IAAO Glossary for Property Appraisal and Assessment

THIRD EDITION

IAAO
INTERNATIONAL ASSOCIATION of ASSESSING OFFICERS
Valuing the World

IAAO GLOSSARY FOR PROPERTY APPRAISAL AND ASSESSMENT

Third Edition

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Revised and Approved September 2021

About IAAO

(IAAO) is a nonprofit, educational, and research association. It is a professional membership organization of government assessment officials and others interested in the administration of the property tax. IAAO was founded in 1934, and now has a membership of more than 8,000 members worldwide from governmental, business, and academic communities.

Revision notes

This edition of the Glossary for Property Appraisal and Assessment replaces the 2013 edition.

Published by
International Association of Assessing Officers
314 W 10th St
Kansas City, Missouri 64105-1616
816-701-8100 • Fax: 816-701-8149
www.iaao.org
Library of Congress Catalog Card Number: ISBN 978-0-88329-160-3

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Produced in the United States of America.

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IAAO GLOSSARY FOR PROPERTY APPRAISAL AND ASSESSMENT, THIRD EDITION

FOREWORD:

On behalf of the International Association of Assessing Officers, we are honored to present the *IAAO Glossary for Property Appraisal and Assessment, Third Edition*. IAAO is the international leader in the mass appraisal and ad valorem taxation valuation.

This text is a fundamental part of the IAAO educational programs, enhanced member professional development, and a resource for all users of ad valorem valuation services. This text is to provide understanding in the application of property assessment valuation.

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NUMERIC

1031 Exchange — Internal Revenue Code Section 1031 enables a taxpayer to defer gain on the sale of an investment property, provided the seller reinvests in other investment property. To defer all capital gains, one must acquire a replacement property with a property value equal to or greater than that of the sold property in a specified period of time.

4 - 3 - 2 - 1 Rule — A rule that allocates 40 percent of the value of a standard lot to the quarter of the lot fronting the street, 30 percent to the second quarter, 20 percent to the third quarter, and 10 percent to the rear quarter.

65/35 Rule — A rule that values a triangular lot with its base fronting a street at approximately 65 percent of that of a rectangular lot of the same frontage and depth. The value of a triangular lot with its apex fronting a street will be 35 percent of that of a rectangular lot of the same base and depth.

A

AAS — See *Assessment Administration Specialist.*

Abandonment — Voluntary relinquishment of all rights and interests in real property, including title and possession. Relinquishing any future interest, right, or reclaim. An action involving relinquishment of rights in real property, by an owner, for the sole purpose of permanently terminating ownership. The act of abandonment must be voluntary and intentional.

Abatement — 1) An official reduction or elimination of one's assessed valuation after completion of the original assessment; 2) An official reduction or elimination of one's tax liability after completion of the tax roll; 3) The temporary exemption of property from all or a portion of taxes that would otherwise be paid; and 4) Remediation of a detrimental physical condition existing on a property. See *Property Tax Credit.*

Absolute Auction — An auction in which the property is sold to the highest bidder regardless of the amount. No minimum bid clause. See *Auction.*

Absolute Ownership — See *Fee Simple Absolute.*

Absolute Value — The value of a number (or variable) regardless of its sign. For example, 3 and –3 (minus 3) both have an absolute value of 3. The mathematical symbol for absolute value is one vertical bar on each side of the number in question, for example, $|3|$.

Abstract of Title — A complete summary of all recorded documents affecting the title to a property. These documents include all conveyances, such as deeds or wills, and all legal proceedings relating to ownership of the property. Abstracts are arranged to show the history of ownership, describe the land and improvements, and give the name(s) of past and present owner(s).

Abstraction Method — A valuation method used when the building value is known and there are no unimproved land sales to support the land value. The application requires the improvements to be recently constructed (or hypothetical) and must represent the highest and best use of the land. The information needed to use this method includes: 1) Net operating income, 2) Building value, 3) Discount rate, 4) Recapture rate, and 5) Effective Tax Rate. See *Highest and Best Use* and *Land Residual Technique*.

Abstractor — An individual who takes the information pertaining to a title in its full form and puts all facts into an abbreviated form, the form being called an abstract of title.

Abuttals — Boundaries or adjacency of land; adjoiners and boundaries. See *Adjacent* and *Adjoining*.

Acceleration Clause — A provision contained in a mortgage or loan contract that allows the lender to demand immediate repayment of the entire balance if the terms of the contract have not been fulfilled. The lender may accelerate the terms of repayment and enforce payment in full for the reasons stated within the clause.

Access Right — The right of egress from and ingress to a property from an existing highway or street. See *Bundle of Rights*.

Accession of Real Property — The addition to value of property through labor or addition of material. Land gradually deposited on the bank of a stream by imperceptible means becomes the land of the upland owner.

Account — A record in the general ledger that provides details for all accounting transactions including assets, liabilities, equity, revenues, cost of goods sold, and expenses.

Accountancy — The profession for the theory and practice of accounting.

Accounting Depreciation — 1) In appraisal, depreciation is a loss of market value of an asset relative to its cost. Depreciation can stem from any cause that results in actual loss; 2) In accounting, depreciation is a method providing for systematic allocation or recovery of cost over an asset life.

Accounting Records — The primary source of financial reporting documents including transactions, journals, general ledgers, vouchers, trial balances, invoices, and all supporting documentation for such records. Financial reporting statements include the balance sheet, depreciation schedule, income statements, and all records conveying business activities and financial performance.

Accounting Valuation — Valuing a company's assets and liabilities in accordance with generally accepted accounting principles for the purpose of financial reporting.

Accretion — An imperceptible and gradual accumulation of land due to natural forces, typically to land abutting water.

Accrued Depreciation — The loss in value of a property due to physical deterioration, functional obsolescence, and economic (external) obsolescence. See *Accumulated Depreciation*.

Accumulated Depreciation — In accounting, the total amount of an asset's cost that has been expensed since the asset was placed into service. The accumulated depreciation account is credited when the depreciation expense account is debited. See *Accrued Depreciation* and *Expense*.

Accuracy — See *Statistical Accuracy*.

Acknowledgment — A formal declaration attesting to the validity of the declarer's signature, usually made in the presence of an authorized public official or a notary public. It verifies the authenticity of the signature but is not a verification of the truth of the contents of the document acknowledged.

Acquisition Cost — The purchase price of an asset. The cost may reflect a used purchase price, discounts, income tax deductions, and other adjustments appropriate for financial reporting. If installation and other associated costs are included, the term "total acquisition cost" may be used.

Acquisition Date — See *Date of Acquisition*.

Acquisition Value — The market value of property at the time it was acquired by the present owner.

Acre — A unit of imperial or US customary land measurement equal to 43,560 square feet, 160 square rods or 10 square chains. An acre is a measure under the Weights and Measurements Act of the British Empire and the United States. A parcel of 40,000 square feet is often referred to as a Builder's Acre.

Acreage — Land larger than one acre that refers to a large parcel of land. The term acreage can be used to indicate a large parcel of land not necessarily measured in acres. Includes farms, timberland, recreational acreage, idle land, and waste land in rural locations. Excludes vacant platted lots that lie within or adjacent to a municipality and that usually carry a lot/block system designation rather than acreage. Separately assessed timber or mineral rights are omitted from this category.

Active System — 1) A mechanical system used to produce heat or cooling. In agriculture an active system can be a hydroponic system, and 2) A remote sensing system measuring electromagnetic energy (EMR).

Actual Age — The number of years that have elapsed since the completed construction of an improvement; also referred to as historical age or chronological age. See *Age, Chronological Age, Economic Life, Effective Age, Remaining Economic Life* and *Useful Life*.

Ad Valorem — A Latin term translating to "based on value."

Ad Valorem Tax — The amount of property taxes levied based on the value of the property, or a proportion of the property value, subject to taxation. A tax that is measured by value. Note: This term is often used to refer only to property taxes or to general property taxes, although technically it is applicable to income taxes, ad valorem tariffs, special property taxes, etc.

Adaptive Estimation Procedure (AEP) — A computerized, iterative, self — referential procedure using properties for which sale prices are known to produce a model that can be used to value properties for which sale prices are not known. Also called Feedback.

Addendum — A list of material added to the end of a document or publication.

Addition — 1) A term sometimes used to denote a subdivision; 2) An increase in the value of fixed assets due to the acquisition of a new property or the enlargement of an old one; and 3) For land development, an extension of an existing subdivision that is developed at a later date, sometimes referred to as addition 1, 2, 3, or Unit 1, 2, 3, etc. Compare *Betterment*.

Additive Model — A model in which the dependent variable is estimated by multiplying each independent variable by its coefficient and adding each product to the constant.

Additivity — The assumption that the marginal contribution of any one independent variable is unaffected by the other variables in the model.

Address — 1) A location, expressed in terms of a conventional spatial reference scheme, at which a property or person may be found; 2) In a computer file, a specific juncture of circuits in computer machinery at which information is stored in the form of magnetic polarities; 3) The name a programmer uses to refer to such a juncture. Note: For a file of human — readable information, one must establish rules about whether and how to record various relevant addresses, including the situs address, owner's address, and mortgagee's address.

Adjacent — To be near, close, or contiguous, in the neighborhood or vicinity of, or adjoining or contiguous to.

Adjoining — For land, means "next to" or "in contact with" and excludes the idea of intervening space.

Adjustable Rate Mortgage — A mortgage with periodic adjustments to its rate of interest to reflect market conditions.

Adjusted Sale Price — The sale price that results from adjustments made to the stated sale price to account for the effects of time, personal property, financing, etc. See *Price*.

Adjustments — Modifications in the reported value of a variable, such as sale price. For example, adjustments can be used to estimate market value in the sales comparison approach by modifications for differences between comparable and subject properties. Note: Adjustments are applied to the characteristics of the comparable properties in a particular sequence that depends on the method of adjustment selected. See *Assess* and *Assessed Value*.

Administrative Review — An analysis of an individual property, typically requested by a property owner, of an aspect of a property tax assessment (e.g., value, exemption) performed by a quasi-judicial body with the authority to adjust or modify the assessment.

Adverse Land Use — A land use that decreases the value of nearby properties, usually because the adverse use is incompatible with the uses of the neighboring properties. A garbage dump near a residential neighborhood is an example of adverse land use.

Adverse Possession — The method of acquiring property ownership via the open, notorious, continuous, hostile, and exclusive occupation and continuous possession of (another's) real property under an evident claim of title or right. Various states have requirements as to the length of time of occupancy necessary to establish adverse possession and other requirements such as payment of taxes.

AEP — See *Adaptive Estimation Procedure*.

Aerial — Relating to the air or atmosphere, being applicable in a descriptive sense to anything in space above the ground and within the atmosphere.

Aerial Film — A specially designed roll film available in many lengths and widths to fit aerial cameras. Emulsion types include panchromatic, infrared, color, and color infrared.

Aerial Mosaic — A collection of aerial photographs whose edges have been matched manually or digitally to form a continuous image across an area of interest.

Aerial Photograph — A photograph of a part of the earth's surface taken by an aircraft, drone, or other implement using a supported camera.

Aerial Triangulation — A process used in photogrammetric mapping that establishes the mathematical relationships among control points and adjusts them as a network of locational values.

Affidavit — A document containing a statement of facts sworn to as correct by the person signing the document.

After-Tax Cash Flow (ATCF) — The amount remaining after property taxes.

Age — A generic term referring to the length of time a property has existed. See *Actual Age, Chronological Age, Economic Life, Effective Age, Remaining Economic Life*, and *Useful Life*.

Age/Life Method — A method of estimating accrued depreciation based on allocating a uniform percentage of value loss each year over the economic life of the improvement or personal property. The age/life method measures depreciation on the accounting concept of Straight-Line depreciation. See *Accrued Depreciation, Economic Life,* and *Straight-Line Depreciation.*

Agents of Production — The four ingredients available for the production of goods and services that satisfy human wants: 1) Land; 2) Labor; 3) Capital; and 4) Management (coordination). Maximum value is attained when the four ingredients attain the state of equilibrium. See *Principle of Balance.*

Aggregate Mean — See *Weighted Mean.*

Agricultural Property — Property used in the production of crops and/or other agricultural products, such as livestock, and agricultural support buildings. See *Property*.

Agricultural Value — The value of a property that is devoted to or available for the production of crops and/or other agricultural products, livestock, and agricultural support buildings, assuming that agricultural is the highest and best use of the property, or laws dictate current use is the highest and best use.

AIA — See *American Institute of Architects.*

Air Rights — A right to use and occupy the space lying above a stated elevation or within certain distances above the ground surface, in conjunction with specified spaces on the surface for the support of foundations.

Akerson Format — A mortgage — equity valuation technique based on altering Elwood's algebraic formula to a series of simple arithmetic steps based on a band of investment calculations.

Alienation — The transfer of an interest in property from one person to another.

Alley Influence — 1) The effect of accessibility or proximity to a side or rear alley on the value of a lot or parcel; and 2) The increment of value resulting from accessibility or proximity to a side or rear alley.

Allocation by Abstraction — A method of separating a whole property value into land and improvement components. The appraiser estimates the improvement's replacement cost new, subtracts an appropriate amount for depreciation, and subtracts the remainder from the whole property value to estimate the land value.

Allocation by Ratio — A method of separating a whole property value into land and improvement components, in which the appraiser develops proportions of land and improvement values for comparable properties and applies those proportions to the subject's whole property value.

Alluvion — See *Accretion*.

Along — "Along a line" means on and in the direction of the line. "Along the road" means along the center line or thread of the road unless qualified as, for example, "Along the east side line of the road," "Along a line" may be changing in direction by curves or angles. Avoid "with a line" or "on a line" where "along a line" is meant. The term "along" may mean "on"; thus "along" the shore means "on" the shore and includes the shores.

Alternative Hypothesis — A hypothesis suggesting a relationship between variables. The opposite of Null Hypothesis. See *Hypothesis Test* and *Null Hypothesis*.

Altitude — The distance of a location above a reference surface. The most usual surface is sea level.

Amendment — A change altering or adding to an agreement.

Amenity — A feature of real estate that enhances its use or desirability. See *Real Estate*.

American Institute of Architects (AIA) — An organization of architects that developed a standard form of documents between owners and contractors for use where the basis of payment is a stipulated sum. Revenue is recognized at project completion (i.e., It contains completed contract billing throughout the project).

AM/FM — Automated Mapping/Facility Management, a computer-based land information system used to produce, edit, archive, and correlate automated map features with non-graphic facility-related design or operation attributes. See Land Information System.

Amnesty Tax — An act of pardon of tax liability by a legislative body.

Amortize — The process of repaying a loan or recovering a capital investment by means of a series of scheduled payments; typically includes interest charges and principal repayment in each of the scheduled payments.

Amortized Mortgage — A mortgage whereby there is a reduction of principal by constant payments toward the principal balance, plus interest payments on the declining principal balance. There are required level constant payments, including principal and interest, with each payment applying first to the accrued interest, and the remainder reducing the principal. See *Mortgage*.

Ancillary Data — Subsidiary data used to define the area of interest, for example, topographic, administrative, or geologic data. Ancillary data may be digitized and merged with the primary image data to facilitate analysis. See *Image*.

ANN — See *Neural Network*.

Annex — To join a smaller, subordinate property to a larger or more dominant property. Includes expanding incorporated government with additional land.

Annual Debt Service — The annual amount of income necessary to pay the principal and interest on a mortgage.

Annuity — A monetary benefit received at regular intervals for a specified period.

Anticipated Use Method — A valuation method used to appraise vacant land when the expected improvements to the land are specified and the total costs are estimated.

Anticipation — See *Principle of Anticipation*.

Appellant — A person who seeks review of an initial decision of a judicial or quasi-judicial body in a higher court.

Apportionment — The process of distribution and allotment into proportional allocations. See Allocation by Abstraction and Allocation by Ratio.

Appraisal — The act or process of developing an opinion of value; an opinion of value.

Appraisal Card — A card used by an assessor or appraiser on which typically is carried a sketch or photograph of a building, a description of its location, a list of the principal factors affecting its reproduction cost and depreciation, and the calculations by which such cost and depreciation are estimated. Note: The building appraisal card is frequently combined with the land appraisal card into a single document. In such an event, the combination card may be used for a composite appraisal as well as for a summation appraisal. Also called a Property Record Card.

Appraisal Date — In ad valorem taxation, the date as defined by law to estimate a property's value.

Appraisal Foundation — See *The Appraisal Foundation*.

Appraisal Level — The common or overall ratio of appraised values to market values. Three concepts are usually the level required by law, the true or actual level, and the computed level based on a ratio study. See Ratio Study.

Appraisal Practice — Valuation services performed by an individual acting as an appraiser, including but not limited to appraisal and appraisal review. Only appraisers may offer services that are considered appraisal practice. See *Appraisal*, *Appraisal Standards Board*, *The Appraisal Foundation*, and *Uniform Standards of Professional Appraisal Practice*.

Appraisal Principles — The concepts evolved from economic doctrine providing the foundation for the valuation process and highest and best use. See *Highest and Best Use*.

Appraisal Ratio — 1) The ratio of the appraised value to an indicator of market value; and 2) By extension, an estimated fractional relationship between the appraisals and market values of a group of properties. See Level of Appraisal.

Appraisal Ratio Study — A ratio study using independent — expert single — property appraisals, and/or sales based on market value as indicators of market value. See Ratio Study.

Appraisal Report — Any form of communication of a completed appraisal or appraisal review. See *Appraisal*.

Appraisal - Sale Price Ratio — The ratio of the appraised value to the sale price, or adjusted sale price, of a property; a simple indication of appraisal accuracy. See *Adjusted Sale Price*, *Appraised Value*, and *Ratio Study*.

Appraisal Standards Board — The independent board of The Appraisal Foundation that develops, interprets, and amends the uniform standards of professional appraisal practice (USPAP).

Appraisal Uniformity — The extent to which appraisal procedures produce logical and consistent results across individual properties. See *Appraisal*.

Appraisal Valuation Model (AVM) — A mathematically based computer software program that produces an estimate of market value based on market analysis of location, market conditions, and real estate characteristics from information that was previously and separately collected. The distinguishing feature of an AVM is that it is an estimate of market value produced through mathematical modeling. Credibility of an AVM is dependent on the data used and the skills of the modeler producing the AVM. See *Market Analysis, Market Value,* and *Model*.

Appraise — To make an estimate of value for property. See *Market Value and Value*.

Appraised Value — The estimate of the value of a property. See *Value*.

Appraiser — The professionally skilled individual who estimates the monetary value of property.

Appraiser Licensing and Certification — A procedure whereby appraisers gain permission from the United States, state, and territorial licensing agencies to practice without supervision by demonstrating appropriate (pre — licensing) experience and education skills and by agreeing to maintain and improve their skills and to conduct themselves in accordance with professional standards set by either The Appraisal Foundation's Appraisal Standards Board or an appraisal organization.

Appraiser Qualifications Board — The independent division of The Appraisal Foundation that establishes education, experience, and other criteria for licensing, certification, and reclassification of qualified appraisers. See *Appraiser*.

Appreciation — Increase in value of a property, in terms of money, from causes other than additions and betterments. Contrast Depreciation. See *Addition* and *Betterment*.

Appurtenance — Real or personal property improvements that when attached or affixed become part of the real or personal property.

Arbitrary Map — An office subdivision or map made by a title company, assessor, or others for their own convenience in locating property in an area in which all the descriptions are by metes and bounds. On this subdivision, the lots are given arbitrary numbers. See *Assessing Officer*, *Metes and Bounds*, and *Subdivision*.

Arithmetic Mean — See *Mean*.

Arm's-Length Transaction — A sale between a willing buyer and a willing seller that are unrelated parties, each of whom is reasonably knowledgeable about market conditions and under no undue pressure to buy or sell.

Array — An ordered arrangement of data, such as a listing of sales ratios, in order of magnitude.

Assemblage — The joining of parcels of land that are not necessarily contiguous resulting in an increase or decrease in value, but when they are contiguous and increase value, they may be considered plottage. See *Parcel* and *Plottage*.

Assembly Value — The increase of the value of a large parcel of land formed from a number of smaller parcels over the sum of the values of the unassembled parcels. See *Assemblage* and *Parcel.*

Assess — Determining the value of property for ad valorem taxation. See *Ad Valorem Tax* and *Value*.

Assessed Value — The value placed on property subject to taxation at market value or some legally authorized fraction thereof. See *Assess, Market Value, and Value*.

Assessing Officer — Any property tax official with professional responsibilities.

Assessment — See *Assessed Value*.

Assessment, Area-Based — One of a small number of non-market assessment valuation standards. A property is placed on the tax roll at a value reflecting the land area or the surface area (floor area) of an improvement. See *Assess, Floor Area of Building, Improvements, Tax Roll*,and *Value*.

Assessment, Original — The official act of the assessing officer to discover, list, and value property for the purpose of ad valorem taxation for preparation of the assessment roll. See *Ad Valorem, Assess, Discovery, Listing,* and *Value*.

Assessment, Penalty — A charge, levy, tax, or fee added to the original amount of tax due. Typically, a sanction for failure to comply with specified legal requirements. See *Property Tax Levy*.

Assessment Administration — Management and oversight of all aspects of ad valorem taxation. See *Ad Valorem Tax* and *Assess*.

Assessment Administration Specialist (AAS) — A professional designation conferred by the International Association of Assessing Officers (IAAO) recognizing professionalism and competency in administration of a variety of functions for property tax purposes.

Assessment Appeal — See *Administrative Review* and *Assess*.

Assessment Base — The total of all the individual assessed values within a geographic area referred to as the tax base. See *Assessed Value* and *Tax Base*.

Assessment Date — See *Appraisal Date*.

Assessment District — See *Assessment Jurisdiction*.

Assessment Equity — The degree to which assessments bear a consistent relationship to market value. Relates to the fair and equitable treatment of individual properties. Requires that properties be appraised equitably with groups or categories (use classes, neighborhoods), and that each of these groups be appraised at the same level, or ratio, of market value. See *Appraisal Ratio, Assess, Class, Equity, Level of Appraisal, Market Value*, and *Value*.

Assessment Jurisdiction — The geographic area for the assessment of property for taxation. Generally consistent with the political boundaries of a state, county, city, or township. See *Assess* and *Jurisdiction*.

Assessment Level — The relationship between the assessed value of property and its market value, often expressed as a percentage. See *Assess, Level of Assessment, Market Value*, and *Value*.

Assessment Map — See *Assess, Cadastral Map*, and *Map*.

Assessment Progressivity — See *Price-related Differential (PRD).*

Assessment Ratio — See *Appraisal Ratio* and *Appraisal Ratio Study.*

Assessment Ratio Study — See *Appraisal Ratio* and *Appraisal Ratio Study*

Assessment Regressivity — See *Price-related Differential (PRD)..*

Assessment Review — See *Administrative Review.*

Assessment Review Board — A quasi-judicial panel that hears matters related to property assessment and property classification. Also known as the Board of Assessment Appeals, Valuation Adjustment Board, Board of Equalization, and Appraisal Review Board, and similar. See *Administrative Review* and *Classification.*

Assessment Roll — The basis on which property tax levies are allocated among assessable property within a taxing jurisdiction. A public record of the assessed value of every property in a taxing jurisdiction. Often includes a parcel identification number (account number), name of owner of record, location address, mailing address, assessed value of land, assessed value of building, assessed value of other real property improvements, assessed value of personal property, and exemption codes. May be referred to as List, Grand List, Abstract, or other titles.

Assessor — See *Assessing Officer.*

Asset — Any item (tangible or intangible) having value to its owner; a source of wealth. For accounting purposes, it is expressed in terms of its cost, depreciated cost (net book value), or basis. May be capitalized to a balance sheet or expensed on an income statement when acquired. See *Acquisition, Balance Sheet, Capitalization, Cost, Depreciated Reproduction Cost, Expense, Income Statement, Intangible Personal Property, Personal Property*, and *Value*.

Asset, Current — An asset that is expected to be sold, exchanged, consumed, or disposed of in generally less than one year. Unrestricted cash or other assets held for conversion within a relatively short period into cash or other similar assets or useful goods or services. Usually, the period is one year or less, but for some items, such as accounts receivable in installments, the period may be longer by contract.

Asset, Fixed — A property having an economic life greater than one year. Does not typically include current assets or inventory. Includes both real and personal property items. Fixed Assets is not synonymous with personal property. See *Asset, Current; Economic Life; Personal Property; Property*; and *Real Property.*

Assign — To transfer property or a specified interest in property.

Assignment — The transfer of any personal or real property or any rights in a property by, for example, a deed, lease, or mortgage. See *Deed, Lease, Mortgage, Personal Property,* and *Real Property.*

Assume Plane Coordinates — A local plane coordinate system set up at the convenience of the user.

Assumption Fee — A lender's fee for processing records when a new buyer assumes an existing loan.

Assumption of Mortgage — The conveyance of the remaining balance of an existing debt to the purchaser of a financed property. An assumption of a mortgage is an agreement in which the buyer accepts liability for repayment of an existing debt. Unless the seller is released, he or she remains liable for the payment of such debt.

At — The place or location of an object not treated as definitively locative. It denotes nearness or proximity. A boundary of land described as "at" a road, without qualifying terms means "to the center of the road." "To," "on," "at," and "by" a stream, unqualified, means to the limit of private ownership.

ATCF — See *After-Tax Cash Flow.*

Attachment — Property seizure by a court order.

Attestation Clause — The witness clause in a document that affirms the document is properly executed.

Attribute — Characteristic of a property.

Auction — A method of marketing and selling property whereby participants bid on the property. See *Absolute Auction.*

Audit — A systematic set of procedures used by an auditor to validate information provided by the property owner or to validate an estimated assessment. Often used in assessment administration to validate personal property assessments. An audit may be informal or a formal book audit.

Audit Program — A systematic set of procedures used by an auditor as part of an ongoing activity to validate information received by a property owner or to validate an estimated assessment. Often assessing jurisdictions develop an audit program for personal property assessments.

Audit Trail — A method of documenting all changes made to a set of books and records of the property owner by the auditor, leading to the final modified records on which assessments are based. An audit trail is generally used by personal property auditors to record all changes from accounting records to a personal property rendition (statement).

Automated Valuation Model (AVM) — A mathematically-based model combined with databases of existing properties and transactions to calculate real estate values. AVM's include proprietary algorithms, usually both a regression based model and repeat sales index, which are weighted and analyzed to generate a single-point value estimate. Accurate value estimates require high-quality data representative of the specific properties for which values are estimated.

Auto-Mosaicking — Producing a single image from multiple overlapping images.

Average — The arithmetic mean. The central value of a numerical data set expressed as the sum of the values divided by the number of values in the data set.

Average Absolute Deviation — The arithmetic mean of the absolute deviations of a set of numbers from a measure of central tendency, such as the median. The average deviation of the numbers 4, 6, and 10 about their median (6) is $(2 + 0 + 4) \div 3 = 2$. The average deviation is used in computing the coefficient of dispersion (COD).

Average Tax Rate — Total taxes paid divided by the total base.

Average Total Cost — The total cost to produce something divided by the number of units produced.

AVM — See *Automated Valuation Model.*

Avulsion — The sudden and perceptible tearing away or separation of land by violent action of water.

Azimuth — A direction measured clockwise from a given meridian.

B

Bailment — A transaction in which personal property is delivered by its owner (the bailor) to a second party (the bailee) into whose possession it is put for safekeeping or for some other temporary purpose or use with no intention that the title shall pass to the second party.

Balance — See *Principle of Balance.*

Balance Sheet — An accounting financial statement that reflects a company's assets, liabilities, and equity as of a specific date. Assets are equal to liabilities and equity.

Balloon Mortgage — A mortgage not fully amortized at maturity and requiring a final lump sum payment.

Band-of-Investment Analysis — A perspective on (and a technique for estimating) the discount rate. The discount rate is viewed as having two components, each weighted in proportion to typical financing terms for properties of the type in question. For example, if 75 percent loans are available at 9 percent interest and investors are known to seek a 14 percent return on equity, then the discount rate is 10.25 percent, that is,

$$(0.75 + 0.09 = 0.0675) + (0.25 + 0.14 = 0.0350) = 0.1025 = 10.25 \text{ percent.}$$

Baseline — A survey line running due east and west through the initial point of a principal meridian, from which township lines are established by the government survey.

Base-Lot Method — A method of appraising land parcels whereby each parcel to be appraised (base lot), and differences between the two in terms of location, size, shape, topography, and the like are analyzed by the appraiser in estimating the value of the lot to be appraised.

Base Map — See *Map, Base.*

Batture — A term used to denote a bed of sand, stone, or rock rising toward the surface of a body of water.

Bearing — Direction of a line measured as the acute angle from a reference meridian; usually expressed in the form "N 30° W" or "S 87° E."

Bearing Wall — A wall that supports a portion of a structure. Also called load bearing wall as it bears the weight load of the roof to foundation.

Before-Tax Cash Flow (PTCF) — The amount remaining before property taxes. Often referred to a Pre-Tax Cash Flow.

Being — A portion of a deed that denotes a secondary call: "to the northeast corner of Brown's land, being also a 2-inch iron pipe." See *Passing Call.*

Benchmark — 1) A term used in land surveying to mean a known point of reference; 2) In property appraisal, a property of known value and of known effective age and replacement cost; and 3) By extension, a model property to be used in determining by comparison the grade or quality class of other properties.

Beneficial Interests — The property interests resulting from equitable ownership in a property rather than legal ownership; for example, the interests of the beneficiary of a trust.

Beneficiary — 1) The person for whose benefit property is held in trust; 2) The person to whom the proceeds of an insurance policy are payable upon the happening of the event insured against or the non-happening of the insured event.

Berm — A mound of earth that diverts or controls surface drainage flow, marks property boundaries, or alters topography.

Beta Coefficients — Standardized regression coefficients that measure the relative importance of the independent variables in explaining or predicting the dependent variable.

Betterment — An expenditure on a fixed asset that increases its market value and extends the property's economic life.

Betterment Tax — See *Special Assessment Area.*

Bias — The tendency of a statistic to overestimate or underestimate a parameter. Statistics describe a sample. A parameter describes an entire population.

Bill and Hold Goods — A type of inventory that has been invoiced but not shipped from the seller to the buyer.

Binary Variable — Qualitative data items that have only two possibilities. Yes or No (for example, corner location) where 1=Yes, and 0=No. Also called Dichotomous Variable.

Blanket Mortgage — A mortgage covering more than one property; used in, for example, subdivision development and cooperative apartment ownership.

Blended Model — A model where more than one modeling technique is used in deriving the estimate of value. Typically, the technique involves running a hedonic model and a repeat sales index. The results are then compared and evaluated. Based on each result, the blended model reports a final estimate of value. In addition to the hedonic model and repeat sales index, many blended models also include the results of a tax-assessed value model.

Block — A block is a square or portion of a city enclosed by streets, whether it is occupied by buildings or composed of vacant lots. In addition, blocks are often enclosed by the boundary of the subdivision.

Block Grants — Grants that are designated for a broad set of uses, such as economic development. They are not as restrictive as categorical grants with broader goals, more discretion, and fewer administrative requirements. However, block grants are not as flexible as revenue sharing.

Blueprint — A detailed plan for the construction of physical components for improvements or personal property.

Bonds — Certificates of ownership of specified portions of a debt due to be paid by a government or corporation to the holder(s), usually with a fixed rate of interest.

Book Audit — A detailed audit that entails comparing the cost of the assets as reported on the listing or declaration to the historical costs of the assets.

Book Value — See *Net Book Value.*

Boot — Money or an asset added to a trade in order to make it reflect the fair market value of the asset being traded.

Bootstrapping — Sampling with replacement from observed data to estimate the variability in a statistic of interest. A related form of resampling. Reasons for using a bootstrap approach include when there is no assumption concerning the distribution of the data, and that it can assess the variability of virtually any statistic.

Boundaries — The physical and/or man-made lines that define a parcel, subdivision, neighborhood, or district.

Bounds — The lines by which different parcels of land are divided. “Butts and bounds” or “butted and bounded” are phrases sometimes used to introduce the boundaries of land.

Box Plot — A graphic representation of the distribution of a continuous variable with a qualitative variable (or quantitative variable with limited data values). They are excellent for revealing outliers and extremes.

Bracketing — A qualitative appraisal technique that compares properties similar to a subject property by ranking them either as superior or inferior to the subject. There are no explicit lump-sum dollar or percentage adjustments. The value of subject property is estimated by its relative position in the array of comparable sales between the next highest and next lowest comparable sale.

British Thermal Unit (BTU) — A unit of heat required to raise one pound of water one degree Fahrenheit.

Brownfield — A site whose use and value is affected by contamination or the potential of contamination.

BTU — See *British Thermal Unit.*

Budget — A formal written statement of the financial plan for an organization that details how resources will be used to accomplish an organization's established goals and objectives.

Buildable Unit — A unit of comparison used when the market indicates that a site is sold on a unit basis.

Building Capitalization Rate — The sum of the recapture and return rates on an income-producing property. The rate applies only to the improved portion of a property. The ratio of building or improvement income to building or improvement value. It can be used to convert a single year's building or improvement income into a building value.

Building Classification Schedule — A table giving standard specifications of a number of different typical buildings, classified according to use (such as one-family dwelling or office building), type of construction (such as wood frame or steel frame), exterior wall materials (such as brick or stone), and other factors affecting reproduction cost.

Building Residual Technique — A capitalization technique used when land value is known and residual income to the building or improvement is capitalized to obtain the building or improvement value.

Build-up Method — A method that yields an overall capitalization rate from two components. The building capitalization rate and the land capitalization rate are weighted by the percentage of property value each represents and then added together to yield an overall rate.

Bundle of Rights — The six basic rights associated with the private ownership of property. They are; 1) The right to sell. 2) The right to lease or rent, 3) The right to use, 4) The right to give away, 5) The right to enter or leave (real property), and 6) The right to refuse to do any of these. Four rights removed from the bundle of rights in favor of government control are: 1) Taxation, 2) Eminent domain, 3) Police power, and 4) Escheat.

Buoyancy — The ability of tax yields to rise and fall with the economy and with revenue needs.

Business Assets — Tangible and intangible resources that are employed by a business enterprise in its operation.

Business Enterprise — A commercial, industrial, or service organization pursuing an economic activity.

Business Enterprise Value — A term applied to the concept of an intangible, non-realty component of a property's value probably ascribable to supramarginal management competence.

Business Equity — The value of assets after deducting liabilities. The interests, benefits, and rights inherent in business ownership.

Business Premises — One type of situs that represents the more or less permanent location of personal property that is highly mobile in nature.

But — "That which follows is an exception to that which has gone before" is the common meaning of "but" in a sentence. May mean "except," "except that," "on the contrary," or "yet."

Buttal — Mans along the ends of the land.

Buyer — 1) One who purchases property; and 2) In real property sales, the grantee to whom property is transferred by deed or to whom property rights are granted by a trust instrument or other document.

By — In a deed, "by a read" is construed as including the land to the center of the street, but "by the east side of a road" means "along with east side" and not "along the center line. "To," "on," or "by" a stream means to the limits of the grantor's land.

C

CAD — Computer Aided Drafting, a process for interactively creating, modifying, and manipulating geometric information. See *Computer Aided Design.*

Cadastral Genealogy — A graphic depiction of the lineage or history of parcel.

Cadastral Map — A scale map displaying property ownership boundaries and showing the dimensions of each parcel with related information such as parcel identifier, survey lines, and easements. Annotations on recent sale prices and land value are sometimes added.

Cadastral Mapping Specialist (CMS) — A professional designation conferred by the International Association of Assessing Officers (IAAO) recognizing professionalism and competency in cadastral mapping techniques that support property valuation for tax purposes, property tax administration, and property tax policy.

Cadastre (or Cadaster) — A term commonly used in Europe to denote an official register or inventory of all lands and/or buildings, giving the area, location, owner, and either the value or estimated gross or net yield of each. This list remains substantially unchanged for a number of years, except for names of owners, and serves more or less the same purpose as an assessment roll in the United States. An official register of quantity, value, and ownership of real estate.

CAE — See *Certified Assessment Evaluator.*

Calibration — The process of estimating the coefficients in a mass appraisal model. Model calibration is the development of the adjustments or coefficients through market analysis of the variables to be used in a mass appraisal model. Source: *AVM Standard.* See *Mass Appraisal Model.*

Call — Within a deed, the designation of visible natural objects, monuments, courses, distances, or other matter of description as limits of the boundaries. Locative calls are particular or specific calls exactly locating a point or line. Descriptive calls are general or directory calls that merely direct attention to the neighborhood in which the specific calls are to be found.

CAMA — See *Computer-Assisted Mass Appraisal.*

Canadian Mortgage and Housing Corporation (CMHC) — A Canadian crown corporation. Its mandate is to assist in housing for Canadians.

Canvass — Also called a "field canvass." The practice of collecting the data needed in assessment operations by systematically going from property to property coding the specified information.

Capital — Financial assets used as a source of financing for all business types. In accounting, the capital account is the net worth of a business at a specific point in time. It is the difference between capitalized assets and liabilities. May also be referred to as Owner's Equity.

Capital Assets — All property generally having an economic life of greater than one year. Includes all property, whether movable or affixed, tangible, or intangible. Examples include land, buildings, plants and machinery, vehicles, furniture and fixtures, and goodwill.

Capital Expenditure — Cash investments to acquire or improve an asset that will have a life of more than one year, as distinguished from cash outflows for expense items normally considered part of the current operations.

Capital Gain — The profit realized through the sale of a property if the sale price of that property exceeds the cost of acquisition and of any improvements the seller has added.

Capital Improvements — Improvements that include additions to the property made at any time.

Capital Market — The interaction of buyers and sellers as they buy and sell long-term financial instruments, such as mortgages, bonds, and stock.

Capital Structure — 1) The manner in which a firm is financed, that is, the amount and kind of equity and debt that satisfies the need for funds; and 2) The financing mix of debt and equity. Note: Capital structure may be based on book values or market values.

Capital Value — Current market value of immovable property.

Capitalization — 1) Any rate used to convert an estimate of income to an estimate of market value; the ratio of net operating income to market value, and, 2) For the assessment of personal property and generally accepted accounting principles (GAAP), capitalization refers to the cost of an asset that is placed in the asset category of a balance sheet, rather than as an expense on an income statement. See *Balance Sheet, Direct Capitalization, Income Approach, Income Capitalization, Income Statement* and *Yield Capitalization.*

Capitalization of Ground Rent — Method of estimating land value in the absence of comparable sales. Applicable where there is an income stream; for example, to farmland and commercial land leased on a net basis.

Capitalization of Income — See *Income Capitalization.*

Capitalization Rate — The annual net operating income of a property divided by its value expressed as a percentage. It converts the estimated net operating income of a property to an estimate of market value. A capitalization rate is composed of: 1) A rate of return on the investment (interest); 2) A rate of return of the investment (recapture); and 3) Effective tax rate. For ad valorem assessments, the inclusion of the effective tax rate in the capitalization rate is referred to as a loaded cap rate.

Capitalized Cost — An accounting term expressing the total consideration expended necessary to acquire asset(s) and may include invoice cost, trade-in allowances, sales tax, freight, installation, and construction period interest.

Capitalized Leased Property — Property, which is intended for purchase by the lessee, subject to the requirements of a lease agreement. Considered as an asset by the lessee within the financial statements of the individual or organization. Often considered installment-sales agreements under the provisions of generally accepted accounting principles (GAAP).

Capitalized Value — The value of a property estimated by the income approach to value.

Cardinal Direction — Direction is either due north, south, east, or west.

Cash Discount — A reduction in the billed amount to the purchaser if payment is made within a specified period of time or if the purchaser meets the provisions of the discount offered by the seller.

Cash-Equivalent Sale Price — The price paid in cash that reflects the fair market value of an asset after consideration of any favorable or unfavorable terms.

Cash Flow — See *After-Tax Cash Flow* and *Before-Tax Cash Flow.*

Categorical Grants — Grants that are designated for a particular use, such as development of municipal parks.

Categorical Variable — A categorical variable (sometimes called a nominal variable) has two or more categories, but there is no intrinsic ordering to the categories. For example, exterior wall type is a categorical variable having a number of categories (wood, brick, stucco, and composite) with no inherent order from highest to lowest. A categorical variable simply allows for the assignment to specific categories without any clear order.

Caveat Emptor — A Latin phrase meaning, "Let the buyer beware." A common maxim stating that the buyer purchases at his or her own risk.

Center Line — Usually applies to the center of a street prior to widening or closing, i.e., the center line of the original street midway between the sides. To avoid ambiguous conditions, if the street has been narrowed or widened on one side or unequally, the center line should be defined.

Central Meridian — The central line of longitude used as the basis for the construction of many map projections. An example would be the meridian at the center of each universal transverse Mercator zone, which is numbered 500,000 meters and used as the reference for east-west measurements within the zone.

Central Tendency — See *Measure of Central Tendency.*

Centralized Assessment — An assessment placed on property by an assessing officer whose jurisdiction extends over two or more local assessment districts. Often utilized by state agencies for public utilities, aircraft, etc. Commonly referred to as State Assessed Property.

CERCLA — See *Comprehensive Environmental Response Compensation and Liability Act.*

Certificate of Redemption — The evidence of buying back or redeeming a property by the owner after loss through a judicial sale.

Certificate of Sale — A certificate issued to the buyer at a judicial sale that entitles the buyer to a deed upon confirmation of the sale by the court.

Certificate of Title — A document typically issued by the government or a title company that states that the title to the property is believed to be clear or lists various encumbrances the property is subject to.

Certified Assessment Evaluator (CAE) — A professional designation conferred by the International Association of Assessing Officers (IAAO) recognizing professionalism and competency in a wide range of matters covering property valuation for tax purposes, property tax administration, and property tax policy.

Certified Public Accountant (CPA) — Accountants who, having met the statutory requirements of a state and having been registered or licensed to practice public accounting, are permitted by the state to call themselves certified public accountants and use the initials CPA after their names.

Certiorari, Writ of — An order issued by a superior judicial or quasi-judicial body requiring an inferior judicial or quasi-judicial body to certify to the superior body the records of a case for judicial review.

Chain — A land measure of 66 feet, four rods, or 100 links.

Chain of Title — See *Abstract of Title.*

Change Principle — See *Principle of Change.*

Charges — Non-tax revenue from fees and reimbursements for current services used in the development of a nominal tax rate.

Chart of Accounts — A complete list of every accounting category contained within the general ledger of the financial reporting documents of an entity. Often includes the account name and a numeric reference.

Chattel — A term that is synonymous with tangible personal property. See *Personal Property.*

Chattel Mortgage — A mortgage in which the security consists of tangible personal property. Note: A chattel mortgage usually takes the form of a bill of sale drawn in favor of the mortgagee with a clause defeating the transfer during compliance by the mortgagor with specified conditions.

Chi-Square — A nonparametric test of statistical significance for categorical variables.

Chord — A straight line connecting the tangents of a curve.

Chronological Age — The age of an item as measured from when the item was new to a specified date. Often referred to as Historical Age. See *Age, Economic Life, Effective Age, Remaining Economic Life*, and *Useful Life.*

Circuit Breaker — A credit or rebate of specified amounts of property taxes incurred whenever such taxes exceed specified percentages or amounts of household income. In instances where renters are included, rent or rent equivalents substitute for property taxes.

Class — A set of items defined by common characteristics; 1) In property taxation, property classes such as residential, commercial, agricultural, industrial, and personal property may be defined; 2) In assessment, building classification systems based on type of building design, quality of construction, or structural type are common; 3) Class use may be subject to regulation and/or law; 4) May have differing tax classes and tax (millage) rates.

Classification — The process of grouping items with common characteristics. See *Class.*

Classified Property Tax System — A system with either different statutory assessment levels or different tax mill rates for discrete property classes typically based on property use.

Claw back — A provision in a property tax relief measure designed to recover some or all of the taxes forgone when it is found that the property or the taxpayer is not or never was qualified for the relief.

Client — Any party for whom a fee appraiser performs a service.

Closing — The act of finalizing a real estate transaction that executes and delivers mortgage or property title documents.

Closing Costs — Settlement fees and expenses incurred in transferring property ownership that are paid at the real estate closing.

Closing Statement — A listing of incurred closing costs of the buyer and seller in closing a real estate transaction.

Cloud on Title — Any claim, encumbrance, or lien that may impair the title to real property.

CMHC — See *Canadian Mortgage and Housing Corporation.*

CMS — See *Cadastral Mapping Specialist.*

COD — See *Coefficient of Dispersion.*

CODw — See *Weighted Coefficient of Dispersion.*

Coefficient of Concentration — The percentage of observations within a given percentage of the median. Typically used in assessment ratio studies. A high coefficient of concentration for low percentages, say 15 percent, indicates high performance.

Coefficient of Correlation — See *Correlation Coefficient.*

Coefficient of Determination (R2) — The proportion of the variation in the dependent variable accounted for by the variation in the independent variables. R2 varies between zero (no linear relationship) and one (perfect linear relationship).

Coefficient of Dispersion (COD) — Expresses as a percentage the average deviation of the ratios from the median. The COD is used throughout the property assessment field as a measure of appraisal uniformity.

Coefficient of Price-Related Bias (PRB) — Indicates the percentage by which assessment ratios change whenever values are doubled or halved. For example, a PRB of –0.03 means assessment levels decrease by 3 percent when value doubles. The PRB should range between –0.05 and +0.05. PRBs outside the range of –0.10 to +0.10 are considered unacceptable.

Coefficient of Variation (COV) — A measure of relative variability. It is the ratio of the standard deviation to the mean. The COV is particularly useful when comparing results from two groups. For example, in an assessment ratio study, when comparing jurisdictions with widely varying levels of assessment, the COV provides a common basis for reviewing the relative level of assessment equity among the different jurisdictions.

Coincidence Line — See *Line, Coincidence.*

Collection Loss — Nonpayment of rent. Also known as Credit Loss. See *Vacancy and Collection Loss.*

Color of Title — An appearance or claim of legal ownership that arises from a document.

Commercial Paper — Short-term promise to pay issued by a corporation.

Commercial Property — Generally any non-industrial, non-single family residential real or personal property used in conjunction with a commercial enterprise. Includes real and personal property used as retail stores, convenience stores, restaurants, bars, supermarkets, discount stores, offices, medical offices, banking institutions, theaters, auto service establishments, hotels/motels, hospitals, etc.

Common Area — The total area within a property that is not designed for rental or sale and is available for common use by all tenants and owners. Also known as Common Elements.

Common Equity — On the books of a corporation, the amount of common stock, plus premium on common stock, plus retained earnings, less reacquired common stock, less common stock expense, plus any additional paid-in capital associated with common stock. The equity interest in a property.

Community Property — Property that is acquired by either spouse during their marriage that becomes owned by the couple equally.

Comparable Sales — In the appraisal profession often referred to as “comparables” or “comps.” Recently sold properties with similar value influencing attributes compared with the subject, i.e., the property being appraised.

Comparative Unit Method — Estimates the replacement cost new of a property by using a cost per unit of comparison such as per linear foot, per square feet, per cubic feet, or for personal property, per production rate. An appraisal technique that totals direct and indirect costs and divides that sum by the appropriate unit of comparison. The result can then be applied to similar properties to estimate market value.

Competition — See *Principle of Competition.*

Compilation — 1) In cartography, the production of a new or revised map from an existing map, aerial photograph, survey, or other source material; and 2) In photogrammetry, the production of a map, chart, or portion thereof from aerial photographs and geodetic control data by means of photogrammetric instruments. Also called Stereo-Compilation.

Composite Rate — An overall rate of blended or weighted averages of various rates of return expected for a single investment as represented by R in the Ellwood formula. See *Mortgage-Equity Analysis.*

Compound Interest Table — A graphic presentation that specifies an interest rate and a compounding period and gives six functions of a dollar at various yearly or monthly intervals: 1) The future worth of $1 after one interval; 2) The future worth of the $1 deposited at the beginning of each interval; 3) The sinking-fund factor; 4) The present worth factor; 5) The present worth of $1 per interval; and 6) The amount to amortize.

Comprehensive Environmental Response Compensation and Liability Act (CERCLA) — A federal environmental program administered by the Environmental Protection Agency (EPA).

Computer-Aided Design (CAD) — A process for interactively creating, modifying, and manipulating geometric information.

Computer-Assisted Mass Appraisal (CAMA) — A software package used by governmental agencies and assessing offices to establish real and personal property valuations for property tax purposes. It is composed of several applications that systemically value property. Often includes statistical analysis such as multiple regression analysis to assist the appraiser in determining the value of property for property taxation purposes.

Concave — The inside of a curve; toward the center of the circle.

Concession — A benefit granted by a lessor or seller as an inducement to lease or purchase.

Condemnation — 1) The exercise of the right of eminent domain to secure legal title to private property required for a public use; and 2) A declaration by a constituted authority to the effect that a structure is unfit for occupancy or dangerous to persons or other property, often accompanied by exercise of the police power to limit or prohibit occupancy or to require demolition of the structure. Note: The term "expropriation" is also used to convey the first of these meanings.

Condition — A qualitative measure of the overall desirability of a property's physical improvements.

Conditional Sale — A sale, especially of chattels, in which the transfer of title is made to depend on the performance of a condition subsequent to the making of the sales contract and delivery of goods. Note: The most common condition is that the remainder of the purchase price be paid. Property held under a conditional sales contract may be repossessed without foreclosure proceeding, and the former holder has no equity of redemption.

Conditions — Restrictions created by a qualification by the grantor of a deed, upon breach of which the estate is defeated and reverts to the grantor (or heirs).

Condominium — A real property ownership concept in which one can own an undivided interest in a portion of the real property (typically called a unit) and own a shared interest with other unit owners in the public areas of the real property (the common elements).

Condominium Unit — The portion of real property owned individually in a condominium ownership concept (as opposed to the common elements in which ownership is shared with other unit owners).

Confidence Interval — A range of values calculated from the sample observations that are believed, with a particular probability, to contain the true population parameter (mean, median, COD). The confidence interval is not a measure of precision for the sample statistic or point estimate, but a measure of the precision of the sampling process.

Confidence Level — Indicates the probability with which the estimation of the location of a statistical parameter (for example, arithmetic mean) in a sample survey is also true for the larger population from which the sample is derived.

Confidence Score — The automated valuation model (AVM) confidence score is a value that indicates the level to which each of multiple AVM models "agrees" with the other estimated values for a given property.

Conformity — See *Principle of Conformity.*

Consideration — The amount of money and other valuable goods or services on which a buyer and a seller agree to consummate a sale.

Consigned Goods — A type of inventory that is in the possession of a selling agent but owned by another party. The agent has no equity interest in the inventory. The selling agent is often compensated in the form of a sales commission paid by the owner of the inventory.

Consignment — 1) A shipment of goods from one person (the consigner) to another (the consignee); and 2) (preferred) A bailment contract whereby one party (the consigner) places his or her goods in the possession of a second party (the consignee or factor) for the purpose of sale by the second party.

Consistent Use — See *Principle of Consistent Use.*

Consolidation — See *Assemblage.*

Constrained Variable — A variable with a value set to either a specific number or constrained to fall between a lower and upper bound. Typically used in valuation modeling techniques such as multiple regression.

Construction Cost — The sum of direct costs of materials and labor plus contractors' indirect costs to construct an improvement of real or personal property.

Construction in Progress — 1) Real property that is not complete; 2) Personal property not fully installed and in the process of going from inventory to fixed asset by installation, or the conversion of personal property realty by becoming a fixture; and 3) Personal property that has been acquired but not yet installed as of the date of valuation. Also known as Construction Work in Progress.

Construction Loan Mortgage — A short-term loan made for the purpose of financing new construction. Usually, the land is initial collateral for the loan, and provisions are specified in the mortgage for disbursing funds as the project develops. Improvements on land provide additional security for the lender as the loan amount increases.

Contiguous — Sharing a property boundary.

Contingent Fee — A fee determined by the results of the services to be performed or by other future events.

Continuous Data — Data that can take any value between two numbers, no matter how small. There are an infinite number of values regardless of scale. See *Discrete Data.*

Continuous Variable — A variable for which it is conceivable that, given any two observed values, a value lying between them may occur. For example, temperature and finished living area are continuous variables; quality class and number of fireplaces are not. See *Binary Variable* and *Discrete Variable.*

Contour Line — An imaginary line on the ground, all points of which are at the same elevation above or below a specified reference surface.

Contour Map — A topographic map that portrays relief by means of contour lines.

Contract for Deed — An agreement for the sale of a property in which the seller retains title until the buyer completes the contracted payments for the property. The agreement may be recorded; however, the conveyance of the property is not complete until all contractual obligations are fulfilled, at which time the deed for transfer of ownership may be recorded.

Contract Rent — The actual amount of rent that is specified in the lease.

Contribution — See *Principle of Contribution.*

Contributory Value — The amount a component of a property contributes to the total market value of the property. See *Principle of Contribution.*

Control-Ground and Geodetic — A system of points that are used as fixed references of position (horizontal) or elevation (vertical) or both. Ground control points are obtained from ground surveys. These points can be used to rectify the accuracy of cartographic products to the actual area on the ground that is represented. Geodetic control takes the size and shape of the earth into consideration. See *Aerial Triangulation.*

Convex — The outside of a curve.

Conveyances — Legal documents that transfer ownership or rights (interests) of property.

Cooperative — A business entity, usually a corporation, that holds title to realty and that grants rights of occupancy to its shareholders by means of proprietary leases or similar devices.

Coordinates — Linear or angular quantities that designate the position of a point in a given reference system.

Copyright — The exclusive right granted by a government for a limited period to an author, composer, designer, or such, or his or her heirs, legatees, or assigns, to reproduce, publish, and sell copies of an original literary or artistic work.

Corner — In land surveying, a point on a land boundary at which two or more boundary lines meet.

Corner Influence — 1) The effect of location at, or proximity to, the intersection of two streets upon the value of a lot or parcel; and 2) The increment of value resulting from such location or proximity. Found most often in commercial properties because of greater ease of entry and exit, accessibility to higher volume of traffic, and increased show-window and advertising space.

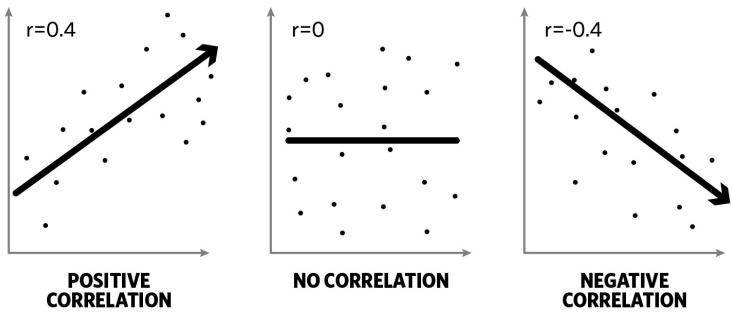
Corporation — A legal entity (business organization form) operating under a grant of authority from a state in the form of a charter and articles of incorporation.

Corporation, Domestic — A corporation organized under the laws of a jurisdiction where it is located or doing business.

Corporation, Foreign — A corporation organized under the laws of some jurisdiction other than the jurisdiction where it is located or doing business.

Correlation Coefficient — Used to measure the strength of association between two variables. The most commonly used correlation coefficient, Pearson's correlation (also called Pearson's R) represented with a lowercase r, ranges from – 1.0 to +1.0, with 0 meaning there is no association between the two variables. A correlation coefficient of 1 means that for every positive increase in one variable, there is a positive increase of a fixed proportion in the other. For example, the number of bedrooms often increases with close correlation with increases in living area. A correlation coefficient of – 1 means that for every positive increase in one variable, there is a negative decrease of a fixed proportion in the other. For example, market value often decreases in correlation with increases in effective age.

The absolute value of the correlation coefficient gives us the relationship strength. The larger the number, the stronger the relationship. For example, $|-0.65| = 0.65$, which has a stronger relationship than 0.40. The graphs below illustrate these relationships.



It is a statistic that characterizes two or more sets of numbers and, when squared and multiplied by 100, gives the percentage strength of the (linear) relationship between the two sets of numbers. For example, if the coefficient of correlation between measures of the height and weight of a group of people were 0.9, then one would deduce that knowing the height of someone would generally explain or account for 81 percent of the weight.

Correlation Matrix — A table showing correlation coefficients between sets of variables. Each variable in the table is correlated with each of the other values in the table. This allows you to see which pairs have the highest correlation. The following correlation matrix shows the correlation coefficients for a combination of eight variables:

Variables	Sale	Nbhd4	Nbhd5	SF1st	SF_Other	Baths	Grade	LotSize
Sale	1.0000	-0.4274	.2312	.5311	0.4914	.5937	-0.7165	0.2205
Nbhd4	-0.4274	1.0000	-0.6055	-0.4901	-0.0124	-0.3117	0.1402	-0.1657
Nbhd5	0.2312	-0.6055	1.0000	0.2930	0.0303	0.1469	-0.0759	-0.0156
SF1st	0.5311	-0.4901	0.2930	1.0000	-0.2383	0.3371	-0.1625	0.3193
SF_Other	0.4914	-0.0124	0.0303	-0.2383	1.0000	0.2999	-0.5856	-0.0484
Baths	0.5937	-0.3117	0.1469	0.3371	0.2999	1.0000	-0.3917	0.0927
Grade	-0.7165	0.1402	-0.0759	-0.1625	-0.5856	-0.3917	1.0000	0.0956
LotSize	0.2205	-0.1657	-0.0156	0.3193	-0.0484	0.0927	0.0956	1.0000

Cost — The money expended in obtaining an object or attaining an objective; generally used in appraisal to mean the amount spent to acquire an asset (personal property) or the amount spent, including both direct and indirect costs, to construct a real property improvement.

Cost, Construction — See *Construction Cost.*

Cost, Depreciated Reproduction — See *Depreciated Reproduction Cost.*

Cost, Direct — See *Direct Cost.*

Cost, Hard — See *Direct Cost.*

Cost, Historical — See *Historical Cost.*

Cost, Indirect — See *Indirect Costs.*

Cost, Original — See *Original Cost.*

Cost, Overhead — See *Overhead Cost.*

Cost, Soft — See *Indirect Costs.*

Cost, Trended — See *Trended Cost.*

Cost, Unit — See *Unit Cost.*

Cost Approach — 1) One of the three approaches to value, the cost approach is based on the principle of substitution—that a rational, informed purchaser would pay no more for a property than the cost of building an acceptable substitute with like utility. The cost approach seeks to determine the replacement cost new of an improvement less depreciation plus land value; and 2) The method of estimating the value of property by: (a) Estimating the cost of construction based on replacement or reproduction cost new or trended historical cost (often adjusted by a local multiplier); (b) Subtracting depreciation; and (c) Adding the estimated land value. (The land value is most frequently determined by the sales comparison approach.)

Cost Index — A factor or multiplier used to adjust variations in construction costs over time; sometimes, by extension, a set of similar numbers showing the relative costs of construction in different geographic areas.

Cost Manual — A guide, containing pictures, specifications of structures, and cost schedules, used to help classify construction quality and estimate the cost of replacing a structure.

Cost of Capital — The required rate of return that investors expect for providing funds to a project.

Cost-of -Development Method — A method of appraising undeveloped land, whereby an estimate is made of the probable proceeds to be obtained from selling the land as subdivided, developed parcels. The cost of so developing the raw land is subtracted from this estimate to obtain an estimate of the value of the raw land.

Cost of Equity — See *Equity Yield Rate.*

Cost of Goods Sold (Cost of Sales) — 1) In retail, the total cost of goods sold during a given accounting period is determined by ascertaining the invoice costs of the materials purchased, adding the value of the inventory on hand at the start of the fiscal period and subtracting the value of the inventory remaining on hand at the end of the fiscal period; and 2) In manufacturing, the cost of production of the items sold, such as raw materials, direct labor, and overhead.

Cost Schedules — Charts, tables, factors, curves, or equations intended to help estimate the cost of replacing a structure from a set of known factors such as quality class and structure size and height.

Cost Study — An economic evaluation of costs to develop the replacement cost new of real or personal property.

Cost to Cure — Estimated cost to correct or replace a component within an item of real or personal property. The cost to remedy deferred maintenance or functional obsolescence.

Cost Trend Factor — A multiplier developed to adjust costs to a specific point in time.

Coupon Rate — The rate of return specified on the face of a debt instrument (such as a bond) as opposed to the actual return (or effective yield).

Course — Direction of a line with reference to a meridian. Also, bearing or azimuth and length of a line considered together.

COV — See *Coefficient of Variation.*

COVw — See *Weighted Coefficient of Variation.*

Covenant — A word used in deeds for the purpose of creating restrictions; imports an agreement on the part of the grantee or subsequent grantees or heirs to make, or to refrain from making, some specified use of the land conveyed.

Credit — A claim for money or money's worth that is enforceable by law, whether due or accruing and whether secured or not; for example, accounts receivable, notes, bonds, accrued interest and rent, and bank deposits, but not corporate stock. In accounting, the right-hand column of a double entry accounting system where debits equal credits.

Critical Value — A factor used to compute the margin of error. In hypothesis testing, a critical value is a point on the test distribution that is compared to the test statistic to determine whether to reject the null hypothesis.

Cross Validation — A technique for validating an automated valuation model (AVM) where, iteratively, a subset of sales is held out of the model and the model is re-fit to the remaining sales. The analyst could then examine either the predictive results for the subsets of holdout sales or the model coefficients over the various iterations.

Cross-tabulation — A two-way frequency distribution that shows the joint distribution of two variables.

Cubic Content of Building — A method of obtaining value typically used for multistory construction. Estimates the cost of the building based on its volume. Calculated by the length times width times height of the structure (L x W x H). It is then multiplied by the forecasted cost factor to arrive at the value.

Cultural Details — Human-made features of the terrain. Included are such items as roads, buildings, and canals.

Curable Depreciation — That part of depreciation that can be reversed by correcting a deficiency.

Current Asset — See *Asset, Current.*

Current Liability — A debt normally due within one year. See *Liability*.

Curves — A continuously bending line without angles. 1) Center of line of a curve is the midpoint along the arc of the curve and is not the "center of the circle" describing the curve; 2) Parallel curves are curves that are concentric; 3) Radius of a curve stops at the arc of the curve. (A description intending to extend beyond the arc should state "and on the prolongation of the radius"); 4) Compound curves are tangent at the point of compounding (changing of radius); 5) Reverse curves are tangent at the point of reversal; and 6) Tangent curves have a common tangent where the curves meet.

Customer Survey — A tool for gathering information on the public's opinion of the assessment office.

D

Data — Information expressed in any of a number of ways. "Data" is the general term for masses of numbers, codes, and symbols generally, and "information" is the term for meaningful data. "Data" is the plural of datum, one element of data.

Database — An organized grouping of data within the structure of a database management system that has been defined by a particular use, user, system, or program.

Data Edit — The process of examining recorded data to ensure that each element of data is reasonable and consistent with others recorded for the same object, such as a parcel of real estate. Data editing, which may be done by human beings or by computer, is essentially a mechanical process, distinct from verifying the correctness of the recorded information by calling or writing property owners.

Data Integrity — The degree to which data sets remain unaltered after changes or updates are made in a database. The validity and accuracy of the information. Protected accurate information in a database to be used for analysis.

Data Maintenance — The process of organizing and curating data. Properly maintaining and caring for data is essential to ensuring that data remain accessible and usable for their intended purposes.

Data Management — An administrative process that includes acquiring, validating, storing, protecting, and processing required data to ensure the accessibility, reliability, and timeliness of the data for users.

Data Model — A generalized, user-defined view of data representing the real world. A description of the structure of a database. It describes how data are represented and accessed.

Data Scraping — A technique using software programs that can analyze human-readable data, typically unstructured, from websites and store them in a structured data file. Collection methods included text filtering, analysis, and capture and image analysis and optical character recognition.

Data Steward — A term commonly used to identify an entity responsible for maintaining data in various map layers.

Date of Acquisition — The effective date of the purchase of an asset. The date that the asset is recorded into the books and records of the purchaser for financial reporting and tax purposes.

Date of Sale (Date of Transfer) — For real property, the actual date of conveyance between grantor and grantee of the bundle of rights. Referred to as the execution date, which may or may not be the date of recordation. For personal property, the date that the buyer and seller convey the property in exchange for money or another item of value.

Datum (Geodetic) — 1) A reference surface consisting of five quantities: the latitude and longitude of an initial point, the azimuth of a line from this point, and two constants necessary to define the reference spheroid; the basis for the computation of horizontal control surveys in which the curvature of the earth is considered (leveling); and 2) A level surface to which elevations are referred; usually, but not always, means sea level.

DCF — See *Discounted Cash Flow Analysis.*

DCR — See *Debt Coverage Ratio.*

Debit — An accounting entry recording the creation of an addition of an asset or an expense, or the reduction or elimination of a liability, or item of net worth (capital). The left-hand side of a journal entry in a double-entry accounting system.

Debt — Money owed.

Debt Coverage Ratio (DCR) — The ratio of net operating income to debt service, which is used to estimate the overall capitalization rate in direct capitalization. The formula for the overall capitalization rate (OAR) is OAR = DCR × Annual debt cost × Debt percentage of capital structure.

Debt Rate — The interest rate on borrowed money.

Debt Service — The total payments of principal and interest on a mortgage.

Declaration — A statement by a property owner.

Declaration of Restrictions — A set of recorded restrictions that applies to a specific area or subdivision.

Declaration of Trust — A written acknowledgment by the legal titleholder to property specifying the property is held in trust for the benefit of another party.

Declining Balance Method — A method of accounting depreciation that allocates higher amounts of depreciation in the earlier years of an asset, on the premise that actual depreciation is greater during that time.

Declining Terminal Series — A projected income stream that declines progressively and systematically and eventually ceases.

Decree — A judgment by the court in a legal proceeding.

Decree of Distribution — The judicial decision made by a probate court determining who is legally entitled to the real estate and personal property of a decedent.

Deed — A document that when executed and delivered conveys an interest in or legal title to a property.

Deed, Quitclaim — See *Quitclaim Deed.*

Deed, Recordation — See *Recordation/Recording.*

Deed, Special Warranty — See *Special Warranty Deed.*

Deed, Tax — See *Tax Deed.*

Deed, Trust — See *Trust Deed.*

Deed, Warranty — See *Warranty Deed.*

Deed Restriction — Limitations on property rights, typically on the use of a property, contained in a deed.

Deferred Maintenance — Postponed maintenance and repairs to real or personal property that were not performed and have been delayed.

Degree — One 360th of the circumference of a circle.

Degree of a Curve — Along railroads, the central angle of a curve subtended by a 100-foot chord on the curve. Along highways, usually, but not always, defined as the central angle subtended by a 100-foot arc of said curve.

Degrees of Freedom (d.f.) — The total number of observations minus the number of independent constraints imposed on the observations. The easiest way to understand degrees of freedom conceptually is through an example:

Consider a data sample of five positive numbers with no known relationship among them. This data sample then has five degrees of freedom.

If four of the numbers in the sample are {3, 8, 5, and 4} and the average of the entire data sample is 6, then the fifth number has to be 10. It can be nothing else. It does not have the freedom to vary.

The degrees of freedom for this data sample is 4.

Therefore, the formula for degrees of freedom equals the size of the data sample minus one:

$$DF = N - 1; \text{ where } DF = \text{degrees of freedom} \qquad N = \text{sample size}$$

Degrees of freedom are calculated to test the validity of various inferential statistical tests. Depending on the specific type of statistical analysis, degrees of freedom typically (but not always) relate to the size of the sample. Because higher degrees of freedom generally result from larger sample sizes, a higher degree of freedom provides a stronger likelihood of finding a statistically significant result.

Degressive Tax — A progressive tax in which the rate increases with the size of the base but by a decreasing increment. Note: Most progressive taxes are of this character in at least the higher brackets. Compare *Progressive Tax*, Proportional Tax, *Regressive Tax System*, and Tax.

Delineation — The visual selection and distinguishing of map-worthy features by outlining on a map or manuscript (as when operating a stereo-plotting instrument); also, a preliminary step in compilation.

Delinquent Taxes — Past due and unpaid taxes.

Delphi Forecasting — A type of forecasting where predictions are reconsidered after other experts comment on the original forecast. Several rounds of forecasting are carried out, and anonymous responses are aggregated and shared with the group after each round using a feedback technique. The experts are allowed to adjust their answers in subsequent rounds. Because multiple rounds of questions are asked and because each member of the panel is told what the group thinks as a whole, the Delphi method seeks to reach the “correct” response through consensus.

Delta Angle — Angle at the center of a circular curve.

Demand — The amount of a commodity that consumers would purchase at a given price.

Demographics — Characteristics of human populations; for example, size, density, and distribution.

Denominator — In a fraction, the number by which another number (the numerator) is divided. For example, the denominator of 3/4 is 4.

Densification Survey — A control or cadastral survey that establishes accuracy or additional detail in an existing survey.

Density — The total number of specific items present within a designated unit of area.

Dependent Variable — A variable whose value will change depending on the value of either one or several independent variables. It is also called the endogenous variable, because it demonstrates a reaction to changes in the independent (exogenous) variable. In valuation analysis, a dependent variable such as sale price is analyzed by testing various property-related variables representing either a property characteristic or some combination/transformation of property characteristics.

Depletion — A decrease in land value due to the removal of trees, minerals, or other such resources. Contrast Depreciation and Obsolescence.

Depletion Rate — The periodic percentage rate at which a quantity is exhausted.

Deposition — A discovery device, conducted under oath outside a courtroom, by which one party asks questions of another party or witness.

Depreciable Cost — The amount of the cost to the current owner that is to be recovered or allocated in accounting depreciation. It may represent the current cost, including sales tax, freight, installation, and other costs associated with placing the asset into service, and less any estimated salvage value.

Depreciated Reproduction Cost — The reproduction cost of a given property, less the estimated amount of accumulated depreciation on such property. See *Reproduction Cost New.*

Depreciation — Loss in value of an object from any cause, relative to its replacement cost new, reproduction cost new, or original cost, whatever the cause of the loss in value. Depreciation is sometimes subdivided into three types: physical deterioration (wear and tear), functional obsolescence (suboptimal design in light of current technologies or tastes), and economic (external) obsolescence (poor location or radically diminished demand for the product). See *Accounting Depreciation.*

Depreciation, Accelerated — An accounting term implying a method of accruing greater depreciation expense in the early years of a property's life and less in the later years according to an established formula.

Depreciation, Accrued — 1) The amount of depreciation, from any and all sources, that affects the value of the property in question on the effective date of the appraisal; 2) In accounting, the amount reserved each year or accumulated to date in the accounting system for replacement of a building or other asset. When depreciation is recorded as a dollar amount, it may be deductible from total plant value or investment to arrive at the rate base for public utilities.

Depreciation, Book — An accounting term referring to the total accruals recorded on the books of the owner of property summarizing the systematic and periodic expenses charged toward amortizing the investment of limited-life property over its expected life.

Depreciation, Curable — That part of depreciation that can be reversed by correcting deferred maintenance and by remodeling to relieve functional obsolescence. See *Cost to Cure.*

Depreciation, Incurable — See *Incurable Depreciation.*

Depreciation, Observed Method — Requires the separation of elements of depreciation into categories based on the causes of loss in value. A method not easily adaptable to mass appraisal, as the appraiser is required to identify the specific causes and individual measurementsof depreciation.

Depreciation, Physical — See *Physical Deterioration.*

Depreciation, Straight Line — A method of writing off the cost of a property over the period of its expected economic life involving: (a) Equal annual debits to depreciation expense, each being equal in amount to an annuity that could be purchased for the price of the property (less the present worth of any anticipated scrap value) and that would have a life equal to the expected economic life of the property; (b) Decreasing annual credits to interest earned, each of which is equal to an assumed rate of return on the then depreciated book value of the property; and (c) Increasing annual credits to depreciation reserve, each of which is equal to the difference between the amount debited to depreciation and the amount credited to interest earned.

Depreciation Method, Unit of Production — An accounting method of expensing the cost of an asset over the period of its expected economic life measured in terms of units of production rather than in years. The means of periodical charges measured by the number of units produced during the period, the sum of which charges are approximately equal to the original cost of the machine less any scrap value remaining at the end of the expected economic life. Referred to as Service Hours.

Depreciation Schedules — In mass appraisal, tables that provide typical loss in value at various effective ages for different property types. In accounting, a worksheet that summarizes the amount of annual and accumulated depreciation for each depreciable asset.

Depth Curve — A graph of depth factors showing the estimated percentage relationships between the front-foot value of a given lot and the front-foot value of a lot of standard depth as the depth of the given lot varies. Note: Usually the depth of the given lot is plotted on the x-axis, and the percentage relationship between the front-foot value of the given lot and that of a lot of standard depth on the y-axis.

Depth Factor — The ratio of the estimated front-foot value of a lot of more or less than standard depth to the estimated front-foot value of a lot of standard depth.

Depth Influence — 1) The effect of increasing depth on the value of a lot or parcel having a given frontage; and 2) The increment or decrement of value arising from a depth greater or less than that of the standard lot. See *Lot, Standard.*

Depth Table — A schedule of depth factors containing the estimated percentage relationship between the front-foot value of parcel of land of any given depth and the front-foot value of a lot of standard depth. See *Depth Factor.*

Descriptive Statistics — Statistics that summarize and organize characteristics of a data set. A data set is a collection of variables from either a sample or population.

Diazo Process — A means of reproduction using a coating of diazonium compounds that is decomposed by exposure to ultraviolet light and ammonia fumes.

Differential Assessments — Assessments in a system of laws that require different classes of property to be assessed with different assessment ratios. The term "differential assessments" is usually reserved for systems in which the classes are broad and easily visible, such as classified property tax systems and use-value farmland assessment systems, although much the same effect is achieved by partial homestead exemptions, temporary exemptions to encourage rehabilitation or industrial location, and the like.

Differential Taxation — A legislated difference in effective tax rates between groups of properties classified according to use, value, or some other criterion. Differentials may be affected by applying different legal assessment ratios, tax rates, or both. Systems that provide differentials are generally known as classified property tax systems in the United States.

Digital Image Processing — Computer manipulation of the digital values for picture elements of an image.

Digital Terrain Model (DTM) — A digital representation of the earth's surface. Its construction includes a basic elevation model (i.e., a digital elevation model,) that is typically enhanced with break line data to accentuate abrupt changes in terrain features, such as pavement edges, road crowns, riverbanks, ridgelines, creek beds, and so on.

Digitization — 1) The process of converting spatial information originally compiled on orthographic materials or base maps into digital form for incorporation into a geographic information system; and 2) Referencing of ground control points or lines to a remotely sensed image.

Digitizer — A device used for scanning an image and converting it into numerical picture elements.

Digitizing Tablet — An electronic grid used for encoding digitized geographic features.

Diminished Utility — The difference in utility between a new improvement representing the highest and best use of the site and the existing improvement in its current condition.

Direct Capitalization — A method of converting a single year's income into an estimate of value by dividing the expected annual net operating income by an overall capitalization rate. See *Income Capitalization* and *Yield Capitalization.*

Direct Cost — The cost that can be traced directly to the construction of an improvement; for example, cost of labor, materials, equipment, and permits used in the construction of an improvement. Referred to as Hard Cost. Contrast with Indirect Cost.

Direct Equalization — The process of converting ratio study results into adjustment factors (trends) and changing locally determined appraised or assessed values to more nearly reflect market value or the legally required level of assessment. See *Equalization* and *Indirect Equalization.*

Direct Tax — Taxes that are imposed on a person or property. Direct taxes include income, property, and sales taxes.

Disclosure — Information provided to another party or the general public.

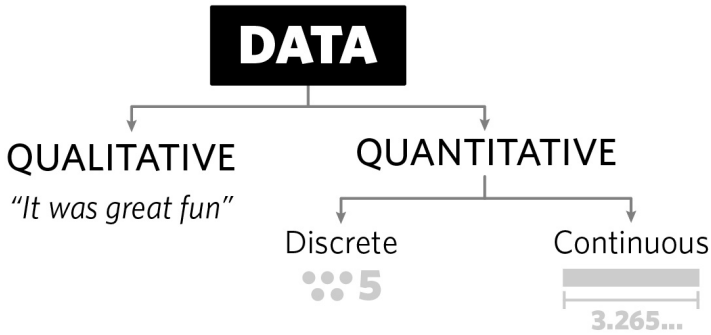
Discount Rate — A rate of return that converts future payments to present value. Referred to as Yield Rate.

Discounted Cash Flow Analysis (DCF) — A yield capitalization technique used to estimate value of income — producing property by applying a discount rate to a series of income streams and a reversion to convert future benefits to present value.

Discounting — Conversion of future benefits to present value. For example, the value of $100 due three years from now, assuming a 6 percent discount rate, is $100 1.063 = $83.96; the value of a perpetual annuity of $100 is $100/1.06 + $100/1.062 + $100/1.063 = $100/.06 = $1,666.67.

Discovery — 1) The process whereby the assessor identifies all taxable property in the jurisdiction and ensures that it is included on the assessment roll; 2) The gathering of facts in preparation for litigation or administrative proceedings; and 3) For personal property, the process whereby the assessor identifies all taxable property in the jurisdiction and ensures that it is included on the assessment roll.

Discrete Data — Are either categorical (pass or fail) or count data (number of bedrooms). This type of data is often represented using bar charts or pie charts. Only a finite number of values are possible, and the values cannot be subdivided meaningfully. For example, the number of bedrooms in a house, as there cannot be a half bedroom.



Discrete Variable — A variable that may assume only a countable, and usually finite, number of values.

Dispersion — Dispersion describes the degree to which a set of data is spread, typically around a measure of central tendency. The spread of a data set is described by a range of descriptive statistics including variance, standard deviation, and interquartile range. Spread can also be shown in graphs including dot plots, box plots, and stem and leaf plots.

Dissimilarity Function — An algorithm used to assign an index of dissimilarity (or similarity) to properties compared with a single subject property.

Distance Between Points — Assumed to be the shortest possible horizontal distance unless otherwise specified.

Distressed Sale — A sale made to meet the immediate and pressing needs of the seller at whatever price the property will bring. Sale under duress.

Distributable Property — See *Property, Distributable.*

Distribution-Free Statistics — A set of robust nonparametric methods whose interpretation or reliability does not depend on stringent assumptions about the distribution of the underlying population from which the sample has been drawn.

District — An area within a city, county, or state set off from the surrounding territory for special reasons, such as school districts, voting districts, etc.

Dividend Yield — The ratio of cash dividends to cash invested.

Dividends — Equity investment income earnings.

Domicile (or Domicil) — That particular locality wherein a person is legally deemed to have his or her true home or place of abode. Note: A person always has one, and only one, domicile. Domicile at one place is not lost until a new domicile is established elsewhere. In case one has more than one place of abode, domicile is determined with reference to one's attitude rather than in accordance with one's physical presence in one or other of such places.

Dominant Estate (Affirmative Easement) — The parcel of land benefitted by an easement on another parcel of land.

Doomage Assessment — An assessment placed on property immediately or at any time allowed by law, when there is reason to believe that delay in the normal assessment process will jeopardize the collection of property taxes. Also referred to as *Jeopardy Assessment.*

Double Taxation — In general, the subjection of the same income or source of income, or both the income and its source, to taxation by the same governmental unit, or by coordinate governmental units, twice in the same tax period. Note: The courts generally recognize the existence of double taxation when a single object is taxed by the same governmental unit, or by coordinate governmental units, twice in the same tax period. Economists further recognize double taxation when both wealth and representative intangible property are taxed; when both property and property income are taxed; and when income is taxed to a corporation and subsequently to the stockholder upon distribution as dividends.

DTM — See *Digital Terrain Model.*

Due — Where monuments or other deed terms do not limit the calls, "due north" means "astronomical north." "Due north" as originally used meant "true north" as determined by a declination correction to a magnetic reading. The word has become ambiguous in meaning because of careless usage. If astronomical north is meant in a deed, use "astronomical north," not "true north."

Dummy Variable — Used in regression analysis to quantify categorical variables that don't have any relationship. For example, the single variable exterior wall type may have mutually exclusive options coded in no specific order, such as 1=wood, 2=composite, 3=stone/brick. etc. If your dummy variable has only two options, 1=air-conditioning and 2=no air-conditioning, then this dummy variable is also a binary variable.

E

Earnings — A general term embracing revenue, profit, or net income.

Earnings-Price Ratio (E/P) — The ratio of earnings per share available to common stockholders of a company for an accounting period to the market price per share of the common stock of that company. The reciprocal of the E/P ratio is the price — earnings ratio (P/E). The E/P ratio is a direct capitalization rate for equity and not a yield rate.

Earnings Statement — Referred to as an income statement. Also referred to as a Profit and Loss Statement. See *Income Statement.*

Easement — An interest in land created by grant or agreement that confers a right upon owners to some profit, benefit, dominion, or lawful use of or over the estate of another; it is distinct from ownership of soil.

Easement, Appurtenant — 1) The right to use another's land as long as the first person owns a specified piece of property. The easement attaches to the specified property, not to the person who owns it; when the title transfers, the easement also transfers; 2) An encumbrance on property transferring rights to use the property to another parcel of land. May be perpetual or terminate after a period of time or upon a certain event.

Easement by Necessity — Arises when an owner of land sells a portion of the property, and the purchaser cannot access that part of the property purchased without crossing the seller's property. The purchaser may then acquire an easement over the seller's property by judicial order.

Easement by Prescription — Arises when a non-owner continuously and openly uses property over a period of time and is not impeded by the property owner. Must be ordered by a court.

Easement in Gross — A right to use another's property, usually for a specified purpose. Utility easements and railroad rights-of-way are examples of easements in gross.

Economic Area — A geographic area, typically encompassing a group of neighborhoods, defined on the basis that the properties within its boundaries are more or less equally subject to a set of one or more economic forces that largely determine the value of the properties in question.

Economic Life — The total number of years during which the improvements and/or personal property contribute to the total property value. Economic life is equal to the effective age plus the remaining economic life and is often referred to as the Total Economic Life. See *Age, Chronological Age, Effective Age*, and *Useful Life.*

Economic Obsolescence — See *External Obsolescence.*

Economic Rent — See *Rent, Economic.*

Economies of Scale — Unit costs fall as the scale of production increases.

Effective Age — The age of a property based on the amount of observed deterioration and obsolescence, which may be less than, greater than, or equal to the chronological age. See *Age, Chronological Age, Economic Life, Remaining Economic Life*, and *Useful Life.*

Effective Gross Income (EGI) — The potential gross rent, less vacancy and collection loss, plus miscellaneous (other) income.

Effective Gross Income Multiplier (EGIM) — The factor that can be multiplied by the effective gross income to obtain the market value of a property. See *Effective Gross Income (EGI).*

Effective Interest Rate — The nominal interest rate divided by the number of conversion periods in one year. For example, if the nominal interest rate is 10 percent, the effective interest rate for quarterly compounding is 2.5 percent. See *Nominal Interest Rate.*

Effective Tax Rate — The rate expressing the ratio between the current tax bill and the property value; the official tax rate of the taxing jurisdiction multiplied by the assessment ratio (statutory level of assessment). It is expressed as a percentage of market value. Differs from nominal tax rate when the assessment ratio (statutory level of assessment) is not 100 percent. The rate may be calculated either by dividing the amount of taxes by market value or by multiplying a property's assessment level by the nominal tax rate.

Effective Yield — Actual percent return on an investment held to maturity in contrast to the stated, nominal rate of return promised or anticipated at the time of investment. For example: 1) A bond selling for more than its face value gives an effective yield less than the coupon (stated or nominal) rate; it trades at a discount; 2) A bond selling at less than its face value gives an effective yield greater than the coupon rate; it trades at a premium; and 3) Coupon reinvestment gives an effective yield greater than the stated/nominal rate of return.

EGI — See *Effective Gross Income.*

EGIM — See *Effective Gross Income Multiplier.*

Egress — An outlet or exit from a property.

Elasticity — 1) The responsiveness of supply and demand to changes in price. Supply or demand that changes rapidly in response to price changes is "elastic." Supply or demand that changes slowly in response to price changes is "inelastic"; and 2) A measure of the responsiveness of tax yields to changes in economic conditions. The yield of an elastic tax increases rapidly in a growing economy. The yield of an inelastic tax increases slowly. Often measured by the formula: percent change in tax ÷ percent change in personal income.

Elevation — The distance of a point above a specified surface of constant potential; the distance is measured along the direction of gravity between the point and the surface.

Ellipsoid — A closed surface whose planar sections are either ellipses or circles.

Ellwood Formula — See *Mortgage-Equity Analysis.*

Emblements — Annual crops.

Eminent Domain — The right by which a sovereign government or some person acting in its name and under its authority may acquire private property for public or quasi-public use upon payment of reasonable compensation, but without consent of the owner. The process is called condemnation.

Encroachment — The unauthorized trespassing of an improvement on the domain of another person's land.

Endogenous Variable — A variable explained by other variables within a model. When using regression models, appraisers are interested in understanding the relationship between one or more independent variables and a dependent variable such as sale price.

Encumbrance — Any limitation that affects property rights and value.

Engineering Breakdown Method — A detailed age/life method that can be used in conjunction with the quantity survey or unit-in-place methods of estimating replacement cost new.

Enterprise Zone — A designated area within an economically challenged area in which property owners are given favorable tax treatment and freedom from a number of planning constraints.

Entrepreneur — One who assumes the risks and management of an enterprise or business.

Entrepreneurial Incentive — A market-derived figure that represents the amount an entrepreneur expects or wants to receive as compensation for providing coordination and expertise and assuming the risks associated with the development of a project. Incentive is the forecasted reward entrepreneurs expect and is projected before completion of the construction.

Entrepreneurial Profit — A market-derived figure that represents the amount an entrepreneur receives for his or her contribution to a project and risk; the difference between the total cost of a property (cost of development) and its market value (property value after completion), which represents the entrepreneur's compensation for the risk and expertise associated with development.

Environmental Assessment — A report showing the results of an investigation into environmental contamination. This report is often required by environmental regulatory agencies to establish the extent of contamination. The depth of analysis depends on the type and extent of contamination suspected.

Environmental Contaminant — Any tangible substance or intangible occurrence that may degrade property, resulting in decreased utility or having an effect on value.

E/P — See *Earnings-Price Ratio.*

Equalization — The process by which an appropriate governmental body attempts to ensure that all property under its jurisdiction is assessed at the same assessment ratio or at the ratio or ratios required by law. Equalization may be undertaken at many different levels. When assessed values are not at the statutorily required level of assessment, the appropriate governmental body develops a multiplier to modify the assessed value to an equalized value. The multiplier is less than 1 when assessed values exceed the statutory level of assessment, and greater than 1 when assessed values are less than the statutory level of assessment. When the assessed values are determined to be at the statutory level of assessment, the equalization factor is 1.

Equalized Values — Assessed values after the equalization process. See *Equalization*.

Equilibrium — The point at which the forces of supply and demand meet. The point of balance when the factors of production are used in the array of consumer goods that maximize consumer welfare. See *Principle of Balance.*

Equitable Ownership — The interest or estate of a person who has a beneficial right in property legally owned by another; for example, the beneficiary of a trust has equitable ownership in the trust property.

Equity — 1) In assessment, the degree to which assessments bear a consistent relationship to market value. Measures include the coefficient of dispersion, coefficient of variation, and price-related differential; 2) In popular usage, a synonym for tax fairness; 3) In ownership, the net value of property after liens and other charges have been subtracted; and 4) In accounting, the net worth of a business enterprise as reported on the financial statements of an entity.

Equity Capitalization Rate — Calculated by dividing one year's equity cash flow by the equity investment.

Equity Dividend — See *Before-Tax Cash Flow.*

Equity Dividend Rate — See *Equity Capitalization Rate.*

Equity of Redemption — A right recognized by courts of equity whereby a person who has transferred legal title to property as security for an obligation is permitted, after defaulting on the obligation, to retain possession of the property for such period as may be prescribed by law or by the court and to reacquire legal title to the property upon fulfillment of the obligation within such period.

Equity Yield Rate — The rate of return on equity capital.

Error — The difference between the actual value of a variable and the expected value of the variable exclusive of sampling problems. Errors may be positive or negative, although in common speech, taking the absolute value of the errors is sometimes implied.

Escheat — The right to have property revert to the state for nonpayment of taxes or when there are no legal heirs of someone who dies without leaving a will.

Escrow — Property or money deposited with a third party, to be held until the occurrence of an event or until the specified terms are completed.

Estate — A present or future possessory interest in real estate.

Estate, Leasehold — See *Leasehold.*

Estate, Life — See *Life Estate.*

Estate for Years — A possessory interest in land that cannot endure beyond a date specified in the conveyance or a date precisely determinable at the time the interest becomes possessory.

Estate in Severalty — Any estate held by a single person.

Estate of Freehold — Any one of the three types of possessory interests in land—fee simple absolute, fee tail, and estate for life—that in feudal times were granted only to freemen. Note: Estates of freehold are said to be estates of indefinite duration, and any other estate is said to be "less than freehold."

Estate Tax — A tax based on the value of the estate of a deceased person.

Estoppel — A legal principle that prevents a person from asserting a legal position that contradicts a position they have taken previously, especially when that statement was relied upon by others.

Et Al. — And others, and another.

Et Seq. — And following.

Et Ux. — And wife.

Et Vir. — And husband.

Euclidean Distance Metric — A measure of Straight-Line distance between two points. In property valuation, it is used to find the nearest neighbor or similar property based on an index of dissimilarity between property location or attributes. When using multivariate selection, the squared difference is divided by the standard deviation of the variable so as to normalize the differences.

Exception, Excepting — Withdraws a part of the rights described as granted, and which would pass but for the excepting clause. Excluded from the deed or grant.

Exemption — An exclusion of part or all of the value of a category of property from taxation.

Exemption, Homestead — See *Homestead Exemption.*

Exogenous Variable — A variable not explained by other variables within a model. Exogenous variables are typically determined outside the model. Unlike endogenous variables, it is not possible to manipulate exogenous variables. A variable representing time is an example of an exogenous variable in a model estimating sale price. Whereas a variable such as living area is possibly influenced by quality, a variable representing time is not influenced by other variables in the model.

Expense — The cost of operations that are incurred to generate revenue. In accounting, generally chargeable against revenue for a specific period of time.

Expense Account — An accounting record maintained for categorizing expenses of a particular type for a specified period of time.

Expense Ratio — See *Operating Expense Ratio.*

Expectancy Theory — A theory of motivation developed by Victor Vroom that relates to how a person will evaluate and choose a behavior based on their desired reward.

Expert Witness — One who is qualified to render testimony on a specialized topic.

Exponent — A symbol usually written to the right and above an expression to indicate particular mathematical operations. For example, 62 means 6 × 6, or 6 squared. Fractional exponents indicate inverse operations; for example, an exponent of 1/2 signifies a square root. Exponents are also called powers. Valuation models make use of the following properties of exponents: A number raised to the exponent 0 is always 1.00; zero raised to any power is zero; any number raised to the power 1 is itself. Negative numbers cannot have exponents less than 1.

Expropriation — See *Condemnation.*

External Obsolescence — A type of temporary or permanent depreciation caused by negative factors outside of the property.

Extraordinary Assumption — An assignment-specific assumption as of the effective date regarding uncertain information is used in an analysis that, if found to be false, could alter the appraiser's opinions or conclusions. Source: The Uniform Standards of Professional Appraisal Practice (USPAP).

F

Façade — The main exterior face of an improvement.

Factor — A numeric value that can be divided or multiplied to produce another numeric expression. Organized numbers that can be identified to produce a numeric component that can be mathematically utilized to produce a statistical result.

Factor Analysis — An exploratory technique applied to a set of observed variables that seeks to find underlying factors (subsets of variables) from which the observed variables were generated. For example, sale price is influenced by underlying variables such as property characteristics both within and outside the property boundaries. The underlying variables are the factors.

Fairness — See *Equity.*

Fannie Mae — See *Federal National Mortgage Association.*

FAR — See *Floor Area Ratio.*

FASB — See *Financial Accounting Standards Board.*

Feasibility Analysis — A study of the cost-benefit relationship of an economic endeavor.

Feature — Points, symbols, lines, and areas on a map representing natural and man-made geographic features. An object in a geographic or spatial database with a distinct set of characteristics.

Federal Home Loan Mortgage Corporation (FHLMC) (Freddie Mac) — An organization that facilitates secondary residential mortgages, for savings and loan associations, to increase availability of residential mortgage financing.

Federal Housing Administration (FHA) — A government-backed institution that provides mortgage insurance on loans made by FHA-approved lenders throughout the United States and its territories. FHA insures mortgages on single-family homes, multifamily homes, residential care facilities, and hospitals.

Federal National Mortgage Association (FNMA) (Fannie Mae) — A quasi-governmental agency that purchases mortgages from originators; intended to increase liquidity in the home mortgage market.

Federalism — Form of government in which power is constitutionally divided between a center or national government and states or regional centers.

Fee — 1) A charge imposed by a government for the performance of a specific nonproprietary act that is made in recognition of the special benefit conferred by such act, or the special cost incurred thereby, and in an amount intended to be substantially equal to or less than the incurred cost; 2) A form of compensation for occasional personal services, especially of public officers or professional persons, measured in terms of services performed rather than in terms of time required for their performance; and 3) An abbreviation of one of the fee estates in property.

Fee Appraisal — See *Single Property Appraisal.*

Fee Simple — See *Fee Simple Absolute.*

Fee Simple Absolute — An estate of infinite duration, freely alienable. The most complete ownership in real estate possible, although still subject to the four powers of government. May still be subject to other private encumbrances or restrictions.

Fee Simple Condition Subsequent — Ownership interest that gives the grantee fee simple title to property so long as a specified event occurs. If the specified event does occur, the grantor has the right to regain title to the property. (Example: "Grantee owns the property in fee simple absolute, so long as it is used for residential purposes.") Usually must contain the words "so long as" in the deed or may be interpreted as a fee simple determinable and not a fee simple on a condition subsequent.

Fee Simple Determinable — Ownership interest that gives the grantee fee simple title to property unless or until a specified event occurs. As opposed to a fee simple on a condition subsequent, if the specified event does occur, the grantor automatically regains title to the property. (Example: "Grantee owns the property in fee simple absolute, provided that it is used for commercial purposes.")

Feedback — See *Adaptive Estimation Procedure.*

FHA — See *Federal Housing Administration.*

FHLMC — See *Federal Home Loan Mortgage Corporation (Freddie Mac).*

Fiduciary — Any person who occupies a position of special trust in certain of his or her relationships to another person or persons; for example, an administrator, executor, guardian, receiver, or trustee.

Field Canvass — See *Canvass.*

Field Review — The practice of reviewing the accuracy of assessment data by viewing the subject property, validating measurements, amenities, and other relevant data.

FIFO — See *First-In, First-Out.*

Financial Accounting Standards Board (FASB) — An independent organization that establishes financial account standards for public and private companies. See *Generally Accepted Accounting Principles.*

Finished Goods — A type of inventory existing as the end stage of manufacturing. Finished goods is the end result of combining raw material with labor, capital, processing time, and other components of production. Intended to be subsequently sold.

First-In, First-Out (FIFO) — An accounting procedure used to measure the cost of unsold inventory, including inventory carried over from the prior year. This method is more reliable than last-in, first-out (LIFO) because it assumes that the goods on hand are the most recently purchased items and that the earliest purchased goods have been sold. May be used for income tax purposes and is the method generally used by assessors for ad valorem taxation.

Fiscal Capacity — A measure of the own-source revenues a state could raise if it had a "representative tax system" and applied the national average tax rate to its own amounts of the major sources of taxes and charges.

Fiscal Comfort — An index that combines fiscal capacity and fiscal need measures into a single measure. Determined from the ratio of fiscal capacity to fiscal need.

Fiscal Federalism — An approach to federalism that emphasizes the nature of the goods and services that government provides and derives the structure of government from that analysis. Sometimes the term is used in a more general sense to refer to the financial analysis of federal systems of government.

Fiscal Year — The accounting period covering 12 successive calendar months, which differs from a 12-month calendar year. Annual budgets, income tax accounting, and accounting reports are closed to develop financial reporting documents.

Fixed Asset — See *Asset, Fixed.*

Fixed Expense — A recurring expense that does not fluctuate with occupancy, such as taxes and insurance.

Fixture — An article of personal property installed or attached to real property in such a manner that it is considered to be a part of the real property. The three tests to determine whether an article is a fixture are typically: 1) Extent of annexation to the real property (cannot be removed without substantial damage to the real property; 2) Extent to which the article is a logical contribution to and enhancement of the real property; and 3) Intention of the parties that the article is part of the real property.

Flat Tax — A tax with a single rate applying to all income for a specified tax-exempt level. Note that the existence of a tax-exempt level of income means that the burden of the tax can still be progressive.

Floor Area of Building — Total area of the horizontal surface of all floors above grade measured to the center of party walls and to the outside surface of external walls.

Floor Area Ratio (FAR) — Indicates the correlation between the plot area on which the building is contracted and the allowable building floor area. A higher floor area ratio implies an urban or denser construction. FAR guidelines are determined by municipalities and differ from one locality to another.

Floor Planned Goods — A type of inventory that is in the possession of a business for sale and in which the possessor has no equity interest. Usually a lending institution, such as a bank, will make the money available to the business and use the goods being floored as collateral. Assessors in jurisdictions that assess inventories must be careful to look for this type of property since it may not be reported by the business and may not be easy to locate on accounting records.

Flowchart — Any of a number of kinds of graphic descriptions of an algorithm showing the operations, data flow, equipment, and so on.

FNMA — See *Federal National Mortgage Association (Fannie Mae).*

Forced Sale — A sale made pursuant to law; usually an auction sale that is involuntary on the part of the owner.

Foreclosure — The legal process by which a lien on a property is enforced, typically by forfeiture of the property due to nonpayment of property taxes or a mortgage.

Forfeiture — Loss of property without compensation based on a violation of law, breach of obligation, or a stipulated restriction on the owner.

Fractional Appraisal Method — Estimating value of individual components of a property rather than value of the entire system or unit as a single operating entity. See *Undivided Interest.*

Fractional Assessment — A percentage of a full value as prescribed by law.

Fractional Section — A subdivision of a township containing more or less than 640 acres of land. Typically, accounting for the overage or deficiency in acreage is done on the north and/or west side of a section, and fractional sections are found on the north and/or west side of a township.

Franchise — 1) A privilege or right that is conferred by grant of government on an individual or a group of individuals; and 2) Usually an exclusive right to furnish public services or to sell a particular product in a certain geographical area.

Freddie Mac — See *Federal Home Loan Mortgage Corporation (FHLMC).*

Free Boundary — A boundary that is not limited by a call for a monument; for example, "thence north 12° east, 120 feet." "Thence north 12° east, 120 feet to Brown's south line" is not a free boundary.

Freedom of Information Laws — Laws created with the purpose of protecting the public's right to access government records and meetings.

Freehold — General category of estates that includes the fee simple absolute and life estates.

Freight In — Freight paid on incoming shipments, treated as an element of cost of goods received.

Frequency Distribution — A table showing the number or percentage of observations falling in the boundaries of a given set of classes. Used in ratio studies to summarize the distribution of the individual ratios.

Front Foot — The unit or standard of linear measure used in measuring frontage.

Front Line Managers — Managers whose main task is to supervise and coordinate the activities of the line employees.

Frontage — The extent of a parcel of land along a street, road, river, or other traffic artery that the parcel is said to face.

Functional Obsolescence — The loss of value in a property improvement due to impairment, deficiency in design, changes in style, taste, technology, needs, and demands. Can be either curable or incurable. Functional obsolescence exists when a property suffers from poor or inappropriate architecture, lack of modern equipment, wasteful floor plans, inappropriate room sizes, inadequate heating or cooling capacity, deficiencies, and so on. It is the inability of a structure to perform adequately the function for which it is currently used.

Functional Organization — A method of organizing personnel and practices under which the primary division is what is done to achieve the goals of the organization (such as producing the assessment roll) rather than where the activities are done. The latter method is called geographical organization. Functional organization of assessment usually means that special divisions are responsible for appraising properties by type: personal property, residential property, agricultural property, commercial property, industrial property, and vacant land.

Functional Utility — The overall usefulness and desirability of a property. The criterion is whether the improvement efficiently satisfies the wants and needs of the marketplace.

Furlong — A land measure of 1/8 mile or 10 chains or 40 rods.

Future Worth of $1 — The amount to which one dollar will grow at compound interest over a specified number of years at a specified interest rate.

Future Worth of $1 Per Period — The amount to which a series of equal periodic payments will accumulate at compound interest for a specified number of years at a specified interest rate.

G

GAAP — See *Generally Accepted Accounting Principles.*

Gantt Chart — A bar chart that is used in project management. Each element or task of a project is represented by a horizontal bar. The bars are placed on the chart according to a time scale. The left end of each bar indicates when the task is expected to begin. The length of each bar indicates the expected duration of the task. The right end of each bar indicates when the task is expected to be completed.

GCP — See *Ground Control Point.*

General Data — A category of data that includes trends that affect value and might occur on the national, regional, and neighborhood levels. These data also include physical (environmental), economic, governmental, and social forces that affect value.

General Journal — An accounting tool used as the "book" of original chronological entry for all financial transactions and sorted into the accounts of similar transactions.

General Ledger — A book of accounts in which all the transactions of a business enterprise are classified in detail or in summary as final entry from original (chronological) postings.

General Property Tax — 1) Originally, an ad valorem property tax that, in contemplation of law, was administered uniformly with respect to all tangible and intangible property (with the exception of a few classes specifically exempt) and that involved a uniform rate throughout each tax district; and 2) Currently, the remnants of such a tax after its continued curtailment through classification, exemptions, use — value assessment laws, and special property tax laws applicable to various types of personal property. Compare *Classified Property Tax System*, *Special Property Tax*, and Tax.

General Revenue — Government funds raised through taxation for any purpose.

Generally Accepted Accounting Principles (GAAP) — The accounting standards adopted by the U.S. Securities and Exchange Commission (SEC) that are the basis for financial reporting, codified by the Financial Accounting Standards Board (FASB) into a single authoritative source.

Geocode — A code (numerical or text) used to locate or identify a point, such as the center of a parcel.

Geodesy — 1) The science concerned with determining the size and shape of the earth; and 2) The science that locates positions on the earth and determines the earth's gravity field.

Geodetic Control Network — A system of monuments that are used as reference points in calculating, through triangulation, the location of other points on surveys and maps.

Geodetic Densification — The augmentation of additional ground or geodetic control points to an existing control network of data points.

Geodetic Surveying — A survey system that takes the earth's curvature into account and is therefore used primarily to survey very large areas.

Geo-economic Area — 1) The environment of a subject property that has a direct and immediate effect on value; and 2) A geographic area (in which there are typically fewer than several thousand properties) defined for some useful purpose, such as to ensure for later multiple regression modeling that the properties are homogeneous and share important locational characteristics.

Geo-economic Area Analysis — A study of the relevant forces that influence property values within the boundaries of a homogeneous area.

Geographic Coordinate System — A method of locating a point on the earth's surface based on its distance from each of the two intersecting grid lines knows as x and y axes.

Geographic Coordinates — A system of spherical coordinates that define the positions of points on the earth. The declinations and polar bearings in this system are the geographic latitudes and longitudes, respectively. See *Coordinates*.

Geographic Information System (GIS) — 1) An overall term encompassing the entire field of computerized mapping; and 2) Also generally considered as a specific subset of the overall field. The GIS can: a) Answer what exists at a specific location. The location can be described using place name, ZIP code, latitude and longitude, or other location systems; b) Find locations satisfying specified conditions (e.g. undeveloped parcel of land zoned for light industry, at least 10 acres in size, within railroad access); c) Spot changes in area over a certain period of time; d) Find patterns (for example, it could test the hypothesis that proximity to PCB — laden transformers is a factor in the incidence of cancer in children); and e) Could model various scenarios (for example, if 10 inches of rain fell in a certain watershed, it could indicate where flooding would occur and at what hour).

Geographic Position — Or geographic coordinate, is a system for defining the position of points on the earth, such as a northing and easting position based on a state plane coordinate system.

Geographic Organization — A method of organizing personnel and practices under which the primary division is where the activities are done.

Geographically Weighted Regression (GWR) — A technique for weighting sales based on their distance to the subject property. In effect, a unique equation is generated for each subject property or group of properties in the same x–y grid.

Geoid — A theoretical figure of the earth using a continuous surface that is perpendicular at every point to the direction of gravity. The geoid would coincide with the ocean surface if the latter were undisturbed and affected only by the earth's gravity field.

Geometric Mean — A measure of central tendency computed by multiplying the values of all of the observations by one another and then taking the result to an exponent equal to one divided by the number of observations. The geometric mean is particularly appropriate when a typical rate of change is being calculated, such as an inflation rate or a cost index.

Geometrical Transformations — Adjustments made in image data to change its geometric (spatial) character.

Georeferenced — To associate something with locations in physical space. The term is commonly used in the geographic information system (GIS) field to describe the process of associating a physical map or raster image of a map with spatial locations on the ground.

GIM — See *Gross Income Multiplier.*

Ginnie Mae — See *Government National Mortgage Association (GNMA).*

GIS — See *Geographic Information System.*

Global Positioning System (GPS) — A network or constellation of satellites and receivers used to find a location on earth.

Globe — A spherical body.

GNMA — See *Government National Mortgage Association (GNMA).*

Going Concern Value — The value all assets including real estate, tangible and intangible personal property within, or assemblage into, used to operate an economically viable business. The value of an entire property in active service and with an established clientele, as distinguished from its value immediately before being put into service or upon retirement from service.

Goodness-of-it Statistics — A statistical estimate of the amount, and hence the importance, of errors or residuals for all the predicted and actual values of a variable. In regression analysis, for example, goodness-of-fit indicates how much of the variation between independent variables (property characteristics) and the dependent variable (sales price) is explained by the independent variables chosen for the model.

Goods — A type of inventory, which is tangible personal property that is exclusively held by the owner for resale. See *Goods Held for Sale (Resale).*

Goods Held for Sale (Resale) — A type of inventory in the hands of a manufacturer, wholesaler, distributor, or retailer, after having been passed through various channels/levels of trade, that is exclusively held by the owner for resale. The appraisal of goods held for sale or resale must reflect the full — accrued costs at the level of trade where the goods are located. See *Goods.*

Goods in Process — A type of inventory placed into the manufacturing process whose elements have begun to change from its original form. Direct and indirect labor and other elements of expense have accrued in the conversion or manufacturing process, thereby adding to the value of the raw materials.

Goods in Transit — See *In-Transit Goods.*

Goodwill — An intangible property that has the favor, prestige, good name, clientele, or integrity that a business has acquired beyond the mere value of its tangible assets.

Government Lot — A partial section of land established, measured, and computed by the public land survey stem (PLSS). May be referred to as Fractional Lot or Fractional Section.

Government National Mortgage Association (GNMA) (Ginnie Mae) — A government-owned and government — financed agency that subsidizes mortgages through its secondary mortgage market and issues federally insured mortgage-backed securities. This agency falls within the Department of Housing and Urban Development.

Government Rectangular Survey System — A ground survey authorized by the Continental Congress in 1775 and by subsequent acts; conducted in 30 states in which the land was divided into townships approximately six miles square, each township normally containing 36 sections and each section normally containing 640 acres. See *Public Land Survey System.*

GPS — See *Global Positioning System.*

GPS Coordinates — A system of locating land on or above the earth through triangulation of satellite signals.

Grade — See *Classification.*

Graduated Tax — A progressive tax in which certain brackets of wealth or income (or of whatever else constitutes the tax base) are established, with a fixed or proportional increase in tax within each bracket.

Grand List — See *Assessment Roll.*

Grandfathered Use — A use that was lawfully established and maintained but that no longer conforms to the use regulations of the current zoning where the property is located.

Grant — The transfer of real property by deed.

Grantee — One who acquires property by voluntary conveyance; buyer.

Grantee Index — Lists alphabetically the name of every grantee who appears on a deed recorded for the year the index covers.

Grantor — One who voluntarily conveys property, whether by sale, gift, lease, or otherwise; seller.

Grantor Index — Lists alphabetically the name of every grantor who appears on a deed recorded for the year the index covers.

Graticule — A network of lines on a map representing geographic parallels and meridians.

Green Building — A building that is designed, constructed, or operated to reduce or eliminate negative impacts on the environment by way of energy efficiencies and the conscious preservation of natural resources.

Grid — A uniform system of rectilinear lines superimposed on aerial photographs, mosaics, maps, charts, and other representations of the earth's surface; used in defining the coordinate positions of points.

GRM — See *Gross Rent Multiplier.*

Gross Assessed Value — The official dollar value listed on an assessment roll, including any partial exemptions.

Gross Domestic Product — The aggregate annual flow of a country's wealth, measuring value of output as the sum of spending by consumers, investors, and government, or as the sum of factor incomes.

Gross Income Multiplier (GIM) — A capitalization technique that uses a ratio between the sale price of a property and its potential gross income. It is a factor that can be multiplied by the potential gross income (PGI) to obtain the market value of a property. Referred to as the Potential Gross Income Multiplier (PGIM).

Gross Lease — See *Lease, Gross.*

Gross Leasable Area — Total area of a building designed for tenants' occupancy and exclusive use. It is measured from the center of party walls to the outside wall surfaces. It can include areas such as lobbies, basements, mezzanines, washrooms, and janitor closets. It excludes stairs, elevator shafts, flues, vents, stacks, pipe shafts, and vertical ducts if they serve more than one floor.

Gross Rent Multiplier (GRM) — A factor that can be multiplied by the potential gross rent of a property to obtain the market value. It is the ratio between the sale price of a property and the monthly economic rent. See *Rent, Economic* and *Potential Gross Rent.*

Ground Area of Building — Total area of a building measured at mean grade to the center of party walls and the outside surfaces of external walls. It excludes patios, open decks, courts, steps, or shafts, as well as areas under open porches, eaves, cornices, and similar projections.

Ground Area Coverage — Complete aerial photographic coverage of an area by conventional photography with parallel flight lines and stereographic overlap between exposures in the line of flight.

Ground Control Point (GCP) — Points on the surface of the earth with known coordinates as represented by some geographic grid reference system.

Ground Rent — The rent paid for the right of use and occupancy of land.

Guide Meridians — The north-south axes on a map that are counted east and west of the principal meridian.

GWR — See *Geographically Weighted Regression.*

H

Habendum Clause — The first part of a deed that follows the legal description and limits and defines the rights that the grantee is to have in the property conveyed.

Hack — A mark on a tree made by cutting out two horizontal V notch wells into the live wood.

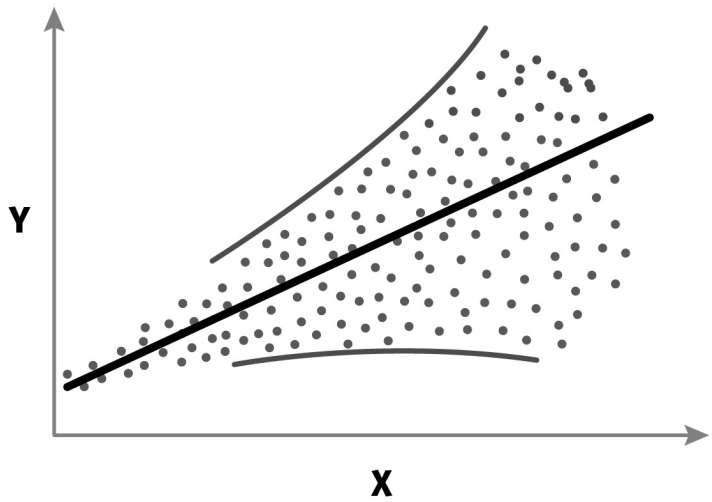
Hard Cost — See *Direct Cost.*

Harmonic Mean — The reciprocal of the arithmetic mean of the reciprocals of each value in the data set. The harmonic mean ratio is less affected by extreme values in the data set than the arithmetic mean or the geometric mean.

Hectare — Equal to 2.471 acres.

Heterogeneous — Unlike; without interrelation. The opposite of homogeneous.

Heteroscedasticity — Exists when the variance of the error term in a regression equation is not constant. Specifically, the standard deviations of a predicted (dependent) variable vary across different values of an independent variable. Regression analysis assumes constant variance for all values of a given independent variable. If a residual plot shows an increasing or decreasing wedge or bowtie shape, nonconstant variance i.e., heteroscedasticity exists.



Hierarchy of Needs Theory — A theory of motivation developed by Abraham Maslow that states that human beings have five basic needs: physiological, safety or security, social, esteem, and self-actualization.

High-Water Mark — The line that water impresses on the soil by covering it for sufficient periods of time to deprive it of vegetation.

Highest and Best Use — The appraisal principle that requires evaluation of all physically possible, legally permissible, financially feasible, and maximally productive (most profitable) uses of a property to determine the use that provides the owner with the highest net return on investment in the property. Highest and best use is evaluated as if vacant land, and as improved.

Highway Right of Way — Normally a highway or road right of way is the limit of property acquired to build the highway. It is usually marked by monuments or fences. Right of ways for roads where no property was acquired originally is normally the limit being used as a road.

Histogram — Bar chart or graph of a frequency distribution in which the frequencies of the various classes are indicated by horizontal or vertical bars whose lengths are proportional to the number or percentage of observations in each class.

Historical Age — See *Chronological Age.*

Historical Cost — The cost of acquisition of a property by its present owner, plus the cost of any additions and betterments made by such owner, whether or not such costs represent prudent investments.

Hit Rates — The number of times the model or cascading models return a usable value estimate. Not a measure of how well the models fit the data but a measure of the relative success of a model in providing a usable result. Systems with high hit rates often result in a lower cost per valuation because of the wider area of property they may be used on.

Holding Period — The length of time an investor expects to own a given property before selling it to someone else.

Homestead — A building occupied by the owner of the freehold and his or her family with the primary intention of making it their home, together with the parcel of land on which it stands and the other improvements appurtenant to it. Note: This is a term variously defined by several states and for several purposes. Most definitions pertain to the exemption of property from levy and sale and, as such, are not concerned with the nature of the estate that a householder owns in his or her home. The above definition, which is intended only for purposes of homestead tax exemption laws, requires further elaboration to indicate what constitutes a family, what constitutes occupancy primarily as a home, how large a parcel of land can be included as part of the homestead, and what constitutes an improvement appurtenant to the home. There is as yet no substantial agreement on these points among the states.

Homestead Exemption — An exemption removes part of the value of the property from taxation and lowers the property taxes. Generally requires an application with the assessor's office or taxing jurisdiction.

Homogeneous — Possessing the quality of being alike in nature and therefore comparable with respect to the parts or elements; said of data if two or more sets of data seem to be drawn from the same population; also said of data if the data are of the same type (that is, if counts, ranks, and measures are not all mixed in together).

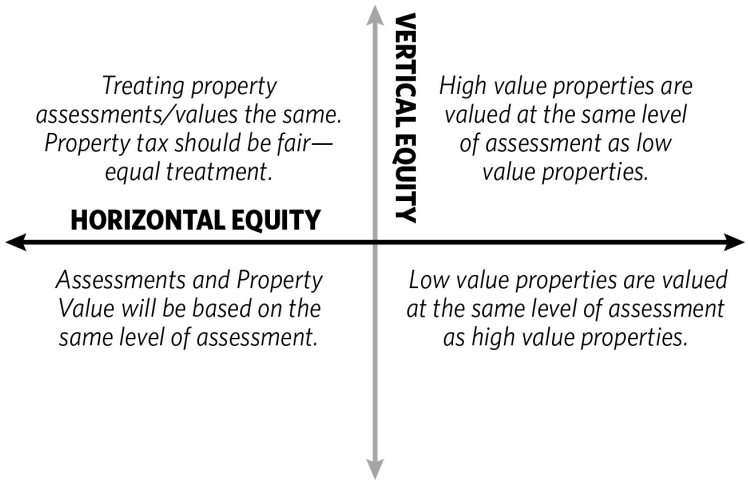
Homoscedasticity — The opposite of heteroscedasticity, homoscedasticity exists when the variance of the error term in a regression equation is constant. In other words, the error term is the same across all values of the independent variables. The assumption of homoscedasticity is fundamental in linear regression analysis.

Horizontal Control — Control stations whose grid coordinates have been computed on plane surveys; known points can be converted to coordinate values.

Horizontal Coordination — Coordination between the various positions in an organization that share equal responsibilities.

Horizontal Equity — Individuals/households in equal economic situations should be treated the same. In property assessment, properties of the same value should be valued the same. See *Vertical Equity.*

Horizontal Inequity — Different treatment for identical situations. For example, properties in one neighborhood with a higher level of assessment compared with the level of assessment for similar properties in a comparable neighborhood. See *Vertical Inequity*.



Hoskold Premise — A technique of capitalization that involves a split rate method: a "speculative risk rate" for profit and a "safe rate" for a sinking fund to account for the recovery of invested capital. The present value of the income stream is measured by a combination of the two rates.

Household Goods — Normal furnishings, appliances, utensils, and other tangible personal property used primarily in the residence by owners, residents, and/or guests. Often exempted from property taxation. Household goods may lose their status as an exempt property if converted to a business enterprise.

Hue — Any pure color from the visible light spectrum (yellow, orange, blue, red, violet, green) or any mixed color from the visible light spectrum where neither color is dominant.

Hybrid Model — A model with (that incorporates both) additive and multiplicative components. See *Additive Model* and *Multiplicative Model.*

Hydrographic Map — A map showing a portion of the water of the earth, including shorelines, the topography along the shores and the submerged portions, and as much of the topography of the surrounding country as is necessary for the purpose intended. Also known as Hydrological Map. See *Map*.

Hyperspectral — Camera systems able to record many spectral wavelength bands (up to several hundred) extending from ultraviolet to visible, beyond infrared.

Hypothesis Test — Method for testing inferences about specific parameters using statistics and sample data. See *Alternative Hypothesis* and *Null Hypothesis.*

Hypothetical Condition — Conditions contrary to known facts that help identify the prospective value of a parcel, given specified constraints.

I

IAAO — International Association of Assessing Officers.

IDW — See *Inverse Distance Weighting.*

Image — The representation of a scene as recorded by a remote sensing system. Although image is a general term, it is commonly restricted to representations acquired by non-photographic methods.

Image Enhancement — Any one of a group of operations that improves the detectability of the targets of interest. These operations include, but are not limited to, contrast enhancement, edge enhancement, spatial filtering and noise suppression, and image sharpening.

Imagery — Collectively, the representations of objects reproduced electronically or by optical means on film, electronic display devices, or other media.

Improved Land — Land that has been made more valuable by the addition of labor or labor and capital. See *Agents of Production.*

Improvement to Land — Designed to enhance a site's utility for general use (fill, water, and waste-water lines, for example) or to reshape the land's natural contours for more specific use (stock tanks, for example). Any publicly constructed improvement that does not fulfill a specific use—such as curbs, gutters, and sidewalks—constitutes an improvement to land.

Improvements — Buildings, other structures, and attachments or annexations to land that are intended to remain so attached or annexed, such as sidewalks, trees, drives, tunnels, drains, and sewers. Any physical enhancements to raw land with the intention of increasing its value. A structure erected on the property constitutes one very common type of improvement, although other actions, such as those taken to improve drainage, are also improvements. Although such cases are rarely intentional, "improvements" can conceivably diminish the value of the land; note, however, that easements restricting the use and value of land are not considered improvements.

In Personam — Against a person. Note: A property tax is said to be in personam when it is a charge against a person, collectable out of any of his or her property or income, rather than a lien against the property subject to the tax. Some taxes are both in rem and in personam.

In Rem — Against a thing. A legal term derived from Latin that means "against the thing" and is used when property itself, rather than a person, is formally liable for the property tax.

Inadequacy — The inability of a property to yield a reasonable return on the value of the land and the reproduction cost of the improvements (less accumulated physical depreciation) because of its lack of capacity.

Inadequate Rate of Return — A percentage of income to investment that does not allow a company both to service debt and to earn the required rate of return for shareholders and bondholders.

Incidence — Usually refers to the persons who ultimately bear a tax burden, as opposed to the persons on whom the tax is initially imposed.

Income Approach — One of the three approaches to value that converts expected economic benefits of owning a property into value through a direct capitalization method or yield capitalization process. Also called Income Capitalization Approach.

Income Capitalization — The conversion of annual net operating income and expected rate of return into an estimate of market value. Components include income, rate, and value. They can be used interchangeably using the IRV formula. See *Direct Capitalization.*

Income Capitalization Approach — See *Income Approach.*

Income Incidence — The determination of the percentage of a person's income that is devoted to paying a tax. For a given tax, if this percentage rises (falls) as income rises, the tax is considered progressive (regressive).

Income Statement — A financial reporting document that shows an entity's revenues and expenses during a specific revenue period.

Income Stream — The series of payments (usually net income payments) receivable from an investment over the life of the investment. The series, of course, may be of any conceivable nature, including a constant series of equal payments (level), a series of decreasing payments that decrease by equal amounts each period (arithmetically decreasing), a series of increasing payments that grow larger each period at a constant rate (geometrically increasing), and so on.

Income Tax — A tax levied on the net income of an individual. In most cases these are broad-based and include income from labor and other sources, but the Census definition includes distinctive taxes on income from interest or dividends.

Increasing/Decreasing Annuity — An income stream with the characteristics of a systematic change in income, either increasing or decreasing.

Incumbrances — Includes liens on real property such as taxes and assessments.

Incurable Depreciation — A part of depreciation for which it is not economical to correct the condition, and if corrected, the cost of correcting the condition exceeds the value added. A deficiency or defect in design in which the cost to cure exceeds the increase in value. See *Obsolescence* and *Physical Deterioration.*

Indemnification — Bonds established to provide security against future costs resulting from previously existing contamination; usually provided by the seller to facilitate a sale of contaminated property. To guaranty reimbursement for a loss or damage.

Indemnify — See *Indemnification.*

Independent Appraisal — See *Single Property Appraisal.*

Independent Variable — A variable that is manipulated to test its impact on a dependent variable. A change in the independent variable may directly cause a change in the dependent variable. Any effect on the dependent variable is typically measured and recorded. In valuation analysis, independent variables are typically selected because of the expectation they will influence dependent variables.

Index Map — A small scale map showing locations (typically in a grid) of larger scale maps, photos, or supporting information for a given region or location of interest.

Indirect Capitalization — See *Yield Capitalization.*

Indirect Costs — Costs other than labor and materials incurred during construction. These include architectural and engineering fees, ad valorem taxes, and property carrying costs (interest on construction loans, financing costs, developer's risk insurance), environmental studies, sales and leasing commissions, marketing fees, and professional and administrative expenses. Also known as Soft Costs.

Indirect Equalization — The process of computing hypothetical values that represent the oversight agency's best estimate of market value, given the legally required level of assessment. It allows proper distribution of intergovernmental transfer payments between state, provincial, and local governments despite different levels of assessment among jurisdictions and/or property classes. It is a tool to provide proper funding and fair apportionment of the tax base in a jurisdiction.

Indirect Tax — Taxes that are imposed on a commodity that are then shifted to the household. A tax that is intended to have its incidence on some person other than the one on whom it is levied; for example, an import duty or a sales tax.

Individual Income Tax — See *Income Tax.*

Industrial Property — Generally any real or personal property used in a manufacturing activity, including production, assembly, or processing of products from raw materials, or fabricated parts. Includes factories, wholesale bakeries, dairy plants, food-processing plants, automotive manufacturing plants, mills, mines, quarries, etc.

Inferential Statistics — Inferential statistics allow for predictions based on a representative sample of characteristics from a larger population. In other words, it allows one to make assumptions about a larger (population) group, using a smaller portion from the same. There are two main applications for inferential statistics: 1) Estimating parameters. Using statistics from a sample (for example the sample mean) to say something about a population parameter (i.e., the population mean), and 2) Hypothesis tests. Use of sample data to answer questions about the population. See Descriptive Statistics.

Information Bias — Refers to a systematic error due to either inaccurate measurement or classification of variables. For example, if estimates of living area are inaccurate due to faulty property measurement procedures, estimates of property value on such data are likely inaccurate.

Infrared Film — Photographic film sensitized to record near infrared wavelengths beyond the red end of the light spectrum; also sensitive to blue and ultraviolet light and must be used with a red filter to screen out these wavelengths.

Infrared Radiation (IR) — Pertaining to or designating that portion of the electromagnetic spectrum lying between the red end of the visible spectrum (about 0.7 micrometers) and an indefinite upper boundary sometimes arbitrarily set at 1,000 micrometers, the lower limit of the microwave region of the spectrum.

Infrared Scanner — An instrument for obtaining thermal infrared imagery through line-scanning techniques.

Infrared Thermal Sensing — Line-scanning techniques using infrared scanners with detectors. Usually, the imagery is obtained from selected portions of the 3- to 14- micron region of the spectrum.

Ingress — Access or entrance to a property.

Initial Point — Independent points of origin established across those portions of the United States covered by the public land survey system.

Innocent Landowner — A landowner who purchased property subsequent to contamination, but who had no knowledge of and did not contribute to the contamination. The landowner must have made all "appropriate inquiries" into the property prior to purchase. Purchasers who qualify as innocent landowners are not liable under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA).

Insolvent — Being incapable of meeting current debts.

Installed Cost — Capitalized cost and other costs necessary to achieve normal utility of assets within an operating unit but not including maintenance or other operating expenses. It should include repairs that extend the life of the asset.

Installment Contract — A purchase contract in which payment is made in prescribed installments that are usually forfeited if default occurs.

Instrument — A formal legal document such as a deed, contract, will, or lease.

Intangible Personal Property — Property that has no physical existence beyond merely representational, nor any extrinsic value; includes rights over tangible real and personal property but not rights of use and possession. Its value lies chiefly in what it represents. Examples include corporate stock, bonds, money on deposit, goodwill, restrictions on activities (for example, patents and trademarks), and franchises. Note: Thus, in taxation, the rights evidenced by outstanding corporation stocks and bonds constitute intangible property of the security holders because they are claims against the assets owned and income received by the corporation rather than by the stockholders and bondholders; interests in partnerships, deeds, and the like are not ordinarily considered intangible property for tax purposes because they are owned by the same persons who own the assets and receive the income to which they attach.

Interactive — Possessing the quality of being able to get reactions to proposals or instructions one at a time rather than merely all at once at the end of a session; usually said of a kind of computer system.

Interactive Valuation Application AVM [Appraiser-Assisted] — This is a mathematical model application, or a set of applications, that is/are developed, calibrated, and checked by analysts. This provides estimates of value that are reviewed and used by valuer.

Intercept — Graphically, the point at which a line, such as a regression line, intersects the axis on which the dependent variable is represented; the value of the predicted variable when the value of all the other values in the model is 0; the constant b0. It defines the y–intercept (the y–coordinate of a point where a line, curve, or surface intersects the y–axis). It is the value of y when the value of x is equal to 0.

Interest (Interest Rate) — The premium paid for the use of money; a (rate of) return on capital; the equilibrium price in money markets. The interest rate usually incorporates a risk factor, an illiquidity factor, a time-preference factor, an inflation factor, and potentially other factors. See *Discount Rate.*

Interest (Interest Transferred, Interest Acquired) — The ownership rights of a person in a property.

Intergovernmental Revenue — Revenue that is received from other governments such as grants, payments, shared revenues, and payments in lieu of taxes.

Internal Controls — The elements of a system for monitoring performance and ensuring integrity that are employed more routinely than procedural audits and are often performed automatically.

Internal Rate of Return — See *Equity Yield Rate.*

Internal Rate of Return for Equity — See *Equity Yield Rate.*

Interprogram Efficiency — The allocation of resources to a given governmental program that provides greater net benefits than if those resources were allocated to any other program.

Interquartile Range (Interquartile Deviation [IQR]) — The result obtained by subtracting the first quartile from the third quartile; 50 percent of the observations fall within the IQR.

Intersector Efficiency — The incremental spending that provides greater net benefits than could be obtained if the resources were left with individuals and organizations in the private sector.

Intestate — The state of having died without leaving a valid last will and testament.

In-Transit Goods — A type of inventory in the hands of a common carrier or other similar carrier that are being transferred from one location to another. Usually these goods are moving by some conveyance from one point to another and, if traveling interstate, are controlled by the Interstate Commerce Commission in the U.S. Based on federal law, in most such situations, the assessor cannot assess the goods if they have not reached their final destination.

Intraprogram Efficiency — When resources are used to maximize net benefits for any given program.

Intrinsic Value — 1) The inherent worth of a thing; and 2) Value that remains when cost to cure a contamination problem exceeds original market value. See *Value-in-Use*.

Inutility — An accounting concept that measures cost and capacity to estimate a loss in value. Often used by non-appraisers as evidence of obsolescence. However, inutility calculations are often inconsistent with appraisal methods of determining any loss in value.

Inventory — A group of personal property items whose value is exhibited by value-in-exchange, as ownership is exclusively for the purpose of sale, rather than use. Property that is used occasionally is not inventory, as inventory is solely held for resale. Inventory includes goods held for sale (resale), raw materials, goods in process, finished goods, supplies, consigned goods, bill and hold goods, floor planned goods, and in-transit goods. See *Bill and Hold Goods, Consigned Goods, Finished Goods, Floor Planned Goods, Goods Held for Sale (Resale), Goods in Process, In-Transit Goods*, and *Raw Materials.*

Inventory, Perpetual — An inventory that is kept up to date by recording and valuing additions to stock and withdrawals therefrom as they occur. Synonymous with "running inventory."

Inventory, Physical — An inventory that is determined on a periodic basis by observation, actual count, weight, or measure of all items on hand.

Inverse Distance Weighting (IDW) — A method of estimating the value of a response variable (say, elevation or sale price) by taking a weighted average of known values at surrounding points.

Investment Analysis — A study that evaluates the relationship between acquisition price and anticipated future benefits of a real estate investment.

Investment Holding Period — The length of time that typical investors generally hold an investment of a specified type.

Investment Trust — A type of investment company that sells its stock and invests the money received in stocks and bonds of other companies, real estate, or other investments. Investment trusts can be open-end or closed-end. See *Real Estate Investment Trust.*

Investment Value — The worth of an investment property to a particular investor. Investment value may or may not coincide with market value depending on the requirements of the specific investor.

Investment Yield — The rate of return on capital that is generated from an investment over a period of ownership, including both income and resale.

Inwood Coefficient — A factor used to obtain the present worth of a level stream of income; also known as the Present Worth of $1 Per Period factor.

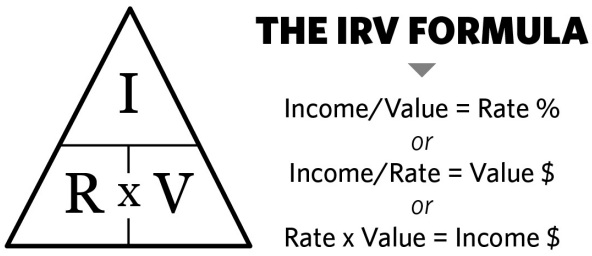
Iowa Type Curve — A classification of survivor curves by their basic mathematical shape into three families of, respectively, 6, 7, and 5 curves; hence the alternate designation of "Iowa 18 type curves." Type survivor curves are used to smooth original survivor curves, to help determine the probable life of single units and as a means of checking the adequacy of the depreciation reserve balance or of estimating an adjustment factor in the appraisal procedure.

Irregular Lot Valuation Table — A valuation table whose purpose is to convert the actual frontage of irregularly shaped parcels to effective front footage.

Irrevocable — That which cannot be recalled or revoked.

IR — See *Infrared Radiation.*

IRV — A mnemonic (formula) for the basic equation of the income approach: Income = (Capitalization) Rate × Value. Value = Income / Rate.



Iteration — One repetition or repeated cycle in a process of estimating values as close as possible to actual values by repeated approximations. The results of each approximation are used in the next one.

J

Jeopardy Assessment — See *Doomage Assessment.*

Joint Estate — See *Tenancy, Joint.*

Joint Tenancy — See *Tenancy, Joint; Tenancy by the Entirety*; and *Tenancy in Common.*

Joint Tenants — An estate owned by two or more persons in equal shares created by a single transfer. Upon the death of a tenant, the surviving tenant takes the entire property, and nothing passes to the heirs of the deceased.

Judicial Review — A review by a body that is part of the organized judiciary.

Judicial Sale — 1) A sale made under the process of a court having competent authority to order it, by an officer duly appointed and commissioned to sell, as distinguished from a sale by an owner in virtue of his right of property; and 2) A court action that enforces a judgment lien by selling property to pay a debt.

Junior Mortgage — A lien on a property that is subordinate to any other prior mortgage claims.

Jurisdiction — 1) The right and power to interpret and apply the law; also, the power to tax and the power to govern; and 2) The territorial range of authority or control.

Juxtaposition of Numbers — Figures used in a description that have differing units; for example, "thence easterly along the north line of lot 21, 21 feet" can easily be changed to "2,121 feet or 2121 feet." Insertion of a phrase such as "thence easterly along the north line of lot 21, a distance of 21 feet" is better.

K

Kilometer — Unit of length equal to 1,000 meters. Equals 0.6214 statute miles.

Kriging — A family of algorithms for interpolating or estimating the value of a response variable from known values at different points on an x – y surface.

Kruskal-Wallis Test — Used to determine if there is a statistically significant difference among the medians of three or more independent groups. This test is the nonparametric equivalent of the one-way analysis of variance (ANOVA) and is typically used when the normality assumption is violated. The Kruskal-Wallis test does not assume normality in the data and is much less sensitive to outliers than the one-way ANOVA. Often used to analyze assessment ratios from three or more classes of property as an indication of significant differences among multiple classes of property. When only two classes are being compared, the appropriate test is the Mann-Whitney test.

Kurtosis — A statistic that indicates the sharpness of the peak of the distribution of a data set.

L

Land — 1) In economics, the surface of the earth and all the natural resources and natural productive powers over which possession of the earth's surface gives man control; and 2) In law, a portion of the earth's surface, together with the earth below it, the space above it, and all things annexed thereto by nature or by man.

Land, Improved — The ground or base of property that has been partially or fully developed for use or continued improvements. Land can be improved by changing the zoning requirements, erecting a building or structure, establishing utility (gas, water, electric) hookups, and installing access features or roadways.

Land, Parcel of — See *Parcel.*

Land, Patented — Land formerly owned by a state or national government as part of the original public domain that has been voluntarily conveyed by such government to a private owner by a proceeding authorized by general statute, the conveyance being evidenced by an instrument known as a "land patent."

Land, Platted — Land that has been surveyed and divided into marketable lots delineated on a plat; applied especially to urban land used or intended for use as building sites.

Land Capitalization Rate (Rl) — The ratio of land income to land value; can be used to convert a single year's land income into land value.

Land Combination — Combining two or more parcels of land into a single parcel. May be required when developing a large area of land for improvements. May be governed by the Land Division Act or requirements of a governmental entity.

Land Contract — A contract for the sale of a property in which the seller retains title until the buyer completes the contracted payments for the property. The contract may be recorded; however, the conveyance of the property is not complete until all contractual obligations are fulfilled, at which time the deed for transfer of ownership may be recorded. See *Contract for Deed.*

Land Cover — The biophysical materials covering the surface of the land, including soil, water, vegetation, and human cultivation activities.

Land Description Systems — Organized, uniform written descriptions of the physical boundaries of property rights; commonly referred to as legal descriptions.

Land Division — Separating land into two or more parts. May be governed by the Land Division Act or statutory requirements of a governmental entity. The total value of land may increase when divided into individual smaller parcels.

Land Grant — A legal document in which the federal government conveys land title to an individual.

Land Information System — A system for capturing, retaining, checking, integrating, manipulating, analyzing, and displaying data about land and its use, ownership, and development.

Land Ratio — The ratio of land area to building area. The land ratio can be an important factor in grouping properties for income approach appraisal by means of direct sales comparisons.

Land Ratio Method — A technique used to estimate the value of property from a knowledge of normal net income, the discount rate, the remaining economic life of a property, the value of the building, the income path attributable to the building, and the income path attributable to the land. The technique estimates total value by discounting the income stream attributable to the land and adding the result to an independent estimate of the value of the building.

Land Residual Technique — A value ascribed to land when the building value is known and when there are no unimproved land sales to support land value. For this technique to be valid, the building must be new (the improvements can be hypothetical) and must represent the highest and best use of the land. The information needed to use the land residual technique includes: 1) Net operating income; 2) Improvement value; 3) Proper discount rate; 4) Property recapture rate; and 5) Effective tax rate. See *Abstraction Method, Discount Rate, Effective Tax Rate, Net Operating Income*, and *Recapture Rate.*

Land Split — See *Land Division.*

Land-to-Building Ratio — The proportion of land area to gross building (improvement) area. For a given use, the most frequently occurring ratio will be that of a functioning economic unit.

Land-to-Improvement/Building Ratio — See *Land-to-Building Ratio.*

Land Value — The amount for which vacant land with the same location, area, shape, physical characteristics, and allowable uses would sell in the open market.

Land Value Tax — An ad valorem property tax measured by the value of land exclusive of any improvements thereon.

Last-In, First-Out (LIFO) — An accounting procedure used to measure the cost of unsold inventory, including inventory carried over from the prior year. This method is less acceptable than first-in, first-out (FIFO) because it assumes that the goods on hand are the earliest purchased items, and that the more recently purchased goods have been sold. May be used for income tax purposes but would rarely reflect inventory value for property tax purposes.

Latitude — The angular distance north or south of the equator, measured in degrees along a meridian, as on a map or globe.

Law of Variable Proportions — Often called law of decreasing returns or the law of proportionality. States that when the quantity of one productive service is increased by equal increments, while the quantities of other productive services remain fixed, the resulting increment of product will decrease after a certain point.

Layer — Set of related geographic features, such as streets, parcels, or rivers, and the attributes (associated characteristics of those features) logically organized into groups that can be displayed independently.

Leadership — The art of acting and conducting business in a way that causes people to want to follow.

Lease — A written contract by which the lessor (owner) transfers the rights to occupy and use real or personal property to another (lessee) for a specified time in return for a specified payment (rent).

Lease, Graduated Rental — A long-term lease with increases or decreases (specified in a step-up or step-down clause) in the rent that are to take effect at established intervals at set amounts or at amounts to be reached by subsequent appraisal and arbitration.

Lease, Gross — A lease under the terms of which the lessor (landlord) receives stipulated rent and which includes the expenses of operating and maintaining the leased property. Contrast *Net Lease*.

Lease, Ground — A lease conveying possessory interest in land exclusive of any improvements constructed thereon.

Lease, Net — See *Net Lease*.

Lease, Percentage — A lease in which the consideration is measured by or dependent on the operating earnings or sales of the business using the leased property.

Lease, Proprietary — A type of lease used by tenant-shareholders in a cooperative apartment; the tenant purchases a specific number of shares of stock to occupy a unit, then makes monthly payments for operations and debt service.

Lease, Sandwich — A lease that lies between the fee title and a subsequent lease. For example, A leases to B and B to C; the first of these leases is a sandwich lease. The lessee in a sandwich lease is not the person using the property. The lessor may or may not be the owner of the fee; if it is a sublease, he or she is not.

Lease, Step-Up — A lease that calls for set increases in rent at specified intervals.

Lease, Straight — A lease that calls for a set amount of rent to be paid periodically over the term of the lease.

Leaseback Sale — The transfer of building, land, or personal property to a buyer under a special arrangement to simultaneously lease it back to the original builder/seller, usually involving a long-term triple net arrangement with options to renew the lease.

Leased Equipment — Items of a particular purpose that are allowed to be used by someone other than the owner through periodic lease payments.

Leased Fee Estate — A landlord's interest in real property under a lease that includes the rights to receive rental payments and to take possession of the property after the lease term ends. See *Reversion*.

Leasehold — A tenant's interest in real property under a lease. Sometimes called a Leasehold Estate or Leasehold Interest.

Leasehold Improvements — Items of personal property such as furniture and fixtures associated with a lessee (the tenant) that have been affixed to the real property owned by a lessor.

Legal Description — A delineation of dimensions, boundaries, and relevant attributes of a real property parcel that serve to identify the parcel for all purposes of law. The description may be in words or codes, such as metes and bounds or coordinates. For a subdivided lot, the legal description would probably include lot and block numbers and subdivision name.

Lessee — The person receiving a possessory interest in property by lease, that is, the owner of a leasehold estate.

Lessor — The person granting a possessory interest in property by lease, that is, the conveyor of a leasehold estate, the holder of a leased fee estate.

Level Annuity — A pattern of income in which the amount of income does not change during the term of the annuity, and the income is received in equally spaced and regularly scheduled payments.

Level of Appraisal — The common, or overall, ratio of appraised values to market values. Three concepts are usually of interest: 1) The level required by law; 2) The true or actual level; and 3) The computed level, based on a ratio study. See *Level of Assessment.*

Level of Assessment — The common or overall ratio of assessed values to market values.

Level of Trade — Refers to the production and distribution stages of a product. They are the: 1) Manufacturing level; 2) Wholesale level; 3) Retail level; and 4) Consumer level. Personal property should be assessed at the trade level at which it is located. See *Uplift Factor.*

Level Perpetual Annuity — A pattern of income in which both the property's value and income are expected to remain constant into perpetuity.

Leverage — The effect of borrowed funds on investment return.

Levy — See *Property Tax Levy.*

Liability — An amount that is owed by one person to another. Used to include obligations of a business entity to its owners, employees, and creditors. Liability accounts are included on the balance sheet for accounting purposes. Assets are equal to liabilities and net worth (equity). See *Asset, Balance Sheet, Equity*, and *Net Worth.*

LiDAR — See *Light Detection and Ranging.*

Lien — 1) The legal right to take or hold property of a debtor as payment or security for a debt; and 2) Any legal hold or claim, whether created voluntarily or by operation of law, that a creditor has on all or specified portions of the property owned by a person indebted to him.

Lien Date — The date on which an obligation, such as a property tax bill (usually in an amount yet to be determined), attaches to a property, and the property thus becomes security against its payment. Often synonymous with *Appraisal Date.*

Life, Economic — See *Economic Life.*

Life, Physical — See *Physical Life.*

Life Estate — An interest in property that lasts only for a specified person's lifetime; thus, the owner of a life estate is unable to leave the property to heirs.

Life Estate Per Autre Vie — Life estate in which the ownership interest is measured not by the owner's life but by the life of another person.

Life Tenant — The recipient of a life estate.

LIFO — See *Last-In, First-Out.*

Light Detection and Ranging (LiDAR) — An airborne collection system that uses a scanning infrared laser sensor comprising a transmitter and receiver, global positioning system (GPS) receiver and an inertial navigation system (INS) unit to obtain the geospatial x, y, and z coordinate value of ground surface points. This data can be used to develop very accurate digital elevation, surface, and terrain models. These models can form the base for orthoimagery and geospatial analysis.

Limits on Assessment Increases — A form of tax and expenditure limitation applicable to all local governments in the state, in which an upper limit is placed on the dollar value of assessments, on the dollar amount of assessment increases, or on the rate of the assessment increase.

Limits on General Revenue or Expenditure Increases — A form of tax and expenditure limitation, applicable to all local governments in the state, in which an upper limit is placed on the dollar value of increases in revenues gathered or on expenditures made, or on the rate of increase in revenues gathered or expenditures made.

Line, Base — See *Baseline.*

Line, Coincidence — Synonymous with preferred term Merge Line. See *Coincidence Line.*

Line, Merge — See *Merge Line.*

Line, Property — See *Property Line.*

Line, Range — See *Range Line.*

Line, Township — See *Township Line.*

Line Graph — A type of graph that plots statistics for one variable (usually a continuous variable) against values for a noncontiguous variable.

Line-Item Budgeting — A style of budgeting designed to achieve financial control and minimize opportunities for corruption by controlling spending.

Linear Model — The relationship between one dependent variable and one or more independent variables. Unknown parameters (population) are estimated. The response or dependent variable assumes the errors are independent normal random variables with a mean of zero and constant variance. The coefficients for each independent variable are used to predict the dependent variable.

Linear Regression Analysis — A kind of statistical analysis used to investigate whether a dependent variable and a set of one or more independent variables share a linear correlation and, if they do, to predict the value of the dependent variable on the basis of the values of the other variables. Regression analysis of one dependent variable and only one independent variable is called simple linear regression, but it is the word simple (not linear) that distinguishes it from multiple regression analysis with its multiple independent variables.

Linearity — The assumption that the marginal contribution to value of an independent variable is constant over the entire range of the variable.

Link — A one hundredth of a surveyor's chain, a linear measure of 66 hundredths of a foot, or 7.92 inches.

Liquid Assets — Assets that can quickly be converted into cash.

Liquidation Value — The estimated gross dollar amount that could be typically realized at a properly conducted public auction held under forced conditions and under present-day economic trends.

Liquidation Value-in-Place — The estimated proceeds of a forced sale of an entire facility or property. For personal property items the assets remain in the location of the business entity.

Liquidity — The ease with which an asset may be converted into cash.

Lis Pendens — A notice of a pending suit. A person dealing with property after a lis pendens has been recorded takes the property subject to the decree of a court.

List, Grand — See *Assessment Roll.*

List, Tax — See *Assessment Roll.*

Listing — The process by which the assessor ensures that records for the taxable property identified during discovery are preserved with integrity, available for use in valuation activities, and ultimately reflected in the assessment roll.

Littoral Rights — Rights held by owners and users of land adjacent to or abutting oceans, gulfs, and lakes. See *Riparian Rights.*

Loan Constant — See *Mortgage Constant.*

Loan Term — The length of time over which a loan must be repaid.

Loan-to-Value Ratio (M) — The portion of the investment financed by the mortgage or debt. It is the complement to the amount financed by equity. It is the relationship (often a percentage) between the amount of a mortgage and the value of the security pledged for the mortgage.

Locally Assessed Property — Property for which the assessed value is set by the assessing official of the local jurisdiction within which the property is located.

Local Multiplier — An adjustment to replacement or reproduction cost new or historical cost to reflect local costs.

Location — The numerical or other identification of a point (or object) sufficiently precise so the point can be situated. For example, the location of a point on a plane can be specified by a pair of numbers (plane coordinates), and the location of a point in space can be specified by a set of three numbers (space coordinates). However, location may also be specified in terms other than coordinates. A location may be specified as being at the intersection of two specific lines by identifying it with some prominent and known feature (for example, "on top of Pikes Peak" or "at the junction of the Potomac and Anacostia Rivers").

Location Value Response Surface Analysis (LVRSA) — A mass appraisal technique that involves creating value influence centers, computing variables to represent distances (or transformations thereof) from such points, and using the variables in a multiple regression or other model to capture location influences. Implementation of the technique is enhanced by the use of a geographic information system. Some geographic information systems permit the value influence centers to be displayed and measured as a three-dimensional grid surface, the results of which can be likewise used in calibration techniques to arrive at the contribution of location based on the model specification.

Location Variable — A variable, such as the distance to the nearest commercial district or the traffic count on an adjoining street, that seeks to measure the contribution of locational factors to the total property value.

Log — Linear Relationship — A correlation between two variables such that if the value of one variable changes by a certain percentage, the value of the other changes by a certain amount. Logarithms permit multiplication to be done by means of adding logs.

Logarithm — The number that, when used as an exponent for another number (called the base), results in a third number of some practical interest (called the antilogarithm). There are two bases. The base 10 produces what are called common logarithms, and the base 2.71828 (e) produces natural logarithms.

Long-Lived Items — Items that are the basic structure of a building and are not usually replaced during economic life. For example: foundation, roof structure, and framing.

Long-Term Debt — See *Long-Term Liability.*

Long-Term Liability — The unpaid balance of notes, bonds, and other evidence of debt payable after one year from the date issued, plus any unamortized debt discount and debt expense and any reacquired long-term debt. An obligation or debt, such as a mortgage, that will not mature for generally more than one year. Considered long-term debt.

Longitude — A linear or angular distance measured east or west from a reference meridian on a sphere or spheroid.

Lot — A plot of land, generally a subdivision of a city, town, or village block, represented and identified by a recorded plat.

Lot, Corner — A lot located in the angle formed by two intersecting streets.

Lot, Government — One of the non-rectangular areas into which sections not evenly or approximately divisible into square 40-acre tracts were divided in the course of the government survey.

Lot, Inside — A lot sufficiently far from the intersection of any streets to be assumed to be free of corner influence.

Lot, Irregular — A lot that is not a conventional shape.

Lot, Restricted — A lot whose owner is restricted as to its use or sale by the terms of a private contract or by operation of law; for example, a lot upon which construction is restricted to residential buildings of an approved style and of a minimum cost. Note: Restrictions are ordinarily created by zoning laws and ordinances or by private contract on the deeding of property.

Lot, Standard — A lot that is selected as the standard in size, shape, grade, and alley influence, usually because it is representative of the majority of lots within a given area.

Lot, Through — A lot fronting on two streets that are parallel, or that run in the same general direction. Synonymous with Merged Lot. Note: The term "through parcel" is more appropriate if the parcel was formed by assemblage of two lots with a common rear line.

Lot and Block Survey — A plat in which a larger parcel of land is subdivided into small units for the purpose of sale. Conveyances need to refer only to the lot, block, and plat book designation.

Lot and Block Survey System — A system used to describe small parcels of land, primarily urban, using in most cases a section or plat number or name, and a lot number.

Lot Coverage Ratio — The relationship between the improved portions of a lot (including buildings, patios, decks, driveways, etc.) as compared with the total area of the lot.

Lot Line — The line shown on the map creating the lot. A lot line is permanent and does not change with street openings.

Lot Line Revision — An adjustment or reallocation of property between two or more lots or parcels of land that does not create a new lot or parcel of land.

Lot Split — A division of an existing lot, whether developed or not, into two or more lots. See *Land Division.*

Low-Water Mark — The line to which a body of water receded, under ordinary conditions, at its lowest stage.

Lower of Cost or Market — 1) An inventory accounting concept that states that the present value of inventory is based on the lower of either historical cost or current selling price; and 2) The accounting theory stating that property is recorded into the books and records at the lowest amount. If the price paid (cost) is lower than market value, the entry into the accounting records is the price paid. If the price paid (cost) is higher than market value, the entry into the accounting records is the market value.

Luminance — The intensity of light per unit area of its source.

Lump-Sum Grant — A grant that does not depend on how much the recipient government spends on a particular service.

LVRSA — See *Location Value Response Surface Analysis.*

M

Macroeconomics — The economics of the economy as a whole—the forces causing recession, depression, and inflation together with the forces resulting in economic growth.

Macro-Identification — A method of studying an entire manufacturing process by identifying the major components contributing to the design capacity of a plant.

Magnetic Declination — A deviation of the direction of the needle from astronomic north.

Magnetic Meridian — The north direction that a magnetic compass needle points to at any given location. It is a deviation of the direction of the needle from astronomic north. An imaginary line connecting the magnetic north and south poles.

Maintenance — Maintaining or preserving a property. Resources are expended that preserve the asset in order to achieve the intended economic life.

Management — The coordination and administration of tasks to achieve a goal.

Management Rate — A rate that reflects the costs of managing the property. This management rate is added to the risk rate, the safe rate, and the non-liquidity rate to yield the return rate in the summation method.

Mandates — Federal regulations that impose costs on state and local governments. There are also state mandates on local governments.

Mann-Whitney Test — A test in inferential statistics that seeks to determine whether the differences in values between two sets of observations from any population are statistically significant.

Manuscript Map — The original drawing of a map as compiled or constructed from various data (such as ground surveys or photographs).

Map — A representation (usually on a flat medium) of all or a portion of the earth or other celestial body, showing the relative size and position of features to some given scale or projection; also, a representation of all or part of the celestial sphere. A map may emphasize, generalize, or omit the representation of certain features to satisfy specific requirements. Maps are frequently categorized and referred to according to the type of information they are designed primarily to convey, to distinguish them from maps of other types. 1) Topographic maps represent the horizontal and vertical positions of features; distinguished from a planimetric map by the addition of relief in measurable form. A topographic map uses contours or comparable symbols to show mountains, valleys, and plains, and in the case of hydrographic charts, symbols and numbers to show depths in bodies of water; 2) Control maps portray relief by means of contour lines; 3) Planimetric maps present only the horizontal positions for the features represented; distinguished from a topographic map by the omission of relief in measurable form. See *Map, Base; Cadastral Map; Hydrographic Map*; and *Manuscript Map.*

Map, Aerial — A map constructed on the basis of aerial photographs. See *Map.*

Map, Base — A map with points of reference and other physical features to facilitate data plotting. See *Map.*

Map, Land Value — A map that shows all streets, watercourses, railroads, and other principal features, and the unit — foot values, square — foot values, or acre values assigned to all land in the area covered. Synonymous with Equalization Map and Base Value Map. See *Map*.

Map, Lot and Block — A map of an urban area showing the division of land into lots and blocks, with dimensions. See *Map*.

Map, Planimetric — A map that shows only the horizontal positions of the features represented. See *Map, Topographic*.

Map, Tax — A map drawn to scale and delineated for lot lines or property lines or both, with dimensions or areas and identifying numbers, letters, or names for all delineated lots or parcels. See *Map*.

Map, Topographic — A map showing the horizontal and vertical locations of natural and artificial features. See *Map*.

Map Book and Page System — A system for parcel identification in which a code (usually numeric) is used to identify each parcel. Each code contains four elements: 1) The volume or book of maps in which the parcel is to be found; 2) The page on which it is to be found; 3) The block; and 4) The individual parcel on the block.

Map Projection — A mathematical model used to transform positions on the surface of the earth, which is curved, onto a flat map surface. An orderly system (mathematical model) to portray all or part of the earth, which is an irregular sphere, on a planar or flat surface. Some distortions of conformality, distance, direction, scale, and area always result from this fitting process. Examples include the Mercator and the Lambert Conformal Conic Projection.

Map Scale — The ratio of a distance on a photograph or map to its corresponding distance on the ground. Scale may be expressed as a ratio, 1:24,000; a representative fraction, 1/24,000; or an equivalence, 1 in. = 2,000 ft.

Map Scale, Fractional — A fractional scale is the ratio that any small distance on the map bears to the corresponding distance on the earth. It may be written in the form of a fraction (1/100,000) or as a proportion (1:10,000). Fractional scales are representative in any linear unit.

Margin of Error — A measure of the uncertainty associated with statistical estimates of a parameter. A margin of error is a key component of a confidence interval. It reports a "plus or minus" percentage or proportion quantity in a confidence interval at a specified level of probability (typically 95 percent). See *Confidence Interval.*

Marginal Cost — The change in a firm's total costs per unit.

Marginal Physical Product — The change in total output of a firm resulting from a one-unit change in the employment of a resource, holding the quantities of other resources constant.

Marginal Revenue — The change in a firm's total revenue per unit in its sales level. Marginal revenue equals price in pure competition only.

Marginal Tax Rate — The proportion of the last dollar of income taxed by the government.

Marginal Unit — The unit last added to any economic process.

Marginal Utility — The change in the total utility to a consumer that results from a one-unit change in the consumption level of an item.

Marginal Utility Theory — A theory of consumer choice that says that consumers will maximize welfare by allocation of their budget such that the marginal utility per dollar is equalized across all purchased goods.

Market — 1) The topical area of common interest in which buyers and sellers interact; and 2) The collective body of buyers and sellers for a particular product.

Market Adjustment Factors — These factors reflecting supply and demand preferences are often required to adjust values obtained from the cost approach to the market. These adjustments should be applied by type of property and area and are based on sales ratio studies or other market analyses. Accurate cost schedules, condition ratings, and depreciation schedules will minimize the need for market adjustment factors.

Market Analysis — A study of the supply and demand metrics within a specific area for a specific type of property.

Market Analyst — An appraiser who studies real estate market conditions and develops mathematical formulas that represent those market conditions.

Market Approach — See *Sales Comparison Approach.*

Market Area — See *Economic Area.*

Market Condition Adjustment — A factor to reflect price changes in relation to the time the property sold and the date of valuation. These factors account for changes in market conditions between the time a comparable sold and the effective date of the appraisal.

Market Delineation (Segmentation) — The process of defining a geographic area to identify supply and demand characteristics that affect the property's ability to serve uses for which it is designed.

Market Price — See *Price, Market.* Compare with *Market Value.*

Market Rate of Return — The typical return on an investment in a given type of property in a given market. It is distinct from the actual rate of return indicated by a property's actual income.

Market-Related Adjustment — See *Market Condition Adjustment.*

Market Rent — See *Rent, Economic.*

Market Value — A value, stated as an opinion, that presumes the transfer of a property (i.e., a right of ownership or a bundle of such rights), as of a certain date, under specific conditions set forth in the value definition that is identified by the appraiser as applicable in an appraisal.

Market Value Standard — A requirement of law or practice that the assessment ratio of all properties be equal to 100 percent of market value.

Marketability — 1) The ease of which a property could be sold based on the desirability of the property; 2) The extent to which a property is free of encumbrances that would preclude the owner's ability to sell the property.

Mark-up — An amount added to a cost in calculating a selling price to account for overhead and profit.

Marshall Valuation Service (MVS) — A cost manual used for developing replacement costs and depreciated values of improvements.

MAS — See *Mass Appraisal Specialist.*

Mass Appraisal — The process of valuing a group of properties as of a given date, using standard methods, employing common data, and allowing for statistical testing. Source: *IAAO Standard on Mass Appraisal.*

Mass Appraisal Model — A mathematical expression of how supply and demand factors interact in a market. For purposes of appraisal, a representation (in words or an equation) that explains the relationship between value or estimated sale price and variables representing factors of supply and demand. Source: *IAAO Standard on Mass Appraisal.*

Mass Appraisal Specialist (MAS) — A professional designation conferred by the International Association of Assessing Officers (IAAO) recognizing professionalism and competency in with a wide range of property types, property appraisal and assessment administration issues, and property tax policy.

Matching Grants — A grant that provides a certain amount for each dollar spent by the recipient government. For example, a 50 percent matching grant would provide $1 to the recipient government for each $1 it spent on a particular function.

Matte Print — Print made on photographic paper with a dull finish more suitable for pencil or ink annotations than a glossy print but less suitable for interpretation than a semi-matte print.

Matte Fi — A coating or texture on the surface of polyester fi. Commonly used with cadastral maps because of dimensional stability, ink adherence, erasing quality, translucence, and strength.

Mean — A measure of central tendency. The result of adding all the values of a variable and dividing by the number of values. For example, the mean of 3, 5, and 10 is 18 divided by 3, or 6. Also called arithmetic mean.

Mean High-Tide Line — The average height of the tide between all the lowest high tides and all the highest tides.

Meander Corner — Location on a map where a meander line intersects with a regular section line.

Meander Line — A traverse of a body of water for the purpose of determining the size and location of the body of water. Meander lines do not represent boundary lines; the body of water where it exists represents the true boundary lines.

Measure of Central Tendency — Single values representing the center point of a set of data. Common measures of central tendency are the mode, median, arithmetic mean, and weighted mean.

Median — A measure of central tendency. The value of the middle item in an uneven number of items arrayed by value. The arithmetic average of the two central items in an even number of items similarly arranged; a positional measure not affected by extreme values.

Median Absolute Deviation — The median of the absolute deviations from the median. In a symmetrical distribution, the measure approximates one-half the interquartile range.

Median Percent Deviation — The median of the absolute percent deviations from the median; calculated by dividing the median absolute deviation by one-hundredth of the median.

Mercator Projection — One of several mathematical projections of the curved surface of the earth on an imaginary cylinder that is then flattened. The original Mercator projection was on a cylinder the axis of which was in a north-south direction. Transverse Mercator projections are on imaginary cylinders with an east-west orientation. Transverse Mercator projections are more common than the original Mercator projection. In addition to the universal transverse Mercator (UTM) projection, there are the modified transverse Mercator system (MTMS) and the state transverse Mercator (STM) system.

Merge Line — An imaginary line dividing a through lot or parcel into two parts, along which, corner and alley influence being ignored, the value of the land is at its minimum and is the same whether the depth be calculated from one street or the other. Note: It is customary to locate the merge line of a rectangular through lot at a point at which the ratio of its distances from the two streets is equal to the ratio of the respective unit-foot values of the two streets. This formula, however, does not produce results consistent with the above definition when used in conjunction with any of the standard depth tables.

Merge Point — Any point on the merge line. See *Merge Line.*

Merger — Union of two or more entities; absorption of a lesser entity by a greater one.

Meridian — A north-south line from which longitudes are referenced. All lines intersect the equator (as well as other latitudes) and converge at the North and South Poles.

Meridian, Grid — A line of a map grid parallel to the line representing the central meridian. See *Meridian Line.*

Meridian, Principal — A true meridian from which range lines are established by the government survey. Contrast *Baseline*. See *Meridian Line.*

Meridian Line — Meridian line is any line running due north and south. Since meridian lines converge at the North Pole, no two meridian lines are parallel. Practically, within the limits of a property survey all lines shown as north and south are considered parallel.

Metes and Bounds — Measurement of angles and distances; a description of a parcel of land accomplished by beginning at a known reference point, proceeding to a point on the perimeter of the property being described, and then tracing the boundaries until one returns to the first point on the perimeter, usually a corner. The angles are described by reference to points of the compass, and the distances are described in feet or chains; curves are treated as arcs on a circle. A description of real property starting at a known point and describing the bearings and distances of the lines forming the boundaries of the property.

Microeconomics — The economics of units, such as firms and neighborhoods, of an economic system (as opposed to macroeconomics, which studies the economy as a whole).

Micro-identification — The process of finding the individual characteristics of equipment.

Microwave Region — Commonly, that region of the electromagnetic spectrum in the wavelength range from 1 micrometer to beyond 1 meter.

Middle Managers — The level of management whose job it is to take the goals and strategies developed by the top managers and put them into practice.

Mill — One mill is one-thousandth of one dollar or one-tenth of one cent.

Millage — A tax rate expressed as mills per dollar. Also known as Mill Rate. For example, a 2 percent tax rate is $2 per $100, $20 per $1,000, or 20 mills per dollar. One mill is one-thousandth of one dollar or one-tenth of one cent.

Mineral Rights — The right to extract ore, petroleum, or other minerals from a property.

Ministerial Duty — A duty prescribed by law that can be discharged without the exercise of official discretion or judgment.

Minkowski Metric — A method of measuring distance used in the automated comparable sales process to quantify the similarity of each candidate property to the subject property. Once the distance is calculated for each candidate property, they are sorted from lowest to highest. The properties with the smallest distances, or largest comparability, are closest to the subject property. If all attributes of the subject property and candidate property match exactly, the distance will be zero. The Minkowski Metric is interpreted as the average percent difference of the candidate property from the subject property.

Minute — A one-sixtieth of a degree of the circumference of a circle.

Miscellaneous Revenue — See *Revenue*.

Mission Statement — A broad, comprehensive statement that describes the fundamental purpose, aims, and values of an organization.

Mixed Use — Instances in which a single tract of land includes multiple use-types. Also known as Multiple Use Property.

MLS — See *Multiple Listing Service*.

Mode — A measure of central tendency; 1) In an array of the values of a variable, the most frequently occurring value; and 2) By extension for grouped data, the class with the greatest number of observations.

Model — A representation of how something works. For purposes of appraisal, a representation (in words or an equation) that explains the relationship between value or estimated sale price and variables representing factors of supply and demand.

Model Calibration — A process used to develop adjustment factors based on market analysis that identifies specific factors with an actual effect on market value.

Model Deployment — The application of a finalized model to data (existing or new), typically in a platform outside of the statistical package used to specify, calibrate, and develop the model.

Model Specification — A process used for identifying and defining the property characteristics used in a valuation model and how they related mathematically with one another.

Money Market — The interaction of buyers and sellers of short-term credit instruments.

Monument — Tangible landmarks indicating boundaries. 1) Physical monuments are existing features such as a stone, stake, tree, hill, ocean, river, or lake, but not the line of an adjoiner. 2) Natural monuments are naturally occurring objects such as a lake, river, tree, boulder, or hill. 3) Artificial monuments are man-made objects such as a stake, fence, or set stone, etc. 4) Record monuments are an adjoiner property called for in a deed, such as a street or particular parcel of land. Frequently the boundary line of the adjoiner is referred to as the record monument; actually, the entire property, rather than the line, is the monument. Physical monuments may or may not mark a record monument. In court reports, record monuments are often referred to as natural monuments. 5) Legal monuments are any monument controlling in a legal description. It is often limited in meaning to be synonymous with record monument.

Moratorium — A period of suspension of legal remedies or rights commonly used by local government agencies.

More or Less — In their ordinary use they are to be taken as words of caution, denoting some uncertainty in the mind of one using them and a desire not to misrepresent. When used in connection with quantity and distance, "more or less" are words of safety and precaution, intended merely to cover some slight or unimportant inaccuracy. If "125 feet more-or-less to the point of beginning" is used in a deed, the "more or less" indicates that the 125 feet is an informative term, whereas, "to the point of beginning" is the controlling term. "About 12 acres more-or-less is indefinite and should be avoided since the word "about" is very broad in meaning.

Mortgage — A contract under the terms of which the legal, but not the equitable, title to a specific property of one person (the mortgagor) is conditionally conveyed to a second person (the mortgagee) as security for the payment of a debt or performance of some other act. Note: In some states, legal title to mortgaged property passes to the mortgagee on execution of the mortgage; in others, legal title passes when the debt secured by the mortgage is in default; in still others, the mortgage is simply a lien, and legal title does not pass until foreclosure proceedings have been completed.

Mortgage, Balloon — See *Balloon Mortgage.*

Mortgage, Blanket — See *Blanket Mortgage.*

Mortgage, Chattel — A mortgage in which the security consists of tangible personal property. Note: A chattel mortgage usually takes the form of a bill of sale drawn in favor of the mortgagee with a clause defeating the transfer during compliance by the mortgagor with specified conditions.

Mortgage, Direct Reduction — A debt secured by real estate that is repaid in periodic, usually equal, installments that include repayment of part of the principal and the interest due on the unpaid balance, such as a level-payment, fixed-rate, fully amortizing mortgage.

Mortgage, Equitable — A lien on property established by a court when the technical requirements of a mortgage are not met, but the intent was that the lender have a mortgage on the property.

Mortgage, First — The mortgage that has the highest priority for repayment over all other liens on a property.

Mortgage, Insured — A mortgage insured by a party other than the borrower that satisfies the balance in the event of default by the mortgagor.

Mortgage, Junior — A lien on a property that is subordinate to any other prior mortgage claims.

Mortgage, Open-End — A mortgage that permits the mortgagor to borrow additional money, with certain conditions, under the same mortgage.

Mortgage, Package — A mortgage that covers both personal and real property.

Mortgage, Purchase Money — A mortgage given to the seller from the buyer to secure the unpaid purchase price of the sale of the property.

Mortgage, Real — A mortgage in which the security consists of real property.

Mortgage, Second — A mortgage that ranks after a first mortgage in precedence. Legal priority determines whether they are specified as a first, second, third, or so on, mortgage.

Mortgage, Wrap-Around — A junior or second mortgage that has a face value of both the amount it secures and the balance due under a first mortgage.

Mortgage Annual Constant (Rm) — The ratio between the annual payments of principal and interest on a mortgage to the original amount borrowed. It can be found by dividing the annual debt service by the amount borrowed or by multiplying the partial payment factor by the number of conversion periods in one year. Also known as the Mortgage Capitalization Rate.

Mortgage Capitalization Rate — See *Mortgage Annual Constant.*

Mortgage Coefficient — A component of the basic rate in the Ellwood variant of mortgage-equity analysis.

Mortgage Constant (RM) — Annual debt service expressed as a percentage of the initial principal amount of the loan; also called Mortgage Capitalization Rate.

Mortgage-Equity Analysis — A technique used to estimate the value of a property from a knowledge of the equity yield rate, typical mortgage terms (including the interest rate, the loan-to-value ratio, the term of the loan, and the amortization provisions), the holding period, and the percentage by which the property will appreciate or depreciate over the holding period. The solution is reached by using the Ellwood formula.

Mortgage Interest Rate (Ym) — The rate of return to the lender when there are not points or other charges to increase the lender's yield rate. It is a compound interest rate and can be used to calculate the mortgage annual constant. Also known as the Mortgage Yield Rate.

Mortgage Yield Rate — See *Mortgage Interest Rate.*

Mortgaged Fee Interest — The borrower's ownership interest in a mortgaged property.

Mortgagee — The person who lends money in a mortgage transaction.

Mortgagor — The person who borrows money in a mortgage transaction.

Motivation — A state of mind that causes an individual to voluntarily behave in a way that ensures the accomplishment of a goal.

Movables (or Movables) — In civil law states, a term used instead of, and more or less synonymously with, the term "personal property." All things that are subject to ownership other than land and land improvements.

Moving Average — A statistic used to smooth the values of a variable when those values are erratic over distance or time, as in the case of land values and mortgage commitments. For example, a five-block simple moving average of land values along a major street would assign to block 16 the average of the values for blocks 14 – 18; it would assign to block 17 the average of the values for blocks 15 – 19, and so on.

MRA — See *Multiple Regression Analysis.*

Multicollinearity — Occurs when there are high correlations between two or more variables. In regression analysis, multicollinearity often causes misleading results.

Multiple Listing Service (MLS) — A computerized database subscription service used by real estate brokers and agents to share information about properties for sale. Hundreds of systems are located throughout the U.S. and Canada to serve local market areas.

Multiple Regression Analysis (MRA) — Also known as Multiple Regression. It is a statistical technique used to analyze data in order to predict the value of one variable (the dependent variable), such as market value, from the known value of other variables (independent variables), such as lot size, number of rooms, and so on. If there is one independent variable used, the technique is known as simple regression. With two or more independent variables the technique is referred to as multiple regression. See *Linear Regression Analysis.*

Multiplicative Model — A mathematical model in which the coefficients of independent variables serve as powers (exponents) to which the independent variables are raised or in which independent variables themselves serve as exponents; the results are then multiplied to estimate the value of the dependent variable.

Multiplicative Transformation — A transformation of a set of variables accomplished by multiplying a variable by one or more other variables. For example, room area is a multiplicative transformation of length and width.

Multipurpose Cadaster — A digital cadastral map rich in cadastral data and associated land data and features to support the mission-critical functions and advanced analytics of the assessor. Also provides a comprehensive platform for the spatial framework for the geospatial data of other governmental agencies and private entities.

Multispectral — Camera systems sensitive to more than one spectral wavelength band.

Multispectral Scanner — A nonphotographic imaging system that uses a rotating mirror and a fiber-optic bundle sensor. The mirror sweeps from side to side and sequentially records brightness values (that is, signal strengths) on magnetic tape for successive pixels, one swath at a time. The forward motion of the sensor platform carries the instrument to a position along the orbital path where an adjacent swath can be imaged.

Multivariate Statistical Technique (Model) — Any of a number of statistical techniques used to analyze more than two variables simultaneously. See *Multiple Regression Analysis.*

Municipal Notes-Short — term promises to pay issued by local governments.

MVS — See *Marshall Valuation Service.*

N

Naïve Forecasting — An estimating technique in which the last period's actuals are used as this period's forecast, without adjusting them or attempting to establish causal factors. Assuming that historical relationships hold constant, this year's revenues are a constant function of last year's revenues.

NAPL — See *Non-Aqueous Phase Liquids.*

National Map Accuracy Standards (NMAS) — For horizontal accuracy maps at publication scales larger than 1:20,000, 90 percent of all well-defined features, with the exception of those unavoidably displaced by exaggerated symbolization, will be located within 1/30 inch (85 mm) of their geographic positions as referred to the map projection; for maps at publication scales of 1:20,000 or smaller, 1/50 inch (50 mm). For vertical accuracy, 90 percent of all contours and elevations interpolated from contours will be accurate within one-half of the basic contour interval. Discrepancies in the accuracy of contours and elevations beyond this tolerance may be decreased by assuming a horizontal displacement within 1/50 inch.

National Priorities List (NPL) — The list of sites determined to pose enough risk to become Superfund sites.

Natural Monopoly — A monopoly, or a single producer of a good, that arises due to economies of scale throughout the relevant range of production of the good. This results in a continually declining average total cost to produce, with the least expensive way to produce the good being a single producer.

Navigation System, Doppler — In general, any navigation system that makes use of the measured shift in frequency to determine the velocity of the receiving system relative to the signal source and, from these measurements, the location of the receiver.

Navigation System, Inertial — Any navigation system in which gyroscopes or accelerometers are used to provide a coordinate system that has a fixed orientation with respect to the distant galaxies.

Navigation System, Satellite — 1) A system used for the navigation of satellites; and 2) A system having beacons or transponders placed on satellites rather than at fixed points on land.

Neat Line — On a map of the earth's surface, a line that marks the limits of a specific area in precise measurements; commonly encloses the map, legend, scale, title, and other information; serves as the (imaginary) link to an adjacent map.

Needs Analysis — A systematic planning process through which the various essential considerations are identified and evaluated. It can provide an in-depth understanding of what can and cannot be accomplished.

Neighborhood — See *Economic Area.*

Neighborhood Analysis — A study of the relevant forces that influence property values within the boundaries of a homogenous area.

Neighborhood Binary Variable — A binary is one of two possible variables used in a valuation model to quantify the effects on value of distinct neighborhoods.

Neoclassical School — A school of management that arose in response to the classical school and emphasized a focus on human behavior.

Net Assessed Value — The official dollar value remaining on an assessment roll after deducting the amount of any applicable partial exemptions from the gross assessed value.

Net Book Value — The value of a fixed asset according to the balance sheet. It is the cost of the fixed asset less book (accounting) depreciation.

Net Lease — A lease under the terms of which the lessee pays the agreed rent plus all or a portion of the expenses for operating and maintaining the leased property. Contrast Gross Lease.

Net Income — See *Net Operating Income (NOI).*

Net Income Multiplier (NIM) — A factor that can be multiplied by the net income (NOI) to obtain the market value of a property. It is the relationship between value and net operating income.

Net Income Ratio (NIR) — The ratio of net operating income to effective gross income. It may also be expressed as a percentage of potential gross income. It is the complement to the operating expense ratio (OER) and can be found by the formula 1 – OER. See *Effective Gross Income, Net Operating Income, Operating Expense Ratio*, and *Potential Gross Income.*

Net Leasable Area (NLA) — The area within a building or structure that is actually occupied by an individual tenant. Net leasable area does not include any of the common areas, such as lobbies and restrooms, shared by other tenants.

Net Lease — A lease in which the landlord (lessor) receives a stipulated rent amount and the tenant (lessee) pays all operating expenses and taxes attributable to the property. A net lease produces net income to the lessor.

Net Operating Income (NOI) — The amount of income remaining after operating expenses are subtracted from effective gross income. See *Capitalization Rate, Effective Gross Income, Income Approach, Operating Expenses,* and *Potential Gross Income.*

Net Profit — Excess of revenue over operating expenses.

Net Rent — See *Rent, Net.*

Net Worth — The aggregate of the equities representing proprietary interest; the excess of the going-concern value of assets over liabilities to outsiders; in the case of a corporation, the total of paid-in capital and retained earnings; in a sole proprietorship, the owner's capital account; in a partnership, the sum of the partners' capital accounts. Used in accounting for financial reporting. Included on the balance sheet. Assets are equal to liabilities and net worth (equity).

Net Worth Tax — An ad valorem property tax based on the difference between the total assets and total liabilities of the taxpayer. Note: This is a tax that is used in a number of countries but not in the United States.

Neural Network (ANN) — A collection of mathematical models that emulate some of the observed properties of biological nervous systems and draw on the analogies of adaptive biological learning. An artificial neural network has several key elements: input, processing (calibration), and output. Other names associated with neural networks include connectionism, parallel distributed processing, neurocomputing, natural intelligent systems, and machine learning algorithms.

Neutral/Neutrality — Refers to a tax that does not distort economic decisions. Closely related to the concept of efficiency, the situation in which patterns of consumption maximize the general welfare of society. A common economic objective that has to do with designing the property tax so that it does not distort economic decisions.

Nexus — The legal question of what constitutes sufficient presence in a state or jurisdiction to be held responsible for paying or collecting a tax.

NIM — See *Net Income Multiplier.*

NIR — See *Net Income Ratio.*

NLA — See *Net Leasable Area.*

NMAS — See *National Map Accuracy Standards.*

NOI — See *Net Operating Income.*

Nominal Data — Qualitative variables without a natural order, such as property class, location, building style, etc. See *Ordinal Data.*

Nominal Interest Rate — The stated interest rate on an annual basis. The nominal interest rate is the same as the effective interest rate only when there is annual compounding. See *Effective Interest Rate.*

Nominal Tax Rate — The rate expressing the ratio between the current taxes and the property assessment; the official tax rate of the taxing jurisdiction. Differs from effective tax rate when the assessment ratio (statutory level of assessment) is not 100 percent. The rate may be calculated by dividing the amount of the taxes by the assessed value of a property. See *Effective Tax Rate.*

Nominal Value — Either a price or value deemed insignificant, or de minimis.

Nominal Variable — Also referred to as a categorical variable, a variable with two or more categories with no intrinsic order. For nominal variables there is no defined method to order the values from highest to lowest. For example, house style has a number of possible values: colonial, ranch, contemporary, etc. Another example of a nominal variable is a binary variable with two categories such as yes or no.

Non-Aqueous Phase Liquids (NAPL) — Liquid contaminants often trapped in soil or bedrock.

Non-Cadastral — Spatial data that are typically dependent on and reside upon cadastral parcel data. Examples of non-cadastral data layers are zoning, future land use, and municipal boundary layers.

Nonconforming Uses — Legally nonconforming uses are uses that were established in the past and that complied with the zoning or land use regulations that existed at the time. However, because of changing codes and ordinances, they no longer conform to the land use regulations currently in existence. Government actions are often the cause of legal nonconformities, including events such as partial takings in an eminent domain proceeding.

Non-Investment Property — See *Property, Non-Investment.*

Nonlinear Model — The relationship between a set of independent variables and one dependent variable displaying complex effects not explainable using a linear (straight-line) model. Generally, nonlinear regression is used to estimate the parameters in a nonlinear model with the main assumption that the underlying data are well represented by the model. The value of the coefficients can be correctly interpreted only if the correct nonlinear model has been fitted. A good choice of starting points can lead to a desirable output; a poor choice will make the output misleading.

Non-Liquidity Rate — In building a rate of return by the summation approach, an appraiser must add in a factor or rate for non-liquidity. This rate compensates the investor for his or her inability to make immediate use of the investment amount. Generally, the longer the holding period for the investment, the higher the non-liquidity rate will be.

Nonparametric Statistic — Statistics that make no assumptions regarding the distribution of the sample data. Specifically, nonparametric statistics do not assume data are drawn from a population with a normal distribution. See *Parametric Statistic.*

Non-Physical Contaminant — Recognized contaminant that does not consist of any tangible, physical substance.

Non-Sampling Error — The error reflected in ratio study statistics from all sources other than sampling error. While non-sampling error is unavoidable due to the inefficiencies inherent in real property markets, the imperfections of the appraisal process, and the imperfections of conducting ratio studies, all practicable steps must be taken to minimize non-sampling error in ratio studies.

Normal — A line that is 90° (perpendicular) to the line or to a curve is a radial line.

Normal Distribution — A symmetric distribution of data with relatively more values at the center of the distribution and relatively few in the tails. The density or height of a normal distribution (the height for a given value on the x-axis) is based on the distribution's mean and standard deviation. In a normal distribution, 68 percent of the observations are within one standard deviation of the mean, 95 percent are within two standard deviations of the mean, and 99 percent are three standard deviations of the mean.

Normative Statement — A statement that involves the use of value judgments and whose merits cannot be evaluated on facts alone.

North — The word "north," as used in the descriptive call of a deed, may be controlled, or qualified, in its meaning by other words of description used with it, but when it is not qualified by other words, it must be construed as meaning due "north." Due north means geographical or astronomical north relative to the earth.

Northerly — Where nothing is given to limit the exact direction, northerly means due north. Directed more toward the north than any of the other cardinal directions, but not exactly north, as in a northerly direction.

Note — An agreement acknowledging and promising to repay a debt.

NPL — See *National Priorities List.*

Null Hypothesis — A hypothesis that there is no statistical significance between certain characteristics of the population. Any difference is based either on chance or sampling error. See *Alternative Hypothesis* and *Hypothesis Test.*

Numerator — In a fractional expression, the number that is divided by some other number (the denominator). For example, 3 is the numerator of the fraction 3/4 and 4 is the denominator.

O

OAR — See *Overall Rate.*

Object of Tax — 1) The objective element on which a tax is imposed; 2) The aims or purposes for which the tax is designed. Note: This term, as defined in 1) does not seem to be distinguished adequately from "measure of tax," "subject of tax," and "tax base." Such distinction as can be drawn is pedantic, and the use of the term in this sense is not recommended. It is also recommended that the term "purpose of tax" be substituted for the second usage.

Objective — The quality of being definable by specific criteria without the need for judgment. Quantitative variables are objective.

Objective Data — Data that are collected or obtained by established and verifiable facts and sources. For example, zoning requirements, corner lot, size of lot, and amount of front feet can all be objectively verified.

Oblique Imagery — A type of imagery that provides high-resolution, three-dimensional images from various positions.

Oblique Photograph — A photograph taken with the camera axis directed intentionally between the horizontal and the vertical. Typically taken from a plane.

Observation — One recording or occurrence of the value of a variable; for example, one sale ratio among a sample of sales ratios.

Observed Condition Breakdown Method — Generally divides depreciation (loss in market value) into all its components: 1) Physical Deterioration — Curable; 2) Physical Deterioration — Incurable Short — Lived Items; 3) Physical Deterioration — Incurable Long-Lived (which includes the basic structure); 4) Functional Obsolescence — Curable; 5) Functional Obsolescence — Incurable; and 6) External Obsolescence (economic) for each major building component, amenity, or feature.

Obsolescence — One factor of depreciation characterized by an impairment or limitation in function or design or by a shift in market preferences. See *External Obsolescence, Functional Obsolescence*, and *Superadequacy*.

Occupancy — The act of taking possession of or residing in or on a property.

Occupancy Ratio — The ratio of the occupied units (for example, square feet of floor space, living units, or rooms) of a property to the total available units.

OER — See *Operating Expense Ratio.*

Official Plan — A comprehensive, long-term plan developed by a municipality to determine public policy such as transportation, utilities, social housing, and land use.

Offsets — Environmental permits allow certain amounts of air pollutants to be released into the environment. If an industry wishes to expand and increase air pollution emissions, it may first be required to reduce its current level of emissions, so that the expanded plant will not emit more air pollution than did the original plant. A company may also trade air pollution allowances with another company to facilitate expansion of the first company. Both these exchanges (intercompany and intracompany) are called "offsets."

Omitted Assessment — An assessment made after the close of a tax year on property that was legally assessable but was not listed, or was omitted, for taxation. Referred to as Omitted Property.

One-Meter Ground Pixel Resolution — The smallest feature that can be discerned (in one pixel) is one meter in length or width.

On Record — A document that has been filed in the public records and made a matter of public record.

Open-End Mortgage — A mortgage that permits the mortgagor to borrow additional money, with certain conditions, under the same mortgage.

Open Market — A freely competitive market in which any buyer or seller may trade and in which prices are determined by competition.

Operating Expense Ratio (OER) — The ratio of expenses to effective gross income (EGI). Normally the percentage that operating expenses make up as a percentage of effective gross income. It can also be expressed as a percentage of potential gross income. It is the complement to the net income ratio (NIR) and can be found by the formula 1 – NIR. See *Operating Expenses* and *Net Income Ratio.*

Operating Expenses — Ordinary and typical expenses that are necessary to keep the property functional. Operating expenses are evaluated to determine which are proper for development of the income approach to value. Typical operating expenses can be classified as: 1) Fixed expenses — An expense that does not vary by the rate of occupancy; 2) Variable expenses — An expense that varies based on the rate of occupancy; and 3) Reserves for replacement — Annual charges for items that have relatively short lives.

Operating Leased Property — Property under an operating lease not included as an asset on the books of the lessee company. Operating leased property is similar to a rental agreement, where the property is rented/leased for a specified period of time and is intended to be returned to the owner/lessor.

Operating Statement — Summarizes in writing the gross income, annual expenses, and resulting net operating income of a business during a specified period of time. Also known as an Income Statement or Profit and Loss Statement. It is a vital financial reporting document prepared periodically, generally at the end of the year. It provides the operating results (income and expenses) for a specific period of time of the earnings or losses of an entity.

Operating Unit — 1) The property, taken as a whole, that is used in a public utility operation; and 2) A term used to define an integrated set of assets whose value is based on the interaction and contribution of the assets as a whole.

Operational Plan — A broad-scale plan for accomplishing several objectives in the immediate future (one year or less). It contains detailed information about objectives, workloads, measures of performance, and resource requirements.

Opportunity Cost — The cost associated with not taking an alternative course of action in financial opportunities. Evaluation of the opportunity costs requires evaluation of every other viable option's strengths and weaknesses.

Orderly Liquidation Value — The amount of gross proceeds that could be expected from the sale of the appraised assets under orderly conditions, given a period of time in which to find a purchaser(s). It considers a complete sale of all assets, as is, where is, and all sales made free and clear of all liens and encumbrances. Represents Value-in-Exchange.

Ordinal Data — Qualitative variables with a natural order, such as condition, building grade, etc. See *Nominal Data.*

Ordinance — A statute or law that designates an enactment by a county's or municipal corporation's legislative body.

Organization Chart — A graphic representation of supervisory positions and lines of authority for all employees in an organization.

Original Cost — The cost of an asset to the current owner. Differs from historical cost, as the cost to the current owner may reflect a used purchase price. See *Historical Cost.*

Original Plat — Used to distinguish the first plat from the subsequent addition. Also known as Original Town or Original Town Site Map.

Origination Fee — A fee charged by a lender (called the loan originator) for making a real estate loan.

Orthoimage — See *Orthophotograph.*

Orthophotograph — A photograph having the properties of an orthographic projection, a corrected or "straightened" image. It is derived from a conventional perspective photograph by simple or differential rectification so that the image displacements caused by camera tilt and relief of terrain are removed. Sometimes referred to as an Orthoimage.

Orthophotography — A photograph derived from perspective photographs and equivalent to a photograph made by orthographic projection. In a perfect orthophotography there are not displacements of images because of tilt or relief.

Orthorectification — The process of manipulating an image to remove spatial distortion by considering location, elevation, and sensor information.

Other and Unallocable Property — Includes any property not classified within any of the preceding groups. Examples are mineral rights, timber rights, and oil rights, if they are separately assessed as real estate. The actual manner in which the property is utilized. May differ from the legal zoning permitted by the governing authority. May differ from the highest and best use of the property. See *Highest and Best Use* and *Zoning.*

Outlier Ratios — Very low or high ratios as compared with other ratios in a sample.

Outliers — Observations that have unusual values; that is, they differ markedly from a measure of central tendency. Some outliers occur naturally; others are due to data errors.

Outlot — A relatively large lot that is included within the boundaries of an original or subdivision plat but that is excepted from the general platting pattern for building lots and is usually intended for occupancy (as, for example, a truck farm or country estate).

Outputs — 1) Goods produced by a firm; and 2) The information returned by a computer to its user.

Overall Age/Life Method — A straight-line method of estimating accrued depreciation of an improvement's replacement cost new, by applying a ratio equaling an improvement's effective age divided by its total economic life. It is the ratio between the effective age of real or personal property and its total economic life. It is applied to the replacement cost new of the property to obtain an estimate of accrued depreciation.

Overall Capitalization Rate — See *Overall Rate (RO) or (OAR).*

Overall Property Tax Rate Limits — A form of tax and expenditure limitation, applicable to all governments in the state, in which an upper limit is placed on either the property tax rate or the rate of increase in the property tax rate.

Overall Rate (OR) (OAR) — The relationship between a single year's annual net operating income and the property's sale price or value. See *Capitalization Rate, Discount Rate, Effective Gross Income, Effective Tax Rate, Net Operating Income*, and *Recapture Rate.*

Overhead Cost — A cost that is not directly traceable to the construction of an improvement. For example, administrative costs, interest on funded debt, and property taxes.

Over-Improvement — An improvement whose cost exceeds the cost of an alternative improvement by more than the excess of the present worth of the given improvement and the land over the present worth of the alternative improvement and the land, often because a structure is too large or too costly for the most profitable use of the site. When compared with highest and best use in the market, subject property's excess cost of a property feature is not justified by any possible increase in its present value. Factors may include excess size, superadequacy, or lack of demand. Contrast Under-Improvement.

Overlap — The amount by which one photograph duplicates the area covered by another photograph, usually expressed as a percentage. Overlap may be end or forward (along the flight path) or side taken during two or more parallel flights); both end and side overlap are customary when more than one line is flown.

Overlay — In mapping, a record on a transparent medium to be superimposed on another record; for example, maps showing original land grants (or patents) prepared as tracing cloth overlays so that they can be correlated with maps showing the present ownership. Also, any of the several overlays that may be prepared in compiling a manuscript map; usually described by name; for example, lettering overlay.

Oversight Agency — The supervisory agency responsible for the management and oversight of assessment programs.

Own-Source Revenue — See *Revenue.*

Owner, Equitable — One who does not have legal title to a property but holds sufficient rights, benefits, and burdens in the property to be considered its owner. See *Beneficiary.*

Owner, Legal — One whose claim to ownership is based on a document (i.e., deed) or rule of law that specifically transfers ownership of the property.

Ownership — The rights to the use of property, to the exclusion of others. See *Bundle of Rights.*

P

Package Mortgage — A mortgage that covers both personal and real property.

Paired Sales Analysis — An appraisal technique using two sold parcels that are the same or comparable in every aspect except one feature or amenity. The price difference between the two sales reflects the value of the difference in the feature or amenity.

Panchromatic — Photographic emulsion sensitive to all colors of light.

Panel — 1) A target used for ground control or point identification during aerial photography; and 2) A group of individuals who are engaged for some service because of their expertise.

Paneling — Marking points on the ground with material of suitable contrast, size, and shape to provide images that can be positively identified on aerial photographs.

Par Value — The face value of an item of intangible property that has both a stated face value and a fluctuating market value; applied especially to corporate stocks.

Parallel Lines — Two straight lines that are an equal distance apart. Parallel curves are always concentric curves. East-west latitude lines are parallel. Technically, north-south meridian lines converge at the poles and cannot be parallel; however, in a legal description or on a map, where two lines are shown with the same bearing, it is implied that the lines are parallel. The same bearing on different maps does not imply parallelism. A line is parallel with, not to, another line. By mathematical definition, "parallel lines" are straight lines; but in common speech about boundaries, the words are often used to represent lines that are not straight lines, but photographs of each other, and courts, in ruling on questions of boundaries, often use them in the latter sense.

Parallel of Latitude — Any line that runs due east and west and is at every point at right angles to the meridian. A parallel of latitude is a curved line on the face of the earth; however, within the limits of a boundary as shown on a map, parallels of latitude are considered straight lines. Only where large tracts are surveyed is curvature consideration necessary.

Parameter — Numerical descriptive measure of the population; for example, the arithmetic mean or standard deviation. Parameters are generally unknown and estimated from statistics calculated from a sample of the population.

Parametric Statistic — A statistic that assumes the sample data come from a population with a normal distribution.

Parcel — A contiguous area of land described in a single legal description or as one of a number of lots on a plat; separately owned, either publicly or privately; and capable of being separately conveyed. In land ownership mapping for assessment purposes, a parcel is usually held to be a tract of land under one entity ownership. It may be a combination of two or more tracts acquired by separate deeds.

Parcel Centroid (Point) — A point within the parcel to which related information can be attached.

Parcel Identification Number — A numeric or alphanumeric description of a parcel that identifies it uniquely. Assessors use various systems, many with common features. A growing number of these systems include geocoding. In the 30 states where it exists, the public land survey system, authorized by the United States government in 1785, is often a basis for parcel identification. In Ontario, Canada, it is a nine-digit number for numerical indexing of legal description-based property identification.

Parcel Identification System — The scheme by which parcel identifiers are generated. Parcel identifiers are constructed from elements relating them to surveying systems, map projection systems, map-page numbers, and geographic areas.

Parcel Identifier — A code, usually numerical, representing a specific land parcel's legal description. The purpose of parcel identifiers is to permit reference to legal descriptions by using a code of uniform and manageable size, thereby facilitating record-keeping and handling. Also called Parcel Identification Number.

Parcel of Land — A contiguous urban or rural land area that is considered as a unit, is subject to single ownership, and is legally recorded as a single piece. Compare Lot and Plot.

Parcel Outline — The geographic extent of the parcel; the parcel boundaries forming a closed polygon.

Parcel Polygon — A sequence of vectors forming a closed shape that defines parcel boundaries. Parcel polygon objects include information about the parcel such as the parcel identification number and the parcel area.

Part Sales — Transfers of real property in which a portion of an existing tract is separated and transferred to another owner, thereby creating one or more new parcels. See *Land Division.*

Partial Equilibrium — Equilibrium of individual economic units or subsections of the economy in light of constraints imposed from outside the unit. See *Equilibrium* and *Principle of Balance.*

Partial Equilibrium Analysis — An analysis of one unit of the economy in light of constraints imposed by economic forces outside the unit. An example would be a highest and best use analysis of vacant land where the land use is limited by zoning.

Partial Exemption — The amount of otherwise-taxable assessed value removed from tax liability by constitutional and/or statutory action. Examples of partial exemptions are those for qualifying homesteads, veterans, and senior citizens.

Partial Payment Factor — Also known as the Amortization or Periodic Repayment factor. The equal periodic payment that has a present worth of $1, for a specified number of periods and at a specified discount rate.

Partial Taking — Taking part rather than all of real property by means of eminent domain. Compensation will be both for the part taken and for any loss of value affecting the remainder.

Partially Amortized Mortgage — A mortgage that has monthly or quarterly payments of interest and partial amortization of the loan balance, with a large balloon payment at the end of the mortgage.

Partnership — An association of two or more persons to carry on as co-owners of a business under a partnership agreement.

Passing Call — References to cultural or topographic features along a survey line, sometimes used to locate lines or recover corners.

Passive System — A sensing system that detects or measures radiation emitted by the target.

Patent — 1) The exclusive right granted by a government for a limited period to an inventor, his or her heirs, legatees, or assigns, to make, use, and vend an article or process invented by him or her; and 2) The instrument by which government lands are granted to private persons under the proceedings set forth in the general statutes. See *Intangible Personal Property* and *Land, Patented.*

P/E — See *Price-Earnings Ratio.*

Per Capita — Divided by the number of people in the population.

Percent Condition — The difference between observed physical depreciation, expressed as a percentage of original or reproduction cost, and 100 percent.

Percent Good — An estimate of the value of a property, expressed as a percentage of its replacement cost, after depreciation of all kinds has been deducted.

Percent of Cost — A technique of valuation by establishing the ratio of the sale price to the cost new of an asset at the time of sale. With sufficient data, similar property can be analyzed statistically, and relationships developed between age, selling price, and cost; it is logical then to estimate value by determining the current cost of the subject and applying the appropriate percentage.

Percentile — The values that divide a set of data into specified percentages when the data are arrayed in ascending order. The tenth percentile includes the lowest 10 percent of the values, the twentieth percentile includes the lowest 20 percent of the values, and so forth.

Performance Audit — 1) A systematic set of procedures used by an auditor to determine if the organization meets acceptable standards; 2) Ratio studies are often included as an important part of a performance audit of assessment organizations; and 3) An analysis of an organization to determine whether the quantity and quality of work performed meets standards.

Performance Bond — Insurance issued by a third party to guarantee the satisfactory completion of a contract.

Performance Budgeting — A style of budgeting that attempts to overcome some of the shortcomings of line-item budgeting by using cost efficiency to make spending decisions and evaluate management. This type of budget links expenditures to desired results.

Performance Evaluation — The process of comparing desired results with actual employee performance.

Performance Ratio — A ratio of the income of an investment to its cost that reflects historical performance of the investment.

Perimeter Sketch — A graphic presentation of the boundaries of a property, either the land or the buildings on the land.

Personal Effects — Items of tangible personal property that an individual normally wears, carries, or uses in activities that do not involve the production of income.

Personal Property — All property not defined as real property. Generally, includes four categories (inventories, fixed assets, leasehold improvements, and intangibles). Tangible property includes most movable items, but can include sales tax, freight, installation costs, and all other costs required to place the item into service. Intangible property is evidence of ownership. Personal property is assessable unless specifically exempted by statute for each state.

Personal Property Specialist (PPS) — A professional designation conferred by the International Association of Assessing Officers (IAAO) recognizing professionalism and competency in the valuation of personal property for tax purposes.

Personalty — A synonym for personal property. See *Personal Property.*

PGI — See *Potential Gross Income.*

Phase I and II Reports — Used for properties that may be affected by contamination. Phase I reports include historical information about the subject property and the neighborhood, and a review of pertinent government records to determine any prior violation pertaining to hazardous wastes or substances. This report requires physical inspection of the property. Phase II reports are required when potential problems are identified in the Phase I study. Phase II is an in-depth study of groundwater, air, soils, and improvements to determine the existence of any hazardous waste or substance or other contaminant.

Photo Delineation — The selection and identification of map-worthy features on a photograph or digital image.

Photogrammetry — 1) The art and science of obtaining reliable measurements by means of photography; and 2) The making of maps based on aerial photographs taken under rigidly controlled conditions.

Physical Contaminant — Any substance recognized as hazardous by the Environmental Protection Agency (EPA) or local or regional authorities.

Physical Deterioration — A cause of depreciation that is a loss in value due to ordinary wear and tear and the forces of nature. The loss in value begins immediately following the completion or installation of a building component. Man-made objects begin to suffer from deterioration as soon as they are created, simply because of the passage of time. Decay may be due to normal chemical changes in materials' composition or may result from mechanical cause. The loss in value may be curable or incurable.

Physical Life — The total period a building lasts or is expected to last. The length of time it could physically exist if allowed to remain standing.

Pixel — An element of surface resulting from subdividing an image into the smallest identically shaped figures that give information about the location, intensity, and perhaps color of the source, but of which no smaller subdivision will provide more information. The concept "pixel" (diminutive of "picture element") is valid only for images made up of discrete patches. It is not valid for continuous images. The term is sometimes assumed to be the equivalent of resolution expressed in terms of area. However, it is not exactly equivalent, because resolution can be defined for pictures that do not contain pixels. The size of a pixel is set principally by the size of the smallest individual radiation-sensitive element in the instrument creating the image. For example, in the human eye, the pixel region is the region occupied on the retina by a cone.

Place of Business, Principal — See *Principal Place of Business.*

Plaintiff — The party who initiates a lawsuit in a civil matter.

Plane Rectangular Coordinates — A system of coordinates in a horizontal plane used to describe the positions of points with respect to an arbitrary origin by means of two distances perpendicular to each other. See *Coordinates*.

Planimeter — A mechanical device used for measuring the area of a parcel on a map.

Planimetric Map — A map that represents only the horizontal position for the features represented; distinguished from a topographic map by the omission of relief in measurable form.

Plant, Machinery and Equipment (PME) — Same as Personal Property. PME is often used outside the United States to reference non-real property items.

Plat — A map intended to show the division of land into lots or parcels. Upon recordation with the appropriate authorities, land included in the plat can thenceforth be legally described by reference to the plat, omitting a metes and bounds description. Also, a diagram drawn to scale showing all essential data pertaining to the boundaries and subdivisions of a tract of land, as determined by survey or protraction.

Plat, Original — A plat constituting the original plan or layout of a municipality and showing its location and division into blocks and lots.

Plat, Recorded — A plat that has been accepted by the constituted authority and that may henceforth be used as the basis for a legal description of land within its boundaries.

Plat, Subdivision — A plat showing the location of a subdivision and its layout into lots, streets, alleys, and the like.

Plat, Township — A plat of a survey township prepared by, or under the direction of, the United States General Land Office.

Plat Book — A book in the registrar's office or courthouse that contains subdivision plats and other plats or maps that have been filed for record.

Plot — 1) A relatively small area of land, generally used for a specific purpose; and 2) A measured area of land; lot.

Plottage — The assembling of adjacent parcels of land into a single unit under single ownership that results in an increase in value. Compare *Assemblage*.

Plottage Value — The incremental value increase that results when two or more sites are combined to form one larger site with greater utility. Compare *Assemblage* and *Assembly Value*.

PLSS — See *Public Land Survey System.*

PME — See *Plant, Machinery and Equipment.*

POB — See *Point of Beginning.*

Point — "Point" in a boundary is the extremity of a line. "To the point" in a description is often meaningless, since the end of a line is a point. If the point is to be referred to later, "to point A" or "to point = 1" gives an easy reference.

Point Estimate — A single numerical value used to estimate a population parameter from a sample. Point estimates provide the best unbiased estimate of the population parameter consistent with the sample data. See *Confidence Interval* and *Reliability*.

Point of Beginning (POB) — In a deed description, it is a reference point from which the description begins.

Point of Commencement — The first point described in a legal description that begins a series of calls that eventually takes the reader to the point of beginning.

Points — Prepaid interest on a loan; one point is equal to 1 percent of the amount of the loan. It is common to deduct points in advance of the loan, so that an individual pays interest on 100 percent of the loan but gets cash on, say, only 99 percent.

Pole — See *Rod*.

Police Power — The power of the state that curtails individual rights for the health, safety, and general welfare of all society. See *Bundle of Rights.*

Policy Statement — A formal expression of the principles and goals of particular aspects of property tax.

Polygon — A line chart that includes a number of straight-line segments.

Pooled Regression — Combining two or more strata to form one regression model.

Population — All the items of interest, for example, all the properties in a jurisdiction or neighborhood; all the observations in a data set from which a sample may be drawn.

Position — A numerical or other description of the location and orientation (attitude) of a point or object. In particular, in geodesy and navigation; 1) Data that give the location of a point in a specific coordinate system; 2) The place occupied by a point on the earth; and 3) The coordinates giving the location of a point on the geoid or ellipsoid.

Position, Geographic — The location of a point on the surface of the earth, expressed in terms of either geodetic or astronomic latitude and longitude. Geo-position is a contraction of this term.

Positional Accuracy — The degree to which the coordinates define a point's true position on the earth's surface.

Positioning System — Generally, a system (equipment, procedures, and personnel) used for locating a vehicle or, less frequently, an instrument. A navigation system can also be used for positioning, but a system designed specifically for positioning generally gives more accurate locations.

Positioning System, Doppler — A positioning system consisting of a radio receiver at the point whose coordinates are to be determined.

Positioning System, Inertial — A positioning system consisting of a computer and an assemblage of three accelerometers and two or three gyroscopes.

Positioning System, Radio — A positioning system in which the travel time or phase shift of radio waves is measured.

Positioning System, Satellite — A positioning system consisting of a radio receiver, or a receiver and transmitter, at the point whose location is to be determined, one or more beacons or transponders in orbit about Earth, and a computing system for determining and predicting the orbits.

Positive Statement — A statement that involves the use of no value judgments and whose merits can be evaluated on facts alone.

Possession — Physical control of personal or real property.

Possessory Interest — 1) An interest of a person in an article of property arising from a physical relationship to the article of such nature as to confer on him or her a degree of physical control over it, coupled with the intent to so exercise such control as to exclude the general public from use of it; and 2) The right to occupy and use any benefit in a transferred property, granted under lease, licenses, permit, concession, or other contract.

Posting — The act of transferring to an account in a ledger the data, either detailed or summarized, contained in a book or document of original entry. Occurs when the balances in the general journal are recorded into the general ledger.

Potential Gross Income (PGI) — The total scheduled annual income for income-producing properties at 100 percent occupancy, including other income the property generates (e.g., parking, laundry, pet fees, etc.).

Potential Gross Rent — The total rent a property would produce if 100 percent occupied at market rent.

Power of Attorney — A written authorization in which one person gives authority to another person to act on his or her behalf.

PPS — See *Personal Property Specialist.*

PRB — See *Coefficient of Price-Related Bias.*

PRD — See *Price-Related Differential.*

Pre-Audit — A review of the primary purpose for conducting an audit, a review of the property tax filings (statements, renditions, personal property filings) if rendered, a review of the development of the assessment, in order to complete an audit timely and efficiently, and in compliance with all property tax laws.

Precedence of Calls — The concept that provides the necessary guidance to map a parcel when a discrepancy exists between two tracts or when conflicting information is found in a single description.

Preferred Capitalization Rate — 1) The capitalization rate applicable to the band of investment financed by preferred stock; and 2) A component of the overall direct capitalization rate calculated by dividing dividends by the market value of preferred stock.

Preferred Stock — See *Stock, Preferred.*

Preliminary Data AVM [AVM Assisting Appraisers] — This AVM sorts substantial amounts of electronic data and provides selected raw or basic data for interpretation by the appraiser. The appraisers use the AVM applications to provide their opinions of value.

Present Value — The current value of a future sum of money given a specified rate of return.

Present Worth — See *Present Value.*

Present Worth of $1 — The lump sum amount that would have to be set aside to accumulate with compound interest to $1 at the end of a specified number of years and at a specified rate of interest. Alternatively, it can be viewed as the present value of $1 receivable at the end of a specified number of years and discounted at a specified rate. Also called Reversion Factor.

Present Worth of $1 Per Period — The present worth of a series of payments of $1, receivable at the end of each year, for a specified number of years and at a specified interest rate. Also called the Annuity Factor or Inwood Coefficient.

Press Release — An official statement written by the assessment office and given to members of the media. A press release provides information on a particular subject.

Pre-Tax Cash Flow — See *Before-Tax Cash Flow (PTCF).*

Price — The amount asked, offered, or paid for a property.

Price, Adjusted Sale — See *Adjusted Sale Price.*

Price, Market — The value of a unit of goods or services, expressed in terms of money, as established in a free and open market. Note: This term is sometimes distinguished from "market value" on the grounds that the latter term assumes that buyers and sellers are informed, but this assumption is also implied by the phrase "free and open market." Compare Price, Sale.

Price, Sale — 1) The actual amount of money exchanged for a unit of goods or services, whether or not established in a free and open market. An indicator of market value; and 2) Loosely used synonymously with "offering" or "asked" price. Note: The sale price is the "selling price" to the vendor and the "cost price" to the vendee.

Price-Earnings Ratio (P/E) — The ratio of the market price per share of the common stock of a specific company to the earnings per share of common stock of that company during a 12-month period. Typically, the ratio is based on the current market price and the most recent 12-month period for which earnings are known. This ratio is the reciprocal of the earnings-price ratio (E/P).

Price-Related Bias — See *Coefficient of Price-Related Bias (PRB).*

Price-Related Differential (PRD) — A statistical measure of vertical property tax equity. The PRD is calculated by dividing the mean ratio by the weighted mean ratio in a ratio study. If the result exceeds 1.03, assessments are considered regressive. If the result is less than 0.98, assessments are considered progressive.

Primary Assessing Jurisdiction — The unit of government having initial responsibility for determining the assessed value against which general property taxes are levied by local government and, where applicable, by state government.

Principal Meridian — A true meridian from which range lines are established by the government survey.

Principal Place of Business — 1) The main location in which a company conducts business; and 2) The place at which the person or persons responsible for the management of a business enterprise exercise their managerial powers. Note: Generally, the president, treasurer, and chair of the board of directors have their headquarters at the principal place of business. The principal place of business in any given state may be a district or even a branch office.

Principles of Value — (See the Principles entries that follow)

Principle of Anticipation — The principle of value that states that value is the present worth of all the anticipated future benefits to be derived from a property. The benefits, in the form of an income stream or amenities, are those benefits anticipated by the market.

Principle of Balance — The principle of value that states that maximum market value is reached when the four agents of production attain a state of equilibrium. The four agents of production are 1) Land; 2) Labor; 3) Capital; and 4) Management. See *Agents of Production.*

Principle of Change — The principle of value that states that market value is never constant because physical, environmental, economic, governmental, and social forces are at work to change the property and its environment. When these forces are in balance, the market achieves a temporary state of rest called equilibrium.

Principle of Competition — Created by the potential for profits, which attracts new buyers and sellers to the marketplace. It is the principle of value that states that when the amount of property of a certain type offered for sale is large in relation to demand, prices will fall, and conversely, when a property of a certain type is reduced in relation to demand, prices will increase.

Principle of Conformity — The principle of value that states that the value of a property depends to some extent on its relation to its surroundings. The principle of conformity states that maximum market value is achieved when there is reasonable similarity among the improvements, and reasonably homogenous and surrounding land uses are compatible with the use of the specified properties.

Principle of Consistent Use — The principle of value that states that the property must be valued with a single use for the entire property. It is improper to value a property on the basis of one use for land and another use for the improvements.

Principle of Contribution — The principle of value that states that the value of a component of property depends on its contribution to the whole. In other words, the cost of the component does not necessarily equal the value the component adds to the property.

Principle of Highest and Best Use — See *Highest and Best Use.*

Principle of Increasing and Decreasing Returns — The principle of value that states that when successive increments of one agent of production are added to fixed amounts of the other agents, future net benefits (income or amenities) increase up to a certain point (the point of decreasing returns), after which successive increments decrease future net benefits.

Principle of Progression — The principle of value that states that the value of a lower-priced property is increased by association with superior properties of the same type in the same area.

Principle of Regression — The principle of value that states the value of a better-quality property is decreased by association with lower-quality properties of the same type in the same area.

Principle of Substitution — The principle of value that states that a property's market value tends to be set by the cost of acquiring an equally desirable and valuable substitute property, assuming that no costly delay is encountered in making the substitution. This principle underlies each of the three approaches to value: cost, sales comparison, and income.

Principle of Supply and Demand — The principle of value that holds that the price of a property varies directly with demand and inversely with supply. Supply is a function of the four agents of production. Demand is a function of consumer desire to purchase the property. See *Principle of Balance.*

Principle of Surplus Productivity — The principle of value that is the net income remaining after the costs of labor, management, and capital (in that order) have been satisfied. The surplus productivity is the income earned by the land. The agents of production must be satisfied in the following order: labor, management, capital, and land. As a result, land value tends to be set by the cost of labor, management, and capital. See *Principle of Balance, Principle of Contribution*, and *Principle of Increasing and Decreasing Returns.*

Private Encumbrances — Private hindrances that affect value and sale price, such as easements, condominium controls, and deed or subdivision restrictions.

Private Restrictions — Private parties, such as a group of homeowners, may establish private restrictions on ownership rights. Deed restrictions are a common form of private restriction.

Private Sale — A sale negotiated and concluded privately between buyer and seller and not offered on the open market.

Privilege Tax — A special tax on the right to start, expand, or continue a business. Synonymous with Franchise Tax.

Procedural Audit — A systematic set of procedures used by an auditor to determine whether an organization is adhering to established procedures. Also, an examination of an organization to determine whether established or recommended procedures are being followed.

Productivity Value — Measures the worth of land based on its income-producing ability in its current use. Owners of farm and ranch property apply for agricultural-use or open-space valuation (both are forms of productivity value) to avoid having their properties assessed at a different highest and best use that would bring higher assessed values and presumably higher taxes. Compare *Value-in-Use.*

Profit and Loss Statement — See *Income Statement.*

Program Budgeting — A style of budgeting that centralizes budgeting to examine net public benefits. It shows the allocation of funds and personnel across broad programmatic areas.

Program Evaluation and Review Technique (PERT) Chart — A planning tool that provides for simultaneous sequencing and scheduling.

Progressive Tax — Assessment progressivity occurs when assessment levels or effective property tax rates on low-value properties are less than assessment levels or effective property tax rates on high-value properties.

Progressive Tax System — A method of taxation in which those with more resources pay a greater percentage of their resources than those with fewer resources. Income progressivity occurs in a tax system under which a taxpayer's average tax rate increases with income. This is often the case with income taxation based on multiple rates. Assessment progressivity occurs when effective property tax rates on high-value properties are greater than effective property tax rates on low-value properties.

Progressivity — See *Principle of Progression* and *Principle of Regression.*

Prolong — To extend in length along a line; to continue along a curve.

Projection — A systematic drawing of lines on a plane surface to represent the parallels of latitude and meridians of longitude of the earth or a section of the earth.

Proper Expenses — See *Operating Expenses.*

Property — The ownership of a thing is the right of one or more persons to possess and use it to the exclusion of others. An aggregate of things or rights to things. These rights are protected by law. There are two basic types of property: real and personal. Real property consists of the interests, benefits, and rights inherent in the ownership of land plus anything permanently attached to the land or legally defined as immovable; the bundle of rights with which ownership of real estate is endowed. To the extent that "real estate" commonly includes land and any permanent improvements, the two terms can be understood to have the same meaning. Also called Realty. Personal property is defined as those items that generally are movable or all items not specifically defined as real property. Many states include as personal property the costs associated with placing personal property in service, such as sales tax, freight, and installation. Installation items include, but are not limited to, wiring, foundations, hookups, and attachments. Two commonly used tests for distinguishing real and personal property are 1) the intent of the parties; and 2) Whether the item may be removed from the real estate without damage to either. See *Intangible Personal Property, Personal Property, Real Property*, and *Tangible Personal Property.*

Property, Distributable — 1) Property subject to central assessment that is certified by the central assessing officer or body to local tax districts, according to the property's actual or constructive tax within such districts, for inclusion in the local assessment and/or tax rolls; and 2) The personal property of an intestate available for distribution by the administrator to the heirs.

Property, Investment — A property that has been developed with the intention and expectation of renting it, in whole or in part, for profit.

Property, Non-Investment — A property that has not been developed with the intention and expectation of renting it, in whole or in part, for profit.

Property, Non-Operating — Property not included in the unit being appraised, usually where the non-operating property is not necessary to the operation of the unit and is readily assessed locally.

Property, Ratable (or Rateable) — Taxable property.

Property, Tangible — Physical items that includes both real and personal property. Specifically, does not include intangible property.

Property in Transit — Property moving interstate by common carrier or private conveyance. It is covered by federal Interstate Commerce Commission regulations and cannot be assessed.

Property Line — The boundary line that defines a parcel of land.

Property Record Card — See *Appraisal Card.*

Property Residual Technique — A valuation method normally used when neither land nor building value can be estimated reliably. To use this technique, an estimate of the amount of recapture is required. This technique treats the net income directly, relating the income to the total property value without considering separation of land or building from the total property value. The remaining proceeds of sale attributed to the land after all expenses, financing costs and profit have been deducted. Source: UBC Sauder School of Business.

Property Rights — See *Bundle of Rights.*

Property Split — A result of the sale of property held by a single owner such that different pieces of the property are owned by different owners. Splits may or may not occur along plat lines. See *Land Division.*

Property Tax — Any tax that is imposed on persons on account of their ownership or possession of property; it is measured by the number of units, the value, or some presumptive evidence of number of units or value, of such property. Note: This tax is generally, but not necessarily, intended to be a direct, proportional ad valorem tax. Compare Classified Property Tax, *General Property Tax*, and *Special Property Tax.*

Property Tax Base — See *Assessment Base.*

Property Tax Calendar — See *Tax Calendar.*

Property Tax Credit — An offset against the property tax payment or another tax payment for taxpayers who meet certain criteria (for example, senior citizens), or whose properties have certain characteristics or are used for specified purposes (for example, pollution abatement), a direct reduction in a tax payment rather than in a tax base.

Property Tax Levy — 1) The total amount of money to be raised from the property tax as set forth in the budget of a taxing jurisdiction; and 2) Loosely, by extension, the millage rate or the property tax bill sent to an individual property owner.

Property Tax Levy Limits — A form of tax and expenditure limitation, applicable to all local governments in the state, in which an upper limit is placed on either the proceeds of the property tax or the rate of growth in the proceeds of the property tax.

Property Tax Policy — Any purposeful course of action by governmental bodies that affects or determines the way property taxes are created, levied, collected, or spent. Property tax policy issues can include determining the division of responsibility between local and state/provincial governments, equalization, appeals, public relations, reappraisal systems, the market value standard, exemptions and abatements, fractional assessments (ratios), and limits on taxes and assessed values.

Property Taxes — See *General Property Tax, Property Tax*, and *Special Property Tax.*

Property Use Category — A United States Census Bureau classification scheme based on actual utilization of real property, including; 1) Residential (Non-Farm) Single-Family; 2) Residential (Non-Farm) Multifamily; 3) Acreage (Acreage and Farms); 4) Vacant Platted Lots; 5) Commercial Property; 6) Industrial Property; and 7) Other and Unallocable Property. The actual manner in which the property is utilized. May differ from the legal zoning permitted by the governing authority. May differ from the highest and best use of the property. See *Acreage, Commercial Property, Highest and Best Use, Industrial Property, Other and Unallocable Property, Residential (Non-Farm) Multifamily, Residential (Non-Farm) Single-Family, Vacant Platted Lots*, and *Zoning.*

Proportional Tax — A tax in which the effective tax rate is the same for all taxpayers regardless of the sizes of the tax bases on which they are subject to taxation. A tax system under which a taxpayer's average tax rate is the same at each level of income.

Proprietary Lease — See *Lease, Proprietary.*

PTCF — See *Before-Tax Cash Flow.*

THERE IS CROSS REFERENCE TO PROPERTY, RESIDENTIAL BUT NO ENTRY FOR IT

Public Access System — An electronic database, accessible to everyone, that provides the public with a searchable repository of information related to local property assessment.

Public Good — A good/service that is made available to all members of a society.

Public Interest Value — Classes of properties, primarily government-owned or public-oriented, for which the economic considerations underlying highest and best use analysis are different, because these properties are built or acquired for reasons other than economic return.

Public Land Survey System (PLSS) — A rectangular survey system established in the United States by the Land Ordinance of 1785. The basic survey unit is the six-square-mile township. Townships are located by baselines and meridians parallel to latitude and longitude lines; they are defined by range lines running parallel (north-south) to meridians and township lines running parallel (east-west) to baselines.

Public Policy — Any purposeful course of action by governmental bodies, whether successful or unsuccessful and whether implementable or not.

Public Restrictions — Governmental restrictions that place limitations on the bundle of rights, including taxation, eminent domain, police power, and escheat.

Purchase Money Mortgage — A mortgage given by the buyer to the seller or other lender to enable the purchase transaction. With this mortgage, a buyer can finance all or much of a property's cost by arranging for the seller to accept a purchase money mortgage as part of the purchase price.

Q

Qualified Sale — A property transfer that satisfies the conditions of a valid sale and meets all other technical criteria for inclusion in a ratio study sample. If a property has undergone significant changes in physical characteristics, use, or condition in the period between the assessment date and sale date, it would not technically qualify for use in ratio study.

Qualitative Data — Non-numerical information that is subjective in nature. For example, view, fire protection, quality, or site/location.

Qualitative Variable — Non-numeric variable that is subjective in nature. It describes an amenity such as view, fire protection, quality, or site/location.

Quality Class — A classification of a structure by an appraiser, intended to describe materials used, workmanship, architectural attractiveness, functional design, and the like. Quality class, or its synonym "grade," is the key variable in most cost schedules. See *Classification*.

Quality Control — The activities involved in ensuring that data accuracy standards are achieved and maintained.

Quantitative Data — Pertaining to the objective nature of some variable of interest, that is, something that can be measured or counted with little ambiguity. For example, number of bathrooms is a quantitative variable.

Quantitative Variable — See *Quantitative Data.*

Quantity Survey Method — A method of estimating reproduction cost in which a complete itemization is made of all labor and material costs by component and subcomponent and all indirect costs; these are added to obtain an estimate of the cost of a structure or a reasonable bid for a contractor to submit on a proposed project.

Quarter Section — A subdivision of a section containing 160 acres more or less, described by referencing the center point in the section, that is, the NE + is north and east of the center point.

Quartiles — The values that divide a set of data into four equal parts when the data are arrayed in ascending order. The first quartile includes the lowest quarter of the data; the second quartile, the second lowest quarter, and so forth.

Quiet Title — An action at law to remove an adverse claim or cloud on the title of property.

Quitclaim Deed — A deed in which the grantor conveys or relinquishes all interests that he or she may have in a property, without warrant as to the extent or validity of such interests. See *Deed.*

Quotient Transformation — A transformation of two or more variables accomplished by dividing one by the other. For example, the length of a room is a quotient transformation of its area and its width. Like the multiplicative transformation, many useful quotient transformations are less intuitively obvious than the one in the example given.

R

Radar, Side-Looking — A form of radar mounted on aircraft in which the beam is pointed, either by scanning or by shaping, in a direction perpendicular to the longitudinal axis of the aircraft so that the returned signals come from a long, narrow strip of ground approximately parallel to the airplane's line of flight. The ground is mapped as a set of adjacent, overlapping strips.

Radar, Synthetic-Aperture — A radar containing a moving or scanning antenna; the signals received are combined to produce a signal equivalent to that which would have been received by a larger, stationary antenna.

Radiation — Process by which electromagnetic energy is propagated through free space by virtue of joint undulatory variations in the electric and magnetic fields in space.

Radon — Radioactive gas that may enter structures from beneath the ground level and contaminate the air within.

Random Sample — A sample for which each item of the population has an equal chance of being included and, by extension, each possible combination of n items (number of items) has an equal chance of occurrence.

Range — 1) The maximum value of a data set (sample), minus the minimum value; and 2) The difference between the maximum and minimum values (that) a variable may assume.

Range Line — One of a series of survey lines running due north and south at six — mile intervals, used for locating parcels of land under government survey. See *Meridian, Principal.* Contrast *Township Line.*

Rank — 1) The position of an item relative to others in a set ordered according to the value of each member of the set in relation to the others; and 2) The act of ordering the members of a set according to the value of each member in relation to the others. For example, the numbers 0.95, 0.87, 1.09, and 0.83 have ranks of 3, 2, 4, 1.

Raster Image — An image represented by a series of lines and samples. A format for storing, processing, and displaying digital graphic data in which graphic images are stored as values for uniform grid cells or pixels.

Ratable Property (Rateable) — See *Property, Ratable (or Rateable).*

Rate, Capitalization — See *Capitalization Rate.*

Rate, Discount — See *Discount Rate.*

Rate, Mill — See *Millage.*

Rate, Tax — See *Tax Rate.*

Rate Base — Under perfect regulation, the dollar amount on which a return is allowed as established by a regulatory agency.

Rate-Driven Levy — The property tax rate to be applied is specified in the budget or tax levy ordinance of a taxing jurisdiction, rather than the situation in which the total revenue to be raised is specified and the rate is calculated.

Rate of Return — See *Discount Rate.*

Ratio, Assessment — See *Appraisal Ratio.*

Ratio, Occupancy — See *Occupancy Ratio.*

Ratio Study — A statistical study of the relationship between appraised or assessed values and market values; based on an analysis of the ratio derived by dividing the appraised or assessed values of property by the market values of such property. Sale prices or independent appraisals are used as proxies for market values.

Raw Materials — A type of inventory used in a manufacturing process but may include some synthetics. This type of inventory, which can be converted into a new and more useful product, also as personal property, is usually located at the manufacturing level of trade.

RCN — See *Replacement Cost New* and *Reproduction Cost New.*

RCNLD — Replacement/reproduction cost new less depreciation or reproduction cost new less depreciation. See *Depreciation, Replacement Cost New*, and *Reproduction Cost New.*

Real Estate — The physical parcel of land and all improvements permanently attached. Compare *Real Property*.

Real Estate Investment Trust (REIT) — Combines capital from many investors to acquire or finance real estate through formation of a corporation whose shares are traded in a market.

Real Estate Taxes — A levy imposed on land and buildings. It is collected by a governing body. It can extend to personal property in some jurisdictions. North America is primarily an ad valorem tax system, and the levy is imposed on the estimated value of the property. The collected funds help the government maintain services within the jurisdiction. See *Effective Tax Rate* and *Nominal Tax Rate.*

Real Estate Transfer Affidavits — In written or electronic format, these documents are an affirmed or sworn statement regarding particulars of a sale of real property, such as personal property, financing, and so on. Typically, these forms are required in states and provinces in which sales disclosure statutes have been enacted and are filed prior to recording the deed. Comprehensive affidavits may limit the number of follow-up verifications required during the sales verification process. These questionnaires are also known as Sales Verification Questionnaires.

Real Estate Transfer Documents — The various kinds of deeds whereby real property is conveyed. Compare Conveyances.

Real Property — Consists of the interests, benefits, and rights inherent in the ownership of land plus anything permanently attached to the land or legally defined as immovable; the bundle of rights with which ownership of real estate is endowed. To the extent that "real estate" commonly includes land and any permanent improvements, the two terms can be understood to have the same meaning. Also called Realty. See *Property*.

Real Time — To make images or data available for inspection simultaneously with their acquisition.

Realty — See *Real Property.*

Reappraisal — The mass appraisal of all property within an assessment jurisdiction accomplished within or at the beginning of a reappraisal cycle. A subsequent (and possibly periodic) mass appraisal of all property of a specified class or classes within an assessment jurisdiction. Factors considered may include changes in physical condition, use, or the market. Also called Reassessment or Revaluation.

Reappraisal Cycle — Time needed, taken, or permitted for a jurisdiction to reappraise all properties of a specified class or classes, as may be mandated by law or rule. See *Reappraisal*.

Rear — A deed reading "thence running to the rear of said land" does not always mean that the land extends to the rear line but may mean "toward the rear."

Reassessment — 1) A revaluation of all property of a specified class or classes within an assessment district directed upon a lawful finding that a prior assessment was too faulty to be corrected through usual procedures of review and equalization; and 2) Revaluation of all real property by assessing authorities, as distinguished from assessment on the basis of valuations most or all of which were established in a prior year. See *Reappraisal Cycle* and *Revaluation*.

Recapture, Straight-Line — The recovery of capital invested in a wasting asset in equal periodic amounts over the remaining economic life of the asset. See *Recapture Rate.*

Recapture Rate — A portion of the overall rate (Ro) or (OAR) in an income approach representing the return of the owner's investment in property. Expressed as the current year's percentage of the remaining economic life (REL). See *Remaining Economic Life.*

Receiver — One who is appointed by a court of equity as its representative to manage property owned by an insolvent debtor until the claims of creditors have been met or to manage property that is the subject of a lawsuit pending its outcome.

Reciprocal — The result obtained when 1 is divided by a given number. For example, the reciprocal of 4 is 0.25. Factors are reciprocals of rates.

Reclamation — The process of physically changing land to increase value.

Reconciliation — The final step in the valuation process wherein consideration is given to the relative strengths and weaknesses of the three approaches to value: cost, income, and sales comparison. Consideration is given to the nature of the property appraised and the quantity and quality of available data in formation of an overall opinion of value, as either a specific value or a range of value. Referred to as Correlation.

Recordation/Recording — The filing of documents affecting real property for public record, which usually requires the witnessing and notarizing of the document.

Recorded — A deed that has been filed for record in the courthouse and made a matter of public record.

Rectangular Coordinates — A land description system where boundaries are described as lines running from points on an x and y grid.

Rectangular Land Surveys — Land description systems based on permanent, uniformly sized rectangular grids that can be subdivided into smaller units of land.

Rectangular Survey System — A surveying method that uses a rectangular grid system, the basic elements of which are townships approximately six miles on each side. Each township is divided into 36 sections, nominally one mile square and containing 640 acres. Sections are further subdivided into quarter sections, and so on.

Rectification — 1) The process by which the geometry of an image area is made planimetric; and 2) The process of converting a tilted or oblique photograph to the plane of the vertical by projecting it onto a horizontal reference plane, with the angular relationship determined by the use of control points recognizable on the photograph and an accurate map.

Rectified — An aerial photograph printed by a process to remove distortion or displacement due to the tilt of the aircraft when originally exposed. See *Orthophotograph* and *Orthorectification.*

Redemption — The process by which the owner of real property sold at a tax sale buys back the property from the purchaser at an enhanced price within a specified redemption period.

Regression Analysis — A statistical learning technique useful to infer the relationship between a dependent variable and independent variables. There are numerous types of regression analysis, from simple linear regression to more complex multiple linear and nonlinear regression. See *Multiple Regression Analysis.*

Regression Coefficient — The coefficient calculated by the regression algorithm for the data supplied that, when multiplied by the value of the variable with which it is associated, will predict (for simple regression) or help to predict (for multiple regression) the value of the dependent variable. For example, in the equation, Value = $10,000 + $5,000 × number of rooms, $5,000 is a regression coefficient. A regression coefficient is the number by which a variable in an equation is multiplied. For example, in the equation MV = 10,000 + 50(X1) the variable X1 is multiplied by 50, so the regression coefficient is 50.

Regression Line — The line on a graph that represents the relationship defined by the regression coefficients. For example, the line from the relationship given in the definition of regression coefficient would cross the y-axis at the value $10,000 and would go up $5,000 for each movement of 1 to the right. This example illustrates one of the subtleties required in understanding regression analysis: In fact, there is no line, because the independent variable is not a continuous variable, but it is easier to talk about the relationship by pretending that the variable is continuous and to represent the relationship by a line rather than the more nearly correct series of vertical bars on a bar chart. Linear regression finds the straight line, specifically the least squares regression line that best represents the relationship between the independent variable and the dependent variable.

Regressive Tax System — Assessment regressivity occurs when assessment levels or effective property tax rates on low-value properties are greater than assessment levels or effective property tax rates on high-value properties.

Regressivity — See *Principle of Regression.*

Regressivity Index — See *Price-Related Differential (PRD).*

Regular Section — A one-square -mile subdivision of a township containing 640 acres.

REIT — See *Real Estate Investment Trust.*

Reject Code — A flag applied to a record indicating that it should not be used for certain purposes.

REL — See *Remaining Economic Life.*

Relationship — The phenomenon whereby knowledge of the value of one variable tells you something about the probable value of another. Relationships may be positive (an increase in the value of one variable implies an increase in the value of the other variable) or negative (a change in the value of one variable implies a change in the other direction for the value of the other variable). Independence of two variables means that there is no relationship between them.

Relative Location — Location as described by the relationship between objects.

Reliability — In a sampling process, the extent to which the process yields consistent population estimates. Ratio studies typically are based on samples. Statistics derived from these samples may be more or less likely to reflect the true condition in the population depending on the reliability of the sample. Representativeness, sample size, and sample uniformity all contribute to reliability. Formally, reliability is measured by sampling error or the width of the confidence interval at a specific confidence level relative to the central tendency measure.

Remainder — An interest in real property that does not give the right of possession until the rights of the person in possession have been terminated either by death or by lapse of time. An example is when A conveys property to B, reserving in the deed a life estate to A. A (life tenant) has the right of possession and enjoyment of the property for their lifetime, and at their death, B (remainderman) acquires this right of possession, thereby giving them the entire interest in the property. During A's lifetime, B's interest is a remainder. In cases of eminent domain, the portion of a property remaining for the property owner.

Remainderman — The person who receives property after the death of a person or persons in a life estate.

Remaining Economic Life (REL) — The estimated number of years remaining during which the improvements and personal property continue to contribute to the total property value. Often expressed as a percentage of the total economic life (REL %). See *Age, Economic Life, Effective Age,* and *Useful Life.*

Remediation — The act or process of curing or reducing contamination on real property.

Remodel — To improve a structure by changing its floor plan, functions, or characteristics.

Remote Sensing — The process of obtaining information about an object while physically separated from it. Practically, this term is used to describe the process of using sensors mounted on satellites to capture images and to observe the earth's geology, surface, and atmosphere.

Rendition — A term occasionally used synonymously with Declaration.

Rent, Economic — 1) In appraisal, the annual rent that is justified for the property on the basis of a careful study of comparable properties in the area; market rent; and 2) In economics, the payment received by an owner of something being bought or rented in excess of the minimum amount for which he or she would have sold or rented it.

Rent, Escalation Clause — A clause in an agreement that allows for an increase in rent.

Rent, Gross — The total amount received by a lessor from a lessee, without deduction for taxes, maintenance, or any other payments made by the lessor on account of the leased property. Contrast *Rent, Net.*

Rent, Ground — See *Ground Rent.*

Rent, Net — The amount remaining to the lessor out of gross rents after deducting taxes on the property, insurance, repairs, expenses of management, and any other operating and maintenance expenses payable by him or her on account of the leased property. Note: Net rent is arrived at before deduction of depreciation expenses, interest on the lessor's investment in the property, and income taxes payable by the lessor.

Rentable Area — A specified unit area of leasable space. 1) The pro rata portion of a building's space usable by tenants. It may include common areas, such as hallways, lobbies, public restrooms, and fitness facilities; and 2) Amount of space on which rent is based, calculated according to local practice.

Rental Value — The value of a property that is devoted to or available for supplying space for rent.

Repeat Sales Analysis Model — Aggregates changes in value and statistical means for properties sold more than once during a specified period in a given geographic area. For example, in a ZIP or postal code area, estimates market-level housing price changes. If an individual property has not been substantially changed since its last sale, this analysis matches each pair of sales transactions (thus the name "repeat sales"). The amount of appreciation (or depreciation) is calculated from the time of the first sale to the second and so on, providing an estimate of the overall appreciation of that local housing market during that time period. The larger the number of available sales pairs, the more statistically reliable the estimate of overall housing price trends will be. Because this analysis is based on identifying properties where more than one sale has occurred, the challenge is to identify enough observations to provide a meaningful index of housing values, while keeping to as small a geographic area as possible. A repeat sales index may also overestimate market appreciation if the data contain pairs of sales in which the second sales price reflects substantial improvements (or other alterations) made to the property after the first sale. Repeat sales indices can provide very useful valuation estimates in jurisdictions where the data are insufficient to support hedonic models. In addition, they may prove to be more accurate in tracking housing values for the houses that a hedonic model may struggle with (especially those subject to extreme positive or negative influences) when a prior sale is known on the property. See *Paired Sales Analysis*.

Repetitive Automated Valuation Model (Continuous Application AVM) — This AVM application is intended to be used repeatedly to project values for future dates without recalibration but through the addition of new sale prices and economic information.

Replacement Cost New (RCN) — The current cost of producing a building or improvement, or item of personal property with the same utility with modern materials, design, and workmanship. This cost is less than the amount indicated by the reproduction cost new method. It implies that the cost is based on a modern improvement that affords utility equivalent to that provided by the subject property.

Replacement/Reproduction Cost New Less Depreciation (RCNLD) — See *Depreciation, Replacement Cost New (RCN),* and *Reproduction Cost New (RCN).*

Replacement Reserve — An allowance in an annual operating statement for replacement of short-lived items that will not last for the remaining economic life of a property.

Report — Any communication, written or oral, of an appraisal, review, or consulting service that is transmitted to the client upon completion of an assignment.

Representative Sample — A sample of observations from a larger population of observations, such that statistics calculated from the sample can be expected to represent the characteristics of the population being studied.

Reproduction Cost New (RCN) — The cost of producing an exact replica of a building, improvement, or item of personal property using the same or similar materials, design, and workmanship. This cost involves rebuilding the subject property with an inherent faculty design, superadequacies, and inefficiencies. It is an unrealistic method for older, obsolete property due to the cost of reproduction. See *Cost Approach.*

Repurchase Agreement — A short-term financing arrangement whereby those needing funds sell securities but agree to repurchase them at a fixed price at a specified time.

Request for Proposal (RFP) — A document outlining the specifications of a project that is sent to potential vendors.

Required Rate of Return on Equity — A component of the discount rate, as it is understood from the point of view of band-of-investment analysis, and a component of the overall rate developed according to mortgage-equity analysis. See *Discount Rate.*

RES — See *Residential Evaluation Specialist.*

Resale Factor — A property's cost components pertaining to carrying charges expected to be incurred during construction and preparation for occupancy.

Resales — A parcel or item of personal property that sold in the past and has been sold again. The difference in selling price can be used to calculate a market condition adjustment. See *Market Condition Adjustment.*

Research Automated Valuation Model — General valuation tools that resemble production AVMs in design but have limited functionality. Research AVMs are used for initial testing of concepts.

Reserve — Creates some right or privilege for the grantor in the land described as granted.

Reserve, Valuation — An account to which is credited the amount of depreciation expenses, anticipated losses on bad debts, and other charges representing a downward revaluation of assets that are carried on the books at a figure making no allowance for such revaluation. Note: Valuation reserves are sometimes carried on the liabilities side of the balance sheet. Good accounting procedure, however, requires that they be carried on the assets side of the balance sheet directly after the assets to which they pertain, and that their amounts be deducted from gross book values in arriving at total sales.

Reserve Requirement — The amount, expressed as a percentage of deposits, a commercial bank that is a member of the Federal Reserve System must keep on deposit in the Federal Reserve Bank of its region.

Reserves for Replacement — Expenses that include annual charges for items that have relatively short lives (short — lived items), such as roof covering, carpets, paint, water heaters, and HVAC systems. See *Sinking Fund.*

Reserving — See *Reserve, Valuation.*

Residence — 1) A domicile; 2) A domicile at which a person is actually dwelling; and 3) A dwelling place, whether or not it constitutes a domicile (preferred). Note: Ordinarily, in the law of taxation, "residence" means "domicile" unless a contrary meaning is specified or is indicated by the context. See *Residential Property.*

Residential Evaluation Specialist (RES) — A professional designation conferred by the International Association of Assessing Officers (IAAO) recognizing professionalism and competency in the valuation of residential property for tax purposes.

Residential (Non-Farm) Multifamily — Includes each residential property that contains two or more living units, including duplexes, apartment houses, and cooperatives that are assessed as a single entity. The category encompasses street-level stores and doctors' offices in apartment buildings but excludes motels or hotels.

Residential (Non-Farm) Single-Family — Includes each detached, semi-detached, or attached house, if separately assessed and not on a farm, that is a residence for one family only. For detached houses, this would include one-family rural properties or suburban estates not used primarily for farming, and mobile homes assessed as real property. This category includes each condominium unit in a multi-unit dwelling structure, plus each condominium's share of the common area, unless the common area is separately assessed.

Residential Property — Generally includes any property that is used or designed for use by a one - to four- family dwelling in which one or more persons reside. Includes Single-Family residences, up to four multifamily units. This category includes each condominium unit in a multi-unit dwelling structure, plus each condominium owner's share of the common area. See *Property, Residential.*

Residual — The difference between an observed value and a predicted value for a dependent variable.

Residual Technique — See *Abstraction Method.*

Residual Value — The value of the property after cleanup of environmental contamination. This may be more or less than the original value, depending on counterbalancing effects of stigma and improvements to property efficiency.

Residual Value of Improvements — See *Building Residual Technique.*

Residual Value of Land — See *Land Residual Technique.*

Resolution — Fineness of detail that can be distinguished in an image, as on a video display terminal. Display resolution is the density of the pixels that compose an image. Spatial resolution is the smallest possible map feature that can be accurately displayed at a specified map scale.

Response Surface Analysis — A mass appraisal technique that involves creating value influence centers, computing variables to represent distances (or transformations thereof) from such points, and using the variables in a multiple regression or other model to capture location influences. Implementation of the technique is enhanced using a geographic information system. Some geographic information systems permit the value influence centers to be displayed and measured as a three-dimensional grid surface, the results of which can be likewise used in calibration techniques to arrive at the contribution of location based on the model specification.

Restricted-Use Value — See *Value-in-Use.*

Restriction — Any limitations on the uses or right of real property.

Revaluation — Sometimes used interchangeably with a reappraisal of property, a complete reappraisal of real property as of a specified date. See *Reappraisal* and *Reappraisal Cycle.*

Revenue — All government revenue except from government-operated public utilities, government-operated liquor stores, and for unemployment compensation, employee retirement, workers' compensation, or other government trust funds. Miscellaneous revenue is a non-tax, non-charge revenue derived from interest earnings, special assessments, sale of property, or other sources. Own-source revenue is government funding that comes only from within the jurisdiction under consideration. For local governments, this means that it excludes revenue received from federal and state intergovernmental grants; it may include taxes, current charges, and miscellaneous revenue collected by the jurisdiction. Alternatively, general revenue minus intergovernmental revenue.

Reverse Mortgage — A low-interest loan, usually for senior homeowners, that uses a home's equity as collateral. The loan amount is a percentage of the home's value determined by the age of the youngest homeowner. The loan does not have to be repaid until the last surviving homeowner permanently moves out of the property or passes away. At that time, the estate has approximately 12 months to repay the balance of the reverse mortgage or sell the home to pay off the balance. All remaining equity is inherited by the estate. The estate is not liable if the home sells for less than the balance of the reverse mortgage.

Reversion — The right of possession commencing on the termination of a particular estate. The estate or interest that will revert to, or be returned to, the grantor in a deed should restrictions be violated or the term of the conveyance end.

Reversion Factor — See *Present Worth of $1.*

Review — 1) Consideration by a board of appeals, a board of equalization, a board of review, or a court of individual, property class, or district assessments, whether for the purpose of adding omitted taxable property, removing exempt property, or equalizing the valuations placed on listed property; and 2) The act or process of critically studying a report, such as an appraisal, prepared by another.

Review, Administrative — See *Administrative Review.*

Review, Judicial — See *Judicial Review.*

Revocable Trust — A trust in which the grantor of the property held in trust retains the right to repossess the legal and equitable titles. See *Trust Deed.*

RFP — See *Request for Proposal.*

RI — See *Land Capitalization Rate.*

Right-of-Way — 1) An easement consisting of a rite of passage through the servient estate (preferred); and 2) By extension, the strip of land traversed by a railroad or public utility, whether owned by the railroad or utility company or used under easement agreement.

Rights, Property — See *Bundle of Rights.*

Rights of Survivorship — The process of descent of ownership or title to property when so stipulated in an instrument of conveyance, such as a deed.

Riparian Rights — Rights held by owners and users of land adjacent to or abutting streams, rivers, and creeks. See *Littoral Rights.*

Risk Rate — The return commensurate with the risk assumed by the investor. Risk rate is a component of the discount rate because the return on real estate is a desired return and might or might not be realized by the investor.

RMS — See *Root Mean Square.*

Rod — A land measure of 16+ feet or 25 links. Also called a "pole." A land measure, a surveyor's linear measure of 16.5 feet for 1/4 of a chain.

Roll, Assessment — See *Assessment Roll.*

Roll, Tax — See *Tax Roll.*

Root Mean Square (RMS) — The square root of the average value of the sum of the squares of the differences between values in a set and the corresponding values that have been accepted as correct or standard. Used to measure map accuracy.

Royalty — 1) A payment made periodically or at irregular intervals to the owner of a patent or copyright for the privilege of reproducing or using a patented or copyrighted article; and 2) A payment made periodically or at irregular intervals to the owner of an interest in mineral land for the privilege of exploring for, and/or mining and disposing of, mineral deposits.

S

Safe Rate — The rate obtainable with the most safety and the least risk.

Said — Refers to one previously mentioned with the same name.

Sale, Arm's-Length — See *Arm's-Length Transaction.*

Sale, Conditional — See *Conditional Sale.*

Sale, Distressed — See *Distressed Sale.*

Sale, Forced — See *Forced Sale.*

Sale, Judicial — See *Judicial Sale.*

Sale, Leaseback — See *Leaseback Sale.*

Sale, Private — See *Private Sale.*

Sale Price — See *Adjusted Sale Price.*

Sale Price-Assessment Ratio — The reciprocal of the assessment-sale price ratio. See *Assessment* and *Sale Price Ratio.*

Sale Terms — The amount of down payment, the interest on the mortgage, and information on points and other fees involved in a real estate sale. Also called Terms of Financing or F inancing Terms.

Sales Chasing — 1) The practice of using the sale of a property to trigger a reappraisal of that property at or near the selling price. Use of the Mann-Whitney test can determine whether sales chasing occurs. If sales with such appraisal adjustments are used in a ratio study, the practice causes invalid uniformity results and causes invalid appraisal level results, unless similar unsold parcels are reappraised by a method that produces an appraisal level for unsold properties equal to the appraisal level of sold properties; and 2) By extension, any practice that causes the analyzed sample to misrepresent the assessment performance for the entire population as a result of acts by the assessor's office. A subtle, possibly inadvertent, variety of sales chasing occurs when the recorded property characteristics of sold properties are differentially changed relative to unsold properties. Then the application of a uniform valuation model to all properties results in the recently sold properties being more accurately appraised than the unsold ones. See *Mann-Whitney Test.*

Sales Comparison Approach — One of three approaches to value, the sales comparison approach estimates a property's value (or some other characteristic, such as depreciation) by reference to comparable sales. The sales comparison approach compares recently sold properties to the subject property. Adjustments are made to comparable properties to reflect the characteristics of the subject property.

Sales Data — 1) Information about the nature of the transaction, the sale price, and the characteristics of a property as of the date of sale; and 2) The elements of information needed from each property for some purpose, such as appraising properties by the direct sales comparison approach.

Sales File — A file of sales data. See *Sales Data.*

Sales Ratio/Assessment Ratio — The ratio of an appraised (or assessed) value to the sale price or adjusted sale price of a property.

Sales Ratio Study — A ratio study that uses sale prices as benchmarks for market values. A relationship between sales prices and value (market value, assessed value, equalized value), that is used to measure the level of appraisal. Used to evaluate the effectiveness of assessment practices, reappraisals, or revaluations.

Sales Tax — A tax levied as a fixed percentage on the dollar value of a broad category of retail purchases.

Sales Verification Questionnaire — In written or electronic format, these documents are an affirmed or sworn statement regarding particulars of a sale of real property, such as the inclusion of personal property, favorable financing, etc. These forms assist the assessing officer in sales validation for property valuation.

Salience — In the economics of taxation, salience refers to the visibility of the tax in question and how this visibility affects behavior.

Salvage Value — The value that badly depreciated improvements, machines, or equipment would have if dismantled and sold in separate parts or pieces; the value of an asset at the end of its economic life.

Sample — A subset containing the characteristics of a larger population. A sample should represent the population as a whole and not reflect any bias toward a specific attribute. In order to achieve an unbiased sample, the selection must be random so each item from the population has an equal chance of inclusion in the sample group.

Sampling Error — A statistical error from a sample that does not represent the population.

Sandwich Lease — See *Lease, Sandwich.*

Saturation — Vividness or intensity of hue in color theory.

Scale — The reduction ratio that characterizes a particular map. A ratio of 1:100, for example, is said to be a larger scale than 1:1,000.

Scanner — 1) An optical-mechanical imaging system in which a rotating or oscillating mirror sweeps the instantaneous field of view of the detector across the terrain; and 2) A device for capturing and digitally encoding images in computer files.

Scanning — Capturing an image using an optical or video input device that uses light-sensing technology. The process of converting paper documents (maps) to digital or computer readable raster images by placing a map original on a drum, which is rotated beneath an optical input device.

Scatter Diagram or Scatterplot — A graphic means of depicting the relationship or correlation between two variables by plotting one variable on the horizontal axis and one variable on the vertical axis. Often in ratio studies it is informative to determine how ratios are related to other variables. A variable of interest is plotted on the horizontal axis, and ratios are plotted on the vertical axis.

Screening Codes — Used to identify the source of the sales information or how the sale was verified; they are separate from the validity code.

Scene — The area on the ground that is covered by an image or photograph.

Schedules — Tables, equations, or some other means of presenting the relationship between the values of two or more variables that are functionally related. For example, cost schedules present the relationship between cost per square foot and living area for a number of quality classes, building heights, and other characteristics.

School Aid Equalization — A system of state revenue sharing to local schools based on guaranteeing that each school district has the same property tax base per student on which to levy local property taxes to fund per — student expenditure on public education.

Scrap Value — See *Salvage Value.*

Sealed Bid — Method of marketing property in which each bidder (buyer) is given just one chance to submit a bid in a sealed envelope, without knowing other bid amounts. All such bids are opened at one time. The seller may set a minimum bid.

Searcher — Known as an Abstractor. See *Abstractor.*

Second — One sixtieth of a minute of the circumference of a circle.

Secondary Mortgage Market — A market in which the originator of a mortgage, such as a local savings bank, may sell it to another investor, such as a pension fund.

Section — A unit of land approximately one mile square and normally containing 640 acres, as laid out by the government survey.

SEE — See *Standard Error of the Estimate.*

Seisin — The acquiring of the right of possession of real property via a transfer of title to a freehold estate.

Selection Bias — Occurs when the procedures used to select observations included in a sample produce a result that is different from what would have been obtained if all members of the population were included in the study. For example, using all available sales as a sample in a valuation study may not represent accurately the larger population from which the sample is selected.

Self-Assessment — The assessment process or portion of the assessment process that requires the property owner to file a return, statement, rendition, or some authorized disclosure on which to compute the tax liability, which is accepted as filed to the assessing officer, as a matter of law or practice.

Seller — A vendor, or person who sells or contracts to sell goods. In real property sales the seller is the grantor who transfers property by deed or grants property rights through a trust instrument or other document.

Seller Financing — A sale in which the seller provides financing to the buyer, typically with a higher rate of interest than market and a lower sale price or a lower rate of interest than market with a higher sale price. Sales should be adjusted to determine market value.

Sensor — Any device that gathers energy (electromagnetic radiation or other), converts it into a signal, and presents it in a form suitable for obtaining information about the environment.

Service-Hours Method — A valuation method to estimate depreciation of fixed assets that assumes that the useful life of a machine or piece of equipment can be estimated in terms of the number of service hours it can work for.

Service Life — The period (or service) for an asset from the date of its installation to the date of its retirement from service.

Settlement — The official resolution of a conflict through agreed-upon terms.

Settlor — One who transfers to a trustee title to property that constitutes the trust estate.

Severance — The division of one parcel into two separately conveyable parcels of land.

Severance Tax — A tax imposed on the privilege or act of removing or severing specified natural resources, such as minerals or timber, from a state of nature. Note: Such a tax may be measured by gross or net proceeds or by units of production, and may be in lieu of, or in addition to, a property tax on the severed or remaining natural resources.

Shore — The land lying between the high-water and low-water marks.

Short-Lived Items — Items of a structure that have a shorter life than the basic structure. For example, roofing, water heaters, floor covering, and interior finish.

Short Sale — A sale in which the lien holder agrees to accept a payoff for less than the outstanding balance of the mortgage or loan.

Significance Level — A measure of the probability that an event is attributable to a relationship rather than merely the result of chance.

Single Property Appraisal — Systematic appraisal of properties one at a time. Commonly referred to as a fee appraisal or bank appraisal, which normally determines a value of a particular property as of a given date. Differs from mass appraisal, which systematically appraises groups of properties as of a given date using standardized procedures and statistical testing.

Sinking Fund — A real or accounting fund or pool of money into which deposits are periodically made; these deposits, together with the compound interest they earn, are projected to accumulate to a given amount on a given date. Some sinking funds are dedicated to a particular purpose, such as replacing a heating system; others are simply convenient ways of thinking about flows of money.

Sinking-Fund Capitalization — A way of calculating the recapture rate in the income approach. It assumes that an investor will deposit recapture income in an interest-bearing account and will thus, in effect, accelerate recapture. To use it, an appraiser goes to a compound interest table to locate the interest rate the investor would probably get and looks down the column of sinking-fund factors to the number of years equal to remaining economic life of the improvements. Adding the sinking-fund factor to the discount rate gives the recapture rate.

Sinking-Fund Factor — The amount that must be periodically set aside to accumulate with compound interest to $1 at the end of a specified number of years and at a specified interest rate. The Sinking-Fund factor is sometimes known (in connection with annuity capitalization) as the Capital Recovery Rate.

Sinking-Fund Method — See *Sinking Fund.*

Sinking-Fund Method Annuity Premise — Assumes that the interest rate on a sinking fund is equal to the investor's discount rate.

Site — The location of a person, thing, or event.

Site Amenities — The specific location-related positive attributes of a property: topography, utilities, street traffic, view, and so on.

Site Analysis — A study that determines the suitability of a specific parcel of land for a specific purpose.

Site Characteristics — 1) Characteristics of data that describe a particular property, especially land size, shape, topography, and drainage, as opposed to location and external economic forces; and 2) By extension, any characteristics of the site or the improvement.

Site Development — Improvements made to a land site (for example, grading, utility installation, roadways, and curbs) before a building is constructed.

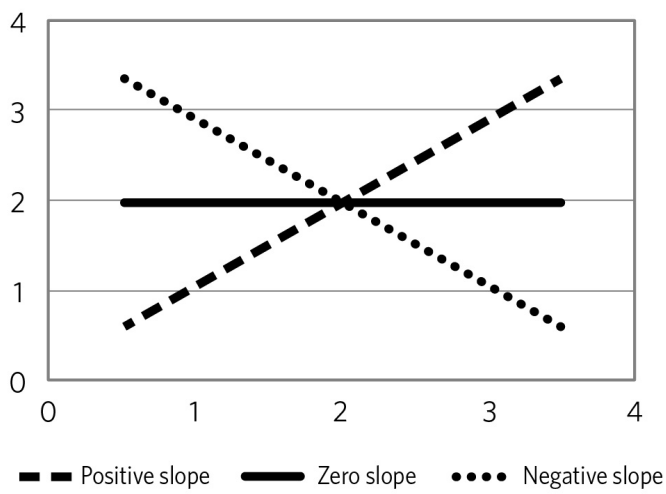
Situs — The actual or assumed location of a property for purposes of taxation. In personal property, situs may be the physical location of the property or, in the instance of highly mobile property, the more or less permanent location of the property owner.

Situs, Constructive — The tax situs established by reasonable rules of law or practice for intangible property or for tangibles when they are not continuously within a given tax district for the full assessment year. For example, a constructive situs is established for freight cars by allocating to a tax district a fraction of the total number of cars owned equal to the ratio of car miles operated within the district to the total number of car miles operated within and without the district.

Situs, Tax — The place at which property is legally taxable; that is, the jurisdiction within which property actually lies or is said to lie for tax purposes.

Skewed — The quality of a frequency distribution that makes it asymmetrical. Distributions with longer tails on the right than on the left are said to be skewed to the right or to be positively skewed; distributions with longer tails to the left are said to be skewed to the left or to be negatively skewed.

Slope — A measure of the steepness of a line. A positive slope is indicated by a line going up moving from left to right along the x-axis. A negative slope is indicated by a line going down moving from left to right. When the line is horizontal, the slope is zero. A line with zero slope is parallel to the x-axis.



Slope Rights — Adjacent to highways, the right to extend fills or cuts beyond the sidelines of the road easement as dedicated.

Soft Cost — See *Indirect Costs.*

Software — 1) Computer programs; and 2) Those parts of a computer system that are not machinery or circuits; thus, procedures and possibly documentation are included along with programs. Often considered an intangible for personal property valuation. See *Intangible Personal Property.*

Solar Panels — Devices containing solar cells that are used to absorb the sun's rays and convert them into electricity or heat.

Sole Proprietorship — A business enterprise net worth that belongs entirely to one individual.

Sonar — An apparatus that detects the presence of, or determines the distance or direction of, an object underwater by receiving and interpreting sound from the object.

Span of Control — The number of employees supervised by each manager.

Spatial — The location of, proximity to, or orientation of objects with respect to one another in N-dimensional space. Generally, refers to phenomena that can be mapped in two or three dimensions on or near the earth's surface.

Spatial Data Analysis — The study of the relationship between location-related data and property data, including property characteristics, market data, estimated values, and sales ratios.

Spatial Resolution — 1) The ability of an entire remote sensor system, including lens, antennas, display, exposure, processing, and other factors, to render a sharply defined image; and 2) A measure of the smallest angular or linear separation between two objects that can be resolved by the sensor.

Spearman Rank Test — Tests the association between two ranked variables. Specifically, as the value of one variable increases, does the other variable tend to increase or decrease? This is a standard nonparametric test useful in examining assessment bias.

Special Assessment Area — A geographic area where additional funds are collected to provide services in a municipality. Also known as Special Rate Area.

Special Property Tax — A tax that applies to a single class of property (for example, oil and gas properties, motor vehicles) and differs substantially in one or more respects from the general property tax. Note: Such difference may be in the base of the tax (for example, it may consist of gross earnings instead of property values), in the rate, or in important administrative aspects. Compare *General Property Tax*.

Special Tax — 1) In general, an unusual, extraordinary, or unique tax; and 2) Specifically, as applied to property taxes, a) a property tax that is levied in addition to the levying of the regular annual property tax; and b) a property tax levied for a single purpose rather than for the general purposes of government.

Special-Use Properties — Properties that have a very specific use and might be appropriate for only one or a very limited number of uses.

Special Warranty Deed — A deed in which the grantor only covenants to warrant and defend the title against claims and demands of the grantor and all persons claiming by, through, and under him or her.

Specific Data — A category of data that consists principally of site and improvement data.

Specific Tax — A tax in which the base is a physical, rather than a value unit; for example, a head tax, gallon tax, or age tax.

Specifications — A written, detailed, drawing that shows a contractor how to proceed with construction.

Spectral Band — An interval in the electromagnetic spectrum defined by two wavelengths or frequencies.

Spectral Reflectance — The reflectance of electromagnetic energy at specified wavelength intervals.

Spectral Resolution — The dimension and number of specific wavelength intervals in the electromagnetic spectrum to which a sensor is sensitive.

Spheroid — 1) Any surface differing only slightly from a sphere; and 2) By extension, a surface close to the geoid or approximating the geoid.

Spiral — A variable radius curve that gradually changes into a straight line.

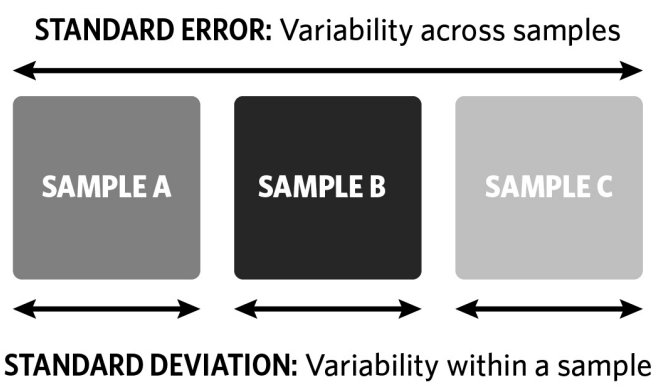
Split — See *Land Division.*

Square Foot — A unit of area equal to 12 inches (a square one foot) in length on each side.

Standard Depth — The depth of a standard lot either arbitrarily or because it is representative of the majority of lots within a given area.

Standard Deviation — The statistic calculated from a set of numbers by subtracting the mean from each value and squaring the remainders, adding together all the squares, dividing by the size of the sample less one, and taking the square root of the result. When the data are normally distributed, one can calculate the percentage of observations within any number of standard deviations of the mean from normal probability tables. When the data are not normally distributed, the standard deviation is less meaningful, and one should proceed cautiously.

Standard Error — A common measure of sampling error. The difference between a population parameter and a sample statistic. The standard error of the mean is an estimate of the precision of the sample mean. While the standard error of the mean is the most common type of standard error, standard errors are calculated for other statistics as well. The standard deviation is a descriptive statistic that can be calculated from sample data. In contrast, the standard error is an inferential statistic that can only be estimated, unless the real population parameter is known.



Standard Error of the Estimate (SEE) — A measure of the accuracy of predictions made in a regression model. For a regression model with a small standard error of the estimate, the data points (predictions) are close to, if not on, the estimated regression line.

Standard Lot — See *Lot, Standard.*

Standard Parallels — The east-west axes on a map that are counted north and south of the baseline.

Standardize — 1) To transform a variable to standard form; that is, to make the mean of the frequency distribution equal to zero and the standard deviation equal to one; and 2) To adjust, for appraisal purposes, reported data such as income and expenses to remove the effects of non-real estate factors, such as abnormally good or bad management, weather, and the like. The more common term for this adjustment process is Normalization.

State Assessed Property — That property for which the assessed value is set by a state agency, either for taxation by the local jurisdiction affected or for state taxation. Most often, this term applies to utility property or property with special characteristics where the state preempts local authority to achieve uniformity in assessments.

State Plane Coordinate System — 1) One of the plane rectangular coordinate systems for each state in the United States, established by the United States Coast and Geodetic Survey in 1933 for use in defining locations of geodetic stations in terms of plane — rectangular Cartesian coordinates. State plane coordinate systems have been established for all 50 states, and within each state there are one or more separate projections of areas known as zones. The boundaries of state plane coordinate zones are coterminous with county and state boundaries, an administrative advantage in that counties are never required to use more than one state plane coordinate zone; and 2) A mathematical projection of the curved surface of the earth on a flat surface over which a coordinate grid expressed in feet is laid.

State Plane Coordinates — 1) Geographic coordinates based on the state plane coordinate system; and 2) A series of grid coordinate systems prepared by the U.S. Coast and Geodetic Survey for the entire United States, with a separate system for each state. Each state system consists of one or more zones. See *State Plane Coordinate System.*

State Property Tax Tribunal — A quasi-judicial administrative review agency organized to separate the state's review and appeal responsibilities from its administrative and equalization functions.

Stationary Property — Property that is more or less permanently located at a business premise.

Statistical Accuracy — The closeness between the statistical estimate and the true (but unknown) population parameter value it was designed to measure. It is usually characterized in terms of error or the potential significance of error and can be decomposed into sampling error and non-sampling error components. Accuracy can be specified by the level of confidence selected for a statistical test.

Statistical Precision — How close estimates from different samples are to each other. For example, the standard error is a measure of precision. When the standard error is small, estimates from different samples will be close in value. Precision is inversely related to standard error. When the standard error is small, sample estimates are more precise; when the standard error is large, sample estimates are less precise.

Statistics — Numerical descriptions calculated from a sample; for example, the median, mean, or coefficient of dispersion. Statistics are used to estimate corresponding measures, termed parameters, for the population.

Statute — A law enacted by a legislative body (Congress or a statehouse in the US); can also be referred to as an act.

Step-Up/Step-Down Lease — A lease that calls for set increases or decreases in rent at specified intervals.

Stepwise Regression Analysis — A technique for selecting the most appropriate independent variables for building a regression model. Stepwise regression is a combination of two other variable selection techniques: forward and backward selection. Stepwise regression is a modification of the forward selection so that after each step in which a variable is added, all candidate variables in the model are checked to see if their significance has been reduced below the specified tolerance level. If a nonsignificant variable is found, it is removed from the model. Stepwise regression requires two significance levels: one for adding variables, and one for removing variables.

Stereoscope — An instrument that uses a stereoscopic pair of images to produce a visual effect of depth or solidity, numerical data, or topographic maps showing depth (height).

Stereoscopic Coverage — Aerial photography taken with sufficient overlap to permit complete stereoscopic observation. Sixty percent forward overlap between frames is usually recommended for adequate stereoscopic coverage.

Stereoscopic Pair — Two photographs of the same area taken from different camera stations in order to afford stereoscopic study of the overlap area. Also called Stereo Pair.

Stigma — A perception that a property continues to be contaminated even though it has been cleaned up. Stigma may affect property value.

Stock — Share of a company.

Stock, Capital — The book value of the outstanding shares of a corporation; the capital stock represents the permanently invested capital of the corporation that cannot legally be impaired by payment of ordinary dividends.

Stock, Common — Corporation stock that has a residual claim on net profits and assets, on dissolution of the corporation, after satisfaction of the claims of all creditors and of the preferred stockholders, if any, or stock that is subordinate in any other respect to a second issue of stock by the same corporation.

Stock, Preferred — 1) In general, corporation stock that has preference in any request over the common stock; and 2) Specifically, corporation stock on which a dividend must be declared at a specified rate per share before any is declared on common stock, and on which liquidation dividends must be paid to the full-face value of the stock before any such dividends are paid on common stock. Note: If the preferred stock is cumulative, dividends that are passed or paid in an amount less than the specified rate per share must be paid in full before a dividend may be declared on common stock in any subsequent year; if it is noncumulative, dividends passed in whole or in part in one year need not be paid in a subsequent year before declaration of dividend on common stock. Participating preferred stock shares in any additional dividends after payment at specified rates on both preferred and common stocks.

Stock and Debt Technique — A method of appraisal in which the liabilities and equity on a company's balance sheet are valued to yield a value for the operating assets (after non-operating properties are deducted). A substitute for the sales comparison approach when sales are insufficient, as the total value of the various interest positions (taken from stock and bond sale prices in the daily newspaper or elsewhere) when summed provides a relatively objective indication of market value.

Stock in Trade — Refers to merchandise items; 1) On display; 2) In easy-access storage; 3) Being received; or 4) Being prepared for shipment.

Straight Mortgage — A mortgage that has a short term, usually about three years. It has no requirement for amortization (the process of extinguishing debt or recovering a capital investment through periodic repayments of principal); requires level interest payments, usually monthly or quarterly; and requires that the entire unpaid principal and interest balance be paid at maturity. This last requirement is known as a balloon payment, which is the balance due on a note at the end of the loan term in excess of the regular payment amounts.

Straight-Line Annuity — An income stream that increases or decreases by a fixed amount per period.

Straight-Line Capitalization — A means of estimating value whereby net operating income is divided by a capitalization rate composed of the discount rate, the reciprocal of remaining economic life as the recapture rate, and sometimes the effective tax rate. The method implicitly assumes that net operating income will decline by an equal dollar amount each year.

Straight-Line Depreciation — Fixed rate of depreciation that occurs through the economic life range of a property. A method of writing off the cost of a property over the period of its expected economic life by means of equal annual charges, the sum of which is equal to the original cost of the property less any anticipated scrap value at the end of its expected economic life.

Straight-Line Method — A method of amortizing investments and other sources of cash flow so that equal amounts are attributed to each of several equal intervals of time.

Strata Plan — Strata housing includes properties that are vertical housing similar to apartments, but can be duplexes, townhouses, and fractional vacation properties. The strata corporation is self-governing and has its own by-laws and rules.

Strategic Plan — A broad-scale plan for accomplishing multiple objectives affecting events several years in the future. These plans typically cover a period of five years or more.

Stratification — The division of a sample of observations into two or more subsets according to some criterion or set of criteria. Such a division may be made to analyze disparate property types, locations, or characteristics, for example.

Stratify — To divide, for purposes of analysis, a sample of observations into two or more subsets according to some criterion or set of criteria

Stratum, Strata — Class or subset that results from stratification.

Stream Mode — A method of converting manual data to digital data that consists of an automatic vertex input at set intervals.

Structure — A man-made improvement, inherently permanent and affixed in place on a specific geographical area. Structures can take various forms, such as buildings, bridges, dams, transmission towers, in — ground pools, drilling platforms, and stationary wharves and docks.

Stumpage — The amount of timber "on the stump."

Stumpage Value — The value of uncut timber.

Subclass — See *Subset*.

Subdivision — A tract of land divided, by means of a map, into lots or lots and blocks for the purpose of resale, generally for residential or agricultural purpose. To be valid, in most jurisdictions a subdivision plat usually must be approved by the local municipality and then recorded (registered) in a county recorder (registrars) office.

Subject Property — The property being appraised.

Subject To — A phrase that identifies rights and/or obligations affecting property, i.e. "subject to an easement."

Subjective — Having the quality of requiring judgment in arriving at an appropriate answer or value for a variable (such as the quality class of a structure). Collected or obtained through personal interactions or observation.

Subjective Data — Items for which the proper value is a matter of informed judgment and more difficult to verify. Examples include construction class, condition, effective year built, neighborhood desirability, and view. The information collected that is dependent on judgment in arriving at an appropriate value for a variable. See *Subjective*.

Sublease — A scenario in which a tenant transfers its rights under a lease to another party known as the subtenant.

Subpoena Duces Tecum — A subpoena requiring the person served therewith to appear at the appointed place or before the designated tribunal with those documents or other things called for in the subpoena.

Subset — A group of properties within a sample, smaller than the sample, usually although not necessarily defined by stratification rather than by sampling.

Subsidiarity — A principle of government organization that holds that decisions should be made at the level of government closest to where they will have their effect, such as by a local government instead of a state or central government. The aim is to make government more responsive to citizens' needs and to make it easier for citizens to hold government accountable.

Substitute Goods — A product or good that can be used in place of another with equally suitable use and quality. Increase in consumption of one product or good decreases the consumption of the other product or good.

Substitution — See *Principle of Substitution.*

Succession — The conveyance of real property by inheritance or will.

Sum of Squared Errors — The sum of the squared deviations from the predicted values (rather than the mean value).

Sum of Squares — The result obtained by adding all the squares of the individual deviations from some given value. Usually, it is the sum of the squares of the deviations of the individual values of a variable from the mean value.

Sum of the Years' Digits — The method of accounting for depreciation in which a percentage of depreciable cost is allocated to each year, which percentage is equal to the number of years of remaining economic life divided by the sum of the digits for each year in the total economic life.

Summation Approach — See *Cost Approach.*

Sunset Provision — A provision within a statute creating a law or agency providing for the automatic termination of that law or agency at a fixed date in the future.

Superadequacy — A feature of a property exceeding in quality or amount the corresponding feature in a typical property of the same use. Superinsulation is one example. Superadequacies fall into the larger category of functional obsolescence. See *Functional Obsolescence.*

Superpositioning — The capability of overlaying, normally an aerial image and a line map, for the purpose of data collection or data maintenance.

Supplies — A type of inventory of goods intend to be consumed during business operations. May be part of a manufacturing process but is not part of the raw materials inventory. Includes items such as paper, chemicals, pallets, and other consumable items that are not held for resale.

Supply — The amount of a good or service that would be offered for sale at various prices during a given period.

Supply and Demand — See *Principle of Supply and Demand.*

Surplus, Corporate — 1) Broadly, the equity of the stockholders in the assets of a corporation in excess of that represented by the capital stock; 2) More narrowly, the equity of the stockholders in the assets of a corporation in excess of that represented by the capital stock, undivided profits, and reserves; and 3) Sometimes erroneously used to refer to the assets that are assumed to represent such equity.

Surplus Productivity — See *Principle of Surplus Productivity.*

Surplus Value — The value of a commodity over and above the quantity of labor required to produce it.

Survey, Control — A survey that provides coordinates (horizontal or vertical) of points to which supplementary surveys are adjusted.

Survey, First-Order — A geodetic survey of the highest prescribed order of precision and accuracy.

Survey, Geodetic — A survey that considers the size and shape of the earth (as distinguished from a plane survey, in which the surface of the earth is considered a plane).

Survey, Government — See *Government Rectangular Survey System.*

Surveying — The science and art of making measurements of distance and direction necessary to determine the relative position of points on, above, or beneath the surface of the earth or to establish such points. The act or operation of making measurements for determining the relative positions of points on, above, or beneath the earth's surface; also, the results of such operations; also, an organization for making surveys. Examples include: 1) Photogrammetric survey — A method that uses either ground photographs or aerial photographs; 2) Aerial survey — A survey using aerial photographs; 3) Ground survey — A survey made by ground methods, as distinguished from an aerial survey. A ground survey may or may not include the use of photographs.

Surveying, Plane — Surveying done under the assumption that the surface of the earth is flat.

Survivor Curve — In depreciation analysis, a method of estimating the probable service life of unit properties and the probable average service life of group properties based on experience; indicates the percentage of the property or asset (in physical units or dollars) that survives at ages (usually in years) from zero to maximum life. See *Iowa Type Curve.*

Sweat Equity — Anything done to a property that doesn't necessarily have a cash value attached to it.

Synoptic View — The ability to see or measure large areas at the same time and under the same conditions (that is, the overall view of a large portion of the earth's surface that can be obtained from satellite altitudes).

System — 1) Structured organization of people, theory, methods, and equipment to carry out an assigned set of tasks; 2) The property operated as an integral unit under one control, management, or operating supervision; and 3) An integrated group of assets that may be related entities or may be property elements such as machinery, buildings, land, and other property used in the performance of services or manufacture of products.

Systematic Maintenance — Maintenance activity that results from real estate transactions, deeds, wills, and subdivision plats.

Systems Approach — An approach to management theory that views the principal function of the manager to be to create an open organizational system with appropriate informal and formal feedback mechanisms, such that the major subsystems work well together, and the organization can exhibit growth, stability, and equilibrium in the face of environmental changes.

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Table, Depth — A table used in appraisal showing percentages of the variation of land value based on the depth of the specific parcel.

Tangent — A tangent to a curve is a line that touches the curve at one point and is also at right angles to the radial line at the point of contact with the curve.

Tangible Personal Property — Includes most movable items, but can include sales tax, freight, installation costs, and all other costs required to place the item into service. See *Personal Property.*

Task Force — A kind of organizational unit, usually temporary, composed of employees from different functional areas whose assignment is usually some kind of non-routine task, such as assisting in a system development effort.

Tax — A compulsory charge levied by a government unit against the income or property of a person, natural or corporate, for the common benefit of all citizens. The term does not include specific charges made against particular persons or property for current or permanent benefits and privileges accruing only to those paying such charges, such as licenses, permits, and specific assessments.

Tax, Ad Valorem — See *Ad Valorem Tax.*

Tax, Classified Property System — See *Classified Property Tax System.*

Tax, Degressive — See *Degressive Tax.*

Tax, General Property — See *General Property Tax.*

Tax, Graduated — See *Graduated Tax.*

Tax, Indirect — See *Indirect Tax.*

Tax, Land Value — See *Land Value Tax.*

Tax, Net Worth — See *Net Worth Tax.*

Tax, Progressive — See *Progressive Tax.*

Tax, Property — See *Property Tax.*

Tax, Proportional — See *Proportional Tax.*

Tax, Recordation/Recording — See *Recordation/Recording.*

Tax, Regressive — See *Regressive Tax System.*

Tax, Severance — See *Severance Tax.*

Tax, Special — See *Special Tax.*

Tax, Special Property — See *Special Property Tax.*

Tax, Specific — See *Specific Tax.*

Tax, Transfer — See *Transfer Tax.*

Tax, Value Increment — See *Value Increment Tax.*

Tax, Windfall — See *Windfall Tax.*

Tax and Expenditure Limitations (TELs) — Statutory and constitutional limitations imposed by states on local fiscal autonomy. TELs are designed ostensibly to: 1) Control and reduce property taxes; 2) Control the growth of government and public spending; and 3) Improve fiscal accountability. The six basic types of TELs are overall property tax rate limits, specific property tax rate limits, property tax levy limits, limits on general revenue or expenditure increases, limits on assessment increases, and truth-in-taxation (full disclosure) requirements.

Tax Base — The aggregate of the values or units to which the tax rate or rates are applied to determine the tax liability of a person or a group of persons. Compare Object of Tax.

Tax Burden — Economic costs or losses resulting from the imposition of a tax. Burden can be determined only by detailed analysis of all economic changes resulting from the tax. In popular usage, the term often refers to the initial incidence rather than to ultimate economic costs.

Tax Calendar — Reflects the process and dates for the completion of an assessment roll and property tax levy for one year in chronological order.

Tax Capacity — The amount of tax that would be collected using an overall average tax rate. For example, for the tax capacity of a particular state, the overall amount raised nationally by the tax would be divided by total personal income (or population). The resulting national average tax rate would then be multiplied by the total personal income (or population) of the state to determine the tax capacity of that state.

Tax Deed — A deed by which title to real property sold to discharge delinquent taxes is transferred by a tax collector or other authorized officer of the law to the purchaser at a tax sale.

Tax District — 1) In general, a state or any political subdivision thereof having or exercising the power to levy taxes; and 2) As applied to property taxes, any area, whether coterminous with or within a state or a political subdivision thereof, within which the tax rate levied by such state or political subdivision is required by law to be uniform on properties of the same class.

Tax Incidence — The distribution of a tax on natural persons who bear the tax after the completion of the process of tax shifting, to be distinguished from the distribution of the tax on the persons, natural or legal, who pay it in the first instance.

Tax Incidence Analysis — Economic analysis that compares the way different taxes affect the distribution of income; requires analysis of the impact of taxes on the market for the taxed item and the market for all factors (land, labor, and capital) used in producing the taxed item.

Tax Increment Bonds — Debt instruments that governments may issue to allow them to pay for projects in a reinvestment zone. Tax revenues pay off the bonds.

Tax Increment Financing (TIF) — The idea that property taxes or other revenue resulting from the increase in a tax base (for example, property values or retail sales) in a specific area can be used to repay the costs of investment in that area. Funds may be invested in various programs such as public infrastructure improvements or land write-down subsidies to private investors.

Tax Levy — 1) The act by which a legislative body fixes either the amount of taxes to be placed in collection or the rate to be applied to a predefined tax base; or 2) The amount of taxes authorized to be placed in collection by a competent legislative body.

Tax Policy — Any purposeful course of action by governmental bodies that affects or determines the way taxes are created, levied, collected, or spent.

Tax Policy Analysis — The process of gathering and interpreting economic data to provide information that can be used by policymakers to formulate tax policy.

Tax Rate — 1) The amount of tax stated in terms of a unit of the tax base; for example, 30 mills per dollar, 2 percent, 2 cents per gallon; and 2) For property tax, the percentage of assessed value at which each property is taxed in a given district. Distinguish between *Effective Tax Rate* and *Nominal Tax Rate*.

Tax Roll — An official list showing the amount of taxes charged against each taxpayer and/or each property within the jurisdiction of a tax district. Note: In property taxation, the tax roll is sometimes combined with the assessment roll into a single document.

Tax Rollback — A tax rollback results in assessment of back taxes on land that was previously taxed according to Special-Use value. When land no longer qualifies for use valuation, the taxing unit assesses taxes for a number of years as specified by statute. The additional tax is the difference between the amount of tax imposed and the amount that would have been imposed if the land had been appraised at (and taxed based on) full market value.

Tax Sale — Sale of a taxpayer's property by a public authority so that delinquent taxes may be collected from the proceeds; usually preceded by a period during which the taxpayer can pay delinquent taxes and followed by a period during which the taxpayer can redeem the property from the purchaser. See *Certificate of Redemption* and *Redemption*.

Tax Shifting — The act of a taxpayer in transferring a tax to another person by means of price changes. Note: A tax is said to be fully shifted when it results in price changes that maintain the taxpayer's net income at the level that would have been obtained in the absence of the tax. As long as price changes occur that forestall the reduction of net income by the full amount of the tax payment, some shifting has occurred. Shifting may be forward, as in the case of a tax on a retail concern that is shifted by increasing the retail price, or backward, as when such a tax is shifted by a reduction in the wages of employees or in wholesale prices.

Tax Warrant — A document directing a peace officer and tax collector to take as much of a person's personal property as is necessary to pay all taxes, penalties, and interest the person owes.

Taxable Value — The appraised value of property less all applicable partial exemptions or limitations on valuation increases. Property taxes are levied on taxable value.

Taxation, Double — See *Double Taxation.*

Tax-Exempt Property — Property entirely excluded from taxation because of its type or use. The most common examples are religious, charitable, educational, or governmental properties. This definition omits property for which the application of a partial exemption reduces net taxable value to zero.

Taxing Unit — Any political unit of a state that imposes property taxes. Counties, school districts, incorporated municipalities (cities), and special districts may be taxing units. See *Tax District*.

Taxpayer — A person who makes payment of property taxes for real or personal property. Generally, includes all persons liable for the payment of property tax, by law or contract.

TELs — Often used to reference Total Economic Life. See *Tax and Expenditure Limitations*.

Tenancy — The act of using or occupying property, especially real property whose fee title is vested in someone other than the occupant.

Tenancy, Joint — A state of tenancy involving two or more persons owning undivided possessory interests that have arisen out of a single conveyance, no one of the tenants being free to create interests in the estate without the consent of the others, and the surviving tenants acquiring the interest of any tenant who may die. Compare *Tenancy in Common* and *Tenancy by the Entirety*.

Tenancy by the Entirety — A state of tenancy, recognized by some states, in which the husband and wife are considered as a single person, neither one being free to create interests in the estate without the consent of the other and the survivor acquiring the whole interest upon the death of either.

Tenancy in Common — Ownership of a parcel of property by two or more persons, that each person having the right to transfer the property by will or inheritance.

Tenancy in Severalty — A state of tenancy involving one person who owns a divided possessory interest.

Tenant — One who holds or possesses a property.

Tenement — 1) Real property and the rights to ownership, especially those of a permanent nature that relate to and pass with the land; and 2) A building intended for rental residence.

Termination for Cause — A type of contract termination that occurs when a party has failed to deliver services on time or according to specifications.

Termination for Convenience — A type of contract termination that occurs when one or both parties decide that continuation of the contract is not in their best interests.

Test Sample — The sample of sales used to develop the model.

Testate — The state of having died after executing a valid last will and testament.

The Appraisal Foundation — An organization authorized by Congress as the source of appraisal standards and appraiser qualifications.

Thematic Maps — Digital maps that allow various performance standards to be displayed spatially.

Thence — "Thence" in a legal description means "from that place."

Theodolite — A precision surveying instrument for measuring horizontal and vertical angles. The graduated circles are usually read by means of optical microscopes and are more precisely graduated than are the circles on a transit.

Theory Z — A management theory that assumes workers can be trusted to do their jobs to their utmost ability as long as management can be trusted to support them and look out for their well-being.

Thermal Infrared — Electromagnetic radiation emitted by any substance as a consequence of the thermal excitation of its molecules. Thermal radiation ranges in wavelength from the longest infrared radiation to the shortest ultraviolet radiation.

Thread — A line midway between the sides of a road or Right-of-Way. "Thread of a stream" is the line midway between the banks.

Three Approaches to Value — The cost approach, income approach, and sales comparison approach.

Tidelands — Lands covered and uncovered by the ordinary tides.

Tied — As used in surveying, monuments are tied together by measurements. A property corner is tied to offset monuments or to other property corners.

Tier — The area included between two township lines.

TIF — See *Tax Increment Financing.*

Time-Adjusted Sale Price — A property's sale price adjusted for changes in market conditions between the date of sale and the date of valuation. See *Market Condition Adjustment.*

Time Series Analysis — A family of techniques that can be used to measure the cyclical movements, random variations, seasonal variations, and secular trends observed over a period of time.

Time Value of Money — The principle that an amount of money anticipated as income in the future is always worth less than an equal amount in hand at the present time.

Timeshare Unit — A residence, usually a condominium at a vacation or resort site, whose ownership is divided among the owners by weeks or months, giving each owner the right to occupancy for a specified time each year.

Title — The union of all elements constituting proof of property ownership or the instrument that is evidence of ownership. Evidence of ownership and lawful possession of property.

Title, Equitable — See *Equitable Ownership.*

Title Examiner — A person who analyzes a chain of title to land and passes on validity of instruments and then renders his opinion.

Title Registration System — A system under which a government agency examines evidence of ownership and determines who owns a property or possesses a property right and compensates injured parties should its determination prove incorrect.

Title Search — An examination of public records to ensure the quality of the seller's title to a property. Preparation of an abstract of title requires a complete title search.

To — In legal descriptions, "to," "on," "by," "at," and "along" a road carry title to the center line unless otherwise qualified. "To" implies contrast. "To" does not always include an object, as "to certain property" does not include property. But "to a stone" usually means "to the center of the stone." "To" is directional, as "90° to" (not with) or "at right angles." "To" is a word of exclusion rather than inclusion. If you go to an object, you exclude other objects.

Tolerance — An acceptable margin of error or inaccuracy.

Top Managers — Managers responsible for controlling the organization by setting its goals, overall strategy, and operating policies.

Topographic Map — A map that presents the horizontal and vertical position of the features represented; distinguished from the planimetric map by the addition of relief in measurable form. See *Contour Map.*

Topography — The contour of land surface; for example, gently rolling, mountainous, or flat.

Topological Rules — An instruction to a spatial database defining the permissible relationships of features.

Topology — A set of defined relationships between links, nodes, and centroids. Topology describes how lines and polygons connect and relate to each other. Among the topological properties of concern in a geographic information system (GIS) are connectivity, order, and neighborhood.

Torrens System — A land registration system in which ownership interests in real property are established and transferred pursuant to a governmental registration and certification process rather than by, for example, deed or will.

Total Economic Life — See *Economic Life.*

Total Quality Management (TQM) — Management theory that provides a strategy for continuously improving an organization's performance at every level and in all areas of responsibility. Increasing user satisfaction is the overriding objective.

Total Station — A fully automated surveying device that measures distances and horizontal and vertical angles, recording them on a magnetic device.

Town — 1) A small incorporated or unincorporated political subdivision of a state; 2) A civil township; and 3) A small urban area.

Townhouse — Single-Family dwelling sharing a common wall with another dwelling.

Township — An approximately 36 square mile division of land used in the federal rectangular survey system. Townships are bounded by two successive range lines on the east and west and two successive township lines on the north and south.

Township, Civil — An unincorporated political subdivision of the state, usually coterminous with a survey township or with that portion thereof that remains after the incorporation of cities and villages situated therein.

Township, Survey — The area included between two township lines and two range lines, normally containing 36 sections of approximately 640 acres each. Synonymous with Congressional Township and Geographical Township.

Township Line — One of a series of survey lines running due east and west at six — mile intervals on either side of a baseline, used for locating parcels of land under government survey. See *Baseline*.

Toxics — Recognized hazardous substances in the environment.

TQM — See *Total Quality Management.*

Trade, Level of — See *Level of Trade.*

Trade Fixture — Property attached to a commercial rented space or building by a tenant, used in conducting a business and owned by the tenant. Examples include decorative lighting, signs, shelving, built-ins. Trade fixtures can be either real property or personal property depending on the type of improvement, intent of the parties to make the improvement real property or personal property, legislative mandates, office policies and procedures, and whether the removal of the property would cause permanent damage to the real property.

Trademark — A name, symbol, or other sign that identifies a product or service; officially registered and legally restricted to use by the owner alone. Generally considered as intangible property.

Transfer Tax — The tax payable to a state (and sometimes to a locality) upon the sale of real property and the recordation of the transfer. The payment is usually proportional to the sale price and is commonly used by appraisers in the absence of more accurate information to deduce the price for which the property sold.

Transformation — The process of changing the values and definitions of one or more variables to make them more useful for further analyses. If market value changes with living area, for example, a useful (valuable) transformation is (would be) to change length and width to area, and if market value does not change proportionally with area, a useful (valuable) transformation (might be) is to use the logarithm of area.

Transit — A repeating surveying instrument for measuring horizontal and vertical angles. The graduated circles are usually not graduated as precisely as are those on a theodolite.

Transitional/Interim Use — A transitional or interim use refers to an improved property with an existing use that might not be the ultimate highest and best use. However, it is a use that is appropriate until it is ready for its future highest and best use. An interim use is a current highest and best use that is likely to change in a short to moderate time period.

Transverse Mercator Coordinates — Geographic coordinates based on a transverse Mercator projection and usually expressed in meters.

Treasury Bills — Short-term debt obligations of the United States Treasury.

Treatment, Storage, and Disposal Facility (TSDF) — Business that treats, stores, and disposes of hazardous waste. Regulated by the Resource Conservation and Recovery Act (RCRA).

Trended Cost — The historical cost adjusted to current price levels by price indexes or composite multipliers. The trended cost should closely approximate the reproduction cost if price indexes are appropriately selected and properly constructed.

Trended Historical Cost — 1) The cost of constructing an improvement at a particular time, adjusted to reflect inflation and deflation, as well as changes in construction costs, between that time and the appraisal date; and 2) Method of cost estimating that obtains an estimate of the reproduction cost of a structure by adjusting its original, or historical, cost with a factor from an appropriate construction cost index.

Trending — Adjusting the values of a variable for the effects of time. Usually used to refer to adjustments of assessments intended to reflect the effects of inflation and deflation and sometimes also, but not necessarily, the effects of changes in the demand for micro-locational goods and services.

Trending Factor — A figure representing the increase in cost or selling price over a period of time. Trending accounts for the relative difference in the value of a dollar between two periods.

Triangular-Lot Table — A schedule of adjustments used to appraise a lot having a triangular shape, in whole or in part, by comparison with a base lot or a given unit of comparison factor, such as a front-foot rate.

Trier of Fact — Any person(s) with the authority to determine the outcome of a legal contest, i.e. a judge, jury, or magistrate.

Trimmed Mean — The mean of a data set calculated after removing a specific percentage of the smallest and largest values from the data set.

Trust — An agreement whereby the owner of property (the settlor) transfers legal title to a second party (the trustee), such property to be held, managed, or disposed of for the benefit of a third party (the beneficiary) or the settlor, or both, as set forth in the trust agreement.

Trust, Investment — See *Investment Trust.*

Trust, Revocable — See *Revocable Trust.*

Trust Deed — 1) Broadly, a deed by which title to property is transferred to a trustee to be held in trust; 2) Specifically, a deed by which title to property is transferred, conditionally or unconditionally, to a trustee to be held for the benefit of creditors or obligors of the grantor; and 3) An agreement made between an issuer of bonds and the holders of such bonds that is deposited with the trustee, whether or not such agreement involves the transfer of property to the trustee. Also called Deed of Trust.

Trust Estate — The aggregate interests of a trustee in property held under a trust agreement.

Trustee — One who holds legal title to property under a trust agreement. Compare Settlor and *Beneficiary*.

Truth-in-taxation (Full Disclosure) Requirements — Legal obligations for local government officials to make taxpayers aware of assessment increases, levy increase proposals, and the like and to give taxpayers an opportunity to participate in public hearings on the changes.

TSDF — See *Treatment, Storage, and Disposal Facility.*

t-Statistic — A particular statistic important in inferential statistics for certain kinds of hypothesis testing of certain kinds of data. Also known as Test Statistic, it is used to test the null and alternative hypotheses. It compares the means of two groups and quantifies the observed data in order to reject or accept the null hypothesis.

t-est — A statistical test used to compare the means of two groups. It is often used in hypothesis testing to determine whether two groups are different from each other.

Turnkey — A project in which the manufacturer, builder, or contractor delivers a completed product or facility; the tenant, user, or owner has only to "turn the key" to begin operations.

Turnover Ratio — A figure signifying a relationship between sales over a stated period (usually a year) and average inventories during such period, arrived at by dividing either (a) total cost of sales by total cost of the average inventory or (b) total sales receipts by total sale price of the average inventory. A valuation guideline based on sales activity, the number of times per period (usually a year) a business sells the average sale value of its inventory during the same period.

Two-Tailed Test — A test in which the alternative hypothesis does not specify the direction of the relationship, as opposed to a one-tailed test, in which the direction of the relationship is specified. For example, the alternative hypothesis that "A does not equal B" implies a two-tailed test, whereas "A is greater than B" implies a one-tailed test. See *Null Hypothesis.*

U

Underground Storage Tank (UST) — Any tank and associated piping that has more than 10 percent of its volume underground. If leaking, these tanks are known as LUSTs.

Under-Improvement — An improvement that does not develop a site to its highest and best use, usually a violation of the principle of conformity.

Undivided Interest — An interest in a property that is not distinct from the interest or interests of one or more other persons; for example, the interest of a joint tenant or a tenant in common.

Unencumbered Fund Balances — Funds or appropriations left over at the end of the budget year that are not committed to any fiscal purpose. An encumbrance is a reservation of funds in the form of purchase orders, signed contracts, salary commitments, chargeable to an appropriation.

Uniform Standards of Professional Appraisal Practice (USPAP) — The generally recognized ethical and performance standards for the appraisal profession in the United States. USPAP was adopted by Congress in 1989 and contains standards for all types of appraisal services, including real estate, personal property, business, and mass appraisal.

Unimproved Land — Raw land in its natural state, prior to grading, construction, and/or subdividing.

Unit — The property being appraised. Everything used or useful to the ongoing economic operation of the business (property). Includes tangible and intangible property.

Unit Assessment — An assessment involving a composite appraisal of a property, as distinguished from an assessment involving a summation appraisal or a fractional appraisal.

Unit Cost — A valuation guideline expressing the relationship between cost or value of property and some unit of measure; for example, cost per square foot or per employee.

Unit Foot — A rectangular portion of urban land with a frontage of one foot and a depth equal to that of the standard lot. Synonymous with Standard Unit Foot and Standard Front-Foot Unit.

Unit-in-Place Method — A method of cost estimating in which all the direct and some of the indirect costs of individual construction components (such as the foundation walls) are specified in appropriate units (such as cost per unit of area, volume, or length), multiplied by an estimate of the quantity required by the particular structure, and added to obtain an estimate of the cost of the structure.

Unit Tax — A tax levied on the quantity purchased as opposed to the dollar amount purchased. Examples are cigarette taxes per pack and gasoline taxes per gallon.

Unit Value — The value of one of a number of similar items or units contained in or making up a property. The cost of production of an item divided by the quantity of items = unit value. The sum of the units divided by the total number of units that make up the property provides the unit value.

Units of Comparison — Property characteristics expressed as value per unit of measure most often used by market participants to estimate a property's total value. A relevant measure of similarity used to calculate the value of a property or establish similarity with another property. Units of comparisons can include land value per square foot, per acre of land area, per front foot, per buildable unit. For commercial property, the unit of comparison may be the square foot of gross building area, usable building area, or rentable building area. For personal property, the unit of comparison may be units of production. The optimal unit of comparison for analysis is typically the one with the lowest coefficient of variation.

Units-of-Output Method — A method used to estimate depreciation of fixed assets that assumes that the useful life of a machine or piece of equipment can be estimated in terms of number of units that can be produced.

Unitary Government — A hierarchical system of government in which state and local governments are de facto departments of the national government.

Unitary Method of Valuation — The unit rule is a method that values the property within a particular jurisdiction based on the fair share of the value of an operating enterprise, of which the property is an integral part. The unit value concept values all the property as a going concern without geographical or functional division of the whole and includes tangible and intangible assets. The unit rule concept is typically associated with the valuation of public utilities, telecommunications networks, railroads, and other transportation properties. However, the concept of unit valuation is similarly applicable to the appraisal of a single-family residence when comparable sales are used to value the entire property without segregation of land values. Similarly, when rents are capitalized into a value estimate for commercial properties, the unit rule is used.

United States Federal Reserve System — A United States banking system charged with responsibility for maintaining the health of the economy through its regulation of the money supply and the rate of interest.

United States Public Land Survey — The land survey authorized by the United States Congress in 1785 upon which the federal rectangular survey system is based.

United States Public Land Survey System — A rectangular land survey employed in most of the United States, based on township lines and baselines.

Universal Transverse Mercator (UTM) — The transverse Mercator projection used in the United States. Universal transverse Mercator projection zones are six degrees of longitude wide and cross civil boundaries.

Unrecorded Deed — A deed, etc., is said to be unrecorded when it has not been filed for record in the courthouse and made a matter of public record.

Uplift Factor — The factor used to bring manufacturing or wholesale cost to a retail level of trade. See Level of Trade.

Usable Area — The area of land that serves an economic purpose or contributes to the value of the property.

Use Class — See *Classification.*

Use Code — A code (used on a property record form) to indicate a property's use class or, less often, potential use.

Use Tax — A companion to the general sales tax designed to cover out-of-state purchases. See *Sales Tax.*

Useful Life — The estimated normal operating life in terms of utility to the owner of a fixed asset or group of assets. See *Economic Life.*

Use Value — See *Value-in-Use.*

Use-Value (Farmland) Assessment Laws — Laws that require or permit assessors to appraise and assess property as though the property were subject to an enforceable restriction that forbade putting the land (or the entire property) to any use but the present one. Typically, there is no such permanent enforceable restriction, but assessors may nevertheless be required to assess certain property types, especially agricultural land, and to a lesser extent historic property, as though the restriction were real. In such instances, the sales comparison approach may be inapplicable, and a version of the income approach may be required. See *Value-in-Use.*

USGS Quad Maps — A series of general-use maps at medium scales that present elevation (contour lines), hydrography, geographic place names, and a variety of cultural features; maps produced by the United States Geological Survey showing one quadrangle. A typical quadrangle in the US is a 7.5 Minute (1:24,000), while international quadrangles will be at smaller scales (1:100,000 or 1:250,000).

USPAP — See *Uniform Standards of Professional Appraisal Practice.*

UST — See *Underground Storage Tank.*

Utility — The quality of a property or service that enables it to satisfy human wants; and 2) The satisfaction obtained from the goods and services that a consumer consumes.

UTM — See *Universal Transverse Mercator.*

V

Vacancy — Unoccupied space.

Vacancy and Collection Loss — Vacancy is the amount of money deducted from potential annual gross income to reflect the effect of probable vacancy and turnover. Collection loss is the nonpayment of rent by tenants. Vacancy and collection loss is commonly expressed as a percentage of potential annual gross income, and it should be based on market research, not actual rental history of a property.

Vacant Platted Lots — Unimproved parcels described in terms other than acreage, usually by a convention using lot, block, and subdivision name. Vacant platted lots are often located either within a municipality or in areas of higher population density than the surrounding territory.

Validity — The quality of a data element or procedure being what it should be in terms of some ultimate purpose or use.

Valuation — 1) The process of estimating the value (market, investment, insured, or other properly defined value) of a specific parcel or parcels of real estate or of an item or items of personal property as of a given date; and 2) The process or business of appraising, of making estimates of the value of something. The value usually required to be estimated is market value.

Valuation, Assessed — See *Assessed Value.*

Valuation Date — See *Appraisal Date.*

Value — The relationship between an object desired and a potential owner; the characteristics of scarcity, utility, desirability, and transferability must be present for value to exist; 2) Value may also be described as the present worth of future benefits arising from the ownership of real or personal property; 3) The estimate sought in a valuation; and 4) Any number between positive infinity and negative infinity. See *Market Value.*

Value, Assembly — See *Assembly Value.*

Value, Full — Synonymous with the preferred term Market Value. See *Market Value.*

Value, Going Concern — See *Going Concern Value.*

Value, Intrinsic — See *Intrinsic Value.*

Value, Junk — Synonymous with the preferred term Scrap Value. See *Scrap Value.*

Value, Liquidation — See *Liquidation Value.*

Value, Residual — See *Residual Value.*

Value, Salvage — See *Salvage Value.*

Value, Scrap — See *Salvage Value.*

Value Increment — The amount by which a property has increased in value.

Value Increment Tax — A tax on increases in value of property between two specific dates, accruing either periodically or at the time property is transferred. Note: This tax is currently found in the capital gains features of many income tax laws but is generally thought of as a land tax on the unearned increment.

Value in Exchange — 1) The amount an informed purchaser would offer for property under given market conditions; and 2) The concept that states value is based on the ability of property to command another asset, such as money, in trade.

Value-in-Use — The value of a property as measured by its current use, regardless of whether that use is the highest and best use of the property. See *Highest and Best Use.*

Variable — An item of observation that can assume various values; for example, square feet, sale prices, or sales ratios. Variables are commonly described using measures of central tendency and dispersion.

Variable Costs — Costs that change as the quantity of the goods, services, or use of supplies and utilities changes, either increasing or decreasing.

Variable Expense — Expenditures that vary from month to month, such as utilities, maintenance, supplies, and management fees.

Variance — A measure of dispersion equal to the standard deviation squared. The expectation of the squared deviation of a random variable from the mean. It measures the distance for a set of random numbers from the mean.

Variation — 1) A general term meaning dispersion; and 2) A reference to a particular statistic called the coefficient of variation. The expectation of the squared deviation of a random variable from the mean. It measures the distance from the average value. Variance is a descriptive statistic measuring dispersion. See *Coefficient of Variation.*

Vector — A format for processing and displaying graphic data. Vector data are represented by strings of coordinates representing the true positions of features represented by points, areas, and their boundaries.

Vendee — A purchaser. Synonymous with Buyer.

Vendor — One who transfers property by sale. Synonymous with Seller.

Verify — To check the accuracy of something. For example, sales data may be verified by interviewing the purchaser of the property, and data entries may be verified by check digits.

Vertical Coordination — Coordination between the various positions in an organization that lie along a single chain- of-command.

Vertical Equity — Distributing tax burdens fairly across differing property values. Equity is achieved when the price-related differential (PRD) falls between 0.98 and 1.03. See *Horizontal Equity.*

Vertical Inequity — Difference in the level of assessment of properties related to the value ranges of the properties. Evaluated by calculating the price-related differential (PRD). Equity is achieved when the price-related differential falls between 0.98 and 1.03. See *Horizontal Equity, Horizontal Inequity*, and *Vertical Equity.*

Vertical Parcel — Parcels contained in the structure of two or more stories, such as a condominium tower. For purposes of cadastral mapping, these may be represented by stacking or pancaking the parcel polygons on top of one another.

Vertical Photograph — An aerial photograph taken with the axis of the camera being maintained as closely as possible to a truly vertical position, with the resulting photograph lying approximately in a horizontal plane.

Vest — To give title to or to pass ownership of property.

W

Warranty Deed — A deed containing a covenant of warranty whereby the grantor of an estate of freehold guarantees that the title that he or she undertakes to transfer is free from defects and that the property is unencumbered except as stated, and whereby the grantor, and the grantors heirs, undertakes to defend and protect the grantee against any loss that may be suffered by reason of the existence of any other title or interest in the property existing at the time the deed was executed and not excepted therein.

Wasting Asset — An asset that declines in value over its expected economic life. Generally, the asset depreciates, eventually having little or no residual value at the end of its life. Generally includes assets such as buildings, improvements, and tangible personal property. Does not include items such as land, or non-assets, such as investments or inventory.

Wavelength — Equals velocity/frequency. In general, the mean distance between maxima (or minima) of a roughly periodic pattern. Specifically, the least distance between particles moving in the same phase of oscillation in a wave disturbance. Optical and infrared wavelengths are measured in nanometers, micrometers, and angstroms.

Weighted Average Method — In personal property appraisal, a method of inventory cost accounting whereby inventory is valued according to the unit price of all units owned throughout the year, calculated by dividing total acquisition cost of all inventory by the number of units owned.

Weighted Coefficient of Dispersion (CODw) — The coefficient of dispersion when the absolute differences between individual assessment ratios and the measure of central tendency (for example, median ratio) are weighted based on sale price.

Weighted Coefficient of Variation (COVw) — The coefficient of variation when the squared differences between individual assessment ratios and the arithmetic mean ratio are weighted based on sale price.

Weighted Mean (Weighted Average) — The weighted mean is a measure of central tendency. The weighted mean of a set of values is computed according to the following formula:

$$M_\omega(x_1, x_2, \ldots, x_N) = \frac{\sum_{i=1}^{i=N} \omega_i \cdot x_i}{\sum_{i=1}^{i=N} \omega_i}; \omega_i \geq 0.$$

Where: $\omega_1, \omega_2, \ldots \omega_N$ are non-negative coefficients, called "weights," that are ascribed to the corresponding values $x_1, x_2, \ldots, x_N$. Only the relative values of the weights matter in determining the value of the weighted mean. In other words, if you multiply each weight by a positive value κ and recalculate the weighted mean with new weights $(\kappa \cdot \omega_1, \ldots, \kappa \cdot \omega_N)$, then the value remains the same. The greater the weight in respect to other weights, the greater the contribution of the corresponding datum into the resultant value of the weighted mean.

Weighted Mean Ratio — Sum of the appraised values divided by the sum of the sale prices (or independent estimates of market value), which weights each ratio in proportion to the sale price (or independent estimate of market value).

Welcome Stranger Assessment — The practice of systematically assessing recently sold properties based on their sale prices, while failing to reassess similar properties that have not recently sold.

Will Book — A record book in the clerk of courts office that contains all last will and testaments that have been probated.

Windfall Tax — An unexpected, unbudgeted increase in the proceeds of a tax.

Words of Exclusion — "To," "from," "by," "between," and "on" are words of exclusion unless there is something in the phrase that makes it apparent that the words were used in a different sense. "To a stone mound," "on Brown's land," and "by the river" exclude other terms.

Y

Yield Capitalization — The method of converting a series of future net benefits into present value where the future net benefits are discounted at a proper yield rate or discount rate (Yo). Yield capitalization can also be accomplished by developing an overall rate (Ro) that specifically reflects the investment's pattern of income, change in value, and yield rate. See *Direct Capitalization, Income Approach*, and *Income Capitalization.*

Yield Rate (Discount) — The rate of return on a real estate investment. The yield rate reflects the compensation necessary to attract investors to give up liquidity, defer consumption, and assume the results of investing. It is the rate of return required on total property investment to meet investment requirements. Conceptually, the yield rate is the weighted average of the mortgage interest rate or mortgage yield rate and the equity yield rate, weighted by the proportions of total investment represented by rate and considers all the properties' expected benefits, including the proceeds from resale at the end of the investment hold period. Referred to as the property's internal rate of return. See *Discount Rate, Equity Yield Rate*, and *Mortgage Interest Rate.*

Yield to Maturity (YTM) — The average rate of return on outstanding debt issues taking into consideration current price, interest payments, and capital gains or losses at maturity of the issue.

YTM — See *Yield to Maturity.*

Z

Zero-Based Budgeting — A style of budgeting that addresses the fact that a government's fiscal resources are limited and might even be declining in the face of inflation, population growth, and increasing service demands. This budgeting concept forces the manager to start from scratch each year.

Zoning — The exercise of the police power to restrict landowners as to the use of their land and/or the type, size, and location of structures to be erected thereon.

Zoning Bylaw — Implements the objectives and policies of a municipal official plan. Is a legal tool to control land use.

z-Statistic — A statistic used in inferential statistics, specifically in a t-test to either support or reject the null hypothesis, i.e., is the sample mean significantly different from the population mean. It is used in hypothesis testing together with a p-value. The p-value indicates the odds the results could have happened by chance. See *z-Test.*

z-Table — Table of critical values associated with the z-Test. See *z-Test.*

z-Test — A statistical test used to compare the means of two groups. It is often used in hypothesis testing to determine whether two groups are different from each other or if any difference is due to a meaningless random chance. More specifically, a t-test allows for the comparison of the average value of two data sets and to make a determination if they came from the same population. See *z-Statistic.*

ASSESSMENT STANDARDS OF THE INTERNATIONAL ASSOCIATION OF ASSESSING OFFICERS

Guide to Assessment Standards

Standard on Assessment Appeal

Standard on Automated Valuation Models

Standard on Contracting for Assessment Services

Standard on Digital Cadastral Maps and Parcel Identifiers

Standard on Manual Cadastral Maps and Parcel Identifiers

Standard on Mass Appraisal of Real Property

Standard on Oversight Agency Responsibilities

Standard on Professional Development

Standard on Property Tax Policy

Standard on Public Relations

Standard on Ratio Studies

Standard on Valuation of Personal Property

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