ALAMEDA COUNTY HUMAN RESOURCE SERVICES DEPARTMENT
APPRAISER I STUDY MANUAL

INSTRUCTIONS: Study the material contained in this manual; it is similar to the material you would be expected to learn as a trainee in the appraising field. The written test will be based upon the material in this manual. Do not assume any knowledge other than what is in this manual.

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INTRODUCTION

Role of County Assessors

County assessors are responsible for the assessment of all taxable property within their local jurisdictions, except state assessed property. The assessor's responsibility involves three main objectives: (1) discovering and taking inventory of all taxable property within the county; (2) determining the taxability of each item of property; and (3) valuing and assessing each item of taxable property in accordance with property tax law. Discovering and taking inventory of property and determining its taxability, although difficult processes, are reasonably precise and objective. The third objective, property valuation and assessment, involves detailed analyses and requires the application of considerable knowledge and skill.

Role of the State Board of Equalization

THE STATE BOARD OF EQUALIZATION is responsible for the assessment of property owned or used by specified public utilities (generally regulated telephone, telegraph, electric, and gas companies), the property of railroads, and all intercounty pipelines, canals, flumes, ditches, and aqueducts. The values for these state-assessed properties are allocated to the counties on a proportional basis.

All assessors, appraisers, and local boards of equalization must have a uniform understanding of the basic concept value to effectively carry out their function of producing a proper assessment roll. The term "value" is extraordinarily difficult to define, even though it has been the subject of more writing and discussion than any other economic term. Despite its importance to the appraisal process, there is much misunderstanding in its use. Understanding the value concept as it applies to taxable property will not solve the appraisal problem, but it will indicate the nature of the data to be collected and analyzed in order to arrive at a solution. Because a clear understanding of the term is necessary before the appraisal process can be analyzed effectively, the first objective is to develop a clear concept of "value" for use in appraising all tangible property subject to assessment in California.

II. THEORY OF VALUE

A. Nature and Prerequisites of Economic Value

In economics, material or immaterial things which satisfy human desires, and are external to people, are called goods. All goods are classified as either free or economic goods. Free goods have no value and do not command a price; economic goods have value and a price. Before any good can have value, it must meet all of the following four prerequisites:

- Utility
- Scarcity
- Capacity for private ownership
- Demand, of effective purchasing power

Utility. Utility is the capacity of goods to evoke desire for possession. Some economists simply say it is the quality of "wantedness" or "desiredness." British economist Alfred Marshall defined utility as the want-satisfying power of a commodity. All of these definitions indicate the essential nature of utility: It is psychological and depends upon the views, or perceptions of *individuals*. Thus, value does not reside in objects or goods themselves; rather, it represents an attitude by people toward things. While goods have value because of their perceived capacity to perform useful services for individuals, utility does not necessarily mean everyday usefulness. One may question whether a diamond ring is useful, but no one will argue that it does not have utility in many settings or markets. In most cases, utility derives from the perceived benefits of an object monetary or otherwise. Real estate, for example, has utility because

prospective purchases know of the productive services that real estate can provide.

Scarcity. Although utility is a necessary condition for value, it is not the exclusive condition. Some things may have immeasurable utility, and yet have no value. The air we breathe has a great deal of utility, but ordinarily it is not an economic good. The reason for this is that air is not scarce – it is freely available to all in unlimited quantities. Without scarcity, a good cannot have value. A good is scarce only in relation to the desire or demand for it. In order to have value, a good must require time and effort to obtain and be scarce enough so that it is necessary to economize on its use.

Capacity for Private Ownership. Before a good can have value, it must be capable of private ownership. Value in an economic sense thus assumes the social institution of private rights in property. The value of a good means value to an individual who has or may have an ownership interest in it. A good has economic value only if its attributes of utility and scarcity can be exploited by exercising the power of ownership through exclusive use or sale.

Demand or Effective Purchasing Power. A final prerequisite of value is demand, or effective purchasing power. If a good has utility and scarcity, this implies a desire on the part of people to obtain it. However, to create economic value, this desire must be supported by effective purchasing power. People must be ready, willing, and able to purchase the good at some price.

Value is a market phenomenon resulting from the interaction of supply and demand. In turn, supply and demand are functions of relative scarcity and utility, respectively. Land, buildings, and other goods have economic value because they have utility, are relatively scarce, are capable of private ownership, and are the objects of demand in a market context.

B. Economic Concept of Market Value

Market Value Defined. Economists define market value, also known a value in exchange, as the power of a commodity to command other commodities in exchange. Value in exchange mans that the purchasing power of a commodity can be expressed in terms of other commodities. It is the relative desirability of a commodity as evidenced by the actions of buyers and sellers in an open market at a particular time.

For example, in a barter economy, a farmer might find that one tractor can be exchanged for three horses. The value of tractors is expressed in terms of horses, and vice versa. If the exchange ratio changes and one tractor now equals four horses, what is the effect on the power of a tractor to command horses in exchange? The answer is that the value of a tractor, in terms of horses, has increased. This may have happened because the value of tractors has remained constant in terms of all other goods while the value of horses has decreased, or because the value of both tractors and horses has changed in terms of all other goods. In either case, value in exchange is determined by the exchange ratios among goods or commodities.

The preceding illustration is fundamental and of great importance. Of course, values are not expressed in our society in terms of commodities such as horses or tractors.

Modern societies use money as a medium of exchange and a standard of value, with values expressed in terms of money. However, it is important to remember that money itself changes in value. The purchasing power of the United States dollar was quite different in 1996 than 2006. Since the value of goods is measured and compared in terms of money, the real value of a good may not have changed, even though its nominal value as measured in dollars has changed.

For example, if the dollar value of property "A" is $100,000 in 1996 and $150,000 in 2006, what does this mean? It may mean that the real value of property "A" has increased. Alternatively, it may mean that the value of money has decreased due to an increase in the general price level, and that there has been no change in the real value of property "A" relative to other goods. It is impossible to interpret what the difference in dollar measurements means unless the change in the general price level is considered. If the general price level has changed, it is necessary to adjust the dollar measurements of value from different time periods to determine the real change in value. This is typically done by inflating or deflating the dollar measurement of one of the goods, typically by means of a price index, to the price level at which the other good is being measured. It is important to remember that value is a real concept (in the sense of the exchange of real goods) and not a money concept.

Regardless of the preference of the individual appraiser for particular terminologies, it is important to recognize that **value is essentially a ratio of exchange**. In our society, values are expressed in terms of money despite the fact that money is one of the most unstable of measuring devices. When changes in the value of the measuring device (money) occur, changes usually occur in the value of all other commodities expressed in terms of money.

III. STANDARD OF VALUE FOR PROPERTY TAX APPRAISAL

A. Fair Market Value Standard

In the appraisal of property for tax purposes, economic concepts of value must be reconciled with value as defined in property tax law. The value standard for property tax purposes is market value. However, the term "market value" is itself subject to some ambiguity. To resolve this ambiguity, the Legislature and the courts have attempted to express the market value concept for property tax purposes in precise terms.

Section 1 of article XIII of the California Constitution establishes the foundation for the fair market value standard:

> Unless otherwise provided by this Constitution or the laws of the United States. (a) All property is taxable and shall be assessed at the same percentage of fair market value. When a value standard other than fair market value is prescribed by this Constitution or by statute authorized by this Constitution, the same percentage shall be applied to determine the assessed value. The value to which the percentage is applied, whether it be the fair market value or not, shall be known for property tax purposes as the full value. (Emphasis added.)

In a benchmark decision, the California Supreme Court amplified the statutory definition of market value as follows:

> It provides, in other words, for an assessment at the price that property would bring to its owner if it were offered for sale on an open market under conditions which neither buyer nor seller could take advantage of the exigencies of the other. It is a measure of desirability translated into money amounts…and might be called the market value of property for use in its present condition.

The Legislature has expressed the concept of market value in section 110 and 110.1. Section 110(a) states:

> Except as is otherwise provided in Section 110.1, "full cash value" or "fair market value" means

> the amount of cash or its equivalent that property would bring if exposed for sale in the open market under conditions in which neither buyer nor seller could take advantage of the exigencies of the other, and both the buyer and seller have knowledge of all the uses and purposes to which the property is adapted and for which it is capable of being used, and of the enforceable restrictions upon those uses and purposes.

Subdivision (b) of section 110 establishes a rebuttable presumption that "full cash value" or "fair market value," as defined in subdivision (a), shall be the actual purchase price if the terms were negotiated under specified conditions reflecting an "open market transaction." Under subdivision (c), this rebuttable presumption shall not apply where a taxpayer has failed to provide certain information about the conditions of the transaction.

Subdivisions (d), (e), and (f) of section 110, added by legislation effective January 1, 1996, provide the statutory expression of the concept that intangible assets and rights that relate to the activities of a business may not enhance the value of taxable property. While intangible assets and rights are not themselves taxable, property that is otherwise taxable may be valued by assuming the presence of intangible assets or rights necessary to put the property to beneficial or productive use.

Subdivisions (a) and (b) of section 110.1 define value as follows:

(a) For purposes of subdivision (a) of Section 2 of Article XIII A of the California Constitution, 'full cash value' of real property, including possessory interests in real property, means the fair market value as determined pursuant to Section 110 for either the following:
    (1) The 1975 lien date.
    (2) For property which is purchased, is newly constructed, or changes ownership after the 1975 lien date, either of the following:
        (A) The date on which a purchase or change in ownership occurs.
        (B) The date on which new construction is completed, and if uncompleted, on the lien date.

(b) The value determined under subdivision (a) shall be known as the base year value for the property.

Subdivisions (c) through (e) of section 110.1 provide for the establishment of 1975 base year values. Subdivision (f) provides that once a base year value is established, it shall be annually adjusted by an inflation factor not to exceed 2 percent.

Rule 2 interprets the above statutory definitions of market value, as follows:

> In addition to the meaning ascribed to them in the Revenue and Taxation code, the words "full value," "full cash value," "cash value," "actual value," and "fair market value" mean the price at which a property, if exposed for sale in the open market with a reasonable time for the seller to find a purchaser, would transfer for cash or its equivalent under prevailing market conditions between parties who have knowledge of the uses to which the property may be put, both seeking to maximize their gains and neither being in a position to take advantage of the exigencies of the other.

In short, market value is the value in exchange under certain stipulated conditions. Each selling price an

appraiser uses as an indicator of market value should be investigated to determine whether these conditions were present at the time of the sale. If any of the conditions stipulated in the definition of market value is absent, the appraiser must determine whether – and to what extent – this influenced the selling price. Important aspects of the relationship between fair market value and open market conditions covered in the above definitions are:

- The amount the property would bring in cash or its equivalent
- Exposure on an open market for a sufficient amount of time
- Neither the buyer nor the seller able to take advantage of the exigencies of the other

Both parties seeking to maximize their gains

- Both buyer and the seller having full knowledge of the property and acting prudently

From the viewpoint of economics then, value is a ration of exchange. Economic theory recognizes that changes in this ration of exchange are expressed in increased or decreased prices, and that the same amount of a commodity commands a greater or smaller number of dollars. In formulating the concept of market value in property tax law, the courts have stressed that this value is the most probably price *in terms* of money. Thus, we have an economic concept and a legal concept of value that are compatible.

The reconciliation of the economic and legal concepts of market value is significant progress toward a clearer value concept, but other ambiguities remain. The following discussions of the unit to be valued, the nature of the market, and the property rights to be appraised will remove most ambiguities. Actually, all these factors are closely inter-related and different concepts applied to any one factor will result in different market value estimates.

B. Appraisal Unit

Market value, with some exceptions, is the standard of valuation for property tax appraisals in California. It follows that the property to which this standard is applied must be identified.

This identification of the property to be appraised is an integral part of the appraisal process. Part of the process of identifying the property is identifying the "appraisal unit." The appraisal unit is also referred to as the "unit to be appraised," "unit to be valued," "unit of appraisal," or "unit of value."

In most cases the identification of the appraisal unit is obvious and causes few or no problems. Since the objective of the appraisal is to determine the market value of the property, the market also provides the appraisal unit. The proper unit to be valued is the unit that people in the market typically buy and sell. For example, single-family homes are sold as a combination of land and buildings. Buyers and sellers do not negotiate separate prices for the land and the buildings but negotiate a price for the combination of the land and buildings. The combination of land and buildings, therefore, comprises the appraisal unit, and the appraisal of this type of property must reflect the value for this unit.

In some cases though, the identification of the appraisal unit may not be as easily discernible as with single-family homes. For example, unimproved residential subdivision lots may be sold individually or in groups. Also, a farm property may consist of several parcels that could be sold separately or as a single farm unit. In these cases, the appraiser must use judgment to determine the proper unit. Decisions should be based on consideration of ownership, use, location, and, most importantly, highest and best use. These decisions must reflect, as faithfully as possible, the unit most likely to be sold if the

property were exposed to the open market.

The necessity of defining the appraisal unit is common to all appraisals. The definition is more problematic, however, with property tax appraisals. When an appraisal is made to obtain a loan, for example, the appraisal unit is usually well defined by the lending institution ordering the appraisal. The property tax appraisal, on the other hand, does not have the benefit of such a prior definition. Also, property tax law imposes some requirements, limitations, and exceptions to the general principles relating to the appraisal unit.

The preceding paragraphs have dealt with the problem of appraising property as a unit, but property tax law requires a separate assessment of land, improvements, and personal property. However, statutes do not require separate appraisals of these different segments of a unified property. The separate figures are, in most cases, only an allocation of the total property value. If the market does not typically deal with a segment of property, the appraiser may find it difficult to defend the amount allocated to that segment (even though everyone agrees that the allocation is reasonable). One author has illustrated the point by reference to a pair of gloves. Even though one glove may have no value, anyone would agree that the value of a pair of gloves could reasonably be allocated equally between the two gloves.

IV. NATURE OF THE REAL ESTATE MARKET

One of the most important aspects of an appraisal is understanding how the real estate market evaluates the properties under appraisal. In order to analyze comparable sales and other market data, the appraiser must have information about the market conditions that surrounded the transaction. Additionally, since an appraisal is based on an estimate of a property's future productivity or benefits, knowledge of the market forces that may affect the supply of and the demand for property being appraised is critical.

While the following discussion focuses on the real estate market, appraisers should understand and recognize similar or analogous aspects in the personal property market.

A. Definitions and Functions of a Market

A market can be defined as the organized action between buyers (demand) and sellers (supply) that permits trade. In *The Appraisal of Real Estate*, the real estate market is defined as "the interaction of individuals who exchange real property rights for other assets, such as money." The study of the market should include all factors of supply and demand that affected the price and quantity traded of the property type being appraised. Real estate markets may be classified in several ways: (1) by geographic area; (2) by property type; or (3) by the scope of prospective market participants.

Real estate markets are often defined by broad geographic boundaries, because the value of most real estate, due to its immobility, is strongly influenced by local market forces. For example, one might refer to the real estate market in San Diego or the market in the San Francisco Bay Area Peninsula. A neighborhood is an example of a highly focused, geographically defined real estate market in which all properties are subjects to common value influences.

Real estate markets may also be defined by the property type traded. Real estate markets are often broadly described in terms of commercial, industrial, agricultural, or residential market segments, each representing a broad type of property. In turn, each of these broad property types may comprise several subtypes. For example, the commercial category includes – but is not limited to –

office and retail properties, while the residential category includes single-family residences, apartments, condominiums, and other subtypes.

Real estate markets may also be defined by the scope of their participants. While the buyers and sellers of most houses reside in the community in which the property is located, the buyers and sellers of most properties – such as large office buildings, industrial properties, or agricultural tracts – may be individual investors or financial intermediaries from far outside the local area. Some properties trade in markets that are regional, national, or even international in scope.

The basic function of any market is to effect exchange. In a barter economy, goods are exchanged for other goods; in a money economy, goods are exchanged for money and money for other goods. The result of exchange is the distribution and allocation of economic resources. Because of the scarcity of resources, all people in a society cannot have everything they want at whatever time they wish. Every economic system must make decisions about what to produce, how to produce it, and how the produced goods and services will be allocated. In a free-enterprise economy, these decisions are largely made in a competitive market through the voluntary interactions between buyers and sellers using the price mechanism.

The real estate market performs functions similar to those performed in other competitive markets. In particular, the real estate market: (1) establishes price; (2) distributes existing real estate resources among potential users; (3) contracts or expands the supply of real estate in response to changing market conditions; and (4) determines land use.

Price is established in a competitive market through market transactions. Price is established through the interaction of demand and supply, and it responds to the forces affecting market demand and supply. The appraiser should examine each transaction used in an appraisal to determine whether the conditions of fair market value have been met.

Real estate resources are distributed, or allocated, among potential users through the price mechanism. In a free, competitive market, real estate is allocated based on the ability to pay, either in the form of rent or purchase price.

The supply of real estate resources is affected by the same market mechanism that influences the supply of other goods. In the real estate market, producers (developers) respond to increased demand – as signaled by higher purchase prices and/or rents – by increasing the supply of real estate through either remodeling or new construction. With a decrease in demand, the opposite occurs. The market mechanism also allows a change in the character of demand to being about a change in the character of supply. For example, if there is increased demand (as reflected in higher prices) for homes with three bathrooms. Supply thus reflects the wants and desires of consumers.

Finally, in a free market, competitive bidding among buyers and sellers determines the utilization of each parcel of real estate. In general, the most productive use of a parcel of land, subject to legal and physical constraints, will prevail over other competing uses. This use, which is determined by market forces, is referred to as a property's highest and best use. In the long run, this process of land use determination at the parcel level also determines the patterns of land use over much wider geopolitical areas.

B. Property Rights To Be Appraised

Real estate is a physical asset. Because of its immobility, it cannot be physically transferred from one owner to another. Therefore, real estate ownership is actually an ownership of rights in realty (real property). The possession of all the rights by an individual owner, subject only to limitations imposed by government, is known as the fee simple absolute estate. Limitation imposes by government include property taxation, police power, eminent domain, and escheat.

(1) Property Taxation. This is the most basic limitation. Legal remedies are provided in the event of nonpayment of taxes.
(2) Police Power. This limitation serves the interests of public health, safety, morals and/or general public welfare. Building codes, zoning, property subdivision ordinances, and restrictions in coastline development are examples of police power.
(3) Eminent Domain. Public entities may acquire private property for public use. Just compensation must be paid for properties acquired through the condemnation process.
(4) Escheat. This limitation is seldom used. It applies only when an owner dies and leaves no heirs. The property then "escheats," and title passes to the state.

Generally, in the appraisal of property for taxation, the rights to be appraised are the fee simple absolute rights unencumbered by liens, leases, or easements.

C. Special Characteristics of Real Estate

Real estate has special characteristics that distinguish it from other economic goods. These characteristics are:

- Immobility
- Uniqueness
- Durability
- Large transaction size
- Long development or production period

Immobility. Since real estate is immobile (it cannot be separated from its location), its value is closely related to the current and future economic prospects of the community or neighborhood in which it is located. Simply put, real estate cannot be moved to a better market. The immobility of real estate means that the value of a given parcel of land is strongly affected by factors outside its boundaries. These factors include the uses that are made of neighboring parcels; the availability and quality of off-site improvements or infrastructure (e.g., water, sewer, utility, and transportation systems); and the quality of public services including schools and police and fire protection. All of these off-site factors exist *outside of* a particular parcel of real estate.

Uniqueness. Each parcel of real property is unique, which often makes comparison with other parcels difficult. For example, residential properties with desirable views or water frontage may sell for much more than otherwise comparable properties that lack such attributes, even if the properties are in close proximity. Similarly, a house on a busy street may sell for significantly

Durability. The durability of real property is apparent. New structures usually have a long life expectancy, and land exists in perpetuity. Thus, real property yields benefits over a long period of time. Since the value of real estate is based on the market's expectations of its future productivity, the appraiser must estimate the benefits of a property over this future period.

Large Transaction Size. A characteristic of real estate related to its durability is its large average transaction size. For most families a home is their largest investment, and investment-type properties, typically require even larger outlays. The economic size of most real estate transactions creates, in most cases, a large financing requirement. Therefore, the cost and availability of financing has a strong effect on the real estate market.

Long Development or Production Period. From conception to completion, real estate projects, often take years to complete. From a market standpoint, this means that the supply of real estate is typically slow to adjust to an increase in market demand. An increase in demand often results in rapid price increases in the short run. Similarly, the supply or real estate is also slow to adjust t a decrease in market demand. A significant decrease in demand leads to price decreases.

Thus, the real estate market departs significantly from the ideal of a purely competitive market ,largely due to the characteristics of real estate discussed above. Specifically in the real estate market:

1) The product is differentiated. Each real estate parcel has special physical characteristics and a unique location. This makes comparable sales and other data difficult to obtain for some types of properties.

2) Buyers and sellers often have unequal information. Some buyers may not be fully aware of the forces and trends which affect value and of the full potential for a parcel. Complete information about all transaction is hard to obtain particularly for commercial and industrial properties.

3) There is a long lead time for planning and building new property improvements. This delays the supply response to an increase in demand. In a perfectly competitive market, supply and demand are rarely far out of balance. The long life of most building improvements also means that supply cannot be reduced with a decrease in demand.

4) The large financing requirement of most real estate means that both real estate demand and supply are significantly affected by credit conditions. The level of interest rates affects the demand of real estate and real estate value. Interest rates also affect the supply of real estate through the impact on new construction.

V. HIGHEST AND BEST USE

A. Value as a Function of Use

Obviously, land is capable of alternative uses. A site may be used for an apartment building, a service station, a single—-family residence, an orchard, a retail store, or a variety of other uses. Structures, to the extent they can be remodeled or adapted, are also capable of alternative uses.

The Productivity or benefits derived from real property depend upon its use. Since value is a function of the present worth of the anticipated future benefits, value also depends upon use. Accordingly, real property must be appraised on the basis of its use or uses.

B. Highest and Best Use Defined

Highest and best use is perhaps the most fundamental concept in real estate appraisal. All of the fundamental principles of real estate market analysis come together in this concept. Highest and best

use is that use, among the possible alternative uses, that is physically practical, legally permissible, market supportable, and most economically feasible. In the Appraisal of Real Estate, highest and best use is defined as follows:

The reasonably probable and legal use of vacant land or an improved property, which I is physically possible, appropriately supported, financially feasible, and that results in the highest value.

An appraisal of fair market value for property tax purposes is based on a property's highest and best use. The appraiser must make a determination of highest and best use as part of the appraisal process.

Since the buyers and owners generally attempt to maximize value and develop property to its highest and best use, the existing use is likely to be the highest and best use. But this is not always the case. Properties are typically devoted to particular uses for long periods of time and economic change may render certain uses in specific locations either less profitable or totally obsolete. The highest and best use of a parcel is subject to change over time.

C. Criteria for Highest and Best Use

In order to qualify as a property's highest and best use, the use must meet four criteria. The use must be: (1) legally permissible: (2) physically possible: (3) financially feasible or probable; and (4) most productive. These criteria apply to both the highest and best use of the land as though vacant and the highest and best use of property as improved. The following discussion generally refers to the analysis of highest and best use of land as though vacant.

Legally Permissible. The highest and best use must be a legal use. Government significantly limits land use. The highest and best use must be a use that is –or will be—allowed by government. A property should not be appraised on the basis of a use that is illegal.

Enforceable Governmental Restrictions. The property tax appraiser must consider the effect that any enforceable governmental restrictions may have on the value of a property. Property subject to an enforceable governmental restriction must be valued based on its restricted use. However, property may be appraised on the basis of a use other than permitted under enforceable governmental restrictions, if there is reason to believe that the restrictions will be terminated. In this event, the property should be appraised at the highest and best use that the probable change would allow, taking into account the expenditures required to make the change and the time period required to accomplish it.

Enforceable Contractual Land Use Restrictions. Deed restrictions that restrict the uses of a property are not the same thing as governmentally imposed restrictions discussed above. Deed restrictions are rights reserved by private persons as opposed to limitations imposed by government. In most cases, the property tax appraiser should not recognize deed restrictions when analyzing highest and best use. The rights to be assessed are the fee simple rights without encumbrances, subject only to the limitations imposed by government. A division of the fee simple rights would require a separate assessment on each portion, and the assessment of only one portion of the rights would result in the illegal exemption of the balance.

In general, private parties cannot reduce the taxable value of their property by imposing their own restrictions upon it.

Physically Possible. *The highest and best use must be physically possible*. Pertinent physical factors regarding a property include its size and shape, topography, load-bearing capacity and availability of utilities. For example, use that require a larger site than the subject property or utilities that are not available to the subject property should be eliminated from consideration. The highest and best use of a property as improved also depends on physical factors, since the costs of any modifications to the improvement depends on the existing property's characteristics and condition.

In addition, highest and best use should be based either on existing landownership or on an existing use that combines parcel sunder separate ownership. If parcels are separately owned and separately used, they should not be combined for appraisal purposes (or for the purpose of highest and best use analysis). For example the appraiser should not consider plottage value, which arises from the combination of two contiguous parcels held in different ownership. However, for example, in the case of a shopping center comprising several parcels under different ownerships, the parcels interact to create value as reflected by the rent levels and trade volume of the entire center. Thus, the value of an individual parcel in the center (and its highest and best use) arises from the parcel's function as part of the economic unit, which is the entire shopping center.

Financially Feasible or Probable. *The highest and best use must be probable, not speculative or conjectural.* There must be a demand for the use in the market; the use must be financially feasible given market conditions of supply and demand. All uses that produce a positive return (i.e., a gross income greater than the amount needed to satisfy operating expenses, debt service, and investment recapture or amortization) are regarded as financially feasible.

Most Productive Use. *The highest and best use must be the most productive use*. Of all the financially feasible uses, the one that produces the highest land value (again, on a risk adjusted basis) is the highest and best use of the land as though vacant. It is the most productive use among the financially feasible uses. Generally, it is a use that is most profitable over a reasonable period of time. For example, a use that yields a very high current income, but quickly depletes the productivity of the property, may not be the highest and best use. The highest and best use analysis should determine whether a non-depleting use that yields a lower but more sustained income will in fact produce a higher land value. The land value resulting from a given use can be estimated using two techniques: (1) by estimating the total property value (land and improvements) of the proposed use and subtracting the full cost of producing the improvements for that use; or (2) by capitalizing the residual income to the land (i.e., the income that remains after income attributable to the improvements have been subtracted).

VI. THE APPRAISAL PROCESS

Steps in the Appraisal Process

The appraisal process is a systematic method for arriving at an estimate of value. It is a standardized procedure developed by professional appraisers for applying the fundamental principles of valuation to a given property.

There are seven steps in the appraisal process:

1. Definition of the appraisal problem
2. Preliminary analysis and data collection
3. Highest and best use analysis
4. Land value estimate

5. Application of the approaches to value
6. Reconciliation of value indicators and the final value estimate
7. Reporting the final value estimate

A. Definition of the Appraisal Problem

The definition of the appraisal problem is the first step in the valuation process. This step should eliminate any ambiguity regarding the nature of the appraisal. The definition of the appraisal problem contains five substeps: (1) identification of the property being appraised; (2) identification of the property rights involved in the appraisal; (3) determination of the purpose of the appraisal; (4) establishing the effective date of the appraisal; and (5) obtaining the definition of value for the appraisal.

Property Identification. A property can be physically identified in several ways: street address, legal description, or assessor's parcel number. In property tax appraisal, the primary means of property identification is the assessor's parcel number (APN). The street address and legal description are secondary means of identification. For personal property appraisals, account numbers may be used as the identification where the property cannot be tied to a specific location, as is often the case with making a single assessment where the taxpayer has equipment at more than one location.

Property Rights and Interests Involved. The appraiser must obtain a precise definition of the property rights to be valued. In most cases, an appraisal for property tax purposes reflects the value of full fee simple unencumbered interest of the property premised on the property's highest and best use.

Purpose and Function of the Appraisal. The purpose of all appraisals is to estimate value of some sort. An appraisal for property tax purposes renders a valuation, consistent with property tax law, that will be used as the basis for assessing the property.

Date of Appraisal. An opinion of value is valid as of the specified date of the appraisal. For most real property in California, the relevant appraisal date for property tax purposes is the date on which a change in ownership of property occurred or new construction was completed. The statutory lien date, January 1, is also a relevant date of appraisal in many instances.

Definition of Value. A critical aspect of an appraisal is to obtain a precise definition of value pertinent to the purpose of the appraisal. Excluding several exceptions, the value to be estimated for property tax purposes is fair market value.

B. Preliminary Analysis and Data Collection

The preliminary analysis phase develops a logistical plan for the appraisal. This step includes a preliminary inspection of the property and its surroundings; a list of the data, time, and resources needed;
a preliminary estimate of he property's highest and best use; and a selection of the primary approaches to value that will be used.

A competent appraisal is supported by information from the real estate market. This information is referred to as "market data." All relevant data about the property should be considered, including primary data collected in the field and data from secondary sources. Market data may be divided into three categories: general, specific, and comparative.

General data pertain to information about trends in the environmental, social, economic, and governmental forces that affect property value. Trends occur at the national, regional, community, and neighborhood level. Comparative data pertain to the physical, financial, and operating characteristics of comparable properties that will be used in the appraisal. Specific data pertain to the subject property itself. For example, both the site and its improvements are examined to gather information regarding their utility. Financial and operating information about the property is also obtained, as is information about any restrictions or easements that affect the possible future uses and/or utility of the property. All appraisal methods require the collection and verification of data by appraisers, and the collection and maintenance of appraisal data is a primary concern of assessors' offices.

C. Highest and Best Use Analysis

After determining the data requirements and collecting the data, the appraiser analyzes the property's highest and best use in light of market forces and conditions. The value estimate is premised on the assumption that the highest and best use has been identified. Under competitive market conditions there is a strong tendency for property to be used in the most productive manner; that is, there is a high probability that the current or existing use is also the highest and best use of the property. The determination of highest and best use is also necessary in order to select the comparable properties used in the appraisal.

D. Land Value Estimate

Land value is directly related to the highest and best use determination. In fact, the determination of the highest and best use of the land as though vacant requires a land value estimate. A separate estimate of land value is needed for at least two reasons. First, an estimate of land value under its highest and best use as though vacant is required in some appraisal approaches or techniques. Both the cost approach and the building residual technique in the comparative sales approach, for example, require separate land value estimates. Second, the property tax appraiser is required to allocate the total property value between land and improvements, which may be accomplished through a separate estimate of land value. This also produces an estimate of the contributory value of the improvements.

E. Application of the Approaches to Value

An important step in the appraisal process is the determination of the appropriate method or methods by which the value will be estimated. Typically, the appraiser considers three primary approaches to value. Each approach, from a different perspective, simulates the thought processes of the typical buyer in a competitive market. The three approaches are the cost, comparative sales, and income approaches.

In the cost approach, the appraiser estimates the market value of a property by: (1) estimating the cost of either reproducing the existing improvements with duplicate improvements or replacing the existing improvements with improvements of equivalent utility as of the appraisal date; (2) reducing that estimated cost by the amount of depreciation, or loss in value; and (3) adding the estimated value of the land or site to the depreciated cost of the improvements. The cost approach thus requires a separate estimate of land or site value.

In the comparative sales approach, the appraiser estimates market value by comparing the subject property to comparable properties of similar utility that have recently sold under competitive market

conditions. The sales prices of comparable properties provide indicators of the market value of the property being appraised. The comparable sales prices are adjusted to reflect differences in utility from the property being appraised. The comparative sales approach is also primarily based on the principle of substitution.

In the income approach, the appraiser estimates value by first estimating the future income to be produced by the property and then discounting or "capitalizing" the future income into an estimate of current market value. The income approach is premised on the concept that value is equal to the present worth of future benefits. The income approach is primarily based on the principle of anticipation.

F. Reconciliation of Value Indicators and the Final Value Estimate

The reconciliation of value indicators from the separate approaches to value and the resulting final value estimate is the next step in the appraisal process. Theoretically, the approaches to value should produce identical value indicators. In practice, however, this is rarely the case, and significant differences may occur. To produce a final value estimate, the appraiser reconciles the indicators from each approach utilized. Value indicators should be reconciled considering: (1) the appropriateness of the approach given the purpose of the appraisal; and (2) the adequacy and reliability of the data available to perform the appraisal. The appraiser should examine and reconcile all value indicators.

The final value estimate is not a simple average of the value indicators; one or two approaches often have greater significance and are given greater weight by the appraiser. The final value estimate must reconcile all available indicators in an analytical manner. While the final value estimate is an opinion of value, it should be a reasoned and defensible opinion based on verified market data.

G. Reporting the Final Value Estimate

The final step in the appraisal process is reporting the final value estimate. An appraisal may be reported in a letter, a form, or a narrative. In appraising for property tax purposes, form reports are generally used although short narrative reports may be used for complex properties and in assessment appeals cases.

VII. COMPARATIVE SALES APPROACH

A. Introduction

The comparative sales approach may be defined as an approach that uses direct evidence of the market's opinion of the value of a property. In this approach, the appraiser estimates the market value of the subject property by comparing it to similar properties that have recently sold. In addition to actual sales, the appraiser may consider listings, offers, options, and the opinions of owners, real estate agents, and other appraisers as to the selling prices that comparable properties might command. The comparative sales approach is based on the premise that the fair market value of a property is closely and directly related to the sales prices (under the conditions of fair market value) of comparable, competitive properties.

The comparative sales approach is not the only approach that utilizes market data. Construction costs and income information are also market data. However, significant differences exist in the nature of the market data in the cost and income approaches in contrast to the comparative sales approach. Neither costs nor incomes are direct evidence of market value. Rational people would

consider cost and future income when buying or selling property in order to form their opinions of market value. However, in the comparative sales approach, an indicated value is direct evidence of the market's opinion of value, which gives this approach a certain preeminence.

Rule 4 states, in part:

> When reliable market data are available with respect to a given real property, the preferred method of valuation is by reference to sales prices.

The comparative sales approach is based upon the principle of substitution and presumes that the market value of a property will approximate the sales prices, listings, offers, and appraisals of competitive substitutes. With a perfect degree of substitution and purely competitive market conditions, properties would have exactly the same value. No two real properties are even identical; all differ at least in location. However, reasonable substitutes may exist if relevant economic characteristics are similar. Because bargaining is characteristic of most sales, even perfect economic substitutes frequently sell for different amounts. This is the nature of the real estate market.

The market value of real estate is more realistically described as a band or a range rather than as a point. The appraiser is attempting to make an estimate that lies within that range. It is difficult, if not impossible, to specify the exact limits of any range of market value, especially sine the range varies with different types of properties, locations, economic and market conditions, and other factors. The possible range is smaller for a property in a homogeneous residential subdivision than for a property in a heterogeneous commercial district. For example, a residential property may have a market value ranging between $125,000 and $130,000; any appraisal that lies within this range may be considered reasonable.

B. Sales Data Collection and Analysis

A sales price represents an agreement between two or more parties at a particular instant of time. As provided by section 110 and rule 2, a sale price of real property, as measured in cash or its equivalent, is rebuttably presumed to be the fair market value of the property if the terms were negotiated under conditions reflecting an open market transaction. Accordingly, the circumstances of each sale must be investigated before the sale price can be used as a value indicator for the subject property. This applies to sales of both the subject and comparable properties. For the sale to be an open market transaction, the following conditions must be satisfied:

- Exposed for sale in the open market
- Both parties seeking to maximize their gains
- Neither party taking advantage of the exigencies of the other
- Reasonable time allowed to find a buyer
- Reasonable knowledge of the property's uses, present and prospective, by both buyer and seller
- No collusion or "love and affection" between the parties
- Consideration in cash or its equivalent

Sales prices may not be indicative of market value. Consider the following examples: A seller may sell hastily in order to raise money; a purchaser may be forced to buy an adjoining lot to continue present operations; an uninformed buyer may pay a price in excess of the property's market value; a

purchaser may give the seller a second deed of trust as partial consideration, and the cash equivalent value of such financing may differ substantially from its nominal value; or, finally, a property may transfer between relatives, and, due to "love and affection" or other factors, the sale price may not represent market value.

If any of the open market conditions identified in the definition of fair market value is absent, the presumption that the sale price represents fair market value may be rebutted. If it is established that the property would not have sold for that price in an open market transaction, the property should be assessed at its fair market value as estimated by using other value indicators. Such a sale is also not valid as an indicator of value for other properties, and it should not be used in the comparative sales approach.

In collecting market data, some information may be incorrect or misleading; it is risky to rely on only one or two sales in arriving at a value indicator. This risk can be minimized by acquiring information from more than one principal and asking questions designed to check the consistency of the data. In the selection of comparable sales data, the appraiser should not give preference to the type of buyer or seller involved in a transaction. This applies, in particular, to the type of legal entity involved. Sales involving private individuals, corporations, partnerships, financial institutions, and governmental entities may all be used when estimating market value, *provided that the conditions of a market value transaction are met* and the necessary adjustments (to reflect comparability to the subject property) are made.

The real estate market functions with more regularity than a casual observation of sales might indicate. A compilation of the unadjusted sales prices in a neighborhood may indicate a relatively wide range of values. However, the range narrows considerably after sales are confirmed and adjustment are made for the primary elements of comparison.

Area of Search. In selecting market data for analysis, an appraiser should focus on transactions pertinent to the subject property's specific market. In general, comparable properties are those that compete with the property being appraised or have a demonstrable effect on prices or other relevant components of the market in question. The subject and comparable properties must have the same highest and best use. The type of real estate being valued and the nature of its market will define the geographic boundaries from which to draw comparable sales data. Neighborhood is a very important factor in the single-family residential market, and the area to search for comparable sales is generally limited to the subject's neighborhood and other similar neighborhoods in close proximity. However, certain types of properties have regional, national, and even international markets. The search for market data should include the same area in which potential buyers would search for comparable substitutes.

Time Period for Sales. The desired time period for comparable sales depends on the sales activity in the market place. In a rapidly changing market with frequent sales, the appraiser should look for comparable sales within a few months of the appraisal date. If there is little sales activity and prices are stable, a longer time span is appropriate. However, appraisers and assessment appeals boards cannot consider sales of comparable properties more than 90 days after the date for which value is being estimated. This limitation does not apply to sales of the subject property.

Number of Sales. The number of sales needed depends on the comparability of the sales to the

subject property. If the subject is a house in a subdivision of similar houses, then three or four sales of closely comparable house are usually sufficient. If closely comparable sales cannot be found, for example, as with some industrial properties, then additional comparable sales will be needed. In some cases, the appraiser may need to investigate a large number of sales just to find three or four comparables.

Sources of Sales Data. County assessors generally have ample sales data within their offices, including a record of all real property sales within the county. However, the amount of detail on each sale will vary. Other sources are available to provide additional detail or information on transactions in other counties; there are several private companies in California that provide real estate sales data. Multiple-listing services also have comprehensive list of sales transaction in their region and listings of property currently offered for sale. Real estate brokers, other appraisers, and title companies are other sources of sales data. In the absence of other comparable sales data, the appraiser may consider multiple listings and other public listings of asking prices for properties in establishing a range of value. It is important to note that listings should not be considered as direct evidence of the final value estimate for real property.

Verification of Data. Verification of sales data is an important step in the comparative sales approach. Assessors have an advantage in this area because the law requires property owners to report certain information about real estate transactions to the assessor on form signed under penalty of perjury. An inspection of the property may be needed to determine physical condition, locational influences, and visual appeal.

C. Sales Data Adjustments

The appraiser considers all differences between the subject and comparable properties that could affect their respective market values, then adjusts the sales prices of comparable properties for these differences in order to arrive at an indicator of value for the subject. Adjustments are made to the comparable property, not the subject property. The adjustments reflect aspects of the transaction or characteristics of the property that have affected sales prices and are referred to as *elements of comparison*. Sales data adjustments may be made to either the total sale price or to an appropriate *unit of comparison* (discussed below), and adjustments can be made on the basis of either a percentage or a dollar amount. The common elements of comparison are:

1. An adjustment for rights and interests conveyed
2. An adjustment of all non-cash components of the sale price to cash equivalence
3. An adjustment for the difference in market conditions between the date of the sale and the valuation date of the subject property.
4. Adjustments for differences in location and physical and economic characteristics between the subject and comparable properties
5. An adjustment for differences in highest and best use
6. An adjustment for non-real property components of the sale, such as tangible personal property (e.g., equipment and furnishings) and non-taxable intangible assets and rights

The first four of these adjustments are described in rule 4. Although physical comparability is often a primary concern when choosing comparable sales, adjustments for the other elements of comparison are also highly important. Adjustments to the sale price of the comparable property should be made in the same order in which the elements of comparison are listed above.

The degree of comparability between a comparable sale and the subject property determines which adjustments are necessary and the size of the adjustments. Typically, adjustments for each characteristic are made as dollar amounts or as percentages. The appraiser adjusts the sales prices of the comparables upward or downward in order to make them comparable to the subject property. Adjustments may be measured using a variety of quantitative and qualitative techniques.

Adjustments for Rights and Interests Conveyed. The property tax appraiser must appraise the rights legally associated with the subject property. Since, for most properties, the full bundle of rights is normal, appraisers assume that no unusual rights or restrictions exist. This facilitates the appraisal process and will normally result in a correct value for the property being appraised. However, where enforceable legal restrictions or other enhancements or encumbrances apply to the subject or comparable properties, care must be taken to identify and adjust for these items. For instance, where the subject property has water rights to an adjacent lake, comparable properties should, where possible, also have similar rights.

In the vast majority of cases, the property tax appraiser must appraise the unencumbered fee simple interest. To be used as a comparable property, the sale price must either reflect the full fee simple interest or be adjusted to reflect the full fee simple interest.

Adjustment for Cash Equivalence. Section 110 defines fair market value in terms of "cash or its equivalent." In using sales prices of the subject or comparable properties for the purpose of valuation, rule 4 provides that the appraiser shall adjust purchase prices t reflect amounts equivalent to cash. A cash equivalent adjustment may be required for sales involving: (1) assumed loans or new loans (i.e., promissory notes) that reflect non-market, or atypical, financing terms; (2) seller-paid loan points paid to a third party (e.g., an institutional lender) as part of the buyer's financing; and (3) any other tangible or intangible property other than cash that the seller accepted as full or partial consideration for the property.

The necessity for a non-market financing adjustment will depend upon the interest rate of the new or assumed promissory note. If the note's stated interest rate is not equal to the market rate of interest for similar notes at the time of the sale (i.e., similar in other terms and risk), ad adjustment for financing terms is necessary. If the note's stated interest rate is lower than the market rate at the time of sale, it is presumed that the seller compensated for the lower rate by increasing the sale price of the property, in which case the value of the note should be discounted (i.e., reduced) to its cash equivalent amount in order to estimate the market value of the property. If the note's stated interest rate is higher than the market rate, it is reasonable to assume that the seller compensated by reducing the sale price, in which case the note's value exceeds its nominal, or face, value requiring an upward cash equivalent adjustment in order to estimate the market value of the property.

The interest rate required to attract a knowledgeable third-party lender for a particular property is a rate that reflects the current market interest rate. Normally, capital is furnished at competitive market rates by commercial lending institutions. However, there are situation in which commercial loans are neither in demand nor available. In these circumstances, alternative third-party financing terms should be considered. There are two primary means available to measure the amount of the cash equivalent adjustment: (1) by using direct market evidence, that is, by comparing sales with non-market financing to sales with market financing; and (2) by using mathematical procedures to

discount the contractual loan payments at the current market interest rate.

Another required cash equivalent adjustment is the cost a seller may incur to obtain third party financing for the buyer. This cost, referred to in the real estate industry as "seller's points," discussed above, these include real estate commissions, escrow fees, and recording fees. However, in terms of cash equivalence, these expenses are not valid adjustments from the total amount the seller receives in exchange for his or her property. They are payments for services rendered, not for the real property transferred. The fact that the seller pays for these services does not make the payments deductible expenses from the sale price of the property. Property will sell for the same general price whether or not these expenses are incurred by the seller.

Selling prices adjusted to cash equivalence are value indicators; they do not necessarily represent fair market value. The reliability of value indicators must be resolved by the appraiser in the reconciliation step of the appraisal process when other value indicators are considered and the final value estimate is made.

Adjustment for Market Conditions. The market conditions adjustment is probably the most complex single sales data adjustment. Comparable sales occurring under different market conditions may require adjustment so that they reflect the same market conditions as the property being appraised.

Market conditions may change rapidly or remain static for long periods of time. Market conditions change due to shifts in demand and supply and/or inflationary or deflationary economic forces. Demand and supply for a particular property, or for all properties of its type, may change over time, and as a consequence, the market value of the property may rise or fall. The purchasing power of the dollar may also fluctuate. During inflationary periods purchasing power decreases, with the result that, other factors remaining constant, additional dollars are required to purchase the same property. The reverse occurs during deflationary periods.

Although the adjustment for market conditions is also referred to as the "time" adjustment, the need for the adjustment is not caused by the simple passage of time. Economic variables affecting demand and supply that have shifted and/or inflationary or deflationary forces in the economy are the causes for this adjustment.

Market condition adjustments can be estimated and measured on the basis of sales data in two primary ways: (1) by measuring the difference in sales prices when the same property sells more than once over a period of time an no significant change in the property has occurred between sales; and (2) by measuring the difference in sales prices for separate but very similar properties that sell at different times. The validity of any adjustment is based primarily on the strength of the supporting data. Because different types of property may be subject to different economic forces, the market conditions adjustment should be measured using sales of the same property type as the property being appraised. Because of the complexity of this adjustment, I should be used with care. As a general rule, it is preferable to use comparable sales occurring near the valuation date of the subject property, thereby avoiding the need for this adjustment.

Adjustments for Location and Physical and Economic Characteristics. If the locational, physical, and economic characteristics of the subject property and the comparable properties differ significantly, each of these characteristics requires comparison and adjustment.

An adjustment for location is required if the locational characteristics of a comparable property are significantly different from those of the property being appraised. Although individuals may have varying preferences regarding locational differences, the market as a whole often shows consistent patterns. Within a homogeneous neighborhood, locational differences may only be the difference between a typical lot and a lot near the park or on a cul-de-sac. However, as the geographic range of comparable sales broadens, the adjustment usually becomes more significant. Physical characteristics include such attributes as building size, quality, age, and condition; size of the site; and site amenities (e.g., view). Economic characteristics are those attributes of a property that affect its income-producing properties. Related to economic characteristics, the appraiser should also consider differences in zoning and other enforceable restrictions.

The degree of comparability between a sale and the subject property determines which adjustments are necessary and the size of the adjustments. Typically, adjustments for each characteristic are made as dollar amounts or as percentages. The appraiser adjusts the sales prices of the comparables upward or downward in order to make them comparable to the subject property. Adjustments may be measured using a variety of quantitative and qualitative techniques.

Adjustment for Non-Real Property Components of Value Included in the Purchase. Non-real property components of value include stocks, bonds, tangible personal property, copyrights, patents, trade names, etc. With the exception of tangible personal property, the other items listed are intangible personal property. The sales prices of the subject property and comparable properties must be adjusted to exclude the value of these items. That is, when the purchase price in terms of cash or its equivalent includes non-real property items in addition to the real property purchased, the value of these items (on a cash equivalent basis) must be removed from the sale price in order to arrive at an indicator of real property value. Furniture, fixtures, and equipment included in the purchase of a hotel or restaurant are typical examples of tangible personal property that might be included in a purchase of real property.

D. Units of Comparison

Units of comparison are the components into which a property may be divided in order to make comparisons. They are used to compare the subject and comparable properties. The appraiser computes like units for comparison by stating each sale price in terms of appropriate units of comparison. The appropriate unit depends on the type of property being appraised. For example, apartments are typically compared based on sale price per apartment unit; commercial properties based on sale price per square foot; industrial properties based on sale price per square or cubic foot; hotels and motels based on sale price per guest room; etc. In the case of single-family residences, the unit of comparison is typically the entire property. Units of comparison should be selected based on what is typically used by buyers and sellers in the market for the type of property being appraised. All applicable units of comparison should be considered, and any wide variations in the results should be analyzed.

Sales data adjustments for elements of comparison can be made to either the total sale price or to the appropriate unit(s) of comparison. Typically, adjustments for the rights and interests conveyed, cash equivalence, and market conditions (and perhaps also non-real property items) are made to the total sale price. Units of comparison are then calculated based on the adjusted sale price. The unit of comparison is then adjusted for differences in location and physical and economic characteristics.

E. Correlation within the Comparative Sales Approach

Analysis of the comparables sales will result in separate value indicators for the subject property based on the data from each comparable sale. Typically, the indicators will indicate a range of value for the subject property. These estimates should not be averaged to reach a single indicator of value. Rather, the adjustments made to each comparable should be evaluated and the greatest weight given to the sales that are closest in comparability to the subject.

F. Value Allocation

The comparative sales approach produces a total property appraisal of an improved property; that is, the appraisal of the land and improvements as a single unit. Since property tax law requires separate assessments for land and improvements, the appraiser must allocate the total property value between these components.

G. Limitations of the Comparative Sales Approach

The comparative sales approach is very reliable in an active market in which there are numerous recent sales of comparable properties. It is the preferred approach when reliable market data is available.

However, two primary factors limit the usefulness of this approach. First, certain types of property are infrequently sold, with the result that there may be insufficient market evidence to derive a valid indicator by direct comparison. Where few comparables sales exist, or the comparable properties are not close substitutes for the subject, it is difficult to make comparisons. An appraiser using the comparative sales approach under these circumstances is forced to make many subjective adjustments to the market data. Second, the conditions of each comparable sale must be carefully investigated before it can be used as an indicator of value. Many sales do not meet the conditions of an open market transaction and are not good indicators of market value. In spite of these limitations, comparative sales are usually a more accurate index of market value than any other available evidence.

VIII. STANDARD CLASSIFICATION SYSTEM

The Standard Classification System is a method of estimating basic building costs by referring to square foot cost tables. Basic building costs are then augmented by in-place or square foot costs of optional or extra components. Components included in the basic square foot costs vary with different building types.

In applying the square foot methods of cost estimating, a square foot cost is assigned to the building being appraised on the basis of comparison with new buildings with known costs. The premise is that the subject building would have the same square foot cost as a similar new building.

A difficulty in applying this method arises in finding new buildings, with known costs for comparison, that are similar to the building to be appraised. Few buildings are exactly alike, and therefore few have the same square foot cost. A further complication is the matter of deciding which known are representative or typical replacement costs.

The Standard Classification System is a means of estimating square foot costs by systematically comparing the subject structure with structures whose costs are known. Buildings are classified according to variations in physical characteristics that cause square foot cost differences. The classification of a building then serves as a reference in finding a proper square foot cost from tables catalogued according to this system.

A. Cost Variables
The physical characteristics used as variables in the standard classification system are:

- Design type
- Construction type
- Quality class
- Shape class
- Area class

Descriptive words, letters, and numbers are used to designate a particular type or class for each of the five cost characteristics. They are assigned on the basis of standards or specifications set up in the Standard Classification System. This means that any one building is assigned an overall classification and is identified by designations for each of these cost variables. Here is an example>

> A building is classified as a single-family resident, D6A, with 1,450 square feet. "Single-family residence" refers to its design type; "D" to its construction type; "6" to its relative level of quality or quality class; "A" to its shape; and "1,450" is its square foot size or area class. All buildings that have this classification will have approximately the same cost. To know the cost of one is to know the cost of all.

B. Design Types
Buildings are first classified on the basis of the use for which they were designed. Square foot costs of building may vary considerably for different design types. Two buildings may be alike in area, shape, quality, and type of construction but have different square foot costs because one has the design-type features of a multiple-family residence and the other those of a single-family residence.

Construction Type
Construction type refers to the structural characteristics of a building. The letters A, B, C, D, and S are used to designate five different structural types recognized by the building trades. These types may be identified by the use of the following descriptions.

Class A Construction Type. *Class A* buildings have structural steel frames which are fireproofed by encasing them in concrete or by spraying them with fireproofing materials. Floor and roof structures are built of reinforced concrete. Walls are filler or curtain type and may be built of brick, concrete, aluminum, glass, or any other noncombustible material. Multiple-story office or hotel buildings are typical Class A buildings.

Class B Construction Type. *Class B* buildings have a framework built of reinforced concrete columns and beams. As in Class A buildings, the floor and roof structures are built of reinforced concrete and the walls are built of noncombustible materials. Typical Class B buildings are multiple-storey office buildings, hotels, and stores.

Class C Construction Type. *Class C* buildings have masonry-type exterior walls. Floor structures may be built of wood frame or poured concrete. Roof structures are wood frame. The walls may be either a continuous bearing wall system or a pilaster and bond beam frame with a masonry filler or

curtain wall. The masonry may be brick, tile, stone, or concrete, either poured in place or tilt-up. Interior partitions are usually wood frame. Class C buildings are usually restricted in height. They are used generally as stores, supermarkets, garages, and warehouses, and sometimes as offices or residences. Structural members may be wood or steel trusses, steel girders, or laminated wood beams.

Class D Construction Type. *Class D* buildings have wood-frame construction such as that generally encountered in residences. The frame is usually made of two-by-four vertical studs, spaced about sixteen inches apart, with horizontal top and bottom plates. The exterior finish or skin may be wood siding, shingle, stucco, masonry veneer, or sheet metal. Class D construction seldom exceeds three stories.

Class S Construction Type. *Class S* buildings are specialized ones that do not fit any of the above categories. Service station buildings are an example of Class S construction.

D. Quality Classification

Quality class ranks buildings according to their amounts of materials, grades of materials, and workmanship. If two buildings are of the same design type, construction type, shape, and size, but one has more materials or better materials, it will have a higher square foot cost. Also, if two buildings are exactly alike, except that one was built with greater care and skill, it will be of better *quality* and will have a higher cost.

Of the five choices that lead to the overall classification of a building, the choice of a quality class is the most difficult. The relative quality of a building is not as obvious as its design type, construction type, shape, or size. Many points of reference must be observed. Many parts of a building cannot be seen, and their presence and nature must be inferred.

The quality class designations are usually numbered from 1 to 10. A class 1 building is the least costly to build per square foot, and a class 10 is the most costly. They are assigned on the basis of a comparison to numbered descriptions (specifications) of typical buildings of various quality levels.

The specifications for each quality class make a distinction between classes. This distinction often shows in the quality of a feature and not whether the feature is present. The same feature may exist in different classes, but the quality of the feature will help to determine the classification. Conversely, some features may be included in a particular classification, while in another class, the same feature must be treated as an additive.

Building specification charts are a compilation of attributes *typically* found in the building class listed on the individual charts. Not all structures will include all of the typical attributes listed in a particular classification. That does not automatically mean that it is an improper classification. The appraiser must use judgment to determine if the majority of attributes listed pertain to the structure being classified.

Many times buildings have quality features that fall between those of two classes rather than being most like one or the other. For this reason, half-class gradations are used. For example, buildings can fall in the 5.5 class, 6.5 class, etc. The unit cost of a class 5.5 is halfway between the cost of a class 5 and the cost of a class 6. The square foot cost tables array costs for half-classes as well as for full classes.

One building may have only one quality class. Where portions of the same building would appear to

require different quality classes, one class is selected based on the average quality or the quality of the predominant area. Addition or lack of some features may require adjustment of quality class up or down by one-half class or on occasions by as much as one full class.

The typical attributes listed in the specifications are the basis for the cost factors established in the square foot area cost tables. These factors recognize and include an element of cost for the typical attributes. **The factors do not, however, include costs for additives.**

Generally, more additives are found in the higher building classifications, particularly D8 and above. The appraiser must use judgment to determine if an additive is significant enough to add value to the structure being appraised. If so, an appropriate adjustment should be made.

E. Area Computation

Uniform procedures for computing building areas are desirable when possible. It is important that a person reviewing the appraisal is able to check the building area computations quickly and accurately.

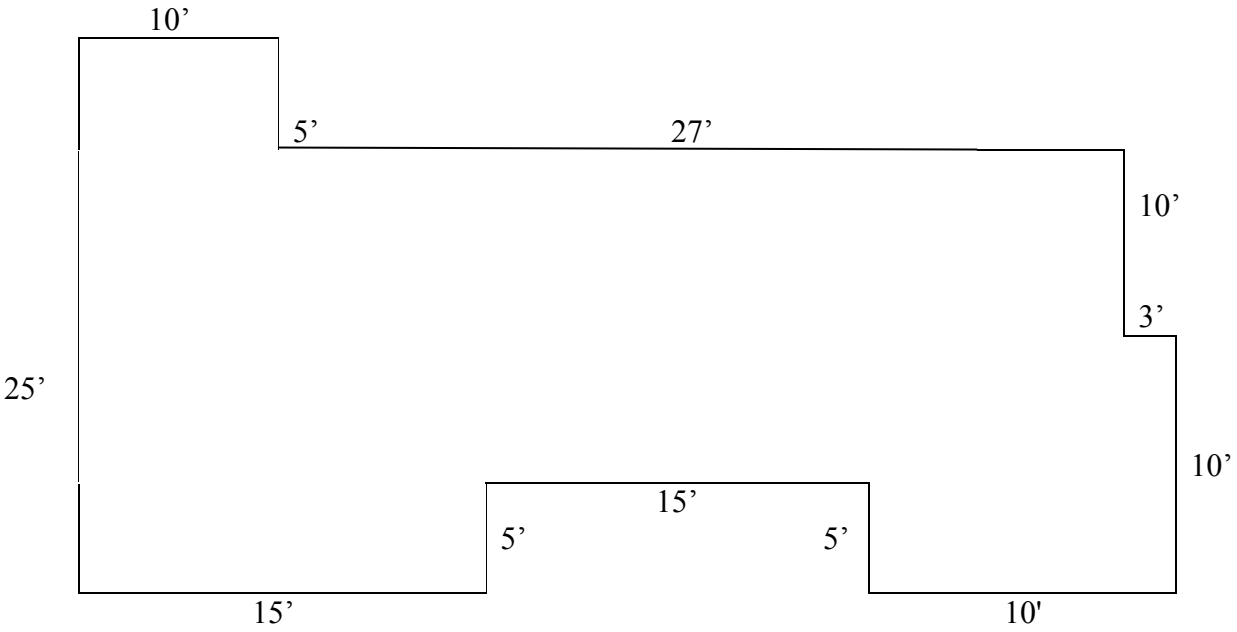
Rectangular Buildings. Rectangular building areas are computed by dividing the building diagram into a series of rectangles, computing the area of each rectangle, and finding the sum of all the areas.

Rectangles are formed by starting at a point which is the extreme left of the lowest horizontal line on the drawing. The based o the first rectangle is a horizontal line between the point of beginning and the intersection of the first vertical line to the right. The altitude of this first rectangle is the distance between the base line and the next intersecting horizontal line above.

After eliminating areas previously formed into rectangles, this process is repeated until all areas have been formed into rectangles.

In listing dimensions, the horizontal distance is always listed first.

Example #1



COMPUTATIONS		
15 x 5 =	75	
10 x 5 =	50	
40 x 5 =	200	
37 x 10 =	370	
10 x 5 =	50	
	745	

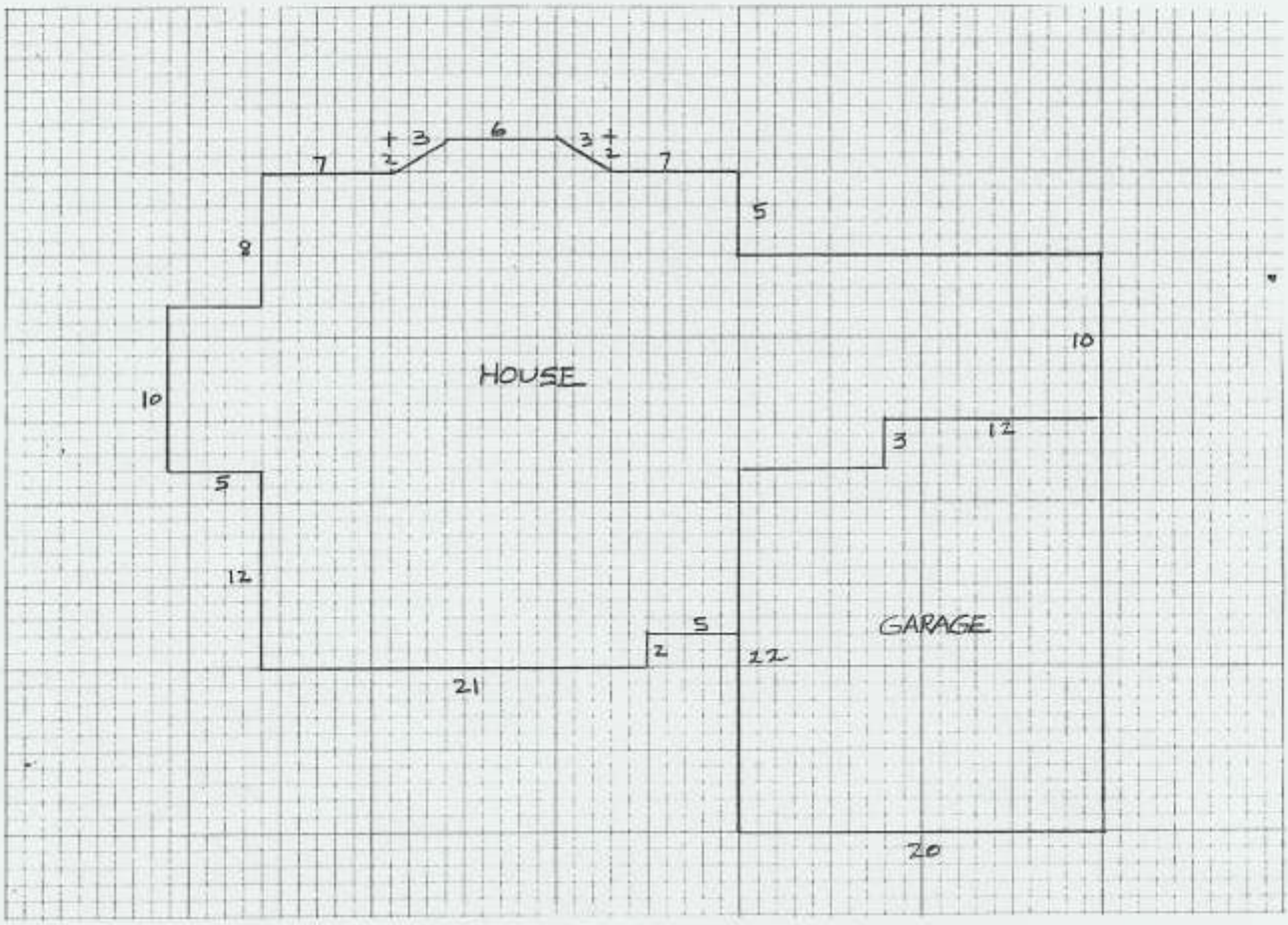
F. Area Classification Variables

Other things equal, the smallest building is the most expensive to construct per square foot of floor area, while the largest is the cheapest. There are three major reasons for this – ration of perimeter wall area to floor area, fixed costs, and quantity buying.

Ratio of Perimeter Wall Area to Floor Area. The ration of the area of the outside wall to the enclosed floor area tends to decrease with increased building size. Larger buildings have a greater floor area over which to spread the costs of the wall. Here is an example, which assumes that the buildings are similar in all respects except size.

Example #2- Unknown dimensions

Beginning with the lowest horizontal line on the drawing and working upward, the calculation of rectangular areas with missing dimensions can be computed by extrapolation.



COMPUTATIONS			
HOUSE		**GARAGE**	
21 x 2 =	42	20 x 22 =	440
26 x 10=	260	12 x 3 =	36
39 x 3 =	117	Total Area	476
51 x 7 =	357		
46 x 3 =	138		
21 x 5 =	105		
(3 x 2)/2 =	3		
6 x 2 =	12		
(3 x 2)/2 =	3		
Total Area	1,037		

Building	Floor Area	Perimeter (Feet)	Perimeter Wall Cost at $15 per Linear Foot	Wall Cost Per Square Foot of Floor Area
A	400	80	$1,200	$3.00
B	1,600	160	$2,400	$1.50

Though the larger building has a higher wall cost, there is proportionately more floor area over which to spread that cost.

Fixed Costs. There are many items that cost the same regardless of building size. The cost of these items will therefore be greater per square foot in a small building than in a larger one of the same class.

Examples of fixed cost items are plumbing fixtures and kitchen cabinets in residences of the same class, and the cost of transporting a crane to a job site for setting tilt-up panels. In both cases, these costs will be the same regardless of the area of the building; thus, the larger the building the lower the cost per square foot.

Quantity Buying. Builders typically receive quantity discounts on large orders of materials for large buildings and competition may force them to pass the saving on to the consumer. This discount should not be confused with the quantify discounts that large-volume builders receive but may not pass on to the consumer in the finished product.

While costs per square foot do decrease with increasing building size, the decrease is most rapid at the lower end of the size scale and tapers off with increasing building size, eventually reaching a plateau. This can be demonstrated graphically and is noticeable in the square foot cost tables.

Area classification is made simply by computing the area of the building. A square foot cost is then selected from the proper table for this area. Building areas to be included for area classification will vary with different design types.

G. Shape Classification

Shape is a consideration in the classification of single-family residences and mountain cabins. Shape classification considers any cost differences that may arise from variations in the building outline. Buildings of the same design type, construction type, quality, and size will cost different amounts per square foot if they are of differing shapes. These cost differentials may be due to one or more of the following causes:

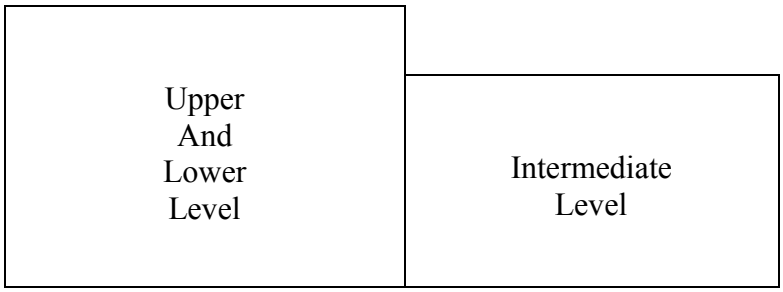
1. Differences in the number of corners for a given area.
2. Differences in the number of roof valleys and ridges for a given area (*cut-upness*).
3. Differences in the ratio of exterior wall area to floor area.

There are four shape designations: A, B, C, and D, with D the most irregular. Which designation is selected depends upon the interaction of the above three shape factors. The ratio of perimeter to floor area is the most important influence, but its importance in the selection of the shape class can be modified by the other two factors.

Shape classification of all multiple-story or split-level residential type buildings is based upon the outline formed by a composite of the extreme outside exterior walls of all full-story areas regardless of varying levels.

Example. A split-level, single-family residence has a 20' x 30' lower level, a 20' x 30' upper level directly over the lower level, and a 20' x 20' intermediate level contiguous to the 30' side of the first rectangle. In this case, shape classification is determined from the outline formed by a composite of the 20' x 30' rectangle and the contiguous 20' x 20' square.

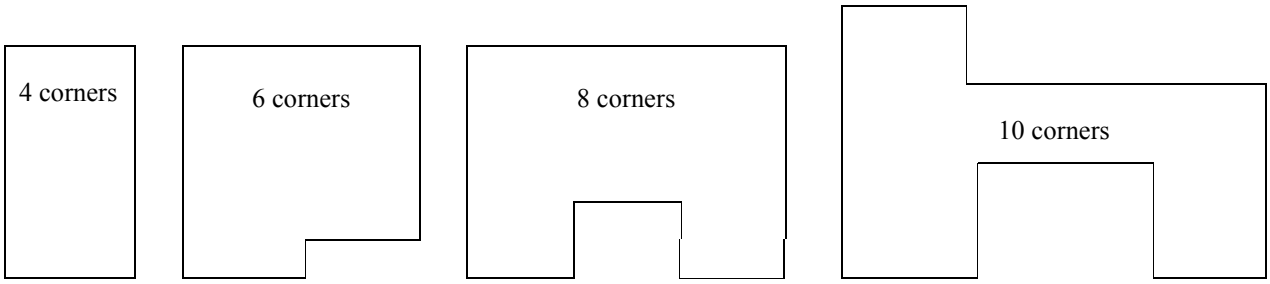
In selecting a shape classification, it is important to follow the roof and foundation line of the building. Porches and garages are items that should not be included in the shape of the home. The shape outline should only follow the foundation outline of the main structure.



If the shape classification guide is used, the area used for area perimeter comparison is the area within the outline used for shape classification. In the example above, use the area of the lower level plus the area of the intermediate level of 1,000 square feet.

Single-Family Residential Shape Classification Guides. The majority of single-family residences can be classified for shape by a visual comparison of a diagram of the subject structure with the typical shape illustrations above. If there is a question as to a proper shape classification, the Single-Family Residential Shape Classification Table (following in this chapter) may be helpful.

TYPICAL SHAPE ILLUSTRATIONS



SHAPE A **SHAPE B** **SHAPE C** **SHAPE D**

Buildings of the same design type, character of construction, quality of construction, and size will vary in costs because of their shape. The more irregular the shape, the greater the cost per square foot. There

are three major factors that cause the costs to increase: (1) the number of corners, (2) the cut-upness of the roof, and (3) the ratio of perimeter to floor area.

Number of Corners. There are additional costs of materials when corners are added. With the cost of materials there are also more labor cots to build corners. With more materials and labor costs, the cost per square foot increases significantly.

Cut-Upness of the Roof. *Cut-upness* refers to the number of roof ridges, valleys, and hips and the manner in which the roof is broken up. As the shapes of houses become more complex, their roof systems are more cut-up. The more the roof is cut-up, the more the cost that must be absorbed by each square foot of floor area.

The cut-upness of the roof also adds to the costs in labor and materials. The increase in labor and material costs are absorbed in the total costs per square foot.

Ratio of Perimeter to Floor Area. The greatest effect of shape upon cost is caused by the differing ratios of perimeter to floor area in buildings of different shapes. Given two buildings of equal size but different shape, the building with the more irregular shape will require more wall area to enclose it, and the wall cost per square foot of floor area will therefore be greater.

Following is an example of two buildings, each with an area of 400 square feet and a wall cost of $50 per linear foot.

Building	Dimensions (Feet)	Perimeter (Feet)	Wall Cost	Wall Cost Per Square Foot of Floor Area
A	20 x 20	80	$4,000	$10.00
B	40 x 10	100	$5,000	$12.50

Shape Classification Table. Shape classification may be determined by comparing the length of the outline formed by the outermost exterior walls of a single-family residence **(excluding the garage and porches)** and the area enclosed by this outline. Shape classification is indicated by a range of perimeter lengths for each shape class at various areas.

Notice in the following Single-Family Residential Shape Classification Table that the suggested ranges of perimeter lengths overlap between shape classes. This is because consideration has been given to variations in costs that might arise from building corners and framing irregular roof structures. If a perimeter length falls into an overlapping area, final determination of shape classification will consider the number of corners and roof design.

Example. A residence of 800 square feet has a perimeter of 121 feet and will be classified as an “A” shape if it is a simple rectangle, and a “B” shape if it is of an irregular shape or if it has a cut-up roof.

SINGLE-FAMILY RESIDENTIAL

Shape Classification Table

Area	Shape	Perimeter Length	Area	Shape	Perimeter Length	Area	Shape	Perimeter Length
600	A	98-106	1,600	A	160-181	3,400	A	233-277
	B	100-108		B	175-196		B	271-315
	C	102-110		C	190-211		C	309-353
	D	104-Up		D	205-Up		D	247-Up
700	A	106-115	1,700	A	165-188	3,600	A	240-286
	B	109-118		B	183-205		B	280-326
	C	112-121		C	199-222		C	320-366
	D	115-Up		D	216-Up		D	360-Up
800	A	113-124	1,800	A	170-194	3,800	A	247-296
	B	118-129		B	188-212		B	290-339
	C	123-134		C	206-230		C	333-382
	D	128-Up		D	224-Up		D	376-Up
900	A	120-132	2,000	A	178-205	4,000	A	253-304
	B	126-138		B	199-226		B	298-351
	C	132-144		C	220-247		C	345-396
	D	138-Up		D	241-Up		D	390-Up
1,000	A	126-139	2,200	A	187-216	4,200	A	259-313
	B	133-146		B	210-239		B	307-361
	C	140-153		C	233-262		C	355-409
	D	144-Up		D	256-Up		D	403-Up
1,100	A	133-148	2,400	A	196-228	4,400	A	265-322
	B	142-157		B	222-254		B	316-374
	C	151-166		C	248-280		C	368-425
	D	160-Up		D	274-Up		D	419-Up
1,200	A	138-154	2,600	A	204-237	4,600	A	271-330
	B	148-164		B	231-264		B	324-383
	C	158-174		C	258-291		C	377-436
	D	168-Up		D	285-Up		D	430-Up
1,300	A	144-161	2,800	A	212-248	4,800	A	277-339
	B	155-172		B	242-278		B	333-395
	C	166-183		C	272-308		C	389-451
	D	177-Up		D	302-Up		D	445-Up
1,400	A	149-168	3,000	A	219-258	5,000	A	283-347
	B	162-181		B	252-291		B	341-405
	C	175-194		C	285-324		C	399-463
	D	188-Up		D	318-Up		D	447-Up
1,500	A	155-175	3,200	A	266-267			
	B	169-189		B	261-302			
	C	183-203		C	296-337			
	D	197-Up		D	331-Up			