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Introduction

A general reassessment of all real property within the state is required as of March 1, 2002. The next general reassessment is statutorily required for March 1, 2006. This assessment manual contains the rules for assessing real property located in Indiana for the March 1, 2002, through March 1, 2005, assessment dates. It includes a number of changes from prior reassessment manuals issued by the State Board of Tax Commissioners.

The foundations upon which this assessment manual is built are established by the Indiana Constitution and the statutes of the Indiana General Assembly. Article X, Section 1 of the Indiana Constitution requires:

> a system of assessment and taxation characterized by uniformity, equality and just valuation based on property wealth, but the Clause does not require absolute and precise exactitude as to the uniformity and equality of each individual assessment.[1]

IC 6-1.1-31-6(c) and 6-1.1-31-7(d) further define True Tax Value: "True tax value does not mean fair market value." It is within this structure, and that required by the courts, that True Tax Value, as expressed in this manual, seeks to operate. IC 6-1.1-31-6(c) goes on to state that: "True tax value is the value determined under the rules of the State Board of Tax Commissioners." Given that the courts and statutes do not fully define true tax value, it is incumbent upon the State Board of Tax Commissioners to develop a definition that satisfies both statutory and judicial requirements by providing a definition that measures property wealth, but is not fair market value.

True tax value, therefore, is defined as:

> The market value-in-use of a property for its current use, as reflected by the utility received by the owner or a similar user, from the property.

It is this definition, therefore, that sets the standard upon which assessments may be judged. Although this assessment manual provides general rules for assessing property, situations may arise that are not explained or that result in assessments that may be inconsistent with this definition. In those cases the assessor shall be expected to adjust the assessment to comply with this definition and may ask the State Board to consider additional factors, pursuant to IC 6-1.1-31-5, to accomplish this adjustment.

True tax value may be thought of as the ask price of property by its owner, because this value more clearly represents the utility obtained from the property, and the ask price represents how much utility must be replaced to induce the owner to abandon the property. In markets in which sales are not representative of utilities, either because the utility derived is higher than indicated sale prices, or in markets where owners are motivated by non-market factors such as the maintenance of a farming lifestyle even in the face of a higher use value for some other purpose, true tax value will not equal value in exchange. In markets where there are regular exchanges, so that ask and offer prices converge, true tax value will equal value in exchange, except for owner occupied housing units, where true tax value will be equal to the value in exchange.

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[1] *State Board of Tax Commissioners v. Town of St. John,* 702 N.E.2d 1034, 1040 (Ind. 1998).

To satisfy the requirements imposed by the courts and the legislature, True Tax Value uses fair market value data of property wealth, but derives values that are not based strictly on fair market value. Instead, True Tax Value gives recognition to two principles of the theory of wealth and value that fair market value does not adequately capture: (1) the concept of value-in-use; and (2) the recognition that "wealth" at its core is not an absolute, but rather to some degree, a comparative term.

Based on the decisions provided by recent court rulings, the basis for True Tax Value outlined in this manual is value-in-use as opposed to value-in-exchange. This concept incorporates objectively verifiable data leading to a determination of property wealth. Property wealth under a value-in-use premise may or may not be the same as market value depending on the specific characteristics of the property. The following definition provides guidance for determining the True Tax Value under a value-in-use approach:

Use Value: *The value a specific property has for a specific use.*[2]

Traditionally, the appraisal profession has used three approaches, or three methods, in determining the value of real property. The first approach, known as the *cost approach*, estimates the value of the land as if vacant and then adds the depreciated cost new of the improvements to arrive at a total estimate of value. The second approach, known as the *sales comparison approach*, estimates the total value of the property directly by comparing it to similar, or comparable, properties that have sold in the market. The third approach, known as the *income approach*, is used for income producing properties that are typically rented. It converts an estimate of income, or rent, the property is expected to produce into value through a mathematical process known as capitalization.

All three of these approaches, when properly processed, should produce approximately the same estimate of value. Fee appraisers use all three approaches when appraising individual properties. However, assessing officials are faced with the responsibility of valuing all properties within their jurisdictions during a reassessment and often times do not have the data or time to apply all three approaches to each property. Therefore, the cost approach has historically been used in mass appraisal by assessing officials since data is available to apply it to all properties within a jurisdiction. The cost approach also lends itself to mass appraisal because it is easily adapted to computer systems.

Replacement cost is preferred as opposed to reproduction cost because replacement cost estimates the cost of a physical structure with similar utility. This estimate of cost should be closely aligned with value-in-use.

Property wealth estimated by value-in-use often approximates value-in-exchange in instances where property types are frequently exchanged and used by both buyer and seller for the same purpose. A good example of this outcome is a small neighborhood retail center that is well occupied and maintained. Property wealth under value-in-use will be different from value-in-exchange. One instance is for special-purpose industrial properties where value-in-exchange occurs only infrequently and under special circumstances.

Special-purpose properties often have very different property wealth estimates under a value-in-use scenario as opposed to value-in-exchange due to the motivations of the parties involved.

[2] Appraisal Institute, *The Dictionary of Real Estate Appraisal*, pg. 383. (1993)

This difference can be expressed as the difference between the bid and ask price for a special-purpose asset. The bid price is what a buyer is willing to pay to purchase an asset, the ask price is what the seller is willing to take in exchange for an asset. Typically, the bid price will initially be lower than the ask price, some negotiation will occur, and when the two are equal an exchange will take place.

In assessment, we are estimating how this negotiation will be resolved as of January 1, 1999. For property types that are frequently traded, the bid and ask price are likely to be fairly similar. For properties that are infrequently exchanged, or that are only exchanged under extraordinary circumstances, this difference between the bid and ask price is likely to be wider and more difficult to reconcile.

A seller of a special-purpose industrial property would accept nothing less than a price equal to the utility being gained from the property. For properties currently in use, this amount would be termed the value-in-use (i.e. the ask price). A buyer of a special-purpose property would initially bid no more than necessary to motivate the seller. A buyer would likely start with a low bid such as the liquidation value of the property. Assuming that the buyer intends to use the property for its current use, the buyer will likely adjust the bid price until a transaction is completed. Since the seller has no motivation to sell at anything less than the value-in-use for a special-purpose property, the ask price becomes the benchmark for a likely transaction under a value-in-use scenario. In the case in which the seller adjusts its opening price and actually consummates a transaction with the buyer at an agreed price, the bid and ask prices coincide and reflect the value-in-use of the property.

As noted previously, some types of fair market value data or valuation methods may be used to calculate True Tax Values, but these data and methods may be used only as described in these rules. In general, such methods will be applicable only if they rely on data that was readily available to the assessor at the time the assessment was made and they represent a reliable indicator of value based on the value-in-use premise or except as the Board may provide in its equalization rule. Fee appraisals of the subject property, or comparable sales approaches, that estimate the market value of improvements may be considered in determining true tax value if they are based on the value-in-use standard and utilize market information that is relevant to the subject property under the assumption that a potential purchaser would continue the existing use of the subject property. Whether a comparable sales approach or an income approach is a reliable indicator of the true tax value of commercial and industrial property under the value-in-use standard must be determined on a case-by-case basis. If the property is a single-use or specialty property and there is no market for the property, the comparable sales approach may be inapplicable depending on the facts. Single-use or specialty property for this purpose means property which is so uniquely designed and adapted for the business conducted upon it or the use made of it and which cannot be converted to other uses without the expenditure of significant sums of money. When others could feasibly use the property for the same general commercial or industrial purpose, e.g. light manufacturing, general retail, or other use type defined in this manual, comparable sales data may be employed to determine true tax value if the data is reliable, the sampled property sales are reasonably comparable based on accepted appraisal standards, and the data was reasonably available to the assessor at the time the assessment was made.

For the purposes of this provision, "readily available" means information reasonably imputed to be information that the assessor should know is relative to the assessment, that the assessor is aware exists, and could have been accessed with reasonable ease or that the assessor could have availed himself/herself of with reasonable ease. Likewise, any information held,

possessed or controlled by a taxpayer that is not furnished to the assessor prior to the assessment date, or otherwise made available and known to the assessor, cannot be considered readily available to the assessor. Information in the hands of a taxpayer is "readily available" to the assessor, however, if the taxpayer offers to make the information available to the assessor and describes the general grounds for its relevance to the assessment before the assessment date, even if the information itself is not provided to the assessor. If the underlying data are disclosed prior to the assessment date, they may then be used to develop appraisal reports or other opinions of value. For example, if a taxpayer discloses the existence of a plant bottleneck to the assessor prior to the assessment date and indicates that the taxpayer's records may support the application of functional obsolescence to recognize the effect such bottleneck may have on value, the taxpayer would have satisfied the "readily available" standard even if the taxpayer waited until after the assessment date to have a full appraisal prepared considering this effect.

This methodology meets the court's recent ruling that each taxpayer does not have the right to "absolute and precise exactitude as to the uniformity and equality of each individual assessment...nor does it [the Property Taxation Clause of the Constitution of Indiana] mandate the consideration of independent property wealth evidence in individual assessments or tax appeals"[3]. The analysis relies in part on neighborhood and industry-wide data in adjusting for depreciation and in doing so incorporates objective and verifiable data. Appeal of assessments must operate within the rules and utilize data in the same manner as provided in this manual. In general, this requires that challenges to assessments be proven with aggregate data, rather than individual evidence of property wealth. Since assessments are calculated using aggregate data, it is not permissible to use individual data without first establishing its comparability or lack thereof to the aggregate data. By requiring taxpayers to make any internal data "readily available" assessors are given the opportunity to establish this comparability.

There shall be a presumption that the value determined according to rules prescribed in this manual is the true tax value of the subject property. However, the taxpayer shall be permitted to offer evidence relevant to the fair market value-in-use of the property to rebut such presumption and to establish the actual true tax value of the property as long as such information is consistent with the definition of true tax value provided in this manual and was readily available to the assessor at the time the assessment was made. Such evidence may include actual construction costs, sales information regarding the subject or comparable properties, appraisals that are relevant to the market value-in-use of the property, and any other information compiled in accordance with generally accepted appraisal principles.

Further definitions that help to explain the concepts explained in this introduction include value and property wealth:

Value: Use value, the value a specific property has for a specific use.

Property Wealth: The abundance of economic utility realized from property rights.

Finally, as stated previously, the most important factor in assuring uniformity and equity of assessments is the application of a standard definition of value and/or property wealth. As important as the specific rules may be, it is critical that assessors test and adjust their assessments to meet the standard set out previously in the definition of true tax value. The county assessor shall utilize assessment studies, as provided in a separate rule, as a means to

[3] *State Board of Tax Commissioners v. Town of St. John*, 702 N.E.2d 1034 (Ind. 1998).

attain a just and equal basis of assessment among taxpayers in the county under IC 6-1.1-13-6. Assessment studies seek to measure both the level of assessment and level of uniformity within assessing jurisdictions and property classes.

Level of assessment refers to the extent to which property assessments approximate legally mandated assessed valuation standards. By comparing the certified assessed values of sample parcels within townships with values based on the valuation standards, assessment ratios can be calculated for each township in a county. These ratios will serve as a basis for level of assessment measures.

Level of uniformity refers to the degree to which property classes are equally assessed within assessing jurisdictions. Based on assessment ratio data for each township in a county, various statistical measures, including coefficient of dispersion, can be applied to determine the level of uniformity within assessing jurisdictions.

Data utilized to measure level of assessment and levels of uniformity are to be used by county assessors to equalize the assessed value of property within the county. If equalization is justified, statistical analysis will provide information as to the degree of adjustments required to bring local assessed values into compliance with legally mandated standards.

Assessment studies generally involve five basic steps: (1) definition of purpose and objectives, (2) collection and preparation of market data, (3) matching appraisal and market data, for consistency, (4) statistical analysis, and (5) evaluation and use of results.

Concept

The underlying concept of this manual is to provide a definition of "True Tax Value" and then allow local assessing officials to select any acceptable mass appraisal method to arrive at that value. The important considerations in choosing a mass appraisal method will be the ease of administration and the accuracy and uniformity of the assessments produced. This allows the assessing official to focus more on the results of the reassessment and less on the process used to accomplish it.

Definitions

Definitions preceded by ■ are taken from the publication, **Glossary for Property Appraisal and Assessment**, copyright © 1997 by the International Association of Assessing Officers, 130 East Randolph Street, Suite 850, Chicago, Illinois 60601-6217. Definitions preceded by ▲ are those developed by the State Board of Tax Commissioners. Words in bold print in the definition refer to other words defined in this section.

Appraisal — ■ (1) The act of estimating the money value of property. (2) The money value of property as estimated by an appraiser. (3) Of or pertaining to appraising and related functions, for example, appraisal practice, appraisal services.

Appraisal Date — ■The date as of which a property's value is estimated. ▲The date as of which the **true tax value** of the property is estimated. In the case of the 2002 general reassessment, this would be January 1, 1999.

Appraisal Methods — ■The three methods of appraisal, that is, the **cost approach**, **income approach**, and **sales comparison approach** as defined in the Overview of Mass Appraisal Methods and Models section of this rule. ▲Any method of estimating value.

Arithmetic Mean — ■See **mean**.

Array — ■An ordered arrangement of data, such as a listing of sales ratios, in order of magnitude. ▲A ranking of data in order of value. May be either in ascending (lowest to highest) or descending (highest to lowest) order. Also referred to as a rank order.

Assess — ■To value property officially for the purpose of taxation.

Assessed Value — ■The dollar amount for a property entered into the assessment roll. ▲May differ from **true tax value** if a **fractional assessment** system exists. Beginning with the 2001 assessment year, the **assessed value** will equal 100% of the **true tax value**.

Assessment — ■ (1) In general, the official act of determining the amount of the tax base. (2) As applied to property taxes, the official act of discovering, listing, and appraising property, whether performed by an assessor, property tax assessment board of appeals or a court. (3) The value placed on property in the course of such act. See **assess**.

Assessment-Appraisal Ratio ■The ratio of the **assessed value** of a property to an independent appraisal.

Assessment Date ▲March 1st of any year.

Assessment Equity ■The degree to which assessments bear a consistent relationship to **market value.**

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

Assessment Ratio ■ (1) The fractional relationship an **assessed value** bears to the **market value** of the property in question. (2) By extension, the fractional relationship the total of the assessment roll bears to the total market value of all taxable property in a jurisdiction. See **assessment level** and **fractional assessments.**

Assessment Ratio Study ■An investigation intended to determine the **assessment ratio** and **assessment equity.**

Assessment-Sale Price Ratio ■The ratio of the assessed value to the **sale price** (or adjusted sale price) of a property.

Average ■The arithmetic **mean.**

Central Tendency ■ (1) The tendency of most kinds of data to cluster around some typical or central value, such as the **mean, median,** or **mode.** (2) By extension, any or all such statistics.

Coefficient of Dispersion ■The **average deviation** of a group of numbers from the **median** expressed as a percentage of the median. In ratio studies, the average percentage deviation from the median ratio.

Comparable Sales ■Recently sold properties that are similar in important respects to a property being appraised; sometime referred to as "comparables".

Dispersion ■The degree to which data are distributed either tightly or loosely around a **measure of central tendency.**

Equalization ■The process by which an appropriate governmental body attempts to ensure that all property under its jurisdiction is appraised at the same ratio or as required by law.

Fractional Assessment ■**Assessment** at a fraction (percentage) of full value, or of such standard as may be fixed by law. Note: Fractional assessment may constitute underassessment, or it may be sanctioned by law. ▲In Indiana, up to and including the

2000 assessment year, the statutes allowed for fractional assessments of 33-1/3% of **true tax value**. Beginning with the 2001 assessment year, fractional assessments no longer legally exist because the statute raises the **assessment level** to 100% of true tax value.

Level of Assessment

See **assessment level** and **assessment ratio**.

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 becomes security against its payment.

Market Value

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

- The buyer and seller are typically motivated;
- Both parties are well informed or advised and act in what they consider their best interests;
- A reasonable time is allowed for exposure in the open market;
- Payment is made in terms of cash or in terms of financial arrangements comparable thereto;
- The price is unaffected by special financing or concessions.

Market Value-in-Use

See **value-in-use**. Synonymous with **Use Value**.

Mass Appraisal

■The process of valuing a group of properties as of a given date using common data, standardized methods, and statistical testing.

Mean

■A **measure of central tendency**. The result of adding all the values of a variable and dividing the number of values.

Measures of Central Tendency

■A single point in a range of observations around which the observations tend to cluster. The three most commonly used **measures of central tendency** are the **mean**, **median**, and **mode**.

Median ■A **measure of central tendency**. When the number of items is odd, the value of the middle item when the items are arrayed by size. When the number of items is even, the arithmetic average of the two central items when the items are similarly arranged. Thus, a positional average that is not affected by the size of extreme values.

Mode ■ The most frequently occurring observation in an array.

Model ■ (1) A representation of how something works. (2) 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.

Property Wealth ▲ The abundance of economic utility realized from property rights. A relative concept that reflects the difference between the property owned by the taxpayer and the minimum amount necessary to sustain life.

Ratio Study ▲ A study of the relationship between appraised or **assessed values** and **market values**. Indicators of market values may be either sales (**sales ratio study**) or independent "expert" appraisals (appraisal ratio study). Of common interest in ratio studies are the level uniformity of the **appraisal** or **assessments**.

Reassessment ■The re-listing and reappraisal of all property in a jurisdiction or portion thereof. Also called reappraisal or revaluation.

Replacement Cost ■The cost, including material, labor, and overhead, which would be incurred in constructing an improvement having the same utility to its owner as a subject improvement.

Reproduction Cost ■The cost of constructing a new improvement, reasonably identical with the subject improvement, using the same materials, construction standards, design, and quality of workmanship.

Sale Price ■Amount paid for an item.

Sales Ratio Study ■A **ratio study** that uses sales prices as a proxy for market values.

Single-Property Appraisal ■Appraisal of properties one at a time. Contrasts with **Mass Appraisal**.

Statistics ■ (1) 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. (2) The science of studying numerical data systematically and of presenting the results usefully.

Subject Property ■The property being appraised.

Taxable Value ■The appraised value minus all applicable exemptions, deductions, and abatements. Property taxes are levied on taxable value. ▲In Indiana, the taxable value is referred to as net assessed value.

True Tax Value ▲ The market value in use of a property for its current use, as reflected by the utility received by the owner or a similar user, from the property.

Use Value See **Value-in-Use**; synonymous with **Market Value-in-Use.**

Valuation Date ■The date as of which a property's value is estimated. ▲The date as of which the **true tax value** of the property is estimated. In the case of the 2002 general reassessment, this would be January 1, 1999.

Value-in-Use ■The value of property for a specified use. The concept that holds value to be inherent in property itself; that is, the value is based on the ability of the asset to produce revenue or utility through ownership. ▲The value a specific property has for a specific use. Synonymous with **Use Value** and **Market Value-in-Use.**

Wealth See **Property Wealth.**

Overview of Mass Appraisal Methods and Models

The purpose of this section of the rule is to give the assessing official an introduction to, and an overview of, mass appraisal methods and models. It is not the intent to be all-inclusive nor to be the definitive source of information on the topic. Those desiring more detail on the subject are referred to the International Association of Assessing Officers textbook, **Mass Appraisal of Real Property**; copyright © 1999 by the International Association of Assessing Officers, 130 East Randolph Street, Suite 850, Chicago, Illinois 60601-6217.

As defined by the International Association of Assessing Officers and in the Definitions section of this rule, mass appraisal is, "The process of valuing a group of properties as of a given date using common data, standardized methods, and statistical testing." This definition can be compared to single-property appraisal, which is the process of valuing an individual property as of a given date. Although the two differ in the areas of data analysis and the degree of quality control required, they are similar in the steps applied to arrive at a final conclusion of value. Both are applied economic theory and have as a foundation various economic principles and theories.

Mass appraisal and single-property appraisal methods are based on what are known as the three approaches to value. These approaches are the cost approach, the sales comparison approach, and the income approach. They are three distinct ways of looking at property and estimating its value. The approaches to value offer three different alternatives a potential buyer has when deciding to make an offer on a property.

Cost Approach

The cost approach to value is based on the assumption that potential buyers will pay no more for the subject property, hence they set the subject's value, than it would cost them to purchase an equally desirable substitute parcel of vacant land and construct an equally desirable substitute improvement. In this approach, the appraiser calculates the cost new of the improvements, subtracts from it accrued depreciation to arrive at an estimate of the improvement's value, and then adds the value of the land as if vacant to arrive at an estimate of the subject property's total value. It can be expressed in a formula as follows:

$$(RCN - D) + LV = V$$

Where:
- RCN = Replacement/Reproduction Cost New of the Improvements
- D = Accrued Depreciation
- LV = Land Value, as if vacant
- V = Total Property Value

Sales Comparison Approach

The sales comparison approach to value is based on the assumption that potential buyers will pay no more for the subject property, hence they set the subject's value, than it would cost them to purchase an equally desirable substitute improved property already existing in the market place. In this approach, the appraiser locates sales of comparable improved properties and adjusts the selling prices to reflect the subject property's total value. The adjustments are the quantification of characteristics in properties that cause prices paid to vary. The appraiser considers and compares all possible differences between the comparable properties and the subject property that could affect value. Objectively verifiable market evidence should be used to determine these items. Items, which are identified as having an influence on value in the market place, are then quantified by the use of their contributory values. These contributory

values then become the adjustments which are added to, or subtracted from, the selling price of the comparable property.

The sales comparison approach can be expressed in a formula as follows:

$$SP \pm Adj = V$$

Where:
- SP = Sale Price of a Comparable Improved Property
- ± = Plus or minus
- Adj = Adjustments
- V = Total Property Value

Income Approach

The income approach to value is based on the assumption that potential buyers will pay no more for the subject property, hence they set the subject's value, than it would cost them to purchase an equally desirable substitute investment that offers the same return and risk as the subject property. It considers the subject property as an investment and, to that end; its value is based on the rent it will produce for the owner. It can be expressed in a formula as follows:

$$I \div R = V$$

Where:
- I = Income from rental of the property
- R = Rate of return on the investment
- V = Total Property Value

Using the Three Approaches

All three approaches to value are the basis for any single-property or mass appraisal "model" used by an appraiser. A "model" is defined by the International Association of Assessing Officers, and in the Definition section of this rule, as "A representation of how something works; for purposes of appraisal, a representation (in words or an equation) that explains the relationship between value . . . and variables representing factors of supply and demand." The appraisal model selected and used by the appraiser can be thought of as the formula that is mathematically processed to arrive at an estimate of value for a property. Therefore, the formulas given for the three approaches to value above could be referred to as "models".

These general models of the three approaches to value outlined above can be refined and expanded through a process referred to as model specification. Model specification is the designing of a model that is based upon appraisal theory and attempts to reflect the actions of buyers and sellers in the market. Specification of a model includes choosing variables to be included in the formula and mathematically defining their relationship to each other and the property's value.

For example, the specification of a simple model is expressed below:

$$IV + LV = V$$

Where:
- IV = Improvement Value
- LV = Land Value
- V = Total Property Value

This model could then be refined as follows:

$$(SF_I \times \$_I/SF) + (SF_L \times \$_L/SF) = V$$

Where:	SF_I	=	Improvement area in square feet
	$\$_I/SF$	=	Unit price of the improvement per square foot
	SF_L	=	Land area in square feet
	$\$_L/SF$	=	Unit price of the land per square foot
	V	=	Total Property Value

The model could be even further refined as follows:

$$NHF \times [(SF_I \times \$_I/SF) + (SF_L \times \$_L/SF)] = V$$

Where:	NHF	=	Neighborhood Factor
	SF_I	=	Improvement area in square feet
	$\$_I/SF$	=	Unit price of the improvement per square foot
	SF_L	=	Land area in square feet
	$\$_L/SF$	=	Unit price of the land per square foot
	V	=	Total Property Value

As can be seen from the above demonstration, models can become very sophisticated in their attempt to reflect market conditions.

There are a multitude of models that have been developed for the mass appraisal process by assessing officials, vendors, and academics. Any of these models may be capable of producing accurate and uniform values for a particular class of property within a specified geographic area. However, not all models can be used for every type of property or in every jurisdiction nor do they all offer ease in administration. The market dictates what type of models should be used and administrative constraints, such as knowledge of the user and budget concerns, dictate what models can be used.

Whatever mass appraisal method(s) and model(s) a county chooses, they must be capable of producing accurate and uniform values throughout the jurisdiction and across all classes of property. The standards of accuracy and validation the State Board will use to judge alternative mass appraisal methods are stated in the section of this manual entitled "Approval of Mass Appraisal Methods."

Minimum Data Requirements

Any mass appraisal method selected by a county must have certain types of data available. These minimum data requirements are intended to allow taxpayers to understand the valuation process and provide the necessary information for the State Board of Tax Commissioners to perform its duties. These requirements are not intended to be restrictive but only to standardize the minimum data each county must have in its mass appraisal method. Any additional data a county wishes to collect is allowed under this rule.

Property Specific Characteristics:

- Parcel Number
- County
- Township
- Corporation
- Rectangular Survey Section #
- Subdivision/Plat Name
- Ownership information
- Street Address
- SBTC Property Class Code (See Appendix A)
- SBTC Taxing District #
- Neighborhood Code (residential only)
- SBTC Land Type Code (See Appendix B)
- Land dimensions
- Land Size
- Improvement(s) Sketch with labels
- Improvement Photograph (principal structure)
- Year of Construction for all improvements
- Condition Rating of all improvements
- Sales History with sales prices, annotated for any adjustments
- Assessment History from the last reassessment forward; broken down by land, improvement, and total

Comparative Data:

- Copies of all sales disclosure statements

Approval of Mass Appraisal Methods

The State Board of Tax Commissioners will provide assessing officials with an acceptable method of mass appraisal referred to as the 2002 Real Property Assessment Guidelines (Version A). The Guidelines will be issued by the SBTC at the time this rule becomes official. Should assessing officials in any county wish to modify the 2002 Real Property Assessment Guidelines (Version A) or use an alternative method; the following steps shall be followed in approving the modified 2002 Real Property Assessment Guidelines (Version A) or alternative mass appraisal method:

1) Each county assessor shall become knowledgeable as to the various methods of mass appraisal available. Included in these methods will be any real property appraisal manuals pre-approved by the State Board of Tax Commissioners. All mass appraisal methods considered shall comply with the minimum data requirements outlined in this manual.
2) The county assessor shall call a meeting of all township and trustee assessors within the county and make a proposal as to which mass appraisal method he/she feels is appropriate for the county.
3) All elected assessing officials within the county, after having heard the county assessor's proposal, shall make a recommendation to accept the proposed method or propose an alternative method. The county assessor shall then make a final determination as to which mass appraisal method he/she prefers to be used in the county based on the discussions of the group.
4) The county assessor shall forward to the State Board of Tax Commissioners the mass appraisal method recommended by the local assessing officials. The submission to the State Board of Tax Commissioners shall include enough detail on the method to allow it to be adequately reviewed.
5) The State Board of Tax Commissioners shall review the submission using the following criteria:
    a) ability to accurately measure "True Tax Value" as defined in this manual;
    b) ease of administration by local assessing officials;
    c) ability to be understood by taxpayers;
    d) adherence to appraisal principles;
    e) statistical support;
    f) ability to produce data to be used in county and state ratio studies;
    g) compliance with the following statistical support guidelines[5]:
        1. statistical models must have a sound foundation in assessment, appraisal, and economic theory;
        2. the model must generally generate random error terms as opposed to non-random error terms;
        3. a general, unrestricted model that is simplified through analysis is better than an overly simple model that systematically adds variables to achieve better fit (i.e. overspecification). Generally, assessments must be based on the simpler of two models that produce equivalent results;
        4. the model must be tested on a random selection of parcels for accuracy and goodness of fit;

[5] Part of this text are from "A Guide to Econometrics", Peter Kennedy, 3rd Ed., 1996, pg. 77-78

5. the model must be able to incorporate rival models. That is, it must be able to explain the results, or lack thereof, for alternative models;
6. the explanation of the model must include a full description of the steps used to create the model and intermediate results that were achieved;
7. the explanation of the model must consider a variety of statistical measures as opposed to just the correlation coefficient (e.g. distribution of error terms, F statistic, sample size and error, etc.);

6) The State Board of Tax Commissioners shall approve or deny the use of the method.
7) Upon approval by the State Board of Tax Commissioners, the local assessing officials shall note on township and county assessment records the date of approval of the mass appraisal method and shall include such notation on each property record card as required by IC 6-1.1-31-5.
8) If a county fails to select a mass appraisal method under this procedure, it shall be required to use the 2002 Real Property Assessment Guidelines (Version A) designated by the State Board of Tax Commissioners.

The easiest way for a county to satisfy these criteria is to import a mass appraisal method with an existing computer assisted mass appraisal (CAMA) system that is used in substantially the same form in another assessing jurisdiction. This will allow the State Board of Tax Commissioners to review the method's output from these other jurisdictions in making its determination as to the acceptability of the method.

Under this rule, a county assessor may recommend a new and untried method. However, a county desiring to use a new and untried method will have to do more to demonstrate the method's ability to produce accurate and uniform values than if presenting a method that has been used successfully elsewhere. This requirement will include not only documentation but also demonstrable success of the new method on an actual sample of properties.

Responsibilities of Assessing Officials in Reassessment

Indiana State Board of Tax Commissioners (SBTC) – In addition to the statutory duties assigned to it under various chapters of IC 6-1.1, the SBTC will be responsible for:

- Approving the mass appraisal methods selected by the counties of the state.
- Conducting reviews of mass appraisal methods to ensure compliance with applicable laws.
- Conducting assessment ratio studies to determine the accuracy and uniformity of locally determined assessments.
- Reviewing assessment ratio studies and equalization conducted by county assessors.

Property Tax Assessment Board of Appeals (PTABOA) – In addition to the statutory duties assigned to them under various chapters of IC 6-1.1, the county PTABOA's will be responsible for:

- Reviewing land value base rates set by township and county assessors prior to these rates being used to assess.
- Conducting public hearings on land value base rates set by township and county assessors prior to these rates being used to assess real property.
- Adjusting land value base rates, where necessary, in conjunction with counties contiguous to their counties to ensure cross-county uniformity.

County Assessor – In addition to the statutory duties assigned to them under various chapters of IC 6-1.1, the county assessors will be responsible for:

- Reviewing mass appraisal methods for their applicability to the assessment of property within their respective counties.
- Conducting meeting(s) of township and trustee assessors to select a mass appraisal method to be used within their respective counties.
- Directing the township and trustee assessors in the uniform valuation of land within their respective counties.
- Submitting to the SBTC the mass appraisal method selected by assessing officials within their respective counties.
- Conducting assessment ratio studies to determine the accuracy and uniformity of assessments within the county.
- Equalizing assessments countywide.

Township and Trustee Assessor – In addition to the statutory duties assigned to them under various chapters of IC 6-1.1, the township and trustee assessors are responsible for:

- Determining land value base rates.
- Using the mass appraisal method selected by the county assessing officials and approved by the SBTC.
- Conducting assessment ratio studies to determine the accuracy and uniformity of assessments within their respective township.
- Equalizing assessments within the township.

Assessment Ratio Studies and Equalization

The accuracy and uniformity of the assessments produced by any mass appraisal method shall be measured by an assessment ratio study. Should the results of the study show the assessments to be inaccurate and/or non-uniform, equalization shall be the remedy.

Assessment Ratio Studies

A ratio study is a measure of the performance of a mass appraisal method. It compares the assessing official's estimate of value with objectively verifiable data. The objectively verifiable data used in the comparison comes from selling prices and single-property appraisals prepared independent of the assessment process. Sales based ratio studies are preferred because they are less expensive and are more objective than independent single property appraisals.

The ratios used in assessment ratio studies are computed on individual properties by dividing the assessing official's estimate of assessed value, for the property by the sale price, or by an appraised value developed by single-property appraisal methods. If sale price was used, the ratio would be known as the assessment-sale price ratio. If appraised value was used, the ratio would be known as the assessment-appraisal ratio. The formula for an assessment-sale price ratio follows:

$$A/S = (AV) \div SP$$

Where: A/S = Assessment-sale Price Ratio
AV = Assessed Value
SP = Sale Price
*(This variable is excluded for non-owner occupied property

For example, assume a property sold for $104,000 and was assessed for $79,000. Further assume the shelter allowance for the county in which the property is located is $18,000. Applying the above formula would yield the following:

$$A/S = (\$79{,}000) \div \$104{,}000$$

$$A/S = 0.7596 \quad \text{Rounded to } 0.76$$

In this example, the assessment-sale price ratio would be 0.76, which is the equivalent of seventy-six percent (76%). In other words, this property is assessed at seventy-six percent (76%) of the value it should be assessed. Ideally, all assessment ratios should be at one hundred percent (100%) in order to be considered accurate.

The ratio study uses assessment ratios as the basic data to measure the performance of a mass appraisal method. It statistically measures the accuracy and uniformity of the assessments produced by the mass appraisal method. Accuracy is measured through the application of statistics by measures of central tendency. Uniformity is measured through the application of statistics by measures of relative dispersion.

The statistical measure of central tendency most often used in assessment ratio studies is the median. The statistical measure of relative dispersion most often used is the coefficient of

dispersion about the median. Both of these measures are defined in the definitions section of this rule.

The median assessment ratio reveals the "average" level at which property is assessed. If, for example, the median assessment ratio for single-family homes in a particular neighborhood is 0.86 (86%) the conclusion can be drawn that, on the average, all homes are assessed at 86% of their value. If the assessment level is supposed to be 100% for this neighborhood, then the ratio study has shown that single-family homes are underassessed and, therefore, not accurately assessed. Ideally, the median should be at 1.00 (100%). This means all properties are, on the average, accurately assessed. But since mass appraisal methods produce only estimates of value and are not an exact science, the actual median assessment ratio may vary from the ideal.

The coefficient of dispersion reveals the "average" difference between individual assessment ratios and the median assessment ratio. It demonstrates the typical amount of deviation the individual assessment ratios have from the median. If, for example, the coefficient of dispersion about the median ratio for single-family homes in a particular neighborhood is 0.18 (18%) the conclusion can be drawn that the individual assessment ratios deviate, on the average, plus or minus 18% from the median assessment ratio. Ideally, the coefficient of dispersion should be at 0 (0%). This means all properties are assessed at the level shown by the median and, therefore, no deviation is present. But, like the median assessment ratio, the actual coefficient of dispersion may vary from the ideal.

Equalization

Standards for evaluating the accuracy and uniformity of mass appraisal methods have been developed by the assessing community. These standards state the overall level of assessment, as determined by the median assessment ratio, should be within ten percent (10%) of the legal level. In Indiana, this means the median assessment ratio within a jurisdiction should fall between 0.90 (90%) and 1.10 (110%) in order to be considered accurate. This standard of ten percent (10%) on either side of the value provides a reasonable and constructive range for measuring mass appraisal methods.

These standards also state the coefficient of dispersion about the median should be at 0.15 (15%) or less for single-family residences and 0.20 (20%) or less for other classes of property. If the coefficient of dispersion is at, or below, these standards, then the mass appraisal method has produced uniform assessments. However, if the coefficient of dispersion is above these standards, then the mass appraisal method has produced non-uniform assessments.

Whenever inaccurate and/or non-uniform assessments are present, the county assessor and the State Board of Tax Commissioners are required to equalize assessments. Equalization of assessments is the process of ensuring all property is, on the average, accurately and uniformly assessed. The equalization process can be accomplished in two ways; through the application of factors to correct the accuracy and through reassessment to correct non-uniformity.

The following decision chart shows when each of the equalization procedures are appropriate:

Median Assessment Ratio	Coefficient of Dispersion	Action Required
Accurate (0.90 to 1.10)	Uniform (=< 0.15)	Nothing
Accurate (0.90 to 1.10)	Non-uniform	Reassess
Inaccurate	Uniform (=< 0.15)	Apply Factors
Inaccurate	Non-uniform	Reassess

More details on assessment ratio studies and equalization will be found in the equalization rule, 50 IAC 14 (to be promulgated in 2001).

Appendix A – SBTC Property Class Codes

Table A-1. Property Class Codes

Code	Class of Property
1	Agricultural taxable land and improvements used primarily for agricultural purposes
2	The legal description is being valued for severed mineral rights at a flat value of sixty dollars ($60) per acre
3	Industrial taxable land and improvements used primarily for manufacturing, processing, or refining foods and materials
4	Commercial taxable land and improvements used for general commercial and recreational purposes
5	Residential taxable land and improvements used primarily for residential purposes
6	Exempt property
8	Taxable land and improvements owned by a public utility company

Table A-2. Property Subclass Codes

Class Code 1 Agricultural taxable land and improvements used primarily for agricultural purposes

00	Vacant land	03	Dairy farm	07	Tobacco farm	11	Beef farm
01	Cash grain/general farm	04	Poultry farm	08	Nursery	20	Timber
02	Livestock other than dairy and poultry	05	Fruit & nut farm	09	Greenhouses	99	Other agricultural use
		06	Vegetable farm	10	Hog farm		

Class Code 2 The legal description is being valued for severed mineral rights at a flat value of sixty dollars ($60) per acre

00	Severed mineral rights

Class Code 3 Industrial taxable land and improvements used primarily for manufacturing, processing, or refining foods and materials

00	Vacant land	30	Medium manufacturing and assembly	46	Research and development facility	70	Small shop
10	Food and drink processing facility	40	Light manufacturing and assembly	50	Industrial warehouse	80	Mine or quarry
20	Foundries and heavy manufacturing	45	Industrial office	60	Industrial truck terminal	85	Landfill
						90	Grain elevator
						99	Other industrial structure

Class Code 4 Commercial taxable land and improvements used for general commercial and recreational purposes

00	Vacant land
01	4 to 19 family apartments
02	20 to 39 family apartments
03	40 or more family apartments
10	Motel or tourist cabins
11	Hotel
12	Nursing home and private hospital
15	Mobile home park
16	Commercial camp ground
19	Other commercial housing
20	Small detached retail of less than 10,000 square feet
21	Supermarket
22	Discount and junior department store
24	Full line department store
25	Neighborhood shopping center (Strip center)
26	Community shopping center
27	Regional shopping center
28	Convenience market
29	Other retail structures
30	Restaurant, cafeteria, or bar
31	Franchise-type restaurant
35	Drive-in restaurant
39	Other food service
40	Dry clean plant or laundry
41	Funeral home
42	Medical clinic or offices
43	Drive-up/walk-up bank only
44	Full service banks
45	Savings and loans
47	Office building (1 or 2 story)
48	Office building (3 stories or more, walkup)
49	Office building (3 stories or more, elevator)
50	Convenience market with gasoline sales
51	Convenience market / franchise-type restaurant with gasoline sales
52	Service station
53	Car wash
54	Auto sales and service
55	Commercial garage
56	Parking lot or structure
60	Theater
61	Drive-in theater
62	Golf range or miniature course
63	Golf course or country club
64	Bowling alley
65	Lodge hall
66	Amusement park
67	Health club
68	Ice rink
69	Riverboat gaming resort
80	Commercial warehouse
81	Commercial mini-warehouse
82	Commercial truck terminal
90	Marine service facility
95	Marina
99	Other commercial structures

Class Code 5 Residential taxable land and improvements used primarily for residential purposes

00	Vacant platted lot
01	Vacant unplatted land of 0 to 9.99 acres
02	Vacant unplatted land of 10 to 19.99 acres
03	Vacant unplatted land of 20 to 29.99 acres
04	Vacant unplatted land of 30 to 39.99 acres
05	Vacant unplatted land of 40 or more acres
10	One family dwelling on a platted lot
15	One family dwelling on unplatted land of 40 or more acres
20	Two family dwelling on a platted lot
21	Two family dwelling on unplatted land of 0 to 9.99 acres
22	Two family dwelling on unplatted land of 10 to 19.99 acres
23	Two family dwelling on unplatted land of 20 to 29.99 acres
32	Three family dwelling on unplatted land of 10 to 19.99 acres
33	Three family dwelling on unplatted land of 20 to 29.99 acres
34	Three family dwelling on unplatted land of 30 to 39.99 acres
35	Three family dwelling on unplatted land of 40 or more acres
40	Mobile or manufactured home on a platted lot
44	Mobile or manufactured home on unplatted land of 30 to 39.99 acres
45	Mobile or manufactured home on unplatted land of 40 or more acres
50	Condominium unit on a platted lot
51	Condominium unit on unplatted land of 0 to 9.99 acres
52	Condominium unit on unplatted land of 10 to 19.99 acres

Continued on next page.

Class Code 5 *continued*

11	One family dwelling on unplatted land of 0 to 9.99 acres	24	Two family dwelling on unplatted land of 30 to 39.99 acres	41	Mobile or manufactured home on unplatted land of 0 to 9.99 acres	53	Condominium unit on unplatted land of 20 to 29.99 acres
12	One family dwelling on unplatted land of 10 to 19.99 acres	25	Two family dwelling on unplatted land of 40 or more acres	42	Mobile or manufactured home on unplatted land of 10 to 19.99 acres	54	Condominium unit on unplatted land of 30 to 39.99 acres
13	One family dwelling on unplatted land of 20 to 29.99 acres	30	Three family dwelling on a platted lot	43	Mobile or manufactured home on unplatted land of 20 to 29.99 acres	55	Condominium unit on unplatted land of 40 or more acres
14	One family dwelling on unplatted land of 30 to 39.99 acres	31	Three family dwelling on unplatted land of 0 to 9.99 acres			99	Other residential structures

Class Code 6 Exempt property

00	Exempt property owned by the United States of America	40	Exempt property owned by a municipality	80	Exempt property owned by a charitable organization that is granted an exemption	86	Church, chapel, mosque, synagogue, tabernacle, or temple that is granted an exemption
10	Exempt property owned by the State of Indiana	50	Exempt property owned by a board of education	85	Exempt property owned by a religious organization that is granted an exemption	90	Exempt property owned by a cemetery organization that is granted an exemption
20	Exempt property owned by a county	60	Exempt property owned by a park district			99	Other exempt property owned by an organization that is granted an exemption
30	Exempt property owned by a township	70	Exempt property owned by a private academy or college				

Class Code 8 Taxable land and improvements owned by a public utility company

00	Locally assessed vacant utility land	30	Locally assessed property owned by a pipeline company	50	Locally assessed property owned by a sewage company	61	State assessed property owned by a telephone, telegraph, or cable company that constitutes a part of any right-of-way of the distribution system
10	Locally assessed property owned by a bus company	31	State assessed property owned by a pipeline company that constitutes a part of any right-of-way of the distribution system	51	State assessed property owned by a sewage company that constitutes a part of any right-of-way of the collection system	70	Locally assessed property owned by a water distribution company
20	Locally assessed property owned by a light, heat, or power company	40	Locally assessed property owned by a railroad company	60	Locally assessed property owned by a telephone, telegraph, or cable company	71	State assessed property owned by a water distribution company that constitutes a part of any right-of-way of the distribution system
21	State assessed property owned by a light, heat, or power company that constitutes a part of any right-of-way of the light, heat, or power company	41	State assessed operating property owned by a railroad company				

Note: Under class code 8, subclass codes 21, 31, 41, 51, 61, and 71 have a zero value at the local level.

Appendix B – SBTC Land Type Codes

Table B-1. Land Type and Sub-type Codes

Code	Type of Land
1 Commercial and Industrial Land	
1 Primary	2 Secondary / 3 Undeveloped Useable / 4 Undeveloped Unuseable
2	Classified Land
3	Undeveloped Land
4	Tillable Land
5	Non-tillable Land
6	Woodland
7	Other Farmland
8 Agricultural Support Land	
1 Legal Ditch	2 Public Road / 3 Utility Transmission Tower
9 Homesite	
1 Residential Excess Acres	2 Agricultural Excess Acres

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