not to exceed 12 months, unless the agency determines that a longer period is necessary insurance for the replacement value of the property in connection with the move and necessary storage; and,
- the replacement value of property lost, stolen, or damaged in the process of moving (not through the fault or negligence of the displaced person, the person's agent, or employee) where insurance covering the loss, theft, or damage is not reasonably available.

Actual Cost Move

An actual cost move may be carried out by a commercial mover or by the displaced person in a self-move, supported by receipts for actual, reasonable, and necessary expenses. Also, in a self-move, the value of the displaced person's time moving is reimbursable. The hourly rate of the displaced person's time should be reasonable and generally should not exceed rates paid by a commercial mover to employees performing the same activity. Displaced persons or families may not move themselves and then collect the cost of a commercial move.

Schedule Payment and Dislocation Allowance

Any person displaced from a dwelling or a seasonal residence is entitled to receive an expense and dislocation allowance as an alternative to a payment for actual moving and related expenses. The Uniform Act allows the use of a moving expense schedule for residential move. In using a schedule, the actual room count may be supplemented by additional rooms representing the reasonable count of room equivalents of personal property found in attics, basements, hallways, yards, and elsewhere. This self-move allowance will be determined by the applicable schedule approved by the Federal Highway Administration.

NON-RESIDENTIAL RELOCATION

The United States Congress intended a different standard for non residential (for instance, businesses, farms, nonprofit organizations) displacements in that the Uniform Act does not require displaced businesses to be made whole. However, since the passage of the law, regulations have been modified to provide a greater level of assistance and benefits to reduce the hardships on small businesses, farms, and nonprofit organizations. Additionally, some states have passed laws to increase the monetary limits that exceed the maximum statutory limits in the Uniform Act. Actual, reasonable, and necessary are still the words that best describe the standard for nonresidential displacements. Business relocation addresses the needs of all displacees that do not qualify as residential displacements. This may include any type of displacement ranging from items of personal property to home-based businesses to storefront operations to manufacturing plants to farms and to non-profit organizations.

Business, Farm, and Nonprofit Organization Advisory Services

The advisory program must include such measures, facilities, and services as may be necessary or appropriate in order to determine the relocation needs and preferences of each business, farm, or nonprofit organization to be displaced. Emphasis on early identification of potential issues surrounding the relocation of the business is mandatory under the regulations. The personal interview with the business owner or representative should include probing questions regarding the businesses needs for the moving process and replacement site requirements. As it is necessary to explain all the relocation reimbursement payments and other assistance to which the business may be eligible and the related eligibility requirements, it is best conveyed in person.

A data bank, adequate to meet the potential needs of a displaced business, should be developed and maintained. The bank may contain information about real estate market resources for business, manufacturers, etc., shopping centers, houses of worship, and any other data that may assist the business in determining a suitable replacement site. Additionally, community service resources need to be identified. These may include data about federal, state, or licensing agencies, Department of Building and Zoning, public transportation routes, assistance and transportation for persons with disabilities, Better Business Bureau, Environmental Protection Agency, Small Business Administration, financial counseling, and veteran services. The list of resources may not be needed in its entirety; however, being aware of the community and its resources makes it possible to act expeditiously and efficiently without losing time and momentum when various needs surface.

Equally important, is the relocation agent's ability to ask open-ended questions and to listen effectively to the displacee. In this way, the relocation practitioner may be able to learn about the business, the owner or operator, and how the relocation program may best be applied to that particular business. A properly conducted interview should ascertain the utility needs, hours of operation, the number of employees, portability and adaptability of machinery and equipment to a new site, and what is actual, reasonable, and necessary for that particular business. Without this type of information, a reasonable and accurate determination of when and how a business can be relocated may not be possible.

The owner/operator is an expert on the specific business. However, the displacee may not know about moving the business and almost certainly is unfamiliar with the provisions of the Uniform Act. Even business displacees who have moved previously may not know about the current developments and services available for business relocations. Concerns about the impact of the relocation on the business may add to the owner/operator apprehensions. If the relocation practitioner is prepared with accurate information and/or referrals to other people or organizations that can provide appropriate and necessary information and guidance, the business person may be more willing to maintain the relocation momentum. To this end, it is essential to:

- provide current and continuing information on the availability, purchase prices, and rental rates of suitable commercial and farm properties;
- assist any person displaced from a business, farm, or nonprofit organization to obtain and become established in a suitable replacement location;
- minimize hardships to displacees in adjusting to relocation by providing counseling; and,
- advice as to other sources of assistance that may be available, and such other help as may be appropriate.

Real Property vs. Personal Property for Businesses, Farms, and Nonprofit Organizations

Move cost payments reimburse the business for actual, reasonable, and necessary expenses resulting from the move of personal property from the site to be acquired to the replacement site. Further, the personal property is property that the agency is not acquiring based on the real property appraisal for the acquisition of the site. This determination can be made with a general inventory of supplies, stock, and furniture and a detailed inventory of the fixtures, machinery, and equipment. The inventory and determination of what is to be considered real or personal property should be resolved at or before the completion of the appraisal report of each property. Additionally, state law or local custom may establish the classification of specific items as real or personal property.

An element of the inventory that is not as precise and that may have some conflicting claims of ownership is *process systems*. Process systems may include but are not limited to electric, gas, and water lines that operate the machinery and equipment particular to the business. It is not the electric, gas, and water service to the structure (for example, general lighting, heating, cooling, and plumbing) to which the business is moving.

If the differentiation between process systems and utility services is misunderstood and not addressed properly by the relocation agent, considerable nonrecoverable costs to the business may result. Move cost reimbursement payments may not be applied to any item that the agency is acquiring based on the real property appraisal. This would constitute a duplication of payment.

The following two examples demonstrate the impact of process systems on payment determinations.

Example No. 1

(Process Systems classified as Real Property)

The process 220 and 440 electric that operate the kilns in a pottery plant are listed in the appraisal report with a replacement cost of \$75,000; an in-place value of \$30,000; and a salvage value of \$10,000. Based on the appraisal, the agency offers the owner of the site and business \$180,000 for the real property. The offer includes \$30,000 for the in-place value of the process electric. During the time the agency negotiates with the owner for the property, the business prepares to relocate. The business cannot locate a suitable site with

the necessary process electric in place. The business has located a suitable site where the process electric can be installed for \$68,000. Because the agency included the \$30,000 in-place value of the process electric in the offer to the owner, the business cannot be reimbursed for the process electric. Under this scenario, the business would have to pay an additional \$38,000 to complete the installation of the system at the replacement site, without any reimbursement.

Example No. 2

(Process System classified as Personal Property)

In this scenario, the in-place process electric is considered personal property and the owner is offered \$150,000 for the real property. The business may now be reimbursed the actual reasonable and necessary cost to install the same process electric at the replacement site. The business has paid \$68,000 to install the process electric which is considered reasonable; therefore, that is the amount that can be claimed under moving cost reimbursement payments. As the examples demonstrate, when the process electric value is paid to the owner, the business may encounter significant relocation problems. If the process system is considered personal property, the business relocation may proceed without delay and without an unnecessary financial hardship to the business. Clearly, this is an area of concern to businesses to be relocated and the agency. Process systems should be addressed very early in the valuation process and before any offers are made to the owner of the site to be acquired.

Reimbursement for Actual Moving and Related Expenses

As soon as possible after the initiation of negotiations, the agency will inform the displaced person, in writing, of the requirements related to claiming move cost reimbursement. The information may be included in the General Information Notice with the other relocation information. An essential requirement of the displacee is to provide the agency with a list of the items to be moved and reasonable advance written notice of the approximate start date of the move from the subject site.

Payment may be withheld if the business does not provide reasonable notice to the acquiring agency of the date of the proposed move. However, the displacing agency should document its records to the effect that it advised the business of this obligation for notification. The business needs to understand that the agency may monitor the move and make reasonable and timely inspections of the personal property at both the displacement and replacement sites. The business, farm, or nonprofit organization that qualifies as a displaced entity is entitled to reimbursement for the actual moving and moving related expenses. The reimbursement, subject to the agency's approval, includes, but is not necessarily limited to:

- transporting personal property for a distance not to exceed 50 miles, unless the agency determines that relocation beyond 50 miles is justified;

- packing, crating, unpacking, uncrating, and putting personal property in place at the replacement site;
- disconnecting, dismantling, removing, reassembling, and reinstalling relocated machinery, equipment, and other personal property, including substitute personal property;
- connecting of the personal property to utilities;
- modifying personal property, if necessary, to adapt it to the replacement structure, the replacement site, or the utilities at the replacement site;
- relocating process electric, gas, and waterlines (systems that operate the machinery and equipment specific to the business or farm) and making the necessary adaptations to the systems for the replacement site, providing these systems are not to be acquired with the real property at the subject site;
- professional services necessary for planning the move of the personal property as with plant layout, placement of machinery and equipment (limited to basic items which does not include architectural or engineering level drawings, concepts, or considerations);
- insurance for the full replacement value (no deductible) of the personal property in connection with the move and necessary storage;
- relettering signs and replacing stationery on hand at the time of the displacement that are made obsolete as a result of the move; and,
- storage of the personal property for a period not to exceed 12 months, unless the agency determines that a longer period is necessary.

Additionally, the costs of any license, permit, or certification required of the displaced person at the replacement location may be reimbursed. However, the payment may be based on the remaining useful life of the existing license, permit, or certification. The agency may also reimburse the business, farm, or nonprofit organization for the replacement value of property lost, stolen, or damaged in the moving process when insurance coverage is not reasonably available. However, if the damage or loss occurs as a result of negligence or carelessness on the part of the business or its employees, reimbursement would not apply.

Actual Direct Loss of Tangible Personal Property

An eligible business may claim an actual direct loss of its personal property as a result of moving or discontinuing the business, farm, or nonprofit organization. The reimbursement will be based on the fair market value of the item in place for continued use as is at the displacement site minus the proceeds from its sale or the estimated cost of moving the item as is, whichever is less. The displacee must make a good faith effort to sell the personal property, unless the agency determines that such effort is not necessary. The reasonable cost incurred in attempting to sell an item that is not to be relocated may be reimbursed, in addition to the actual direct loss claim.

Substitute Personal Property

If an item of personal property that has been used as part of a business, farm, or nonprofit organization is not moved, but is replaced promptly with a substitute item that performs a comparable function at the replacement site, the displaced person is entitled to reimbursement. This type of reimbursement for the substitute personal property is based on the cost of the substitute item installed at the replacement site minus any proceeds from the sale or trade-in of the replaced item or the estimated cost of moving and reinstalling the replaced item, whichever is less. As with Actual Direct Loss the reasonable cost incurred to sell an item may be reimbursed.

Low Value/High Bulk

If personal property to be moved is of low value and high bulk, but the cost to move the property is disproportionate to its value, the agency may limit the allowable moving cost payment to the lower of the value in place or the replacement cost. An example may be a stockpile of 100 tons of sand.

Search Expense Reimbursement

A displaced business, farm, or nonprofit organization is entitled to reimbursement for actual expenses incurred while searching for a suitable replacement site. However, the reimbursement cannot exceed \$2,500. This expense may be incurred for transportation to locate replacement sites, for meals and lodging while away from home, for time spent searching for the most suitable site, in fees (not commissions) paid to a real estate agent to locate a site, time spent obtaining permits and attending zoning hearings, and time spent negotiating the purchase/lease of a replacement site.

Moving Options

There are multiple methods of moving personal property available to the displaced business. A business may select one or any combination of the following methods:

- **Commercial Move** – The displacee is reimbursed the actual cost paid to a commercial mover based on the lower of two acceptable bids from qualified professional movers.
- **Negotiated Self-Move** - If the displaced business elects to assume full responsibility for the move of the business, the agency may make reimbursement for the business' moving expenses under a negotiated amount determined prior to the move. This payment is not to exceed the lower of two acceptable bids from qualified professional movers obtained by the agency or prepared by a qualified agency staff member. At the agency's discretion, a payment for a low cost and/or uncomplicated move may be based on a single bid or estimate.
- **Actual Self-Move** – If the displacee elects this method, the business may be reimbursed for the actual expenses incurred. This reimbursement must be supported by receipted bills for labor and equipment. Hourly labor rates should not exceed the rates a commercial mover would pay their employees. Equipment rental fees should not exceed what a commercial mover would pay to rent the same equipment.

Ineligible Moving Cost Expenses

A displaced person is not entitled to reimbursement for the cost of moving any structure or other real property improvement in which the displaced person reserved ownership. The loss of goodwill, profits, or trained employees is not reimbursable. Other expenses that are not reimbursable are interest on loans to cover moving costs, personal injury claims, and legal fees or other expenses related to preparing a reimbursement claim. This list is not complete and questions of eligibility must be addressed within the Uniform Act and its regulations, and the agency's determination of what is actual, reasonable and necessary.

Related Nonresidential Eligible Expenses

In addition to payment under moving options, a business may be eligible to receive payment for the following expenses, if determined actual, reasonable, and necessary by the agency:

- Connection to available nearby utilities from the right of way to improvements at the replacement site.
- Professional services performed prior to the purchase or lease of a replacement site, including but not limited to soil testing, feasibility and marketing studies.
- Impact fees or one-time assessments for anticipated heavy utility usage.

Reestablishment Expense Reimbursement

In addition to the payments available for move, and move related expenses discussed previously, a small business, as defined in 49 CFR Par 24, a farm, or a nonprofit organization is entitled to receive a payment, not to exceed \$10,000, for expenses actually incurred in reestablishing the operation at the replacement site. Unlike move and move related expenses that only apply to personal property, reestablishment expense reimbursements may be applied to modifications to the real estate. A business whose sole activity at the site is providing space at the site to others is also eligible for reestablishment. The reestablishment test is one of necessity and must answer the question, "Is the expense necessary to reestablish the displaced business?" The reestablishment is not a comparative standard; it is not a comparison between the amenities or characteristics of the displacement site against the amenities and characteristics of the replacement site. For instance, a displacee may choose to change the nature of the business but is still eligible to receive a reestablishment payment. As determined by the agency, reestablishment must be reasonable and necessary. The expenses may include, but are not limited to:

- repairs or improvements to the replacement real property as required by federal, state or local law, code, or ordinance;
- modifications to the replacement property to accommodate the business operation or to make the replacement structures suitable for conducting the business;
- redecoration or replacement of soiled or worn surfaces at the replacement site (such as, paint, paneling, or carpeting);
- advertisement of replacement location;

- increased cost of operation for two years; and,
- construction and installation cost for exterior signage.

In addition, the agency may reimburse any other items they consider essential to the business that are not specifically listed as ineligible.

Ineligible reestablishment expenses include, but are not limited to:

- the purchase of capital assets, such as, office furniture, filing cabinets, machinery, or trade fixtures;
- the purchase of manufacturing materials, production supplies, product inventory, or other items used in the normal course of the business operation;
- interest on money borrowed to make the move or purchase the replacement property; and,
- payment to a part-time home-based business that does not contribute materially to the household income.

Fixed Payment In Lieu of All Other Payments

A displaced business may be eligible to select a fixed payment in lieu of all of the other payments for actual moving and related expenses and reestablishment expenses. A fixed payment for businesses and farms equals the average annual net earnings of the business, as computed in accordance with 49 CFR Part 24; however, the payment will not be less than \$1,000 or more than \$20,000. A nonprofit corporation is computed based on gross revenues less administrative expenses.

Eligibility for Fixed Payment

The displaced business is eligible for the fixed payment if the agency determines that:

- the business owns or rents personal property that must be relocated from the site being acquired and for which the business will incur an expense when it actually vacates the site;
- the business cannot be relocated without a substantial loss of its existing patronage (clientele or net earnings);
- the business is not part of a commercial enterprise having more than three other entities that are not being acquired by the agency and which are under the same ownership and engaged in the same or similar business activities;
- the business is not operated at the displacement site/dwelling solely for the purpose of renting the site to others; and
- the business contributed materially to the income of the displaced person.

A business choosing the fixed payment must meet all the described criteria. However, the agency is generally not expected to confirm that a substantial loss of patronage will result. The agency will challenge this assumption only if it is factually clear that a substantial loss of patronage will not occur. For example, a plumber, without a retail or wholesale business,

may not qualify for a fixed payment. The plumber's business would likely be a telephone trade and the change of location would not necessarily cause a loss of customers. However, additional cost of operation resulting from increased mileage to service his customers could qualify him for this payment.

Computation of Fixed Payment

If a business or farm meets all of the prerequisite requirements for eligibility for a fixed payment, the computation is generally straightforward. If the relocation is to occur in year "C," the taxable income, preferably obtained directly from the tax forms for the business, for years "A" and "B" is averaged. If the amount is less than \$20,000, the fixed payment is the result of the computation. If the amount is greater than \$20,000, the fixed payment is \$20,000. However, not all business tax forms, certified financial statements, or other financial documents are clear as to the taxable income. Further, the consideration is different for corporations than it is for a sole proprietor, partnership, nonprofit corporation, and so forth. Also, the agency may need to consider years of negative taxable incomes. However, it is different for businesses that have been operating for less than two years. The relocation agent must give careful consideration to all the facts, look to the specifics in 49 CFR Part 24, and consider consulting an accountant to ensure that the appropriate amounts are used and that the computation is correct.

Personal Property Only

If a person is required to move personal property but is not required to move from a dwelling, business, farm, or nonprofit organization, they are eligible to receive reimbursement for their moving costs.

SUMMARY

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended serve as a means of providing uniform and equitable treatment for people displaced from their residences, businesses, farms, and nonprofit organizations as a result of certain programs and projects. The laws establish the minimum standards for the appraisal and acquisition of real property and for advisory services and relocation assistance to displaced persons affected by a program or project undertaken by a federal agency or by a state or local agency with federal financial aid in any phase of the activity.

A displaced person (such as an individual, family, partnership, corporation, or association) who is required to relocate from real property or is required to move personal property from real property as a direct result of the program or project may be entitled to benefits. Any individual, family, business, farm, or nonprofit organization displaced must be offered relocation assistance services for the purpose of locating suitable replacement property. Residential individuals and families are entitled to reimbursement of moving expenses and certain related expenses incurred in moving. The displacee may choose to be paid on the basis of the actual and reasonable moving costs and related expenses or the displacee may choose reimbursement based on a fixed moving cost schedule or a combination of

the two moving options. Residential individuals and families may be entitled to replacement housing payments. The payments are separated into three basic types:

1. price differential,
2. rental assistance,
3. downpayment.

The type of payment depends on whether the displacee is an owner or tenant and how long the displacee lived in the property being acquired prior to the initiation of negotiations.

There are two basic length of occupancy requirements which determine the type of replacement housing payment. Owners who are in occupancy 180 days or more prior to the initiation of negotiations may be eligible for a price differential of up to \$22,500 or a rental assistance payment of up to \$5,250. Owners who are in occupancy from 90 days to 179 days prior to the initiation of negotiations may be eligible for a rental assistance payment or a down payment of up to \$5,250. The down payment cannot exceed the amount of the payment the owner would have received if the owner had been a 180-day owner.

Residential tenants of 90 days or more prior to the initiation of negotiations may be eligible for a rental assistance payment or a down payment of up to \$5,250. If the tenant was in occupancy at the time of the initiation of negotiations, but for less than 90 days prior to that date, the tenant is entitled to relocation assistance advisory services and moving payments and may be eligible for a rental assistance payment under last resort housing. If comparable housing is not available, or if it is not available within the maximum \$5,250 or \$22,500 payment limits, the agency must still provide replacement housing before a displacee is required to move. The agency may provide this housing of last resort in a number of ways including, but certainly not limited to, making replacement housing payments in excess of the maximum \$5,250 or \$22,500 payment limits.

Businesses, farms, and nonprofit organizations are entitled to reimbursement of moving expenses and certain related expenses incurred in moving. Owners and tenants may receive payment on the basis of the actual and reasonable moving costs and related expenses or, under certain circumstances, as a fixed, in lieu of, payment.

Actual and reasonable moving expenses may be paid when the move is performed by a professional mover and/or by a self-move. Other related expenses (such as, utilities from the right of way to the business, feasibility studies, impact fees), searching expenses to locate a replacement property (not to exceed \$2,500), and establishment expenses for expenses incurred in relocating and reestablishing the business on a replacement site (not to exceed \$10,000), may also be reimbursable.

A fixed payment in lieu of (in lieu of moving expenses, related expenses, searching expenses, and reestablishment expenses) not less than \$1,000 or more than \$20,000 may be made by the agency. There are several considerations in determining a displaced businesses eligibility to receive this payment.

Asset Management of Public and Quasi-Public Property

————— Douglas “Sandy” Grigg —————

and

The International Ethics Committee

INTRODUCTION

Over the past decade or so, there has been a shift in the way businesses view their real estate assets. The corporate need to reduce costs and increase profits, together with the pressures of globalization, and technological changes have led to a review of corporate missions and revisions to business plans. One of the areas organizations have examined is the management of the company’s real estate assets.

For example, a large manufacturer may change its production methods by significantly increasing automation. Rather than warehouse additional quantities of manufactured goods, the manufacturer adopts a just-in-time delivery system, which results in both reduced inventories and excess warehouse capacity.

Another example is that of a business that provides services to customers at the customers’ worksites. Based on the current economic climate, the firm needs to reduce operating costs and raise capital. While a very large percentage of the firm’s staff spends most of their time at off-site locations, the company continues to provide office space in a company-owned building. Therefore, the company owns and maintains a building that is under utilized.

These problems are not unique to the private sector. Real estate asset management, in the public and quasi-public sector, is equally as complicated and as important as in the private sector. The paradigm has shifted in both economic sectors from a passive, reactive, and crisis property-driven property management approach to an approach that relies on the rationalization and optimization of real estate assets.

Asset rationalization is the process of determining the need for a given asset and the roles that asset will play in an organization. Referring back to the manufacturer who decided to

reduce inventory through the introduction of a just-in-time delivery system and now has excess warehouse capacity, to rationalize the need for warehouse space, the firm should review the current warehouse space needs and determine what role, if any, warehousing will serve in the organization. Once a decision is reached, the manufacturer must then determine how the space can be optimized.

Optimization is the maximization of the use of or return from the real estate asset including maximizing the asset's relevance to present and future business needs. Continuing, "What, if anything, should the manufacturer do?" "As the space is no longer needed for inventory storage, is the space appropriate for other uses?" "If used differently or more efficiently, how might the space align better with the company's business processes?" By asking and answering these, and other relevant questions, the manufacturer should be able to rationalize the asset and optimize its use.

Referring again to the second example, the business reviewing its office space needs in relation to the manner in which it conducts its business, to rationalize the need for office space, the company must determine if employee accountability and productivity can be maintained without the staff being located on-site. Once decided, the question remains, "How much, if any, of the office space is surplus?" "Even if it is all seemingly surplus, does the company want to maintain some office presence both for the occasional on-site staff work and for corporate identification?"

"Should the company lease out part of its building?" Once a decision is reached as to organizational need for the asset, the company must determine how the space can be optimized. The goal is to determine how the firm can maximize the use of or return from the real estate asset including maximizing the asset's relevance to present and future business needs.

Public agencies are confronted with many of the same concerns as private companies. Rising costs, the public's and shareholder's desire for accountability, tax reductions, and an emphasis on increasing returns on investments now drive many public and quasi-public organization's asset management decisions. Two of the many questions now raised in the public sector are "Why own the service capability when the agency can rent it, or lease it, or buy it when needed?" and "If the agency does need to retain a real estate asset, how can use of the asset be optimized?"

ASSET MANAGEMENT AND THE PUBLIC REALM

Assume that a municipality, in its quest to reduce operating costs and increase revenues, decides to contract out 50% of its snowplowing responsibilities. As a result, 50% of the storage yard space is no longer needed and may now be available for secondary use or sale. The municipality can use rationalization and optimization to determine how to best use that excess area. Several questions need to be asked and answered. "Will the asset be needed in the future? Which action, secondary use or sale, will attract the most revenue?" "What are the risks?" "Will the changes be cost-effective?" "Will the public benefit?"

As can be seen, the rationalization and optimization processes are the same, whether or not the real estate is privately or publicly owned. The following examples demonstrate further public and quasi-public sector organizational change and how the changes altered the way each organization viewed its real estate assets.

Example No. 1

(The Consolidation of Six Separate Cities into One City)

In 1996, a large metropolitan area contained six cities, each with its own government and assets required to operate a city. In 1997, the six municipalities combined into one governmental unit. The following are just four real estate related questions that emerged from the consolidation, “What does the new city do with six city halls?” “Are all the work and storage yards needed for one city?” “What is the total real estate inventory?” “Are there other real estate redundancies and, if so, what are they and how should they be addressed?”

Example No. 2

(The Deregulation and Breakup of a Major Utility)

In 1999, one of the largest utilities in North America split into five separate units. The two largest organizations created by the breakup were a generating company and a transmission and distribution company. Consider the following real estate issues that emerged: “What were the real estate assets of the original utility company?” “What will happen if an asset is now required by more than one company?” “What will be the impact if one of the new companies no longer has the right to condemn or expropriate for new acquisitions?”

Example No. 3

(The Merger of Twelve Municipalities and a Regional Government into a Single New City)

In 2001, the creation of a new city was accomplished by combining several cities, urban centers, rural municipalities, and a regional government. The real estate issues that emerged were similar to those in the first two examples. “What does the new city do with twelve city halls?” “What are the impacts of merging twelve utilities into one?” “What are the operating costs and where are the redundancies, if any?”

The previous three public sector examples show some of the real estate asset management questions faced by the organizations involved.

Some of the events that can significantly affect real estate in the public sector are:

- the merger or breakup of governmental units or utility companies;
- the consolidation of services;
- privatization and deregulation of utilities;
- contracting out for services;
- technology changes (fiber and wireless);

- evolving business processes and changing priorities; and,
- just-in-time delivery of real estate services.

Managers in the public and quasi-public real estate sectors need to be focused on business planning, goals, and asset management. Today, whether the issue is private or public real estate, the core business and the costs of doing business, the return on and return of the investment, present use, highest and best use, future use, and the social and community impacts must be considered in any real estate asset management plan.

ASSET MANAGEMENT

Historically, many large public and quasi-public organizations separated the real estate functions among various organizational groups. The company may have had an acquisition section, a property sales section, a property management section, and a facilities management group. Today, sections and groups and their functions are merging. Some real estate activity is being contracted out with the staff managing a whole spectrum of real estate duties, including consultant management. The management requirement mandates an understanding of the relationship between the real estate assets and the organization's core business.

Property Management	Asset Management
Property Administration	Asset Management
Maintaining the Status Quo	Rationalization of Assets
Increase Productivity	Optimization of Assets
Increase Value	Increase Value
Functional Separation	Functional Integration
Fragmented (each real estate asset and how to manage it [license, lease, sell, or buy] is dealt with separately).	Comprehensive (an integrated asset management program with options [license, lease option, partnering, sell, or buy] considered in relation to the core business).

Table 15.1: Property Management and Asset Management Comparison

Table 15.1 shows a comparison between the duties performed by property management and asset management groups.

ASSET MANAGEMENT AND THE ASSET MANAGEMENT PLAN

Assets are items that have value in use or in exchange. They are a businesses total resources, both tangible and intangible (for example, accounts and notes receivable, cash, inventory, equipment, real estate, goodwill, and so forth). *Asset management*, as used in

this text, is the comprehensive integrated management plan for all real estate assets. The *real estate asset manager* directs the team that controls all real estate assets, including (but not limited to) owned property, new acquisitions, easements granted and easements received, options to others and options to the organization, rights of ways, secondary rights, leases, and licenses.

The integrated asset management plan is a structured process that combines all the individual real estate parcels into coordinated real estate assets. The integration plan includes all the real estate and the processes and functions that contribute to those assets. The integrated asset management plan may include any or all of the following:

- facilities (such as the management of the buildings, structures, and sites that are used in the core business activities) including an active asset preservation program which monitors required repairs;
- passive, licensed, or leased property (such as a program to maximize short term income that may be needed for the organization's long term requirements);
- excess or surplus property (such as a program to dispose of property that is excess or surplus to the organization's long term requirements);
- property management (such as the daily management of real estate and real estate assets, including licensing and leasing administration);
- financial and management decision analysis (such as net present value determinations, risk analysis, and gap analysis); and,
- environmental management (such as knowing the environmental status of the assets with a plan to manage and mitigate events that may have environmental implications).

The integrated asset management plan does not mean:

- untapped resources are ignored (the manager must recognize opportunities to maximize real estate's returns to the organization);
- doing business as usual (being unprepared for organizational change); and,
- working in isolation (management requires participation in a number of different functions and disciplines). Good asset management requires cooperation.

ASSET MANAGEMENT PLAN GOALS

To be effective, the asset management plan must have measurable goals. The following eight goals could be used singly or in combination.

Meeting Corporate Expectations, Core Business Activities, Goals and Targets

The asset manager must understand the organization's core business and real estate's role in that business. For example, the core business of a real estate department in a public transportation agency is not right of way. The real estate department's core business is to provide real estate support to the organization's core business, which is transportation.

Ensuring All Real Estate Assets Are Performing At Optimum Level

Performance levels are determined by the core business. Methods to measure whether or not real estate is performing at its optimum level include return on investment, net present value, operating expense ratios, and the relationship between property rights needed and property rights possessed.

Improving Operational Capacity

It must be determined whether or not existing real property rights are sufficient to meet current and anticipated needs.

Reducing Vacancy and Collection Loss or Other Real Estate Related Costs

Procedures to reduce vacancy and collection loss must be established. Operating expenses (for example, insurance, real estate taxes, utilities, management, maintenance, and so forth) need to be reviewed for reasonableness and to ensure that they are within industry standards.

Increasing (Primary and Secondary) Revenues

Questions such as: If the property is currently in passive use is it available for rent for secondary use? Is the current secondary use appropriate for the property's present and future business needs? Is it being utilized at its highest and best use?

Enhancing Asset Value

Investigating the possibility of zoning changes or property subdivision is an important factor in maximizing property values.

Providing Flexibility

Property flexibility can be enhanced, for example, by acquiring a site for the dual purpose of constructing an electric transformer station, while at the same time providing additional areas for equipment storage.

Increasing Social or Community Benefits

Investigating ways to providing benefits to the community, such as a hike and bike trail in a linear corridor or offering an after-hours community room in a corporate office, should be part of the planning goals. Asset management plans can be prepared for different purposes, such as for one specific asset, or for a group of like assets, or for all the organization's real estate assets.

The plan can provide clearly defined directions, establish priorities, and set goals. The plan will enable the asset manager to develop multiyear business strategies and to envision larger undertakings, such as joint public-private developments.

KEY ELEMENTS OF AN ASSET MANAGEMENT PLAN

To ensure consistency and continuity, it is important to establish and utilize a standardized approach with relevant key goal indicators in the asset management plan planning process.

The key elements in an asset management plan includes understanding the organization's core business, knowing the organization's structure, understanding the organization's accountability footprint and decision-making process, knowing real estate's role in the organization, having or developing a strong communication network, and having clearly defined directions and goals.

Understanding the Organization's Core Business

Table 15.2 provides examples of organizations and their core business. The common element of all the organizations is that the real estate departments are there for the purpose of supporting the core business. This specific focus of the real estate departments does not preclude it from providing other services, such as the disposal of property rights or managing a secondary land use program.

Knowing the Organization's Structure

In preparing the asset management plan, the organizational structure components and the specific functions of each unit as those functions relate to the core business must be considered. For example, the finance department can aid in the formulation of the assessment management plan by providing financial analysis services for real estate decision-making, as well as operating cost data and their analysis for the real estate holdings.

Organization	Core Business	Business of Real Estate Department
Telephone Company	Communications	Optimize real estate assets in support of core business
Gas Company	Production and transportation of gas	Optimize real estate assets in support of core business
Electric Company	Production and distribution of electricity	Optimize real estate assets in support of core business
Public Highway Department	Construction and maintenance of roads	Optimize real estate assets in support of core business
Water Company	Provide safe water supply	Optimize real estate assets in support of core business

Table 15.2: Core Business Examples

Understanding Accountabilities and Decision-Making

Understanding where accountabilities lie and where decisions are made assists the asset manager in enumerating the steps in the approval process. For example, “Who has the authority to decide which real estate proposals will be advanced?” “Who has the authority to commit funding?” “Who has the authority to determine which parcels are surplus to the core business?”

In some organizations, the real estate function resides in the finance department because real estate can impact corporate profit and loss. For example, the organization’s operations unit needs additional space. The real estate unit, as the responsible party, prepares the lease or buy analysis, develops the cost information, and finally negotiates and acquires the specific property rights. The finance department probably has the final authority to approve the analysis and expenditure.

In other organizations, the real estate function resides in the engineering department as real estate provides the right of way for the design and construction units. For example, the design group prepares a set of project acquisition maps and advises the real estate unit that the properties must be acquired to meet a project letting schedule in one year. The real estate unit prepares the appraisals and negotiates the purchases to meet the engineering department’s schedule.

Knowing Real Estate’s Role

Being aware of real estate’s placement in the table of organization and its functions within the organization will be of help in understanding accountabilities and the approval process. The real estate group may provide services to the organization and it may also have a governance role. Governance can take many forms including the mandatory review of all real estate transactions and the final approval for all real estate programs. It is also important to know if there are other departments within the organization involved with real estate issues. If there are, their specific responsibilities and authorities must be ascertained, as real estate’s role will be affected.

Having or Developing a Strong Communication Network

A strong communication network within the organization should improve operations and provide an understanding of the decisions that have been made and the reasons for them. For example, a satellite office lease is due to expire in thirty days. The office manager has been receiving regular renewal notices from the lessor but the manager has failed to forward the notices to the real estate group.

Now, thirty days before lease expiration, the office manager informs the real estate department of the need to renew the lease. The problems caused by this lack of effective communications are many, particularly the loss of negotiation leverage.

Having Clearly Defined Directions and Goals

Clearly defined corporate directions and goals and the place of the real estate assets in the organization's structure need to be both flexible and focused. For example, if the organization's direction changed from expansion to retrenchment and downsizing and if the organization had previously rationalized and optimized its real estate assets, the asset manager should be able to quickly increase revenues by accelerating its secondary use program or surplus property disposal program.

THE PLAN

There are five basic components of an integrated asset management plan: (1) an inventory of the assets, (2) a needs assessment of core business requirements, (3) a consideration of the options available, (4) a plan review, and finally, (5) the development of the implementation plan.

(1) Inventory of the Assets

The following real estate assets should be included in the inventory:

- all fee simple interests;
- all leases to other parties (revenue or leasing-out);
- all leases for agency use (acquisition or leasing-in);
- all licenses granted by the organization;
- all licenses granted to the organization;
- all easements granted by the organization;
- all easements granted to the organization;
- any special rights (such as government rights, permits, and so on); and,
- any other rights (such as shared rights, options, and so on).

At this point, the inventory is basically a database of unorganized information. To formulate an asset management plan and to facilitate its use, the assets must be classified and grouped into portfolios. A portfolio is a collection of like assets. They should be organized to achieve clarity (clearness of expression), conciseness (succinctness), consistency (uniformity), and continuity (coherent whole).

First, assets are rationally defined and then classified systematically to allow for meaningful analysis and for the addition of new assets.

Table 15.3 is one example of a classification system. Once classified, the assets are organized into portfolios, which then allows the asset manager to create subportfolios. The subportfolios provide a greater level of detail and management potential for the assets. For example, within the operational real estate and property rights portfolio, subportfolios

of all the owned operating properties and all the leased operating properties can be created. In the surplus properties portfolio, the asset manager could create subportfolios for properties for sale, and easements for abandonment. The intent of the portfolios and subportfolios is to group like assets to enable the asset manager to manage the assets efficiently, plan for the future, and to optimize the use of or return from the real estate asset. A key element of a good inventory is flexibility; one that has the capability to change focus and redefine analytical parameters as the need to do so arises.

Classification	Definition	Goal
Operational real estate and real property rights	Any asset that is currently dedicated to the organization's core business.	Business is operating at optimum levels with sufficient real estate and real property rights to provide flexibility and expandability.
Real estate held for future use	Any asset that is not presently used for the organization's core business but which may be required in the future. Will include vacant sites or improved properties that may have secondary uses. Decisions and activities relating to these assets are controlled by the knowledge of their eventual use in the core business.	Keep operating and maintenance costs to a minimum; maintain flexibility for core business; examine secondary use potential.
Surplus properties	Properties that do not contribute to the core business and have been declared surplus by all appropriate parties. The asset does not have a core business value other than the opportunity to receive a return on the original investment. These assets should be dealt with in a timely manner. Decisions should be based on maximizing an immediate return or a return within a reasonable period of time.	Disposal at the appropriate time and at the best return.
Transitional	Assets that are under review. Their value may or may not contribute to the core business. The asset could: <ul style="list-style-type: none"> • have a recognizable core business application • require decisions, internal or external, before a final determination can be made • have a default/holding classification • have leverage potential 	Maintain a priority list until the asset is classified into one of the three above categories. If reclassification remains untimely, the asset will remain transitional until such time as a reclassification is possible.

Figure 15.3: Asset Classification System

(2) Needs Assessment of Core Business Requirements

A needs assessment is the investigation and documentation of the assets as they relate to the core business.

(3) Consideration of the Options Available

The first need is to analyze corporate directions and goals. Obtaining direction from senior management enables the asset manager to align the goals and targets of the integrated asset management plan with the organization's strategic plan. For example, because of marketplace instability, the organization wants to increase its flexibility and decrease its reaction time to external organizational threats. This strategic objective might result in the asset management plan containing the goal of moving away from owned assets toward leased assets. Another strategic objective may senior management's desire to increase its cash reserve to take advantage of business expansion opportunities. This decision could lead the asset manager to increase the sale of surplus properties.

Other senior management priorities may relate to the importance of employee health and safety, organizational change and restructuring, modernization of production processes, disposal of older facilities, and so forth. which could influence the asset management plan.

(4) Plan Review

Guided by the inventory, the needs assessment, and the options considerations, the asset manager undertakes a preliminary plan review. The objective of this review is to set the stage for the implementation plan. The review might involve interviews with appropriate agency personnel (such as, planners, department managers, and legal counsel) to gather additional information and comments. Once the interviews and other analyses are completed, the asset manager can reevaluate the classifications and revise, if necessary, the portfolios and subportfolios. At this point, the asset manager should involve top level management. They should review the plan and its recommendations and decide on the next step, the implementation plan.

This plan review process is an ongoing activity. Subsequent periodic reviews that assess organizational changes, different facilities requirements, new market conditions, regulatory changes, and changes in the composition of the real estate portfolios may create new opportunities for revenue enhancement. Changes in relevant legislation may also impact the plan and result in changes or modifications to it. For example, a change in environmental statutes as they relate to clean air and fossil fuel emission standards may lead the organization to invest in modifications to its existing facilities or to the development of new energy production (e.g., gas or nuclear energy) facilities.

(5) Development of the Implementation Plan

The concept of an integrated plan means addressing more than just real estate. It also means considering operational needs, expanding or downsizing the organization, or mergers could be additional factors considered in the asset management plan.

In any plan, benchmarks and goals are used to measure progress and success. Integrated planning is a structured process to consider and to select options. The status quo is always an option and serves as a baseline for comparison with the other options. It is usually best to limit options and to keep them simple. For example, a property is being considered as surplus to the organization's needs. The simplest options are to retain it (status quo), lease it, or sell it. Another example of simplifying the options is the case where an organization needs additional office space. The options are to stay as is (status quo), change the space allocations to accommodate the staff in the existing space, lease additional office space, or buy additional space. At times, the number of options may seem to be many, but usually the additional options tend to be variations of the simple ones. Consider again the example of the property being considered as surplus to the organization's needs.

An additional option may be to hold the property until the market conditions improve before selling. This option is just a combination of the status quo and the sell options. In the example of the organization in need of additional office space, an additional option may be to relocate closer to markets. This option is basically the same as the lease or buy options.

As part of considering all options, the asset manager should list and consider all resources for all the options. Common resources analyzed include labor, capital, management, and real estate.

The asset manager needs to consider the impacts that timing will have on costs and resources. The plan should have a timeline schedule that highlights key result dates. The establishment of key result dates or critical path milestones are essential to the plan's implementation. In many organizations, agency approvals need to be obtained prior to action. They should be gained by specific dates in order to keep the project on schedule. By knowing the key result dates, tasks can be arranged in correct sequence to meet the timeline.

Determining who the plan participants are and what roles they will play provides the asset manager with a clear understanding of who does what and when. Clearly defined funding requirements, the funding sources, and when it will be available are also part of the scheduling process.

POLICIES AND PROCEDURES

Throughout the process, the asset manager must keep the organization's core business as the plan's prime driver. In order to optimize assets within the core business, corporate policies and procedures must be understood and the asset manager should be fully conversant with the policies and procedures that impact directly or indirectly on the assets. Continuous policies and procedures review will advance the objectives of the business and the integrated asset management plan.

The organization's policies and procedures may be in conflict with its objectives and goals. For example, a city may want to increase its cash flow by selling surplus assets. Policy and procedure state that the city council must approve all asset sales. This policy

could significantly increase the time necessary to receive approvals with the result that the opportunity to maximize the sale price is lost. One of the asset manager's duties is to uncover and recommend changes to "hindering or blocking" policies that do not meet the current organizational needs. A possible solution to this specific "hindering" policy may be for the council to preapprove both the declaration that a property is surplus and preauthorize its sale at a predetermined minimum sale price. The asset manager would then have the opportunity to go to the market and negotiate the best possible terms without entering into conditional agreements.

A second example of a policy and procedure that may be in conflict with the organization's objectives and goals is an agency's document approval process. When the policy is reviewed, the asset manager and the organization may find that the approval process, as currently in place, provides little value added and a reduction in reviews and signatures may expedite the process without a loss of control.

ASSET MANAGEMENT TOOLS

There are tools that can help an asset manager prepare the integrated plan. These tools include feasibility studies, financial analysis, gap analysis, continuous improvement, accountability footprint, and strategic planning.

Feasibility Analysis

A *feasibility analysis* is a study of whether or not a project will meet the proposer's objectives. It is simply an investigation of the practicalities of a project or plan. The initial review should provide sufficient information to enable a decision as to whether or not to proceed. The feasibility analysis should answer the questions: "Can it be done?," and "Should it be done?" For example, if there is a need to supply high voltage transmission facilities to an entire major city, one option may be to acquire a corridor right of way and build a transmission line through the city's center. A feasibility analysis would answer the questions, "Can it be done?" "Yes, the right of way can be acquired and the project engineered and built." "Should it be done?" "No, it will be necessary to condemn/expropriate too many properties and the project will be too costly to construct. In addition, there are other less intrusive and less costly alternatives."

Financial Analysis

A second tool is a financial analysis of the options. A financial analysis examines the cost-benefit relationships of an economic venture. Sometimes referred to as a business case or business case summary, this tool brings together all the relevant financial information. For many analyses, the net present value and internal rate of return are the basis of consistent comparison of the options.

Net present value (NPV) is the difference between the present value of all the positive cash flows and the present value of all the negative cash flows. If the NPV is positive, the investment is acceptable. For example, the initial price of a property is \$1,000,000 and it is expected to be sold in ten years for \$2,500,000. The discount rate, or rate of return the

organization expects on its real estate investments is 8%. Given this information, the net present value for this investment is \$158,000 ($\$2,500,000 \times 0.4632$ [the present value of \$1 to be received 10 years in the future at an 8% discount rate]–\$1,000,000).

The *internal rate of return (IRR)* is the rate that discounts all the expected future cash flows to a present value that is equal to the original investment. For example, the initial price of a property is \$1,000,000 and it is expected to be sold in 10 years for \$2,500,000. Given this information, the internal rate of return is 9.6%.

Gap Analysis

Gap analysis is an analytical tool that analyzes the difference (gap) between today's reality and a desired future state. This dynamic tool is simple and easy to use. The first step is to determine the goal or objective, the desired future state. This is the gap analysis' "top line." The second step is to determine today's reality or the "bottom line" of the gap. Finally, the gap between the two lines is analyzed to determine how the organization can get from today's state to the future state.

For example, a highway department wants to deal with its core business only, which is planning, designing, and constructing roads. It no longer wants to deal with maintenance issues such as snow plowing, and so forth. The top line is a statement that the core business is planning, designing, and constructing roads. Currently, the bottom line is that the highway department plans, designs, builds, and maintains roads. The gap analysis determines how the highway department will get from its current state, which includes road maintenance, to its future state of planning, designing, and constructing roads only.

Continuous Improvement

Continuous improvement is a tool that, in practice requires constant monitoring of an organization's business processes. It is an aid in keeping an organization's policies and procedures current and flexible.

Accountability Footprint

The accountability footprint documents the responsibilities and accountabilities of the participants in the integrated asset management plan. Knowing who does what and who is accountable for what can save time, resources, and improve the likelihood of a project's success. Documenting accountability is particularly important when dealing with complex issues, in the management of certain assets, and in cases where there is a significant risk to the organization. The accountability footprint can be documented through tables, narratives, or flow chart diagrams. For example, a facility management group allows a current tenant to add additional space to its occupation, without cost. The asset manager has been negotiating with a third party to rent the same space, at an above market rate. The Figure 15.4 provides a basic accountability footprint that would have alleviated the situation. The table demonstrates who does what and who has accountability. It also indicates that there may be an integration of asset management functions.

The following is an example of a narrative footprint for a more complex asset consisting of a large multitenanted property, designated as property to be held for future organizational use. Each section of this footprint can be further divided using the basic accountability footprint shown in the basic accountability footprint.

Activity	Accountability	Work Unit	Team Member
Maintenance and day-to-day site operations	Ensure that all building systems are maintained and functioning properly. Respond to tenant inquiries and service requests.	Facility Management	"A"
Tenant request for space change	Decision point: "Can it be done?"	Facility Management	"A"
Tenant request for space change	Decision point: "Should it be done?" (Revenue, legal, management concerns.)	Asset Manager	"B"

Table 15.4: Basic Accountability Footprint

Accountability

Financial

- Overall budgets and business plans are prepared by "A" (Business Analyst) with input from "B" (Facility Manager), and "C" (Asset Manager). "B" will budget for specific facility related service costs, and "C" will budget for realty/ownership costs. The budget and business plan will be submitted to "D" (Director) for approval.
- Capital funding requirements are submitted by "B" (Facility Manager) to "C" (Asset Manager) for review and recommendations to "D" (Director) for approval.
- All invoice payments, revenue reporting, and cost control services are provided by "A" (Business Analyst).

Operations

- Accountabilities for day-to-day and business site operations, personnel, and health and safety issues will rest with "B" (Facility Manager). Any operational issues outside the approved budget or business plan will require additional approval by "C" (Asset Manager), or by "D" (Director).

Property Management

- Accountability for all matters relating to real estate, community impacts, the environment, and legal will rest with "C" (Asset Manager).

Strategies

Secondary Uses

- All short-term secondary use proposals must be submitted to “C” (Asset Manager) for review, analysis, and plan preparation. Short term secondary use proposals are reviewed by “B” (Facility Manager) prior to final approval by “C” (Asset Manager).
- All long-term (5 years or longer) secondary use proposals must be submitted to “C” (Asset Manager) for review, analysis, and plan preparation. Long term secondary use proposals are reviewed by “B” (Facility Manager) prior to endorsement by “E” (Manager, Strategic Planning), with submission to “D” (Director) for approval in accordance with proper organizational authority.

New Core Business Development

- All new core business proposals must be developed and submitted by “E” (Manager, Strategic Planning) for review, analysis, and plan preparation. “E” will consult, on a project-by-project basis, with the managers of the appropriate business units. All new core business initiatives must be submitted by “E” to “D” (Director) for approval in accordance with proper organizational authority.

Accountability footprints can be used for any project type and their use should be encouraged. In preparing a needs assessment, gap analysis, or even for the preparation of an integrated asset management plan, accountabilities need to be described clearly. The person responsible for the plan’s preparation is not necessarily the person responsible for the plan’s implementation.

Strategic Plan

Another asset management tool is the strategic plan. This multitask tool can be utilized for individual or multiple real estate assets, as well as for other real estate related issues. It is possible, under certain circumstances, for the strategic document to become the integrated asset management plan.

Table 15.5 shows a sample template that can be modified to address specific issues, problems, or circumstances.

Heading	Comments
Executive Summary	One or two page summary of the major issues, options, and recommendations.
Introduction	Purpose, scope, and limiting conditions.
Background	General area location and description, present area property uses, specific site location within the general area.
Site Description	Site attributes (e.g., size, topography, frontage, shape) and any other relevant site information that would influence value and real estate or core business activities.
Services and Improvements	Services, utilities, etc. and improvement descriptions that would influence value and real estate or core business activities.
Encumbrances	Easements, options, etc.
Zoning	The zoning designation and its specific provisions.
Environmental	Reports completed, their findings and recommendations. If no reports, state suspected environmental issues.
Financial Information	Budgets, revenues, costs, rates of return, and net present value.
Taxes	Realty and other.
Demolition (if improved)	Feasibility and costs.
History	Acquisition date and price, reasons for acquisition, ownership, past and present uses, currently accountable business unit.
Highest and Best Use	That use which is physically possible, legally permissible, financially feasible, and maximally productive.
Value (Real Estate)	Current value in use and/or market value.
Value (Business)	The asset value in relation to core business (e.g., an abandoned generating station may still have operating potential with a value greater than the market value).
Possible External Influences	Factors (e.g., political, competitive, etc.) that might influence the asset and its management.
Internal Influences	Aspects, such as financial approvals, authorizations to proceed, declarations of status (e.g., surplus), etc.
Options	Hold, license/lease (part or all), sell (part or all).
Asset Classification Definitions	Listing and description of all the asset management categories.
Recommendations	Asset classification.
Implementation Plan	Key component of the strategic plan report. The implementation plan explains how the report's recommendations will be carried out and it provides the opportunity to reduce the time between plan approval and plan implementation.
Accountability Footprint	The specific roles, responsibilities, and accountabilities of the participants involved in the strategy and in the implementation of the strategy Illustrations maps, sketches, photographs, plan sheets, etc.

Table 15.5 Sample Strategic Plan/Report Template

ASSET MANAGER AND THE ASSET MANAGEMENT TEAM

Asset Manager

The asset manager directs all real estate activities (such as licenses, leasing-in and leasing-out, property sales, properties retained for future use, and properties utilized by the organization) under the control of the real estate group. The manager provides real estate services to other groups (such as acquisition of easements for the operations group, lease negotiations) and provides assistance and governance functions to groups within the organization. For example, an operating group wants to build a new warehouse. The asset manager assists in the analysis of options, in providing necessary real estate information (for example, lease costs, construction costs, and so forth), and by providing recommendations on the real estate components in the business plan.

Element	Comment
Value	This could include the market, book, in use, salvage, assessed values and possibly the present and future contributory values to the core business.
Legal Description	Information might include the deed reference, any encumbrances or restrictions, the specific location (e.g., postal address, township, county, state/province).
Land	Parcel description (e.g., size, shape, topography, frontage, flood zones, etc.).
Uses	Current use, highest and best use, present and potential future core business uses.
Zoning	The zoning plan or zoning by-laws. Any other permitted or nonconforming uses.
Secondary Uses	A history of the secondary uses and the data related to the uses (e.g., tenant/lessee name and address, when occupied, rent/lease amount, repair and management expenses and issues, etc.).
Encumbrances	In addition to secondary uses, right of ways, encroachments, mortgages and liens, etc.
Environmental status	The environmental baseline study (Phase I ESA) data (e.g., when prepared and its conclusions). Other reports and anecdotal information.
Revenue	A listing of all revenues from all sources.
Operating Costs	A listing of all fixed (e.g., taxes and insurance) and variable (e.g., maintenance, repairs, utilities, and possibly management) expenses.
Asset Classification Terms	Operating, surplus, transitional and property held for future use.
Terms	Any other information relating to time, revenues, and expenses.
Key Dates	This could include organizational decision, lease renewal, insurance expiration, option and other dates.

Table 15.6: Potential Team Members and Possible Roles

Asset Management Team

To be effective, the asset manager needs a clear understanding of the position's responsibilities and authorities. For a project or work program, the accountability footprint should include the names and titles of the project team members, as well as their specific roles, responsibilities, and accountabilities. Asset management is an integrated process and is comprised of a team of contributors from different functions within the organization that acts cooperatively to meet the goals and needs of the core business.

The asset management team is a multidisciplined interdependent group with clearly defined roles, responsibilities, goals, and accountabilities. Some team members are full-time while others serve as data sources, advisers, or decision-makers. Table 15.6 lists potential team members, their possible roles, and responsibilities.

PROPERTY INVENTORY AND DAILY PROPERTY MANAGEMENT ACTIVITIES

The inventory, in addition to being an organized and searchable database of real estate assets, needs to contain information to aid in the performance of day-to-day property management and planning activities. Table 15.7 lists information that may be helpful in the day-to-day property management of the asset management group. As for the assets, once the data has been collected and added to the inventory, it can be organized into portfolios and subportfolios for better analysis.

Depending on need, portfolios can be simple or complex. For example, the asset manager may develop separate portfolios for all fee ownerships, all easements, all revenue leases (leasing-out), all acquisition leases (leasing-in), all licenses, all government rights, asset classification, or business unit. An asset management staff member may also create sub-portfolio to deal with assets that are specific to each staff member. These sub-portfolios might be organized by asset classification, location, organizational jurisdiction, etc. The purpose of the portfolios and sub-portfolios is to organize the assets in a manner that maintains continuity and consistency of approach and to allow a greater opportunity to optimize the assets and to increase work efficiencies.

SURPLUS ASSET SALE

When an asset is no longer required for core business activities, the asset manager should prepare a strategy or business case to change the asset's classification. The asset manager can make the decision to continue holding the property, lease it, or sell it. To facilitate a decision, the business case should present and analyze the various options to determine the best alternative. In the business case, there are three possible alternatives (or variations of the three). (See Table 15.8):

- Hold the property until market conditions are optimum.
- Lease part or all the property.
- Sell part or all the property.

Position	Possible Roles	Comments
Asset Manager	Landlord Advisor Administrator Financial Analyst Planner	Landlord: represents the owner's position. Advisor: provides advise on real estate controlled by operating groups. Administrator: controls day-to-day real estate functions. Financial Analyst: accounts for financial aspects of the real estate asset. Planner: develops real estate asset management plans.
Property Manager	Administrator Advisor Financial Analyst Contributor	Administrator: exercises some control over day-to-day real estate functions. Advisor: provides advise on real estate controlled by operating groups. Financial Analyst: provides budgeting information. Accountable for some financial aspects of specific properties or projects. Contributor: provides input into financial and planning processes and other real estate related issues.
Accountant Financial Analyst	Contributor Approver	Contributor: provides input and support for financial decision-making. Approver: may approve significant financial decisions and actions.
Facility Manager	Site Operator Contributor Approver	Site operator: controls day-to-day site operations. Contributor: provides input into site specific real estate related operational needs. Approver: may approve real estate activities at a specific site.
Appraiser	Contributor	Contributor: provides highest and best use and value data.
Attorney	Contributor Approver	Contributor: provides legal advise. Approver: approves decisions as they relate to legal issues. There must be a clear understanding between the attorney and asset manager as to who has the authority to make business decisions.
Operating Department Manager	Contributor Approver Planner Financial Analyst	Contributor: provides information regarding specific business activities. Approver: may approve real estate activities at specific sites. Planner: may contribute to asset management plans for short and long range activities. Financial Analyst: accountable for all financial aspects of managed operations.
Environmentalist	Contributor Approver	Contributor: provides information regarding environmental issues of as they may impact the real estate. May obtain approvals from various government jurisdictions. Approver: may approve (or veto) real estate activities and processes.

Table 15.7: Potential Team Members and Possible Roles

If the decision is to sell the asset, the asset manager should prepare a disposal plan. Adherence to corporate policies and procedures is imperative when dealing with the sale of public or quasi-public assets. Once the asset has been declared surplus and the approvals for sale obtained, the asset manager should prepare a surplus property package. The package will probably include a description of the property, a survey or map and photographs, any restricted uses or limitations, and a value opinion. If there is a priority of sale policy, the package is presented first to those individuals or groups with specific deadlines for expressions of interest. Next, the asset manager determines the method of sale (that is, tender, broker, internal sale, or exchange). Once received, the offers are compared against each other and against the surplus property package to determine which offer meets the conditions of the disposal and provides the greatest return to the organization. Dollars alone may not represent the best return to the organization. For example, a sale to a hospital may be socially responsible action. Once the offeree is selected, a recommendation is made to the decision-makers, and the sale is closed.

Option	Variables
Hold	Until market conditions are optimum
	Until the agency initiates a change (e.g., zoning, subdivision)
	Consider licensing or leasing, as an interim strategy
Lease	Lease part
	Lease all
Sell	Immediately, as is
	Sell part
	Sell all

Figure 15.8: Business Case Options

SECONDARY-AND MULTIPLE-USE LICENSE AND LEASE

Assets that are needed for the core business, but are not fully utilized may be appropriate for secondary uses. Secondary or multiple uses denote that the property can be utilized for uses other than or in conjunction with the core business. The opportunity to create and manage secondary uses can arise when a property is being held for future use, or when an operating site can support more than the core business use. For example, while a utility company's right of way is used principally to support transmission lines and towers, the right of way could also provide space for a fiber optic line.

The transition from recognizing the asset's potential for secondary use and actually entering into an agreement requires the asset manager to answer the following questions:

- Does the proposed use interfere with current core business activities or might it impact future core business uses?

If the answer is yes, then an agreement should not be entered into unless terms can be negotiated to mitigate any impacts. The key consideration is clearance and approval of the secondary use by the appropriate organizational authorities.

- Is the return to the organization worth the effort?

Basically, if the financial or nonfinancial return is not significant enough to warrant the effort, then the organization should not enter into the agreement. The organization should have a policy that provides a baseline as to the level of expected return. If the projected net return does not meet or exceed these criteria, then the organization will not enter into an agreement. There may be instances when the financial return is not significant but the overall return, which may include goodwill, cost avoidance, risk reduction, and so on make the project worthwhile. An example may be renting farmland under transmission lines for a nominal sum. Such an agreement maintains farmland production and reduces the organization's maintenance costs, which may include property taxes. Not all secondary use decisions are simple. For example, the agency owns an improved residential property with a future use associated with the core business. In the inventory, the property is classified as "real estate held for future use." The asset manager must ask the following questions:

- Should the agency leave the property vacant?
- Should the agency rent the property?
- Should the agency lease the property?
- Should the agency demolish the structure?

The asset manager should prepare a business case or a mini-strategy, evaluating each option. The following chart provides some of the pros and cons that each option presents.

Secondary can play an important role in producing revenue, optimizing assets, and enhancing public image. The asset manager must be aware of the organization's policies and procedures, and when managing different portfolios should ask, on a regular basis, the following questions:

- Are the current policies for joint/secondary use current and supportive of asset optimization?

There is a tendency in public and quasi-public organizations to review policies on an irregular basis, and usually only after there has been an event that exposes weaknesses in the current policy.

- Are the current agreements clear and the provisions understandable?

All parties to the agreement must understand the transaction and the rights of each party. Clarity and consistency in documentation are vital aspects of asset management.

REAL PROPERTY LEASING

A lease is a contract whereby the owner transfers the right of use, possession, and enjoyment of the real estate to another for a specified time period and on the payment of consideration, usually rent. Once a lease is entered into, two estates are created, the leased fee interest (owner or lessor) and the leasehold interest (tenant or lessee). Each party to the lease has certain basic rights. The lessor has the right to receive consideration, usually rent, and the right to recapture the real estate at the end of the lease term; the lessee has the right to possess, use, and quietly enjoy the real estate for the lease term. There are two principal lease types: (1) the acquisition lease (leasing-in) when the agency acquires space for its use and (2) the revenue lease (leasing-out) when the agency leases to another party for a consideration (financial or other).

If time is of the essence and once a tentative agreement between the parties has been reached, an offer to lease may be appropriate. An offer to lease is an expression of interest and includes a delineation of the price and terms. An option to lease is a contract given, for a consideration, at an agreed price and terms, for a stipulated period of time. As every lease agreement is different, due diligence must be exercised when negotiating a lease. There are three main components in a lease development: (1) negotiations, (2) agreement, and (3) the document.

Option	Pros	Cons
Leave vacant	No landlord/tenant issues. Maintains flexibility.	No income. Risk issues (vandalism, illegal use, dumping). Requires some management.
Rent	Income. Shared maintenance. Fewer risk concerns.	Landlord/tenant issues. Reduced flexibility.
Lease	Income. Shared maintenance. Fewer risk concerns.	Landlord/tenant issues. Limited flexibility.
Demolition	One time only expense. Fewer risk concerns. Maximum flexibility.	No income. Possible negative public perception.

Figure 15.9: Secondary Use Decision

Negotiations

The asset manager may have to negotiate both acquisition leases (leasing-in) and revenue leases (leasing-out). When negotiating, the perspectives and positions are different in respect to consideration and the terms and responsibilities. Typically, the lessor (the agency in a revenue lease) wants to maximize income and minimize expenses and the

lessee (the agency in an acquisition lease) wants to minimize its expenditures, both the amount of rent paid and the expenses incurred.

Agreement

There must be a meeting of the minds. Both parties should be comfortable with the process and with the results. Both parties should have a clear understanding of all the terms, conditions, and the procedures that will be followed if subsequent misunderstandings occur.

Document

To avoid misunderstandings, the lease document should be clear and inclusive. It should be written in simple, unambiguous language and clear terms with limited opportunities for misinterpretation or misunderstanding. The lease must include all the terms and conditions to which the parties agreed.

LEASE COMPONENTS

Leases are complex and vary greatly in their specific terms, however there are common components to all leases. The following is a list of components that usually form part of a lease.

Leasing Parties and Intent

A lease must clearly indicate who is the lessor (party of the first part) and the lessee (party of the second part). It must indicate the lease's intent, for example, that the lessor owns the property and wants (intends) to lease it to the lessee and that the lessee wants (intends) to lease the property from the lessor.

Rent

This is a key lease component. What is the rent's composition? Is it fixed-rent only? Is it the aggregate of a base rent and additional rent? Is it gross rent? Net rent? How is it to be paid? Where and when is it to be paid? Are there penalty provisions for late payment? Are there renewal options? If there are, what will be the amount of the rent?

Realty Taxes

The tax obligations of the lessor and lessee must be clear. Are the taxes realty taxes only? Does it include local improvement rates? What happens if the responsible party fails to pay? What happens should the taxes increase? Does tax payment include franchise, estate, capital, or transfer taxes?

Schedules

Each schedule should be clear as to its intent and content. For example, one schedule may contain the legal description; another, the chattels being transferred or other rights to be conveyed. There is no limit to the number of schedules a lease may contain.

Term

This lease section states the length of the agreement and what renewal options, if any, are included. The term should state the start and end dates. If there are any renewal options, the conditions for renewal and the dates or times required for renewals need to be stated.

Operating Costs

Typically operating costs include taxes, insurance, management, maintenance and repairs, utilities, and so forth. Who pays what? Will the expenses be divided? If so, on what basis are they apportioned? What happens if the responsible party fails to pay?

Fixtures

Are fixtures included in the lease? If so, what are they? To whom do they belong? Are there trade fixtures?

Leasehold Improvements

What are the leasehold improvements, if any? What are the lease provisions for their disposition at the end of the lease term?

Alterations and Repairs

Who is responsible for what?

Premises

Clearly delineate what is being leased including its location within the building or site (if necessary), and the size of the area occupied. If possible, include a sketch of both the leased area and common areas.

Common Areas

What are they? Where are they? Who pays for common area maintenance? It is shared with other tenants?

Quiet Enjoyment

The tenant, as long as the terms and conditions are met, has the right to peacefully possess and enjoy the leased premises without hindrance or disturbance from the lessor.

Use of the Premises

The lease must clearly state the allowed uses of the premises (for example, office, storage, warehouse, and so on), or possibly the lease may state "any lawful use is allowed." (A lawful use is any use that observes federal, state, provincial, or municipal laws and regulations.) The lease may include a list of specific activities not allowed.

Insurance and Indemnification

Clearly document the tenant's insurance requirements and the lessor's right to place insurance if the tenant fails to do so, or fails to continue insurance coverage. Document how the tenant will prove that insurance is in place. Clearly describe the indemnification of both the lessor and lessee. State at what times or in what situations each party will hold liability. Included in this section are provisions relating to damage and destruction.

Assignment and Subletting

Changes in tenancy can only be made with the lessor's approval.

Defaults

This lease provision should capture as many of the conditions that could be classified as defaults (for example, nonpayment of rent, failure to observe or perform in accordance with other terms, bankruptcy, and so forth).

Other Components

There are numerous other provisions that a lease may contain including notice requirements, rights in the event of condemnation/expropriation, environmental liabilities, tenant holdover provisions, commissions, confidentiality, registration or filing of the lease, force majeure, and the statement that the lease represents the entire agreement.

The above is a reasonably comprehensive list of components of a lease; however, it is not complete as each lease is unique and circumstances will dictate the need for more or less content. Clarity, inclusiveness, and a meeting of the minds are key elements.

SUMMARY

Throughout this chapter, an attempt was made to show the evolution, in public and quasi-public organizations, from managing property to the development of an integrated asset management plan. Real estate professionals are required to be planners, business analysts, financial analysts, and skilled managers in addition to their asset manager role.

This chapter also provides real estate professionals involved in public and quasi-public real estate processes a rationale for making decisions in this new business world. We discussed the differences between property management and asset management with both having a function in the real estate business of public and quasi-public organizations. The focus of real estate management has shifted significantly from property alone to understanding core business and rationalizing and optimizing assets in support of the core business.

And we also discussed the integrated asset management plan and defined it as a structured process, which combined all the individual real estate parcels into coordinated real estate assets. This includes all the real estate and the processes and functions that contribute to those assets. To be effective, the asset management plan must have measurable goals including meeting corporate expectations, ensuring that all real estate

assets are performing at optimum levels, improving operational capacity, reducing vacancy and collection loss or other real estate related costs, increasing revenues, enhancing asset values, providing flexibility, and increasing social and community benefits.

There are tools that will help to an asset manager prepare the integrated plan. These tools include feasibility studies, financial analysis, gap analysis, continuous improvement, accountability footprint, and strategic planning.

UNITED STATES GLOSSARY

A

Abandonment: The relinquishment of all rights and interests in real property without intention to reclaim; a conveyance of a portion of a highway right of way or facility by a governmental agency to another party.

Abandonment of proceedings: The discontinuance of an action by the plaintiff after the filing of a complaint, either as provided by law or by implication.

Absolute net lease: A lease in which the lessee pays all expenses.

Abstract of title: A document that shows the condensed history of a property's title. It may include portions of prior conveyances and/or other pertinent instruments relating to the estate or interest in the property and all liens, charges, encumbrances, and releases.

Abstraction: A method to estimate land value in which the depreciated cost of the improvements on the improved property is estimated and deducted from the total sale price to arrive at an estimated sale price for the land - most effective when the improvements contribute little value to the total sale price of the property.

Abutter's rights: The right of one property owner to influence the property rights of another by virtue of their sharing a common property line.

Acceptance: With private parties, voluntarily agreeing to the terms of an offer; the formal acceptance of a document by resolution; the certificate of such resolution.

Access: The means to approach, to enter, and to exit property. Access is a private right as distinguishable from the public's rights.

Access control: The power of government to restrict/control a property owner's right to create entrances and exits on a public road. After a roadway is designed, built, and in use, there will be instances in which someone will request permission to create a driveway or entrance onto the roadway—these requests require consideration of local access control regulations, potential impacts to the roadway, and the safety and capacity (ability of roadway to carry the additional traffic) that a new entrance will create.

Access rights: The right of ingress to and egress from one's property to a public road. The right may be actual or implied.

Accession: An equitable or fairness doctrine that results in a property owner gaining title to additions or improvements that are attached to the owner's property, either by nature or construction.

Accountability footprint: A process to document the responsibilities and accountabilities of the participants in an integrated asset management plan.

Account servicing: Monitoring the status of accounts of indebtedness such as monitoring records of current debts, billing for amounts due, collecting amounts due, handling debt or correspondence, performing follow-up functions, and providing accurate reporting of debt portfolios.

Accretion: An increase or extension of land boundaries by natural action, such as wind or water. The riparian property owner, unless statutes state otherwise, acquires title to the increases or extension.

Accrue: The process of increasing account value, usually associated with interest or other time-related increases.

Acknowledgment: The act by which a party executing a legal document appears before an authorized officer of the court or notary public and declares the execution to be a voluntary act.

Acre: A land measurement equaling 60 square rods, or 4,840 square yards, or 43,560 square feet, or 0.4047 hectares.

Across the fence value: In the valuation of real estate corridors, the value concluded based on a comparison with adjacent lands before the consideration of any other adjustment factors.

Actual age: The number of years that have elapsed since the completed construction of an improvement or structure.

Actual direct loss of tangible personal property: Businesses and farms that move as a result of having their real estate acquired sometimes elect not to move some of their personal property, in which case they may be eligible to receive a calculated payment for this personal property (see 49 CFR 24.301(g)(14)).

Actual moving expenses: The costs paid to disconnect, move, and reinstall personal property. These costs are usually associated with a business move (see 49CFR 24 301 and 303).

Acquisition: The process of obtaining by negotiation, or through eminent domain action, the right of way necessary to construct or support a project.

Ad valorem: According to the value; in proportion to the value of something.

Ad valorem tax: A tax that varies with the value of property being taxed.

Administrative costs/charges: Additional costs incurred in processing and handling a debt because it has become delinquent. Administrative costs should be accrued and assessed from the date of delinquency. Costs should be based on actual costs incurred, or cost analyses that estimate the average of actual additional costs sustained for particular types of debt at similar stages of delinquency.

Administrative offset: Withholding money payable by the federal government to a person, or held by the government for a person or entity, in order to satisfy a debt that the person or entity owes the government.

Administrator: A person appointed by a probate court to settle a deceased person's affairs; a person whose job is to manage the affairs of a business, organization, or institution.

Advance acquisition: The acquisition of rights of way in advance of normal acquisition schedules in order to avoid higher costs later, to assist in hardship cases, or when there is property management potential or other advantage to the acquiring agency.

Advance construction: When states or local governments independently raise "upfront" capital required for a federally approved project to preserve eligibility for future federal-aid reimbursement for that project. At a later date, the state can obligate federal-aid highway funds for reimbursement of the federal share. This tool allows states to take advantage of access to a variety of capital sources, including its own funds, local funds, anticipation notes, revenue bonds, bank loans, etc., to speed project completion.

Adverse possession: A claim made against the property of another by virtue of actual, continuous (for a time period established by statute), exclusive, hostile, notorious (the other ownership claimant has notice of the possession and its extent), open, and under claim of title.

Advocacy: Representing the interest of another; active verbal support for a cause or position.

Affidavit: A voluntarily written declaration or statement, confirmed by oath or affirmation, sworn to before an officer of the court who has the authority to administer the oath and/or affirmation; usually the statement of a witness for court proceedings.

After appraisal: Part of the appraisal of a property from which only a portion of that property is acquired for the planned project, often referred to as a "partial acquisition."

Age-life depreciation: A method to estimate depreciation by developing a ratio between the improvement's effective age and its economic life, and then multiplied by the improvement's cost when new.

Agreement: A word used to describe a common opinion of two or more people; regarding each party's rights and obligations related to the agreement.

Agreement of sale: A written contract where the purchaser agrees to buy certain property and the seller agrees to sell, according to the terms and conditions set forth in the Agreement.

Agents in production: The agents of capital, labor entrepreneurial coordination and land, which together create services, income, wealth.

Air rights: The right to use and control a designated airspace above a real estate parcel.

Allocation: The process of separating value into its components; a method to determine land value by which improved property sales are analyzed to develop a typical land value to property value ratio, with the ratio multiplied by the property being appraised or the comparable sales being analyzed.

Allowance for uncollectible accounts: An account established to reduce receivables for estimates of uncollectible amounts to reflect the assets at their net realizable value.

Alluvium: Sediment deposited by flowing water, especially soil formed in river valleys and deltas from material washed down by the river; soil deposited by accretion.

Alternate Dispute Resolution (ADR): A range of different forums and processes that can be utilized to resolve a dispute such as administrative settlements and mediation.

American Association and State Highway and Transportation Officials (AASHTO): A nonprofit, nonpartisan association representing highway and transportation departments in the 50 states, the District of Columbia and Puerto Rico. It represents all five transportation modes: air, highways, public transportation, rail and water.

American Institute of Certified Planners (AICP): The American Planning Association's professional institute that provides recognized leadership nationwide in the certification of professional planners, ethics, professional development, planning education, and the standards of planning practice.

American Land Title Association (ALTA): A national trade association of the abstract and title insurance industry. Members search, review, and insure titles to protect buyers and mortgage lenders who invest in real estate.

American Planning Association (APA): A nonprofit public interest and research organization committed to urban, suburban, regional, and rural planning. APA and its professional institute, the American Institute of Certified Planners, advance the art and science of planning to meet the needs of people and society.

American Public Transportation Association (APTA): Acting as a leading force in advancing public transportation, APTA serves and leads its diverse membership through advocacy, innovation, and information-sharing to strengthen and expand public transportation.

American Society of Appraisers (ASA): An international membership organization of professional appraisers that represents all appraisal disciplines.

American Society of Farm Managers and Rural Appraisers (ASFMRA): A professional appraisal organization with an emphasis on financial analysis, valuation, and management of agricultural and rural properties.

Americans with Disabilities Act (ADA): The legislation defining the responsibilities of, and requirements for, transportation providers to make transportation accessible to individuals with disabilities.

Amortization: The process of recovering, over a stated period of time, a capital investment; the provision for the gradual reduction of an obligation, usually on an installment basis; provision made in advance for the gradual reduction of an amount owed.

Annual loan constant: A capitalization rate for debt, such as the ratio between the annual debt service and the mortgage amount ($RM = ADS/VM$); the total annual principal and interest loan payment.

Annuity: An annual income; a series of periodic payments that includes both a partial return of capital and interest on the capital; a return in equal amounts (level annuity), or in increasing amounts (increasing annuity), or decreasing amounts (decreasing annuity); a series of periodic payments, usually, although not necessarily, equal in amount and made at equal intervals of time, usually annually.

Answer: To provide what is needed, wanted, or asked for; a written statement made by a defendant in a suit, in which the defendant endeavors to resist the plaintiff's demands.

Anticipation: A real estate principle that holds that present value is created by the expectations of future benefits.

Appeal: The complaint to an appellate court of an injustice done or error committed by a trial or lower court, whose judgment or decision the appellate court is called on to correct or reverse.

Appellant: The party who takes an appeal from one court or jurisdiction to another; appellee is the party in a cause against whom an appeal is taken.

Appellate: Pertaining to or having cognizance of appeals, often used to indicate the distinction between the original jurisdiction (trial court) and appellate jurisdiction (appeal court).

Apportion: A term that refers to the distribution of funds between two or more parties having an interest in the same real estate when the participants cannot reach an equitable decision. Generally the apportionment is by the courts or an agreed arbitrator, separate from the acquisition process.

Appraisal: The act or process of developing a value opinion; a formal valuation of property, made by a competent authority; valuation services performed by an individual acting as an appraiser, including but not limited to appraisal, appraisal review, or appraisal consulting; a systematic procedure to address the client's valuation issue.

Appraisal date: The date at which the analysis, opinions, and advice in an appraisal, review, or consulting service apply. The appraisal must be approved by an agency official before it is used as its just compensation offer.

The Appraisal Foundation (TAF): A not-for-profit educational foundation, organized in 1987, to foster appraisal professionalism through the establishment of uniform standards of professional appraisal practice (USPAP), and qualifications for state certification and licensing of appraisers. The Appraisal Foundation has a Board of Trustees responsible for funding and appointing members to the Appraisal Foundations two independent boards, the Appraisal Standards Board and the Appraiser Qualification Board. The Appraisal Foundation has nineteen sponsors.

Appraisal Institute (AI): An international membership association of professional real estate appraisers throughout the United States, Canada and abroad. The Appraisal Institute confers the Professional Designations of SRA, SRPA, MAI.

Appraisal report: Any communication, written or oral, of an appraisal, appraisal review, or appraisal consulting service that is transmitted to the client upon completion of an assignment.

Appraisal review: The process of developing and communicating a credible opinion as to the quality of another appraiser's work. Review Appraisers must be competent, experienced, and licensed/certified (see UAR 49 CFR, Part 24).

Appraised value: The appraiser's opinions and conclusions resulting from an assignment.

Appraiser: A person who performs valuation services competently and in an independent, impartial, and unbiased manner.

Appreciation: The increase in cost, price, or value over a period of time resulting from improved economic conditions and increasing price levels.

Approaches to value: The three approaches that an appraiser can use to estimate the value of a property; for example, cost, income capitalization, and sales comparison.

Appropriation: A sum of money that has been set aside from a budget, especially a government budget, for a specific purpose; authorization of funding expenditures from Congress; the taking of something that belongs to, or is associated with, somebody else, especially without permission; the taking of property for public use.

Appropriations Act: The action of a legislative body that makes funds available for expenditure with specific limitations as to amount, purpose, and duration. In most cases, it permits money previously authorized to be obligated and payments made, but for the highway program operating under contract authority, the Appropriations Act specifies amounts of funds that Congress will make available for the fiscal year to liquidate obligations.

Appurtenance: An incidental right (as a right of way) attached to a principal property right, and passing in possession with it; something added to another, more important thing; an appendage.

Arterial: A class of roads serving major traffic movements (high-speed, high volume) for travel between major points.

Assemblage: The physical combining of two or more parcels into one ownership or use.

Assessed value: A property valuation by an assessor to provide for the sharing of the costs of government operations.

Assessment: The valuation of property for tax purposes.

Asset: Items that have value in use or in exchange; any item of economic value, either physical in nature (such as land), or a right to ownership, expressed in cost or some other value, which an individual or entity owns.

Asset management: A comprehensive integrated management plan for all real estate assets.

Asset manager: A person who directs all real estate activities (for example, licenses, leasing-in, leasing-out, property sales, properties retained) under the control of the real estate group; asset team A multidisciplined interdependent group with clearly defined roles, responsibilities, goals, and accountabilities as they relate to the management of real estate assets.

Asset rationalization: A process of determining the need for a given asset and the role the asset will play in an organization.

Assignee: Individual to whom a title, claim, property, interest, or right has been legally transferred (for example, the assignee of a mortgage).

Assignment: The method by which a right or contract or property is transferred from one person to another.

Assignment results: The appraiser's opinions and conclusions resulting from an assignment.

Assignor: Individual who transfers a title, claim, property, interest, or right to another person; a company or entity who transfers rights they hold to another entity (such as the assignor of a mortgage).

Association of Metropolitan Planning Organizations (AMPO): A nonprofit, membership organization, established in 1994, created to serve the needs and interests of metropolitan planning organizations (MPOs) nationwide. AMPO offers its member MPOs technical assistance and training, conferences and workshops, frequent print and electronic communications, research, a forum for transportation policy development and coalition building, and a variety of other services.

ASTM International: A not-for-profit organization that develops and publishes voluntary standards for materials, products, systems, and services (formerly known as the American Society for Testing and Materials).

Attorney: A person who is legally permitted to transact business on another's behalf; a person who advises and represents clients as to legal rights and obligations.

Attorney-in-fact: A person who is authorized to act for another person under a power of attorney, which may be limited to a specific act or may be all-encompassing.

Audit: Periodic investigation of financial statements and their relationships to planned or permitted expenditures.

Authorization: The process of controlling access and rights to resources, such as services or files; that which empowers an agency to implement a particular program, and also establishes an upper limit on the amount of funds that can be appropriated for that program.

Authorization Act: Basic substantive legislation that establishes or continues federal programs or agencies, and establishes an upper limit on the amount of funds for the program(s). The current authorization act for surface transportation programs is the Transportation Equity Act for the 21st Century (TEA-21).

Average daily traffic: The number of vehicles that pass a given point in a certain period of time; the total volume of traffic during a stated period, usually a year, divided by the number of days in that period.

Avigation easement (aviation): The right granted by a property owner for the use of the airspace above a specific height for aircraft flight; the easement that prohibits the property owner from using the land for structures, trees, signs, stacks, etc., higher than the altitude specified in the avigation easement. The degree of restriction will vary depending on the glide angle plane necessary for the safe use of an airfield's runway.

Avulsion: The sudden removal of soil by natural action, usually water, from one property and the depositing of the soil on the property of another; the sudden separation of part of one person's land and its attachment to another's, especially as a result of a flood.

Azimuth: The angle, in degrees and measured clockwise, between North and an object; the angle measured from north, eastward along the horizon, to the point where a vertical circle through an astronomical object intersects the horizon.

B

Bad debt expense: Estimated cost of losses that may be realized as a result of a failure to collect on receivables; the loss that is recorded when information is available that an asset (in this case, receivables) has probably been impaired.

Backfill: Material (soil, rocks, etc.) used to replace that which was removed during construction; the act of placing material adjacent to a structure; to refill a trench or other excavation with the soil that was dug from it.

Backland theory: A legal theory that asserts that in a partial taking of a tract of land with different zones of value, compensation is based on the property of lower value (even if higher valued property is taken) provided the same amount of higher valued land can be reestablished after the taking (seldom used as there are different laws for different states, whereby some declare that the owner must be paid for the taking).

Before tax cash flow: Cash flow remaining after annual debt service.

Backslope: That portion of the roadway between the side drainage ditch and the top of the cut, usually measured as a ratio of horizontal distance to each foot of increase in elevation.

Balance: A real estate principle that holds that value is created and maintained in proportion to the equilibrium (balance) attained in the amount and location of essential uses of real estate. Maximum value is created at that point where the four factors of production (land, labor, capital, and management) are in equilibrium (balance).

Bargain and sale deed: A deed in which the grantor implies to have, or have had, an interest in the property but does not warrant the title in any respect; a deed conveying real property without covenants.

Base and meridian: Imaginary lines used by surveyors to find and describe the location of land. The baseline is east-west; the meridian line is north-south.

Baseline: A survey line running due east and west through the initial point of a principal meridian from which township lines are established by the government survey system quadrangular; a horizontal elevation line used as the survey line for a highway route (see Survey Baseline).

Base property: The private holdings of a rancher, either fee owned land, water sources, or leased property, that are used as the base property required for the issuance of a grazing permit on public domain under the Taylor Grazing Act.

Base rent: The minimum rent due under the terms of a lease that also require the tenant to pay additional rent based on a percentage or participation requirement, usually used in a commercial application.

Basis point: A shorthand financial reference to one-hundredth of one percent (.01%) used in connection with yield and interest rates.

Before and after method: This is the Federal Rule used in the valuation of partial acquisition. The appraiser develops an opinion of value prior to the acquisition or take, and another opinion of value after the acquisition or take. The difference is the value of the acquisition, be it a plus or a minus number.

Before appraisal: Part of an appraisal of a property from which only a portion of the property is acquired for a project; that portion of an appraisal “before” a partial acquisition for a project; part of the appraisal of an affected property that estimates the value of the property as it is before the acquisition. (Law and regulations typically require that this estimate of value cannot include any increase or decrease in the value of the property that results from the planned or anticipated project).

Benchmark: A point of known elevation; a point of reference for measurement; a bronze plate that serves as a reference point for the determination of the elevation of a certain point above sea level.

Beneficial interests: Benefits, profits, or advantages resulting from a contract; the ownership of an estate, as different from the fee ownership or control of a property.

Benefits: A payment made, or an entitlement available based on Public Law, whereby a property owner or tenant may receive an enhancement based on the effects of a taking; an increase in value to property not acquired but which benefits from an acquisition.

Berm: The earthen or paved extension of the roadway, sometimes a shoulder; a longitudinal mound of earth used to deflect water; a dike-like earthen structure formed by materials excavated from a shallow ditch that parallels and adjoins it, used to control surface drainage.

Betterment: A physical improvement or a capital expenditure that increases the utility or market desirability of an improvement. It is distinguished from repairs or replacements by the fact that the original character is improved and the value is increased (may arise from a physical change external to the property such as street improvements, improved drainage facilities, etc.). Its measure of value is not in actual cost, but in enhanced value imparted to the property.

Binding requirements: All or part of a Standards Rule of USPAP from which departure is not permitted (see USPAP, 2010).

Blight: A severely spoiled or ruined state, especially of an urban area; a reduction in the productivity or usefulness of real estate caused by destructive economic forces, such as the encroachment of inharmonious property uses and/or the rapid depreciation of buildings.

Book value: The net amount at which an asset or liability is carried on the books of account (also referred to as carrying value or amount). It equals the gross nominal amount of any asset or liability minus any allowance or valuation amount.

Borrow: Organic material from sources outside the roadway prism, which has been subjected to certain specifications, that is used primarily to bring the ground elevation at the project site up to grade as per plan.

Breach: The breaking or violating of a law, right, or duty, either by commission or omission; a failure to obey, keep, or preserve something such as a law, trust, or promise.

Breakdown method: A method of calculating depreciation in property value in which the total loss is estimated by analyzing and measuring each cause of depreciation separately.

Bribe: Payment for special consideration in business dealings (not always illegal but usually unethical).

Bridge: A structure that is built above and across a river, road, or other obstacle to allow people or vehicles to cross from one point to another.

Broker: A person licensed to engage in the real estate business.

Brownfield: An abandoned, idled, or underused industrial or commercial site or facility where redevelopment is complicated by real or perceived environmental contamination; an urban development site that has been previously built on or environmentally contaminated and is currently unusable or abandoned.

Budget authority: The authority provided by law to enter into financial obligations that will result in immediate or future outlays of federal government funds. Budget authority includes the credit subsidy costs for direct loan and loan guarantee programs. Basic forms of budget authority include appropriations, borrowing authority, contract authority, and authority to obligate and expend offsetting receipts and collections.

Build/operate/transfer: A public/private partnership arrangement involving private construction, private operation for given period of time, and eventual transfer to public ownership.

Building capitalization rate: A rate that expresses the relationship between the net operating income to the building and the building value ($RB = IB/VB$).

Building code: A governmental entity's ordinances, rules, and/or regulations relating to the repair, construction, use, and remodeling of buildings and structures.

Building line: A line established by ordinance or statute, between which line and the street right of way a structure is not permitted (also referred to as a "setback" line).

Building Owners and Managers Association (BOMA): A professional trade association whose members own or manage commercial real estate, or provide goods and services to the industry.

Building residual technique: A technique in which the building is valued independent of the land. The annual net income to the land is deducted from the estimated annual net income to the property, and the residual amount is income attributable to the building, which is valued with a building capitalization rate.

Bundle of rights: The bundle of rights is a common way to explain the complexities of property ownership; those legal rights of ownership including, enjoyment, exclusion, disposition, possession and control. Any one, or several, of the rights, may be transferred or conveyed to another, with the owner retaining any rights not conveyed.

Burden of proof: A duty placed upon a civil or criminal defendant to prove or disprove a disputed fact; the obligation to prove allegations that are presented in a legal action.

C

Call Risk: Risk to the investor associated with prepayments by the issuer of the principal amount of the bonds prior to the stated maturity date, in accordance with the bonds' redemption provisions.

Capital: Accumulation of wealth, or money available for investment; capital, capital goods, or real capital are the factor of production, used to create goods or services, that is not itself significantly consumed; a city, or the area of a country, province, region, or state, regarded as enjoying primary status, usually but not always the seat of the government.

Capital appreciation bonds: Long-term bonds that pay no current interest, but accrete or compound in value from the date of issuance to the date of maturity. CABs differ from zero coupon bonds in that they are issued at an initial amount and compound in value, in contrast to zeroes, which are issued at a deep-discount and compound to par.

Capital gains or losses: The amount by which the net proceeds from the resale of an asset exceed the adjusted cost basis, or book value, of the item; used primarily in IRS computations. The Tax Reform Act of 1986 eliminated the special treatment of capital gains.

Capital program funds: Financial assistance from the Capital Program of 49 U.S.C. This program enables the Secretary of Transportation to make discretionary capital grants and loans to finance public transportation projects. Funds are divided among fixed-guide way (rail) and bus-related facilities.

Capital reserves: Funds that remain in a bank and are not loaned out. These funds can be used to support a variety of credit enhancement tools. Capital reserves also can be used to leverage the lending institution, or borrow against reserves to expand the pool of available loan funds.

Capitalization: The process of depositing various funds as seed capital into a lending institution to enable financial services; a pool of money that is distributed, through loans and credit enhancements, in such a way to ensure that payments are made back to preserve the corpus.

Capitalization rate: A rate used to convert income into value.

Cash flow rate: A capitalization rate for equity that is the ratio between the annual equity dividend and the equity value ($RE = IE / VE$).

Centerline: The longitudinal center of a right of way project such as the middle of a road alignment (see Baseline).

Centerline profile map: A type of right of way map that shows the centerline elevation profile of a proposed roadway.

Certificate of title: A document based on a title search stating that the title or interest in property is vested in a designated person and showing outstanding liens, charges, or other encumbrances, if any.

Chain: A surveying instrument consisting of 100 linked pieces of iron or steel and measuring 66 feet (20 meters).

Chain of title: A history of conveyances and encumbrances affecting the title from the time the original patent was granted to the present time.

Change: A real estate principle that holds that change is the result of cause and effect relationships among the forces that impact real estate.

Charge Off: Alternative term to “write-off” (Write-off is the preferred term).

Chattel: (personal) Personal property that is not attached to real estate. (real) All real property estates that do not constitute a freehold or fee estate, for example, a lease.

Chronological age: The number of years that have elapsed since the completed construction of an improvement; of, relating to, or arranged in, or according to, the order of time.

Clean Air Act Amendments (CAAA): The original Clean Air Act was passed in 1963, but the national air pollution control program is actually based on the 1970 version of the law. The 1990 Clean Air Act Amendments (the most recent version) is the most far-reaching revisions of the law, and made major changes in the Clean Air Act.

Claim: Alternative meanings of the word “claim” include: a demand submitted by a lender for government payment of a defaulted guaranteed loan; a document filed with the Department of Justice for the pursuit of litigation and/or enforced collection of an account; or a request filed with an agency for the payment of an amount considered due to the submitting individual or organization, such as for medical insurance.

Client: The party or parties who engage another, by contract or employment; a person or organization to whom goods or services are provided and sold.

Close Out: Occurs concurrently with, or subsequent to, an agency decision to write off a debt for which the agency has determined that future additional collection attempts would be futile.

Closing statement: A listing of the debits and credits of the seller and buyer in the settlement of a real estate transaction.

Clouded Title: An irregularity, possible claim, or encumbrance that, if valid, would adversely affect or impair title to a parcel.

Code of Federal Regulations (CFR): A document that is a compilation of the general and permanent rules of the executive departments and agencies of the federal government as published in the Federal Register. The code is divided into 50 titles that represent broad areas subject to federal regulation.

Collateral: Any property pledged as security for a loan.

Collection Agency: A private sector entity whose primary business is the collection of delinquent debts.

Collector (highway): In rural areas, routes that serve intracounty (within a county or regional area) rather than statewide travel. In urban areas, streets that provide direct access to neighborhoods and arterials.

Color of title: That which appears to be good title but which, in fact, contains some defect.

Commensurate property: The measure of a rancher's ability to care or provide for livestock without using public lands, that is appropriately proportionate.

Commercial: An adjective used to signify a business activity, regardless of whether that activity has been undertaken by an individual or business.

Common law: The body of customs, usages, and practices developed and administered by the Anglo-Saxons; the unwritten law founded on customs and precedents as distinguished from statute law.

Common property: A tract of land considered the property of the public, in which all persons enjoy equal rights; property not owned by individuals or governments, but by groups, tribes, or informal villages.

Community property: All property acquired by either husband or wife or both during their marriage, excluding property acquired by gift or inheritance, and which belongs to both, and not to each individually.

Comparables: Properties used as comparisons to calculate the value of a specific property.

Comparative unit method: A method used in the cost approach to develop an estimate in terms of dollars per unit (for example, square foot, square meter, cubic feet).

Compensable damages: Damages for which compensation must be paid under eminent domain.

Compensable interest: A property right, which if acquired for public purposes, would entitle the owner to receive just compensation.

Compensation: (See Just Compensation)

Competition: A real estate principle that holds that competition is the interactive efforts among market participants to secure real estate or an interest in real estate.

Complaint: The plaintiff's presentation in a court action, setting forth the claim on which relief or compensation is sought.

Complete appraisal: The act or process of developing an opinion of value or an opinion of value developed without invoking the Departure Rule.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): 1) The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or

the environment. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. The law authorizes two kinds of response actions: Short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response. 2) Long-term remedial response actions, that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life threatening. These actions can be conducted only at sites listed on EPA's National Priorities List (NPL). 3) CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

Comprehensive land use plan: (See Master Plan.)

Compromise: Accepting less than the full amount of the debt owed from the debtor in satisfaction of the debt a settlement of a dispute in which two or more sides agree to accept less than they originally wanted (also referred to as "settlement"); something that somebody accepts because what was wanted is unattainable.

Concession: An allowance, usually in the form of rent abatement, made by the lessor to the lessee; a lease that allows a tenant to conduct a business on the property of another.

Conclusive presumption: A statement of facts that must be accepted as conclusive evidence because the law will not permit its contradiction.

Condemnation: The act of or process by which property is acquired for public purposes under the power of eminent domain, following due process of law and on the payment of just compensation; the act of a federal, state, county, or other government, district, or public utility or corporation vested with the right of eminent domain to take private property for public use when a public necessity exists.

Condemnee: The owner of the property or the property right acquired under eminent domain.

Condemnor: The agency acquiring property under the right of eminent domain.

Conditions, covenants, and restrictions: A list of uses and restrictions usually contained in the deed of conveyance, to which property can or cannot be put, commonly used by land developers or home-owners associations.

Conformity: A real estate principle that holds that value is created and sustained when a property's characteristics conform to market demands.

Consent to dismiss and waiver of deposit: A formal document where a defendant in a condemnation action gives consent to the dismissal of the action and waives all claims to moneys that may have been deposited.

Consequential damages: Loss in value to real estate, from which no part is acquired, resulting from a public improvement (for example, highway through a neighborhood).

Conservation easement: A voluntary agreement that allows a landowner to limit the type or amount of development on their property while retaining private ownership of the land; a restriction that limits future property use to conservation or preservation.

Conservator: A court-appointed individual assigned to protect and preserve the property of a person physically incapacitated or otherwise unable to handle their personal affairs.

Consideration: The inducement, generally monetary, that moves a party to enter into a contract; something to be taken into account when weighing the pros and cons of a situation before making a decision.

Consistent use: The premise that land cannot be valued on the basis of one highest and best use and the improvement valued at another highest and best use.

Constructive notice: The accessibility of public records; notice is assumed by the existence of the records; announcement of title conditions as found on the public records.

Consumer: Adjective used to signify a personal activity; a buyer of goods or services.

Contaminant: Any physical, chemical, biological, or radiological substance or matter that has an adverse effect on air, water, or soil.

Contamination: Introduction of microorganisms, chemicals, toxic substances, wastes, or wastewater into water, air, soil, and structures in concentrations that make the medium unfit for its intended use.

Contingencies: An event that might occur in the future, especially a problem, emergency, or expense that might arise unexpectedly and therefore must be prepared for; a provision made against future unforeseen events such as an allocation of funds in a budget.

Contour: A topographic line on a map that connects the points on a land surface that have the same elevation.

Contract: A legally enforceable agreement between two or more people or parties.

Contract authority: A form of budget authority that permits obligations to be made in advance of appropriations or receipts. Contract authority therefore is unfunded and requires a subsequent appropriation or offsetting collection to liquidate (pay) the obligations. (For example, the federal-aid highway program has operated under contract authority since 1921.)

Contract for deed: (See Land contract)

Control of access: The condition where the right of access is fully or partially controlled by the governing agency.

Convey: The act of deeding or transferring title to another; a conveyance is a written instrument by which a title, estate, or interest in property is transferred.

Cooperative agreement: Written consent between two parties to define the basic structure and purpose of a financial transaction, including the roles the parties involved and the way in which funds will be administered.

Corpus: The corpus refers to all initial funds, additional, and subsequent revenue deposited for bank capitalization. The corpus is essentially a “body” of funds that is available, on a revolving basis, for use in providing financial assistance to borrowers.

Corridor: A long, narrow strip of property between two termini generally used for transportation purposes (for example, canals, electrical power transmission, fiber optics, telephone, gas and oil pipelines, roads, and so on).

Cost: The total dollar amount necessary to create an improvement.

Cost (appraisal approach): One of the three approaches to value; the Cost approach estimates the value of a property by adding the value of the land as if vacant, and adding the estimated cost to reproduce or replace the improvement less any accrued depreciation from the current structure.

Cost of substitute personal property: A payment to a business or farm owner when the owner decides to replace personal property items rather than moving the items to the relocation site to which they move (see 49 CFR 24.301(g)(16)).

Cost to cure: The cost to restore an item of deferred maintenance to new or reasonably new condition; in the taking of right of way, the difference in the depreciated cost of a take or damage to a component, and the value to restore the utility or cure remaining damages to the item, but not to exceed 100% of the value.

Covenant: A written agreement in a conveyance or other instruments setting forth assurances by the grantor.

Credit: Promise of future payment in kind or of money given in exchange of present money, goods, or services.

Credit cycle: The complete credit process, composed of 4 phases: credit extension, account servicing, debt collection, and write-off/close out.

Credit enhancement: Financing tools, such as letters of credit, lines of credit, bond insurance, debt service reserves, and debt service guarantees that improve the credit quality of underlying financial commitments. Credit enhancements have the effect of lowering interest costs and improving the marketability or liquidity of bond issues.

Credit extension: Review and approval of requests for short- and long-term credit.

Credit program: Federal program that makes loans and/or loan guarantees to non-federal borrowers.

Credit score: A statistically-based measure of risk of a particular type of loan to a particular borrower.

Cross-section: A plane surface formed by cutting through an object at right angles to an axis, especially the longest axis; a piece cut as part of a cross section, or an image of such a piece.

Cul de sac: The terminus of a street; a street open at one end with a rounded turnaround at the other end.

Culvert: Any structure not classified as a bridge, which provides an opening under a roadway; a covered channel that carries water or cabling under a road or railroad, or through an embankment.

Curable depreciation: Items of physical deterioration and functional obsolescence that are customarily repaired or replaced because the contributory value as repaired or replaced is equal to or more than the cost to cure.

Current receivable: A receivable on which payment is due within 12 months of the reporting period.

Cut: The removal of earth from an area intended for construction; to reduce an amount from something such as money or time; to stop providing a service or supply of something; to negotiate an agreement.

D

Damages: In condemnation, the loss in value from any cause to the remainder of a parent tract (or to adjoining properties in which the property owner has an interest) as a result of a partial taking. Generally, it is the difference between the value of the property before the acquisition and the value of the property after the acquisition. The appraiser must verify which jurisdiction the State Agency is under (such as state or federal rule).

Debt service: The total annual principal and interest loan payment.

Declaration of a service: The affidavit made by a party who serves defendant(s) in a condemnation case with the summons and complaint, given as proof that the service was made in the manner required by the Code of Civil Procedure.

Dedication: The setting apart by the owner, and the acceptance by the public, of property for public use in accordance with statute or common law (no compensation is paid by the public).

Debt: Refers to an amount of money or property that has been determined by an appropriate official to be owed to any person, organization, or entity; Debt collection Recovery of amounts due after routine follow-up fails. This activity includes the assessment of the debtor's ability to pay, the exploration of possible alternative arrangements to increase the debtor's ability to repay and other efforts to secure payment.

Deed: A written instrument, usually under seal, by which the ownership interests in real estate are transferred from one party to another.

Deed-in-lieu of foreclosure: A voluntary transfer of marketable title to a property to avoid foreclosure.

Deed of trust: An instrument used in many jurisdictions in place of a mortgage. Property is transferred to a trustee by the borrower (trustor) in favor of the lender (beneficiary) and reconveyed upon payment in full.

Default: Failure to perform a duty or to discharge an obligation in accordance with an credit agreement, grant, or contract.

Defendant: The person defending or denying; the party against whom relief or recovery is sought in a court action or lawsuit.

Deferred maintenance: Curable, physical deterioration that should be corrected immediately.

Deficiency judgment: In a foreclosure sale, the difference between the sale price and the indebtedness sued for, if the foreclosure sale does not cover the debt.

Deficit rent: The amount by which market rent exceeds contract rent.

Deficiency: Portion of a loan that remains outstanding after pledged property has been liquidated (converted to cash) and applied to the outstanding balance.

Delinquency: Failure of the debtor to pay an obligation or debt by the date specified in the agency's initial written notification or applicable contractual agreement, unless other satisfactory payment arrangements have been made by that date. Delinquency would also occur if, at any time thereafter, the debtor fails to satisfy the obligations under payment agreement with the agency.

Delivery: The placing of the property in the actual or constructive possession of the grantee, usually accomplished by delivery of the deed to the grantee or by recordation.

Delta: A quantitative change, especially a small or incremental one; a triangular deposit of sand and soil at the mouth of a river or inlet; an inscribed angle as being defined by two chords of the circle sharing an endpoint.

Demonstrative evidence: Evidence in the form of objects (for example, maps, diagrams, or models) that has in itself no probative value but is used to illustrate and clarify the factual matter at issue.

Department of Energy (DOE): The Department of Energy's overarching mission is to advance the national, economic and energy security of the United States, to promote scientific and technological innovation in support of that mission, and to ensure the environmental cleanup of the national nuclear weapons complex.

The department has four strategic goals toward achieving the mission: Defense Strategic Goal: To protect our national security by applying advanced science and nuclear technology to the Nation's defense; Energy Strategic Goal: To protect our national and economic security by promoting a diverse supply and delivery of reliable, affordable, and environmentally sound energy; Science Strategic Goal: To protect our national and economic security by providing world-class scientific research capacity and advancing scientific knowledge; and Environment Strategic Goal: To protect the environment by providing a responsible resolution to the environmental legacy of the Cold War and by providing for the permanent disposal of the Nation's high-level radioactive waste.

Department of Health and Human Services (HHS): The Department of Health and Human Services is the United States government's principal agency for protecting the health of all Americans and providing essential human services, especially for those who are least able to help themselves.

Department of Housing and Urban Development (HUD): HUD's mission is to increase homeownership, support community development and increase access to affordable housing free from discrimination. To fulfill this mission, HUD will embrace high standards of ethics, management and accountability and forge new partnerships, (particularly with faith-based and community organizations) that leverage resources and improve HUD's ability to be effective on the community level.

Department of Transportation (DOT): The agency that establishes the nation's overall transportation policy. Under its umbrella there are ten administrations whose jurisdictions include highway planning, development and construction; urban mass transit; railroads; aviation; and the safety of waterways, ports, highways, and oil and gas pipelines. The Department of Transportation (DOT) was established by act of October 15, 1966, as amended (49 U.S.C. 102 and 102 note), "to assure the coordinated, effective administration of the transportation programs of the federal government," and to develop "national transportation policies and programs conducive to the provision of fast, safe, efficient, and convenient transportation at the lowest cost consistent therewith."

Departure rule: Specific requirement of the USPAP that permits exceptions from sections of the standards that are classified as specific requirements rather than binding requirements.

Deposition: The written testimony of a witness taken under oath.

Depreciation: An appraisal term for the loss in value from any cause; physical deterioration, functional obsolescence, and external obsolescence (a total of seven different types of depreciation exist in real estate); a term also used in accounting as an allowance made against the loss of value of an asset and computed using various accounting methods.

Deregulation: Revisions to or complete elimination of economic regulations controlling utilities or transportation. (For example, the Motor Carrier Act of 1980 and the Staggers Act of 1980 revised the economic controls over motor carriers and railroads.)

Descent: Ownership succession by inheritance or by any act of law, as distinguished from purchase; the title by which one person, on the death of another, acquires the real estate of the latter as the lawful heir.

Design capacity: The criteria used to design a road or project to maximize the use of the project to current or future standards.

Design-build: The procurement or project delivery arrangement whereby a single entity (a contractor with sub-consultants, or team of contractors and engineers, often with sub-consultants) is entrusted with both design and construction of a project. This contrasts with traditional procurement where one contract is bid for the design phase and then a second contract is bid for the construction phase of the project.

Design speed: The maximum safe speed that can be maintained over a specified section of road when conditions are so favorable that the design features of the roadway govern the imposed limit.

Deterioration: Impairment of condition; one of the causes of depreciation, and reflecting the loss in value brought about by wear and tear, disintegration, use in service, and the action of the elements.

Devise: An item of property bequeathed through a will; devisee a person to whom real estate is given by will; devisor a testator who leaves real estate.

Direct capitalization: An income capitalization approach technique that converts an estimate of a single year's income into value in one step.

Direct damages: Payment for property or an interest in property actually acquired for a public improvement.

Direct loan: A disbursement of funds by the Government to a non-federal borrower under a contract that requires repayment of such funds with or without interest. The term includes the purchase of, or participation in, a loan made by a non-federal lender; Direct Loan Obligation A legal or binding agreement by a federal agency to make a direct loan when specified conditions are fulfilled by the borrower. Acquisitions of federally guaranteed non-federal loans in satisfaction of default or other guarantee claims are not recorded as direct loan obligations; Direct Loan Subsidy Cost Estimated long-term cost to the federal government of direct loans calculated on a present value basis, excluding administrative costs. The cost is the present value of estimated net cash outflows at the time the direct loans are discharged.

Discharge: Satisfying a debt as a legal obligation through the performance of the obligation(s) imposed under the debt instrument; to pay a debt in full, or through another action such as a compromise.

Disconnect costs: When a business or farm owner moves personal property as a result of an agency project they may be eligible to receive reimbursement for the cost to disconnect, dismantle and remove personal property. (see 49 CFR 24.301(g)(3).

Discount rate: A yield rate that converts or discounts future payments or accountables into present value. The rate is extracted from the market.

Discovery: The methods used by parties to a civil or criminal action to obtain information held by the other party that is relevant to the action; data or materials that a party in a legal proceeding must disclose to another party before or during the proceeding.

Discretionary spending: The outlay of monies that are controlled through the congressional appropriation process. The Budget Enforcement Act establishes annual spending limitations or caps on discretionary appropriations and the resulting outlays.

Dispossess: To deprive somebody of the possession or occupancy of something, especially property; to evict or remove.

Divest: To lose or give away rights to the possession of property, or deprive somebody of these rights.

Dominant tenement: The parcel of land that benefits from or has the advantage of an easement across the property, usually held by one person but owned by another.

Donation: The voluntary conveyance by the owner of private property to public ownership and use without compensation; the act of giving money or goods to an organization as a gift or bequest.

Donut areas: Geographic areas outside a metropolitan planning area boundary, but inside the boundary of a nonattainment or maintenance area that contains any part of a metropolitan area (does not include isolated rural areas).

Drainage area: The area that will drain to any given selected spot, usually to a catch point or basin.

Drainage ditch: Any open watercourse used for drainage; the depressed area within a right of way given over to the collection and removal of surface drainage.

Drainage easement: The right to drain surface water from one property owner's land across another's.

Due diligence: The care that a prudent person might be expected to exercise in the examination and evaluation of risks affecting a transaction; the disclosure to potential buyers of all relevant information that applies to a security issue.

E

Easement: An interest in real property that conveys use, but not ownership, of a portion of an owner's property. Access may be acquired by private parties or public utilities. An easement restricts but does not abrogate the fee owner's rights to the use and enjoyment of the property. There are 43 identified types of easements.

Easement appurtenant: An easement for the benefit of another property that passes with the property transfer.

Easement by prescription: The right to use the property of another that is established by exercising this right over a period of time. Also known as a prescriptive easement.

Easement in gross: An easement that is not attached or appurtenant to any particular estate; does not run with the land nor is it transferred through the conveyance of title (commonly, public utility easements).

Easement of necessity: A court granted easement when it is determined that the easement is essential for the use and enjoyment of the property, such as a land-locked parcel.

Ecology: The relationship of living things to one another and their environment, and the study of such relationships.

Economic age-life depreciation: A method to estimate depreciation by developing a ratio between the improvement's effective age and its economic life and then multiplied by the improvement's cost new.

Economic feasibility: An investment's ability to produce sufficient income to pay expenses and provide a reasonable return on, and the recapture of, the capital invested.

Economic life: The period over which an improvement contributes to property value.

Effective age: The age of a structure based on its observed condition - physical, functional, and external.

Effective date: The date (date of value) at which the analysis, opinions, and advice in an appraisal, review, document, or consulting service apply. May be retroactive, current or future.

Effective gross income: The estimated potential gross income less a vacancy and collection loss; Effective gross income multiplier is the ratio between a sale price and the property's effective gross income ($EGIM = SP/EGI$).

Eminent domain: The power of any sovereign government to take private property without the consent of the owner. The U.S. Constitution's 5th Amendment gives the right, but the 14th amendment guarantees due process. Not to be confused with the Act of Condemnation.

Encroachment: An improvement (such as a structure, sign, wall, or fence) that illegally intrudes on another's property or right of way illegally or without permission.

Encumber: To burden a parcel of land with a lien or charge (such as a mortgage); encumbrance a charge, claim, liability, or lien attached to real property.

Entrepreneur: A person who assumes the risk and management of an enterprise in exchange for anticipated gain.

Environment: The sum of all external conditions affecting the life, development and survival of an organism.

Environmental Assessment (EA): An environmental analysis prepared pursuant to the National Environmental Policy Act to determine whether a federal action would significantly affect the environment and thus require a more detailed environmental impact statement.

Environmental audit: An independent assessment of the current status of a party's compliance with applicable environmental requirements or of a party's environmental compliance policies, practices, and controls.

Environmental impact statement (EIS): A report developed as part of the National Environmental Policy Act requirements, which details any adverse economic, social, and environmental effects of a proposed project for which federal funding is being sought. A tool for decision making, it describes the positive and negative effects of the undertaking and cites alternative actions. Adverse effects could include air, water, or noise pollution; destruction or disruption of natural resources; adverse employment effects; injurious displacement of people or businesses; or disruption of desirable community or regional growth.

Environmental Justice (EJ): Environmental justice assures that services and benefits allow for meaningful participation, and are fairly distributed to avoid discrimination.

Environmental Protection Agency (EPA): The federal regulatory agency responsible for administering and enforcing federal environmental laws, including the Clean Air Act, the Clean Water Act, the Endangered Species Act, and others.

Environmental restoration: The re-establishment (including all site preparation activities) of natural habitats or other environmental resources on a site where they formerly existed or currently exist in a substantially degraded state. This can include the restitution for the loss, damage, or destruction of natural resources arising out of the accidental discharge, dispersal, release or escape into or upon the land, atmosphere, watercourse, or body of water of any commodity transported by a motor carrier. This also may include the on-site or offsite replacement of wetlands and other natural habitats lost through development activities (see 49CFR387 and 23CFR 777).

Environmentally sensitive area: An area of environmental importance having natural resources, which if degraded may lead to significant adverse, social, economic or ecological consequences. These could be areas in or adjacent to aquatic ecosystems, drinking water sources, unique or declining species habitat, and other similar sites (see 49CFR194).

Environmental site assessment: The process of determining whether contamination is present on a parcel of real property.

Equity: The owner's interest in real estate; the commitment of money from public or private sources for project finance, with a designated rate of return target.

Equity capitalization rate: The ratio between the annual equity dividend and the equity value ($RE = IE / VE$).

Equity dividend: Cash flow remaining after annual debt service; Equity dividend rate is the ratio between the annual equity dividend and the equity value ($RE = IE / VE$); Equity yield rate is the equity investor's internal rate of return.

Escheat: The reversion of property to the State in a case when an individual dies without having made a legally valid will and/or without heirs.

Escrow: A procedure whereby a disinterested third party controls the legal documents and funds on behalf of a seller and buyer.

Estate: A right or interest in property; the whole of somebody's property, possessions, and capital, especially the property of somebody who is dead or bankrupt.

Estate for years: An interest in real property by virtue of a contract or possession for a definite and limited time (also called a "life-estate").

Estoppel: A legal rule that prevents somebody from stating a position inconsistent with one previously stated, especially when the earlier representation has been relied upon by others.

Evaluation: An estimate of value for certain real estate related transactions that are exempt from the agencies' appraisal requirements.

Eviction: A process to oust a person from the possession of real property.

Examiner: One who examines documents. (see Title examiner, Title opinion)

Executive Order 12893: An executive order issued by President Clinton in January 1994, establishing infrastructure investment as a priority for the Administration and directing federal agencies to establish programs for more effective capital investment from current federal funds.

Excess condemnation: The condemnation of property in excess of that which is actually required for the proposed public use, usually for the disposition of appurtenances.

Execution sale: The sale of property, as a legal remedy, for the enforcement of a judgment.

Executor: A person or trust institution designated in a will or appointed by a court to settle the estate of a deceased person.

Expenditure: An amount of money spent, as a whole or on a particular thing; a term signifying disbursement of funds for repayment of obligations incurred; an electronic transfer of funds, or a check sent to a State highway or transportation agency for voucher payment, is an expenditure or outlay.

Expert witness: A person who by reason of education and/or experience gives evidence; a person who is recognized by the court as an expert on the subject matter in question (a property owner is generally accepted as an expert in their own lands).

External obsolescence: An element of depreciation, usually incurable, caused by negative influences outside the property (such as a blight).

Extraction: A method to determine land value by extracting the depreciated improvement value from the total sale price to arrive at the value of the land (see Abstraction).

Extraordinary assumption: An assumption, directly related to a specific assignment, which, if found to be false, could alter the appraiser's opinions or conclusions.

F

Face amount (face value): The stated worth of a note, insurance policy, mortgage, etc. Synonymous to par value in capital stocks (Marshall & Swift LP).

Factors in production: The agents of land, labor, capital, and management, which together create wealth, income, or services (also known as Agents of Production).

Fair market value: The most probable price that a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus (see Market Value).

Feasibility analysis: A study of whether or not a project will meet the proposer's objectives; an investigation of the practical relationships of an economic endeavor.

Federal Aviation Administration (FAA): A federal agency with the mission to provide an efficient global aerospace system that contributes to national security and the promotion of United States aerospace safety. Formerly the Federal Aviation Agency, the Federal Aviation Administration was established by the Federal Aviation Act of 1958 (49 U.S.C. 106) and became a component of the Department of Transportation in 1967 pursuant to the Department of Transportation.

Federal Aviation Regulations (FAR): The set of regulatory obligations contained in Title 14 of the Code of Federal Regulations in which FAA is charged to enforce in order to promote the safety of civil aviation both domestically and internationally.

Federal Energy Regulatory Commission (FERC): The federal agency with jurisdiction over, among other things, gas pricing, oil pipeline rates, and gas pipeline certification.

Federal Highway Administration (FHWA): A branch of the U.S. Department of Transportation that administers the federal-aid Highway Program, providing financial assistance to states to construct and improve highways, urban and rural roads, and

bridges. The FHWA also administers the Federal Lands Highway Program, including survey, design, and construction of forest highway system roads, parkways and park roads, Indian reservation roads, defense access roads, and other federal lands roads. Federal-aid Highway Program (FAHP) An umbrella term for most of the federal programs providing highway funds to the States. This is not a term defined in law. FAHP is comprised of those programs authorized in Titles I and V of TEA-21 that are administered by FHWA.

Federal Lands Highway Program (FLHP): Provides funds to construct roads and trails within (or, in some cases, providing access to) Federal lands. There are four categories of FLHP funds: Indian Reservation Roads, Public Lands Highways, Park Roads and Parkways, and Refuge Roads. Funds available to the U.S. Forest Service may be used for forest development roads and trails. To be eligible for funding, projects must be open to the public and part of an approved federal land management agency general management plan (see 23 U.S.C. 204).

Federal Register: A daily publication that provides a uniform system for making regulations and legal notices issued by the Executive Branch and various departments of the federal government available to the public.

Federal rule: An appraisal method used in the valuation of partial acquisitions. The appraiser develops an opinion of value prior to the acquisition or take and another opinion of value after the acquisition or take – the difference is the value of the acquisition.

Federally assisted projects: A project that receives federal reimbursement or payment of some project expenses such as planning, construction, right of way acquisition, and property management, usually from the State Department of Transportation.

Fee simple estate: The highest real estate ownership interest; Absolute ownership, unencumbered by any other interest or estate.

Fee tail: A form of tenure under the feudal system that could only be transferred to a lineal descendant. If there were no lineal descendants, upon the death of the tenant the land reverted to the lord.

Fiduciary: A position of trust and confidence, regarding financial transactions; relating to the relationship between a trustee and the person or body for whom the trustee acts.

Fill: The material used to build up land or to obtain a uniform grade for a construction project.

Financing account: A nonbudget account associated with each credit program account. The financing account holds fund balances, receives the subsidy cost payment from the credit program account, and includes all other cash flows to and from the government resulting from post-1991 direct loans or loan guarantees (see OMB Circular No. A-34).

Final order of condemnation: The closing order of a court in a condemnation action, made after the requirements of the final judgment have been satisfied and the document that passes property title to the condemner.

Financial analysis: The cost-benefit relationships of an economic endeavor.

Fixed-expenses: Operating expenses that do not usually vary with the level of occupancy (for example, real estate taxes and insurance).

Fixed-residential moving cost schedule: Used to calculate the amount of reimbursement that displaced persons may be eligible to receive if they decide to move their own personal property.

Fixture: An item that was once personal property but is now affixed, or is an integral part of the real estate (such as shelves, and septic tanks).

Flood plain: The areas along water bodies that, because of their topography and elevation, are subject to overflow and flooding.

Flow line: The profile of the low point on the inside of a drainage structure or channel.

Forbearance: The act of a creditor who refrains from enforcing a debt when it falls due; various government credit programs, which, under specific conditions, offer borrowers certain protections against foreclosure.

Force majeure: Events that are beyond the control of a contractor, such as earthquakes, epidemics, blockades, wars, acts of sabotage, and archeological site discoveries.

Foreclosure: A legal proceeding to extinguish a property owner's rights, title, and interest in order to sell the owner's property to satisfy a lien; a method of enforcing payment of a debt secured by a mortgage by seizing the mortgaged property. Foreclosure terminates all rights that the mortgagor has in the mortgaged property upon completion of due process through the courts.

Forgive: To grant relief from all or part of a debt under statutory authority. When an agency forgives a debt, or some portion thereof, it is deciding that the amount being waived is not now part of the government's claim.

Freedom of Information Act (FOIA): Allows all U.S. citizens and residents to request any records in possession of the executive branch of the federal government. The term "records" includes documents, papers, reports, letters, films, photographs, sound recordings, computer tapes and disks.

Freehold: A special right granting the full use of real estate for an indeterminate time. It differs from leasehold, which allows possession for a limited time. There are varieties of freehold such as fee simple and fee tail.

Freeway: A divided arterial highway designed for the unimpeded flow of large traffic volumes. Access to a freeway is rigorously controlled and intersection grade separations are required.

Functionally equivalent: Term used to describe how the replacement dwelling offered to a displaced person is to compare to the displacement dwelling in regard to performing the same function, and providing the same utility.

Functional obsolescence: Impairment of functional capacity or efficiency; the state of becoming old-fashioned and no longer used, especially because of being replaced by something newer and more effective.

Functional replacement: The replacement of real estate acquired as a result of a transportation related public improvement with facilities of equivalent utility.

Functional utility: The ability of a structure to perform the functions for which it is intended.

G

Gap analysis: A business tool that analyzes the difference (gap) between today's reality and a desired future state.

General Accounting Office (GAO): The General Accounting Office is the audit, evaluation, and investigative arm of Congress. GAO examines the use of public funds, evaluates federal programs and activities, and provides analyses, options, recommendations, and other assistance to help the Congress make effective oversight, policy, and funding decisions. GAO's activities are designed to ensure the executive branch's accountability to the Congress under the Constitution and the government's accountability to the American people.

General benefit: The advantage accruing from a given public improvement to the community as a whole.

General warranty deed: A deed in which the grantor warrants the title against defects arising at any time, either before or after the grantor acquired title to the property.

Geographic Information System (GIS): Computerized data management system designed to capture, store, retrieve, analyze, and display geographically referenced information. For Highway Performance Monitoring System (HPMS) purposes, GIS is defined as a highway network (spatial data that graphically represents the geometry of the highways, an electronic map) and its geographically referenced component attributes (HPMS section data, bridge data, and other data including socioeconomic data) that are integrated through GIS technology to perform analyses. From this, GIS can display attributes and analyze results electronically in map form.

Geometric design: The design of the visible dimensions and elements of a highway or other public improvement.

Geometric layout: A preliminary plan showing all general geometric features to be included in the proposed project without indicating detailed design information (such as a schematic).

Goals: Generalized statements that broadly relate to the physical environment or to values.

Going concern value: The value of an operating business.

Good will value: A component of going concern value that represents the value of intangible assets (for example, franchise reputations, customer patronage, location, products, and other similar factors).

Government Sponsored Enterprise (GSE): A shareholder-owned and operated financial institution, chartered by the federal government, that facilitates the flow of investment funds to specific economic sectors, thereby providing access to national capital markets. The activities of these private entities are not included in federal budget totals, but because of their special relationship to the government, GSEs provide detailed statements as supplementary information for budget presentation. Examples of GSEs include the Federal National Mortgage Association (Fannie Mae), the Student Loan Marketing Association (Sallie Mae), and the Federal Home Loan Mortgage Corporation (Freddie Mac).

Government survey: The original rectangular system of subdividing public lands used by the federal government, the survey consists of a systematic numbering of square townships that are referenced to a principal meridian and accompanying baseline. Each township is approximately six miles square, and contains 36 sections, each section approximately 1 mile square and containing 640 acres.

Governmental purpose bond: A term in the Internal Revenue code for a tax-exempt bond, which is secured by governmental revenues, or whose proceeds are used for a general governmental purpose (as opposed to a private activity bond).

Grade: The degree of the slope of the land; the slope of a surface, such as a lot or road, with a vertical rise or fall expressed as a percentage of the horizontal distance (for example, a 10% grade means a vertical rise of 10 feet per 100 feet of horizontal distance).

Grade line: The slope in the longitudinal direction of a project, usually expressed as a percentage or a relationship between vertical rise and horizontal distance.

Gradient: The rate of rise or fall; the degree of inclination, or grade.

Graduated lease: A lease that provides for certain rental adjustments at one or more points during the lease term.

Grant: A transfer of property or an interest in property.

Grants: A federal financial assistance award, making payment in cash or in kind for a specified purpose. The federal government is not expected to have substantial involvement with the state or local government or other recipient while the contemplated activity is being performed. The term “grants-in-aid” is commonly restricted to grants to states and local governments.

Grant Anticipation Notes (GANs): Short-term debt that is secured by grant money expected to be received after debt is issued. Financial institutions may buy anticipation notes on behalf of project sponsors in advance of receiving other financial assistance, to enable a faster project start. Helps project sponsors advance projects, especially when unable to access capital markets.

Grant deed: A document that transfers title; a legal document recording a transaction in which real property is transferred from one person to another.

Grantee: One to whom property is conveyed, for example, the buyer.

Grantor: One who conveys property, the seller.

Gross income multiplier: The ratio between a sale price and the property's potential gross income ($PGIM = SP/PGI$), or the ratio between a sale price and the property's effective gross income ($EGIM = SP/EGI$).

Gross lease: A lease of property where the lessor pays all property charges regularly incurred through ownership, such as utility bills.

Gross rent multiplier: The ratio between a sale price and the property's gross rent ($GRM = SP/GR$).

Ground rent: The rent paid to use and occupy land; that portion of the total rent paid allocated to the land; Ground rent capitalization is the method used to opine land value by dividing the ground rent by a land capitalization rate ($VL = IL/RL$).

Guarantee: A contract(s) in which a financial institution agrees to take responsibility for all or a portion of a project sponsor's financial obligations for a project under specified conditions.

Guarantee title: A title, the validity of which is insured by an abstract, title, or indemnity company.

Guardian: A person who is entitled or legally appointed to the care and management of the person or property of another.

Gutter: Any prepared open watercourse, whether paved or not, constructed inside the curb or shoulder line of a roadway.

H

Habendum: The "to have and to hold" clause that usually follows the granting part of a deed, defining the extent of the estate granted.

Hazardous substance: Any material that poses a threat to human health and/or the environment. Typical hazardous substances are toxic, corrosive, ignitable, explosive, or chemically reactive.

Hazardous waste: Any by-product that can pose a substantial or potential hazard to human health or the environment when improperly managed, and possesses at least one of four characteristics (ignitability, corrosivity, reactivity, or toxicity), or appears on special Environmental Protection Agency lists.

Hectare: A unit of land measurement equaling 10,000 square meters, or 147 acres.

Heir: One who holds the right to receive a property, position, or title of somebody else when that person dies, a beneficiary.

Heirs and assigns: Terminology used in a deed, which states the interest the grantee is receiving from an estate.

Hereditaments: The largest classification of property, including lands, tenements, and incorporeal property; anything capable of being inherited.

Highest and best use: The reasonably probable and legal use of vacant land or an improved property, which is physically possible, appropriately supported, and financially feasible, and that results in the highest value; the legal use (or development/redevelopment) of a property that makes it most valuable to a buyer or the market.

Highway: Any road, street, freeway/expressway, or parkway that includes rights-of-way, bridges, railroad and/or highway crossings, tunnels, drainage structures, signs, guardrail, and protective structures. The highway further includes that portion of any interstate or international bridge or tunnel and the approaches thereto (see 23 U.S.C. 101a).

Highway capacity: A measure of the ability of a road to accommodate traffic.

Highway easement: The right to use the property of another for the construction, operation, and maintenance of a highway.

Highway-rail grade crossing (Rail): A location where one or more railroad tracks are crossed by a public highway, road, street, or a private roadway at grade, including sidewalks and pathways at or associated with the crossing.

Historical age: The number of years that have elapsed since the completed construction of an improvement.

Historic preservation: The protection and treatment of the nation's significant historic buildings, landmarks, landscapes, battlefields, tribal communities, and archeological sites, prominent federally-owned buildings, and State and privately-owned properties (see National Park Service, Historic Preservation Services).

Historic site: A structure, monument, park, cemetery, or other site having public interest and local, state, regional, or national significance.

Historical cost: The cost of a structure at the time of its construction.

Hold harmless agreement: A legal agreement in which the liability of one party is assumed by another party.

Holdover tenant: A tenant who remains in possession of leased property after the expiration of a lease.

Horizontal curve: A curve (for example, simple, reverse, compound, spiral) joining two tangents.

Hundred percent location: The prime location in the central business district.

Hypothetical condition: That which is contrary to what exists but is supposed for the purpose of analysis.

I

Implied contract: A contract created by the actions of the principals, rather than by oral or written agreement.

Improved land: Land that has been developed for some use by the construction of a structure; land that has been prepared for development (for example, grading, drainage, and utility installation).

Improvement: A building or other structure permanently attached to the land.

In gross: A personal right, rather than a right attached to real estate.

In rem: Describes something such as a law or right made about or directed at property rather than a person; pertaining to property as contained in a legal document.

Incidental expenses (settlement expenses): A reimbursement under the Uniform Act for some settlement expenses that a residential property owner may receive after he or she buys a dwelling to replace the one that the agency has acquired (see 49 CFR 24.401 (e)(1-9)).

Income capitalization approach: One of the three approaches to value; a set of procedures by which income is converted into value through the application of a rate.

Income rate: A rate that reflects the relationship of one year's income to value.

Incorporeal rights: Intangible rights, such as legal actions, rather than property rights.

Increased mortgage interest costs: A payment that a residential property owner may be eligible to receive under the Uniform Act to offset the increased cost of obtaining a mortgage on a replacement dwelling to replace the agency acquired dwelling (see 49 CFR 24.401(d)).

Incurable depreciation: Loss in value resulting from those elements of physical deterioration, functional obsolescence, and external obsolescence that either cannot be corrected or would not produce an increment in value sufficient to warrant the cost of correction.

Indenture: A deed in which the grantor and grantee enter into reciprocal and corresponding grants or obligations; a contract committing an apprentice or servant to serve a master or employer for a specific period of time.

Indian lands: Indian reservation, Indian trust land, or restricted Indian land that is not subject to fee title alienation without the approval of the federal government, or Indian and Alaska Native villages, group, or communities in which Indians and Alaskan Natives reside, whom the Secretary of the Interior has determined are eligible for services generally available to Indians under federal laws specifically applicable to Indians.

Indian tribe: Any Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges to exist as an Indian tribe pursuant to the Federally Recognized Indian Tribe List Act of 1994, 25 U.S.C. 479a.

Infrastructure: A term connoting the physical underpinnings of society at large, including, but not limited to, roads, bridges, transit, waste systems, public housing, sidewalks, utility installations, parks, public buildings, and communications networks. In transit systems, all the fixed-components of the transit system, such as rights-of-way, tracks, signal equipment, stations, park-and-ride lots, bus stops, and maintenance facilities. In transportation planning, all the relevant elements of the environment in which a transportation system operates.

Injunction: A writ issued by a court of equity whereby one is required to do or to refrain from doing a specified act.

Inland and coastal channels: Includes the Atlantic Coast Waterways, the Atlantic Intracoastal Waterway, the New York State Barge Canal System, the Gulf Coast Waterways, the Gulf Intracoastal Waterway, the Mississippi River System (including the Illinois Waterway), the Pacific Coast Waterways, the Great Lakes, and all other channels (waterways) of the United States, exclusive of Alaska, that are usable for commercial navigation.

Installment loan: An obligation to repay monies borrowed at fixed-intervals over time.

Institute of Real Estate Management (IREM): An affiliate of the National Association of Realtors; an association of property and asset managers.

Institutional investor: A financial institution such as a mutual fund, insurance company, or pension fund, that purchases securities in large quantities.

Instrument: Any legal document (such as a deed, lease, mortgage, will); somebody or something used as a means of achieving a desired result or accomplishing a particular purpose; a device that measures or controls something (such as a survey total station).

Insurance: Type of guarantee in which an agency pledges the use of accumulated premiums to offset the cost of default on the part of borrowers. "Loan insurance" is considered the equivalent of a "loan guarantee."

Intangible asset (Intangible property): A nonphysical asset, including but not limited to franchises, trademarks, patents, copyrights, goodwill, equities, securities, and contracts, as distinguished from physical assets (such as facilities and equipment).

Integrated asset management plan: A structured process that combines all the individual real estate parcels into coordinated real estate assets; a plan that includes all an organization's real estate, and the processes and functions that contribute to those assets.

Integrated Transportation and Land-Use Package (ITLUP): Decisions about transport systems, the form of urban development and how land is used all impact each other. Integrated transport planning – planning that takes account of and connects all these considerations – helps ensure that development of the transportation network and land use is coordinated. In this way, it ensures the most efficient use of public funds and avoids creating unintended impacts.

The Institute of Transportation Engineers (ITE): One of the largest and fastest-growing multimodal professional transportation organizations in the world, ITE members are traffic engineers, transportation planners and other professionals who are responsible for meeting society's needs for safe and efficient surface transportation through planning, designing, implementing, operating and maintaining surface transportation systems worldwide.

Intelligent Transportation Systems (ITS): The application of advanced electronics and communication technologies to enhance the capacity and efficiency of surface transportation systems, including traveler information, public transportation, and commercial vehicle operations.

Interest: Sum paid or calculated for the use of capital. Financing interest is the charge assessed as a cost of extending credit, as distinguished from additional interest, which is the charge assessed on delinquent debts in order to compensate the federal government for the time value of money owed and not paid when due.

Interest method: Method used to amortize the premium or discount of an investment in bonds, or to amortize the subsidy cost allowance of direct loans. Under this method, the amortization amount of the subsidy cost allowance equals the effective interest minus the nominal interest of the direct loans. The effective interest equals the present value of the direct loans times the effective interest rate (the discount rate). The nominal interest equals the nominal amount (face amount) of the direct loans times the stated interest rate (the rate stated in the loan agreements).

Interest rate: The rate of return on debt capital.

Interest subsidy: A subsidy provided by financial institutions (such as multilateral lenders, state infrastructure banks, or export credit agencies) to lower overall financing costs for project sponsors. With this tool, project sponsors repay loans at less than current market rates. Market rates may be determined by the cost of borrowing through conventional issues of comparable duration.

Interim use: The temporary use to which a property is put until it reaches its highest and best use.

Intermodal: The ability to connect, and the connections between, modes of transportation (such as highways and light-rail).

Internal rate of return: The rate that discounts all the returns to the amount of the original investment, or the rate that discounts all the returns to a net present value of zero.

International Right of Way Association (IRWA): An international not-for-profit association whose members are engaged in all aspects of the acquisition of rights of way for public and quasi-public agencies.

Interrogatories: A series of written questions about a court case submitted by one party to the other party.

Interstate highway: A limited access, divided highway of at least four lanes designated by the Federal Highway Administration as part of the Interstate System.

Interstate Highway System (IHS): The system of highways that connects the principal metropolitan areas, cities, and industrial centers of the United States. Also connects the U.S. to internationally significant routes in Canada and Mexico.

Intestate: The description of a person who dies without making a valid will, or the reference made to this condition.

Intrinsic value: A concept in which value is claimed to be inherent in the object.

Investment analysis: A study that reflects the relationship between the acquisition price and the anticipated future benefits of a real estate investment.

Inverse condemnation: The legal process by which a property owner may claim and receive compensation for the taking of, or damages to property as a result of a public improvement.

Investment grade: Describes the top four rating categories of relatively secure bonds suitable for a conservative investor. Standard & Poor's rating service looks upon all bonds between the AAA and BBB ratings as investment grade. Generally speaking, any bonds rated below BBB are considered to have speculative features and are deemed sub-investment grade or junk bonds.

Investment value: The value of an investment to a particular investor, based on the investor's specific requirements.

Involuntary conversion: The conversion of real estate into personal property (money) without the voluntary act of the property owner.

Involuntary lien: A lien imposed against property without the consent of an owner (for example, taxes, special assessments, federal income tax).

J

Joint and several liabilities: Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) this legal concept relates to the liability for Superfund site cleanup and other costs on the part of more than one potentially responsible party. If there were several owners or users of a site that became contaminated over the years, they could all be considered potentially liable for cleaning up the site.

Joint tenancy: A tenancy in which two or more parties hold equal and simultaneously-created interests in the same property, and in which title to the entire property is to remain to the survivors upon the death of one of them, as a spouse, and so on to the last survivor.

Judgment: A formal decision or determination on a matter or case by a court; in a condemnation case, a decision as to the damages suffered by the condemnee.

Judgment lien: A lien acquired against the property of a debtor by a creditor upon obtaining a favorable judgment.

Junior debt: Debt having a subordinate or secondary claim on an underlying security or source of payment for debt service, relative to another issue with a higher priority claim (See Subordinate Claim).

Jurisdictional exception: An assignment condition that voids the force of a part or parts of USPAP, when compliance with part or parts of USPAP is contrary to law or public policy applicable to the assignment.

Just compensation: The compensation to a property owner an agency must make in order to acquire property for a federally funded or federally assisted project, which includes the value of the real estate acquired and any damages caused to the remainder of the property by the acquisition and/or construction. In condemnation, the amount of loss for which a property owner is compensated when his or her property is taken, and which places a property owner in the same position monetarily as before the property is taken. It is usually held to be Fair Market value, but the courts have refused to rule that it is always equivalent to market value (the appraiser estimates Market Value). Any amount authorized above the estimated market value received by the owner is usually considered as Full Compensation. Generally, it is considered that the courts render Full Compensation.

K

Karst: An area of irregular limestone where erosion has produced fissures, sinkholes, underground streams and caverns.

Key money: Payment made by an incoming tenant to the landlord; a type of security deposit.

Kickback: Payment of a fee from one party back to another party in exchange for completing the transaction (for example, payment from an appraiser back to a client in exchange for being awarded an assignment). The payment of undisclosed fees or things of value in connection with an appraisal assignment is an ethical violation (see Bribe).

L

Laches: Negligence in the observance of duty or opportunity; specifically, undue delay in asserting a legal right or privilege or neglect to do something at a proper time, especially as when such delay will bar a party from bringing a legal proceeding, such as an inexcusable delay in forwarding a claim.

Land: In an economic sense, one of the agents or factors of production. In a legal sense, the solid part of the surface of the earth, as distinguished from water.

Land capitalization rate: A rate that expresses the relationship between the net operating income to the land and the land value ($RL = IL/VL$).

Land classification: The classification of specific land types according to their characteristics or their capabilities for use; the classification of soils into groups that have common features of position in the landscape, texture, drainage, slope and erosion, and including factors of soil type and topography.

Land contract: An installment contract for the sale of property. The seller (vendor) retains title until paid in full by the buyer (vendee).

Land improvements: Physical changes in or construction on land to increase its utility and value.

Land residual technique: A method to opine land value where the land is valued independent of the building. The annual net income to the building is deducted from the estimated annual net income to the property, and the residual amount is income attributable to the land, which is capitalized with a land capitalization rate into a land value.

Land surveyor: A person whose occupation is to establish property boundary lines and appurtenant delineations to land.

Land tenements and hereditaments: Currently, the most technical and all inclusive description of real estate.

Land use: Refers to the manner in which portions of land or the structures on them are used (such as commercial, residential, retail, industrial, and so forth).

Land use map: A community map that shows the nature and character of land uses and their densities.

Land use plan: A plan that establishes strategies for the use of land to meet identified community needs.

Land use regulation: Broadly, any legal restriction (for example, zoning ordinance, restrictive covenant) that controls the uses to which real estate can be put.

Landlocked parcel: A parcel of land surrounded entirely by privately owned land, without access to any type of public or private access, often associated with the partial taking of land for highway purposes.

Larger parcel: In condemnation, the portion of a property that has unity of ownership, contiguity, and unity of use, the conditions that establish the larger parcel for valuation purposes. In many jurisdictions, contiguity is sometimes subordinated to unity of ownership and unity of use.

Late charges: Amounts accrued and assessed on a delinquent debt. The term includes administrative costs, penalties, and additional interest.

Lawyer: A person who is legally permitted to transact business on another's behalf; a person who advises and represents clients as to legal rights and obligations.

Lease: A contract where the owner transfers the right of possession and use of the real estate to another for a specified time period, and on payment of a consideration, usually rent; an agreement between a landlord, property owner or property manager and a tenant that covers issues such as rental amount, length of time the lease is in effect, property taxes, garbage pickup fees, utility costs, property maintenance and other expenses.

Leased fee interest: The right to receive consideration, usually rent, and the right to recapture the real estate at the end of the lease term; the present (discounted) value of the contract (lease) rent plus the present (discounted) value of the reversion.

Leasehold improvement: An improvement and/or addition to leased property made by the lessee.

Leasehold interest: The rights to possess, use, and quietly enjoy the real estate for the lease term; the present (discounted) value of the difference between market rent and contract rent.

Legal access: A right that an owner of property that abuts a road has to use the road for ingress and egress.

Legal description: Legally acceptable identification of real estate by the government rectangular survey method, metes and bounds, or recorded plat (lot and block number); a method, acceptable in court, that geographically locates property.

Lessee: The party to whom a lease is given in return for a consideration, usually rent.

Lessor: The party who gives a lease in return for a consideration, usually rent.

Letter of credit: A form of loan from a financial institution to be used only in the instance of a shortfall in net revenue for debt service (that is, a contingent loan). A letter of credit is security provided directly to the lender/bondholders (via a bond trustee), rather than to the borrower/project sponsor.

Letter of Intent: A letter of intent expresses an interest in performing a service or taking part in an activity, but does not legally obligate either party.

Letters patent: An instrument (document) from a government granting property to an individual.

Leverage: A financial mechanism used to increase available funds usually by issuing debt (typically bonds) or by guaranteeing or otherwise assuming liability for others' debt in an amount greater than cash balances.

Leveraging Ratio: Measures the extent to which a given investment attracts additional capital; the leveraging ratio of federal funds is equal to the total project costs divided by the budgetary cost of providing federal credit assistance.

Liability: Amount owed (that is, payable) by an individual or entity, such as for terms received, services rendered, expenses incurred, assets acquired, construction performed, and amounts received but not yet earned.

License: A personal privilege to do some act on the land or another; formal permission from a governmental or other constituted authority to do something, as to carry on some activity, business or profession.

Lien: A hold or claim that one party has on the property of another (for example, security for a debt or a charge, judgment, mortgage, tax, and so forth).

Life estate: An estate in property for the duration of a specific person's life. Upon that person's death, the estate reverts to the grantor.

Limitation on obligations: Any action or inaction by an officer or employee of the United States that limits the amount of federal assistance that may be obligated during a specified time period. A limitation on obligations does not affect the scheduled apportionment or allocation of funds, it just controls the rate at which these funds may be used.

Limited appraisal: The act or process of developing an opinion of value, or an opinion of value developed invoking the Departure Rule.

Line of credit: A form of loan to be used only in the instance of a shortfall in net revenue for debt service or other financial commitments (i.e., a contingent loan). A line of credit, while similar to a letter of credit, is security available directly to the borrower/project sponsor with flexibility in use of the funds.

Link: Any part of a transportation system, especially a connection between major routes; a land measurement used in surveying, equal to 20.12 cm/7.92 in. and one hundredth of a chain.

Liquidation: Process of converting collateral to cash.

Liquidity: Refers to an investor's ability to sell an investment as a means of payment or easily convert it to cash without risk of loss of nominal value.

Lis pendens: A notice publically recorded which indicates that a legal action is pending affecting real estate in the jurisdiction where the notice is recorded.

Litigation: The legal action or process taken for full or partial debt recovery.

Loan: A legally binding document that obligates a specific value of funds available for disbursement. The amount of funds disbursed is to be repaid (with or without interest and late fees) in accordance with the terms of a promissory note and/or repayment schedule.

Loan constant: A capitalization rate for debt. It is the ratio between the annual debt service and the mortgage amount ($RM = ADS/VM$).

Loan guarantee: Contingent liability created when the federal government assures a private lender, who has made a commitment to disburse funds to a borrower that the lender will be repaid to the extent of a guarantee in the event of default by the debtor.

Loan guarantee commitment: Binding agreement by a federal agency to make a loan guarantee when specified conditions are fulfilled by the borrower, the lender, or any other party to the guarantee agreement (see OMB Circular No. A-11).

Loan guarantee subsidy cost: Estimated long-term cost to the federal government of loan guarantees calculated on a present value basis, excluding administrative costs. The cost is the present value of estimated net cash outflows at the time the guaranteed loans are disbursed by the lender. The discount rate used for the calculation is the average interest rate (yield) on marketable Treasury securities of similar maturity to the loan guarantees, applicable to the time when the guaranteed loans are disbursed.

Loan Servicer: A public or private entity that is responsible for collecting, monitoring, and reporting loan payments. A loan servicer would also assist in originating the loan.

Loan-to-value ratio: Represents the proportion of the amount of a loan to the value being pledged to secure that loan. It is derived as follows: total financing costs (i.e., the market value of the collateral plus the financed portion of any closing costs, insurance premiums, or other transaction-related expenses less the borrower's cash down payment) divided by the market value of the collateral.

Loan value: A value that a lender will accept as the basis for a mortgage or trust deed.

Local public agency (LPA): An organization (such as municipality, county) charged with the responsibility for proper administration, planning, and development of a public project.

Local public agency coordinator: The person(s) appointed by State Departments of Transportation to act as a contact and coordinator for activities carried out by local public agencies in their State. The coordinator is a focal point for information on applicable laws, rules, regulations, policies and procedures in which a local public agency must follow when using federal funds in any part of a project.

Local Street: A street intended solely for access to adjacent properties.

Location: Location is considered one of the basic elements contributing to the value of a property, and accessibility is the principal measure of the value of location; the fixed-position of the highway on the ground, including curves and tangents; a position with respect to human activities.

Logistics: All activities involved in the management of product movement; delivering the right product from the right origin to the right destination, with the right quality and quantity, at the right schedule and price.

Long Range Transportation Plan (LRTP): A document resulting from regional or statewide collaboration and consensus on a region or state's transportation system, and serving as the defining vision for the region's or state's transportation systems and services. In metropolitan areas, the plan indicates all of the transportation improvements scheduled for funding over the next 20 years, and includes projections for land use and population.

M

Majority: The age at which a person is no longer a minor and is legally entitled to contract and enjoy civil rights.

Mandatory spending: Outlays generally not controllable through the congressional appropriation process. Mandatory amounts are budget authority or outlays that cannot be increased or decreased in a given year without a change in substantive law. Entitlement programs (such as food stamps, Medicare, veterans' pensions) are chief examples of mandatory programs, whereby Congress controls spending indirectly, by defining eligibility and setting benefit payment rules, rather than directly through the appropriation process. With regard to the federal-aid highway program, mandatory spending refers to outlays resulting from obligations of contract authority programs not subject to annual obligation limitations, such as Minimum Allocation, Emergency Relief, and Demonstration Project spending.

Manufactured home: A livable home (sometimes called mobile home) manufactured in a plant as a unit(s) and delivered to the site using its own wheels.

Marginal land: Land that barely pays the expenses associated with it.

Market: The place where people interact to sell and buy; the area in which buyers and sellers of a commodity are in communication with one another; a geographic area or a section of the population, considered from the point of view of the amount of goods that can be sold to it.

Market analysis: A study of market conditions for a specific property type.

Market rent: The most probable rent that a property should bring in a competitive and open market.

Market value: The most probable price that a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming that neither is under duress or the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from the seller to buyer under the following certain conditions: 1) buyer and seller are typically motivated. both parties are well informed or well advised, and acting in what they consider their best interests. 2) a reasonable time is allowed for exposure in the open market. payment is made in terms of cash in United States dollars or in terms of financial arrangements comparable thereto. 3) the price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale. Persons performing appraisal services that may be subject to litigation are cautioned to seek exact definition of market value applicable to the jurisdiction where the services are being performed. (See Just Compensation).

Marketable title: Title that is subject to no reasonable doubt as to its validity or freedom from encumbrance, and that can be reasonably sold, purchased, or mortgage; Title of such quality that a purchaser under contract should be compelled to accept it.

Mass appraisal: The process of valuing a group of properties as of a given date, using standard methods, employing common data, and allowing for statistical testing.

Mass transportation: Another name for public transportation.

Mass transportation agency: An agency authorized to transport people by bus, rail, or other conveyance, either publicly or privately owned, and providing to the public general or special service (but not including school, charter or sightseeing service) on a regular basis.

Master lease: A lease controlling subsequent leases.

Master plan: A comprehensive long range plan to allow a governmental unit to grow in an orderly manner.

Measures of effectiveness: Measures or tests that reflect the degree of attainment of particular objectives.

Mechanic's lien: A lien allowed by statute to secure payment priority for the value of the work performed and materials furnished in the repair or construction of improvements.

Mediation: The intervention between conflicting parties to promote reconciliation, settlement, or compromise; to achieve a solution, settlement, or agreement by working with both sides in a dispute.

Memorandum of Understanding (MOU): A document providing a general description of the responsibilities that are to be assumed by two or more parties in their pursuit of some goal(s); an agreement between two parties in the form of a legal document. It is not fully binding in the way that a contract is, but it is stronger and more formal than a traditional “gentleman’s agreement,” sometimes used as a synonym for a letter of intent, particularly in private law.

Merger of title: The absorption of a lesser estate into a greater one.

Metes and bounds: The limits and boundary of a tract of land; Generally, a description that has a point of beginning and uses bearings (the angles east or west of due north or due south) and distances (usually in feet, chains, or meters) to describe the perimeter of a tract of land.

Mile: Also called statute mile. a unit of distance on land in English-speaking countries equal to 5280 feet, or 1760 yards, or 1.609 kilometers. All mileage computations are based on statute miles.

Minimum qualifications of appraisers: The criteria that an agency uses to determine which appraisers or review appraisers are qualified (based on experience, State licenses or State certifications) to perform specific appraisal and review assignments (see 49 CFR 24.103(d)).

Minimum standards: A set of requirements that specifies what information must be included in an appraisal report, and the formats that are acceptable to use for preparing the appraisal report (see 49 CFR 24.103(a)).

Minor arterials (highway): Roads linking cities and larger towns in rural areas, and in urban areas, roads that link but do not penetrate neighborhoods within a community.

Mitigation: Measures taken to reduce adverse impacts on the environment. Mitigation involves long-term actions taken to protect lives and reduce the impact of disasters on the built environment (such as roads, bridges, buildings). May refer to environmental mitigation in public administration.

Mitigation of damages: A legal obligation on an injured party to attempt to minimize damages to property after an event or action.

Mobile home: Manufactured homes and recreational vehicles used as residences.

Modification: Federal government action, including legislation or administrative action, that alters the estimated subsidy cost and the present value of outstanding direct loans (or direct loan obligations), or the liability of loan guarantees (or loan guarantee commitments). Direct modifications change the subsidy cost by altering the terms of existing contracts or by selling loan assets. Indirect modifications are actions that change the subsidy cost by legislation that alters the way in which an outstanding portfolio of direct loans or loan guarantees is administered. The term modification does not include subsidy cost re-estimates, the routine administrative workouts of troubled loans, and actions that are permitted within the existing contract terms.

Modular home: A home built in a factory in sections (or units), delivered to the location on trailers, and erected on site (not to be confused with a Manufactured Home).

Monument: A visible permanent object placed by a surveyor to establish the lines and boundaries of land (survey); a structure, such as a building or sculpture, erected as a memorial.

Mortgage: A pledge of real property as security for the payment of a debt; a written document by which property is given as security for a debt with the right of redemption.

Mortgage capitalization rate: A capitalization rate for debt; the ratio between the annual debt service and the mortgage amount ($RM = ADS/VM$); also known as mortgage constant.

Mortgage deed: A deed that has the effect of a mortgage and imposes a lien on the grantee's estate.

Mortgage, purchase money: A mortgage given by a purchaser to the seller in lieu of cash and as a part of the price paid for property.

Mortgage-equity analysis: A yield capitalization method that develops a capitalization rate for combinations of equity yields and mortgage terms.

Mortgagee: The party who lends money and receives the mortgage.

Mortgagor: The party who borrows money and gives the mortgage.

N

National Association of Independent Fee Appraisers (NAIFA): A membership association of professional real estate appraisers.

National Environmental Policy Act of 1969 (NEPA): Established as a national environmental policy requiring that any project using federal funding or requiring federal approval, including transportation projects, examine the effects of proposed and alternative choices on the environment before a federal decision is made. NEPA applies to all federal agencies and most of the activities they manage, regulate, or fund that affect the environment. It requires all agencies to disclose and consider the environmental implications of their proposed actions. In most instances, federal aid for local public agency projects is given out by the state (usually the state DOT). Information on NEPA and Federal Aid project requirements can be found in the regulations at 23 CFR 771.

National Highway Institute (NHI): The training institute, or the educational arm of the Federal Highway Administration.

National Highway System (NHS): This system of highways designated and approved in accordance with the provisions of 23 U.S.C. 103(b) (see 23CFR500).

Necessity: When used in relation to eminent domain, refers to the reasonable necessity (being indispensable, unavoidable, or absolutely requisite) of the acquisition of real property for public purposes.

Negotiation: The primary method used to acquire property; the process by which two or more people resolve differences to reach a mutually acceptable agreement. In regards to federal acquisition projects, a process that involves listening to the property owner, explaining items such as details of construction, the agency's offer of just compensation (and what just compensation entails), and determining the best way to reach an agreement for the sale of property (also known as a negotiated settlement, and/or administrative settlement).

Negotiator: A person who arranges or settles transactions by discussion and mutual agreement.

Neighborhood: A group of complementary land uses; a district or area with distinctive characteristics.

Net ground lease: A lease of unimproved land that provides that the lessee pay all property charges regularly incurred.

Net income multiplier: The ratio between a sale price and the property's net operating income ($NIM = SP/NOI$).

Net lease: A lease of property where the lessee pays all property charges regularly incurred.

Net operating income: The estimated effective gross income less expenses (fixed, variable, and replacement allowances).

Net present value: The difference between the present value of the positive cash flows and the present value of the negative cash flows.

Nominal (or face or par) value or amount: Amount of a bond, note, mortgage, or other security as stated in the instrument itself, exclusive of interest or dividend accumulations. The nominal amount may or may not coincide with the price at which the instrument was first sold, its present market value, or its redemption price.

Noncompliance: Failure to comply with a standard or regulation issued under 46 U.S.C. Chapter 43, or with a section of the statutes.

Nonconforming use: A use that was lawfully established and maintained but which, because of the application of a zoning ordinance, no longer conforms to the use regulations of the zone in which it is located.

Noncurrent receivable: A receivable on which payment will not be due within 12 months of the reporting period.

Non-federal match: The commitment of state or other non-federal funds required to receive federal contributions. For example, the U.S. SIB program requires a non-federal match for capitalization funds, which is 25% of the amount of federal

funds. The match may be lower in states that have a sliding scale rate based on the percentage of federal land in the state.

Notary public: A legal officer with specific judicial authority to attest to legal documents, usually with an official seal and signature.

Notice to plead: A formal notice given to the defendant that an answer to a complaint must be given within a prescribed time.

Notice to quit: A notice given by a landlord to a tenant to vacate property.

Null and void: Not legally binding.

O

Oath: A solemn affirmation to tell the truth; any type of attestation by which an individual signifies that he or she is bound in conscience to perform a particular act truthfully and faithfully.

Obligation: The federal government's legal commitment (promise) to pay or reimburse the States or other entities for the federal share of a project's eligible costs.

Obligation authority: The amount of budgetary resources (including new budget authority, balances of unobligated budget authority carried over from prior years, and obligation limitations) available for obligation in a given fiscal year. With regard to the federal-aid highway program, obligation authority often refers to the amount of federal-aid obligation limitation, established annually by Congress in appropriation acts, that is allocated to the states and controls the amount of apportioned contract authority that can be obligated by the states in a given fiscal year.

Obligation limitation: A restriction, or "ceiling," on the amount of federal assistance that may be promised (obligated) during a specified time period. This is a statutory budgetary control that does not affect the apportionment or allocation of funds. Rather, it controls the rate at which these funds may be used.

Obsolescence: A loss in value due to defects in design, materials, workmanship, or external factors as measured by present standards (may be functional or external).

Offer: An explicit proposal to contract which, if accepted, completes the contract and binds both the party that made the offer and the party accepting the offer to the terms of the contract.

Offer to lease: An expression of interest to lease, which includes a delineation of the price and terms.

Operating expenses: The sum of all fixed- and variable operating expenses and the replacement allowance cited in the appraiser's operating expense statement.

Operating statement: A written account of the income, expense, and profit or loss of an investment during a specific period.

Optimization: The process of obtaining the best use or return on a real estate asset after considering the asset's value to both the present and future core business needs.

Option to lease: A contract given, for a consideration, at an agreed price and terms, for a stipulated period of time.

Order of immediate possession: An order of the court allowing the condemnor possession and use of the property being condemned before a judgment is rendered, on deposit with the Court by the condemnor of reasonably adequate security for payment of just compensation.

Original discount rate: Discount rate originally used to calculate the present value of direct loans, or loan guarantee liabilities, when the direct or guaranteed loans were disbursed.

Outlays: An outlay represents an official payment of funds.

Overall capitalization rate: A rate that expresses the relationship between the net operating income and the total property price or value ($RO = IO/VO$).

Overall yield rate: The rate of return on the total investment (debt and equity); the rate that discounts all the returns to the amount of the total original investment.

Overhead easement: The right to use the space at a designated distance above the surface of the land as for power lines, aviation, and air rights.

Overimprovement: An improvement that does not reflect the highest and best use for the site on which it is placed because of its excessive size or cost, and the consequent inability to develop the maximum land value.

P

P.L. 93-638 - Indian Self-Determination and Education Assistance Act, as amended: The response by Congress, in recognition of the unique obligation of the United States, to the strong expression of the Indian people for self-determination, assuring maximum Indian participation in the direction of education as well as other federal services for Indian communities, so as to render such programs and services more responsive to the needs and desires of Indian communities.

Parcel: A piece of land of any size under one ownership.

Parcel plat: A map of a single parcel of property or a portion of the property, showing the boundaries, areas, remainder, improvements, access, ownership, and other pertinent information; a map that illustrates clearly and accurately the relative location of project features to the affected property, and which provides sufficient information to meet the needs of project participants.

Parent property: In condemnation, the portion of a property that has unity of ownership, contiguity, and unity of use - the conditions that establish the larger parcel for valuation purposes. In many jurisdictions, contiguity is sometimes subordinated to unity of ownership and unity of use.

Park: A place or area set aside for recreation, or preservation of a cultural or natural resource.

Parkway: A highway that has full or partial access control, is usually located within a park or a ribbon of park-like developments, and prohibits commercial vehicles. Buses are not considered commercial vehicles in this case.

Parity debt: Debt obligations issued (or to be issued) with an equal claim to other debt obligations on the source of payment for debt service; bonds and other debt securities that have an equal and ratable claim on the same underlying asset used as collateral.

Partial interest: Divided or undivided rights in real estate that represents less than the whole.

Partial release: A release of a portion of property covered by a mortgage.

Partial taking: The acquisition of a part of a real estate parcel or a real property interest for public or quasi-public use under eminent domain; acquisition by Condemnation of only part of the property or some property rights.

Participating agency: A Participating agency is an agency that might have an interest in a project. The selection and responsibilities for participating agencies are different from those defined for cooperating agencies. Participating agencies, for instance, are afforded an opportunity for involvement in the development of the project purpose, the need and range of alternatives considered, as well as the coordination plan and schedule for a project.

Pay-as-you-go financing: Describes government financing of capital outlays from current revenues or grants rather than by borrowing.

Patent: A grant of some privilege, property, or authority made by the government or sovereign of a country to one or more individuals; a document or title issued by a government or state for the conveyance of some portion of the public domain to an individual.

Pedestrian walkway (or walkway): A continuous way designated for pedestrians and separated from the through lanes for motor vehicles by a space or barrier (see 23CFR217).

Penalty: Punitive charge assessed for delinquent debts. The rate to be assessed is capped by law.

Percentage lease: A lease, which provides that part or all of the rent will be based on a percentage of the volume of business, usually associated with a guaranteed minimum rent.

Permanent easement: An easement conveyed in perpetuity; an easement that remains with the land through successive heirs or owners.

Personal property: Property that is movable; property that is not permanently attached to, or part of, the real estate; identifiable tangible objects that are considered by the general public as being “personal” (for example, furnishings, artwork, antiques, gems and jewelry, collectables, machinery and equipment); all tangible property that is not classified as real estate. Personalty refers to items that are determined to be personal property.

Physical deterioration: Loss in value due to age, wear and tear, and use.

Physical life: The total period that a building or its components will last (notated as A.D).

Pipeline easement: The right to use the property of another for the facilities, construction, operation, and maintenance of a pipeline.

Plaintiff: A person who brings a legal action against another (in condemnation cases it is the condemnor).

Planting easement: An easement for reshaping roadway areas and establishing, maintaining, and controlling plant growth.

Plat: An individual property map that shows property lines and other features (for example, buildings and topographic elements).

Plottage: The value increment resulting from the combining of two or more parcels into a larger site, which has greater utility.

Police power: The right of government to restrict property rights to protect public health, safety, and welfare.

Pollutant: Any substance introduced into the environment that adversely affects the usefulness of a resource or the health of humans, animals, or ecosystems.

Pollution: The presence of a substance in the environment that, because of its chemical composition or quantity, prevents the functioning of natural processes and produces undesirable environmental and health effects.

Portfolio: A collection of like assets; the responsibilities or role of the head of a government department.

Potential gross income: The total income to real estate at full occupancy.

Potentially responsible party: Any individual or company including owners, operators, transporters or generators, potentially responsible for, or contributing to a spill or other contamination at a Superfund site.

Power of Attorney (POA): A power of attorney (or letter of attorney in common law systems or mandate in civil law systems) is an authorization to act on someone else’s behalf in a legal or business matter.

Power of sale: A clause inserted in a will, deed of trust, or trust agreement authorizing the sale or transfer of land in accordance with the terms of the clause.

Prescription: The acquisition of property rights by an adverse user; the acquisition or extinction of rights by lapse of time.

Preferred alignment: As part of the planning process, an agency identifies a number of project possibilities, including no-build and several alternate alignments, and then determines which of the possibilities appears to be most feasible. This is usually the agency's "preferred alignment."

Prescription easement: The right to use the property of another, which is established by exercising this right over a period of time (also known as a "prescriptive right").

Pre-foreclosure sale: The opportunity for borrowers who cannot meet their obligation (repayment of a loan) to sell their property in order to avoid foreclosure (also known as a "Short Sale"). Borrowers who agree to sell their property using this method are generally relieved of their loan obligation.

Preliminary rating: A credit opinion from a rating agency based on a preliminary assessment assigned to a proposed bond issue.

Prepayment: Partial or full repurchase or other advance deposits of an outstanding loan principal and interest by the borrower/debtor. The repurchase may be made at a discount from the current outstanding principal balance.

Present Value (PV): The value of future cash flows discounted to the present at certain interest rate (such as the entity's cost of capital or funds), assuming compounded interest; the worth of a future stream of returns or costs in terms of money paid immediately (or at some designated date). A dollar available at some date in the future is worth less than a dollar available today because the latter could be invested and earn interest in the interim. In calculating the net present value, prevailing interest rates provide the basis for converting future amounts into their "money now" equivalents. Under credit reform, the subsidy cost of direct loans and loan guarantees are to be computed on a present value basis and included as budget outlays at the time the direct or guaranteed loans are disbursed.

Pre-tax cash flow: Cash flow remaining after annual debt service.

Pretrial conference: A conference preceding a trial, attended by the judge and counsels, where an effort is made to simplify and expedite disposition of the case by clarifying the issues and other technical matters.

Price: The amount asked, offered, or paid for a property.

Prime tenant: The major tenant, the designation of which may be based on financial strength.

Principal: Amount loaned to the borrower and owed to the lending institution which excludes interest, penalties, administrative costs, loan fees, and prepaid charges.

Problem identification: An element in the planning process that represents the gap between the desired vision, goals and objectives, and the current or projected performance of the system.

Program account: Budget account into which an appropriation to cover the subsidy cost of a direct loan or loan guarantee program is made, and from which such cost is disbursed to the financing account. Usually, a separate amount for administrative expenses is also appropriated to the program account.

Profile: The slope in the longitudinal direction of a project, usually expressed as a percentage or a relationship; a side view of an object or structure, or a representation of an object or structure seen from the side.

Project planning: A type of study that may include route study and selection, agreements with cooperating agencies, preliminary engineering, public hearings, and construction plan development.

Project revenues: All rates, rents, fees, assessments, charges, and other receipts derived by a project sponsor from a project.

Property: Anything, real or personal, that is owned.

Property line: The division between two parcels of land, or between a parcel of land and the right of way line.

Property management: Administration of property with the objective being to maintain, enhance, or maximize its productivity and value.

Property manager: A person who manages property for an organization.

Prorate: To allocate between seller and buyer their proportionate share of an obligation or interest paid (for example, a proration of real property taxes).

Proximity damage: Damage to a property arising as a consequence of the nearness or proximity of a project (such as a highway) to the property; the diminution in property value as a result of the proximity of a highway or other construction project to a property.

Public authority: A federal, state, county, town or township, Indian tribe, municipal or other local government or instrumentality thereof, with the authority to finance, build, operate, or maintain highway facilities, either as toll or toll-free highway facilities.

Public entity: Any state or local government; any department, agency, special purpose district, or other instrumentality of one or more state or local governments; the National Railroad Passenger Corporation (Amtrak) and any commuter authority.

Public hearing: A formal meeting where officials hear and consider the public's views and concerns about an action, project, or proposal

Public liability: A part of the law of tort (a wrong that involves a breach of a civil duty owed to someone else) that focuses on civil wrongs. An applicant (the injured party)

usually sues the respondent (the owner or occupier) under common law based on negligence and/or damages. Liability is for bodily injury or property damage, and includes liability for environmental restoration (see 49CFR387).

Public meeting or hearing: A public gathering for the express purpose of informing and soliciting input from interested individuals regarding transportation issues or federal projects.

Public road: Any road under the jurisdiction of, and maintained by, a public authority (federal, state, county, town or township, local government, or instrumentality thereof) and open to public travel.

Public use: A use benefiting the entire community

Public Utility Easement (PUE): Areas of land used by utility companies to construct and maintain power, telephone, cable TV and gas lines, overhead, underground, or both types of installations. PUE may be for one utility, or for several utilities. The property owner retains ownership of all the land, including that allocated for the utility easement. Easements may be written into the plat drawing at the time that a plat is created (for housing developments), or they may be separate agreements that are written by a utility and signed by the property owner.

Purchase money mortgage: A mortgage given by the purchaser to the seller in lieu of cash as a part of the price paid for property.

Purchase rate: Total actual and projected dollars purchased, including principal and interest, on a guaranteed loan as a percentage of the total dollars disbursed for a given cohort of loans.

Q

Quantity survey method: A cost estimating method in which the quantity and quality of all materials used and all categories of labor required is estimated and unit cost figures are applied to arrive at a total cost estimate for labor and materials.

Quasi: Having some resemblance to the original object, usually by possession of certain attributes.

Quiet enjoyment: A covenant in a Grant of Title that the tenant or grantee of an estate shall enjoy the possession of the premises in peace and without disturbance by defective title or hostile claimants.

Quiet title: A court action brought to establish ownership of real estate when ownership is in question.

Quitclaim deed: A deed conveying, without warranty, any title, interest, or claim the grantor may have in the property conveyed.

R

Ramp-up phase: The phase in a project's life cycle immediately following construction. It is during this phase, the early years of operation, that a project's revenue stream is established.

Rate covenant: A contractual agreement in the legal documentation of a bond issue requiring the issuer to charge rates or fees for the use of specified facilities or operations at least sufficient to achieve a stated minimum debt service coverage level.

Rating agency: An organization that assesses and issues opinions regarding the relative credit quality of bond issues. The three major municipal bond rating agencies are Fitch Investors Service, Moody's Investors Service, and Standard and Poor.

Real estate: An identified parcel or tract of land, including improvements, if any; the physical land and attachments (such as buildings).

Real estate asset manager: A person who directs the team that controls an organization's real estate assets; a person who directs all real estate activities (such as licenses, leasing-in, leasing-out, property sales, properties retained) under the control of the real estate group.

Real property: The interests, benefits, and rights inherent in the ownership of real estate (for example, the bundle of rights).

Real property: Tangible, nonmovable assets, such as land and buildings.

Realty: Refers to items that are determined to be real property.

Receivable(s): Amount owed to a lender by an individual, organization, or other entity to satisfy a debt or a claim. Examples of receivables generated by government activities include amounts due for taxes, loans, the sale of goods and services, fines, penalties, forfeitures, interest, and overpayments of salaries and benefits.

Reconstructed operating statement: A written account of the income, expense, and profit or loss of an investment during a specific period.

Record of decision: A public document that explains which cleanup alternatives will be used at National Priorities List sites where, under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), trust funds pay for the cleanup.

Recordation: The process of filing a copy of a deed or other document concerning real estate with the land records office for the county in which the land is located. Recording creates a public record of changes in ownership of all property.

Recourse: Rights of a holder in due course of a financial instrument (such as a loan) to force the endorser on the instrument to meet his or her legal obligations for making good the payment of the instrument if dishonored by the maker or acceptor.

Recovery: The dollars collected subsequent to a purchase, net of expenses, on a guaranteed loan.

Recovery rate: The total actual and projected collections net of expenses subsequent to a purchase as a percentage of the total projected dollars purchased for a given cohort of guaranteed loans.

Rectangular grid system: The original rectangular system of subdividing public lands used by the federal government. The survey consists of a systematic numbering of square townships referenced to a principal meridian and accompanying baseline; a system of land division into townships approximately six miles square, each township containing six sections, each section containing 640 acres.

Redeem: To buy back; to free from a lien by payment of the secured amount; to remove an obligation by payment; the act of buying back property after a mortgage foreclosure, tax foreclosure, or other execution of sale.

Reestablishment expenses: Under the Uniform Act, reimbursement of some of the expenses related to the relocation and reestablishment of a business, farm, or nonprofit organization when it is required to move as a result of a federally aided project (see at 49 CFR 24.304).

Reestimates: Estimates of the subsidy costs performed subsequent to their initial estimates made at the time of a loan's disbursement.

Regional Planning Organization (RPO): An organization that performs planning for multi-jurisdictional areas. MPOs, regional councils, economic development associations, rural transportation associations are examples of RPOs.

Regionally significant project: A project that is on a facility that serves regional transportation needs.

Regulatory (federal aid program): The regulations that tell how the federal aid highway program is administered, the primary regulations for right of way real property acquisition, relocation, appraisal, property management, junkyard control, outdoor advertising and property management (see 23 CFR 710, 750, 751 and 49 CFR 24).

Release: Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment of a hazardous or toxic chemical or extremely hazardous substance.

Release clause: A stipulation that upon payment of a specific amount of money to the holder of a trust deed or mortgage that the lien on a specific property will be removed from the blanket lien on the entire involved area.

Relinquishment: The release or quitclaim of an easement to the underlying fee property owner; the conveyance of a portion of a transportation facility from a state transportation agency to another government agency for transportation.

Relocation agent: A person who provides relocation advisory services and benefit determinations to people and businesses displaced by a public program or project under the Uniform Act.

Relocation assistance: Advisory and financial aid assistance to residential occupants, businesses, farms, and nonprofit organizations displaced by a public program under the Uniform Act.

Relocation planning: A process for federally aided projects and programs, which involves identifying and considering the potential impacts created by displacing residences, farms, businesses, and other organizations, and methods to minimize those impacts (see 49 CFR 24.205).

Remainder: The portion of a parcel that is retained by the owner after a partial taking.

Remaining economic life: The estimated period of time that an improvement will continue to contribute to the property's value.

Remediation: Cleanup or other methods used to remove or contain a toxic spill or hazardous materials. Abatement methods include evaluation, enclosure, encapsulation, repair, and/or removal of hazardous materials.

Remnant: A remainder property of little value or use.

Renewal option: The right of a lessee to extend the lease for an additional period of time under specific terms.

Rent: The consideration paid for the use of property.

Repayment agreement: A contract that establishes the terms and conditions governing the recovery of a debt of the lender and borrower when credit is initially extended or a debt is rescheduled. (See Reschedule.)

Replacement allowance: An expense that provides for a prorated portion of the cost to replace a building component (such as a roof, HVAC units, or remodeling) that will reach the end of its life prior to the building reaching the end of its remaining economic life.

Replacement cost: The cost to construct a structure of equivalent utility to the subject structure as of the effective date of the appraisal; the cost to replace structural components using current construction materials.

Report, appraisal: Any communication, written or oral, of an appraisal, appraisal review, or appraisal consulting service that is transmitted to the client upon completion of an assignment.

Reproduction cost: The cost to construct a structure that is an exact replica of the subject structure as of the effective date of the appraisal.

Reschedule: The procedure of establishing new terms and conditions to facilitate

repayment of a debt, also called restructuring, refinancing, and reamortizing. Rescheduling includes establishing new terms as a result of changes in authorizing legislation (for example, congressional action allowing farmers to have an additional 5 years to pay off their loans).

Research: Investigation or experimentation aimed at the discovery of new theories or laws, and the discovery and interpretation of facts or revision of accepted theories or laws in the light of new facts.

Research and Special Programs Administration (RSPA): The Administration was established formally on September 23, 1977. It is responsible for hazardous materials transportation and pipeline safety, transportation emergency preparedness, safety training, multimodal transportation research and development activities, and collection and dissemination of air carrier economic data. It includes the Office of Hazardous Materials Safety; the Office of Pipeline Safety; the Office of Research Technology, and Analysis; the Office of University Research and Education; the Office of Automated Tariffs; the Office of Research Policy and Technology Transfer; the Volpe National Transportation Systems Center; and the Transportation Safety Institute.

Reservation: A right retained by a grantor in conveying property.

Resolution ordering acquisition: A formal resolution adopted by the governing board of the condemning agency. It is a prerequisite to filing a condemnation action and is conclusive evidence of the necessity of the public improvement and the necessity of the specific property being acquired

Respondent: In the appeal of a case, the party who contends against the appeal; the party who prevailed in the lower court.

Response action: Generic term for actions taken in response to actual or potential health-threatening environmental events (for example, spills, sudden releases, and asbestos abatement and management problems); a CERCLA authorized action, involving either a short-term removal action or a long-term removal response. This may include, but is not limited to, removing hazardous materials from a site to an EPA approved hazardous waste facility for treatment, containment or treating the waste on-site, identifying and removing the sources of ground-water contamination, and halting further migration of contaminants.

Restricted area: Airspace designated under Federal Aviation Regulations (FAR), Part 73, within which the flight of aircraft, while not wholly prohibited, is subject to restriction. Most restricted areas are designated joint use and Intermediate Fix/Visual Flight Rules (IF/VFR) operations in the area may be authorized by the controlling Air Traffic Control (ATC) facility when it is not being utilized by the using agency. Restricted areas are depicted on en route charts. Where joint use is authorized, the name of the ATC controlling facility is also shown.

Restricted road: Public road with restricted public use.

Restriction: The restrictions and prohibitions placed on the property owner from doing certain things relating to the property.

Revaluation lease: A lease that provides for a periodic review of rent based on a reevaluation of the property.

Revenue lease: A lease type when the agency leases to another party for a consideration.

Reversion: The right of the lessor to receive the property back at the end of the lease term or at the end of the holding period; the lump sum benefit that the investor will receive at the end of the investment.

Revolving loan fund: Financing tool that recycles funds by providing loans, receiving loan repayments, and then providing further loans.

Right of access: The right of ingress to and egress from one's property to a public road (the right may be actual or implied). Access is a private right, as distinguishable from the public's rights.

Right of entry: The right to enter on the property of another for construction purposes prior to the completion of the acquisition process.

Right of immediate possession: The right to occupy property for public purposes, after preliminary steps for acquisition have been taken but before final settlement.

Right of survey entry: The right to enter on property temporarily to perform surveys and other investigations (such as soil boring) for a proposed public improvement.

Right of way: The right to pass across the lands of another; land or property, or an interest in land or property, for transportation purposes (for example, roads, public transport, utilities, and so forth).

Right of way agent: A person who acquires rights of way for public and quasi-public use.

Right of way estimate: An approximation of the project's property acquisition costs, which is prepared in advance of the appraisal reports.

Right of way map: A drawing of an improvement project that shows the project's relationship to adjacent properties, the parcels or portions of the parcels acquired for the project, their ownerships, and any other pertinent information.

Riparian: River bank; relating to the banks of a body of water.

Riparian rights: The rights of an owner of water fronting property to use the water.

Risk category: Subdivisions of a cohort of direct loans or loan guarantees into groups of loans that are relatively homogeneous in cost, given the facts known at the time of obligation or commitment. Risk categories will group all loans obligated or

committed for a program during the fiscal year that share characteristics predictive of defaults and other cost.

Road: An open way for the passage of vehicles, persons, or animals on land.

Roadbed: The graded portion of a road, and/or the area between the intersections of top and side slopes, on which the base course, surface course, shoulders, and median are being constructed.

Rural highway: Any highway, road, or street that is not an urban highway (such as roads outside city, municipal district, or urban boundaries).

S

Salary offset: The process of collecting a debt by deducting part or all of the debt from an employee's current pay at one or more officially established pay intervals without his or her consent.

Sales comparison approach: One of the three approaches to value; a set of procedures by which a value indication is obtained by comparing properties that have sold recently to the property being appraised (also called Market Approach).

Salvage value: The price of a structure or component that is removed from the premises; an amount that represents the value in place minus the costs to disconnect, move, and reconnect.

Sandwich lease: A lease in which an intermediate (or sandwich) leaseholder is the lessee of one party and the lessor of another.

Scale: An indication of the relationship between the distances on a map and the corresponding actual distances; to measure using a specified distance.

Scenic easement: An easement for conservation and the development of roadside views and natural features.

Schematic layout: Preliminary project drawings, which shows the general proposed project components.

Scope of work: The amount and type of information researched and the analysis applied in an assignment; an agreement between the agency and the appraiser, requiring input from both parties, defining what is expected what is subject to modification during the appraisal process.

Section: A land measurement equaling one square mile or 640 acres.

Secured Debt: Debt for which collateral has been pledged.

Security deposit: A monetary deposit made by a tenant to a landlord to secure possession.

Senior Debt: Debt obligations having a priority claim on the source of payment for debt service.

Service: Legal notice delivered to one, which provides notice of a legal action or other proceeding.

Servicer: Entity under contract to a lender or agency to perform account servicing functions.

Servient tenement: The land which suffers or has the burden of an easement.

Setback: Zoning regulations that designate the distance that buildings must be set back from property lines.

Set-off rule: The rule governing the setting off of benefits. The federal courts and those of some states allow setoff of benefits against both the value of the property taken and the damages to the remainder property. In other jurisdictions the rule allows the setting off of benefits against only the damages to the remainder property.

Settle: Resolving a debt or claim.

Severance damages: Damages to the remaining property caused by a partial taking.

Sight easement: An easement for maintaining or improving sight distances.

Site: Land that is ready to be used for a specific purpose.

Site improvements: Improvements on and off a site that make it suitable for its intended use or development.

Slope easement: An easement for cuts or fills.

Smart growth: A set of policies and programs design to protect, preserve, and economically develop established communities and valuable natural and cultural resources.

Soft loan: Loan provided to a project sponsor with flexible repayment terms. Soft loans are generally subordinate to other debt, can have variable repayment schedules and extended terms, and subsidized interest rates.

Sovereign: The supreme powers of a state that is totally independent and free from any outside political control or authority over their decisions, and granted to them by the U.S. Constitution.

Special provisions: Special directions, provisions, or requirements peculiar to the project under consideration, and not otherwise thoroughly or satisfactorily detailed or set forth in the design specifications.

Special purpose property: A property devoted to or available for a special purpose (such as a school, museum, religious facility), but which does not have generally accepted independent marketability.

Special use permit: A permit that allows a specific exception to the zoning regulations from a list of acceptable exceptions for a particular parcel of land in a district of a particular zoning character. The local zoning authority reviews and grants special use permits.

Special warranty deed: A deed in which the grantor warrants the title against defects arising after purchase but not against defects arising before that time.

Specific performance: An action that compels a person to carry out the terms of the agreement or contract.

Specific requirements: All or part of a Standards Rule of USPAP from which departure is permitted under certain limited conditions.

Specifications: A general term covering all directions, provisions and requirements contained within a specifications manual.

Spot zoning: A zoning provision that permits limited and specific modifications to allow uses that would otherwise not be permitted.

State rule: An appraisal method of a partial taking whereby the appraiser values the before value, then the taking, then the remainder, and deducts damages (if any), considers any benefits, and arrives at a value for the take.

Start-up project: A separate, free-standing and new facility dependent on its own revenue stream to generate earnings to cover operating and capital costs.

State Infrastructure Bank: A state or multistate revolving fund that provides loans, credit enhancement, and other forms of financial assistance to surface transportation projects.

State Transportation Improvement Program (STIP): A short-term transportation planning document covering at least a three-year period and updated at least every two years. The STIP includes a priority list of projects to be carried out in each of the three years. Projects included in the STIP must be consistent with the long-term transportation plan and planning processes as well as metropolitan plans, TIPs, and processes, must conform to regional air quality implementation plans, and must be financially constrained (achievable within existing or reasonably anticipated funding sources). The transportation plan covers a 20-year period and includes both short- and long-term actions that develop and maintain an integrated, intermodal transportation system.

Statute of limitations: A statute prescribing time limitations on the right of action in certain causes.

Statutory (Federal Aid program): This refers to the laws passed by Congress that govern real estate acquisition activities for federal and federally assisted programs and projects, the primary statute being the Uniform Act.

Stigma: An adverse effect on property value produced by the market's perception of increased environmental risk due to contamination, environmental, structural, or social factors.

Stipulated judgment: A judgment that results from an agreement by the parties rather than from a court decision.

Stipulated (Legal) Settlement: In instances in which condemnation proceedings have begun, parties can still negotiate, and in some instances, can agree to a settlement before their case is heard. In order to conclude the negotiation, the parties present the Judge or presiding authority their agreement to settle.

Stipulated settlement: A negotiated settlement that is reached after the initiation of condemnation proceedings but before trial.

Stress test: A construction term used to establish the load amount or breaking point of pavement, steel, soils columns, etc.; a financial test applied by rating agencies to assess the claims-paying ability of municipal bond insurers. The stress test subjects a bond insurer's portfolio to a severe and prolonged economic downturn that produces an extraordinary level of bond defaults. In order to receive an AAA rating on its claims-paying ability, a bond insurer must be able to pay all projected claims through the peak years of the stress period and be left with sufficient resources to write new business when more stable economic conditions resume.

Sub-allocation: An administrative distribution of funds from BIA Central Office down to the BIA area.

Subdivision: A tract of land divided into blocks or lots.

Subdivision development method: A method to opine land value when the land's highest and best use is for subdivision and development; an estimate of the gross sales prices is developed, all expenses associated with the development deducted, and the net sale proceeds discounted to present value.

Subordinate claim: A claim on an underlying source of payment for debt service, which is junior or secondary to that securing another debt obligation (see Junior debt).

Subordination clause: A clause in a junior or second lien acknowledging the superiority of priority for prior liens; a subordination clause may be used in a first deed of trust permitting it to be subordinated to subsequent liens (for example, the liens of construction loans).

Subsidy Cost: The estimated long-term cost to the federal government of providing credit assistance (e.g., direct loans or loan guarantees), calculated on a net present value basis at the time of disbursement and excluding administrative costs.

Substitution: A real estate principle that affirms that when there are several similar options available, assuming no costly delay, the one with the lowest price will attract the greatest number of buyers.

Subsurface easement: The right to use the space at a designated distance below the surface of the land, as for pipelines and storage facilities.

Summons: An initial document giving the defendant notice of the claim and an opportunity to defend against it.

Superfund: The program operated under the legislative authority of the CERCLA, and the Superfund Amendments and Reauthorization Act (SARA) that funds and carries out EPA solid waste emergency and long-term removal and remedial activities. These activities include establishing the National Priorities List, investigating sites for inclusion on the list, determining their priority, and conducting and/or supervising cleanup and other remedial actions.

Supplemental standards: Appraisal requirements issued by governmental agencies, government sponsored enterprises, or other entities that establish public policy which adds to the purpose, intent and content of the requirements in USPAP, that have a material effect on the development and reporting of assignment results.

Supply and demand: A real estate principle that holds that price varies directly, but not necessarily proportionately, with demand and inversely, but not necessarily proportionately, with supply.

Surface easement: The right to use the surface of the land for access and drainage.

Survey baseline: A line used as a basis for establishing additional survey lines, or guidelines, such as the edge of pavement, ditches, centerline, median, ramps, topography, etc., to establish a common measurement system.

Suspend collection action: Placing collection action temporarily in abeyance due to the existence of a particular set of circumstances.

T

Take: The acquisition of property.

Taking: The process of obtaining right of way by negotiation, or through eminent domain, to construct or support a project.

Tax refund offset: Reduction of a debtor's tax overpayments by the amount of legally enforceable debt owed to a federal agency. A tax refund offset is a type of administrative offset.

Taxpayer Identification Number (TIN): Social Security Number (SSN) for individuals or the Employee Identification Number (EIN) for business organizations or nonprofit entities.

TE-045 Innovative Finance Initiative: A research program begun by the Federal Highway Administration in 1994 in response to Executive Order 12893. This finance initiative is designed to increase investment, accelerate projects, promote the use of existing innovative finance provisions, and establishes the basis for future initiatives by waiving selected federal policies and procedures, thus allowing specific transportation projects to be advanced through the use of nontraditional finance mechanisms.

Temporary easement: An easement granted for a specific use for a specific start and end date.

Tenancy at sufferance: An estate in real estate in which a person, who formerly held an estate in the property, wrongfully continues in possession after the estate's termination.

Tenancy at will: An estate in real estate that has no specific duration and is terminable at the will by either the landlord or tenant. The relationship is personal in its nature and terminates at the death of either party.

Tenancy by the entirety: An estate in real estate created by a conveyance to husband and wife, where each becomes seized and possessed of the entire estate. Upon the death of one, the surviving spouse owns the whole.

Tenancy from period to period: An estate in real estate that automatically renews at the end of each period unless, prior to the end of any given period, appropriate notice to terminate has been given.

Tenancy in common: An estate in real estate held by two or more people, each having equal and undivided interest but without any right of survivorship.

Tenancy in severalty: An estate in real estate held by one owner.

Tenant: One who holds possession of the real estate of another.

Terminate collection action: Ceasing active collection of a debt. The act of removing the debt from accounting records is to "write off." A decision to terminate collection action occurs concurrently with the write-off.

Testament: A written document providing for the disposition of a person's property after death; a will.

Testate: The condition of leaving a will at death.

Testator: One who makes or has made a testament or will.

Thirty-day notice (30-day notice): This is a notice that may be given to a person who will be required to move a residence, business or personal property as a result of an agency's project. It informs the person that he or she must move the residence, business or personal property 30 days from the date of the notice.

TIFIA Credit Program: As part of its 1998 enactment of the Transportation Equity Act for the 21st Century (TEA 21), Congress established a federal credit program for large transportation projects. Sections 1501 to 1504 of TEA 21, collectively the Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA) authorize the Department of Transportation (DOT) to provide three forms of credit assistance—secured (direct) loans, loan guarantees and standby lines of credit—to surface transportation projects of national or regional significance. A specific goal of TIFIA is to leverage private co-investment. Because the program offers credit assistance, rather than grant funding, potential projects must be capable of generating revenue streams via user charges or other dedicated funding sources. The TIFIA credit

assistance is limited to 33% of eligible project costs. For more information, visit the TIFIA website at <http://tifa.fhwa.dot.gov/>.

Title: The evidence of a person's right to own or possess property; the quality of ownership as determined by a body of facts and events.

Title VI-Title VI of the Civil Rights Act of 1964: Prohibits discrimination in any program receiving federal assistance.

1) Title 23 of the United States Code Highway title that includes many of the laws governing the federal-aid highway program. The title embodies substantive provisions of law that Congress considers permanent and need not be reenacted in each new highway authorization act. 2) Title 49 of the United States Code Transportation title that includes laws governing various transportation-related programs and agencies, including the Department of Transportation, general and intermodal programs, interstate commerce, rail and motor vehicle programs, aviation programs, pipelines, and commercial space transportation.

Title examiner: A title company employee charged with the duty of interpreting and passing upon the validity of documents dealing with real property.

Title guarantee: The validity of a title that is insured by an abstract, title, or indemnity company.

Title insurance: Insurance against loss or damage resulting from defects or failure of title.

Title opinion: An analysis and interpretation of a title search concerning present ownership, encumbrances, clouds on title, and other infirmities.

Title report: A report showing the condition of title before a sale or loan transaction.

Title search: An investigation of public records and documents to ascertain the history and present status of title to a property, including ownership, liens, charges, encumbrances, and other interests.

Topographic map: A map that shows the features of the earth's surface using contour lines, tinting, or shading.

Topography: Detailed graphic delineation on maps or charts of natural and artificial features of a place or region, especially in a way to show their relative positions and elevations; the configuration of a surface, including its relief and the position of its natural and artificial features.

Torrens title: A certificate of title issued by a public authority under a system where all deeds and documents affecting real property are registered.

Total benefit/cost ratio: The sum of five categories of quantifiable project benefits divided by the annualized cost of the project.

Total operating expenses: The sum of all fixed- and variable operating expenses and the replacement allowance cited in the appraiser’s operating expense statement.

Township: A government survey term; a territorial subdivision being six miles square and containing 36 sections.

Trade fixtures: Articles specific to a business, usually trademarked, placed in or attached to rented placed in or attached to rented buildings by a tenant to help carry out the trade or business of the tenant.

Transport: Movement of natural, synthetic, and/or supplemental gas between points beyond the immediate vicinity of the field or plant from which produced, except for movements through well or field lines to a central point for delivery to a pipeline or processing plant within the same state, or movements from a “citygate” point of receipt to consumers through distribution mains.

Transportation Enhancement Activities (TE): Provides funds to the States for safe bicycle and pedestrian facilities, scenic routes, beautification, restoring historic buildings, renovating streetscapes, or providing transportation museums and visitors centers. (see 23 U.S.C. 101(a) and 133(b)(8).

Transportation Improvement Program (TIP): A document prepared by a metropolitan planning organization that lists projects to be funded with FHWA/FTA funds for the next one- to three-year period.

Transportation infrastructure: A federal credit program under which the USDOT may provide three forms of credit assistance - secured (direct) loans, loan guarantees, and standby lines of credit - for surface transportation projects of national or regional significance. The fundamental goal is to leverage federal funds by attracting substantial private and non-federal co-investment in critical improvements to the nation’s surface transportation system.

Transportation Management Area (TMA): An urbanized area with a population over 200,000 (as determined by the latest decennial census) or other area when TMA designation is requested by the Governor and the MPO (or affect local officials), and officially designated by the Administrators of the FHWA and the FTA. The TMA designation applies to the entire metropolitan planning area(s).

Travel Model Improvement Program (TMIP): TMIP supports and empowers planning agencies through leadership, innovation and support of planning analysis improvements to provide better information to support transportation and planning decisions.

Tribal lands: Restricted Indian land that is not subject to fee title alienation without the approval of the federal government; land held in trust for the Indian people, and fee lands owned by tribal governments.

Tribal TIP: A multiyear, financially constrained list of proposed transportation projects to be implemented within, or providing access to, Indian country during the next 3-5 years. It is developed from the tribal priority list.

Trust deed: An instrument used in many jurisdictions in place of a mortgage. Property is transferred to a trustee by the borrower (trustor) in favor of the lender (beneficiary) and reconveyed upon payment in full.

Trust fund(s): A fund credited with receipts that are held in trust by the government and earmarked by law for use in carrying out specific purposes and programs in accordance with an agreement or a statute. Trust funds are usually financed with earmarked tax collections.

Turn-key: A turn-key or a turn-key project is a type of project that is constructed by a developer and sold or turned over to a buyer in a ready-to-use condition; a generic term for a variety of public/private partnership arrangements whereby a public sector entity awards a contract to one or more private firms to undertake the development, construction, and/or operation of an infrastructure project for a predetermined period of time before turning the project back over to the public entity. Turn-keys may take various forms, including design-build-transfer and build-operate-transfer.

U

Underimprovement: An improvement that is inadequate to develop the highest and best use of its site.

Underlying fee owner: The owner of fee title to a parcel encumbered by an easement.

Uneconomic remnant: A remainder property of little value or use; the parcel of real property in which the owner is left with an interest after the partial acquisition of the owner's property, and which the Agency has determined has little or no value or utility to the owner.

Unified Planning Work Program (UPWP): The management plan for the (metropolitan) planning program. Its purpose is to coordinate the planning activities of all participants in the planning process.

Uniform Standards of Professional Appraisal Practice (USPAP): One set of standards of the appraisal profession, developed for appraisers and users of appraisal services by the Appraisal Standards Board of The Appraisal Foundation.

Unit in place method: A method used in the cost approach to develop a cost estimate using the installed prices for the various building elements.

Unit rule: In condemnation appraisal, a valuation rule that deals with ownership interests and physical components. A property must be valued as a whole rather than by the sum of its various interests, or by the sum of its physical components.

United States (U.S.) territories: Include Samoa, Guam, the Northern Marianas, Puerto Rico and the Virgin Islands.

United States Code: Contains a consolidation and codification of all general and permanent laws of the U.S.

U.S. Army Corps of Engineers (USACE): A federal agency with the mission to provide engineering services related to the nation's water resources, army and air force military facilities, and other defense and federal agencies.

U.S. rectangular grid system: The original rectangular system of subdividing public lands used by the federal government. The survey consists of a systematic numbering of square townships referenced to a principal meridian and accompanying baseline; a system of land division into townships approximately six miles square, each township containing 36 sections, and each section containing 640 acres.

Unity of title: The rule, both in federal and state courts, that states that to be considered part of the remainder property, the property must be held by the condemnee under the same quality of ownership as that from which the taking occurs.

Unity of use: The rule, both in federal and state courts, that states that to be considered part of the remainder property, the property must be devoted to the same use as the parcel from which the taking is made.

Unobligated balance: The portion of obligation authority (including new budget authority and balances of unobligated budget authority carried over from prior years) that has not yet been constrained. With regard to the federal-aid highway program, the term generally refers to balances of apportioned contract authority that the states have been unable to obligate due to annual obligation limitations imposed by Congress.

Urban highway: Any road or street within the boundaries of an urban area. An urban area is an area including, and adjacent to a municipality or urban place with a population of 5,000 or more. The boundaries of urban areas are fixed by state highway departments, and subject to the approval of the Federal Highway Administration, for purposes of the Federal Aid Highway Program.

Urbanized area: Any area that contains a city of 50,000 or more population, plus incorporated surrounding areas meeting size or density criteria as defined by the U.S. Census.

Use value: The value a specific property has for a specific use.

Utility relocation: The adjustment of a utility facility required by the program or project undertaken by the displacing Agency. It includes removing and reinstalling the facility, including temporary facilities, acquiring the needed right of way on a new location, moving, rearranging or changing the type of existing facilities, and taking any necessary safety and protective measures. It shall also mean constructing a replacement facility that has the functional equivalency of the existing facility, and all that is necessary for the continued operation of the utility service, the project economy, or sequence of project construction.

V

Vacancy and collection loss: A deduction from the potential gross income to reflect a loss due to unrented space and credit loss.

Valuation: The process of developing a value opinion.

Valuation process: A systematic procedure to address the client's valuation issue.

Valuation services: Services pertaining to aspects of property value.

Value: The monetary relationship between properties and those who buy, sell, or use those properties; the monetary worth of a property, good or service to buyers and sellers at a given time.

Value after the taking: In condemnation, the market value of the remainder property after the taking and damages have been calculated.

Value before the taking: In condemnation, the market value of the entire property (parent tract) prior to an acquisition.

Venue: The location of a judicial action, hearing, or proceeding.

Visioning: A variety of techniques that can be used to identify goals.

W

Waiver of appraisal: When an appraisal is determined to be unnecessary, the Agency shall prepare a waiver valuation. The person performing the waiver valuation must have sufficient understanding of the local real estate market to be qualified to make the waiver valuation. A waiver valuation is not considered an appraisal.

Waiver valuation: The term waiver valuation means the valuation process used and the product produced when the Agency determines that an appraisal is not required, pursuant to rule 24.102(c)(2) appraisal waiver provisions.

Warranty deed: A deed warranting that the grantor has a good title free and clear of all encumbrances and will defend the grantee against all claims.

Waterborne transportation: Transport of freight and/or people by commercial vessels under U.S. Coast Guard jurisdiction.

Wetland: An area that is saturated by surface or ground water with vegetation adapted for life under those soil conditions, such as swamps, bogs, fens, marshes, and estuaries.

Will: A written, signed, and witnessed statement, made by an individual, which provides for the disposition of the person's property upon death.

Workout Group: Group established within an agency, whose sole purpose is to resolve or attempt to resolve troubled debts, including those debts that demand that extreme measures be taken to protect the government's interests.

Writ: An official court document, which commands the person to whom it is addressed, to do something specific. That “person” is typically either a sheriff, who may be instructed to seize property, or a defendant, who is commanded to answer the charges in a legal action.

Y

Yield capitalization: An income capitalization approach technique that converts an estimate of every year’s income, over the holding period, and the reversion into value

Z

Zone: An area or a region distinguished from adjacent parts by a distinctive feature or characteristic; the smallest geographically designated area for the analysis of transportation activity. A zone can be from one to ten square miles in area. Average zone size depends on the total size of study area.

Zoning: Public regulations that control, through police power, the use of real estate.

Zoning map: A map showing the community’s zones of permitted uses under the zoning ordinance.

Zoning ordinance: A law, generally city, village, town, or county, controlling the use of land and the improvements on the land.

Zoning variance: An authorized modification in the use of property that does not conform to the zoning ordinance for that specific location.

SOURCES

The Dictionary of Real Estate Appraisal
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United States Department of Transportation
Federal Highway Administration Federal Transportation Agency

Real Estate Acquisition Guide For Local Public Agencies – FHWA 46 U.S.C. Chapter 43,
or with a section of the statutes. (USCG1)

The Office of Innovative Program Delivery (IPD) provides tools, expertise and financing to help the transportation community explore and implement innovative strategies to deliver costly and complex infrastructure projects.

Glossary for Property Appraisal and Assessment

(APTA1)

(BTS5) (BTS6)

49 CFR 24.103(d).

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CANADIAN GLOSSARY

A

Abandonment: The act of giving up or relinquishing all rights of ownership to, or use of, a property without the intention of reclaiming it, thereby making the property available for appropriation by another person or authority.

Absolute net lease: A lease in which the lessee pays all expenses.

Abstract of title: A document which shows the condensed history of a property's title. It may include portions of prior conveyances and/or other pertinent instruments relating to the estate or interest in the property and all liens, charges, encumbrances, and releases.

Abstraction: A method to opine land value by allocating the prices of improved property sales between land value and improvement value. The ratio is then multiplied by the property being appraised or the comparable sales being analyzed.

Access rights: The right to approach, to enter, and to exit property.

Accord and satisfaction: A contract law term by which one party, having complied with its obligation under a contract, accepts some type of compensation from the other party (usually money, but in any case compensation less than the contract originally called for) in lieu of enforcing the contract and holding the other party to the obligation. This discharges the contract.

Accountability footprint: A process to document the responsibilities and accountabilities of the participants in an integrated asset management plan.

Accretion: An increase or extension of land boundaries by natural action, such as wind or water. The riparian property owner, unless statutes state otherwise, acquires title to the increases or extensions.

Accrued depreciation: The difference between an improvement's cost new and its value as of a given date. (*Canadian USPAP 2010*)

Acquired land: Federal real property that normally has been purchased from private owners as opposed to original Crown Land.

Acquisition: A transaction that adds new real property rights to a governmental inventory by purchase, lease, licence, exchange, gift, easement, expropriation, or any other means.

Acquisition lease: A lease type when the agency acquires space for its use.

Acre: A land measurement equaling 160 square rods or 4,840 square yards or 43,560 square feet or 0.4047 hectares.

Actual age: The number of years that have elapsed since the completed construction of an improvement.

Ad valorem: According to the value.

Ad valorem tax: A tax varying with the value of property being taxed.

Administrative law: 1. Natural justice. 2. The body of law which applies to hearings before quasi-judicial or administrative tribunals.

Administrative tribunal: A hybrid adjudicating authority between the government and the courts. It operates as a government policy-making body at times but also exercises a licensing, certifying, approval or other adjudication authority which is “quasi-judicial” because it directly affects the legal rights of a person.

Administrator: A person appointed by a probate court to settle a deceased person’s affairs.

Adverse possession: A claim made against the property of another by virtue of actual, continuous (for a time period established by statute), exclusive, hostile, notorious (the other ownership claimant has notice of the possession and its extent), open, and under claim of title.

Advocacy: Representing the interest of another.

Affidavit: A voluntarily written declaration or statement, confirmed by the oath or affirmation, sworn to before an officer who has the authority to administer the oath or affirmation.

Agent: A person who has received the power to act on behalf of another, binding that other person as if that person was making the decisions. The person who is being represented by the agent is referred to as the principal.

Agreement : A word used to describe a common opinion of two or more people regarding each party’s rights and obligations related to the agreement.

Air rights: The right to use and control a designated airspace above a real estate parcel.

Allocation: The process of separating value into its components. 2. A method to opine land value by which improved property sales are analyzed to develop a typical land value to property value ratio with the ratio multiplied by the property being appraised or the comparable sales being analyzed.

Allodial: A type of land ownership that is absolute. It supposes no obligation to another.

Alluvion: Soil deposited by accretion.

Alternate dispute resolution: A range of processes to resolve a disagreement. For example, administrative settlements and mediation.

American Society of Appraisers: An international membership organization of professional appraisers. It represents all appraisal disciplines.

Amortization: 1. The process of recovering, over a stated period of time, a capital investment. 2. The provision for the gradual reduction of an obligation, usually on an installment basis.

Annual debt service: The total annual principal and interest loan payment.

Annuity: 1. An annual income. 2. A series of periodic payments that includes both a partial return of capital and interest on the capital. 3. A return in equal amounts (level annuity) or in increasing amounts (increasing annuity) or decreasing amounts (decreasing annuity). 4. A series of periodic payments, usually, although not necessarily, equal in amount and made at equal intervals of time, usually annually.

Anticipation: A real estate principle that holds that present value is created by the expectations of future benefits.

Appeal: To ask a more senior court or person to review a decision of a subordinate court or person. Appeals can continue to the Supreme Court.

Appraisal: A formal opinion of value prepared as a result of a retainer, intended for reliance by identified parties, and; for which the appraiser assumes responsibility. (*Canadian USPAP 2010*)

The Appraisal Foundation (USA): A not-for-profit educational organization to advance the appraisal profession. TAF develops and promulgates professional appraisal standards and appraiser qualifications.

Appraisal Institute of Canada: A national professional organization that designates and represents professional real estate appraisers, and valuation consultants.

Appraisal Institute (USA): An international membership association of professional real estate appraisers throughout the United States, Canada and abroad.

Appraisal practice: The work or services performed by appraisers, defined by three terms in these standards: appraisal, review, and consulting. (*Canadian USPAP 2010*)

Appraisal process: A systematic procedure to address the client's valuation issue.

Appraisal report: 1. Any communication of an appraisal that is transmitted to the client upon completion of an assignment. 2. There are four report types: Full Narrative, Narrative, Short Narrative, and Form. (*Canadian USPAP 2010*)

Appraisal review: The process of developing and communicating a credible opinion as to the quality of another appraiser's work.

Appraised value: The appraiser's opinions and conclusions resulting from an assignment.

Appraiser: A person who performs valuation services competently and in an independent, impartial, and unbiased manner.

Appreciation: The increase in cost, price, or value resulting from improved economic conditions and increasing price levels.

Approaches to value: The three approaches to developing a value opinion: the cost approach, the direct comparison approach, and the income approach.

Appurtenance: Additional rights that are an adjunction to real property. For example, structures, fences, rights of way, or easements. Appurtenances pass with the property when it is sold.

Arbitration: An alternative dispute resolution method by which an independent, neutral third person or arbitrator hears and considers the merits of a dispute and renders a final and binding decision.

Assemblage: The physical combining of two or more parcels into one ownership or use.

Asset: Items that have value in use or in exchange.

Asset management: A comprehensive integrated management plan for all real estate assets.

Asset management team: A multidisciplinary interdependent group with clearly defined roles, responsibilities, goals, and accountabilities as they relate to the management of real estate assets.

Asset manager: 1. A person who directs the team that controls an organization's real estate assets. 2. A person who directs all real estate activities (for example, licenses, leasing-in, leasing-out, property sales, and properties retained) under the control of the real estate group.

Asset rationalization: A process of determining the need for a given asset and the role the asset will play in an organization.

Assign: To give or transfer responsibility to another.

Assignee: One who receives an assignment. For example, the assignee of a mortgage.

Assignment: An appraisal, review, or consulting service provided as a consequence of an agreement between an appraiser and client. (*Canadian USPAP 2010*)

Assignor: One who makes an assignment. For example, the assignor of a mortgage.

ASTM International: A not-for-profit organization that develops and publishes voluntary standards for materials, products, systems, and services. Formerly known as the American Society for Testing and Materials.

Attorn, attornment : To consent, implicitly or explicitly, to a transfer of a right. Often used to describe a situation where a tenant, by staying on location after the sale of the leased property, accepts to be a tenant of the new landlord. (*Duhaime's Law Dictionary*)

Automated valuation model: Computer software that uses property database information to pull relevant comparable information and assign a value or range of values to a particular property. (*The Dictionary of Real Estate Appraisal*)

Avigation easement: The right granted by a property owner for the use of the airspace above a specific height for aircraft flight.

Avulsion: The sudden removal of soil by natural action, usually water, from one property and the depositing of the soil on the property of another.

Azimuth: The angle, in degrees and measured clockwise, between North and an object.

B

Backfill: 1. Material used to replace, or the act of replacing, material removed during construction. 2. Material placed, or the act of placing material, adjacent to a structure.

Backland theory: A legal theory that asserts that in a partial taking of a tract of land with different zones of value, compensation is based on the property of lower value (even if higher valued property is taken) provided the same amount of higher valued land can be re-established after the taking. (*The Dictionary of Real Estate Appraisal*)

Backslope: That portion of the roadway between the side drainage ditch and the top of the cut, usually measured as a ratio of horizontal distance to each foot of increase in elevation.

Balance: A real estate principle that holds that value is created and maintained in proportion to the equilibrium (balance) attained in the amount and location of essential uses of real estate. Maximum value is created at that point where the four factors of production (labour, coordination, capital, land) are in equilibrium (balance).

Band of investment: A technique used to develop capitalization rates based on the weighted averages of the rate's components.

Barrister: A litigation specialist; a lawyer that restricts practice to the courtroom. In Canada, there is no legal distinction between the advising and litigating roles.

Base and meridian: Imaginary lines used by surveyors to find and describe the location of private or public lands.

Baseline: 1. A survey line running due east and west through the initial point of a principal meridian from which township lines are established by the government survey system quadrangular. 2. A horizontal elevation line used as the survey line for a highway route.

Base rent: A minimum rent amount specified in a lease.

Before and after method: An appraisal method used in the valuation of partial acquisitions. The appraiser develops an opinion of value prior to the acquisition or take and another opinion of value after the acquisition or take. The difference is the value of the acquisition.

Benchmark: 1. A point of known elevation above sea level. 2. A bronze plate to serve as a reference point in running a line of levels for the determination of the elevations.

Beneficiary: A person for whom a trust has been created.

Benefits: An increase in value to property not acquired but which benefits from the acquisition.

Bill of sale: A written agreement by which title to chattels is transferred.

Bona vacantia: Property that belongs to no person and which may be claimed by a finder.

Borrow: Suitable material from sources outside the roadway prism, used primarily for embankments.

Breach: The breaking or violating of a law, right, or duty, either by commission or omission.

Breakdown method: A method of estimating depreciation in which the total loss in property value is estimated by analyzing and measuring each cause of depreciation separately.

Brownfield: An abandoned, idled, or under used industrial and commercial site or facility where redevelopment is complicated by real or perceived environmental contamination.

Building capitalization rate: A rate that expresses the relationship between the net operating income to the building and the building value ($RB = IB/VB$).

Building code: A governmental entity's ordinances, rules, and regulations relating to the construction, use, repair, and remodeling of buildings.

Building Owners and Managers Association: A professional trade association whose members own or manage commercial real estate or provide goods and services to the industry.

Building residual technique: A technique in which the building is valued independent of the land. The annual net income to the land is deducted from the estimated annual net annual income to the property. The residual amount is income attributable to the building, which is capitalized with a building capitalization rate into a building value.

Bundle of rights: All the rights of real estate ownership, which includes the right to enter, use, lease, sell, give away, or the right not to do any of these things.

Burden of proof: The necessity or duty of providing the facts in dispute on an issue raised between the parties in a cause.

C

The Canadian Council of Land Surveyors: A federation of associations representing the disciplines of cadastral, geodetic, hydrographic and photogrammetric surveying, and land information management.

Canadian Environmental Protection Act: Proclaimed in 1988, the Canadian Environmental Protection Act is the country's most extensive federal environmental legislation. The Act governs such areas as ocean dumping, the release, import and export of toxic substances, and international air pollution. Regulations and amendments under the Act include those governing the storage, treatment, destruction, and export of polychlorinated biphenyls (PCBs) materials, as well as regulations relating to the use and consumption of ozone depleting substances.

Canadian Uniform Standards of Professional Appraisal Practice: Appraisal standards developed for appraisers and users of appraisal services to promote a high level of public trust in professional appraisal practice.

Capital asset: A tangible real property asset.

Capitalization: The process of converting income into an opinion of value through the application of a rate.

Capitalization rate: A rate used to convert income into value.

Cash flow: That portion of the net operating income that remains after a deduction for annual debt service.

Cash flow rate: A capitalization rate for equity. It is the ratio between the annual cash flow and the equity value. ($RE = IE/VE$)

Caveat: A formal warning. A document containing a notice, warning, or caution that there are persons other than the registered owner interested in the property and which is registered against title to the property.

Centreline of survey: The longitudinal centre of a right of way project.

Certificate of title: A guarantee of title by the examining authority.

Chain: A surveying instrument consisting of 100 linked pieces of iron or steel and measuring 20 meters.

Chain of Title: A history of conveyances and encumbrances affecting the title from the time the original patent was granted to the present time.

Change: A real estate principle that holds that change is the result of cause and effect relationships among the forces that impact real estate.

Charge: 1. The name given to a mortgage document when title is registered under the Land Titles Act. 2. An encumbrance, lien, or claim.

Chattel: Personal property.

Chronological age: The number of years that have elapsed since the completed construction of an improvement.

Client: Generally, the party who engages an appraiser (by employment or contract) in a specific assignment. (*Canadian USPAP 2010*)

Commissioner for Oaths: An individual empowered by statute to administer oaths and take and receive affidavits, declarations, and affirmations.

Common law: 1. The body of customs, usages, and practices developed and administered by the Anglo-Saxons. 2. The body of English Law as distinguished from Roman Law, Canon Law, and other legal systems. 3. The unwritten law founded on customs and precedents as distinguished from statute law.

Comparables: Properties used as comparisons to opine the value of a specific property.

Comparative method: A method used in the cost approach to develop a cost estimate in terms of dollars per unit (such as a square foot, square meter, or cubic feet).

Compensable interest: A property right, which if acquired for public purposes, would entitle the owner to receive just compensation.

Competition: A real estate principle that holds that competition is the interactive efforts among market participants to secure real estate or an interest in real estate.

Condition precedent: A contract condition that suspends the coming into effect of a contract unless or until a certain event takes place. Many residential real estate contracts have a condition precedent which states that the contract is not binding until and unless the property is subjected to a professional inspection, the results of which are satisfactory to the purchaser.

Condition subsequent: A contract condition that causes the contract to become invalid if a certain event occurs. The happening of a condition subsequent may invalidate a contract which is, until that moment, fully valid and binding.

Conforming use: A use permitted by zoning regulations.

Conformity: A real estate principle that holds that value is created and sustained when the property's characteristics conform to market demands.

Consensus: A result achieved through negotiation where a solution is arrived at between the parties comprised of concessions made by the parties, and to which all parties then subscribe unanimously as an acceptable resolution of the issue.

Consensus ad idem: An agreement or meeting of the minds between the parties where all understand the commitments made by each. This is a basic requirement for each contract.

Consequential damages: Loss in value to real estate, no part of which is acquired, resulting from a public improvement.

Consideration: The inducement, generally monetary, that moves a party to enter into a contract.

Consistent use: The premise that when improved land is in a state of transition to another "highest and best use" it cannot be appraised with one use allocated to the land and another to the building or other improvements. (*Basics of Real Estate Appraising*)

Contaminant: Any physical, chemical, biological, or radiological substance or matter that has an adverse effect on air, water, or soil.

Contamination: Introduction of micro-organisms, chemicals, toxic substances, wastes, or wastewater into water, air, soil, and structures in concentrations that make the medium unfit for its intended use.

Contour: 1. A topographic line on a map that connects the points on a land surface that have the same elevation. 2. The water edge of a lake.

Contract: A legally enforceable agreement between two or more people or parties.

Contract rent: 1. The amount of rent provided for under the terms of the lease. 2. The actual rent that is agreed to be paid.

Contribution: A real estate principle that states that the value of the factors of production or of a component part of property depends on how much it contributes to the value of the whole, or how much its absence detracts from the value of the whole.

Convey: The act of deeding or transferring title to another.

Conveyance: A written instrument by which a title, estate, or interest in property is transferred.

Co-ordinate system: A system for specifying location. The co-ordinates can be spherical (latitude and longitude) or plane rectangular (for example, Universal Transverse Mercator).

Corridor: A long, narrow strip of property between two termini generally used for transportation purposes (for example, canals, electrical power transmission, fibre optics, telephone, gas and oil pipelines, roads, and so forth).

Cost: The total dollar amount necessary to create an improvement.

Cost approach: 1. One of the three approaches to value. 2. A set of procedures by which a value indication is obtained by estimating the reproduction or replacement cost new of a structure, deducting depreciation from all causes, and adding the land value opinion.

Cost services method: A method used in the cost approach to develop a cost estimate through the use of cost service manuals or books.

Cost to cure: The cost to restore an item of physical depreciation or functional depreciation to near new or new condition.

Covenant: A written agreement in a conveyance or other instruments setting forth assurances by the grantor.

Cross-section: The land surface exposed by cutting at right angles to an axis.

Crown Land: Land, whether or not it is covered by water, or an interest in land, vested in the Crown by virtue of the British North America Act.

Crown Reserve Land: Frontier land in respect of which no interest is in force.

Cuius est solum, ejus est usque ad caelum et ad inferos: The party who owns the land, owns down to the centre of the earth and up to the heavens.

Cul de sac: 1. The terminus of a street. 2. A street open at one end with a large rounded turnaround at the other end.

Culvert: Any structure not classified as a bridge, which provides an opening under a roadway.

Curable depreciation: Items of physical depreciation and functional depreciation that are customarily repaired or replaced because the contributory value as repaired or replaced is equal to or more than the cost to cure.

Current value opinion: A value opinion when the effective date is contemporaneous with the date of the report, at the time of inspection, or at some other date within a reasonably short period from the date of inspection when market conditions have not or are not expected to have changed. (*Canadian USPAP 2010*)

D

Damages: 1. Compensation to offset losses caused by another's actions. 2. In eminent domain, the loss in value to the remainder property as a result of a partial taking. Generally, it is the difference between the value of the property before the acquisition and the value of the property after the acquisition.

Date of the report: The date of the appraisal completion as identified on the letter of transmittal, includes whether the perspective of the appraiser on the market or property use conditions as of the effective date of the appraisal was retrospective, current, or prospective. (*Canadian USPAP 2010*)

Deed: A written instrument, signed, sealed, and delivered, by which the ownership interests in real estate are transferred from one party to another.

Deed quitclaim: A conveyance where whatever interest the grantor possesses is conveyed to the grantee, without warranty of title.

Deed restriction: A limitation which passes with the property regardless of ownership, most commonly limiting the type of use or intensity of real estate use.

Deed with full covenant: A conveyance where the grantor warrants forever the title to the premises.

Default: Failure to perform a duty or to discharge an obligation in accordance with an agreement or a contract.

Defendant: The person defending or denying; the party against whom relief or recovery is sought in an action or suit.

Deferred maintenance: Curable, physical depreciation that should be corrected immediately, although work has not commenced. (*The Dictionary of Real Estate Appraisal*)

Deficit rent: The amount by which market rent exceeds contract rent.

Delta: A quantitative change, especially a small or incremental one.

Depreciation: A loss in property value from any cause.

Descent: 1. Ownership succession by inheritance, or by any act of law, as distinguished from purchase. 2. The title by which one person, on the death of another, acquires the real estate of the latter as the heir at law.

Design capacity: The capacity used in designing a road.

Devise: Real estate left by will.

Devisee: A person to whom real estate is given by will.

Devisor: A testator who leaves real estate.

Direct comparison approach: 1. One of the three approaches to value. 2. A set of procedures by which a value indication is obtained by comparing properties that have sold recently to the property being appraised.

Direct method: An income approach technique that converts an estimate of a single year's income into value in one step.

Discount rate: A yield rate that converts or discounts future payments into present value.

Dispossess: 1. To put out of possession or occupancy. 2. To evict.

Distrain: The right of a landlord to seize a tenant's property which is in the rented premises, as collateral against a tenant who has not paid the rent or who has otherwise defaulted on the lease.

Dominant estate: The property that benefits from an easement.

Dominant tenement: The property that benefits from an easement.

Drainage area: The area that will drain to any given selected point.

Drainage ditch: 1. Any open watercourse used for drainage. 2. The depressed area within the roadway given over to the collection and removal of surface drainage within the right of way,

Drainage easement: The right to drain surface water from one property owner's property across another's property.

Due diligence: The care that a prudent person might be expected to exercise in the examination and evaluation of risks affecting a transaction.

E

Easement: A nonpossessory interest held by one person in property of another where the first person is accorded partial use of the property for a specific purpose. An easement restricts but does not abrogate the fee owner's rights to the use and enjoyment of the property.

Easement appurtenant: An easement for the benefit of another property. The easement passes with the property transfer.

Easement by prescription: The right to use the property of another, which is established by exercising this right over a period of time.

Easement in gross: An easement for the benefit of a person or entity. Commonly, public utility easements.

Easement of necessity: A court granted easement when it is determined that the easement is essential for the use and enjoyment of the property.

Easement, subsurface: The right to use the space at a designated distance below the surface of the land as for pipelines and storage facilities.

Easement, surface: The right to use the surface of the land as for access and flowage.

Ecology: 1. The relationship of living things to one another and their environment.
2. The study of such relationships.

Economic age-life method: A method to estimate depreciation by developing a ratio between the improvement's effective age and its economic life and then multiplied by the improvement's cost new.

Economic feasibility: An investment's ability to produce sufficient income to pay expenses and provide a reasonable return on and recapture of the capital invested.

Economic life: The period over which an improvement contributes to property value.

Effective age: The age based on the condition and use of the structure.

Effective date: The date that establishes the context for the value opinion; the date of value. (*Canadian USPAP 2010*)

Effective gross income: The estimated potential gross income less a vacancy and bad debt allowance.

Effective gross income multiplier: The ratio between a sale price and the property's effective gross income. ($EGIM = SP/EGI$).

Eminent domain: The right or power of public and quasi-public agencies to expropriate private property for public purposes without the owner's consent on payment of just compensation and following due process of law.

Encroachment: An improvement (such as a structure, sign, wall, or fence) that illegally intrudes on another's property.

Encumbrance: A claim, lien, or liability attached to a property.

Entrepreneur: A person who assumes the risk and management of an enterprise in exchange for anticipated gain.

Environment: The sum of all external conditions affecting the life, development and survival of an organism.

Environmental assessment: A detailed environmental study of a proposed project. The study includes an assessment of the project's need, the various alternatives studied, the potential social and environmental impacts, and the methods to reduce, remediate, or avoid potential issues.

Environmental audit: An independent assessment of the current status of a party's compliance with applicable environmental requirements or of a party's environmental compliance policies, practices, and controls.

Environmental site assessment: The process of determining whether contamination is present on a parcel of real property.

Equity: The owner's interest in real estate.

Equity capitalization rate: It is the ratio between the annual cash flow and the equity value. ($RE = IE/VE$)

Equity yield rate: The equity investor's internal rate of return.

Escheat: The reversion of property to the Crown in a case when an individual dies intestate and without heirs.

Escrow: A procedure whereby a disinterested third party controls the legal documents and funds on behalf of a seller and buyer.

Estate: A right or interest in property.

Estoppel: A bar, in law, that precludes a person from asserting rights in contradiction of a previous position or representation.

Ethics: 1. A set of moral principles or values. 2. The principles of conduct governing an individual or a group.

Excess rent: The amount by which contract rent exceeds market rent.

Executor: A person designated in a will or appointed by the probate court to carry out the terms of a will.

Expenses: The operating expenses necessary to maintain a continuing flow of gross income

Expert witness: 1. A person who by reason of education and/or experience gives evidence. 2. A person who is recognized by the court as an expert on the subject matter in question.

Expropriation: Pursuant to statute, the compulsory acquisition of property, by the Crown or by one of its authorized agencies.

External depreciation: An element of depreciation, usually incurable, caused by negative influences outside the property.

Extraction: A method to opine land value by extracting the depreciated improvement value from the total sale price to arrive at the value of the land.

Extraordinary assumption: A hypothesis - either supposed or unconfirmed - which, if not true, could alter the appraiser's opinions and conclusions. (*Canadian USPAP 2010*)

Extraordinary limiting condition: A necessary modification or exclusion of a Standard Rule.

F

Factors in production: The agents of labour, coordination, capital, and land, which together create wealth, income, or services.

Feasibility analysis: 1. A study of whether or not a project will meet the proposer's objectives. 2. An investigation of the practicalities of a project or plan. 3. The cost-benefit relationships of an economic endeavour.

Federal Crown Land: Crown Land under the administration and control of Her Majesty in right of Canada.

Fee simple estate: The highest real estate ownership interest, subject to the government limitations of eminent domain, escheat, police power, and taxation.

Fee tail: A form of tenure under the feudal system that could only be transferred to a lineal descendant. If there were no lineal descendants upon the death of the tenant, the land reverted to the lord.

Fiduciary: A position of trust and confidence, regarding financial transactions.

Fill: The material used to build up land or to obtain a uniform grade.

Financial analysis: The cost-benefit relationships of an economic endeavour.

First Nation Land: Reserve land to which a land code applies and includes all the interests in and resources of the land that are within the legislative authority of Parliament.

Fixture: An item that was once a chattel but is now an integral part of the real estate.

Flood plain: The areas along water bodies that, because of their topography and elevation, are subject to overflow and flooding.

Flow line: The profile of the low point on the inside of a drainage structure or channel.

Foreclosure: A legal proceeding to extinguish a property owner's rights, title, and interest in order to sell the owner's property to satisfy a lien.

Freehold: A special right granting the full use of real estate for an indeterminate time. It differs from leasehold, which allows possession for a limited time. There are varieties of freehold such as fee simple and fee tail.

Freehold land: Land not owned by the Crown.

Functional depreciation: Impairment of functional capacity or efficiency.

Functional utility: The ability of a structure to perform the functions for which it is intended.

G

Gap analysis: A business tool that analyzes the difference (gap) between today's reality and a desired future state.

General benefit: The advantage accruing from a given public improvement to the community as a whole.

Global positioning system: A locational system based on the transmission of satellite signals.

Government survey: The division of land into square townships referenced to a principal meridian and accompanying baseline. 2. A system of land division into townships approximately six miles square, each township contains 36 sections and each section containing 640 acres.

Grade: 1. The degree of the slope of the land. 2. The slope of a surface, such as a lot or road, with a vertical rise or fall expressed as a percentage of the horizontal distance. For example, a 3 percent grade means a rise of 3 feet per 100 feet of horizontal distance.

Grade line: The slope in the longitudinal direction of a project, usually expressed as a percentage or a relationship.

Gradient: 1. The rate of rise or fall. 2. The degree of inclination. 3. The grade.

Graduated lease: A lease that provides for certain rental adjustments at one or more points during the lease term.

Grant: A general term applicable to all transfers of real property. Grantee. 1. One to whom property is conveyed. 2. The buyer. Grantor. 1. One who conveys property. 2. The seller.

Gross income multiplier: The ratio between a sale price and the property's gross income. Generally held to be an effective gross income multiplier.

Gross lease: A lease of property where the lessor pays all property charges regularly incurred through ownership.

Gross rent multiplier: The ratio between a sale price and the property's gross rent. (GRM = SP/GR).

Ground lease: A lease which gives the right to use land.

Ground rent: 1. The rent paid to use and occupy land. 2. That portion of the total rent paid allocated to the land.

Ground rent capitalization: A method to opine land value by dividing the ground rent by a land capitalization rate. (VL = IL/RL).

Guardian: A person who is entitled or legally appointed to the care and management of the person or property of another.

H

Hazardous substance: Any material that poses a threat to human health and/or the environment. Typical hazardous substances are toxic, corrosive, ignitable, explosive, or chemically reactive.

Hazardous waste: Any by-product that can pose a substantial or potential hazard to human health or the environment when improperly managed.

Hectare: A land measurement equaling 10,000 square meters or 2.471 acres.

Heir: One who by operation of law inherits the property and especially the real property of a person who dies without leaving a valid will.

Highest and best use: The reasonably probable and legal use of property, which is physically possible, appropriately supported, and financially feasible, and that results in the highest value. (*Canadian USPAP 2010*)

Highway easement: The right to use the property of another for the construction, operation, and maintenance of a highway.

Historic place: A site, building, or other place of historic interest or significance.

Historical age: The number of years that have elapsed since the completed construction of an improvement.

Historical cost: The cost of a structure at the time of its construction.

Hold harmless agreement: A legal agreement in which the liability of one party is assumed by another party.

Holdover tenant: A tenant who remains in possession of leased property after the expiration of a lease.

Hypothetical condition: That which is contrary to what exists but is supposed for the purpose of analysis. Common hypothetical conditions include proposed improvements and prospective appraisals.

I

Improved land: 1. Land that has been developed for some use by the construction of a structure. 2. Land that has been prepared for development (for example, grading, drainage, or utility installation).

Improvement: A building or other structure permanently attached to the land.

Improvement to land: Alteration or addition to land to make the property usable (for example, grading, curbs, sidewalks, and fills).

In gross: A personal right rather than a right attached to real estate.

In rem: Pertaining to property.

Income approach: 1. One of the three approaches to value. 2. A set of procedures by which income is converted into value through the application of a rate.

Income rate: A rate that reflects the relationship of one year's income to value.

Incorporeal: Intangible legal rights.

Incorporeal hereditament : An incorporeal right which is attached to property and which is inheritable (such as an easement).

Incurable depreciation: Loss in value resulting from those elements of physical depreciation, functional depreciation, and external depreciation that either cannot be corrected or would not produce an increment in value sufficient to warrant the cost of correction.

Indefeasible: A right or title in property that cannot be voided, defeated or canceled by any past event, error or omission in the title.

Indenture: A deed in which the grantor and grantee enter into reciprocal and corresponding grants or obligations.

Injunction: A writ issued by a court of equity whereby one is required to do or to refrain from doing a specified act.

Injurious affection: The reduction in market value caused to the remaining land of the owner by the acquisition or by the construction of the works or by the use of the works or by any combination of them, and such personal and business damages,

resulting from the construction or use, or both, of the works as the statutory authority would be liable for if the construction or use were not under the authority of a statute. (*The Expropriations Act*)

Instrument: Any legal document (such as a deed, lease, mortgage, or will).

Intangible asset, intangible property: A nonphysical asset, including but not limited to franchises, trademarks, patents, copyrights, goodwill, equities, mineral rights, securities, and contracts, as distinguished from physical assets such as facilities and equipment. (*Canadian USPAP 2010*)

Integrated asset management plan: 1. A structured process that combines all the individual real estate parcels into coordinated real estate assets. 2. A plan that includes all the organization's real estate and the processes and functions that contribute to those assets.

Interest rate: The rate of return on debt capital.

Interim use: The temporary use to which a property is put until it reaches its highest and best use.

Internal rate of return: 1. The rate that discounts all the returns to the amount of the original investment. 2. The rate that discounts all the returns to a net present value of zero.

International Right of Way Association: An international not for profit association whose members are engaged in all aspects of the acquisition of rights of way for public and quasi-public agencies.

International Valuation Standards Committee: A Non-Government-Organization member of the United Nations that works cooperatively with member States, organizations such as the World Bank and valuation societies throughout the world to harmonize and promote agreement and understanding of valuation standards.

Intestate: Without leaving a will.

Intrinsic value: A concept in which value is claimed to be inherent in the object.

Inverse expropriation: The legal process by which a property owner may claim and receive compensation for the taking of, or damages to, property as a result of a public improvement.

Investment analysis: A study that reflects the relationship between the acquisition price and the anticipated future benefits of a real estate investment. (*Canadian USPAP 2010*)

Investment value: A value opinion based on specific criteria for a specific investor.

Irrevocable: 1. Incapable of being recalled or revoked. 2. Unchangeable. 3. Unalterable.

J

Joint and several liability: Liability of more than one person for which each person may be sued for the entire amount of damages done by all. (Duhaime's Law Dictionary)

Joint tenancy: A tenancy in which two or more parties hold equal and simultaneously created interests in the same property and in which title to the entire property is to remain to the survivors upon the death of one of them, as a spouse, and so on to the last survivor.

Jus spatiandi et manendi: A legal right of way granted to the public but only for the purposes of recreation or education, such as upon parks or public squares. (Duhaime's Law Dictionary).

Jurisdictional exception: An assignment condition that voids the force of a part or parts of The Standards, when compliance would be contrary to law or public policy and only that part shall be void and of no force or effect in that jurisdiction. (*Canadian USPAP 2010*)

Just compensation: 1. The compensation for property acquired under eminent domain that places a property owner in the same position as before the property is taken. It is usually the fair market value of the property acquired.

L

Laches: Neglect to do something at a proper time, especially such delay as will bar a party from bringing a legal proceeding. For example, an inexcusable delay in forwarding a claim.

Land: The earth's surface.

Land capitalization rate: A rate that expresses the relationship between the net operating income to the land and the land value ($RL = IL / VL$).

Land classification: 1. The classification of specific land types according to their characteristics or their capabilities for use. 2. The classification of soils into groups that have common features of position in the landscape, texture, drainage, slope, and erosion and including factors of soil type and topography.

Land improvements: Physical changes in or construction on land to increase its utility and value.

Land record: An assemblage of legal property title documentation.

Land registry system: A system of title record provided by provincial law. It is a system for the registration of current land titles.

Land residual technique: A method to opine land value where the land is valued independent of the building. The annual net income to the building is deducted from the estimated annual net income to the property. The residual amount is income attributable to the land, which is capitalized with a land capitalization rate into a land value.

Land surveyor: A person whose occupation is to establish property boundary lines.

Land use control: Broadly, any legal restriction (such as zoning ordinance or restrictive covenant) that controls the uses to which real estate can be put.

Land use map: A municipal map that shows the nature and character of land uses and their densities.

Land use plan: A systematic program for the current and future use and management of property.

Landlocked parcel: A parcel of land surrounded entirely by privately owned land, without access to any type of public or private access. Often associated with the partial taking of land for highway purposes.

Landlord: The person from whom another holds tenancy.

Larger parcel: The subject property when considered together with contiguous or nearby property, the value of which is impacted by common ownership. (*Canadian USPAP 2010*)

Lawyer: 1. A person who is legally permitted to transact business on another's behalf. 2. A person who advises and represents clients as to legal rights and obligations.

Lease: A contract where the owner transfers the right to use, occupy, or control part or all of a property for a stated time period and at a stated rent.

Lease tender: The process by which the Crown invites bids from property owners to lease property.

Leased fee estate: 1. The landlord's interest. 2. The right to receive consideration, usually rent, and the right to recapture the real estate at the end of the lease term. 3. The present (discounted) value of the contract (lease) rent plus the present (discounted) value of the reversion. 4. The use and occupancy of a property conveyed to another.

Leasehold estate: 1. The lessee's interest. 2. The right to possess, use, and quietly enjoy the real estate for the lease term. 3. The present (discounted) value of the difference between market rent and contract rent.

Leasehold improvement: An improvement and/or addition to leased property made by the lessee.

Lease-in: A lease type when the agency acquires space for its use.

Lease-out: A lease type when the agency leases to another party for a consideration.

Legal access: A right that an owner of property that abuts a road has to use the road for ingress and egress.

Legal description: A method, acceptable in court, that geographically locates property.

Lessee: The party to whom a lease is given in return for a consideration, usually rent.

Lessor: The party who gives a lease in return for a consideration, usually rent.

Letters patent: An instrument by which federal or provincial patented public lands or an interest in the lands is granted or conveyed.

License: Any right of use or occupancy of real estate other than an interest in property.

Lien: A hold or claim that one party has on the property of another (for example, security for a debt or a charge, judgement, mortgage, tax, and so forth).

Life estate: An estate in property for the duration of a specific person's life. Upon that person's death, the estate reverts to the grantor to a remainder interest.

Life tenant: The beneficiary of a life estate.

Link: A land measurement equaling 1/100 of a chain or 20.12 centimetres.

Lis pendens: A notice recorded that indicates that a legal action is pending affecting real estate in the jurisdiction where the notice is recorded.

Litigation: A formal court action; a lawsuit.

Littoral rights: The right of the owner of property with contiguous shoreline to use and enjoy the shore.

Loan value: A value that a lender will accept as the basis for a mortgage or trust deed.

Location: 1. Position with respect to human activities. Location is considered one of the basic elements contributing to the value of a property; and accessibility is the principal measure of the value of location. 2. The fixed-position of the highway on the ground, including curves and tangents.

Locational depreciation: An element of depreciation, usually incurable, caused by negative influences outside the property.

M

Market: 1. The place where people interact to sell and buy. 2. The area in which buyers and sellers of a commodity are in communication with one another.

Market analysis: A study of market conditions for a specific property type.

Market price: The amount actually paid, or to be paid, for a property in a particular transaction.

Market rent: The estimated amount that would be paid for the use of real property rights if the real property was offered in the open market by a willing owner allowing a reasonable exposure time.

Market value: The most probable price that a property should bring in a competitive market under all conditions requisite to a fair sale, the buyer and seller, each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from the seller to buyer under conditions whereby: 1. Buyer and seller are typically motivated; 2. Both parties are well informed or well advised, and acting in what they consider their best interests; 3. A reasonable time is allowed for exposure in the open market; 4. Payment is made in terms of cash in Canadian dollars or in terms of financial arrangements comparable thereto and; 5. The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale. (*Canadian USPAP 2010*)

Marketable title: 1. Title that is subject to no reasonable doubt as to its validity or freedom from encumbrance and that can be reasonably sold, purchased, or mortgaged. 2. Title of such quality that a purchaser under contract should be compelled to accept it.

Master lease: A lease controlling subsequent leases.

Master plan: A comprehensive long range plan to allow an organization to grow in an orderly manner.

Mechanic's lien: A lien allowed by statute to secure payment priority for the value of the work performed and materials furnished in the repair or construction of improvements.

Mediation: The intervention between conflicting parties to promote reconciliation, settlement, or compromise.

Metes and bounds: 1. The limits and boundary of a tract of land. 2. Generally, a description that has a point of beginning and uses bearings (the angles east or west of due north or due south) and distances (usually in feet, chains, or meters) to describe the perimeter of a tract of land.

Mitigation: Measures taken to reduce adverse impacts on the environment.

Mitigation of damages: A legal obligation on an injured party to attempt to minimize damages to property after an event or action.

Modified economic age-life method: A modification to the economic age-life method to determine depreciation. It breaks down the physical components into repairable depreciation and nonrepairable depreciation

Moiety: Half of something. For example, a joint tenant holds a moiety in property.

Monument: A visible permanent object placed by a surveyor to establish the lines and boundaries of land.

Mortgage: 1. A pledge of real property as security for the payment of a debt. 2. A written document by which property is given as security for a debt with the right of redemption.

Mortgage capitalization rate: A capitalization rate for debt. It is the ratio between the annual debt service and the mortgage principle. ($RM = ADS/VM$)

Mortgage-equity analysis: yield capitalization method that develops a capitalization rate for combinations of equity yields and mortgage terms.

Mortgagee: The party who lends money and receives the mortgage.

Mortgagor: The party who borrows money and gives the mortgage.

N

Negotiation: 1. The primary method used to acquire property. 2. The process by which two or more people resolve differences to reach a mutually acceptable agreement.

Negotiator: A person who arranges or settles transactions by discussion and mutual agreement.

Net ground lease: A lease of unimproved land that provides that the lessee pay all property charges regularly incurred.

Net lease: A lease of property where the lessee pays all property charges regularly incurred.

Net operating income: The estimated effective gross income less expenses.

Net present value: The difference between the present value of the positive cash flows and the present value of the negative cash flows.

Nonconforming use: A use that is not compatible with zoning regulations but is, with certain restrictions, legally exempt.

Notary: A legal officer with specific judicial authority to attest to legal documents usually with an official seal.

O

Oath: A solemn affirmation to tell the truth.

Observed condition method: A method of estimating depreciation in which the total loss in property value is estimated by analyzing and measuring each cause of depreciation separately.

Occupied without an interest: The custodian has the use of real estate without having a legal interest.

Offer: An explicit proposal to contract, which if accepted, completes the contract and binds both the party that made the offer and the party accepting the offer to the terms of the contract.

Offer to lease: An expression of interest to lease, which includes a delineation of the price and terms.

Operating lease: A lease in which the lessor does not transfer substantially all the benefits and risks incident to ownership of property.

Operating statement: A written account of the income, expense, and profit or loss of an investment during a specific period.

Optimization: The process of obtaining the best use or return on a real estate asset after considering the asset's value to both the present and future core business needs.

Option to lease: A contract given, for a consideration, at an agreed price and terms, for a stipulated period of time.

Overall capitalization rate: A rate that expresses the relationship between the net operating income and the total property price or value. ($RO = IO/VO$).

Overall yield rate: 1. The rate of return on the total investment (debt and equity).
2. The rate that discounts all the returns to the amount of the total original investment.

Overhead easement: The right to use the space at a designated distance above the surface of the land as for power lines, aviation, and air rights.

P

Parcel: A land area that is described in a single description in a deed or as one of a number of lots on a registered plan.

Partial taking: The acquisition of a part of a real estate parcel or a real property interest for public or quasi-public use under eminent domain.

Percentage lease: A lease, which provides that part or all of the rent will be based on a percentage of the volume of business, usually associated with a guaranteed minimum rent.

Permanent easement: 1. An easement conveyed in perpetuity. 2. An easement that lasts forever.

Personal property: 1. Property that is movable. 2. Property that is not permanently attached to, or part of, the real estate. 3. All tangible property that is not classified as real estate. (*USPAP 2010*)

Physical depreciation: Loss in value due to age, wear and tear, and use.

Physical life: The total period that a building or its components will last.

Plottage: The combining of two or more parcels into a larger site which has greater utility.

Plottage value: The value increment resulting from the combining of two or more parcels into a larger site which has greater utility.

Police power: 1. The right of government to restrict property rights to protect public health, safety, and welfare.

Pollutant: Any substance introduced into the environment that adversely affects the usefulness of a resource or the health of humans, animals, or ecosystems.

Pollution: The presence of a substance in the environment that because of its chemical composition or quantity prevents the functioning of natural processes and produces undesirable environmental and health effects.

Portfolio: A group of related properties under common management.

Potential gross income: The total income to real estate at full occupancy.

Power of attorney: An instrument containing an authorization for one to act as the agent of the person who grants the power of attorney.

Power of sale: A clause inserted in a will, deed of trust, or trust agreement authorizing the sale or transfer of land in accordance with the terms of the clause.

Prescription: The acquisition of property rights by an adverse user.

Prescription easement: The right to use the property of another, which is established by exercising this right over a period of time.

Price: The amount asked, offered, or paid for a property. (*USPAP 2010*)

Profile: The slope in the longitudinal direction of a project, usually expressed as a percentage or a relationship.

Profit a prendre: A license to enter property of another combined with a grant of the right to take and remove some natural product (such as mineral deposits) from that property.

Program Land: Property under the administration of a Minister of the Crown to support the department's programs.

Project planning: A type of study that may include route study and selection, agreements with cooperating agencies, preliminary engineering, public hearings, and construction plan development.

Property: Anything, real or personal, that is owned.

Property management: Administration of property with the objective being to maintain, enhance, or maximize its productivity and value.

Property manager: A person who manages property for an organization.

Property transfer assessment: The process of determining whether contamination is present on a parcel of real property.

Prorate: To allocate between seller and buyer their proportionate share of an obligation or interest paid, for example, a proration of real property taxes.

Public hearing: A formal meeting where officials hear and consider the public's views and concerns about an action, project, or proposal.

Q

Quantity survey method: A method used in the cost approach to develop a cost estimate. It is a repetition of the contractor's original cost estimating procedures.

Quantum meruit: A principle under which a person should not be obliged to pay, nor should another be allowed to receive, more than the value of the goods or services exchanged.

Quasi: Having some resemblance, usually by possession of certain attributes.

Quiet enjoyment: A covenant that the tenant or grantee of an estate shall enjoy the possession of the premises in peace and without disturbance by defective title or hostile claimants.

Quitclaim deed: A deed conveying, without warranty, any title, interest, or claim the grantor may have in the property conveyed.

R

Real estate: Land, buildings, and other affixed improvements, as a tangible entity. (*Canadian USPAP 2010*)

Real estate asset manager: 1. A person who directs the team that controls an organization's real estate assets. 2. A person who directs all real estate activities (such as licenses, leasing-in, leasing-out, property sales, and properties retained) under the control of the real estate group.

Real property: 1. The interests, benefits, and rights inherent in the ownership of real estate. (*Canadian USPAP 2010*)

Real property transaction: Any acquisition or disposal under the Federal Real Property and Federal Immovables Act.

Reasonable appraiser: One who maintains a level of performance that would be acceptable to the professional practice peer group.

Reconstructed operating statement: A written account of the income, expense, and profit or loss of an investment during a specific period.

Rectangular grid system: The division of land into square townships referenced to a principal meridian and accompanying baseline. 2. A system of land division into townships approximately six miles square, each township contains 36 sections and each section containing 260 hectares.

Release clause: A stipulation that upon payment of a specific amount of money to the holder of a trust deed or mortgage that the lien on a specific property will be removed from the blanket lien on the entire involved area.

Relinquishment: The release or quitclaim of an easement to the underlying fee property owner.

Remainder: The portion of a parcel that is retained by the owner after a partial taking.

Remaining economic life: The estimated period of time that an improvement will continue to contribute to the property's value.

Remediation: 1. Cleanup or other methods used to remove or contain a toxic spill or hazardous materials. 2. Abatement methods including evaluation, repair, enclosure, encapsulation, or removal of hazardous materials.

Remnant: A remainder property of little value or use.

Renewal option: The right of a lessee to extend the lease for an additional period of time under specific terms.

Rent: Compensation for use of real property.

Replacement allowance: An expense that provides for a prorated portion of the cost to replace a building component (such as a roof, hvac units, remodeling) that will reach the end of its life prior to the building reaching the end of its remaining economic life.

Replacement cost: The cost as of the effective date of the appraisal, to replace the subject utility with a structure providing similar utility.

Report, appraisal: 1. Any communication of an appraisal that is transmitted to the client upon completion of an assignment. 2. There are four report types: Full Narrative, Narrative, Short Narrative, and Form (*Canadian USPAP 2010*)

Reproduction cost: The actual cost as of the effective date of the appraisal, to reproduce an exact replica of the subject improvements. (Basics of Real Estate Appraising)

Residual: The right to enjoy all the rights in land ownership not otherwise temporarily disposed of to others, as well as the right to receive payment in consideration of the temporary disposition. The residual land interest embodies all the legal rights in the parcel not otherwise disposed of, plus the reversion.

Restriction: The restrictions and prohibitions placed on the property owner from doing certain things relating to the property.

Restrictive covenant: An agreement restricting the use of property, which constitutes part of the conveyance and which is binding on subsequent purchasers.

Resumption: In some Crown grants, the right of the Crown to recapture property or some part of it for certain purposes (such as road construction).

Retrocession: Return of administration and control of property to its original Crown owner once it is no longer required to support its specified program use.

Revenue lease: A lease type when the agency leases to another party for a consideration.

Reversion: 1. The right of the lessor to receive the property back at the end of the lease term or at the end of the holding period. 2. The lump sum benefit that the investor will receive at the end of the investment.

Review, appraisal: The process of developing and reporting a credible opinion as to the quality of another appraiser's work.

Right: The interest one has in real estate.

Right of access: The right of ingress to and egress from one's property to a public road. The right may be actual or implied.

Right of entry: The right to enter on the property of another for construction purposes prior to the completion of the acquisition process.

Right of way: 1. The right to pass across the lands of another. 2. Land or property, or an interest in land or property for transportation purposes (for example, roads, public transport, utilities, and so forth).

Right of way agent: A person who acquires rights of way for public and quasi-public use.

Right of way estimate: An approximation of the project's property acquisition costs, which is prepared in advance of the appraisal reports.

Right of way map: A drawing of an improvement project that shows the project's relationship to adjacent properties, the parcels or portions of the parcels acquired for the project, their ownerships, and any other pertinent information.

Riparian: 1. River bank. 2. Relating to the banks of a body of water.

Riparian rights: The rights of an owner of water fronting property to use the water.

Roadbed: The graded portion of a road, the area between the intersections of top and side slopes, on which the base course, surface course, shoulders, and median are constructed.

S

Salvage value: The realization value of parts reclaimed for future use after retirement of the asset.

Scale: 1. An indication of the relationship between the distances on a map and the corresponding actual distances. 2. A ruler.

Schematic layout: Preliminary project drawings, which show the general proposed project components.

Scope of work: The amount and type of information researched and the analysis applied. (*Canadian USPAP 2010*)

Section: A land measurement equaling one square mile or 640 acres or 260 hectares.

Security deposit: A monetary deposit made by a tenant to a landlord to secure possession.

Seisin: The legal possession of property by a freeholder.

Servient estate: The property subject to an easement.

Servient tenement: The property subject to an easement.

Severance damages: Damages to the remaining property caused by a partial taking.

Site: Land that is ready to be used for a specific purpose.

Solicitor: 1. A person who is legally permitted to transact business on another's behalf. 2. A person who advises and represents clients as to legal rights and obligations.

Sovereign: The supreme powers of the Crown that are totally independent and free from any outside political control or authority over their decisions.

Special adaptability: An apparent but future use to which a property may be, but is not now, put and for which it is particularly adapted.

Special purpose property: A property devoted to or available for a special purpose (such as a school, museum, or religious facility), but which does not have generally accepted independent marketability.

Statute: A law approved by a legislature or parliament.

Statutory right of way: A right of access on, over, or under real property defined in legislation.

Stigma: An adverse effect on property value produced by the market's perception of increased environmental risk due to contamination. (*Canadian USPAP 2010*)

Subdivision: A tract of land divided into blocks or lots.

Subdivision development method: A method to opine land value when the land's highest and best use is for subdivision and development. An estimate of the gross sales prices is developed, all expenses associated with the development deducted, and the net sale proceeds discounted to present value.

Subordination clause: A clause in a junior or second lien acknowledging the superiority of priority for prior liens. A subordination clause may be used in a first deed of trust permitting it to be subordinated to subsequent liens as, for example, the liens of construction loans.

Substitution: A real estate principle that states that when several similar goods or services are available, the one with the lowest price attracts the greatest demand and widest distribution. (*Basics of Real Estate Appraising*)

Subsurface easement: The right to use the space at a designated distance below the surface of the land as for pipelines and storage facilities.

Supply and demand: A real estate principle that holds that price varies directly but not necessarily proportionately with demand and inversely but not necessarily proportionately with supply.

Surface easement: The right to use the surface of the land as for access and flowage.

Survey: To determine and delineate the form, extent, and position of a tract of land by taking linear and angular measurements and by applying the principles of geometry and trigonometry.

Sustainable development: Development that ensures that the use of the resource does not damage prospects for the resource's use by future generations.

T

Temporary easement: An easement granted for a specific use for a limited time.

Tenancy by the entirety: An estate in real estate created by a conveyance to husband and wife, where each becomes seized and possessed of the entire estate. Upon the death of one, the surviving spouse owns the whole.

Tenancy in common: An estate in real estate held by two or more people, each having equal and undivided interest but without any right of survivorship.

Tenant: One who holds possession of the real estate of another.

Tenure: The type of interest and the associated rights in real property outlined in an agreement.

Term: A length of time for which money is loaned.

Testament: 1. A written document providing for the disposition of a person's property after death. 2. A will.

Testate: The condition of leaving a will at death.

Testator: One who makes or has made a testament or will.

Time is of the essence: The requirement of punctual contract performance.

Title: 1. The evidence of a person's right to own or possess property. 2. The quality of ownership as determined by a body of facts and events.

Title, certificate: A document based on a title search stating that the title or interest in property is vested in a designated party and showing outstanding liens, charges, or other encumbrances, if any.

Title opinion: An analysis and interpretation of a title search concerning present ownership, encumbrances, clouds on title, and other infirmities. (*The Dictionary of Real Estate Appraisal*)

Title search: An investigation of public records and documents to ascertain the history and present status of title to a property, including ownership, liens, charges, encumbrances, and other interests.

Topographic map: A map that shows the features of the earth's surface using contour lines, tinting, or shading.

Topography: 1. Detailed graphic delineation on maps or charts of natural and artificial features of a place or region especially in a way to show their relative positions and elevations. 2. The configuration of a surface, including its relief and the position of its natural and artificial features.

Torrens land registration system: A system of land registration in which the government authority issues title certificates covering the ownership of property that tends to serve as title insurance.

Township: A territorial subdivision six miles square and containing 36 sections.

Trade fixtures: Articles placed in or attached to rented buildings by a tenant to help carry out the trade or business of the tenant. (*Canadian USPAP 2010*)

Trespass: Unlawful interference with another's property.

U

Unauthorized occupancy: The sustained use of property without authority.

Underlying fee owner: The owner of fee title to a parcel encumbered by an easement.

Undivided interest: The interest of a tenant in common.

Uneconomic remnant: A remainder property of little value or use.

Unit in place method: A method used in the cost approach to develop a cost estimate using the installed prices for the various building elements.

U.S. Army Corps of Engineers: A United States agency with the mission to provide engineering services related to the nation's water resources, army and air force military facilities, and other defence and federal agencies.

U.S. Federal Aviation Administration: A United States agency with the mission to provide an efficient global aerospace system that contributes to national security and the promotion of United States aerospace safety.

U.S. Federal Highway Administration: A part of the United State's Department of Transportation. The agency's mission is to create the world's best transportation system.

Use value: The value a specific property has for a specific use.

V

Vacancy and bad debt allowance: A deduction from the potential gross income to reflect a loss due to unrented space and credit loss.

Vacancy and collection loss: A deduction from the potential gross income to reflect a loss due to unrented space and credit loss.

Valid: Having binding force. Legally sufficient and authorized by law.

Valuation: The process of developing a value opinion.

Valuation services: Services pertaining to aspects of property value (*USPAP 2010*).

Value: 1. The monetary relationship between properties and those who buy, sell, or use those properties. (*Canadian USPAP 2010*). 2. The monetary worth of a property, good or service to buyers and sellers at a given time. (*The Dictionary of Real Estate Appraisal*)

Value after the taking: In expropriation, the market value of the remainder property after a partial acquisition.

Value before the taking: In expropriation, the market value of the entire property prior to an acquisition.

Venue: The location of a judicial action, hearing, or proceeding.

Void: Having no force or effect.

Voidable: That which is enforceable, valid, and binding until adjudged void.

W

Waiver: 1. An intentional relinquishment of some right or interest. 2. The renunciation, abandonment or surrender of some claim.

Warranty deed: A deed warranting that the grantor has a good title free and clear of all encumbrances and will defend the grantee against all claims.

Water rights: The right to use, extract, or dispose of water on a property.

Wetland: An area that is saturated by surface or ground water with vegetation adapted for life under those soil conditions, as swamps, bogs, fens, marshes, and estuaries.

Will: A written and signed statement, made by an individual, which provides for the disposition of the person's property upon death.

Witness: To subscribe one's name to a deed, will, or other document for the purpose of attesting to its authenticity.

Words of limitation: Words in a conveyance or in a will, which set the duration of an estate.

Workfile: The documentation necessary to support an appraiser's analyses, opinions, and conclusions. (*Canadian USPAP 2010*)

Writ: An official court document, which commands the person to whom it is addressed, to do something specific. That "person" is typically either a sheriff, who may be instructed to seize property, or a defendant, who is commanded to answer the charges in a legal action.

Y

Yield method: An income approach technique that converts an estimate of every year's income, over the holding period, and the reversion into value.

Z

Zoning: Public regulations that control the allowable uses of real estate.

Zoning bylaw: A law controlling the use of land and the improvements on the land.

Zoning map: A map showing the municipality's zones of permitted uses under the zoning ordinance.

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A special thank you to the following committees:

International Asset/Property Management Committee

International Environmental Committee

International Ethics Committee

International Local Public Agency Committee

International Pipeline Committee

International Professional Development Committee

International Relocation Assistance Committee

International Surveying & Engineering Committee

International Transportation Committee

International Utilities Committee

International Valuation Committee