



I-T Township Assessor — Introductory Course

August 2013

Course 1-T Outline

Township Assessor — Introductory Course

Glossary

Math for Assessors

- Unit 1 An Overview of the Property Tax Cycle and the Appeal Process
- Unit 2 Qualifications, Duties, and Responsibilities of Assessors and the Property Tax Code
- Unit 3 Using the Sales Comparison, or Market Approach, to Arrive at Value
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- Unit 12 Mapping and the Property Index Numbering System
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Answer Key

*Exam 50 multiple choice questions

* A score of 70 percent (35 correct answers) is necessary to pass this course.

Glossary — 1-T

Ad valorem — according to value.

Ad valorem tax — a tax levied according to value.

Actual age — the number of years that have elapsed from the year of construction to the present date.

Assessed value — the value placed upon property after multiplying its market value by the level of assessment.

Assessment/sales ratio study — used to indicate the percentage relationship of the prior year's equalized assessed value to actual market value for real property in certain categories and in geographical areas.

Building residual — the building value; sale price, less the lot value, equals building residual.

Capitalization — a mathematical process for converting the net income produced by a property into an indication of value. (Present value of future worth.) Used in the Income Approach to value.

$$\text{Net operating income (I in the IRV formula)} = \frac{I}{R \times V}$$

Capitalization Rate: R in the IRV formula; consists of the Equity, Effective Tax and Mortgage/Interest rates.

Equity rate - Annual rate at which invested capital is returned to the investor over a specified period; refers to income provision made to compensate for the loss of invested capital.

Effective Tax rate - determined by multiplying the level of assessment by the aggregate tax rate supported by that property; used to calculate property taxes by applying the effective tax rate to full market value.

Mortgage/Interest rate – interest rate used to convert future payments or receipts into present value.

Coefficient of dispersion (COD) — average deviation of a group of assessment ratios taken around the median; used to measure uniformity of assessments.

CDU Rating — modifies the normal age depreciation of an improvement according to the appraiser's determination of the improvement's condition, desirability, and utility.

Cost approach — calculating the cost of replacing the improvements, subtracting accrued depreciation, and adding land value.

Cost factor — used to adjust the schedules in the manual for differences in local construction labor and material rates.

Depreciation — loss of value from any cause, *i.e.*, physical depreciation, functional obsolescence, and economic obsolescence.

Effective age — age of an improvement based on the improvement's CDU rating; effective age does not always equal actual age.

EII — a wing of a building at right angles to the main structure.

Equalization factor — a factor applied to each jurisdiction so all jurisdictions assess property at the same level of market value.

Equalized assessed value (EAV) — assessed value multiplied by any applicable equalization factor equals EAV.

Front foot price — supposes that each foot of lot frontage is worth the same dollar amount; used to indicate lot value.

Improvement — any structure attached to, lying upon or within the land, that may not be removed without physical stress.

Income approach — calculating the present worth of the income from an income-producing property.

IRV formula — formula for income approach to value.
I (income) = R (capitalization rate) x V (market value).

$$\frac{I}{R \times V}$$

Legal description — a description in words and numbers judged legally sufficient to locate and identify a parcel of land.

Level of assessments — ratio of equalized assessed value to sale price.

Market value — the most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus.

Mean — an arithmetic average.

Median — the middle value of a group of numbers after they have been ranked.

Mode — the number that occurs most frequently in a set of numbers.

Principle of substitution — The informed buyer is not justified in paying anything more for a property than it would cost him to acquire an equally desirable substitute property.

Property index number (PIN) — 14 numbers that reflect the geographical location, legal description, and special use of a parcel of land.

Property record card (PRC) — used to record individual property appraisals used for assessment.

Quality grade — used to adjust schedules in the manual for differences in the quality of construction materials and workmanship.

Replacement cost new (RCN) — represents current cost of replacing an improvement.

Rectangular survey system — also known as the Governmental Survey System, established in 1785; a system in which land is divided in a grid like fashion consisting of principal meridians, baselines, townships, ranges, and sections.

Remaining economic life (REL) — period of time, from the date of valuation, over which a prudent investor would reasonably expect to recapture his investment.

Sales comparison, or market approach — calculating the value of properties by observing and analyzing the selling prices of comparable properties.

Math for Assessors

This guide explains mathematical terms and illustrates frequently used formulas and equations.

Proceed to Unit 1 if you feel proficient in your math skills and do not need to review this material.

Percentages and decimals

Percentage (%) denotes a standard of measurement that represents a whole quantity divided into 100 equal parts. For example, 20 percent refers to 20 parts of a total of 100 parts, which in terms of fractional values is written as $\frac{20}{100}$.

Values are often written in percentages or decimals, and it is important to understand both the relationship between the two and the process of converting one to the other.

Note: Frequently calculators will run specialized functions when the % key is used that is not the intention of the user. Unless an individual is confident in the use of the % key for the particular calculator, using the % key is not recommended.

To convert from a percent to a decimal, divide the value by 100, or simply move the decimal point two places to the left. For example, divide 20 by 100, and it becomes .20. The result is the same if the decimal point were moved two places to the left. For example, 5% becomes .05. [A "0" must be added to the left of the "5" to provide the second place before the decimal point (located 5.%) can be moved two places to the left in this example.] .05 is also read as 5 hundredths or 5 parts of 100 parts. Similarly, $8\frac{1}{2}\%$, or 8.5%, becomes .085.

To convert from a decimal to a percentage, multiply the value by 100, or simply move the decimal point two places to the right. For example, .30 become 30%, .06 becomes 6%, and .0975 becomes 9.75%.

To convert a percent to \$/\$100 AV: carry the number over as it is and exchange the % sign for the \$/\$100 AV.

Examples:

$$27\% = \$27 / \$100 \text{ AV} = \$27 \text{ per } \$100 \text{ AV}$$

$$.0382 = 3.82\% = \$3.82 / \$100 \text{ AV or } \$3.82 \text{ per } \$100 \text{ AV}$$

Exercise 1: Converting decimals to percents to \$/\$100 AV to mill rate

When converting from a percent to a decimal, divide by 100 or move the decimal two places to the left. $10\% = 10 \div 100 = .10$

When converting from a decimal to a percent, multiply the decimal by 100 or move the decimal two places to the right. $.03125 \times 100 = 3.125\%$.

	Decimal	Percent	\$/\$100 AV	\$/\$1000 AV (mills)
1.	_____	12%	_____	_____
2.	_____	1.75%	_____	_____
3.	.0325	_____	_____	_____
4.	.0004	_____	_____	_____
5.	_____	_____	\$2.55/\$100 AV	_____
6.	_____	.06%	_____	_____
7.	.1234	_____	_____	_____
8.	_____	_____	\$.033/\$100 AV	_____
9.	_____	_____	_____	4.28 mills
10.	.0225	_____	_____	_____
11.	_____	.450%	_____	_____
12.	_____	_____	_____	1.62 mills

Percentages and decimals can be added, subtracted, multiplied, or divided.

Adding	20%	.20
	+ 5%	+ .05
	<u>25%</u>	<u>.25</u>

Subtracting	20%	.20
	- 5%	- .05
	<u>15%</u>	<u>.15</u>

To multiply or divide percentages: First convert the number to a decimal by moving the decimal point 2 places to the left. If a number does not have a decimal point, it is considered to be at the right of the number.

$$25\% = 25.\% = .25$$

Multiplying

After the number has been converted to a decimal number, complete the calculation on the calculator and convert the answer back to a percentage by moving the decimal point 2 places to the right and write a % symbol.

Examples of Multiplying Percentages:

$$(1) 11\% \times 8\% = .11 \times (.08) = .0088 = .88\%$$

$$(2) 11 \times 8\% = 11 \times (.08) = .88 \text{ or } 88\%$$

20%	.20
<u>x 5%</u>	<u>x .05</u>
1%	.0100

20	20.00
<u>x 5%</u>	<u>x .05</u>
100%	1.0000

Dividing

Examples of Dividing Percentages:

$$(1) 20\% \div 5\% = (.20) \div (.05) = 4$$

$$(2) 20 \div 5\% = 20 \div .05 = 400$$

Factors

The factoring process involves the adjustment of a number by multiplication, resulting in a product either more or less than the original value.

There are many types of factors that may be used by an assessor to accurately value the individual characteristics of a parcel of property. Some examples include quality grade, remaining economic life (REL), depreciation (DEP), cost, and time.

The Appraisal Publications' Replacement Cost New (RCN) value of \$96,500 must be adjusted to reflect a 4% **increase** in value due to a cost factor. To determine the factor to be used in this situation, add the amount of the increase to 100%. 100% represents the original value.

$$100\% + 4\% = 104\%$$

$$\$96,500 \times 104\% = \$100,360 \text{ or } \$96,500 \times 1.04 = \$100,360$$

Examples of factoring

The Publication 123 “Instructions for Residential and Condominium Schedules” RCN value of \$96,500 must be adjusted to reflect a 4% decrease in value due to a cost factor. To determine the factor to be used in this situation, **subtract** the amount of the decrease from 100%. 100% represents the original value.

$$\$96,500 \times 96\% = \$92,640 \text{ or } \$96,500 \times .96 = \$92,640$$

Chain multiplication

Chain multiplication is the process of multiplying a series of numbers or factors by one another in order to produce one number or factor.

Examples of chain multiplying

Front feet x \$/FF x shape factor = value of the site

$$50' \times \$100/\text{FF} \times .65 = \$3,250$$

Cost factor x design factor x neighborhood factor = adjustment factor

$$.96 \times 1.22 \times 1.15 = 1.346880 \text{ or } 1.35$$

Land values

The assessor must place a separate assessment on both the land, or site, and the improvements. Common land values that are used in this process are dollar per square foot values and dollar per acreage values. Before either dollar values can be determined, the total square footage of area, or the total acreage, must be calculated for the site.

To determine the square footage of a rectangular site, multiply the length of the site by the width of the site. **L x W**

For irregularly shaped sites, it may be necessary to divide the site into rectangles and triangles and add them together.

The area of a triangle is found by multiplying the base by the height and dividing by 2.

$$\frac{\mathbf{B \times H}}{2}$$

To convert total square footage into total acreage, divide the square footage by 43,560, the total square footage in an acre.

Exercise 2 Land values

Site	Shape	Measurements	Square footage	Approx. acreage
1.	Rectangular	400' x 800'	<u>320,000</u>	<u>7.3 (7.34)</u>
2.	Rectangular	320' x 480'	_____	_____
3.	Triangular	320' x 480'	<u>76,800</u>	<u>1.8 (1.76)</u>
4.	Triangular	150' x 180'	_____	_____
5.	Square	150' x 150'	_____	_____
6.	Triangular	600' x 900'	_____	_____

LAR Formula

The county clerk has the responsibility of calculating tax rates and extending taxes against individual properties. The county clerk must also ensure that no tax rate exceeds any limitation that may be imposed by law.

Although the local assessors do not calculate tax rates or extend property taxes, taxpayers often contact the assessor upon receipt of their tax bills.

$$\frac{L}{A \times R}$$

A tax rate is calculated by dividing the levy by the tax base for each taxing district. This mathematical process is referred to as the LAR formula.

Levy (L) — This is the amount of money a taxing district determines is necessary to raise from property taxes.

Tax base (A) — This is the amount of taxable EAV after removing all qualified exemptions and including all applicable values for state-assessed property in the taxing district.

Tax rate (R) — This is the percentage applied to the taxable EAV in the taxing district.

If any two values are known, the third value can easily be determined with this formula. If you cover up the letter representing the component you are trying to determine, the formula for determining the value of that component is left.

To find the levy, cover up the “L” in the formula so you are left with **A x R** .

$$\frac{\text{L}}{\text{A} \times \text{R}}$$

Multiply the tax base “A” by the tax rate “R.”

If you know the levy and the tax rate, to find the tax base, cover up the “A” in the formula so you are left with **L ÷ R**

$$\frac{\text{L}}{\text{A} \times \text{R}}$$

Divide the levy “L” by the tax rate “R.”

To determine the tax rate, cover up the “R” in the formula so you are left with **L ÷ A**. Divide the levy “L” by the tax base “A.”

$$\frac{\text{L}}{\text{A} \times \text{R}}$$

To determine L, multiply A by R. For example: If a taxing body has a tax base of \$25 million and a tax rate of 2%, or .02, the amount to be raised from property taxes is \$500,000.

$$\$25,000,000 \times 2\% (.02) = \$500,000$$

To determine A, divide L by R.

For example: If a taxing body has a tax levy of \$500,000 and a tax rate of 2%, or .02, the tax base is \$25 million.

$$\frac{\text{L}}{\text{A} \times \text{R}} = \frac{500,000}{.02} = 25,000,000$$

To determine R, divide L by A. For example: If a taxing body has a levy of \$500,000 and a tax base of \$25 million, the tax rate is .02, 2%, or \$2.00/\$100 AV.

$$\frac{\text{L}}{\text{A} \times \text{R}} = \frac{500,000}{25,000,000} = .02 = 2\%$$

Exercise 3 Tax rates

	L	A	R
1.	\$660,000	\$30,000,000	<u>2.2000%</u>
2.	_____	\$10,000,000	4.0000%
3.	\$55,000	_____	.6875%
4.	_____	\$95,480,000	2.3615%
5.	\$200,000	\$50,000,000	_____
6.	\$90,000	_____	.7500%
7.	\$44,600	\$54,257,900	_____
8.	\$150,000	_____	.3550%
9.	_____	\$12,750,000	.6544%

Individual tax bill

There are several processes involving different officials that are followed in determining an individual tax bill for most types of property.

- 1 Property is valued by the assessor to determine fair market value (MV).
- 2 The assessor determines the assessed value (AV) by dividing the fair market value by 3, or multiplying by 33.33% (.3333).
- 3 Equalization factors (township multiplier, county multiplier, and state multiplier) are applied to the assessed value to derive the equalized assessed value (EAV) for the parcel of property.
- 4 All qualified exemptions, such as various homestead exemptions, are deducted from the AV, the remaining value becomes the taxable EAV.

- 5 The taxable EAV is multiplied by the applicable tax rate for each of the taxing districts in which the property is situated.
- 6 All of the amounts due each taxing district are added to obtain a total tax bill. Another way to produce the total tax bill is to multiply the taxable EAV by the aggregate tax rate. The aggregate rate is the total of all the district rates in which the property is situated.

Exercise 4
Tax bills

Determine the tax bill on a residential property with a market value of \$96,750 and a taxable EAV of \$32,250. The property is situated in six taxing districts. Compute the tax rate for each taxing district (levy ÷ taxable EAV) and then determine the amount of tax (taxable EAV x rate).

	District	Levy	Taxable EAV	Rate	Tax
1	School	\$996,173	\$31,425,000	<u>3.1700</u> %	\$ <u>1,022.33</u>
2	County	\$473,630	\$94,726,000	<u>.5000</u> %	\$ <u>161.25</u>
3	Township	\$178,994	\$25,482,000	_____ %	\$ _____
4	City	\$144,661	\$15,272,000	_____ %	\$ _____
5	Fire	\$110,707	\$37,846,000	_____ %	\$ _____
6	Library	\$ 76,360	\$15,272,000	_____ %	\$ _____

Aggregate tax rate = _____ % x taxable EAV \$ _____ =

Tax bill \$ _____

Formulas

Income approach	$\frac{I}{R \cdot V}$
Net operating income	Effective gross income — Expenses
Gross income multiplier	$\frac{\text{Sales Price}}{\text{Gross Income}}$
Unit price	$\frac{\text{Sales Price}}{\# \text{ of Units}}$
Adjusted sales price	Sales price (+ or -) adjustments
Adjusted unit price	$\frac{\text{Adjusted sales price}}{\# \text{ of Units}}$
Wall ratio	$\frac{\text{Square foot ground area}}{\text{Effective Perimeter}}$

***Square foot of floor area (SFFA) = SFGA x no. of floors**

DATA BANK	
SF Ground Area	
Eff. Perimeter LF	
CF of Bldg.	
SF Wall Area	
Wall Ratio	
Sty	Schl

SFGA — square feet of ground area

L x W

EP — effective perimeter

L + W + L + W

(Party walls are factored at 60 percent of the length of the wall.)

CF — cubic feet

SFGA x H

SFWA — square feet of wall area

EP x H

WR — wall ratio

SFGA ÷ EP

Link to Publication 126 Instructions for Commercial Schedules:
tax.illinois.gov/Publications/Pubs/Pub-126.pdf

Unit 1

An Overview of the Property Tax Cycle and the Appeal Process

This unit covers the history of property taxation, gives an overview of the property tax system, the property tax cycle, and the appeal process.

The purpose of this unit is to provide a basic understanding of property taxation, the establishment of value for tax purposes, and the two-year property tax cycle, beginning with the creation of the assessment books and concluding with the sale of a lien on real estate due to nonpayment of taxes.

Learning objectives

After completing the assigned readings, you should be able to

- outline the flow of the assessment books, from the creation of the books through their use in the preparation of the collector's books,
- identify the roles various township and county officials play in the property tax cycle, and
- identify established completion dates for various processes.



Terms and concepts

Ad valorem tax
Assessment
Assessment date
Assessment cycle
Budget and levy cycle
Equalized assessed value (EAV)
Levy
Market value
Personal property
Real property
State-assessed property
Statutory level of assessment

An overview of property tax

When Illinois became a state in 1818, the constitution contained a provision for taxing property in direct proportion to the value of property. From 1818 to 1930, amendments to the constitution provided the state with various powers concerning property taxation. The last year the state levied real estate taxes was 1932. Since then, property taxes have been levied at the local level.

Property tax is governed by the Property Tax Code, 35 ILCS 200/1-1 through 32-20. Property tax is a local tax assessed by the county or township. Revenues from property tax are collected and spent at the local level. The department issues guidelines, determines county equalization factors, grants or denies non-homestead exemptions, distributes assessment manuals, and provides technical assistance and assessment training to local assessing officials.

Property can be divided into two classes — real and personal. **Real property** is land and anything permanently attached to the land, *e.g.*, buildings and fixtures permanently or constructively attached to a building. **Personal property** is all property that is not real property. Some examples of personal property include automobiles, livestock, money, and furniture.

All owners of real property must pay property taxes unless specifically exempted by state law. Owners of business, industrial, agricultural, and residential property all pay property taxes directly. Renters also contribute to the property taxes, but do so indirectly through their rent. Landlords consider taxes as a cost of doing business and adjust their rents to cover this cost.

In Illinois, taxpayers now pay property taxes only on their real property. Personal property tax for individuals was abolished by the 1970 Illinois Constitution. Corporations, partnerships, limited partnerships, joint ventures, and similar entities continued to pay taxes on personal property until 1979. These business entities now pay a replacement tax on income or invested capital. Business entities pay this tax to the department, who distributes the monies to the local

taxing districts in proportion to the amount received previously from the personal property tax.

Property taxes are raised, spent, and distributed locally. Property taxation produces more than three-fourths of the total tax revenue and finances a major part of the services provided by local governmental units which benefit citizens and their property. The largest share of the property tax goes to school districts.

Property tax is a tax that is based on the value of the property owned, and is assessed according to its value. For this reason it is often called an **ad valorem tax**. Value is a complicated concept with many definitions. Most real property in Illinois must be assessed based on its value in the open market. **Market value** is the most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Appraisals for ad valorem tax purposes shall assume the property is owned in “fee simple” meaning that the total bundle of rights is considered to be intact.

The determination of market value for tax purposes is the job of assessors, who use one or more of the following three basic approaches to estimate market value:

- 1 sales comparison, or market approach** — calculating the value of properties by observing and analyzing the selling prices of comparable properties;
- 2 cost approach** — calculating the cost of replacing the improvements, subtracting accrued depreciation, and adding land value; and
- 3 income approach** — calculating the present worth of the income from an income-producing property.

The determination of market value requires skilled and knowledgeable assessors. To encourage assessing officials to improve their knowledge and skill in determining value, the state pays a stipend to any supervisor of assessments, assessor, deputy assessor, or member of a board of review, who earn certain professional designations and continue their education each year.

The property tax cycle

The property tax cycle—from the assessment of property to the collection and distribution of taxes—takes nearly two years for most property. Some steps take place concurrently, but basically it can be divided into six steps.

- | | |
|----------------|-------------------------------|
| 1 assessment | 4 levy |
| 2 review | 5 extension |
| 3 equalization | 6 collection and distribution |

The assessment cycle

The **assessment cycle** begins with the creation of the assessment books and ends with the review of the assessments by the board of review. The assessment cycle takes from nine to twelve months to complete, depending on the size of the county and the number of assessment complaints filed with each board of review.

The steps in the assessment cycle are

- 1 assessment,
- 2 review, and
- 3 equalization.

Step 1: Assessment

An **assessment** involves four steps:

- 1 identifying the real property within a jurisdiction,
- 2 listing it,
- 3 appraising it, and
- 4 placing a value for it on the tax rolls.

This value is known as the assessment and is the basis for determining what portion of the total tax burden each property owner will bear. In Illinois, the **statutory assessment level** is one-third or 33 $\frac{1}{3}$ percent of market value, unless set otherwise by law.

Most property is locally assessed by township and county officials. In all counties except Cook and the 17 commission counties, township or multi-township assessors have primary assessment responsibility. There are over 900 elected assessors in Illinois

Assessors must qualify to hold office on the basis of prescribed course work in assessment techniques.

In the 17 commission counties — Alexander, Calhoun, Edwards, Hardin, Johnson, Massac, Menard, Morgan, Monroe, Perry, Pope, Pulaski, Randolph, Scott, Union, Wabash, and Williamson — that have no township level of government, the supervisor of assessments has the primary assessment responsibility. In Cook and St Clair counties, the county assessor takes the primary responsibility for the assessment of property.

Supervisors of assessments and county assessors are also referred to as chief county assessment officers (CCAO). The work of township and multi-township assessors is subject to review and, if necessary, revision by the supervisor of assessments. The supervisor of assessments is usually appointed by the county board. The supervisor of assessments must have two years of relevant experience, pass a qualifying examination administered by the department, and possess a professional appraisal designation specified in the statutes. Some counties have an elected supervisor of assessments. The county assessors in Cook and St. Clair counties are elected.

A few types of property are assessed by the state, such as **railroad operating property**, railroad right-of-way and track, and **pollution-control facilities** that have been certified as such by the Illinois Environmental Protection Agency. The value of **state-assessed property** is a small percentage of the value of all taxable property. State-assessed property is valued by the department and these assessments are certified to the appropriate county clerks for inclusion in local tax bases.

In Illinois, property is to be viewed, inspected, and revalued once every four years in all counties but Cook, which has a three-year reassessment cycle and triad assessment districts. Between these quadrennial assessments, assessors may revalue any property whose value has changed or is incorrect. Farm acreage must be reassessed annually.

The **assessment date** in Illinois is January 1. On that date, the assessment cycle begins for all real property which must be valued as to its condition at that point and time. The Property Tax Code requires that on or before this date, the CCAO calls on the county clerk to receive

the assessment books listing all parcels of real estate to be assessed in each of the townships in the county. The assessment book has columns for the property index number (PIN), the name of owner, the assessment by the township assessor, the assessment by the CCAO, and the assessment by the board of review for each parcel. The CCAO conducts a meeting with the township assessors to give instructions to the assessors, inform them of any changes, and give them the assessment books.

Procedures for the establishment of farmland assessments begin on May 1, in the year prior to the assessment date, with the certification of proposed values from the department to the CCAO. These values are used to make the assessments for the assessment year beginning on the following January 1.

Steps 2 & 3: Review and equalization

In most non-commission counties, township and multi-township assessors should complete their assessments by June 15. After assessors have certified their assessment books as being correct and complete, they return them to the CCAO, who has until the third Monday in June to examine the books and make any changes necessary to achieve fairness. Assessment books are then given to the county board of review for subsequent review and equalization. The Cook county assessor certifies the completed assessment books to the board of review as they are completed.

Taxpayers have the right to inspect property record cards and other assessment records for any property, subject to reasonable rules and regulations established by local authorities.

Review and intra-county equalization (in all counties except Cook) are performed by the CCAO and the board of review. While both the CCAO and the board of review have the power to equalize, normally only one will do so. Review at this level is generally an informal review of the assessment roll. Formal review on a complaint by the taxpayer takes place at the board of review.

The CCAO examines the assessment book and makes any changes that will make assessments more equitable.

He or she may equalize assessments by applying a factor to all assessments for a township, an area, or a class of property. All assessments that have been changed from the previous assessment year must be published in a newspaper. However, only the equalization factor must be published for properties that had assessment changes due solely to equalization. Individual notices must be mailed to taxpayers whose assessments were changed for any reason other than an equalization factor.

Any assessment change made by the CCAO is entered in his or her column in the assessment books. The CCAO certifies the assessment books to the county board of review by the third Monday in June, and compiles and sends a tentative abstract of assessments to the department. The department uses the information on the abstract to determine if the level of assessments has changed since the data for the department's sales ratio study was collected. The department then certifies a tentative inter-county equalization factor, often called a "tentative state multiplier," to the CCAO and county clerk and holds a public hearing on the factor.

The board of review convenes on the first Monday in June in most counties and completes its work no later than March 15th of the following year. The Cook county board of review convenes on or before the second Monday in September and adjourns 60 days after the date of the last delivery to the board of review of the assessment books for any township or taxing district. The board has several important duties in the assessment cycle. For prior years, the board assesses property that was inadvertently omitted from the assessment rolls. They hear the formal complaints of taxpayers and make any necessary assessment changes. The board can also make individual assessment changes on its own volition. However, the taxpayer and township assessor must be notified of these changes and given an opportunity to be heard before the board.

In addition, the board reviews applications from property owners, such as churches, schools, and local governmental units who believe their properties should be

exempt from property taxes. The board makes a recommendation to the department as to whether these properties should be exempt. The department makes the final determination. The board of review (except in Cook county) also equalizes assessments by township, area, or class of property and sends a report on equalization to the department.

Any assessment changes are entered in the board of review's column in the assessment books. Whenever any assessment change has been made by the board of review, the board must mail change of assessment notices to the taxpayers and make a full and complete list of all changes in assessments made by the Board of Review and final equalization factors applied by the Board of Review. A copy of the list must be given to the CCAO and to the county clerk. These lists are a matter of public record and open for public inspection. The board of review then certifies the assessment books to the county clerk

Completion of the assessment cycle

After the county clerk receives the assessment books from the board of review, the clerk prepares an abstract of assessments that the department uses in the computation of the final equalization factor for the county. Once the county clerk receives the department's certification of the final equalization factor and the certification of the state-assessed railroad operating property and pollution control facilities, he or she applies the final equalization factor to the local assessments as certified by the board of review. This results in the **equalized assessed value (EAV)**. These EAVs are the final values used to compute tax rates and to extend taxes. This completes the assessment cycle.

Assessment cycle

County clerk	Prepares two sets of real estate books and delivers to the CCAO by January 1.
CCAO	Meets with township assessors before January 1 and establishes guidelines; delivers one set of books to townships. In Cook and St Clair counties, the county assessor assesses real property.
Township assessor	Values real estate as of January 1 and returns books to CCAO by June 15 (Lake July 15, DuPage November 15); can equalize, except in Cook county.

CCAO	<ol style="list-style-type: none"> 1 Reviews assessments made by township assessors; makes changes. 2 Equalizes assessments within county by class, by area, or by township, except in Cook county. 3 Mails change of assessment notices to taxpayers. 4 Publishes changes in newspaper of general circulation. 5 Delivers books to board of review by the third Monday in June. 6 Prepares and signs tentative abstract of assessment report; mails report to the department
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Department of Revenue	<p>Develops tentative equalization factor; publishes factor in newspaper.</p> <p>Holds public hearing.</p>
------------------------------	--

Board of review	<ol style="list-style-type: none"> 1 Assesses omitted property. In Cook county, the county assessor is directed to assess omitted property. 2 Acts on non-homestead exemptions and mails to department for approval. 3 Hears complaints and makes assessment changes on any property when deemed necessary. 4 Mails change of assessment notices to taxpayers. 5 Equalizes assessments within county by class or area, if necessary, except in Cook county. 6 Delivers books to county clerk and to CCAO. 7 Mails report on equalization to department. 8 Makes a list of assessment changes and equalization factors; submits a copy to the county clerk and the CCAO.
------------------------	---

County clerk	Prepares, and signs, the final abstract of assessments and mails to department.
---------------------	---

Department of Revenue	Certifies final equalization factor and mails to county clerk.
------------------------------	--

County clerk	Applies equalization factor to all local assessments, except farmland, farm buildings, coal rights, wind turbines*, and state-assessed properties.
---------------------	--

Department of Revenue	Certifies state assessments and mails to county clerk.
------------------------------	--

County clerk	Totals the EAV for each taxing district.
---------------------	--

* Wind turbines over .5 MW nameplate capacity

Budget and levy cycle

While the assessment cycle determines the allocation of the tax burden among property owners, the **budget and levy cycle** determines the total amount of property tax to be allocated to the property owners. The three steps in the budget and levy cycle are:

- 1 levy,
- 2 extension, and
- 3 collection and distribution.

The budget and levy cycle begins in the fall of the assessment year when most boards of review are still in session. At this time, taxing districts have generally determined their budgets for the next fiscal year and have held a public hearing on this budget. Taxpayers who are concerned with the amount of property tax distributed to taxing districts should attend these public hearings and voice their opinions concerning how much money will be needed from the property tax.

Step 1: Levy

After the budget is approved, the taxing districts can then calculate the amount of revenue needed from the property tax. This amount is certified to the county clerk as the property tax **levy** on or before the last Tuesday in December. The amount levied is the amount that taxpayers will pay on their property tax bills in the following year.

Step 2: Extension

Once the assessment cycle is complete, the county clerk receives the assessment books from the board of review and applies the county equalization factor from the department to the individual assessments. With this information, and the levies received from the taxing districts, the county clerk proceeds with the extension of taxes.

Extension is a two-step process that includes the computation of tax rates and the application of those rates to the EAVs of the individual parcels of real estate.

In the first step, tax rates are computed by dividing a taxing district's levy by the total EAV of all parcels of property in the taxing district. Some tax rates are subject to statutory maximums. If the calculated rate is above the maximum rate, the county clerk uses the maximum rate.

**Example
computation
of tax rate**

Levy	=	\$1,000
EAV of property in the district	=	\$100,000
Tax rate	=	$\frac{\text{Levy}}{\text{EAV}}$
Tax rate	=	$\frac{\$1000}{\$100,000}$
Tax rate	=	.01 or 1 percent

Tax rates are normally expressed in dollars per \$100 of EAV. In the example above, the tax rate is \$1/\$100 of EAV, or \$1 in taxes for each \$100 of EAV.

In the second step of the extension process, the individual tax bills are extended in the collector's book by multiplying the EAV of each property by the sum of the tax rates for all districts in which the property is located. This sum is called the aggregate tax rate. A typical aggregate rate would include rates for the county, township, school district, and municipality, and could also include rates for a park district, fire protection district, library district, *etc.*, depending on where the property is located.

**Example of tax
extension**

Assume the property's aggregate tax rate is \$7.00/\$100 and the property's EAV is \$20,000.

$$\begin{aligned} \text{Tax bill} &= \text{EAV} \times \text{aggregate tax rate} & \text{Tax bill} &= \\ \$20,000 \times \$7/\$100 \text{ (or .07)} & & & \\ \text{Tax bill} &= \$1,400 & & \end{aligned}$$

**Step 3:
Collection and
distribution**

For this example, the collector's books would normally show an abbreviated legal description of the property, the owner's name, the property index number (PIN), the EAV of \$20,000, the tax code that indicates what combination of taxing districts the property is located in, the aggregate tax rate of \$7.00/\$100, the tax bill in two equal installments of \$700 each, and spaces to enter the payments for the two installments.

The statutory date for the delivery of the collector's books from the county clerk to the county treasurer, who also

serves as the *ex officio* county collector, is December 31 of the assessment year. As a practical matter, the collector's books are not normally given to the county treasurer until March or April of the year following the assessment year, since the levies are not due until the last Tuesday in December and some boards of review adjourn in December or later. This is 15 to 16 months into the property tax cycle.

The county treasurer prepares a property tax bill for each property listed in the collector's books. The bill is mailed by May 1 of the year following the assessment year. For counties that use a two-installment method, the first installment is due by June 1, and the second installment is due by September 1. Once the treasurer begins receiving money from either installment, he or she distributes the monies to the appropriate taxing districts.

Soon after September 1, the county treasurer prepares a list of properties for which taxes have not been paid. This delinquent tax list is published in a newspaper, and notices are sent to the owners of the properties.

These notices specify that the treasurer will apply to the circuit court for a judgment against the property for delinquent taxes. If taxes remain unpaid, the court will order a lien to be sold at the tax sale in the amount of the unpaid property taxes, interest, penalty, and fees.

The tax sale usually occurs in late October, approximately 22 months into the property tax cycle, with the county clerk and county treasurer presiding. A lien on the property is sold through a bidding process in which bidders, also called tax buyers, state the percent of interest for which they are willing to purchase the lien, starting at 18 percent per 6 months, and going lower until the lowest bidder purchases the lien. The tax buyer pays the amount of the lien and receives a certificate of purchase from the county clerk. The county treasurer then distributes revenues from the tax sale to the taxing districts.

Once the lien is sold, the property owner may redeem it by paying to the county clerk the amount of the lien,

interest, penalty, and fees. The amount of the lien and interest is then paid by the county to the tax buyer, who must surrender the certificate of purchase. A tax buyer may eventually obtain a tax deed for the property if the tax lien is not redeemed.

The table on the following page shows the budget and levy cycle.

Budget and levy cycle

Taxing body	<ol style="list-style-type: none">1 Prepares tentative budget.2 Publishes notice of public hearing; puts tentative budget on display 30 days before public hearing.3 Holds public hearing.4 Passes budget with changes in form of ordinance.5 If necessary, makes truth-in-taxation publication and holds hearing.6 Gives certificate of levy to county clerk by the last Tuesday in December.
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County clerk	<ol style="list-style-type: none">1 Calculates tax rates and computes aggregate tax rate for each combination of taxing districts.2 Extends taxes on total EAV in each taxing district and enters the amounts in the collector's books.3 Prepares and delivers collector's books to county treasurer by December 31.
---------------------	--

County treasurer (collector)	<ol style="list-style-type: none">1 Prepares and mails tax bills by May 1.*2 Collects first installment for real estate by June 1.*3 Distributes tax money proportionately to taxing districts as money is collected.4 Collects second installment for real estate by September 1.*5 Prepares delinquent tax list and sends a notice of application for judgment on real estate.
-------------------------------------	--

Circuit court	<p>Pronounces judgment for sale of a lien on real estate due to nonpayment of taxes.</p> <p>Rules on tax objections.</p>
----------------------	--

County clerk and treasurer	<p>Administers sale of lien on real estate due to nonpayment of taxes.</p>
-----------------------------------	--

* Cook County uses accelerated billing.

Property Assessment Appeals

Property taxes are levied, collected, and spent locally to finance a major part of the services that local units of government provide to their citizens. Since property is assessed at the local level, the department has no direct involvement in the assessment appeal process. The following is a general guide to the assessment appeal process in Illinois.

When going through the appeal process the property owner is appealing the assessed value of the property, not the tax bill. The amount of the tax bill is determined by the tax rates that are applied to the assessment by various taxing districts, such as schools, parks, libraries. If the assessment is to increase the county must publish the change in a local newspaper. Tax rates are not an issue in the appeal process, only the amount of the assessment. Once the tax bill is received, it is generally too late to make an appeal for that year's assessment.

Reasons for an appeal

A formal complaint may be filed based on any of the following claims:

- The assessor's market value is higher than actual market value. This claim can be supported if the property has recently been purchased on the open market or if a professional appraisal is supplied.
- The assessed value is at a higher percentage of market value for the property than the prevailing township or county median level, as shown in an assessment/sales ratio study.
- The assessment is based on inaccurate information, such as an incorrect measurement of a lot or building.
- The assessment is higher than those of similar neighboring properties.

Informal appeal

If a property owner has a complaint, the local assessing official should be the first person contacted. An assessor who still has assessment books for a given year can correct any assessment. Calling an erroneous

assessment to the assessor's attention early in the year may result in a correction without using the formal appeal process. Property owners should contact their township or county supervisor of assessments for information. If the informal appeal is unsuccessful, the property owner should proceed with a formal appeal to the reviewing board in the county in which the property is located.

Formal appeal

Steps in the appeal of assessments

An appeal of assessment, other than land or farm buildings, has seven steps.

- 1 Determine the fair market value for the property.
- 2 Determine the prevailing assessment level in the jurisdiction.
- 3 Obtain the assessed valuation of the property.
- 4 Discuss the assessment with the assessor.
- 5 Determine the basis for the formal complaint.
- 6 File a written complaint with the board of review.
- 7 Present evidence of unfair assessment at the hearing to the board of review. If a property owner is dissatisfied with the board's decision, the owner can appeal the decision to the State Property Tax Appeal Board, in writing, or file a tax objection complaint in circuit court.

The local assessing official should be contacted for information regarding the steps in appealing a farm land or farm building assessment.

Evidence needed

To support a claim of an unfair assessment, supporting evidence is required. Some evidence may be obtained from the township or county assessing official's office, from a professional appraiser, or through research. Pertinent evidence for nonfarm property may include some or all of the following:

- a copy of the property record card (PRC) and photograph for the property under appeal,
- a copy of Form PTAX-203, Real Estate Transfer Declaration, a deed, or a contract for purchase,
- an appraisal of the property,
- a list of recent sales of comparable properties, including photographs, PRCs, and evidence of the sale prices,

- a photograph of elements detracting from the value of the property not shown on the PRC and an estimate, in terms of dollars, of their negative effect on the market value, and
- a copy of PRCs and photographs of similar or neighboring properties.

**Additional
assistance
available**

The department provides assistance with the appraisal of commercial and industrial properties having an assessment (prior to equalization by the department) of \$350,000 or more, for counties of less than 3 million inhabitants. This assistance is available to assessors and CCAOs who have a complaint or appeal of a property pending before the board of review or State Property Tax Appeal Board.

A written agreement must be reached between the department and the assessing official making the request. The agreement must specify all of the project details.

The department provides information regarding:

- comparable sales data,
- appraisal techniques,
- appraisal publications
- coal and mineral assessments, and
- the assessment of pollution-control facilities and railroad operating property, which is state-assessed property.

Unit 1

Summary

Property is divided into two classes - **real and personal**.

Ad valorem means according to value. Real property in Illinois is assessed according to value, therefore it is an *ad valorem* tax.

Market value is the most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus.

The three approaches to value are **the sales comparison or market approach, the cost approach, and the income approach**.

Property is assessed according to its condition on **January 1** of each year.

The **CCAO** reviews assessments made by township assessors and makes changes when deemed necessary.

The **board of review** hears complaints and makes changes to assessments when deemed necessary. The board of review makes the final decision on property values at the county level.

The **county clerk** calculates tax rates and extends taxes on individual parcels of property.

The **county treasurer** prepares and mails tax bills. If taxes are not paid on time, the treasurer prepares a delinquent tax list and publishes a notice of application to the court for judgment against the property for delinquent taxes, interest, and penalties which results in a lien being placed on the affected property. The county clerk and the **treasurer** then administer a sale of the lien at a tax sale each year. Only the lien for unpaid taxes, interest, and penalties is sold, not the real estate.



Unit 1

Review questions

1 Define *ad valorem* tax.

2 _____ is the major source of tax revenue for local governments.

3 What are the two classifications of property?

1 _____

2 _____

4 The largest share of property tax goes to _____.

5 List the three approaches to value.

1 _____

2 _____

3 _____

6 What four steps are involved in the assessment of any property?

1 _____

2 _____

3 _____

4 _____

7 What two types of properties are assessed by the state?

1 _____

2 _____

8 What happens if an individual does not pay his taxes?

9 Who has the statutory authority to review assessments and make changes when deemed necessary?

1 _____
2 _____

10 List in order, the offices that actually handle the assessment books, from the time they are created until the taxes are extended.

1 _____
2 _____
3 _____
4 _____
5 _____
6 _____

11 Property is valued as to its condition on _____.

12 _____ makes the final decision on property values at the county level.

Unit 2: Qualifications, Duties, and Responsibilities of Assessors and the Property Tax Code

This unit covers the statutes regarding the qualifications, duties, and responsibilities for the office of township and multi-township assessor.

The purpose of this unit is to provide a basic understanding of the responsibilities of the assessor, the Property Tax Code, the Certified Illinois Assessing Officer (CIAO) designation, and the qualifications needed to hold office.

After completing the assigned readings, you should be able to

Learning objectives

- understand the CIAO designation and its requirements,
- identify the qualification requirements for holding office,
- identify the basic duties and responsibilities of assessors, and
- have a general understanding of the Property Tax Code and its contents.

Terms and concepts

The Property Tax Code
Pre-election qualifications
Rule 110.162
Article 2 - Township Assessment Officials
Article 4 - Assessment Officials - Other Provisions
Article 9 - General Valuation Procedures
Article 25 - Penalties

The statutory authority for township and multi-township assessors is the **Property Tax Code**. The code is Act 200 in Chapter 35 of the Illinois Compiled Statutes (35 ILCS 200). Assessors should become familiar with the provisions of the code.

Note: The Property Tax Code may be found at www.ilga.gov. Click on “Illinois Compiled Statute,” “Chapter 35 Revenue,” and “35 ILCS 200/.”

Qualification requirements

All candidates for township or multi-township assessor must file a certificate of qualifications, along with their nomination papers, as stated in Section 2-45 of the Property Tax Code.

Candidates who

- file nomination papers;
- intend to participate in any caucus, primary or general election;
- are seeking to be appointed to fill vacancies in the office of township or multi-township assessor; or
- intend to enter into a contract to complete the assessments in any township or multi-township

must meet the following minimum education requirements, generally based upon the EAV of the assessment jurisdiction.

Introductory assessment jurisdictions

In jurisdictions with \$10 million or less in non-farm/non-mineral EAV **and** less than \$1 million in commercial and industrial EAV, the candidate or appointee must

- complete and pass the Township Assessor-Introductory Course offered by the department, or
- have passed the Basic Course offered by the Illinois Property Assessment Institute prior to January 1, 1997, or
- possess a designation approved for jurisdiction with higher EAVs.
-

Intermediate assessment jurisdictions

In jurisdictions with more than \$10 million but less than \$25 million in non-farm/non-mineral EAV **and** less than \$1 million in commercial and industrial EAV, the qualifications are based on whether the candidate was previously elected in any such jurisdiction.

If the candidate or appointee **previously was not elected** to office in an assessment jurisdiction that had more than \$10 million but less than \$25 million in nonfarm/ non-mineral EAV, and less than \$1 million in commercial and

industrial EAV, the candidate must meet one of the introductory assessment jurisdiction requirements.

If the candidate or appointee **previously was elected** to office in an assessment jurisdiction that had more than \$10 million but less than \$25 million in non-farm/non-mineral EAV, and less than \$1 million in commercial and industrial EAV, the candidate must meet one of the larger assessment jurisdiction requirements.

Larger assessment jurisdictions

In jurisdictions with **more than \$25 million** in nonfarm/non-mineral EAV or more than \$1 million in commercial and industrial EAV, the candidate or appointee must possess one of the following designations:

- A Certified Illinois Assessment Officer (CIAO) from the Illinois Property Assessment Institute.
- A Certified Assessment Evaluator (CAE) or Residential Evaluation Specialist (RES) designation from the International Association of Assessing Officers (IAAO).
- A Residential Member (RM), Member Appraisal Institute (MAI), Senior Real Estate Analyst (SREA), Senior Real Property Appraiser (SRPA), or Senior Residential Appraiser (SRA) designation from the Appraisal Institute.
- A Member (IFA), Senior Member (IFAS), or Appraiser-Counselor (IFAC) from the National Association of Independent Fee Appraisers (NAIFA).
- A Member (ASA) designation from the American Society of Appraisers.

Candidates who plan to use either the “Township Assessor — Introductory Course” or the Certified Illinois Assessing Officer designation need to contact the department at 217 782-2818 to receive a “Certificate of Qualification.”

Candidates who plan to use one of the other approved designations listed in Section 2-45 of the Property Tax Code need to request a letter of qualification from that particular organization. The letter of qualification from the other organization must specify the type of designation,

membership status, and the time period for which the candidate is qualified.

Revision of assessor qualifications

A jurisdiction may be in a higher EAV category only because of a small number of high-value commercial or industrial properties that are not assessed by the township or multi-township assessor. In this case, the township and multi-township board of trustees may petition the department to review the qualifications of a particular jurisdiction and the department **may** change the qualification to that required for a lower EAV jurisdiction. This provision is covered by Section 2-52 of the code.

Contents of the petition

The department does not provide forms for the petitioning process. Petitions submitted to the department must include the following information:

- 1 The name and county of the township or multi-township assessment district.
- 2 The date the township or multi-township board of trustees approved the petition to request the department to revise the qualifications.
- 3 The non-farm EAV and the commercial and industrial EAV that was used as the basis for certifying the pre-election and pre-appointment requirements.
- 4 A statement that the township or multi-township board of trustees requests the qualifications for township or multi-township assessor be revised.
- 5 A **detailed** statement that supports the request for a revision of assessor qualifications.
- 6 If the petition states that the reason for the request is the fact that either another governmental or private party values certain commercial or industrial property within the assessment district, the petition must include a statement of the qualifications of the party doing the actual assessing and the current EAV of that property. A copy of the written agreement between the assessment district and the assessing party must also

be provided. This party should identify the property being assessed and indicate whether he or she will continue to value this property for the duration of the assessor's term.

More specific information including additional requirements and documentation regarding the petition process is found in (86 Adm. Rules 110-162(d)) of the department's rules.

Detailed supporting statements

The detailed statement in support of the request for revision of assessor qualifications must include information regarding the quantity and complexity of assessments within the township or multi-township assessment district.

The statement may include, but is not limited to

- evidence that assessed values are different than the values used as the basis for certifying the pre-election and pre-appointment requirements for township or multi-township assessor;
- descriptions of the number, characteristics, and valuations of classes, groups, or individual properties in the assessment district;
- descriptions of the activities of the assessor in the assessment process in the assessment district;
- copies of written agreements for another governmental or private party to value commercial or industrial properties within the assessment district;
- any other information the petitioning board considers relevant to a determination that the quantity and complexity of assessments within the assessment district supports reducing the standards for qualification for the office of township or multi-township assessor.

The department will consider evidence concerning the quantity and complexity of assessments within the township or multi-township assessment district when making a determination on a petition for revision of assessor qualifications. Evidence considered includes evidence that the values for the assessment district are different from those used by the department, and evidence that an assessment district would have been in a category

with lower assessor qualification requirements if it were not for the EAV of three or fewer properties valued by another governmental or private party.

Additional Information

The department may request additional information from the petitioning board before making a determination on a petition. If a revision is allowed in assessor qualification, the department will notify the township or multi-township clerk and the county clerk of that county within 30 days of receipt of the petition or receipt of any requested additional information. Any revision allowed by the department remains in effect until the next certification under Section 2-50 of the code.

It should be noted that the department will not determine a petition in favor of the petitioning board strictly on the basis that all, or a significant portion, of the township or multi-township assessor's duties have been turned over to another party.

CIAO designation

Individuals must successfully complete three core course requirements and two electives to obtain a CIAO designation.

The first course, **Basic Assessment Practices**, covers assessing officer qualifications, introductory material on the property tax code and the property tax cycle, and the duties and responsibilities of assessing officials, along with penalties for failing to perform these functions. The course provides a general explanation of the various designations and where to find assistance. Information on managing the assessment office, including discussion of ethics, public relations, budgeting, and record management is also covered.

The second course, **Property Valuation**, focuses on

- the assessment process of discovering, listing, and assessing property,
- mass appraisal tools and land valuation, and
- the valuation process for residential, commercial, industrial, and farm property.

The course also includes an overview of computer-assisted mass appraisal and neighborhood analysis.

The third course, **Introduction to Mass Appraisal Techniques**, covers the technical aspects of the assessment process:

- instruction on sales ratio studies, equalization, exemptions, and preferred assessments, and
- leaseholds, instant assessments, disaster assessments, and mobile homes.

To complete the requirements for the designation, individuals also must select **two electives** from the following six courses:

1-A Introduction to Residential Assessment Practices
1-B Introduction to Commercial Assessment Practices
1-E Introduction to Sales Ratio Studies;
1-F Introduction to Farmland Assessments;
1-M Introduction to Mapping for Assessors; and
Office Management (EXAM VERSION ONLY)

Individuals who received the CIAO designation in the year preceding their election or appointment meet the education requirements for qualification.

Continuing education

Individuals who received their CIAO designation prior to the year preceding their election or appointment must also satisfy continuing education requirements.
(See Section 2-45.)

The law requires that individuals who obtained their CIAO prior to the year preceding their participation for election, or prior to their appointment, take 30 hours of additional course work approved by the department.

This can be either an approved 30-hour exam course or separate approved courses totaling 30 hours. At least 15 hours of these credits must be successfully completed exam course credits. The 30 hours must be taken within a calendar year. The 30 hours of additional course work must be taken prior to filing nomination papers, participating as a candidate in a caucus, primary, or

general election, being appointed to fill a vacancy in office, or contracting with an assessment district. If an individual successfully completes a minimum of 300 hours of maintenance courses approved by the department, with at least 150 hours of exam credit, the individual is only required to take 15 class hours of additional training approved by the department within the 4 years preceding the election or appointment.

CIAO stipend

The annual continuing education requirement for the \$500 CIAO stipend consists of completion of 30 hours of continuing education coursework approved by the department. At least 15 of the 30 hours must be exam credit. The 30 hours must be taken within a calendar year. (See Section 4-10.)

The education program provides assessment officials with the framework and direction necessary to personalize their continuing education program. Within this program, courses are analyzed for content and assigned to six general categories. There are then three levels within each of these six categories.

Six categories of classes

Administration: Administration of the assessment office and computer usage

Commercial: Assessment of commercial and industrial property

Land: Assessment of land; assessment of farmland; mapping; and GIS

Theory: Assessment and appraisal theory; legal issues; and legislative issues

Residential: Assessment of residential property

Statistics: Use of mathematical and statistical procedures in the assessment process.

Three levels within the six categories of classes

Level 1: Introductory level courses, that provide a basic understanding of the subject matter.

Level 2: Intermediate level courses, that provide more in-depth material, enabling students to build on the skills acquired at the introductory level.

Level 3: Advanced level courses, that build on information acquired in Level 2 and provide the theory, information, and skills needed to perform and understand complex principles of the assessment process. These courses are application-oriented.

Number of hours per level and category

Level 1: 180 hours maximum, up to 45 hours per category.

Level 2: 420 hours maximum, no category limits within Level 2

Level 3: No restrictions.

Once an assessing official has achieved the designated number of either examination or seminar hours for a given category or level, the official advances to a new category or level, in order to earn continuing education credit. Students may take classes at levels 2 or 3 if they have already completed necessary prerequisites even though they still have hours available at a lower level.

The annual continuing education requirement for the \$500 CIAO stipend requires the official to complete 30 hours of continuing education coursework, approved by the department, with at least 15 of those 30 hours being examination credit. Credit for continuing education is subject to the Education 2000 criteria.

The department has the responsibility of course approval for CIAO continuing education credit. The course must be of adequate substance to warrant approval for continuing education credit. To qualify for continuing education credit, as required by Section 4-10 of the code, a course must deal with either

- cost, market, and income approaches to value,
- mass appraisal techniques, or
- property tax administration.

To request course approval, you must submit a copy of the course description or outline, time slots for each topic, dates for the course, and the examination to the department. The examination must be stringent enough to warrant examination credit. The department has the right to re-evaluate approved courses and change the amount or type of credit.

Failure to meet the requirements during any year will affect payment of the stipend for that year only.

**Additional
compensation**

Individuals who meet the requirement for the CIAO stipend qualify for additional compensation if they also hold either a current Certified Assessment Evaluator (CAE) or a Residential Evaluation Specialist (RES) designation from the International Association of Assessing Officers (IAAO).

Exercise 2-1 Using the Property Tax Code

Use the Property Tax Code to answer the following questions and cite the correct section.

- 1 What is the education requirement for the assessor in a township or multi-township with a non-farm, non-mineral equalized assessed valuation of less than \$10 million and less than \$1 million commercial and industrial valuation?
_____ Section _____
- 2 Are assessing officials required to take an oath of office?
_____ Section _____
- 3 Must a supervisor of assessments hold an annual meeting for his or her township and multi-township assessors?
_____ Section _____
- 4 Are individuals permitted to obtain copies of property record cards?
_____ Section _____
- 5 Are township assessors required to provide the supervisor of assessments with a copy of all new property record cards as they are added to the tax rolls?
_____ Section _____
- 6 Must the supervisor of assessments provide guidelines for the assessment of property by township assessors?
_____ Section _____
- 7 Is there a provision in the statutes for the revisions of assessment in counties of less than 3 million?
_____ Section _____
- 8 What is the date specified by statute for the return of the assessment books by the township assessor to the supervisor of assessments?
_____ Section _____

- 9 May township assessors appoint deputies to assist them with their duties?
_____ Section _____
- 10 Is there a provision in the statutes for setting the salary of an assessor?
_____ Section _____
- 11 Can township assessors be reimbursed for their education expenses?
_____ Section _____
- 12 Are there any penalties for assessors who knowingly fail to perform their duties?
_____ Section _____
- 13 Who is responsible for prosecuting violators of the Property Tax Code?
_____ Section _____
- 14 How are vacancies in the office of township assessor filled?
_____ Section _____
- 15 What is the statutory level of assessment?
_____ Section _____
- 16 Can candidates “get qualified” after they are elected or appointed, as long as they are qualified when they take their oath?
_____ Section _____

The following pages contain excerpts from Sections 2, 4, 9, and 25 of the Property Tax Code, as amended through Public Act 98-0015. These sections are to be used for course work only and should not be used as a replacement for the Property Tax Code.

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TITLE 2. ASSESSMENT OFFICIALS

Article 2. Township Assessment Officials

Sec. 2-5. Multi-township assessors.

Townships with less than 1,000 inhabitants shall not elect assessors for each township but shall elect multi-township assessors.

(1) If 2 or more townships with less than 1,000 inhabitants are contiguous, one multi-township assessor shall be elected to assess the property in as many of the townships as are contiguous and whose combined population is 1,000 or more inhabitants.

(2) If any township of less than 1,000 inhabitants is not contiguous to another township of less than 1,000 inhabitants, one multi-township assessor shall be elected to assess the property of that township and any other township to which it is contiguous.

(Source: P.A. 87-818; 88-455.)

Sec. 2-10. Mandatory establishment of multi-township assessment districts.

Before August 1, 2002 and every 10 years thereafter, the supervisor of assessments shall prepare maps, by county, of the townships, indicating the number of inhabitants and the equalized assessed valuation of each township for the preceding year, within the counties under township organization, and shall distribute a copy of that map to the county board and to each township supervisor, board of trustees, sitting township or multi-township assessor, and to the Department. The map shall contain suggested multi-township assessment districts for purposes of assessment. Upon receipt of the maps, the boards of trustees shall determine separately, by majority vote, if the suggested multi-township districts are acceptable.

The township boards of trustees may meet as a body to discuss the suggested districts of which they would be a part. Upon request of the township supervisor of any township, the township supervisor of the township containing the most population shall call the meeting, designating the time and place, and shall act as temporary chairperson of the meeting until a permanent chairperson is chosen from among the township officials included in the call to the meeting. The township assessors and supervisor of assessments may participate in the meeting. Notice of the meeting shall be given in the same manner as notice is required for township meetings in the Township Code. The meeting shall be open to the public and may be recessed from time to time.

If a multi-township assessment district is not acceptable to any board of trustees, they shall so determine and further determine an alternative multi-township assessment district. The suggested or alternative multi-township assessment district shall contain at least 2 townships and 1,000 or more inhabitants, shall contain no less than the total area of any one township, shall be contiguous to at least one other township in the multi-township assessment district, and shall be located within one county. For purposes of this Section only, townships are contiguous if they share a common boundary line or meet at any point. This amendatory Act of 1996 is not a new enactment, but is declarative of existing law.

Before September 15, 2002 and every 10 years thereafter, the respective boards of town trustees shall notify the supervisor of assessments and the Department whether they have accepted the suggested multi-township assessment district or whether they have adopted an alternative district, and, in the latter case, they shall include in the notification a description or map, by township, of the alternative district. Before October 1, 2002 and every 10 years thereafter, the supervisor of assessments shall determine whether any suggested or alternative multi-township assessment district meets the conditions of this Section and Section 2-5. If any township board of trustees fails to so notify the supervisor of assessments and the Department as provided in this Section, the township shall be part of the original suggested multi-township assessment district. In any dispute between 2 or more townships as to inclusion or exclusion of a township in any one multi-township assessment district, the county board shall hold a public hearing in the county seat and, as soon as practicable thereafter, make a final determination as to the composition of the district. It shall notify the Department of the final determination before November 15, 2002 and every 10 years thereafter.

The Department shall promulgate the multi-township assessment districts, file the same with the Secretary of State as provided in the Illinois Administrative Procedure Act and so notify the township supervisors, boards of trustees and county clerks of the townships and counties subject to this Section and Section 2-5. If the Department's promulgation removes a township from a prior multi-township assessment district, that township shall, within 30 days after the effective date of the removal, receive a distribution of a portion of the assets of the prior multi-township assessment district according to the ratio of the total equalized assessed valuation of all

the taxable property in the township to the total equalized assessed valuation of all the taxable property in the prior multi-township assessment district. If a township is removed from one multi-township assessment district and made a part of another multi-township assessment district, the district from which the township is removed shall, within 30 days after the effective date of the removal, cause the township's distribution under this paragraph to be paid directly to the district of which the township is made a part. A township receiving such a distribution (or a multi-township assessment district receiving such a distribution on behalf of a township that is made a part of that district) shall use the proceeds from the distribution only in connection with assessing real estate in the township for tax purposes.

(Source: P.A. 88-455; incorporates 88-221; 88-670, eff. 12-2-94; 89-502, eff. 6-28-96; 89-695, eff. 12-31-96.)

Sec. 2-15. Voluntary establishment of multi-township assessment districts.

Any 2 or more contiguous townships in any one county, other than townships provided for in Sections 2-5 and 2-10, may by majority vote of each board of trustees of the townships, form a multi-township assessment district comprising those townships. This determination shall be made no later than October 1 of the year preceding the year in which township officials are elected. If one or more of those township assessor's offices is vacant, a determination to form a multi-township assessment district may still be made at the time of that vacancy. The assessor or assessors remaining in office in one or more of the townships comprising the multi-township assessment district shall assume the duties of multi-township assessor until a successor is elected or appointed and qualified. If there is no township assessor remaining in office at the time, the board of trustees of the multi-township assessment district, as defined in Section 2-20, shall appoint a multi-township assessor for the unexpired terms of the former elected township assessors as provided in this Code.

The township boards of trustees shall notify the supervisor of assessments and the Department prior to December 1 of the year in which they have taken any action prescribed in this Section.

(Source: P.A. 88-455; 88-670, eff. 12-2-94.)

Sec. 2-20. Township and Multi-Township Boards of Trustees; Elected Assessors.

The township supervisors and clerks of townships comprising a multi-township assessment district, and the township board of trustees in townships that are not a part of a multi-township assessment jurisdiction, shall, ex officio, constitute a multi-township or township board of trustees for their respective assessment jurisdictions.

Each multi-township board of trustees shall organize and select one of its number as chairman, another as clerk and another as treasurer. These officers shall serve a term of 2 years or until their successors are elected, except no person shall be a member of a multi-township board of trustees after the expiration of his or her term as township supervisor or township clerk.

The powers and duties of a multi-township board of trustees or township board of trustees concerning property tax assessment administration shall be limited to the following: (1) levying taxes necessary to provide the funds required by the budget adopted for the township or multi-township assessor and certifying the levy to the county clerk, (2) determining and approving the budget of the assessor, (3) determining a salary for the assessor, and (4) setting the compensation of any assessor or temporarily appointed because the assessor is physically incapacitated, according to Section 60-5 of the Township Code. The levy shall not be included within any statutory limitation of rate or amount for other township purposes, but shall be in addition to that rate or amount. The board shall have no power to approve or disapprove personnel of the multi-township or township assessor. The treasurer of the multi-township board of trustees shall have the duties and responsibilities of the township supervisor in relation to the township assessor in the maintenance and disbursement of funds of the multi-township assessor.

The changes made in this Section by Public Act 82-554 do not apply to any township in a county with more than 3,000,000 inhabitants.(Source: P.A. 88-455; 88-670, eff. 12-2-94.)

Sec. 2-25. Transition to multi-township organization.

No later than December 1 preceding the date the multi-township assessor takes office, the assessors of townships included in the multi-township district and the supervisor of assessments shall deliver to the multi-township assessor all books, records, supplies,

and other property relating to their assessing office, taking the multi-township assessor's receipt therefor. The township supervisors of the townships comprising the multi-township district shall transfer to the multi-township treasurer all funds relating to or budgeted for purposes of township assessments. Any accounts or tax moneys for township assessment purposes thereafter shall be paid to the multi-township treasurer of the multi-township district, with copies of the county treasurer's disbursement statements going directly to the multi-township assessor. (Source: P.A. 81-838; 88-455.)

Sec. 2-30. Budget Making.

At least 60 days prior to the beginning of each fiscal year, the assessor for each multi-township assessment district or township shall prepare and present on forms provided or approved by the Department an office budget for the ensuing fiscal year. The multi-township or township board of trustees shall adopt a budget and appropriation ordinance in accordance with the Illinois Municipal Budget Law.

The multi-township board must, at least 30 days before the public hearing required by Section 3 of the Illinois Municipal Budget Law, prepare or cause to be prepared a tentative budget and appropriation ordinance and file the ordinance with the township clerks of the townships comprising the multi-township assessment district. The township clerks must make the tentative budget and appropriation ordinance available for public inspection for at least 30 days before final action on the ordinance. The required public hearing must be held on or before the last day of the first quarter of the fiscal year before the board. Notice of the hearing must be given by publication in a newspaper published in the multi-township assessment district at least 30 days before the time of the hearing. If there is no newspaper published in the multi-township assessment district, notice of the public hearing may be given by posting notices in 5 of the most public places in each township comprising the multi-township assessment district. It is the duty of the township clerks to arrange for the public hearing. The board at the public hearing may adopt all or part of the tentative budget and appropriation ordinance, as the board deems necessary.

The multi-township or township board of trustees shall determine the amount required and permitted by law to finance the operations of the office of the multi-township or township assessor. The board of trustees shall certify that amount in a levy to the county clerk in

the manner provided in Section 2-20. The county clerk shall extend the tax levies, as provided in this Code, against all taxable property within the jurisdiction. (Source: P.A. 92-684, eff. 7-16-02.)

Sec. 2-35. Disconnection petition.

(a) A township with 1,000 or more inhabitants according to the last preceding special Federal Census may be disconnected from a multi-township district under this Section if: (1) the township had less than 1,000 inhabitants preceding the date on which the township was included within a multi-township district under Section 2-5 and 2-10; or (2) the township was included within a multi-township district created under Section 2-15.

(b) If a petition for the disconnection from a multi-township assessment district of a township described in subsection (a) is signed by 10% of the registered voters of the township and is filed with the clerk of the township no later than August 1 of the year preceding the year in which the multi-township assessor is to be elected, the clerk shall promptly forward the petition to the township board of trustees. The township board of trustees shall adopt or reject the petition within 60 days after receiving it. If the board adopts the petition, the township shall be disconnected from the multi-township district, effective upon the expiration of the term of office of the incumbent multi-township assessor.

(c) After the disconnection of a township under this Section, the multi-township district shall continue to exist. If only one township remains in the district after the disconnection or if the combined population of the remaining townships is less than 1,000 inhabitants, the disconnection shall not be allowed. (Source: P.A. 84-1051; 88-455.)

Sec. 2-40. Notice of disconnection.

Within 60 days of an adoption of a disconnection petition under Section 2-35, the clerk or clerks of the disconnected township or townships shall notify the Department of that fact. When so notified, the Department shall amend the list filed with the Secretary of State under Section 2-10. (Source: P.A. 85-340; 88-455.)

Sec. 2-45. Selection and eligibility of township and multi-township assessors.

(a) In all counties under township organization, township or multi-township assessors shall be qualified as required by subsections

(b) through (d) of this Section and shall be elected as provided in this Code. Township or multi-township assessors shall enter upon their duties on January 1 following their election, and perform the duties of the office for 4 years.

(b) Beginning December 1, 1996, in any township or multi-township assessment district not subject to the requirements of subsections (c) or (d) of this Section, no person is eligible to file nomination papers or participate as a candidate in any caucus or primary or general election for, or be appointed to fill vacancies in, the office of township or multi-township assessor, unless he or she (i) has successfully completed an introductory course in assessment practices that is approved by the Department; or (ii) possesses at least one of the qualifications listed in paragraphs (1) through (6) of subsection (c) of this Section. The candidate cannot file nominating papers or participate as a candidate unless a copy of the certificate of his or her qualifications is filed with the township clerk, board of election commissioners, or other appropriate authority as required by the Election Code. The candidate cannot be appointed to fill a vacancy until he or she has filed a copy of the certificate of his or her qualifications with the appointing authority.

(c) Beginning December 1, 1996, in a township or multi-township assessment district with \$25,000,000 or more of non-farm equalized assessed value or \$1,000,000 or more in commercial and industrial equalized assessed value, no person is eligible to file nomination papers or participate as a candidate in any caucus or primary or general election for, or be appointed to fill vacancies in, the office of township or multi-township assessor, unless he or she possesses at least one of the qualifications listed in paragraphs (1) through (6) of this subsection (c).

(1) a Certified Illinois Assessing Officer certificate from the Illinois Property Assessment Institute with current additional 30 class hours as required for additional compensation under Section 4-10;

(2) (A) A Certified Illinois Assessing Officer certificate from the Illinois Property Assessment Institute with a minimum of 300 additional hours of successfully completed courses approved by the Department, if at least 150 of the course hours required a written examination; and

(B) within the 4 years preceding the election, successful

completion of at least 15 class hours of additional training in courses that must be approved by the Department, including but not limited to, assessment, appraisal, or computer courses, and that may be offered by accredited universities, colleges, or community colleges;

(3) a Certified Assessment Evaluator designation from the International Association of Assessing Officers;

(4) certification as a Member of the Appraisal Institute, Senior Real Estate Analyst, or Senior Real Property Appraiser from the Appraisal Institute or its predecessor organization;

(5) a professional designation by any other appraisal or assessing association approved by the Department; or

(6) if the person has served as a township or multi-township assessor for 12 years or more, a Certified Illinois Assessing Official certificate from the Illinois Property Assessment Institute with a minimum of 360 additional hours of successfully completed courses approved by the Department, if at least 180 of the course hours required a written examination.

The candidate cannot file nominating papers or participate as a candidate unless a copy of the certificate of his or her qualifications is filed with the township clerk, board of election commissioners, or other appropriate authority as required by the Election Code. The candidate cannot be appointed to fill a vacancy until he or she has filed a copy of the certificate of his or her qualifications with the appointing authority.

(d) Beginning December 1, 2000, in a township or multi-township assessment district with more than \$10,000,000 and less than \$25,000,000 of non-farm equalized assessed value and less than \$1,000,000 in commercial and industrial equalized assessed value, no person who has previously been elected as township or multi-township assessor in any such township or multi-township assessment district is eligible to file nomination papers or participate as a candidate in any caucus or primary or general election for the office of township or multi-township assessor, unless he or she possesses at least one of the qualifications listed in paragraphs (1) through (6) of subsection (c) of this Section. The candidate cannot file nominating papers or participate as a candidate unless a copy of the certificate of his or her qualifications is filed with the township

clerk, board of election commissioners, or other appropriate authority as required by the Election Code.

(e) If any person files nominating papers for candidacy for the office of township or multi-township assessor without also filing a copy of the certificate as required by this Section, the clerk of the township, the board of election commissioners, or other appropriate authority as required by the Election Code shall refuse to certify the name of the person as a candidate to the proper election officials.

If no candidate for election meets the above qualifications there shall be no election and the town board of trustees or multi-township board of trustees shall appoint or contract with a person under Section 2-60.

As used in this Section only, “non-farm equalized assessed value” means the total equalized assessed value in the township or multi-township assessment district as reported to the Department under Section 18-225 after removal of homestead exemptions, and after removal of the equalized assessed value reported as farm or minerals to the Department under Section 18-225.

For purposes of this Section only, “file nomination papers” also includes having nomination papers filed on behalf of the candidate by another person. (Source: P.A. 93-188, eff. 7-11-03.)

Sec. 2-50. Certification by Department.

The Department shall, within 15 days after the effective date of this amendatory Act of 1995 and, thereafter, by February 1 of each year before the year of election of township or multi-township assessors, certify to each township or multi-township clerk and each county clerk a list showing all township and multi-township assessment districts with the pre-election requirements for township or multi-township assessor under Section 2-45 for each township and each multi-township assessment district. If a new multi-township assessment district is established under Section 2-15 or a township is disconnected from a multi-township assessment district under Section 2-35, the Department shall, within 30 days after the required statutory notice, certify to the multi-township clerk and county clerk whether the assessor for the new multi-township assessment district is subject to

the requirements of subsections (b), (c), or (d) of Section 2-45 of this Code. (Source: P.A. 88-455; 89-441, eff. 6-1-96.)

Sec. 2-52. Revision of assessor qualifications by Department.

The Department may revise the assessor qualifications for township and multi-township assessment districts from those qualifications specified in subsections (c) or (d) of Section 2-45 to those qualifications specified in subsection (b) of Section 2-45 if the township or multi-township board of trustees petition the Department to do so. In determining petitions from a township or multi-township board of trustees requesting a change in assessor qualifications, the Department shall consider the quantity and complexity of assessments in the township or multi-township. The Department shall promulgate reasonable rules relating to the administration of this Section. (Source: P.A. 89-441, eff. 6-1-96.)

Sec. 2-55. Role as ex-officio deputy assessors.

In all townships in counties of 3,000,000 or more, in which township assessors are elected, the township assessors shall be ex-officio deputy assessors to make the assessments in the townships wherein they are elected but those ex-officio deputy assessors shall be under the direction and control of the county assessor in the same manner as other deputy assessors, subject to the rules and regulations prescribed by the county assessor and the board of appeals. The compensation and expenses of the township assessors shall be determined and paid as provided in Sections 2-70, 2-75, 2-80, 4-10, 4-15 and 4-20. If in any township the ex-officio deputy assessor is not able, within the time allowed by law or set by rules and regulations prescribed by the county assessor and the board of appeals, to make the assessment in the township, any additional deputy assessor or deputy assessors required to make the assessment shall be residents and legal voters of the township and may be appointed by the county assessor. For failure to complete the assessment and return the assessment books within the time prescribed by law or set by the rules and regulations of the county assessor and board of appeals, any township assessor may be removed from office by the order of the county assessor. All clerks and deputies shall take and subscribe an oath of office to honestly and faithfully perform all the duties of their respective offices under the direction of the county assessor. The county assessor, the clerks and deputy assessors, may administer oaths authorized by law to be administered by assessors. The number and compensation of the clerks and the deputies (other than

the ex-officio deputies) shall be determined annually by the county board and shall be paid from the county treasury.
(Source: P.A. 83-121; 88-455.)

Sec. 2-60. Vacancies.

(a) When any township or multi-township assessment district fails to elect an assessor or when an assessor's office becomes vacant for any reason specified in Section 25-2 of the Election Code, the township or multi-township board of trustees shall fill the vacancy in townships or multi-township assessment districts by appointing a person qualified as required under Section 2-45 or as revised by the Department under Section 2-52. A person appointed to fill a vacancy under this Section must be a member of the same political party as the person vacating the office if the person vacating the office was a member of an established political party, as defined in Section 10-2 of the Election Code, that is still in existence at the time the appointment is made. The appointee shall establish his or her political party affiliation by his or her record of voting in party primary elections or by holding or having held an office in a political party organization before the appointment. If the appointee has not voted in a party primary election or is not holding or has not held an office in a political party organization before the appointment, then the appointee shall establish his or her political party affiliation by his or her record of participating in a political party's nomination or election caucus.

(b) In the alternative, a township or multi-township assessment district shall contract with a person qualified as required under Section 2-45 or as revised by the Department under Section 2-52 to do the assessing at a cost no greater than the maximum salary authorized for that township or multi-township assessment district under Section 2-70.

(Source: P.A. 89-342, eff. 1-1-96; 89-441, eff. 6-1-96; 90-748, eff. 8-14-98.)

Sec. 2-65. Deputies and employees.

(a) In all counties under township organization where a township or multi-township assessor is unable alone to perform all duties of the office, he or she may appoint one or more suitable persons as deputies to assist in making the assessment, and may appoint other employees required for operation of the office. The deputies and other employees may be employed on an annual, monthly or daily basis.

(b) Every township or multi-township assessor with 5 or more deputies and other employees shall adopt rules concerning all benefits available to employees. The rules shall include, without limitation, the following benefits to the extent they are applicable: insurance coverage, compensation, overtime pay, compensatory time off, holidays, vacations, sick leave, and maternity leave. The rules shall be adopted and filed with the township clerk within 4 months after the assessor takes office. A multi-township assessor shall file the rules with the clerk of each township in the district. Amendments to the rules shall be filed with the appropriate township clerk or clerks by their effective date. (Source: P.A. 87-818; 88-455.)

Sec. 2-70. Salary.

Each multi-township board of trustees shall set the salary of its multi-township assessor at least 150 days before his or her election. Each township board of trustees shall set the salary of its township assessor at the same time it sets the compensation of its township supervisor. (Source: P.A. 90-210, eff. 7-25-97.)

Sec. 2-75. Affidavit for time employed.

When compensation of a township or multi-township assessor or his or her deputy is based upon the time actually employed in the making of assessments, the assessors and deputies shall make an affidavit of the time so employed. Payments of the compensation and expenses under Sections 2-65, 2-70 and 2-80 shall be paid out of the township or multi-township treasury. (Source: Laws 1967, p. 388; P.A. 88-455.)

Sec. 2-80. Expenses and office needs.

Township and multi-township assessors shall receive travel and transportation expenses in the amount determined by the board of town trustees, and shall be reimbursed for their reasonable travel, meal, lodging and registration expenses incurred in attendance at a school of instruction prescribed by the Department. The board of town trustees shall provide the office and storage space, equipment, office supplies, deputies and clerical and stenographic personnel and other items as are necessary for the efficient operation of the office. (Source: P.A. 83-1277; 88-455.)

Article 4. Assessment Officials - Other Provisions

Sec. 4-5. State compensation not to affect county compensation.

Any additional compensation payable from State funds to any county officer under this Code shall not affect any other compensation provided by law to be paid to the county officer. No county board may reduce or otherwise impair the compensation payable to a county officer because the person receives additional compensation payable from State funds under this Code. However, a county board may include State funds payable under this Code as reimbursements of or contributions to county officer salaries in determining the compensation of a county officer. As used in this Section, "county officer" includes any local assessment officer whose compensation is determined in whole or in part by a county board.

(Source: P.A. 86-348; 88-455.)

Sec. 4-10. Compensation for Certified Illinois Assessing Officers.

Subject to the requirements for continued training, any supervisor of assessments, assessor, deputy assessor or member of a board of review in any county who has earned a Certified Illinois Assessing Officers Certificate from the Illinois Property Assessment Institute shall receive from the State, out of funds appropriated to the Department from the Personal Property Tax Replacement Fund, additional compensation of \$500 per year.

To receive a Certified Illinois Assessing Officer certificate, a person shall complete successfully and pass examinations on a basic course in assessment practice approved by the Department and conducted by the Institute and additional courses totaling not less than 60 class hours that are designated and approved by the Department, on the cost, market and income approaches to value, mass appraisal techniques, and property tax administration.

To continue to be eligible for the additional compensation, a Certified Illinois Assessing Officer must complete successfully a minimum of 15 class hours requiring a written examination, and the equivalent of one seminar course of 15 class hours which does not require a written examination, in each year for which additional compensation is sought after receipt of the certificate. The Department shall designate and approve courses acceptable for additional training, including courses in business and computer techniques, and class hours applicable to each course. The Department shall specify procedures for certifying the completion

of the additional training.

The courses and training shall be conducted annually at various convenient locations throughout the State. At least one course shall be conducted annually in each county with more than 400,000 inhabitants. (Source: P.A. 97-72, eff. 7-1-11.)

Sec. 4-15. Compensation of local assessment officers holding other designations.

Any assessor, deputy assessor or member of a board of review who has been awarded a Certified Assessment Evaluator certificate by the International Association of Assessing Officers shall receive an additional compensation of \$500 per year from funds appropriated to the Department from the Personal Property Tax Replacement Fund.

Any assessor, deputy assessor or member of a board of review who has been awarded a Residential Evaluation Specialist, Assessment Administration Specialist, or Cadastral Mapping Specialist certificate by the International Association of Assessing Officers, but who has not been awarded a Certified Assessment Evaluator certificate, shall receive additional compensation of \$250 per year from funds appropriated to the Department from the Personal Property Tax Replacement Fund. If any assessor, deputy assessor, or member of a board of review has been awarded more than one certificate, but has not been awarded a Certified Assessment Evaluator certificate, the maximum additional compensation shall be \$250.

To continue to qualify for the additional compensation after receipt of a certificate, any assessor, deputy assessor or member of a board of review must, each year that additional compensation is sought, complete successfully a minimum of 15 class hours requiring a written examination, and the equivalent of one seminar course of 15 class hours which does not require a written examination. (Source: P.A. 97-72, eff. 7-1-11.)

Sec. 4-20. Additional compensation based on performance.

Any assessor in counties with less than 3,000,000 but more than 50,000 inhabitants each year may petition the Department to receive additional compensation based on performance. To receive additional compensation, the official's assessment jurisdiction must meet the

following criteria:

(1) the median level of assessment must be no more than 35 $\frac{1}{3}$ % and no less than 31 $\frac{1}{3}$ % of fair cash value of property in his or her assessment jurisdiction; and

(2) the coefficient of dispersion must not be greater than 15%.

For purposes of this Section, "coefficient of dispersion" means the average deviation of all assessments from the median level. For purposes of this Section, the number of inhabitants shall be determined by the latest federal decennial census. When the most recent census shows an increase in inhabitants to over 50,000 or a decrease to 50,000 or fewer, then the assessment year used to compute the coefficient of dispersion and the most recent year of the 3-year average level of assessments is the year that determines qualification for additional compensation. The Department will promulgate rules and regulations to determine whether an assessor meets these criteria.

Any assessor in a county of 50,000 or fewer inhabitants may petition the Department for consideration to receive additional compensation each year based on performance. In order to receive the additional compensation, the assessments in the official's assessment jurisdiction must meet the following criteria:

(i) the median level of assessments must be no more than 35 $\frac{1}{3}$ % and no less than 31 $\frac{1}{3}$ % of fair cash value of property in his or her assessment jurisdiction; and

(ii) the coefficient of dispersion must not be greater than 40% in 1994, 38% in 1995, 36% in 1996, 34% in 1997, 32% in 1998, and 30% in 1999 and every year thereafter.

Real estate transfer declarations used by the Department in annual sales-assessment ratio studies will be used to evaluate applications for additional compensation. The Department will audit other property to determine if the sales-assessment ratio study data is representative of the assessment jurisdiction. If the ratio study is found not representative, appraisals and other information may be utilized. If the ratio study is representative, upon certification by the Department, the assessor shall receive additional compensation of \$3,000 for that year, to be paid out of funds appropriated to the Department from the Personal Property Tax Replacement Fund.

As used in this Section, "assessor" means any township or multi-township assessor, or supervisor of assessments.
(Source: P.A. 97-72, eff. 7-1-11.)

Sec. 4-25. Bond of assessors.

Before entering office, every assessor and supervisor of assessments, other than township or multi-township assessors, shall enter into a bond, payable to the People of the State of Illinois in the sum of two thousand dollars, or such larger sum as the county board shall determine, with two or more sufficient sureties.

The bond of the supervisor of assessments shall be approved by the county board, and bonds of other assessors by the president or chairman of the county board. The condition of the bond shall be that the assessor or supervisor of assessments will diligently, faithfully and impartially perform the duties of the office during the term or portion thereof for which he or she was elected or appointed. The bond shall be filed in the office of the county clerk and recorded in a book to be provided for those bonds. Any taxing district, or person suffering any loss resulting from an assessor's failure to perform any of the conditions of the bond may sue to recover the loss in the name of the People of the State of Illinois. (Source: P.A. 87-1021; 87-1189; 88-455.)

Sec. 4-30. Oath of assessors.

Before entering office, every assessor or supervisor of assessments shall take and subscribe to the following oath, which shall be filed in the office of the county clerk, except the oath of township or multi-township assessors and their deputies shall be filed with their respective town clerks. The oath shall be as follows:

State of Illinois)

)ss.

County of)

I do solemnly swear (or affirm) that I will support the Constitution of the United States and the Constitution of the State of Illinois; and that I will faithfully discharge all the duties of the office of assessor, or supervisor of assessments to the best of my ability.

Dated.....

(Source: P.A. 87-1021; 87-1189; 88-455.)

TITLE 3. VALUATION AND ASSESSMENT
Article 9. General Valuation Procedures
Division 1. Office Operations

Sec. 9-5. Rules.

Each county assessor, board of appeals, and board of review shall make and publish reasonable rules for the guidance of persons doing business with them and for the orderly dispatch of business. In counties with 3,000,000 or more inhabitants, the county assessor and board of appeals (ending the first Monday in December 1998 and the board of review beginning the first Monday in December 1998 and thereafter), jointly shall make and prescribe rules for the assessment of property and the preparation of the assessment books by the township assessors in their respective townships and for the return of those books to the county assessor. (Source: P.A. 88-455; 89-126, eff. 7-11-95; 89-671, eff. 8-14-96.)

Sec. 9-10. Office hours.

The offices of the chief county assessment officer shall be open all the year during business hours to hear or receive complaints or suggestions that property has not been properly assessed. (Source: Laws 1939, p. 886; P.A. 88-455.)

Sec. 9-15. Annual meeting of supervisor of assessments.

In all counties of township organization having a supervisor of assessments, the supervisor of assessments shall, by January 1 of each year, assemble all assessors and their deputies for consultation and shall instruct them in uniformity of their functions. The instructions shall be in writing and available to the public. Notice of the annual assembly shall be published not more than 30 nor less than 10 days before the assembly in a newspaper published in the township or the tax assessment district, and if there is no such newspaper, in a newspaper published in the county and in general circulation in the township or tax assessment district. At the time of publishing the notice, a press release giving notice of the assembly shall be given to each newspaper published in the county and to each commercial broadcasting station whose main office is located in the county. The assembly is open to the public.

Any assessor or deputy assessor who willfully refuses or neglects to observe or follow instructions of the supervisor of assessments, which are in accordance with law, shall be guilty of a Class B misdemeanor.

Any supervisor of assessments who willfully gives directions which are not in accordance with law is guilty of a Class B misdemeanor. (Source: P.A. 84-837; 88-455.)

Sec. 9-20. Property record cards.

In all counties, all property record cards maintained by a township assessor, multi-township assessor, or chief county assessment officer shall be public records, and shall be available for public inspection during business hours, subject to reasonable rules and regulations of the custodian of the records. Upon request and payment of such reasonable fee established by the custodian, a copy or printout shall be provided to any person.

Property record cards may be established and maintained on electronic equipment or microfiche, and that system may be the exclusive record of property information. (Source: P.A. 83-1312; 88-455.)

Sec. 9-25. Township property record cards.

In counties under township organization, the township assessors and multi-township assessors shall allow the supervisor of assessments to make a duplicate copy of any or all records compiled and maintained by the township assessor and multi-township assessor. The supervisor of assessments shall make and maintain a complete set of property record cards. The township or multi-township assessor shall supply the supervisor of assessments with a copy of all new property record cards as they are added to the tax rolls. (Source: P.A. 84-837; 88-455.)

Sec. 9-30. Property records systems - Townships and multi-townships.

The township or multi-township assessor may spend funds for the preparation, establishment and maintenance of a detailed property record system which would provide information useful to assessment officials. The assessor also may enter into contracts with persons,

firms or corporations for the preparation and establishment of the record system. The property record system shall include up-to-date and complete tax maps, ownership lists, valuation standards and property record cards, including appraisals, for all or any part of the property in the township or multi-township assessment district in accordance with reasonable rules and procedures prescribed by the Department, but the system and records shall not be considered to be assessments nor limit the powers and duties of assessing officials. The record shall be available to all assessing officials and to the public. (Source: P.A. 82-554; 88-455.)

Sec. 9-35. County tax maps - Supervisor of assessments.

Except as provided in Section 5-1108 of the Counties Code, each supervisor of assessments shall prepare and maintain, in accordance with rules and procedures prescribed by the Department, tax maps and up-to-date lists of property owners' names and addresses and property record cards for all of the property in the county, and shall procure at regular intervals from the records maintained by the county recorder information relating to transfers of property. The supervisor of assessments shall not, however, duplicate the work of any full-time township assessor or multi-township assessor who maintains up-to-date and complete tax maps, ownership lists and property record cards in accordance with rules and procedures prescribed by the Department. This shall not preclude the maintenance of duplicate records in the supervisor of assessments' office. This Section shall not prohibit the preparation and setting up of a property record system (including appraisals) and property record cards as provided for in other Acts, but such system and records shall not be considered to be assessments nor limit the powers and duties of the assessors as provided by this Code. Systems and records or copies of them set up under other Acts may be maintained by the supervisor of assessments in his or her office. In preparing the original tax maps, lists and property record cards, he or she shall consult with the Department and the Department shall furnish to the officer such supplies and equipment as may, in its judgment, be necessary to set up the original set of maps, lists and records required by this Section. (Source: P.A. 86-482; 86-1475; 88-455.)

Sec. 9-40. County tax maps; County assessor.

In any county with less than 3,000,000 inhabitants which elects a county assessor under Section 3-45, the county assessor shall, except as provided in Section 5-1108 of the Counties Code, prepare and

maintain tax maps, up-to-date lists of property owners' names and addresses, and property record cards for all of the property in the county. Those documents shall be prepared and maintained in accordance with rules and procedures prescribed by the Department. The county assessor also shall procure at regular intervals from the records maintained by the recorder information relating to transfers of property. The county assessor shall not duplicate the work of any fulltime township assessor who maintains up-to-date and complete tax maps, ownership lists and property record cards in accordance with rules and procedures prescribed by the Department, but this shall not preclude the maintenance of duplicate copies of those records in the county assessor's office. This Section does not prohibit the preparation and setting up of a property record system (including appraisals) and property record cards as provided for in other Acts, but the system and records shall not be considered to be assessments nor limit the powers and duties of the assessors under this Code. Systems and records or copies of them set up under such other Acts may be maintained by the county assessor in his or her office. In preparing the original tax maps, lists and property record cards, the county assessor shall consult with the Department. The Department shall furnish to that officer supplies and equipment as may, in its judgment, be necessary to set up the original set of maps, lists and records required by this Section. (Source: P.A. 86-1475; 88-455.)

Sec. 9-45. Property index number system.

The county clerk in counties of 3,000,000 or more inhabitants and, subject to the approval of the county board, the chief county assessment officer or recorder, in counties of less than 3,000,000 inhabitants, may establish a property index number system under which property may be listed for purposes of assessment, collection of taxes or automation of the office of the recorder. The system may be adopted in addition to, or instead of, the method of listing by legal description as provided in Section 9-40. The system shall describe property by township, section, block, and parcel or lot, and may cross-reference the street or post office address, if any, and street code number, if any. The county clerk, county treasurer, chief county assessment officer or recorder may establish and maintain cross indexes of numbers assigned under the system with the complete legal description of the properties to which the numbers relate. Index numbers shall be assigned by the county clerk in counties of 3,000,000 or more inhabitants, and, at the direction of the county board in counties with less than 3,000,000 inhabitants, shall be assigned by the chief county

assessment officer or recorder. Tax maps of the county clerk, county treasurer or chief county assessment officer shall carry those numbers. The indexes shall be open to public inspection and be made available to the public. Any property index number system established prior to the effective date of this Code shall remain valid. However, in counties with less than 3,000,000 inhabitants, the system may be transferred to another authority upon the approval of the county board.

Any real property used for a power generating or automotive manufacturing facility located within a county of less than 1,000,000 inhabitants, as to which litigation with respect to its assessed valuation is pending or was pending as of January 1, 1993, may be the subject of a real property tax assessment settlement agreement among the taxpayer and taxing districts in which it is situated. In addition, any real property that is (i) used for natural gas extraction and fractionation or olefin and polymer manufacturing and (ii) located within a county of less than 1,000,000 inhabitants may be the subject of a real property tax assessment settlement agreement among the taxpayer and taxing districts in which the property is situated if litigation is or was pending as to its assessed valuation as of January 1, 2003 or thereafter. Other appropriate authorities, which may include county and State boards or officials, may also be parties to such agreements. Such agreements may include the assessment of the facility or property for any years in dispute as well as for up to 10 years in the future. Such agreements may provide for the settlement of issues relating to the assessed value of the facility and may provide for related payments, refunds, claims, credits against taxes and liabilities in respect to past and future taxes of taxing districts, including any fund created under Section 20-35 of this Act, all implementing the settlement agreement. Any such agreement may provide that parties thereto agree not to challenge assessments as provided in the agreement. An agreement entered into on or after January 1, 1993 may provide for the classification of property that is the subject of the agreement as real or personal during the term of the agreement and thereafter. It may also provide that taxing districts agree to reimburse the taxpayer for amounts paid by the taxpayer in respect to taxes for the real property which is the subject of the agreement to the extent levied by those respective districts, over and above amounts which would be due if the facility were to be assessed as provided in the agreement. Such reimbursement may be provided in the agreement to be made by credit against taxes of the taxpayer. No credits shall be applied against taxes levied with respect to debt service or lease payments of a taxing district. No referendum approval or appropriation shall be required for such an agreement or such credits and any such obligation shall not constitute indebtedness of the taxing district for

purposes of any statutory limitation. The county collector shall treat credited amounts as if they had been received by the collector as taxes paid by the taxpayer and as if remitted to the district. A county treasurer who is a party to such an agreement may agree to hold amounts paid in escrow as provided in the agreement for possible use for paying taxes until conditions of the agreement are met and then to apply these amounts as provided in the agreement. No such settlement agreement shall be effective unless it shall have been approved by the court in which such litigation is pending. Any such agreement which has been entered into prior to adoption of this amendatory Act of 1988 and which is contingent upon enactment of authorizing legislation shall be binding and enforceable. (Source: P.A. 96-609, eff. 8-24-09.)

Sec. 9-50. Maps and plats.

The chief county assessment officer may make or purchase maps and plats that will facilitate the business of his or her office. The maps and plats shall always remain in the office, and will be open and accessible to the public. (Source: Laws 1939, p. 886; P.A. 88-455.)

Sec. 9-55. Survey by owner.

When a property is divided into parcels so that it cannot be described without describing it by metes and bounds, it is the duty of the owner to have the land surveyed and platted into lots. The platting shall be in accord with the Plat Act. The plat shall be certified and recorded. Any unit of local government responsible for issuing building permits may require, by ordinance, that the plat be certified and recorded before the building permit is issued, unless a subdivision plat is not required under subsection (b) of Section 1 of the Plat Act. The description of property, in accordance with the number and description in the plat, shall be a valid description of the property described. However, no plat of a subdivision, vacation or dedication of a tract of land shall be approved by a city, incorporated town or village officer, nor shall any recorder record a plat, unless a statement from the county clerk is endorsed thereon showing that he or she finds no delinquent general taxes, unpaid current general taxes, delinquent special assessments or unpaid current special assessments against the tract of land. No officer of a city, village or incorporated town shall approve the plat of a subdivision of a tract of land until all deferred installments of outstanding unpaid special assessments are either certified as paid by the proper collector, or a division thereof is made in accord with the proposed subdivision and duly approved by the court that confirmed the special assessment. (Source: P.A. 90-788, eff. 8-14-98.)

Sec. 9-60. (Repealed).

(Source: P.A. 88-455. Repealed by P.A. 95-925, eff. 1-1-09.)

Sec. 9-65. Reassessment after platting.

Except as otherwise provided by Section 10-30 with respect to assessments made in counties with less than 3,000,000 inhabitants, whenever acreage property has been subdivided into lots and the subdivision has been recorded, the lots shall be reassessed and placed upon the assessor's books, replacing the acreage property, as of the first day of January immediately following the date of the recording or filing of the subdivision. (Source: P.A. 83-358; 83-837; 83-1362; 88-455.)

Division 2. Assessment authority

Sec. 9-70. Assessment authority.

The Department shall assess all pollution control facilities, low sulfur dioxide emission coal fueled devices, and property owned or used by railroad companies operating within this State, except, noncarrier real estate. Local assessment officers shall assess all other property not exempted from taxation. (Source: P.A. 81-838; 88-455.)

Sec. 9-75. Revisions of assessments; Counties of less than 3,000,000.

The chief county assessment officer of any county with less than 3,000,000 inhabitants, or the township or multi-township assessor of any township in that county, may in any year revise and correct an assessment as appears to be just. Notice of the revision shall be given in the manner provided in Section 12-10 and 12-30 to the taxpayer whose assessment has been changed. (Source: P.A. 81-838;88-455.)

Sec. 9-80. Authority to revise assessments; Counties of less than 3,000,000.

The chief county assessment officer in counties with less than 3,000,000 inhabitants shall have the same authority as the township or multi-township assessor to assess and to make changes or alterations in the assessment of property, and shall assess and make such

changes or alterations in the assessment of property as though originally made. Changes by the chief county assessment officer in valuations shall be noted in a column provided, and no change shall be made in the original assessor's figures.

When the chief county assessment officer or his or her deputy views property for the purposes of assessing the property or determining whether a change or alteration in the assessment of the property is required, he or she shall give notice to the township assessor by U.S. Mail at least 5 days but not more than 30 days prior to the viewing, so that the assessor may arrange to be present at the viewing, except if the township or multi-township assessor fails to timely return the assessment books or workbooks as required by Section 9-230. He or she shall also give notice to owners of the properties by means of notices in a paper of general circulation in the township. The notices shall state the chief county assessment officer's intention to view the property but need not specify the date and time of the viewing. When the chief county assessment officer or his or her deputy is present at the property to be viewed, immediately prior to the viewing, he or she shall make a reasonable effort to ascertain if the owner or his or her representative, or the assessor, are on the premises and to inform them of his or her intention to view the property. Failure to provide notice to the township assessor and owner shall not of and by itself invalidate any change in an assessment. A viewing under this Section and Section 9-155 means actual viewing of the visible property in its entirety from, on or at the site of the property.

All changes and alterations in the assessment of property shall be subject to revision by the board of review in the same manner that original assessments are reviewed. (Source: P.A. 96-486, eff. 8-14-09.)

Sec. 9-85. Revision of assessments by county assessor and board of review; Counties of 3,000,000 or more.

In counties with 3,000,000 or more inhabitants, the county assessor shall have authority annually to revise the assessment books and correct them as appears to be just; and on complaint in writing in proper form by any taxpayer, and after affording the taxpayer an opportunity to be heard thereon, he or she shall do so at any time, until the assessment is verified. An entry upon the assessment books does not constitute an assessment until the assessment is verified. When a notice is to be mailed under Section 12-55 and the address that appears on the assessor's records is the address of a mortgage lender or the trustee, where title to the property is held in a land trust, or in any event whenever the notice is mailed by the assessor

to a taxpayer at or in care of the address of a mortgage lender or a trustee where the title to the property is held in a land trust, the mortgage lender or the trustee within 15 days of the mortgage lender's or the trustee's receipt of such notice shall mail a copy of the notice to each mortgagor of the property referred to in the notice at the last known address of each mortgagor as shown on the records of the mortgage lender, or to each beneficiary as shown on the records of the trustee.

All changes and alterations pursuant to Section 16-95 or Section 16-120 in the assessment of property shall be subject to revision and entry into the assessment books by the board of appeals (until the first Monday in December 1998 and the board of review beginning the first Monday in December 1998 and thereafter) in the same manner as the original assessments. (Source: P.A. 88-455; 89-126, eff. 7-11-95; 89-671, eff. 8-14-96.)

Division 3. Assessment books

Sec. 9-90. Procuring assessment books.

The county clerk shall procure all necessary books and blanks required by this Code to be used in the assessment of property and collection of taxes, at the expense of the county. (Source: Laws 1939, p. 886; P.A. 88-455.)

Sec. 9-95. Listing of property.

All property subject to taxation under this Code, including property becoming taxable for the first time, shall be listed by the proper legal description in the name of the owner, and assessed at the times and in the manner provided in Sections 9-215 through 9-225, and also in any year that the Department orders a reassessment (to the extent the reassessment is so ordered), with reference to the amount owned on January 1 in the year for which it is assessed, including all property purchased that day. The assessment, as modified or equalized or changed as provided by law, shall be the assessment upon which taxes shall be levied and extended during the general assessment period for which the assessment is made, or during the remainder of that general assessment period for any property reassessed by order of the Department. No assessment shall be considered illegal by reason of not having been listed or assessed in the name of the owner or owners. (Source: P.A. 85-1221; 86-1481; 88-455.)

Sec. 9-100. Assessment list; Delivery of books.

Before January 1 in each year of the general assessment, as provided in Sections 9-215 through 9-225, each county clerk shall make up the list of property to be assessed for taxes for the townships or taxing districts in the county, in books for that purpose. Annually, before January 1, he or she shall make up lists of properties which are taxable, or which become taxable for the first time, and which are not already listed, and make up lists of properties which have been subdivided and not listed by the proper description. The county clerk shall enter in the proper column, opposite the respective parcels, the name of the owner, or other such persons, so far as he is able to ascertain the names. The lists shall contain columns to show the number of acres or lots improved, and the assessed value; the assessed value of improvements; the total value; and other information as may be required. The county clerk shall also have prepared and ready for delivery all blanks necessary in the assessment of property, and shall deliver those blanks to the assessors along with the assessment books or lists. The books or lists may be completed and delivered by townships or taxing districts without waiting for the completion of all the books or lists, but all assessment books or lists shall be delivered by the county clerk to the chief county assessment officer on or before January 1. The books or lists shall be made in duplicate. (Source: P.A. 86-1481; 88-455.)

Sec. 9-105. Makeup of assessment books by townships.

The books for the assessment of property, in counties not under township organization, shall be made up by congressional townships, but parts or fractional townships may be added to full townships, at the discretion of the county board. In counties under township organization, the books shall be made to correspond with the organized townships. Separate books shall be made for the assessment of property and the collection of all taxes and special assessments thereon, within the corporate limits of cities, incorporated towns and villages, if ordered by the county board. (Source: Laws 1939, p. 886; P.A. 88-455.)

Sec. 9-110. Railroad assessment book.

The county clerk shall procure, at the expense of the county, a record book in a form prescribed by the Department, in which to enter railroad property as listed for taxation, and shall enter the valuations assessed, corrected and equalized in the manner provided by

law. The county clerk shall extend all the taxes for which the property is liable against its equalized assessed value. At the time fixed by law for delivering tax books to the county collector, the clerk shall attach a warrant, under his or her seal of office, and deliver the book to the county collector. The county collector shall collect the taxes charged against railroad property, and pay over and account for the taxes in the manner provided in other cases. The book shall be returned by the collector and filed in the office of the county clerk. The taxes on all railroad property shall be extended as on other property, and shall be subject to the same penalties, dates of payment and methods of enforcement as other property taxes. (Source: Laws 1945, p. 1212; P.A. 88-455.)

Sec. 9-115. Parcels in more than one taxing district.

When any property is situated in more than one township or taxing district, or is situated and assessed in any drainage district, for drainage purposes, the portion in each township or taxing district shall be listed separately. The lands in any drainage district shall be listed so as to correspond, as nearly as possible, to the respective subdivisions and descriptions in the latest assessment roll of the drainage district. (Source: Laws 1939, p. 886; P.A. 88-455.)

Sec. 9-120. Combined listings.

When a whole section, half section, quarter section, or half-quarter section of property, belongs to the same owner, it may, and shall, at the request of the owner or his or her agent, be listed as one tract, and when all lots in the same block belong to the same owner they may, and shall, at the request of the owner or his or her agent, be listed as a block. When several adjoining lots in the same block belong to the same owner, they may, and shall, at the request of the owner or his or her agent, be included in one description. However, this Section shall not apply to property on which delinquent or forfeited taxes are outstanding. (Source: Laws 1939, p. 886; P.A. 88-455.)

Sec. 9-125. Verification of assessment lists.

The county clerk shall compare the lists of property with the list of taxable property on file in his or her office. (Source: Laws 1939, p. 886; P.A. 88-455.)

Sec. 9-130. Delivery of assessment books.

The chief county assessment officer shall call upon the county clerk on or before the first day of January in each year and receive the assessment books and blanks as prepared by the county clerk for the assessment of property for that year. (Source: P.A. 86-678; 88-455.)

Sec. 9-135. Correction of assessment lists.

If the assessor or chief county assessment officer finds that any property subject to taxation, or special assessment, has not been returned to him or her by the clerk, or has not been described in the subdivisions or manner required by this Code, he or she shall correct the return of the clerk, and shall list and assess the property in the manner required by law.

The assessor or chief county assessment officer shall, also, from time to time, make alterations in the description of property as he or she may find necessary. When property has been subdivided since the making of the general assessment, the assessor or chief county assessment officer shall from time to time correct the descriptions so that they correspond to the subdivision, and distribute the assessment in the proper proportions among the parcels into which the land has been subdivided; and in case of a vacation of a subdivision readjust the description of the assessment accordingly. (Source: Laws 1939, p. 886; P.A. 88-455.)

Sec. 9-140. Loss or destruction of assessment books.

When all or any part of the assessment rolls or collectors' books of any county, or other taxing district are lost or destroyed by any means whatever, a new assessment, or new books, as the case may require, shall be made under the direction of the county board. The board shall, in those cases, fix reasonable times and dates for performing the work of assessment, equalization, levy, extension and collection of taxes, and paying over the same, or making new books, as the circumstances of the case may require. All provisions of this Code apply to the dates fixed by the county board, in the same manner that they apply to the dates for similar purposes, as fixed by this Code. The presiding officer of the county board may select and appoint persons, with the advice and consent of the county board, when he or she finds it necessary, to carry out provisions of this section. (Source: P.A. 78-1128; 88-455.)

Division 4. Valuation procedures

Sec. 9-145. Statutory level of assessment.

Except in counties with more than 200,000 inhabitants which classify property for purposes of taxation, property shall be valued as follows:

(a) Each tract or lot of property shall be valued at 33 1/3% of its fair cash value.

(b) Each taxable leasehold estate shall be valued at 33 1/3% of its fair cash value.

(c) Each building or structure which is located on the right of way of any canal, railroad or other company leased or granted to another company or person for a term of years, shall be valued at 33 1/3% of its fair cash value.

(d) Any property on which there is a coal or other mine, or stone or other quarry, shall be valued at 33 1/3% of its fair cash value. Oil, gas and other minerals, except coal, shall have value and be assessed separately at 33 1/3% of the fair cash value of such oil, gas and other minerals. Coal shall be assessed separately at 33 1/3% of the coal reserve economic value, as provided in Sections 10-170 through 10-200.

(e) In the assessment of property encumbered by public easement, any depreciation occasioned by such easement shall be deducted in the valuation of such property. Any property dedicated as a nature preserve or as a nature preserve buffer under the Illinois Natural Areas Preservation Act, for the purposes of this paragraph, is encumbered by a public easement and shall be depreciated for assessment purposes to a level at which its valuation shall be \$1 per acre or portion thereof.

This Section is subject to and modified by Sections 10-110 through 10-140 and 11-5 through 11-65. (Source: P.A. 91-497, eff. 1-1-00.)

Sec. 9-150. Classification of property.

Where property is classified for purposes of taxation in accordance with Section 4 of Article IX of the Constitution and with such other limitations as may be prescribed by law, the classification must be established by ordinance of the county board. If not so established, the classification is void. (Source: P.A. 78-700; 88-455.)

Sec. 9-155. Valuation in general assessment years.

On or before June 1 in each general assessment year in all counties with less than 3,000,000 inhabitants, and as soon as he or she reasonably can in each general assessment year in counties with 3,000,000 or more inhabitants, or if any such county is divided into assessment districts as provided in Sections 9-215 through 9-225, as soon as he or she reasonably can in each general assessment year in those districts, the assessor, in person or by deputy, shall actually view and determine as near as practicable the value of each property listed for taxation as of January 1 of that year, or as provided in Section 9-180, and assess the property at 33 1/3% of its fair cash value, or in accordance with Sections 10-110 through 10-140 and 10-170 through 10-200, or in accordance with a county ordinance adopted under Section 4 of Article IX of the Constitution of Illinois. The assessor or deputy shall set down, in the books furnished for that purpose the assessed valuation of properties in one column, the assessed value of improvements in another, and the total valuation in a separate column. (Source: P.A. 86-1481; 87-1189; 88-455.)

Sec. 9-160. Valuation in years other than general assessment years.

On or before June 1 in each year other than the general assessment year, in all counties with less than 3,000,000 inhabitants, and as soon as he or she reasonably can in counties with 3,000,000 or more inhabitants, the assessor shall list and assess all property which becomes taxable and which is not upon the general assessment, and also make and return a list of all new or added buildings, structures or other improvements of any kind, the value of which had not been previously added to or included in the valuation of the property on which such improvements have been made, specifying the property on which each of the improvements has been made, the kind of improvement and the value which, in his or her opinion, has been added to the property by the improvements. The assessment shall also include or exclude, on a proportionate basis in accordance with the provisions of Section 9-180, all new or added buildings, structures or other improvements, the value of which was not included in the valuation of the property for that year, and all improvements which were destroyed or removed. In case of the destruction or injury by fire, flood, cyclone, storm or otherwise, or removal of any structures of any kind, or of the destruction of or any injury to orchard

timber, ornamental trees or groves, the value of which has been included in any former valuation of the property, the assessor shall determine as near as practicable how much the value of the property has been diminished, and make return thereof.

Beginning January 1, 1996, the authority within a unit of local government that is responsible for issuing building or occupancy permits shall notify the chief county assessment officer, by December 31 of the assessment year, when a full or partial occupancy permit has been issued for a parcel of real property. The chief county assessment officer shall include in the assessment of the property for the current year the proportionate value of new or added improvements on that property from the date the occupancy permit was issued or from the date the new or added improvement was inhabitable and fit for occupancy or for intended customary use until December 31 of that year. If the chief county assessment officer has already certified the books for the year, the board of review or interim board of review shall assess the new or added improvements on a proportionate basis for the year in which the occupancy permit was issued or the new or added improvement was inhabitable and fit for occupancy or for intended customary use. The proportionate value of the new or added improvements may be assessed by the board of review or interim board of review as omitted property pursuant to Sections 9-265, 9-270, 16-50 and 16-140 in a subsequent year on a proportionate basis for the year in which the occupancy permit was issued or the new or added improvement was inhabitable and fit for occupancy or for intended customary use if it was not assessed in that year. (Source: P.A. 91-486, eff. 1-1-00.)

Sec. 9-165. Definitions.

As used in Sections 9-160 and 9-180:

"Municipality" means a city, village or incorporated town.

"Governing body" means (a) the corporate authorities of a municipality with respect to territory within its corporate limits and (b) the county board with respect to territory in the county not within the corporate limits of any municipality.

"Occupancy permit" means the certificate or permit, by whatever name denominated, which a municipality or county, under its authority to regulate the construction of buildings, issues as evidence that all applicable requirements have been complied with and requires before any new, reconstructed or remodeled building may be lawfully occupied.

(Source: P.A. 91-357, eff. 7-29-99; 91-486, eff. 1-1-00.)

Sec. 9-170. (Repealed).

(Source: P.A. 88-455. Repealed by 89-412, eff. 11-17-95.)

Sec. 9-175. Owner on assessment date.

The owner of property on January 1 in any year shall be liable for the taxes of that year, except that when coal has been separated from the land by deed or lease, the owner or lessee of the coal shall be liable for the taxes on the coal in the year of first production and each year thereafter until production ceases. Subject to the provisions of Section 20-210 for payment of current taxes on a specified part or undivided share of property, in all cases of property having more than one owner as of January 1 of any year, each owner is liable jointly and severally in any action under Section 21-440 for all taxes of that year.(Source: P.A. 86-949; 87-818; 88-455.)

Sec. 9-180. Pro-rata valuations; improvements or removal of improvements.

The owner of property on January 1 also shall be liable, on a proportionate basis, for the increased taxes occasioned by the construction of new or added buildings, structures or other improvements on the property from the date when the occupancy permit was issued or from the date the new or added improvement was inhabitable and fit for occupancy or for intended customary use to December 31 of that year. The owner of the improved property shall notify the assessor, within 30 days of the issuance of an occupancy permit or within 30 days of completion of the improvements, on a form prescribed by that official, and request that the property be reassessed. The notice shall be sent by certified mail, return receipt requested and shall include the legal description of the property.

When, during the previous calendar year, any buildings, structures or other improvements on the property were destroyed and rendered uninhabitable or otherwise unfit for occupancy or for customary use by accidental means (excluding destruction resulting from the willful misconduct of the owner of such property), the owner of the property on January 1 shall be entitled, on a proportionate basis, to a diminution of assessed valuation for such period during which the improvements were uninhabitable or unfit for occupancy or for customary use. The owner of property entitled to a diminution of assessed valuation shall, on a form prescribed by the assessor,

within 90 days after the destruction of any improvements or, in counties with less than 3,000,000 inhabitants within 90 days after the township or multi-township assessor has mailed the application form as required by Section 9-190, file with the assessor for the decrease of assessed valuation. Upon failure so to do within the 90 day period, no diminution of assessed valuation shall be attributable to the property.

Computations under this Section shall be on the basis of a year of 365 days. (Source: P.A. 91-486, eff. 1-1-00.)

Sec. 9-185. Change in use or ownership.

The purchaser of property on January 1 shall be considered as the owner on that day. However, when a fee simple title or lesser interest in property is purchased, granted, taken or otherwise transferred for a use exempt from taxation under this Code, that property shall be exempt from taxes from the date of the right of possession, except that property acquired by condemnation is exempt as of the date the condemnation petition is filed. Whenever a fee simple title or lesser interest in property is purchased, granted, taken or otherwise transferred from a use exempt from taxation under this Code to a use not so exempt, that property shall be subject to taxation from the date of purchase or conveyance. It shall be the obligation of the titleholder of record in such cases where there is a change in use or a change in a leasehold estate or, in cases where there has been a purchase, grant, taking or transfer, it is the obligation of the transferee to notify the chief county assessment officer within 30 days of that action. Failure to give the notification, resulting in the assessing official continuing to list the property as exempt in subsequent years, shall cause the property to be considered omitted property for the purpose of this Code. In those cases the county collector is authorized to issue a tax bill to the person holding title to the property in that part of the year during which it was not exempt from taxation for that part of the year and to accept payment of the bill as full and final settlement of tax liability for the year involved. (Source: P.A. 86-949; 87-818; 88-455.)

Sec. 9-190. Damaged or destroyed property.

(a) When a property in a county with less than 3,000,000 inhabitants has been destroyed or rendered uninhabitable or otherwise unfit for occupancy or customary use by natural disaster or accidental means, the township assessor shall send to the owner by certified mail an

application form for reduction of the assessed valuation of that property as provided in Section 9-180.

(b) Whenever an official, employee, or other representative of a municipal fire department, fire protection district, volunteer fire protection association, or emergency services and disaster agency of a political subdivision of this State is required by law to make an official report to another government official or agency concerning a natural disaster or accident that is likely to cause real property to have a diminished assessed valuation, that official, employee, or representative shall make a copy of the report available to the property owner on the owner's request and shall insure that the report contains the following notice:

NOTICE TO PROPERTY OWNER

If your property has been damaged you may be eligible for a decrease in the assessed valuation of your property, which could result in lower property taxes.

Contact your local assessor for more information.

(c) Regardless of whether an official report concerning the natural disaster or accident is issued under subsection (b), the property owner may notify the township assessor of the property's destruction, uninhabitability, or unfitness for occupancy or normal use.

(Source: P.A. 87-818; 88-455; incorporates 88-221; 88-670, eff. 12-2-94.)

Sec. 9-195. Leasing of exempt property.

(a) Except as provided in Sections 15-35, 15-55, 15-60, 15-100, 15-103, 15-160, and 15-185, when property which is exempt from taxation is leased to another whose property is not exempt, and the leasing of which does not make the property taxable, the leasehold estate and the appurtenances shall be listed as the property of the lessee thereof, or his or her assignee. Taxes on that property shall be collected in the same manner as on property that is not exempt, and the lessee shall be liable for those taxes. However, no tax lien shall attach to the exempt real estate. The changes made by this amendatory Act of 1997 and by this amendatory Act of the 91st General Assembly are declaratory of existing law and shall not be construed as a new enactment. The changes made by Public Acts 88-221 and 88-420 that are incorporated into this Section by this amendatory Act of 1993 are declarative of existing law and are not a new enactment.

(b) The provisions of this Section regarding taxation of leasehold interests in exempt property do not apply to any leasehold interest created pursuant to any transaction described in subsection (e) of Section 15-35, subsection (c-5) of Section 15-60, subsection (b) of Section 15-100, Section 15-103, Section 15-160, or Section 15-185. (Source: P.A. 97-1161, eff. 6-1-13.)

Sec. 9-200. Previously exempt property.

Property that is purchased, granted, taken or otherwise transferred from a use exempt from taxation under this Code to a use not so exempt shall be subject to taxation from the date of change of use, purchase or conveyance. In those cases the county collector may issue a tax bill to the person holding title to the property for that part of the year during which it was not exempt, and may accept payment of the bill as full and final settlement of tax liability for that year. (Source: P.A. 86-1481; 88-455.)

Sec. 9-205. Equalization.

When deemed necessary to equalize assessments between or within townships or between classes of property, or when deemed necessary to raise or lower assessments within a county or any part thereof to the level prescribed by law, changes in individual assessments may be made by a township assessor or chief county assessment officer, under Section 9-75, by application of a percentage increase or decrease to each assessment. (Source: P.A. 81-1034; 88-455.)

Sec. 9-210. Equalization by chief county assessment officer; counties of less than 3,000,000.

The chief county assessment officer in a county with less than 3,000,000 inhabitants shall act as an equalizing authority for each county in which he or she serves. The officer shall examine the assessments in the county and shall equalize the assessments by increasing or reducing the entire assessment of property in the county or any area therein or of any class of property, so that the assessments will be at 33 1/3% of fair cash value. The equalization process and analysis described in this Section shall apply to all property except farm and coal properties assessed under Sections 10-110 through 10-140 and 10-170 through 10-200.

For each township or assessment district in the county, the supervisor of assessments shall annually determine the percentage relationship between the estimated 33 1/3% of the fair cash value of the property and the assessed valuations at which the property is listed for each township, multi-township or assessment district. To make this analysis, he or she shall use property transfers, property appraisals, and other means as he or she deems proper and reasonable.

With the ratio determined for each township or assessment district, the supervisor of assessments shall then determine the percentage to be added to or deducted from the aggregate assessments in each township or assessment district, other than property assessed under Sections 10-110 through 10-140 and 10-170 through 10-200, in order to produce a ratio of assessed value to fair cash value of 33 1/3%. That percentage shall be issued as an equalization factor for each township or assessment district within each county served by the chief county assessment officer. The assessment officer shall then change the assessment of each parcel of property by application of the equalization factor. (Source: P.A. 88-455; 88-670, eff. 12-2-94.)

Sec. 9-213. Explanation of equalization factors.

The chief county assessment officer in every county with less than 3,000,000 inhabitants must provide a plain-English explanation of all township, county, and State equalization factors, including the rationale and methods used to determine the equalizations. If a county Internet website exists, this explanation must be published thereon, otherwise it must be available to the public upon request at the office of the chief county assessment officer. (Source: P.A. 96-122, eff. 1-1-10.)

Sec. 9-215. General assessment years; counties of less than 3,000,000.

Except as provided in Sections 9-220 and 9-225, in counties having the township form of government and with less than 3,000,000 inhabitants, the general assessment years shall be 1995 and every fourth year thereafter. In counties having the commission form of government and less than 3,000,000 inhabitants, the general assessment years shall be 1994 and every fourth year thereafter. (Source: P.A. 86-1481; 87-1189; 88-455.)

Sec. 9-220. Division into assessment districts; assessment years; counties of 3,000,000 or more.

(a) Notwithstanding any other provision in this Code to the contrary, until January 1, 1996, the county board of a county with 3,000,000 or more inhabitants may by resolution divide the county into any number of assessment districts. If the county is organized into townships, the assessment districts shall follow township lines. The assessment districts shall divide, as near as practicable, the work of assessing the property in the county into equal parts but neither the area nor the number of parcels need be equal in the assessment districts. The resolution shall number the assessment districts and provide for a general reassessment of each district at regular intervals determined by the county board.

(b) Beginning January 1, 1996, in counties with 3,000,000 or more inhabitants, assessment districts shall be subject to general reassessment according to the following schedule:

(1) The first assessment district shall be subject to general reassessment in 1997 and every 3 years thereafter.

(2) The second assessment district shall be subject to general reassessment in 1998 and every 3 years thereafter.

(3) The third assessment district shall be subject to general reassessment in 1996 and every 3 years thereafter.

The boundaries of the 3 assessment districts are as follows: (i) the first assessment district shall be that portion of the county located within the boundaries of a municipality with 1,000,000 or more inhabitants, (ii) the second assessment district shall be that portion of the county that lies north of State Route 64 (North Avenue) and outside the boundaries of a municipality with 1,000,000 or more inhabitants, and (iii) the third assessment district shall be that portion of the county that lies south of State Route 64 (North Avenue) and outside the boundaries of a municipality with 1,000,000 or more inhabitants. (Source: P.A. 88-455; 89-126, eff. 7-11-95.)

Sec. 9-225. Division of county into four assessment districts.

Resolutions of any county board dividing the county into four assessment districts, if adopted before January 1, 1990, shall remain valid thereafter unless and until repealed by the county board.

The county board of any county may, by resolution adopted after January 1, 1992, divide the county into 4 assessment

districts. The county clerk shall forward a copy of the resolution to the Department. The assessment districts shall follow township lines if the county is organized into townships, and shall divide, as near as may be, the work of assessing the property in the county into 4 equal parts. Neither the area nor the number of parcels of property need be equal in the 4 assessment districts. The resolution shall number the assessment districts 1 to 4 inclusive. The general assessment years for assessment district number 1 shall be 1992 and every fourth year thereafter; for assessment district number 2, the general assessment years shall be 1993 and every fourth year thereafter; for assessment district number 3, the general assessment years shall be 1994 and every fourth year thereafter; and for assessment district number 4, the general assessment years shall be 1995 and every fourth year thereafter. However, the general assessments shall not include property constituting a farm which is assessed under Sections 10-110 through 10-140. The county board of any county divided into assessment districts under this paragraph may provide by resolution for the assessment of the entire county in the general assessment year provided by law for that county and for the dissolution of the assessment district after the first such assessment. (Source: P.A. 86-1481; 87-1189; 88-455.)

Sec. 9-230. Return of township or multi-township assessment books.

(a) The township or multi-township assessors in counties with less than 600,000 inhabitants, based on the 2000 federal decennial census, shall, on or before June 15 of the assessment year, return the assessment books or workbooks to the supervisor of assessments. The township or multi-township assessors in counties with 600,000 or more but no more than 700,000 inhabitants, based on the 2000 federal decennial census, shall, on or before July 15 of the assessment year, return the assessment books or workbooks to the supervisor of assessments. The township or multi-township assessors in counties with less than 3,000,000 inhabitants, but more than 700,000 inhabitants, based on the 2000 federal decennial census, shall, on or before November 15 of the assessment year, return the assessment books or workbooks to the supervisor of assessments. If a township or multi-township assessor in a county with less than 3,000,000 inhabitants, based on the 2000 federal decennial census, does not return the assessment books or work books

within the required time, the supervisor of assessments may take possession of the books and complete the assessments pursuant to law. Each of the books shall be verified by affidavit by the assessor substantially as follows:

State of Illinois)
)ss.
County of)

I do solemnly swear that the book or books in number, to which this affidavit is attached, contains a complete list of all of the property in the township or multi-township or assessment district herein described subject to taxation for the year so far as I have been able to ascertain, and that the assessed value set down in the proper column opposite the descriptions of property is a just and equal assessment of the property according to law.

Dated

(b) If the supervisor of assessments determines that the township or multi-township assessor has not completed the assessments as required by law before returning the assessment books under this Section, the county board may submit a bill to the township board of trustees for the reasonable costs incurred by the supervisor of assessments in completing the assessments. The moneys collected under this subsection may be used by the supervisor of assessments only for the purpose of recouping costs incurred in completing the assessments.

(Source: P.A. 96-486, eff. 8-14-09; 97-797, eff. 1-1-13.)

Sec. 9-235. Failure to complete assessments.

If the board of review, in any county under township organization with less than 3,000,000 inhabitants, fails to complete its work for the assessment year by the next January 1, the supervisor of assessments shall issue work books to the township assessors until the board of review completes its work. (Source: P.A. 85-1253; 88-455.)

Sec. 9-240. Assessment book totals.

The assessor and chief county assessment officer shall add up and note the aggregate of each column in the assessment books; and shall also add in each book, under proper headings, a tabular statement, showing the footings of the several columns upon each page; and shall add up and set down the total of each column. When the assessor or chief county assessment officer returns several assessment books, he

Division 5. Omitted property

Sec. 9-260. Assessment of omitted property; counties of 3,000,000 or more.

(a) After signing the affidavit, the county assessor shall have power, when directed by the board of appeals (until the first Monday in December 1998 and the board of review beginning the first Monday in December 1998 and thereafter), or on his or her own initiative, subject to the limitations of Sections 9-265 and 9-270, to assess properties which may have been omitted from assessments for the current year and not more than 3 years prior to the current year for which the property was liable to be taxed, and for which the tax has not been paid, but only on notice and an opportunity to be heard in the manner and form required by law, and shall enter the assessments upon the assessment books. Any notice shall include (i) a request that a person receiving the notice who is not the current taxpayer contact the office of the county assessor and explain that the person is not the current taxpayer, which contact may be made on the telephone, in writing, or in person upon receipt of the notice, and (ii) the name, address, and telephone number of the appropriate personnel in the office of the county assessor to whom the response should be made. Any time period for the review of an omitted assessment included in the notice shall be consistent with the time period established by the assessor in accordance with subsection (a) of Section 12-55. No charge for tax of previous years shall be made against any property if (1) the assessor failed to notify the board of review of the omitted assessment in accordance with subsection (a-1) of this Section; (2) the property was last assessed as unimproved, the owner of such property gave notice of subsequent improvements and requested a reassessment as required by Section 9-180, and reassessment of the property was not made within the 16 month period immediately following the receipt of that notice; (3) the owner of the property gave notice as required by Section 9-265; (4) the assessor received a building permit for the property evidencing that new construction had occurred or was occurring on the property but failed to list the improvement on the tax rolls; (5) the assessor received a plat map, plat of survey, ALTA survey, mortgage survey, or other similar document containing the omitted

property but failed to list the improvement on the tax rolls; (6) the assessor received a real estate transfer declaration indicating a sale from an exempt property owner to a non-exempt property owner but failed to list the property on the tax rolls; or (7) the property was the subject of an assessment appeal before the assessor or the board of review that had included the intended omitted property as part of the assessment appeal and provided evidence of its market value.

(a-1) After providing notice and an opportunity to be heard as required by subsection (a) of this Section, the assessor shall render a decision on the omitted assessment, whether or not the omitted assessment was contested, and shall mail a notice of the decision to the taxpayer of record or to the party that contested the omitted assessment. The notice of decision shall contain a statement that the decision may be appealed to the board of review. The decision and all evidence used in the decision shall be transmitted by the assessor to the board of review on or before the dates specified in accordance with Section 16-110.

(b) Any taxes based on the omitted assessment of a property pursuant to Sections 9-260 through 9-270 and Sections 16-135 and 16-140 shall be prepared and mailed at the same time as the estimated first installment property tax bill for the preceding year (as described in Section 21-30) is prepared and mailed. The omitted assessment tax bill is not due until the date on which the second installment property tax bill for the preceding year becomes due. The omitted assessment tax bill shall be deemed delinquent and shall bear interest beginning on the day after the due date of the second installment (as described in Section 21-25). Any taxes for omitted assessments deemed delinquent after the due date of the second installment tax bill shall bear interest at the rate of 1.5% per month or portion thereof until paid or forfeited (as described in Section 21-25).

(c) The assessor shall have no power to change the assessment or alter the assessment books in any other manner or for any other purpose so as to change or affect the taxes in that year, except as ordered by the board of appeals (until the first Monday in December 1998 and the board of review beginning the first Monday in December 1998 and thereafter). The county assessor shall make all changes and corrections ordered by the board of appeals (until the first Monday in December 1998 and the board of review beginning the first Monday in December 1998 and thereafter). The county assessor may for the purpose of revision by the board of appeals (until the first Monday in December 1998 and

the board of review beginning the first Monday in December 1998 and thereafter) certify the assessment books for any town or taxing district after or when such books are completed.

(Source: P.A. 96-1553, eff. 3-10-11.)

Sec. 9-265. Omitted property; interest; change in exempt use or ownership.

If any property is omitted in the assessment of any year or years, not to exceed the current assessment year and 3 prior years, so that the taxes, for which the property was liable, have not been paid, or if by reason of defective description or assessment, taxes on any property for any year or years have not been paid, or if any taxes are refunded under subsection (b) of Section 14-5 because the taxes were assessed in the wrong person's name, the property, when discovered, shall be listed and assessed by the board of review or, in counties with 3,000,000 or more inhabitants, by the county assessor either on his or her own initiative or when so directed by the board of appeals or board of review. The board of review in counties with less than 3,000,000 inhabitants or the county assessor in counties with 3,000,000 or more inhabitants may develop reasonable procedures for contesting the listing of omitted property under this Division. For purposes of this Section, "defective description or assessment" includes a description or assessment which omits all the improvements thereon as a result of which part of the taxes on the total value of the property as improved remain unpaid. In the case of property subject to assessment by the Department, the property shall be listed and assessed by the Department. All such property shall be placed on the assessment and tax books. The arrearages of taxes which might have been assessed, with 10% interest thereon for each year or portion thereof from 2 years after the time the first correct tax bill ought to have been received, shall be charged against the property by the county clerk.

When property or acreage omitted by either incorrect survey or other ministerial assessor error is discovered and the owner has paid its tax bills as received for the year or years of omission of the parcel, then the interest authorized by this Section shall not be chargeable to the owner. However, nothing in this Section shall prevent the collection of the principal amount of back taxes due and owing.

If any property listed as exempt by the chief county assessment officer has a change in use, a change in leasehold estate, or a change in titleholder of record by purchase, grant, taking or

transfer, it shall be the obligation of the transferee to notify the chief county assessment officer in writing within 90 days of the change. If mailed, the notice shall be sent by certified mail, return receipt requested, and shall include the name and address of the taxpayer, the legal description of the property, and the property index number of the property when an index number exists. If notice is provided in person, it shall be provided on a form prescribed by the chief county assessment officer, and the chief county assessment officer shall provide a date stamped copy of the notice. Except as provided in item (6) of subsection (a) of Section 9-260, item (6) of Section 16-135, and item (6) of Section 16-140 of this Code, if the failure to give the notification results in the assessing official continuing to list the property as exempt in subsequent years, the property shall be considered omitted property for purposes of this Code.
(Source: P.A. 96-1553, eff. 3-10-11.)

Sec. 9-270. Omitted property; limitations on assessment.

A charge for tax and interest for previous years, as provided in Sections 9-265 or 14-40, shall not be made against any property for years prior to the date of ownership of the person owning the property at the time the liability for the omitted tax was first ascertained. Ownership as used in this section shall be held to refer to bona fide legal and equitable titles or interests acquired for value and without notice of the tax, as may appear by deed, deed of trust, mortgage, certificate of purchase or sale, or other form of contract. No charge for tax of previous years, as provided in Section 9-265, shall be made against any property if (1) the assessor failed to notify the board of review of an omitted assessment in accordance with subsection (a-1) of Section 9-260; (2) the property was last assessed as unimproved, the owner of the property gave notice of subsequent improvements and requested a reassessment as required by Section 9-180, and reassessment of the property was not made within the 16 month period immediately following the receipt of that notice; (3) the owner of the property gave notice as required by Section 9-265; (4) the assessor received a building permit for the property evidencing that new construction had occurred or was occurring on the property but failed to list the improvement on the tax rolls; (5) the assessor received a plat map, plat of survey, ALTA survey, mortgage survey, or other similar document containing the omitted property but failed to list the improvement on the tax rolls; (6) the

assessor received a real estate transfer declaration indicating a sale from an exempt property owner to a non-exempt property owner but failed to list the property on the tax rolls; or (7) the property was the subject of an assessment appeal before the assessor or the board of review that had included the intended omitted property as part of the assessment appeal and provided evidence of its market value. The owner of property, if known, assessed under this and the preceding section shall be notified by the county assessor, board of review or Department, as the case may require. (Source: P.A. 96-1553, eff. 3-10-11.)

Article 25. Penalties

Sec. 25-5. Delivery and receipt of collector's book before bond approved.

If any county clerk delivers the tax books into the hands of the county collector, or if any collector receives the books or collects any taxes before the collector's bond has been approved and filed, as required by this Code, the clerk and collector, and each of them, shall be liable to a penalty of not less than \$500, and all damages and costs, to be recovered in a civil action. The State's Attorney shall bring suit, in the name of the People of the State of Illinois. Nothing in this Section shall be construed as relieving the sureties of a collector from liabilities incurred under a bond not approved and filed as required by this Code. (Source: P.A. 76-2254; 88-455.)

Sec. 25-10. Failure of collector to obtain timely judgment or present list of errors.

If any collector, by his own neglect, fails to obtain judgment within the time prescribed by this Code, or fails to present his list of errors in assessment of property at the time required by this Code, he shall lose the benefit of any abatement to which he might have been entitled, and shall pay to the county the full amount charged against him, except that in the 10 years next following the completion of a general reassessment of property in any county with 3,000,000 or more inhabitants, the collector is under no duty to obtain judgment earlier than 30 days after taxes upon property have become delinquent and have begun to bear interest. (Source: P.A. 83-121; 88-455.)

Sec. 25-15. Knowing failure of local assessment officer to perform duties.

Any local assessment officer or other person whose duty it is to assess property for taxation or equalize any assessment, who refuses or knowingly or willfully neglects any duty required of him by law, or who consents to or connives at any evasion of this Code whereby any property required to be assessed is unlawfully exempted in whole or in part, or the valuation thereof is set down at more or less than is required by law, is guilty of a Class A misdemeanor. He or she shall also be liable upon his bond to the party injured for all damages sustained by that party. He or she shall also be removed from office by the judge of the court before whom he or she is tried and convicted. (Source: P.A. 77-2236; 88-455.)

Sec. 25-20. Knowing failure of public officer to perform duties.

Every public officer who refuses to perform or knowingly neglects any duty enjoined upon him by this Code, or who consents or connives to evade its provisions, whereby any proceeding required by this Code shall be prevented or hindered, or whereby any property required to be listed for taxation is unlawfully exempted or the same be entered upon the assessment or collector's books at less than the value required by this Code, or the percentage as may be provided by a county ordinance adopted under Section 4 of Article IX of the Constitution of Illinois, shall, for every such offense, neglect or refusal, be liable, on the complaint of any person, for double the amount of the loss or damage caused thereby, to be recovered in a civil action in the name of the People of the State of Illinois in any court having jurisdiction, and may be removed from office at the discretion of the court. (Source: P.A. 80-247; 88-455.)

Sec. 25-25. Failure of officer to perform duties if no other penalty provided.

If any officer fails or neglects to perform any of the duties required of him by this Code, upon being required so to do by any person interested in the matter, and for the failure or neglect to perform that duty there is no other or specific penalty provided in this Code, he shall be liable to a fine of not less than \$10 nor more than \$500, to be recovered in a civil action in the circuit court of the proper county, and may be removed from office at the discretion of the court. Any officer who knowingly violates any of the provisions of this Code, for the violation of which there is no other specific penalty provided in this Code, shall be liable to a fine not less than \$10 nor more than \$1,000 to be recovered in a civil action in the name of the People of

the State of Illinois, in any court having jurisdiction and may be removed from office at the discretion of the court. Fines when recovered shall be paid into the county treasury. (Source: Laws 1939, p. 886; P.A. 88-455.)

Sec. 25-30. Failure of collector to attend tax sale.

If any county collector or designated deputy fails to attend any sale advertised under this Code, and offer property for sale as required by law, he or she shall be liable to pay the amount of taxes, special assessments and costs due on the advertised property. The county collector may afterwards advertise and sell the delinquent property to reimburse himself or herself for the amount advanced by him or her, but at the sale no property shall be forfeited to the State. (Source: Laws 1939, p. 886; P.A. 88-455.)

Sec. 25-35. Failure of county clerk to attend tax sale or keep required records.

If any county clerk or designated deputy fails to attend any tax sale, or to make and keep the record, as required by this Code, he or she shall forfeit and pay the sum of \$500, and shall be liable to indictment for that failure. Upon conviction he or she shall be removed from office. The sum shall be sued for in civil action, in the name of the People of the State of Illinois, and when recovered shall be paid into the county treasury. (Source: Laws 1939, p. 886; P.A. 88-455.)

Sec. 25-40. Fraudulent return or schedule.

Any person who, with intent to defeat or evade the law in relation to the assessment of property, delivers or discloses to any assessor or deputy assessor a false or fraudulent list, return or schedule of his or her property not exempted by law from taxation, is guilty of a Class A misdemeanor. (Source: P.A. 77-2236; 88-455.)

Sec. 25-45. Duty of state's attorney to prosecute.

The State's Attorney of each county shall prosecute all violators of this Code. They shall receive as fees the sum of \$20 in counties with less than 3,000,000 inhabitants and \$40 in counties with 3,000,000 or more inhabitants for each conviction, to be taxed as costs, and 10% of all fines collected. The residue of all fines collected under this Code shall be paid into the county treasury for use of the county. (Source: P.A. 87-669; 88-455.)

Unit 2: Qualifications, Duties, and Responsibilities of Assessors and the Property Tax Code

Summary

The statutory authority for township and multi-township assessors is the **Property Tax Code**. The code is Act 200 in Chapter 35 of the Illinois Compiled Statutes (35 ILCS 200).

Under **Section 2-45** of the code, assessors are required to meet pre-election and pre-appointment qualifications before filing nomination papers, participating as a candidate in any caucus, primary, or general election, or being appointed to the position.

Under **Section 2-60**, the township or multi-township district may either reappoint, make new appointments, or develop new contracts with a qualified person to do the assessments. The person contracted to do the assessing in the district must also meet the pre-election or pre-appointment educational requirements under Section 2-45, prior to entering into a contract with the assessment district.

Individuals in jurisdictions with higher EAVs are required to have a **CIAO designation** or one of the other designations approved by the department, as provided by the statutes. Individuals in jurisdictions with lower EAVs are required to complete the introductory course.

Township and multi-township assessors are responsible for the assessing of property within their respective jurisdictions. The duties of the assessor and the procedures for assessment of property are outlined in the Property Tax Code. There are also penalty provisions for assessors who fail to perform their duties in a responsible manner.

Unit 2

Review questions

- 1 Section _____ outlines the pre-election and pre-appointment requirements for township and multi-township assessors.
- 2 Section _____ provides for the revision of assessor qualifications.
- 3 The CIAO criteria requires an individual to complete _____ core courses and _____ of _____ electives.
- 4 Individuals in jurisdictions with a non-farm/non-mineral EAV of _____ or a commercial/industrial EAV of _____ are required to have a CIAO designation before running for office or being appointed to office.
- 5 Individuals in jurisdictions with more than \$10 million and less than \$25 million of non-farm/non-mineral EAV and less than \$1 million of commercial/industrial EAV who have previously held office will be required to have an approved _____ prior to running for office.

Unit 3

Using the Sales Comparison, or Market Approach, to Value Property

This unit covers the three approaches to value: the sales comparison, or market approach; the cost approach; and the income approach, but concentrates on the sales comparison, or market approach.

The purpose of this unit is to provide a basic understanding of the appraisal process and how the sales comparison method can be used to determine market value.

Learning objectives

After completing the assigned readings, you should be able to

- identify the three approaches to value,
- understand the three types of depreciation,
- explain the formula for the sales comparison, or market approach,
- make the necessary adjustments to the sales price, unit price, and room price for each sale,
- select the property that is most comparable to the subject property, and

Terms and concepts

Highest and best use
Principle of substitution
Adjusted sales price

Appraisal theory

Principle of highest and best use

Before determining a property's market value, the property's highest and best use must first be determined. Property has its highest value at its highest and best use.

Highest and best use is defined as "that use that will produce the highest net return to the land for a given period of time, within the limits of those uses which are economically feasible, probable, and legally permissible." The use must be legal, does not involve criminal activities, and is not contrary to local regulations such as zoning. The use should be probable and not speculative in nature, and should also be one for which there is a demand. The highest and best use will be a complementary use, rather than one that is competitive

A property's highest and best use is generally its current use. However, consider a single-family residential property in a commercially zoned area along a busy street. The highest and best use of this property could easily be a store or an office building. The use that would lead to the highest net return to the property would be the highest and best use.

Principle of substitution

The **principle of substitution** provides the basis of the three approaches to value and states that a buyer is not justified in paying more for a property than it would cost to acquire an equally desirable, substitute property. That is, the value of a property is established as the amount equally desirable and comparable properties are being bought and sold for in the market.

The three approaches to value

The three approaches to valuing real property are the sales comparison, or market approach; the cost approach; and the income approach.

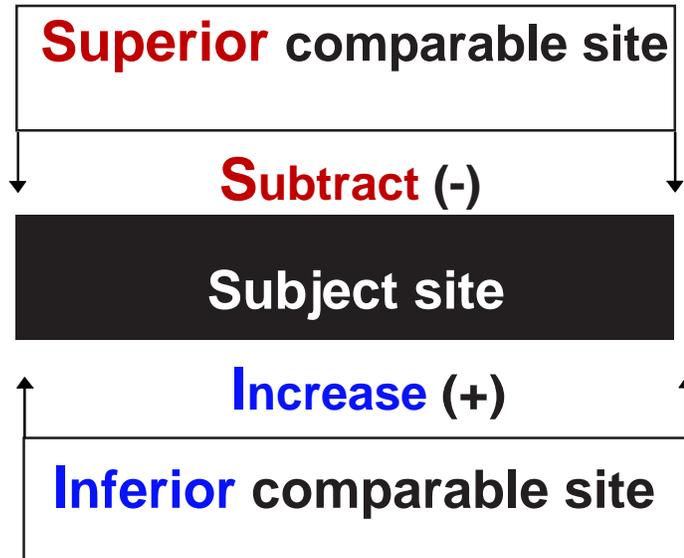
- 1 The sales comparison, or market approach** — compares properties that have recently sold to the subject property that is being appraised. It is the best approach for valuing residential property in rural areas.
- 2 The cost approach** — involves calculating the replacement cost of the building and subtracting depreciation.
- 3 The income approach** — involves capitalizing the property's net earnings.

Sales comparison or market approach

The sales comparison, or market approach, to value arrives at a value for the subject property by comparing it to comparable properties that have sold. Consideration must be given to all the tangible and intangible factors influencing value, such as location, construction, age, physical features, condition, desirability, and utility.

The appraiser adjusts the comparable sales to the subject property. If the comparable property is superior in some manner to the subject property, the sales price of the comparable property is adjusted downward to the subject property. Likewise, if the comparable property is inferior in some manner to the subject property, the sales price of the comparable property is adjusted upward to the subject property.

The assessor must have **3-5 comparable properties** to determine market value using the sales comparison approach. The assessor would choose the value, after adjustments are made, of the comparable property that is most like the subject property. **The comparable with the fewest number of adjustments is the one most like the subject property.**



Example of upward adjustment

For example: An upward adjustment of 20 percent may be warranted if two comparable residential sales are alike in every way except **sale 1**, that sold for \$150,000, has four bedrooms, and **sale 2**, that sold for \$125,000, has only three bedrooms. If several other pairs of sales indicate similar trends, a 20 percent upward adjustment ($\$150,000/\$125,000 = 1.20$) would be required before the inferior **sale 2** can be used to estimate the value of the subject property with four bedrooms.

Example of downward adjustment

A downward adjustment may be necessary if a comparable sale is superior to the subject property because it has four bedrooms and the subject property has three bedrooms. To determine the necessary adjustment for a bedroom, pairs of comparable sales, one with one more bedroom than the other, are compared to determine the amount of the adjustment.

The significance of this approach lies in its ability to produce estimates of value that directly reflect the opinions of buyers and sellers in the market

The first step in the sales comparison, or market approach, is to gather information on comparable properties that have sold. Once the information is gathered, the appraiser should study the properties to determine if any adjustments are

needed. Based on this analysis, you should then determine the value of any adjustments to be made.

In this exercise, you will make adjustments to the comparable sales for various features that are different from those features found in the subject property. The features of the subject property are listed, and the instructions for making adjustments to the comparable properties are listed on the same page.

The 5 sales listed were selected as the most comparable to the subject property. The market data for each property is indicated above the dotted line.

Explanation of adjustments

The subject property is a 4-bedroom home on a crawl space in a good location. An analysis of all residential property sales within the neighborhood indicates a **monthly increase of \$500.**

The subject is on a crawl space. Add \$1,000 for having a slab. Subtract \$2,500 for having a basement.

The subject has 1 bathroom (3 fixtures), 1 kitchen sink, and 1 water heater. Subtract \$500 for each extra plumbing fixture. (A half-bath contains 2 fixtures.)

The subject has 4 bedrooms. Add or subtract \$1,500 for each variance.

The subject has a 1-car garage. Properties that do not have a garage are considered to be inferior. Add \$3,000 for properties that do not have a garage. Properties that have a 2-car garage are considered superior. Subtract \$5,000 for properties that have a 2-car garage.

The subject does have central air conditioning. Add \$1,500 for those properties that do not have central air conditioning.

The subject has 1 fireplace. Add or subtract \$1,200 for each fireplace in variance.

The subject property is in a good location. The appropriate adjustments have been determined through a study of recent sales and neighborhood analysis. These adjustments are shown on the following page.

The subject's lot size is 9,500 square feet. Through a study of vacant land sales, you have determined the appropriate adjustments as shown on the following page.

Note: Net adjustments will be in a lump sum dollar amount. A percent adjustment must be converted into a dollar amount.

The first comparable is 1306 Archer.

Using the grid on Page 93, make the following adjustments:

Time adjustment

Step 1:

The market has indicated an increase of \$500 per month. The number of months, 5, is multiplied by the monthly increase amount of \$500. The time adjustment for Comparable 1 is + \$2,500.

Step 2:

The sales price of \$75,000 is added to \$2,500 for an adjusted sale price of \$77,500.

Basement adjustment

1306 Archer is built with a full basement, our subject property is built on a crawl space. A basement is considered to be superior to a crawl space, therefore an adjustment of -\$2,500 is necessary.

Plumbing adjustment

1306 Archer has 5 plumbing fixtures; our subject property has 5 fixtures. Since the number of fixtures is the same as the subject property, no adjustment is necessary.

Bedroom adjustment

1306 Archer has 3 bedrooms; our subject property has 4 bedrooms. 3 Bedrooms is considered to be inferior to 4 bedrooms, so an adjustment of + \$1,500 is necessary.

Garage adjustment

1306 Archer has a 1-car garage, our subject property has a 1-car garage. Therefore, no adjustment is necessary.

Central air conditioning adjustment

1306 Archer does not have central air conditioning; our subject property has central air conditioning. A home without central air conditioning is considered to be inferior, so a + \$1,500 adjustment is necessary.

Fireplace adjustment

1306 Archer has 1 fireplace; our subject has 1 fireplace. Since both features are the same, no adjustment is necessary.

Location adjustment

1306 Archer is an inferior location. The adjusted sales price of \$77,500 is multiplied by the location adjustment of + 2%, resulting in an adjustment of + \$1,550.

Lot size adjustment

1306 Archer has a lot that is inferior in size. The size adjustment of + 6% is multiplied by the adjusted sales price of \$77,500, resulting in an adjustment of + \$4,650.

The final step is to determine what the net adjustment is for 1306 Archer. The net adjustment is found by computing a total for all of the individual adjustments. Once the net adjustment is determined, this is added to the adjusted sales price, which produces an indication of value for the subject property.

The net adjustment for Comparable 1 is + \$6,700. This is added to the adjusted sale price of \$77,500, resulting in an adjusted sales price of \$84,200.

Following the steps outlined above, finish completing the data on Comparables 2 through 5. Each of the 4 sales will have various adjustments that will be superior or inferior adjustments.

Parcel	Sale 1	Sale 2	Sale 3	Sale 4	Sale 5
Address	1306 Archer	814 Adams	1414 State	6607 Healey	1209 Monroe
Sale Price	\$75,000	\$63,000	\$69,500	\$62,800	\$59,700
No of months since sale (\$500 per month)	5	4	3	5	12
Adjusted Sale Price					
Foundation	Basement	Crawl	Basement	Basement	Slab
Plumbing Fixtures	5	7	8	7	5
Bedrooms	3	4	4	3	3
Garage (# of stalls)	1	1	2	1	1
Central Air Conditioning	No	Yes	Yes	No	Yes
Fireplaces	1	0	2	1	0
Location adjustment	+ 2%	No adj	-3%	+4%	No adj
Lot size adjustment	+ 6%	No adj	+2%	No adj	No adj
Net adjustment					
Number of adjustments					
Final Adjusted Sale Price (Adj. sale price + Net Adj)					

	Adj. sales price	No of Adjustments
Comparable 1	_____	_____
Comparable 2	_____	_____
Comparable 3	_____	_____
Comparable 4	_____	_____
Comparable 5	_____	_____

After making all of the necessary adjustments and calculations, the appraiser would study the grid to determine the sale which is most comparable to the subject property. Once the comparable has been selected, values can be determined for the subject property.

Looking at the least number of adjustments, which sale is most comparable to the subject property?

You should have selected Sale 2 as the property most comparable to the subject property because it required the least number of adjustments. The net adjustment for Sale 2 also happens to have the lowest dollar amount of the 5 comparables.

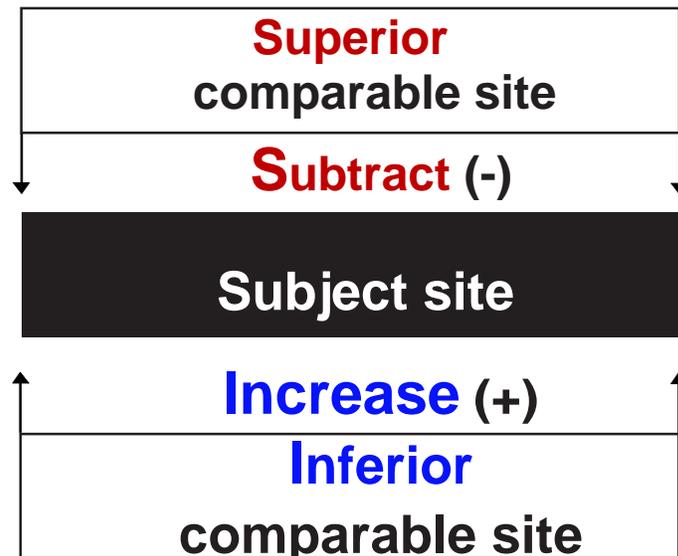
The sale that is the **most comparable** is the one with the least **number** of adjustments. Since sale 2 required only a few adjustments, it is most like the subject property.

Unit 3 Summary

Using the Sales Comparison, or Market Approach, to Arrive at Value

The sales comparison, or market approach, to value arrives at a value for the subject property by comparing it to comparable properties that have sold. Consideration must be given to all the tangible and intangible factors influencing value, such as location, construction, age, physical features, condition, desirability, and usefulness.

If the comparable property that has sold is superior in some manner to the subject property, the sales price of the comparable property is adjusted downward to the subject property. Likewise, if the comparable property is inferior in some manner to the subject property, the sales price of the comparable property is adjusted upward to the subject property.



Unit 3

Review Questions

1. T or F The three approaches to value are the market approach, the income approach, and the sales comparison approach.
2. T or F When using the sales comparison, or market approach, one never adjusts the subject property.
3. T or F Make a minus adjustment to your comparable property if it is inferior to your subject property.
4. T or F If the market is showing an annual increase of 3 percent, a sale occurring 2 years ago would have a minus adjustment of 6 percent.
5. T or F Three to five sales are recommended when using the sales comparison, or market approach, to value property.
6. T or F The property most comparable to the subject is the comparable with the least number of adjustments.

Unit 4

Using the Income Approach to Value Property

This unit covers the ways in which the IRV formula is used to calculate the income of a property, the capitalization rate for a property, and the market value for a property.

The purpose of this unit is to provide a basic understanding of how the IRV formula can be utilized in the assessment process of income-producing properties.

Learning objectives

After completing the assigned readings, you should be able to

- determine the capitalization rate for a property when given the net income and the value,
- determine the value for a property when given the appropriate capitalization rate and income of a property,
- determine the income for a property when given the appropriate capitalization rate and value for a property,
- determine the potential gross income (PGI) for the subject property,
- determine the vacancy and collection losses for a property when given the market standard percentage,
- determine the effective gross income (EGI),
- determine allowable expenses,
- determine the net operating income, and
- determine the value of the property when given the applicable capitalization rate.



Terms and concepts

Allowable expenses
Effective gross income
IRV Formula
Market value (MV)
Net operating income
Potential gross income (PGI)
Vacancy and collection losses

The income approach

Property, such as parking lots, apartments, and office buildings are often valued on the basis of the net operating income these properties produce for their owners. The **income approach** has its widest application in the appraisal of income-producing property. Commercial property is universally bought and sold on its ability to generate and maintain a stream of income for its owner. The value of such property is a measure of the amount, quality, and durability of the future net income the property can be expected to return to its investor.

The justified price paid for income-producing property is no more than the amount of investment required to produce a comparably desirable return. In addition, since the market can be analyzed to determine the net return actually anticipated by investors, it follows that the value of income-producing property can be derived from the income the property is capable of producing.

The process for converting the net income produced by property into an indication of its value is called **capitalization**. Capitalization is accomplished by dividing the net income of the property (I) by the capitalization rate (R). The result is an estimate of market value (V) of the property.

Market value (V) = net income (I) ÷ capitalization rate (R)

Any one of the factors of the formula can be determined if the other two factors are known.

In the formula
$$\frac{I}{R \times V}$$

“I” refers to the net operating income.

To arrive at the net operating income, use the following formula:

	Potential gross income (PGI)
–	Vacancy and collection losses
+	Miscellaneous income
	Effective gross income (EGI)
–	Allowable expenses
–	Reserves for replacements (RR)
	Net operating income (NOI)

The **potential gross income (PGI)** is the economic rent for a property at 100 percent occupancy. When estimating the PGI, it is important to base it on economic, or market rent, which may not be the same as contract rent. Economic or market rent is rent based on market standards, or the rent of similar properties in the area. Contract rent is the rent the property is actually receiving, based on a lease or other agreement.

It is highly unlikely that a property will be rented to 100 percent capacity at all times, so a deduction for “**vacancy losses**” is allowed. The amount of the deduction is based on market standards, or the vacancy rate typical for the area. Deductions are also allowed for “**collection losses**.” Collection losses are losses that result from tenants’ failure to pay rent. These losses are also based on market standards. The amounts deducted will be a percent of the PGI.

The **effective gross income (EGI)** is calculated by estimating the PGI, subtracting the appropriate amounts for vacancy and collection losses, and adding any miscellaneous income.

From the EGI, the allowable expenses and reserves for replacements are subtracted to arrive at the **net operating income (NOI)**.

Allowable expenses are the expenses necessary for the operation of the business to keep it competitive with other properties in the area. Some examples of allowable expenses are salaries, utilities, management, insurance, supplies, materials, repairs and maintenance.

For assessment purposes, property taxes and mortgage interest are not allowable expenses. They are taken into consideration in the capitalization rate. Other items not considered allowable expenses are income taxes, depreciation, capital improvements, and the owner's business expenses that are not necessary for maintaining the rent produced by the property.

The final deduction is for **reserves for replacements**. The parts of a structure that must be replaced before the building reaches the end of its economic life have an annual expense deduction. Examples of items for this category are carpeting, floor coverings, roofing, appliances, heating, and air conditioning.

"R" refers to the capitalization rate that consists of the equity rate, the mortgage interest rate and the effective tax rate.

Equity Rate — annual rate at which invested capital is returned to the investor over a specified period.

Effective Tax Rate — tax rate expressed as a percentage of market value. This is found by multiplying the level of assessments by the current local (aggregate) tax rate.

Mortgage Interest Rate — interest rate used to convert future payments or receipts into present value.

Land capitalization rates are comprised of

- an equity rate,
- an effective tax rate, and
- a mortgage interest rate.

Building capitalization rates are comprised of

- an equity rate,
- an effective tax rate, and
- a mortgage interest rate.

Selecting the proper capitalization rate and accurately estimating a realistic potential gross income, along with applicable operating expenses, are essential to the capitalization process.

$$\frac{I}{R \times V}$$

The IRV formula can be used to determine any one of the three factors. If you cover up the letter representing the component you are trying to determine, the formula for determining the value of that component is left.

$$\frac{\textcircled{I}}{R \times V}$$

To find the income of a property, cover up the “I” in the formula so you are left with $R \times V$.

Multiply the appropriate capitalization rate “R” by the value “V.”

$$\frac{I}{\textcircled{R} \times V}$$

If you know the net income of a property and the value, to find the appropriate capitalization rate, cover up the “R” in the formula so you are left with $\frac{I}{V}$.

Divide the net income “I” by the value “V.”

$$\frac{I}{R \times \textcircled{V}}$$

To determine the value of the property cover up the “V” in the formula so you are left with $\frac{I}{R}$.

Divide the net income “I” by the capitalization rate “R.”

It can readily be seen that any one of the factors of the IRV formula can be determined if the other two factors are known

**Example of
determining
a value**

An apartment building has 15 units that rent for \$500 per month. The allowable expenses are \$50 per unit, per month. The appropriate capitalization rate is 10.25 percent. What is the value of the building?

In order to arrive at a value, you need the net income and the appropriate capitalization rate.

- 1 Determine the potential gross income.
 $15 \text{ (units)} \times \$500 \times 12 \text{ (months)} = \$90,000$
- 2 Determine the annual allowable expenses.
 $15 \text{ (units)} \times \$50 \times 12 \text{ (months)} = \$9,000$
- 3 Determine the net income (PGI - allowable expenses).
 $\$90,000 - \$9,000 = \$81,000$
- 4 Apply the IRV formula

“V” = “I” divided by “R”

$$\begin{array}{l} I = \underline{\$81,000} = \underline{\$81,000} \\ R = 10.25\% \quad .1025 \quad = \$790,244 \end{array}$$

The value of the property is \$790,244.

Exercise 4-1 IRV Formulas

Using the IRV formula, complete the following questions.

1. A parking lot recently sold for \$300,000. The parking lot has 100 parking spaces, each of which rents for \$25 per month. Allowable expenses are \$6,000 annually. What is the capitalization rate?

ANSWER _____

2. A parking lot provides its owner with a net annual income of \$27,400. The appropriate capitalization rate is 9.35%. What is the value of the parking lot?

ANSWER _____

3. The capitalization rate for an office building is 11.3 %. The building value in a recent sale was \$452,600. What is the net annual income for the office building that an investor would expect?

ANSWER _____

4. An apartment building recently sold for \$375,700. The net annual income for this building \$53,428. What is the capitalization rate?

ANSWER _____

5. An apartment building has 20 units that rent for \$350 per month. The allowable expenses are \$25 per unit per month. The capitalization rate is 12.54%. What is the value of the building?

ANSWER _____

6. A parking lot recently sold for \$267,900. The mortgage/interest rate is 9.25%; the equity rate is 2.54%; the effective tax rate is 2.00%. What is the parking lot's net annual income?

ANSWER _____

Unit 4 Using the Income Approach to Arrive at Value Summary

$$\frac{I}{R \times V}$$

I = Net operating income

R = Capitalization rate

V = Market value

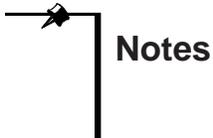
Potential gross income (PGI)

- Vacancy and collection losses
- + Miscellaneous income

Effective gross income (EGI)

- Allowable expenses
- Reserves for replacements (RR)

Net operating income (NOI)



Unit 4 Using the Income Approach to Arrive at Value Review

1 What is the formula for the income approach?

2 A 100-space gravel parking lot rents for \$30 a month per space. The effective tax rate is 2.54%, the mortgage interest rate is 9.35%, and the equity rate is 3.00%. What is the value of the parking lot?

3 A 2-story commercial building has a value of \$960,000. The building provides its owner with a monthly net income of \$6,000 per floor. This is well in line with similar properties. What is the building capitalization rate?

4 Land used as a gravel parking lot recently sold for \$270,000. The equity rate is 3.25%, the mortgage interest rate is 8.15%, and the effective tax rate is 2.50%. What is the net income of this parking lot?

5 A 12-unit apartment building has (6) 1-bedroom units, (4) 2- bedroom units, and (2) 3-bedroom units. The 3-bedroom units rent for \$400 a month, the 2-bedroom units rent for \$350 a month, and the 1-bedroom units rent for \$275 a month. Similar properties in the area have recorded their monthly income to be at \$3500 a month. What is the potential gross income of this 12-unit apartment building?

Unit 5

Using the Cost Approach to Arrive at Value

This unit covers the cost approach.

The purpose of this unit is to provide a basic understanding of the cost approach method.

Learning objectives

After completing the assigned readings, you should be able to

- understand the formula for the cost approach,
- identify the three types of depreciation and how they affect value,
- calculate a cost factor,
- conduct a cost factor study, and
- define a mass appraisal system.



Terms and concepts

Cost approach
Cost factor
Cost factor study
Economic depreciation
Functional depreciation
Mass appraisal
Physical depreciation
Replacement cost new (RCN)

Mass appraisal

Mass appraisal is the valuation of many properties as of January 1 of the assessment year, using standard procedures that provide uniformity.

The purpose of mass appraisal is to produce equitable and efficient appraisals of all property in a jurisdiction for ad valorem tax purposes. A mass appraisal system should incorporate all three approaches to value, but most systems are primarily based on the cost approach.

The cost approach

The market value of a property can be estimated using the **cost approach** by estimating the value of the land, adding the **replacement cost new (RCN)** of the improvements, and subtracting the depreciation from the improvements. An **improvement** is defined as any structure attached to, lying upon or within the land, that cannot be removed without physical stress.

The formula for the cost approach is:

Market value = land value + (RCN - depreciation)

The **land value** is usually estimated by using the sales comparison, or market approach, to value. This approach is applied by comparing the subject site with sales of comparable sites that are vacant.

The RCN is the current cost of constructing improvements having utility equal to the utility of the subject improvements. It may or may not be the cost of reproducing a replica of the subject improvement. The distinction between the two is that, replacement cost refers to a substitute property of equal utility and reproduction cost refers to an exact replica property. In a particular situation, the two concepts may be interchangeable, but not necessarily so. Both RCN and reproduction cost have their application in the cost approach to value. The differences are reconciled in the application of depreciation allowances. The RCN includes the total cost of construction incurred by the builder.

There are several acceptable methods for establishing the replacement cost new of a structure. However, only the two more popular methods are discussed: the component-in-place method and the square foot method. Both of these methods can be used to develop a cost manual for a specific geographic area.

The component-in-place method is used by builders or contractors because it is very accurate. This method combines the direct and indirect costs of labor, material, and overhead for each unit in place for a portion or area of the structure. All these units are then added together to arrive at the total cost for the structure.

The square foot method is another widely used method for calculating the RCN. This method is based on the floor area of the structure and generally is used for residential buildings.

Replacement cost usually represents the upper limit of value of a structure. The difference between RCN and the present value is **depreciation**, the loss of value from all causes. The third and final step in completing the cost approach is to estimate the amount of depreciation.

Three types of depreciation

Three types of depreciation exist:

- 1 **physical depreciation**
- 2 **functional obsolescence**
- 3 **economic obsolescence**

Within the three types of depreciation are two depreciation conditions: deterioration and obsolescence. Deterioration occurs as the property declines in quality or condition. Obsolescence occurs as the property goes out of use or becomes obsolete.

Depreciation can be either curable or incurable. Depreciation is curable when the cost to cure will add to the market value of the structure. It is incurable when the cost to cure is greater than the increase in the market value of the structure.

Physical depreciation is defined as the loss in value due to deterioration, *e.g.*, wear and tear, time, and the action of the elements. Physical depreciation begins while a building is under construction and continues until the life of the structure has ended. The physical life of a building is dependent on

- the degree of maintenance it receives,
- the type and quality of materials used in its construction, and
- the soundness of the methods of its builder.

Examples of the two types of physical depreciation, curable and incurable, are

- 1 Curable** — short-lived components such as windows, doors, floor coverings, and roofs.
- 2 Incurable** — long-lived components such as foundations, studs, and rafters.

Both **functional and economic obsolescence** are defined as the loss of value, due to forces other than physical, that act upon a structure in such a way as to limit its economic life.

Functional obsolescence refers to obsolescence resulting from conditions within the property, such as imbalance in construction features or inadequate design or arrangement that lessen its utility or usefulness.

Examples of the two types of functional obsolescence, curable and incurable, are

- 1 Curable** — lack of air conditioning, lack of proper electrical wiring, low hanging pipes, and absence of proper ventilation.
- 2 Incurable** — extremely poor floor plan, very low or high ceilings.

Economic obsolescence refers to obsolescence caused by influences outside the property, such as physical, economic, social, and governmental changes that have an adverse effect upon the stability and quality of the neighborhood in general.

Examples of economic obsolescence, that are usually incurable:

- **Location** — change in traffic pattern and noise and air pollution.
- **Economic** —high interest rates and business closings.
- **Government** — zoning changes, poor services, and high tax rates.

The significance of the cost approach lies in its extent of application. It is the one approach that can be used on all types of construction. The widest applications are in mass appraisal and the appraisal of properties that lack adequate market and income data, which prevents the application of the other approaches to value.

The responsibility of the assessor

Simply stated, the job or responsibility of the assessor is to place an assessed value in his or her column of the assessment books for each of the properties in the jurisdiction.

There are four steps the assessor must complete for each property in the jurisdiction. The assessor must

- 1 Discover** — Find and inventory all real property using tax maps and property index numbers; find new construction by observation, reviewing building permits, and other methods.
- 2 List** — Describe the characteristics of land and improvements on property record cards, including measurements of improvements.
- 3 Value** — Estimate the value of all real property in the jurisdiction and ensure uniformity and equity in the methods used and the market values produced.
- 4 Assess** — Apply an assessment level to these market values, arriving at an assessed value for each of the properties in the jurisdiction. Ensure that the assessed values reflect a uniform level of assessments, and that these assessed values are derived from current market values.

Unlike an independent appraiser, who has the time to carefully analyze the various approaches to value before arriving at an estimate of value for one property, the assessor must estimate values within a relatively short period of time. The assessor is a mass appraiser.

The Appraisal Publications are designed for mass appraisal. The cost schedules discussed in Unit 6 are used to apply the cost approach to value in a mass appraisal system. It is unreasonable to expect that every building value obtained through the use of these schedules will be exact. However, it is expected that the value estimates produced be well within tolerable limits. The outcome of this system still depends greatly on the professional judgment of the assessor. This is especially true when the assessor must use factors that will adjust various values before arriving at the final value of the subject property. These factors are defined in the following unit. There are guidelines that can be used to establish factors, but the assessor must continually rely on his or her skill and experience when assigning individual factors to each property.

Cost factor

A **cost factor** is designed to adjust the Appraisal Publications' RCN value to reflect the local cost of labor and material in other areas. The use of a cost factor may be necessary for any assessor whose jurisdiction is not similar to the central Illinois area. You will calculate a cost factor by performing a cost factor study for use with the class exercises in Unit 6.

Steps in calculating a cost factor:

Step 1 Find arms-length sales of improved properties on which the improvements are **one year old or less**, which eliminates adjusting for depreciation.

Step 2 Subtract the current land values from those sale prices to obtain the value of the improvement or building.

$$\text{Building value} = \text{sale price} - \text{land value}$$

Step 3 Determine the RCN for each building.

Step 4 Divide each building value by the corresponding RCN to obtain a cost factor for each sale.

$$\text{Cost factor} = \frac{\text{Building Value}}{\text{Publication RCN}}$$

Step 5 Rank the factors.

Step 6 Select the median factor as the overall cost factor.

Step 7 Apply the overall cost factor to the Appraisal Publications RCN of all property within the jurisdiction.

The true RCN is equal to the Appraisal Publications' RCN multiplied by the cost factor.

$$\text{True RCN} = \text{Publication RCN} \times \text{cost factor}$$

Exercise 5-1

Cost factor study

The purpose of a cost factor study is to determine the factor to be used to adjust the values found in the Appraisal Publications to reflect the labor and material costs found in your local area. Once this factor is determined, it is applied to all construction within the jurisdiction.

When computing a cost factor, it is important to remember to use only improvements that have an actual age of one year or less, which eliminates the need to factor in depreciation.

A cost factor greater than 1.00 indicates that the Appraisal Publications' values are too low for the jurisdiction, so you must increase the RCN values. A cost factor less than 1.00 indicates that the Appraisal Publications' values are too high for the jurisdiction, so you must decrease the RCN values.

In this exercise, use the worksheet on the following pages to determine a cost factor for 15 sales. There are several formulas that you will need to use to determine the cost factor.

The first formula is used to determine the building value or building residual.

- Step 1** Looking at Sale 1, the age column lists the improvement as new. To find the building residual, subtract the lot value of \$17,000 from the sale price of \$104,000. The remainder of \$87,000 is the building residual, or building value.

Building residual = sale price - lot value

$$\mathbf{\$104,000 - \$17,000 = \$87,000}$$

- Step 2** Divide the building residual of \$87,000 by the Appraisal Publications' RCN of \$82,300, which gives you a cost factor of 1.06.

Note: For this exercise round to 2 decimal places.

Cost factor = building residual ÷ Publications' value

$$\mathbf{\$87,000 \div \$82,300 = 1.06}$$

Looking at Sale 2, the age column lists the improvement as new. Use the formula for the building residual and subtract the lot value of \$17,000 from the sale price of \$97,700, which produces a building residual of \$80,700.

$$\mathbf{\$97,700 - \$17,000 = \$80,700}$$

Divide the building residual of \$80,700 by the Appraisal Publication RCN of \$78,400, which gives you a cost factor of 1.03.

$$\mathbf{\$80,700 \div \$78,400 = 1.03 \text{ cost factor}}$$

Continue the computations for the remaining sales as outlined above.

Exercise 5-1 worksheet Cost factor study

Sale Number	Age	Sale Price	Lot Value	Building Residual	Manual Value	Cost Factor
1	N	\$104,000	\$17,000	\$87,000	\$82,300	1.06
2	N	97,700	17,000	<u> </u>	78,400	<u> </u>
3	N	67,800	10,500	57,300	54,500	1.05
4	N	62,900	8,000	<u> </u>	51,800	<u> </u>
5	N	85,600	15,500	70,100	63,700	1.10
6	N	89,200	16,000	<u> </u>	63,100	<u> </u>
7	N	80,300	16,000	64,300	61,200	1.05
8	N	88,300	16,500	<u> </u>	69,000	<u> </u>
9	30	53,500	8,000	45,500	47,900	.95
10	N	93,100	16,500	<u> </u>	72,100	<u> </u>
11	N	76,700	15,500	61,200	58,300	1.05
12	N	86,500	16,000	<u> </u>	66,500	<u> </u>
13	44	67,900	11,000	56,900	59,300	.96
14	N	92,700	16,000	<u> </u>	69,500	<u> </u>
15	12	72,400	11,000	61,400	60,200	1.02

Step 3

The last step is to select the median after ranking all the cost factors that meet the age criteria. The factors can be ranked from highest to lowest or from lowest to highest.

Note: If you have an odd number of factors, select the median or middle value as the cost factor for your jurisdiction. If the number of factors is even, add the two middle factors together, then divide the sum by two, and use the average as your cost factor.

The cost factor that is determined is applied to all construction within a jurisdiction and will be used for all of the residential property record card (PRC) examples in this workbook.

- Rank**
- 1 _____
 - 2 _____
 - 3 _____
 - 4 _____
 - 5 _____
 - 6 _____
 - 7 _____
 - 8 _____
 - 9 _____
 - 10 _____
 - 11 _____
 - 12 _____
 - 13 _____
 - 14 _____
 - 15 _____

Median = _____

Unit 5 Using the Cost Approach to Arrive at Value Summary

The market value of a property can be estimated using the **cost approach** by estimating the value of the land, adding the **replacement cost new (RCN)** of the improvements, and subtracting the depreciation from the improvements.

Replacement cost represents the upper limit of value of a structure. The difference between RCN and the present value is **depreciation**, the loss of value from all causes.

There are three types of depreciation that exist: **physical depreciation, functional obsolescence, and economic obsolescence.**

The Appraisal Publications are designed for mass appraisal.

A cost factor is designed to adjust the Appraisal Publications' **replacement cost new (RCN)** value to reflect the local cost of labor and materials.



Unit 5

Review questions

- 1 What are the three types of depreciation? Place a ✓ next to the one that is generally incurable.

_____	_____
_____	_____
_____	_____

- 2 What is the purpose of a cost factor?

- 3 What is a mass appraisal system?

Unit 6

Mass Appraisal and Residential Square Foot Schedules

This unit covers the mass appraisal system and the various factors used to adapt a mass appraisal system to local jurisdictions. It also covers the residential square foot schedules in the Appraisal Publications.

The purpose of this unit is to provide a basic understanding of a mass appraisal system and its use. In addition, the unit explains the use of the schedules to value property using the cost approach.

Learning objectives

After completing the assigned readings, you should be able to

- identify the various factors used to adjust the Appraisal Publications,
- explain how the various factors are obtained and used,
- identify the use of the Appraisal Publications,
- identify and use the various cost tables in the manual,
- understand and use a remaining economic life (REL) depreciation table.

Terms and concepts

Actual age
Base price
CDU (condition, desirability, and utility) rating
Cost approach
Depreciation
Effective age
Full value
Property record card 1 (PRC-1)
Property record card 2 (PRC-2)
Quality grade
Remaining economic life (REL)
Replacement cost new (RCN)
Standard 5 plumbing fixtures

Factors used with the Appraisal Publications

Cost factor As discussed in Unit 5, a cost factor is designed to adjust the Appraisal Publications' RCN value to reflect the local cost of labor and material in other areas. The use of a cost factor may be necessary for any jurisdiction that is not similar to the central Illinois area.

Quality grade The accuracy of an RCN obtained from the Appraisal Publications is greatly affected by proper quality grading. A **quality grade** represents the quality of construction, workmanship, and materials used in a project. The quality of workmanship and materials can greatly affect the cost of construction and the value of the improvement.

The majority of improvements fall within a definite class of construction involving average quality of workmanship and materials. This type of construction is designated as grade "C" which carries a factor of 100 percent or 1.00. The cost tables in the Appraisal Publications represent quality grade "C." A different quality grade factor may be used if the subject property was not built using average quality materials and workmanship.

There are six basic quality grades in the Appraisal Publications.

Grade	Quality	Factor
AA	Superior quality	225 percent
A	Excellent quality	150 percent
B	Good quality	122 percent
C	Average quality	100 percent
D	Cheap quality	82 percent
E	Very cheap quality	50 percent

Pluses and minuses, after the letter grade, can be used to fine tune these adjustments. For example, a "C+ 10" grade improvement would have a grade factor of 10 percent above "C," or 110 percent.

Design factor

The following details should be considered in determining whether to use a design factor:

- Irregular foundation outline,
- Wide roof overhangs,
- An unusual amount of built-in features,
- A number of special features, such as costly paneling, expensive fireplace mantles, and large fireplace chimneys,
- The use of mixed materials in the interior and the exterior of a home,
- Glass houses, earth homes, vacation homes, and
- Unusual architectural designs.

The design factor is handled in the same manner as a quality grade factor; it is assigned to individual homes and should remain unchanged during the life of the structure.

To determine a design factor, the percentage increase or decrease in cost due to the design feature or features must be determined. These costs should be verified through the contractor. The original contractor can provide a certified construction cost value. Several opinions from local contractors are also beneficial in verifying costs.

A design factor can be determined by the formula

$$\frac{\text{Contractor's costs}}{\text{Publication 123 RCN}}$$

Typically, a minus 13 percent to a plus 50 percent adjustment is made to the Appraisal Publications' RCN value when using a design factor. A design factor is more commonly used in quality grades "B," "A," and "AA" improvements, although it may be required for grade "C" construction.

Appraiser factor

A jurisdiction may have more than one assessor. Some jurisdictions may employ field appraisers to determine the quality grades of all buildings within that jurisdiction.

Because quality grades are based on the judgment of one

individual, it is possible that quality grades may be assigned that are consistently higher or lower than what other assessors or appraisers in that jurisdiction would have assigned to those buildings. In order to maintain uniformity, an **appraiser factor** is required to bring those buildings, valued by that particular individual, more in line with the value of the rest of the buildings in the jurisdiction. This factor is applied to all the parcels listed by the individual assessor.

The appraiser factor is developed using a method similar to that used to obtain the cost factor. Additional information on this factor and other factors are available in the Appraisal Publications.

Neighborhood factor

The neighborhood where the property is located has a direct effect on the value. The neighborhood of a property may be defined by a natural boundary formed by rivers, or political boundaries formed by zoning to protect the common use in an area. The neighborhood should be analyzed to determine if the area is in a stage of growth, stability, or decline in order to estimate the future use and value.

A review of the factors

The **quality grade** — Used to adjust the Publication 123 RCN values to reflect the quality of materials and workmanship of the improvement.

Cost factor x design factor x neighborhood factor x appraiser factor — These factors are chain multiplied to arrive at one factor used to adjust the Appraisal Publications' RCN value to reflect a true RCN of the improvement.

Exercise 6-1

Cost	X	Design	X	Neighborhood	X	Appraiser	=	Factor
1.06	x	1.03	x	1.02	x	1.04	=	1.16
1.06	x	1.00	x	.98	x	.98	=	_____
1.06	x	1.05	x	1.00	x	1.00	=	_____
1.06	x	1.01	x	1.10	x	1.00	=	_____

REL/Depreciation

The final factor that is applied to all improvements is a **remaining economic life (REL)** factor. This factor is applied to the true RCN to arrive at a full market value, which now reflects the adjustment made for depreciation.

Depreciation is the loss in value due to a number of factors. Generally, depreciation is placed into three categories: physical; functional; and external or economic depreciation. All depreciating forces act concurrently, but not at the same rate.

Use of the Residential REL Depreciation Table

Schedule A — This schedule takes into account the **actual age** of the improvement, and what is referred to as the CDU rating of the improvement, to arrive at an **effective age**. This effective age is then used to find the remaining economic life factor, which is applied to the true RCN.

The **CDU rating** is assigned to each property by comparing that subject property's physical condition "C," desirability "D," and utility "U" to other properties within the neighborhood, or within a jurisdiction if neighborhoods have not been established.

The CDU rating is the method for determining a rate of depreciation. The **condition** refers to physical depreciation, such as wear and tear and action of the elements that has taken place. The **desirability** refers to the economic or external depreciation, such as lack of appeal due to location, or some type of adverse influences outside the boundary lines of the property. The **utility** refers to functional obsolescence, such as inefficient and impractical arrangement of rooms and any super-adequacy or inadequacy that may be present.

The CDU rating is broken down into five classifications.

E	Excellent	Superior condition
G	Good	Better than average condition
A	Average	Normal wear and tear for area
P	Poor	Definitely below average condition
U	Unsound	Excessively deteriorated condition

How to use the Residential REL Depreciation Table

Step 1 Locate the actual age of the improvement (based on year of construction) in the AGE column of Schedule A.

Step 2 Determine the CDU of the subject and locate it along the upper portion of Schedule A.

Step 3 Trace the age to its point of intersection with the CDU and find the effective age.

For example: a property that has an age of “10,” with a CDU rating of “good,” has an effective age of “7” in Schedule A.

Step 4 This effective age is then located on Schedule B in the column headed EFF. AGE. The percentage factor indicated in the right column of Schedule B is the REL factor. This factor is then applied to the true RCN, which depreciates the value to reflect full market value. REL is directly related to depreciation.

For example: a property with an effective age of 7 has an REL of 92%.

REL% + DEP% = 100%, or

100% – REL factor expressed as a percent = percent of depreciation.

For example: a property with an REL of 92% has depreciated 8%. **100% — 92% = 8%**

The assessor must carefully review CDU ratings over time because the CDU rating of each property may change for a variety of reasons. Because each property is assigned an individual CDU rating, a change of one CDU may not require a change in the CDU ratings of other properties within the neighborhood.

Residential REL Table

Schedule A						Schedule B									
Age	Effective Age					Age	Effective Age					Eff. Age	REL	Eff. Age	REL
	E	G	A	P	U		E	G	A	P	U				
1	1	1	1	14	27	51	32	42	51	66	76	1	99	51	51
2	1	1	2	15	28	52	32	43	52	67	77	2	97	52	50
3	1	2	3	16	29	53	33	44	53	68	78	3	96	53	49
4	1	2	4	16	30	54	33	44	54	68	78	4	95	54	48
5	1	3	5	17	31	55	33	45	55	69	80	5	94	55	47
6	2	4	6	17	32	56	34	46	56	70	81	6	93	56	47
7	2	5	7	18	33	57	34	47	57	71	82	7	92	57	47
8	2	6	8	19	34	58	35	48	58	72	83	8	91	58	46
9	2	6	9	20	35	59	35	48	59	72	83	9	90	59	46
10	2	7	10	21	38	60	36	49	60	73	83	10	89	60	46
11	3	7	11	22	39	61	37	50	61	73	85	11	88	61	45
12	3	8	12	23	39	62	38	50	62	74	86	12	87	62	45
13	3	9	13	24	40	63	39	51	63	74	86	13	86	63	44
14	4	10	14	24	40	64	40	52	64	76	88	14	85	64	43
15	4	11	15	25	40	65	42	53	65	78	90	15	84	65	43
16	4	12	16	26	43	66	42	53	66	78	91	16	82	66	42
17	4	13	17	30	45	67	43	55	67	80	93	17	81	67	42
18	5	14	18	31	46	68	44	58	68	84	97	18	80	68	42
19	5	15	19	31	46	69	45	59	69	86	100	19	79	69	41
20	6	16	20	32	47	70	46	60	70	88	102	20	77	70	41
21	8	16	21	33	48							21	76	71	41
22	10	17	22	33	48							22	75	72	41
23	10	18	23	34	49							23	74	73	40
24	11	19	24	35	50							24	73	74	40
25	11	20	25	35	50							25	72	75	40
26	12	21	26	36	51							26	71	76	39
27	12	22	27	38	52							27	70	77	39
28	13	23	28	38	52							28	69	78	39
29	13	24	29	39	53							29	68	79	38
30	13	25	30	40	54							30	67	80	38
31	14	25	31	40	54							31	66	81	38
32	15	26	32	42	56							32	65	82	37
33	16	27	33	44	59							33	65	83	37
34	17	28	34	46	60							34	63	84	37
35	18	29	35	47	61							35	62	85	36
36	19	30	36	48	62							36	62	86	36
37	20	31	37	50	64							37	61	87	36
38	21	31	38	51	64							38	59	88	35
39	22	32	39	53	65							39	59	89	35
40	23	33	40	54	66							40	58	90	35
41	24	34	41	55	67							41	57	91	34
42	25	35	42	56	67							42	57	92	34
43	25	36	43	57	68							43	56	93	33
44	26	38	44	59	69							44	56	94	33
45	27	39	45	60	70							45	56	95	33
46	28	39	46	60	70							46	55	96	32
47	29	40	47	61	70							47	54	97	32
48	30	40	48	62	71							48	54	98	32
49	31	41	49	64	73							49	52	99	31
50	32	41	50	65	75							50	51	100	31
														101	30
														102	30

See the Property Record Card section of the Illinois Real Property Appraisal Manual to use these tables.

Residential square foot schedules

The schedules in Publication 123 are based on construction costs in the central Illinois area. The values are also based on construction using average quality materials and workmanship. As discussed earlier, there are various factors that can be applied to adjust Publication 123 to reflect the values in various jurisdictions.

For residential structures, Publication 123 includes base cost schedules for building style and type of construction. When referencing a base cost schedule, it is important to use the appropriate schedule. The base cost schedules include normal construction features, such as a slab foundation, exterior walls, floors, roof, interior finish, central heating, lighting, and average landscaping. They also include the standard five plumbing fixtures: bathroom toilet, basin, tub or shower, kitchen sink, and hot water heater. If you are dealing with construction features other than those included in the base cost schedules, you must make “plus” or “minus” adjustments to the base cost. Publication 123 includes various supplemental schedules to assist in valuing these variances that also indicate whether a plus or minus adjustment to the base price is required.

The residential schedules are used in conjunction with the residential **property record cards (PRCs)**. PRC-1 is used for valuing land, and the PRC-2, is used for the computation of building values. The right column of the PRC-2 is used for computing the full value of the structure. This column is called the “**computation ladder.**”

Determine the base cost of the structure

Using the base cost schedule on the following page, determine the base cost of the structure. The base cost of the structure is based on the square footage of the ground floor multiplied by the number of stories. The schedules include values for 1-story, 1 ½-story, split-level, 2-story, and 3-story structures. When referring to the schedules, use the **combined square footage of all floors**. Select the appropriate corresponding story height to determine the value. Looking at the base cost schedule, the left column represents the combined square footage of all floors.

For example, if you have a 2-story wood frame structure with vinyl siding and 1,000 square feet on each floor, find 2,000 square feet in the left column of the base cost schedule for wood frame construction/vinyl siding, and move to the appropriate column under 2-story structure. The base cost of this structure, before adjustments, is \$171,760. **If the actual square footage falls between 2 numbers on the schedule, choose the closest one. If it is exactly in the middle, average the values for the numbers between which it falls between.**

Residential	Average Quality	2 Story
Standard design from stock plans 1 Kitchen 1 Full bath No basement Asphalt/Fiberglass Shingles Hot air heat (gas fired) Painted drywall interior Average material and workmanship		

Base cost per square foot of total living area

Total SF	Wood siding Wood frame	Vinyl siding Wood frame	Brick veneer Wood frame	Stucco Wood frame	Concrete Block or Stucco on Block	Brick Solid Masonry
1,000	102,110	101,470	108,300	101,650	106,980	128,890
1,100	110,120	109,000	116,790	109,470	115,620	134,900
1,200	116,290	115,130	123,270	115,560	122,100	143,360
1,300	123,760	122,520	128,160	123,120	129,980	150,450
1,400	130,880	128,260	134,140	129,830	137,550	158,460
1,500	137,420	136,100	143,280	137,390	143,980	171,980
1,600	144,660	144,370	151,180	143,620	151,890	177,170
1,700	151,220	150,530	157,900	150,520	158,960	180,820
1,800	158,820	157,900	164,470	158,180	165,320	193,800
1,900	166,650	164,630	171,820	165,670	173,590	203,140
2,000	173,500	171,760	183,490	172,020	183,730	211,350
2,100	180,140	179,680	190,950	179,900	189,330	212,690
2,200	187,550	186,130	198,800	186,770	196,580	218,700
2,300	194,160	193,210	205,810	191,790	203,870	230,760
2,400	201,360	200,250	213,400	198,250	211,890	240,950
2,500	207,670	207,340	220,090	207,130	218,050	246,680
2,600	214,630	214,120	227,230	213,190	225,360	253,790
2,700	220,720	218,510	233,280	219,230	232,030	259,530
2,800	227,560	225,280	240,300	226,300	238,940	267,100
2,900	234,260	231,920	246,510	232,370	246,820	273,620
3,000	239,910	237,510	252,200	238,470	252,740	280,640
3,100	246,640	244,170	259,250	245,410	260,650	286,970
3,200	253,250	250,720	265,910	250,080	267,630	296,660
3,300	257,000	254,890	269,850	253,320	271,850	303,790
3,400	263,360	261,250	276,470	260,080	276,530	309,680
3,500	270,170	267,470	283,680	268,820	283,680	317,800
3,600	275,830	273,070	289,620	272,990	289,620	323,860
3,700	284,270	281,420	298,170	281,160	300,440	335,440
3,800	289,630	286,730	304,110	289,190	302,950	341,470
3,900	294,880	291,930	310,710	292,110	309,620	345,010
Over 4,000	\$75.00	\$74.25	\$79.50	\$74.75	\$78.75	\$88.75

Plumbing (±)			
Per fixture less than standard.....	Deduct	\$1,885	
Per fixture greater than standard.....	Add	\$1,885	

The base price includes the standard 5 plumbing fixtures: bathroom toilet, bathroom basin, tub or shower, kitchen sink, and hot water heater. If the structure has more than the standard 5 fixtures, add \$1,885 per fixture to the base cost. If you have less than the standard 5 fixtures, a deduction of \$1,885 per fixture should be made.

Quality grade refers to the quality of the material and workmanship. Publication 123 is based on **average** quality improvements. The quality grade for average is "C." If you have a quality other than average, you must apply the appropriate grade factor.

Quality	
Grade	Factor
AA	225%
A	150%
B	122%
C	100%
D	82%
E	50%

Residential No Heat Schedule (-) Always a subtraction						
Total Square foot area	1 Story	1.5 Story	2 Story	Bi-level	Tri-level	2.5 – 3 Story
200	860	860	-----	-----	-----	-----
400	1,720	1,720	-----	-----	-----	-----
600	2,735	2,735	-----	-----	-----	-----
800	3,390	3,390	3,375	3,345	3,425	-----
1,000	4,000	4,000	3,980	3,945	4,045	4,110
1,200	4,570	4,545	4,535	4,500	4,620	4,660
1,400	5,105	5,065	5,105	5,085	5,110	5,205
1,600	5,675	5,600	5,640	5,625	5,645	5,795
1,800	6,225	6,265	6,195	6,190	6,120	6,315
2,000	6,825	6,685	6,765	6,720	6,650	7,015
2,200	7,355	7,220	7,315	7,305	7,315	7,705
2,400	7,890	7,695	7,855	7,785	7,655	8,390
2,600	8,445	8,190	8,370	8,330	8,180	8,945
2,800	8,945	8,850	8,875	8,930	8,695	9,525
3,000	9,445	9,290	9,355	9,290	9,135	10,055
3,200	9,925	9,710	9,875	9,775	9,910	10,600
3,400	10,365	10,320	10,270	10,245	10,265	11,190
3,600	10,840	10,800	10,760	10,670	10,805	11,700
3,800	11,410	11,380	11,295	11,165	11,215	12,260
4,000	12,120	11,980	11,700	11,660	11,680	12,620

The base price schedule includes heat. If the structure is **not heated**, a minus adjustment must be made.

Residential Central Air conditioning Schedule (+) For additions or ells use \$2.50 per square foot of service area in the addition. Air Conditioning is always an addition.

Total Square foot area	1 Story	1.5 Story	2 Story	Bi-level	Tri-level	2.5 – 3 Story
200	1,200	1,200	1,200	1,200	-----	-----
400	1,200	1,200	1,200	1,200	-----	-----
600	2,020	2,020	2,020	2,020	-----	-----
800	2,500	2,500	2,475	2,500	2,500	2,600
1,000	2,960	2,960	2,925	2,960	2,960	3,165
1,200	3,380	3,360	3,340	3,370	3,380	3,615
1,400	3,780	3,750	3,730	3,765	3,780	4,045
1,600	4,200	4,160	4,140	4,180	4,200	4,495
1,800	4,610	4,520	4,540	4,565	4,610	4,930
2,000	5,050	4,950	4,965	5,000	5,050	5,400
2,200	5,440	5,385	5,330	5,415	5,440	5,820
2,400	5,840	5,830	5,715	5,835	5,840	6,250
2,600	6,250	6,235	6,110	6,245	6,250	6,690
2,800	6,620	6,555	6,460	6,590	6,620	7,085
3,000	6,990	6,850	6,810	6,920	6,990	7,480
3,200	7,345	7,270	7,140	7,310	7,345	7,860
3,400	7,680	7,595	7,465	7,640	7,680	8,215
3,600	8,020	7,860	7,780	7,940	8,020	8,580
3,800	8,445	8,275	8,220	8,360	8,445	9,040
4,000	8,970	8,790	8,700	8,880	8,970	9,600

Central air conditioning is not included in the base price. If the structure is cooled by central air conditioning, a plus adjustment must be made.

Fireplace (+)			
Type	1 story	2 story	3 story
Masonry Fireplace & stack	\$5,340	\$5,950	\$6,775
2 nd fireplace on same stack	\$4,410	\$4,915	\$5,840
Pre-fab Fireplace	\$4,205	\$4,700	\$5,200

Fireplaces are not included in the base price. If the structure contains a fireplace, an adjustment must be made for the number of fireplaces and stacks.

The base price of the dwelling **includes** the cost of only a **slab foundation**. You must make an adjustment for a dwelling that has either a **crawl space or basement area**. To use the schedule, calculate the SF area with a foundation other than a concrete slab, and correlate it to the appropriate construction type (crawl or basement).

This schedule is also designed to estimate the cost of finishing a basement into living quarters or a recreation room.

Use SFGA to determine the basement/foundation value.

Basement/foundation schedule (+)														
Basements: Base cost per area square foot. For finished area, correlate the square footage of finish and add on Finished basement line on the PRC.														
	400	600	800	1,000	1,200	1,400	1,600	1,800	2,000	2,400	2,800	3,200	3600	Over 3600
Crawl space	3,265	4,750	6,375	7,370	8,350	9,410	10,740	10,945	11,904	13,415	14,930	17,050	18,145	5.05
Unfinished basement	4,680	6,935	9,000	10,480	12,025	13,500	14,960	16,470	17,980	21,750	24,100	26,400	29,350	8.00
Finished Basement Living area	5,870	10,355	14,820	16,835	19,750	22,730	25,730	28,680	31,630	36,520	41,805	47,970	49,825	15.20
Finished Basement Recreation Room area	3,995	7,335	9,560	10,870	12,935	13,900	16,090	17,430	19,020	21,390	25,460	28,160	32,210	11.45

Garages

The cost of a garage is not included in the base residence cost. The garage costs include wall surfaces, roof surface when applicable, a concrete floor, doors, and electric lighting. Walls and roof cover are the same as the basic residence. The garages cost table includes attached, detached, and built-in garages. Also included are costs for basement garages and areas over attached or detached garages.

Attached garages share a common wall with the residence and costs include interior finish for only that common or share wall.

Detached garages are freestanding structures with totally independent foundation and roof structures from the residence. There is no interior finish included in the costs.

Built-in garages having area both adjacent to and above. Costs include finish for all common surfaces.

Garages: Base cost per square foot of area

Garages	Attached			Detached			Built-in	
	1 Car	2 Car	3 Car	1 Car	2 Car	3 Car	1 Car	2 Car
	275-364	484-676	864+	275-364	484-676	864+	275 – 364	484 - 676
Vinyl Siding on wood stud	33.50	27.30	25.60	37.60	31.50	31.00	27.65	23.75
Wood Siding on wood stud	35.50	31.35	31.20	39.45	33.55	31.45	29.30	27.25
Brick veneer on wood stud	38.85	33.05	32.90	44.70	38.25	35.85	32.05	28.75
Stucco on Wood on wood stud	34.65	29.30	27.00	39.50	33.25	30.35	28.60	25.50
Solid Masonry, brick	40.65	37.60	36.50	48.30	40.15	36.80	33.55	32.70
Basement Garage:	Add lump sums to unfinished basement costs. 1 car: \$2,350 2 car: \$3,200							
Areas over Garage:	If an area over an attached garage is equal to the residence in interior finish, include that area in the total square footage of the residence and price the garage as a built-in. If minimal finish like a bonus room, use 50% of the garage square foot costs. If storage only with high-pitched gable roof, add 20% to the garage costs to cover roof and floor costs.							

Porches (+)						
SFGA	Open frame porch	Frame Screened-in porch	Knee wall with glass	Solid wall enclosed frame	Open Masonry Porch	Enclosed masonry porch
24	1,120	1,905	3,050	2,290	1,225	2,935
50	1,970	2,450	4,720	3,580	2,620	4,225
80	2,945	3,990	6,385	4,870	3,915	5,530
100	3,455	4,545	7,470	5,895	4,415	7,000
120	3,955	5,130	7,975	6,340	5,500	7,420
150	4,940	6,415	9,965	7,930	6,590	9,260
200	6,300	7,825	11,655	9,550	8,445	11,180
250	7,500	9,300	13,540	11,195	9,975	13,055
300	8,620	10,580	15,315	12,685	11,325	14,930
350	9,640	11,725	16,975	14,060	12,670	16,590
400	10,460	12,600	18,430	15,265	14,000	18,010
500	12,350	14,960	21,885	18,125	16,425	21,390
600	13,950	17,060	24,950	20,665	18,830	24,385
700	15,535	19,020	26,645	22,900	20,815	25,755
750	15,810	19,365	27,650	23,310	21,025	27,105
800	16,025	19,615	28,425	23,625	21,315	28,445
900	17,190	20,970	32,220	25,245	23,030	27,105
1,000	18,150	22,140	34,010	26,650	25,160	28,445

Porches are not included in the base cost. If the structure has one or more porches, an addition to the base price must be made. To determine a value, locate the square footage of the porch in the left column and then go to the appropriate construction type in the right columns for the value. If you have more than one porch attached to the structure, price each porch individually. You cannot combine the total square footage for all porches.

Partial masonry trim (+) Per SF of surface area				
Quality	A	B	C	D
Brick	\$17.60	\$14.35	\$11.75	\$9.65
Stone	44.10	35.85	30.60	25.30
Artificial Stone	19.00	15.45	12.60	10.35

Occasionally, structures will feature brick, stone, or artificial stone as trim accenting a portion of the structure. If there is **partial masonry trim** on the structure, an addition to the base price must be made. The amount of the adjustment would reflect the type of material used and the quality grade of the material.

Paving (+)	
Crushed stone	\$0.65/SF
Concrete	4.90/SF
Asphalt	2.90/SF

The **paving** schedule is used to value sidewalks, driveways, etc. The amount of the addition is determined by the type of material used. Values are indicated for crushed stone, concrete, and asphalt. To determine the amount of the addition, multiply the square footage of the paved area times the indicated value.

Stoop, decks, patios (+/-)	
Stoop – masonry	\$26.90/SF
Deck – wood, elevated	17.35/SF
If no stairs, deduct	5.75/SF
If no railing, deduct	1.75/SF
Patio – concrete	6.35/SF
Patio – brick (In sand)	13.20/SF

Stoops, decks, and patios are not included in the base price, so an addition must be made. To determine the value, multiply the square footage of the structure times the indicated value.

REL depreciation tables

As discussed earlier, the condition, desirability, and utility of the property are factored in by using various CDU ratings. Structures can be rated excellent, good, average, poor, or unsound. The actual age of the structure and the CDU rating produce the effective age of a property. The effective age of the property determines the remaining economic life (REL) factor, which is applied to the RCN of a structure to adjust for depreciation.

REL + depreciation = 100% of the value.

The Residential REL Depreciation Tables are used to determine the REL factor. Looking at Schedule A, the left column reflects the actual age of the structure based on the construction date. Once you locate the actual age, move to the right to the appropriate column and find the effective age based on the CDU rating assigned to the property. Once you determine the effective age of the property, move to Schedule B. The left column of Schedule B lists the effective age, and the number next to it is the REL factor that is used to adjust the value in the computation ladder.

Residential REL Table

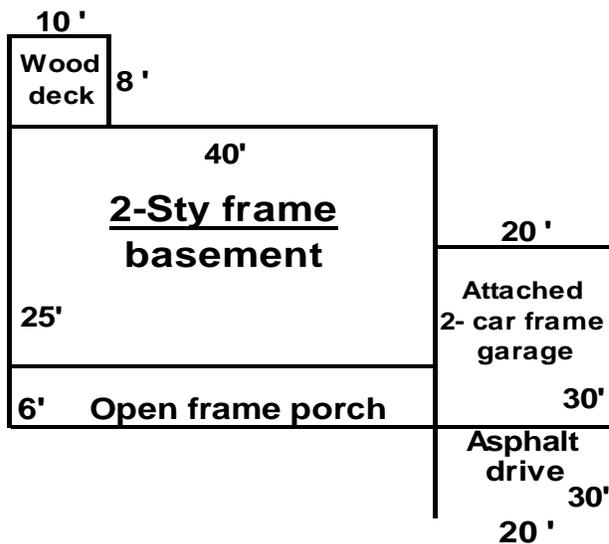
Schedule A						Schedule B									
Age	Effective Age					Age	Effective Age					Eff. Age	REL	Eff. Age	REL
	E	G	A	P	U		E	G	A	P	U				
1	1	1	1	14	27	51	32	42	51	66	76	1	99	51	51
2	1	1	2	15	28	52	32	43	52	67	77	2	97	52	50
3	1	2	3	16	29	53	33	44	53	68	78	3	96	53	49
4	1	2	4	16	30	54	33	44	54	68	78	4	95	54	48
5	1	3	5	17	31	55	33	45	55	69	80	5	94	55	47
6	2	4	6	17	32	56	34	46	56	70	81	6	93	56	47
7	2	5	7	18	33	57	34	47	57	71	82	7	92	57	47
8	2	6	8	19	34	58	35	48	58	72	83	8	91	58	46
9	2	6	9	20	35	59	35	48	59	72	83	9	90	59	46
10	2	7	10	21	38	60	36	49	60	73	83	10	89	60	46
11	3	7	11	22	39	61	37	50	61	73	85	11	88	61	45
12	3	8	12	23	39	62	38	50	62	74	86	12	87	62	45
13	3	9	13	24	40	63	39	51	63	74	86	13	86	63	44
14	4	10	14	24	40	64	40	52	64	76	88	14	85	64	43
15	4	11	15	25	40	65	42	53	65	78	90	15	84	65	43
16	4	12	16	26	43	66	42	53	66	78	91	16	82	66	42
17	4	13	17	30	45	67	43	55	67	80	93	17	81	67	42
18	5	14	18	31	46	68	44	58	68	84	97	18	80	68	42
19	5	15	19	31	46	69	45	59	69	86	100	19	79	69	41
20	6	16	20	32	47	70	46	60	70	88	102	20	77	70	41
21	8	16	21	33	48							21	76	71	41
22	10	17	22	33	48							22	75	72	41
23	10	18	23	34	49							23	74	73	40
24	11	19	24	35	50							24	73	74	40
25	11	20	25	35	50							25	72	75	40
26	12	21	26	36	51							26	71	76	39
27	12	22	27	38	52							27	70	77	39
28	13	23	28	38	52							28	69	78	39
29	13	24	29	39	53							29	68	79	38
30	13	25	30	40	54							30	67	80	38
31	14	25	31	40	54							31	66	81	38
32	15	26	32	42	56							32	65	82	37
33	16	27	33	44	59							33	65	83	37
34	17	28	34	46	60							34	63	84	37
35	18	29	35	47	61							35	62	85	36
36	19	30	36	48	62							36	62	86	36
37	20	31	37	50	64							37	61	87	36
38	21	31	38	51	64							38	59	88	35
39	22	32	39	53	65							39	59	89	35
40	23	33	40	54	66							40	58	90	35
41	24	34	41	55	67							41	57	91	34
42	25	35	42	56	67							42	57	92	34
43	25	36	43	57	68							43	56	93	33
44	26	38	44	59	69							44	56	94	33
45	27	39	45	60	70							45	56	95	33
46	28	39	46	60	70							46	55	96	32
47	29	40	47	61	70							47	54	97	32
48	30	40	48	62	71							48	54	98	32
49	31	41	49	64	73							49	52	99	31
50	32	41	50	65	75							50	51	100	31
														101	30
														102	30

See the Property Record Card section of the Illinois Real Property Appraisal Manual to use these tables.

Computing the value of a structure

The subject property is a 10-year old, 2-story wood frame structure with 8 rooms, including 4 bedrooms and a family room.

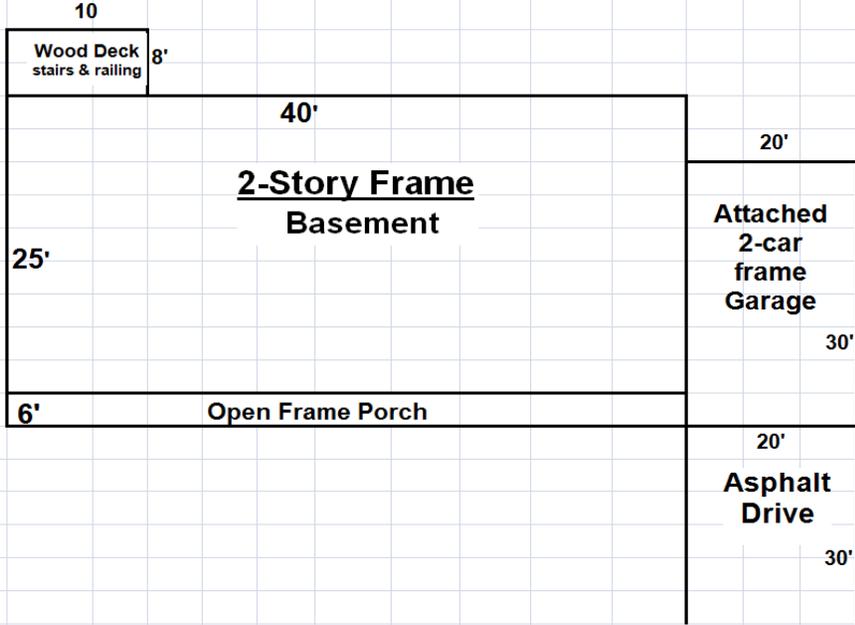
The foundation is 8" masonry — there is a full basement, unfinished — the dwelling has central warm air heat and central air conditioning — plumbing consists of the standard 5 plumbing fixtures, plus an additional full bath and a separate half-bath (2 fixtures) — exterior walls are covered with vinyl siding with 300 square feet of common-stone trim, grade "C," across the front — the roof is covered with asphalt shingles — the basement floor is concrete and the first and second floors are covered with tile and carpet — the interior finish is drywall on the first and second floors — there is one masonry fireplace — the structure has an attached 600 square foot frame 2-car garage with vinyl siding, with a 600 square foot asphalt drive — there is an 80 square foot wood deck with stairs and railings on the rear of the structure — there is a 6' x 40' open frame porch at the front of the house — the property has a CDU of "average," and quality grade "C."



The entire PRC-2 for this property is on the next page. Refer to the computation ladder and the corresponding line numbers as you go through this line-by-line example.

Building Record - Residential - Rural (Property - Type 1)

Occupancy							Interior Finish				Remodeled	Sold Date	Mo.	Day	Yr.	Age 10	Adj. Age										
1	2	3	4	5	6	7		B	1	2	3	NH	Amount \$				CDU	Average									
Vacant Lot	Dwelling	Other	Mobile Home	A Frame	Summer Home	Apt.	Plaster/dry wall		X	X		Memo					Grade	C									
Living Accommodations							Fiberboard											Dwelling Computations									
Total Rooms	Bedrooms	Family Room						Paneling											2	Sty.	Frm Constr.	1000	SF				
8	4	1						Features	SF	Quality	Type							Sty.	Constr.	SF							
Foundation							Pt. Msy Trin	300	C	Brk.	Stone	Art ³	Porches					1000 x 2= 2000	SF	171,760							
8"	Msy. Wall			Pier			Finished				Living	Condo. Comm.	Porch	240	SF	OFF ¹	EFP ²	OMP ¹	EMP ⁴	2-Sty	Basement	10,480					
Basement							Basement				Recreation	Prorated %	Porch	SF	OFF ¹	EFP ²	OMP ¹	EMP ⁴	2-Sty	Heating	Central air	4,965					
1	3	4						Fireplaces #	1	masonry	Stack#	1	With:	Porch	SF	OFF ¹	EFP ²	OMP ¹	EMP ⁴	2-Sty	Sched. Comb.						
Full	Crawl	Slab						Integral garage	On grade ¹			Below ²	Wd. deck	80	SF	Wood deck	w stairs & railing			Plumbing +	5 -	9,425					
Area without bsmt.							SF	Attached garag	600	Frm.	Msy. ²	Carpport ³						Attic									
Heating																	Porches	240	SF	OFF	7,500						
1	2	3		4				None	Central	Air Condition		Other						Wood Deck	80	SF	1,388						
Warm air										X									Attach./Integral garage	16,380							
Hot water/Steam																	Total	221,898									
Floor furnace																	Grade	C	1.00								
Unit heaters																	Total	221,898									
Other																	Other features										
Plumbing																	Pt. msy. Walls	9,180									
Standard (5)										X									Fireplace	5,950							
Bathroom (3)										X									Finished basement								
Half bath (2)										X									Total	237,028							
Sink/Lavatory water closet																	C x D										
Attic																	NH x AP	1.06									
1	2	3		4				None	Unfinished	Part		Full						Replacement cost new	251,250								
										% finished									Eff. Age	REL							
Exterior Walls																	Depr.	89%	0.89								
Wood/stucco/aluminum/vinyl siding										X									Full								
Concrete block																			S C M I	Value	223,613						
Brick/stone TRIM										X																	
Other																											
Roof							Summary of Other Buildings																				
Shingle - asphalt/asbestos/wood										X				Type	No.	Construction	Size	Rate	Grade	Age	CDU	Factor	Repl. Cost new	REL	Full Value		
Slate/tile														Garage (detached)		Frm ¹ Msy. ¹	Carpport ³										
Composition														DRIVE	1	Asphalt	600	2.90	C/1.00	10 yrs Avg	1.06	1,844	0.89	1,641			
Other																											
Floors																											
	B	1	2	3			Concrete	X																			
Wood																											
Tile										X																	
Carpet										X								Listed by:						Total full value other buildings	1,641		
																			Date:						Total full value all buildings	225,254	



PT

1. The structure is 10 years old, so 10 is written on the **Age** line.
2. The **CDU** is listed as “average.”
3. The **Quality grade** is listed as “C.”
4. The dwelling is a 2-story, wood frame/vinyl siding structure with 1,000 square feet on the ground floor. (2-story x 1,000 square feet = 2,000 total square feet)
5. Looking at the **Base cost schedule — wood frame/vinyl siding construction**, the base price is \$171,760. (page 145)
6. The structure has an **unfinished basement**. You must make a plus adjustment of \$10,480 for the 1,000 square foot basement. (page 146)
7. The structure is heated, so no adjustment is necessary for heat. However, the structure has central air conditioning. Since air conditioning is **not** included in the base price, you must make a plus adjustment. Look at the **Central air conditioning schedule** — a 2-story structure with 2,000 square feet requires a plus adjustment of \$4,965. (page 147)
8. In addition to the standard 5 plumbing fixtures, there is an additional bathroom and a toilet room, so a plus adjustment for 5 additional fixtures is required. Reference the **Plumbing schedule** — the appropriate adjustment is \$1,885 per fixture, or a plus \$9,425 (5 x \$1,885).
9. No adjustment is needed since there is no **attic**.
10. The listing indicated 1 “open frame porch,” which is 240 square feet. Refer to the **Porch schedule** — the value for a 250 square foot open frame porch is \$7,500. Since no value is given for 240 square feet, choose the **closest** listed footage. (page 148)
11. The next addition needed is for an 80 square foot wood deck with **stairs** and **railings**. Looking at the schedules for **Decks** — the base price is \$17.35 per square foot. To arrive at a value, take 80 SF x \$17.35 = \$1,388. (page 148)
12. There is a 600 square foot 2 car attached frame garage with vinyl siding. Look at the **Garage schedule** – the base price is \$27.30. To arrive at a value, take 600 SF x \$27.30. A plus \$16,380 adjustment is required. (page 149)
13. The base cost of \$171,760 and the adjustments made so far (for the basement, central air conditioning, plumbing, a porch, a deck, and attached garage) are totaled to arrive at \$221,898.

14. The next line refers to the quality grade. The quality grade for this structure is “C”. Looking at the schedule for **Quality** – the factor for “C” is 100 percent. Since the grade is “C”, or average quality construction, the values are not affected. Particular attention should always be paid to the factor assigned; any grade other than “C” will produce a factor other than 100 percent and change the value. (page 150)
15. Taking 100 percent (1.00) times \$221,898, the value remains \$221,898.
16. It should be noted that in the first part of the computation ladder, a quality grade factor of 1.00 was applied to the adjusted base price. However, in the items listed in the next portion of the ladder, individual quality grades for each feature must be considered when selecting the amount of adjustments.
17. The property has 300 square feet of common stone trim, grade “C.” Looking at the schedule for **Partial masonry trim**, find “stone” and grade “C” — the value is \$30.60. Taking 300 square feet x \$30.60 produces a value of \$9,180 to add to the cost. (page 150)
18. This structure contains 1 masonry fireplace. Referencing the **Fireplace schedule** — the value for a fireplace and stack for a 2 story dwelling is \$5,950. (page 150)
19. There are no more adjustments to make to the computation ladder at this point. Adding the adjusted base price of \$221,898, to the value of the trim and fireplace results in a total of \$237,028.
20. As stated earlier, the values in Publication 123 are for the central Illinois area. From the cost factor study conducted earlier, this property is in an area where construction costs run about 6 percent higher. Therefore, you must use the cost factor of 106 percent to obtain accurate values for this jurisdiction.
21. When the adjusted value of \$237,028 is multiplied by 106 percent (1.06), the resulting value of \$251,250 is the RCN of this structure.
22. Since the structure is 10 years old, the RCN must be adjusted for any depreciation that has occurred. Going to **Schedule A** of the **Residential REL Depreciation Tables** — a 10-year old structure with a CDU of “average” has an effective age of 10. On **Schedule B**, an effective age of 10 indicates an REL factor of 89 percent. This property has depreciated 11 percent (REL + depreciation = 100 percent).
23. Taking 89 percent (.89) of the RCN of \$251,250 produces a full value of \$223,613 for this structure today.

24. The listing also indicates that there is a 600 square foot asphalt driveway. Reference the **Paving schedule** — the price per square foot of paved area is \$2.90. To arrive at a value, take $600 \text{ SF} \times \$2.90 = \$1,740 \times 1.00$ (quality grade) = $\$1,740 \times 1.06$ (cost factor) = $\$1,844$ (RCN). $\$1,844$ (RCN) $\times .89$ (REL) = $\$1,641$ full value. (page 150)
25. The value for the asphalt drive is \$1,641 and this becomes the full value of the other buildings.
26. The final step is adding \$1,641, the full value of the other buildings, to \$223,613, the full value of the dwelling, which results in a full value of \$225,254 for all buildings.

The following schedules show how the values were obtained.

Residential	Average Quality	2 Story
Standard design from stock plans 1 Kitchen 1 Full bath No basement Asphalt/Fiberglass Shingles Hot air heat (gas fired) Painted drywall interior Average material and workmanship		

Base cost per square foot of total living area

Total SF	Wood siding Wood frame	Vinyl siding Wood frame	Brick veneer Wood frame	Stucco Wood frame	Concrete Block or Stucco on Block	Brick Solid Masonry
1,000	102,110	101,470	108,300	101,650	106,980	128,890
1,110	110,120	109,000	116,790	109,470	115,620	134,900
1,200	116,290	115,130	123,270	115,560	122,100	143,360
1,300	123,760	122,520	128,160	123,120	129,980	150,450
1,400	130,880	128,260	134,140	129,830	137,550	158,460
1,500	137,420	136,100	143,280	137,390	143,980	171,980
1,600	144,660	144,370	151,180	143,620	151,890	177,170
1,700	151,220	150,530	157,900	150,520	158,960	180,820
1,800	158,820	157,900	164,470	158,180	165,320	193,800
1,900	166,650	164,630	171,820	165,670	173,590	203,140
2,000	173,500	171,760	183,490	172,020	183,730	211,350
2,100	180,140	179,680	190,950	179,900	189,330	212,690
2,200	187,550	186,130	198,800	186,770	196,580	218,700
2,300	194,160	193,210	205,810	191,790	203,870	230,760
2,400	201,360	200,250	213,400	198,250	211,890	240,950
2,500	207,670	207,340	220,090	207,130	218,050	246,680
2,600	214,630	214,120	227,230	213,190	225,360	253,790
2,700	220,720	218,510	233,280	219,230	232,030	259,530
2,800	227,560	225,280	240,300	226,300	238,940	267,100
2,900	234,260	231,920	246,510	232,370	246,820	273,620
3,000	239,910	237,510	252,200	238,470	252,740	280,640
3,100	246,640	244,170	259,250	245,410	260,650	286,970
3,200	253,250	250,720	265,910	250,080	267,630	296,660
3,300	257,000	254,890	269,850	253,320	271,850	303,790
3,400	263,360	261,250	276,470	260,080	276,530	309,680
3,500	270,170	267,470	283,680	268,820	283,680	317,800
3,600	275,830	273,070	289,620	272,990	289,620	323,860
3,700	284,270	281,420	298,170	281,160	300,440	335,440
3,800	289,630	286,730	304,110	289,190	302,950	341,470
3,900	294,880	291,930	310,710	292,110	309,620	345,010
Over 4,000	\$75.00	\$74.25	\$79.50	\$74.75	\$78.75	\$88.75

Basement/foundation schedule (+)

Basements: Base cost per area square foot. For basement area or crawl space, write the valuation correlating to the proper square footage on the Basement line of PRC-2. For finished area, correlate the square footage of finish and add on Finished basement line on the PRC.

	400	600	800	1,000	1,200	1,400	1,600	1,800	2,000	2,400	2,800	3,200	3600	Over 3600
Crawl space	3,265	4,750	6,375	7,370	8,350	9,410	10,740	10,945	11,904	13,415	14,930	17,050	18,145	5.05
Unfinished basement	4,680	6,935	9,000	10,480	12,025	13,500	14,960	16,470	17,980	21,750	24,100	26,400	29,350	8.00
Finished Basement Living area	5,870	10,355	14,820	16,835	19,750	22,730	25,730	28,680	31,630	36,520	41,805	47,970	49,825	15.20
Finished Basement Recreation Room area	3,995	7,335	9,560	10,870	12,935	13,900	16,090	17,430	19,020	21,390	25,460	28,160	32,210	11.45

Use the square foot ground area (SFGA) for the foundation.

Plumbing (±)	
Per fixture less than standard...	
Deduct	\$1,885
Per fixture greater than standard...	
Add	\$1,885

Residential Central Air conditioning Schedule (+) For additions or ells use \$2.50 per square foot of service area in the addition. Air Conditioning is always an addition.						
Total Square foot area	1 Story	1.5 Story	2 Story	Bi-level	Tri-level	2.5 – 3 Story
200	1,200	1,200	1,200	1,200	-----	-----
400	1,200	1,200	1,200	1,200	-----	-----
600	2,020	2,020	2,020	2,020	-----	-----
800	2,500	2,500	2,475	2,500	2,500	2,600
1,000	2,960	2,960	2,925	2,960	2,960	3,165
1,200	3,380	3,360	3,340	3,370	3,380	3,615
1,400	3,780	3,750	3,730	3,765	3,780	4,045
1,600	4,200	4,160	4,140	4,180	4,200	4,495
1,800	4,610	4,520	4,540	4,565	4,610	4,930
2,000	5,050	4,950	4,965	5,000	5,050	5,400
2,200	5,440	5,385	5,330	5,415	5,440	5,820
2,400	5,840	5,830	5,715	5,835	5,840	6,250
2,600	6,250	6,235	6,110	6,245	6,250	6,690
2,800	6,620	6,555	6,460	6,590	6,620	7,085
3,000	6,990	6,850	6,810	6,920	6,990	7,480
3,200	7,345	7,270	7,140	7,310	7,345	7,860
3,400	7,680	7,595	7,465	7,640	7,680	8,215
3,600	8,020	7,860	7,780	7,940	8,020	8,580
3,800	8,445	8,275	8,220	8,360	8,445	9,040
4,000	8,970	8,790	8,700	8,880	8,970	9,600

Porches (+)						
SFGA	Open frame porch	Frame Screened-in porch	Knee wall with glass	Solid wall enclosed frame	Open Masonry Porch	Enclosed masonry porch
24	1,120	1,905	3,050	2,290	1,225	2,935
50	1,970	2,450	4,720	3,580	2,620	4,225
80	2,945	3,990	6,385	4,870	3,915	5,530
100	3,455	4,545	7,470	5,895	4,415	7,000
120	3,955	5,130	7,975	6,340	5,500	7,420
150	4,940	6,415	9,965	7,930	6,590	9,260
200	6,300	7,825	11,655	9,550	8,445	11,180
250	7,500	9,300	13,540	11,195	9,975	13,055
300	8,620	10,580	15,315	12,685	11,325	14,930
350	9,640	11,725	16,975	14,060	12,670	16,590
400	10,460	12,600	18,430	15,265	14,000	18,010
500	12,350	14,960	21,885	18,125	16,425	21,390
600	13,950	17,060	24,950	20,665	18,830	24,385
700	15,535	19,020	26,645	22,900	20,815	25,755
750	15,810	19,365	27,650	23,310	21,025	27,105
800	16,025	19,615	28,425	23,625	21,315	28,445
900	17,190	20,970	32,220	25,245	23,030	27,105
1,000	18,150	22,140	34,010	26,650	25,160	28,445

Stoop, decks, patios (+/-)	
Stoop – masonry 1 riser	\$26.90/SF
2 risers	\$35/SF
Deck – wood, elevated	17.35/SF
If no stairs, deduct	5.75/SF
If no railing, deduct	1.75/SF
Patio – concrete	6.35/SF
Patio – brick in sand	13.20/SF

Garages

The cost of a garage is not included in the base residence cost. The garage costs include wall surfaces, roof surface when applicable, a concrete floor, doors, and electric lighting. Walls and roof cover are the same as the basic residence. The garages cost table includes attached, detached, and built-in garages. Also included are costs for basement garages and areas over attached or detached garages.

Attached garages share a common wall with the residence and costs include interior finish for only that common or share wall.

Detached garages are freestanding structures with totally independent foundation and roof structures from the residence. There is no interior finish included in the costs.

Built-in garages having area both adjacent to and above. Costs include finish for all common surfaces.

Garages: Base cost per square foot of area



Garages	Attached			Detached			Built-in	
	1 Car	2 Car	3 Car	1 Car	2 Car	3 Car	1 Car	2 Car
	275-364	484-676	864+	275-364	484-676	864+	275 – 364	484 - 676
Vinyl Siding on wood stud	33.50	27.30	25.60	37.60	31.50	31.00	27.65	23.75
Wood Siding on wood stud	35.50	31.35	31.20	39.45	33.55	31.45	29.30	27.25
Brick veneer on wood stud	38.85	33.05	32.90	44.70	38.25	35.85	32.05	28.75
Stucco on Wood on wood stud	34.65	29.30	27.00	39.50	33.25	30.35	28.60	25.50
Solid Masonry, brick	40.65	37.60	36.50	48.30	40.15	36.80	33.55	32.70
Basement Garage:	Add lump sums to unfinished basement costs. 1 car: \$2,350 2 car: \$3,200							
Areas over Garage:	If an area over an attached garage is equal to the residence in interior finish, include that area in the total square footage of the residence and price the garage as a built-in. If minimal finish like a bonus room, use 50% of the garage square foot costs. If storage only with high-pitched gable roof, add 20% to the garage costs to cover roof and floor costs.							

Quality Grade	
Grade	Factor
AA	225%
A	150%
B	122%
C	100%
D	82%
E	50%

Fireplace (+)			
Type	1 story	2 story	3 story
Masonry Fireplace & stack	\$5,340	\$5,950	\$6,775
2 nd fireplace on same stack	\$4,410	\$4,915	\$5,840
Pre-fab Fireplace	\$4,205	\$4,700	\$5,200

Partial masonry trim (+) Per SF of surface area				
Quality	A	B	C	D
Brick	\$17.60	\$14.35	\$11.75	\$9.65
Stone	44.10	35.85	30.60	25.30
Artificial Stone	19.00	15.45	12.60	10.35

Paving (+)	
Crushed stone	\$0.65/SF
Concrete	4.90/SF
Asphalt	2.90/SF

Residential REL Table

Schedule A						Schedule B									
Age	Effective Age					Age	Effective Age					Eff. Age	REL	Eff. Age	REL
	E	G	A	P	U		E	G	A	P	U				
1	1	1	1	14	27	51	32	42	51	66	76	1	99	51	51
2	1	1	2	15	28	52	32	43	52	67	77	2	97	52	50
3	1	2	3	16	29	53	33	44	53	68	78	3	96	53	49
4	1	2	4	16	30	54	33	44	54	68	78	4	95	54	48
5	1	3	5	17	31	55	33	45	55	69	80	5	94	55	47
6	2	4	6	17	32	56	34	46	56	70	81	6	93	56	47
7	2	5	7	18	33	57	34	47	57	71	82	7	92	57	47
8	2	6	8	19	34	58	35	48	58	72	83	8	91	58	46
9	2	6	9	20	35	59	35	48	59	72	83	9	90	59	46
10	2	7	10	21	38	60	36	49	60	73	83	10	89	60	46
11	3	7	11	22	39	61	37	50	61	73	85	11	88	61	45
12	3	8	12	23	39	62	38	50	62	74	86	12	87	62	45
13	3	9	13	24	40	63	39	51	63	74	86	13	86	63	44
14	4	10	14	24	40	64	40	52	64	76	88	14	85	64	43
15	4	11	15	25	40	65	42	53	65	78	90	15	84	65	43
16	4	12	16	26	43	66	42	53	66	78	91	16	82	66	42
17	4	13	17	30	45	67	43	55	67	80	93	17	81	67	42
18	5	14	18	31	46	68	44	58	68	84	97	18	80	68	42
19	5	15	19	31	46	69	45	59	69	86	100	19	79	69	41
20	6	16	20	32	47	70	46	60	70	88	102	20	77	70	41
21	8	16	21	33	48							21	76	71	41
22	10	17	22	33	48							22	75	72	41
23	10	18	23	34	49							23	74	73	40
24	11	19	24	35	50							24	73	74	40
25	11	20	25	35	50							25	72	75	40
26	12	21	26	36	51							26	71	76	39
27	12	22	27	38	52							27	70	77	39
28	13	23	28	38	52							28	69	78	39
29	13	24	29	39	53							29	68	79	38
30	13	25	30	40	54							30	67	80	38
31	14	25	31	40	54							31	66	81	38
32	15	26	32	42	56							32	65	82	37
33	16	27	33	44	59							33	65	83	37
34	17	28	34	46	60							34	63	84	37
35	18	29	35	47	61							35	62	85	36
36	19	30	36	48	62							36	62	86	36
37	20	31	37	50	64							37	61	87	36
38	21	31	38	51	64							38	59	88	35
39	22	32	39	53	65							39	59	89	35
40	23	33	40	54	66							40	58	90	35
41	24	34	41	55	67							41	57	91	34
42	25	35	42	56	67							42	57	92	34
43	25	36	43	57	68							43	56	93	33
44	26	38	44	59	69							44	56	94	33
45	27	39	45	60	70							45	56	95	33
46	28	39	46	60	70							46	55	96	32
47	29	40	47	61	70							47	54	97	32
48	30	40	48	62	71							48	54	98	32
49	31	41	49	64	73							49	52	99	31
50	32	41	50	65	75							50	51	100	31
														101	30

The cost factor of 1.06, developed in Unit 5, Exercise 5-1, will be used for all three of the following exercises. Use the cost factor of 1.06 **only** for these exercises. Do **not** use this cost factor on your exam unless instructed to do so.

Note: The residential PRC (PRC-2) on your exam will not have a narrative description attached as they do in Exercises 6-1 through 6-3. It is important that you study the PRCs in this segment to ensure that you can correctly interpret the specifications of the property based on the items checked on the cards. You will encounter one residential PRC (PRC-2) on your exam.

If you have any questions, please refer to the answer key in the back of this booklet.

Residential	Average Quality	1 Story
Standard design from stock plans 1 Kitchen 1 Full bath No basement Asphalt/Fiberglass Shingles Hot air heat (gas fired) Painted drywall interior Average material and workmanship		

Base cost per square foot of total living area

Total SF	Wood siding Wood frame	Vinyl siding Wood frame	Brick veneer Wood frame	Stucco Wood frame	Concrete Block or Stucco on Block	Brick Solid Masonry
600	70,070	69,370	74,130	70,550	73,570	86,890
700	78,900	78,110	83,470	79,990	82,840	97,640
800	86,900	86,030	91,940	88,660	91,240	107,320
900	95,000	94,050	100,510	97,330	99,570	117,090
1,000	102,500	101,470	108,840	106,810	108,440	126,080
1,100	110,070	108,970	117,150	114,610	116,230	135,110
1,200	117,140	115,970	125,460	123,470	123,460	143,490
1,300	124,250	123,000	133,530	128,990	130,710	151,900
1,400	130,950	129,640	141,590	135,660	137,500	159,760
1,500	138,180	136,800	149,920	142,130	144,950	168,580
1,600	145,560	144,100	158,240	148,180	151,380	177,220
1,700	152,080	150,560	166,510	155,730	158,160	184,400
1,800	159,640	158,040	174,770	163,090	166,660	193,960
1,900	167,650	165,980	183,020	170,310	174,350	204,110
2,000	175,000	173,250	191,260	177,340	182,000	212,620
2,100	181,500	179,680	198,980	184,500	188,580	220,340
2,200	188,540	186,650	206,700	191,490	195,800	228,700
2,300	195,290	193,330	214,430	198,240	202,710	236,690
2,400	202,270	200,250	222,150	208,510	209,860	244,950
2,500	209,470	207,370	229,830	211,510	217,220	253,670
2,600	216,500	214,330	237,500	218,230	224,190	261,970
2,700	222,940	220,710	245,180	224,820	230,740	269,530
2,800	229,350	227,060	252,860	234,300	237,370	277,080
2,900	235,860	233,500	260,420	237,680	243,990	283,620
3,000	242,220	239,800	267,970	244,040	250,460	290,660
3,100	247,840	245,360	275,510	250,310	256,510	296,790
3,200	254,530	251,980	283,040	258,540	263,440	303,790
3,300	259,150	256,560	288,720	261,470	267,700	309,680
3,400	265,840	263,180	294,390	264,400	274,340	317,680
3,500	270,690	267,980	300,071	271,390	280,160	322,800
3,600	277,950	275,170	305,750	278,370	286,290	329,860
Over 3,600	\$77.00	\$76.20	\$84.00	\$76.60	\$79.30	\$91.60

Residential	Average Quality	1.5 Story
Standard design from stock plans 1 Kitchen 1 Full bath No basement Asphalt/Fiberglass Shingles Hot air heat (gas fired) Painted drywall interior Average material and workmanship		

Base cost per square foot of total living area

Total SF	Wood siding Wood frame	Vinyl siding Wood frame	Brick veneer Wood frame	Stucco Wood frame	Concrete Block or Stucco on Block	Brick Solid Masonry
600	70,180	69,470	74,390	69,830	73,690	87,020
700	80,080	79,280	84,890	79,680	84,040	96,800
800	86,930	86,060	92,150	86,500	91,280	105,190
900	95,040	94,180	100,650	94,560	99,790	115,000
1,000	102,520	101,600	108,570	101,990	107,640	124,050
1,100	110,870	109,890	117,410	110,320	116,300	134,150
1,200	116,490	115,550	123,490	116,140	122,120	141,230
1,300	123,060	121,700	130,060	122,320	128,220	148,750
1,400	129,880	127,200	135,930	127,840	134,630	155,460
1,500	137,420	137,100	146,460	137,870	145,210	167,660
1,600	143,570	142,130	151,750	142,710	150,320	175,280
1,700	154,580	152,030	163,390	153,810	161,000	181,500
1,800	160,670	158,740	169,670	159,700	168,380	191,800
1,900	166,050	165,060	176,420	166,060	174,910	202,700
2,000	171,370	167,940	180,970	170,510	179,250	209,350
2,100	178,940	176,610	188,780	176,990	187,170	213,690
2,200	185,080	182,670	195,260	183,290	193,410	219,240
2,300	190,710	189,030	201,200	189,870	200,250	228,470
2,400	197,260	195,290	207,910	196,690	207,120	236,710
2,500	204,910	202,040	215,980	202,590	214,440	244,890
2,600	210,040	207,100	221,380	208,880	219,490	252,050
2,700	220,450	217,580	232,130	216,820	230,150	259,540
2,800	226,970	224,250	239,110	225,060	237,180	267,100
2,900	232,910	230,350	245,330	231,810	243,270	276,620
3,000	238,260	234,450	250,890	237,100	248,980	281,640
3,100	243,470	239,530	256,640	241,880	255,640	287,290
3,200	248,950	244,840	261,900	247,210	261,400	294,760
3,300	257,300	252,930	270,680	254,210	270,170	301,040
3,400	264,610	259,580	278,260	261,430	277,840	309,590
3,500	270,400	265,580	284,190	266,340	283,920	316,370
3,600	276,890	274,670	291,010	271,350	290,690	323,860
Over 3,600	\$76.80	\$76.05	\$80.65	\$75.30	\$79.90	\$89.25

Residential	Average Quality	2 Story
Standard design from stock plans 1 Kitchen 1 Full bath No basement Asphalt/Fiberglass Shingles Hot air heat (gas fired) Painted drywall interior Average material and workmanship		

Base cost per square foot of total living area

Total SF	Wood siding Wood frame	Vinyl siding Wood frame	Brick veneer Wood frame	Stucco Wood frame	Concrete Block or Stucco on Block	Brick Solid Masonry
1,000	102,110	101,470	108,300	101,650	106,980	128,890
1,100	110,120	109,000	116,790	109,470	115,620	134,900
1,200	116,290	115,130	123,270	115,560	122,100	143,360
1,300	123,760	122,520	128,160	123,120	129,980	150,450
1,400	130,880	128,260	134,140	129,830	137,550	158,460
1,500	137,420	136,100	143,280	137,390	143,980	171,980
1,600	144,660	144,370	151,180	143,620	151,890	177,170
1,700	151,220	150,530	157,900	150,520	158,960	180,820
1,800	158,820	157,900	164,470	158,180	165,320	193,800
1,900	166,650	164,630	171,820	165,670	173,590	203,140
2,000	173,500	171,760	183,490	172,020	183,730	211,350
2,100	180,140	179,680	190,950	179,900	189,330	212,690
2,200	187,550	186,130	198,800	186,770	196,580	218,700
2,300	194,160	193,210	205,810	191,790	203,870	230,760
2,400	201,360	200,250	213,400	198,250	211,890	240,950
2,500	207,670	207,340	220,090	207,130	218,050	246,680
2,600	214,630	214,120	227,230	213,190	225,360	253,790
2,700	220,720	218,510	233,280	219,230	232,030	259,530
2,800	227,560	225,280	240,300	226,300	238,940	267,100
2,900	234,260	231,920	246,510	232,370	246,820	273,620
3,000	239,910	237,510	252,200	238,470	252,740	280,640
3,100	246,640	244,170	259,250	245,410	260,650	286,970
3,200	253,250	250,720	265,910	250,080	267,630	296,660
3,300	257,000	254,890	269,850	253,320	271,850	303,790
3,400	263,360	261,250	276,470	260,080	276,530	309,680
3,500	270,170	267,470	283,680	268,820	283,680	317,800
3,600	275,830	273,070	289,620	272,990	289,620	323,860
3,700	284,270	281,420	298,170	281,160	300,440	335,440
3,800	289,630	286,730	304,110	289,190	302,950	341,470
3,900	294,880	291,930	310,710	292,110	309,620	345,010
Over 4,000	\$75.00	\$74.25	\$79.50	\$74.75	\$78.75	\$88.75

Plumbing (±)		
Per fixture less than standard...	Deduct	\$1,885
Per fixture greater than standard...	Add	\$1,885

Quality Grade	
Grade	Factor
AA	225%
A	150%
B	122%
C	100%
D	82%
E	50%

Fireplace (+)			
Type	1 story	2 story	3 story
Masonry Fireplace & stack	\$5,340	\$5,950	\$6,775
2 nd fireplace on same stack	\$4,410	\$4,915	\$5,840
Pre-fab Fireplace	\$4,205	\$4,700	\$5,200

Partial masonry trim (+)				
Per SF of surface area				
Quality	A	B	C	D
Brick	\$17.60	\$14.35	\$11.75	\$9.65
Stone	44.10	35.85	30.60	25.30
Artificial Stone	19.00	15.45	12.60	10.35

Paving (+)	
Crushed stone	\$0.65/SF
Concrete	4.90/SF
Asphalt	2.90/SF

Residential Central Air conditioning Schedule (+) For additions or ells use \$2.50 per square foot of service area in the addition. Air Conditioning is always an addition.

Total Square foot area	1 Story	1.5 Story	2 Story	Bi-level	Tri-level	2.5 – 3 Story
200	1,200	1,200	1,200	1,200	-----	-----
400	1,200	1,200	1,200	1,200	-----	-----
600	2,020	2,020	2,020	2,020	-----	-----
800	2,500	2,500	2,475	2,500	2,500	2,600
1,000	2,960	2,960	2,925	2,960	2,960	3,165
1,200	3,380	3,360	3,340	3,370	3,380	3,615
1,400	3,780	3,750	3,730	3,765	3,780	4,045
1,600	4,200	4,160	4,140	4,180	4,200	4,495
1,800	4,610	4,520	4,540	4,565	4,610	4,930
2,000	5,050	4,950	4,965	5,000	5,050	5,400
2,200	5,440	5,385	5,330	5,415	5,440	5,820
2,400	5,840	5,830	5,715	5,835	5,840	6,250
2,600	6,250	6,235	6,110	6,245	6,250	6,690
2,800	6,620	6,555	6,460	6,590	6,620	7,085
3,000	6,990	6,850	6,810	6,920	6,990	7,480
3,200	7,345	7,270	7,140	7,310	7,345	7,860
3,400	7,680	7,595	7,465	7,640	7,680	8,215
3,600	8,020	7,860	7,780	7,940	8,020	8,580
3,800	8,445	8,275	8,220	8,360	8,445	9,040
4,000	8,970	8,790	8,700	8,880	8,970	9,600

Garages

The cost of a garage is not included in the base residence cost. The garage costs include wall surfaces, roof surface when applicable, a concrete floor, doors, and electric lighting. Walls and roof cover are the same as the basic residence. The garages cost table includes attached, detached, and built-in garages. Also included are costs for basement garages and areas over attached or detached garages.

Attached garages share a common wall with the residence and costs include interior finish for only that common or share wall.

Detached garages are freestanding structures with totally independent foundation and roof structures from the residence. There is no interior finish included in the costs.

Built-in garages having area both adjacent to and above. Costs include finish for all common surfaces.

Garages: Base cost per square foot of area



Garages	Attached			Detached			Built-in	
	1 Car	2 Car	3 Car	1 Car	2 Car	3 Car	1 Car	2 Car
	275-364	484-676	864+	275-364	484-676	864+	275 – 364	484 - 676
Vinyl Siding on wood stud	33.50	27.30	25.60	37.60	31.50	31.00	27.65	23.75
Wood Siding on wood stud	35.50	31.35	31.20	39.45	33.55	31.45	29.30	27.25
Brick veneer on wood stud	38.85	33.05	32.90	44.70	38.25	35.85	32.05	28.75
Stucco on Wood on wood stud	34.65	29.30	27.00	39.50	33.25	30.35	28.60	25.50
Solid Masonry, brick	40.65	37.60	36.50	48.30	40.15	36.80	33.55	32.70
Basement Garage:	Add lump sums to unfinished basement costs. 1 car: \$2,350 2 car: \$3,200							
Areas over Garage:	If an area over an attached garage is equal to the residence in interior finish, include that area in the total square footage of the residence and price the garage as a built-in. If minimal finish like a bonus room, use 50% of the garage square foot costs. If storage only with high-pitched gable roof, add 20% to the garage costs to cover roof and floor costs.							

Basement/foundation schedule (+)

Basements : Base cost per area square foot. For basement area or crawl space, write the valuation correlating to the proper square footage on the Basement line of PRC-2. For finished area, correlate the square footage of finish and add on Finished basement line on the PRC.

	400	600	800	1000	1200	1400	1600	1800	2000	2400	2800	3200	3600	Over 3600
Crawl space	3,265	4,750	6,375	7,370	8,350	9,410	10,740	10,945	11,904	13,415	14,930	17,050	18,145	5.05
Unfinished basement	4,680	6,935	9,000	10,480	12,025	13,500	14,960	16,470	17,980	21,750	24,100	26,400	29,350	8.00
Finished Basement Living area	5,870	10,355	14,820	16,835	19,750	22,730	25,730	28,680	31,630	36,520	41,805	47,970	49,825	15.20
Finished Basement Recreation Room area	3,995	7,335	9,560	10,870	12,935	13,900	16,090	17,430	19,020	21,390	25,460	28,160	32,210	11.45

Porches (+)						
SFGA	Open frame porch	Frame Screened-in porch	Knee wall with glass	Solid wall enclosed frame	Open Masonry Porch	Enclosed masonry porch
24	1,120	1,905	3,050	2,290	1,225	2,935
50	1,970	2,450	4,720	3,580	2,620	4,225
80	2,945	3,990	6,385	4,870	3,915	5,530
100	3,455	4,545	7,470	5,895	4,415	7,000
120	3,955	5,130	7,975	6,340	5,500	7,420
150	4,940	6,415	9,965	7,930	6,590	9,260
200	6,300	7,825	11,655	9,550	8,445	11,180
250	7,500	9,300	13,540	11,195	9,975	13,055
300	8,620	10,580	15,315	12,685	11,325	14,930
350	9,640	11,725	16,975	14,060	12,670	16,590
400	10,460	12,600	18,430	15,265	14,000	18,010
500	12,350	14,960	21,885	18,125	16,425	21,390
600	13,950	17,060	24,950	20,665	18,830	24,385
700	15,535	19,020	26,645	22,900	20,815	25,755
750	15,810	19,365	27,650	23,310	21,025	27,105
800	16,025	19,615	28,425	23,625	21,315	28,445
900	17,190	20,970	32,220	25,245	23,030	27,105
1,000	18,150	22,140	34,010	26,650	25,160	28,445

Stoop, decks, patios (+)			
Stoop -- masonry	1 riser	\$26.90/SF	2 risers \$35/SF
Deck -- wood, elevated		17.35/SF	
	If no stairs, deduct	5.75/SF	
	If no railing, deduct	1.75/SF	
Patio -- concrete		6.35/SF	
Patio -- brick in sand		13.20/SF	

Residential REL Table

Schedule A						Schedule B									
Age	Effective Age					Age	Effective Age					Eff. Age	REL	Eff. Age	REL
	E	G	A	P	U		E	G	A	P	U				
1	1	1	1	14	27	51	32	42	51	66	76	1	99	51	51
2	1	1	2	15	28	52	32	43	52	67	77	2	97	52	50
3	1	2	3	16	29	53	33	44	53	68	78	3	96	53	49
4	1	2	4	16	30	54	33	44	54	68	78	4	95	54	48
5	1	3	5	17	31	55	33	45	55	69	80	5	94	55	47
6	2	4	6	17	32	56	34	46	56	70	81	6	93	56	47
7	2	5	7	18	33	57	34	47	57	71	82	7	92	57	47
8	2	6	8	19	34	58	35	48	58	72	83	8	91	58	46
9	2	6	9	20	35	59	35	48	59	72	83	9	90	59	46
10	2	7	10	21	38	60	36	49	60	73	83	10	89	60	46
11	3	7	11	22	39	61	37	50	61	73	85	11	88	61	45
12	3	8	12	23	39	62	38	50	62	74	86	12	87	62	45
13	3	9	13	24	40	63	39	51	63	74	86	13	86	63	44
14	4	10	14	24	40	64	40	52	64	76	88	14	85	64	43
15	4	11	15	25	40	65	42	53	65	78	90	15	84	65	43
16	4	12	16	26	43	66	42	53	66	78	91	16	82	66	42
17	4	13	17	30	45	67	43	55	67	80	93	17	81	67	42
18	5	14	18	31	46	68	44	58	68	84	97	18	80	68	42
19	5	15	19	31	46	69	45	59	69	86	100	19	79	69	41
20	6	16	20	32	47	70	46	60	70	88	102	20	77	70	41
21	8	16	21	33	48							21	76	71	41
22	10	17	22	33	48							22	75	72	41
23	10	18	23	34	49							23	74	73	40
24	11	19	24	35	50							24	73	74	40
25	11	20	25	35	50							25	72	75	40
26	12	21	26	36	51							26	71	76	39
27	12	22	27	38	52							27	70	77	39
28	13	23	28	38	52							28	69	78	39
29	13	24	29	39	53							29	68	79	38
30	13	25	30	40	54							30	67	80	38
31	14	25	31	40	54							31	66	81	38
32	15	26	32	42	56							32	65	82	37
33	16	27	33	44	59							33	65	83	37
34	17	28	34	46	60							34	63	84	37
35	18	29	35	47	61							35	62	85	36
36	19	30	36	48	62							36	62	86	36
37	20	31	37	50	64							37	61	87	36
38	21	31	38	51	64							38	59	88	35
39	22	32	39	53	65							39	59	89	35
40	23	33	40	54	66							40	58	90	35
41	24	34	41	55	67							41	57	91	34
42	25	35	42	56	67							42	57	92	34
43	25	36	43	57	68							43	56	93	33
44	26	38	44	59	69							44	56	94	33
45	27	39	45	60	70							45	56	95	33
46	28	39	46	60	70							46	55	96	32
47	29	40	47	61	70							47	54	97	32
48	30	40	48	62	71							48	54	98	32
49	31	41	49	64	73							49	52	99	31
50	32	41	50	65	75							50	51	100	31
														101	30
														102	30

See the Property Record Card section of the Illinois Real Property Appraisal Manual to use these tables.

Exercise 6-1



Cost factor _____
PIN 03-10-108-011-0040
Lot size 80' x 120' **Lot** \$25,000

The lot is improved with a 15-year-old 1-story frame dwelling with vinyl siding. The dwelling has an unfinished basement and an attached 2 car frame garage with vinyl siding — housing 5 rooms, including 2 bedrooms. There is a 24 square foot enclosed masonry (EMP) porch.

Foundation 8" concrete block on spread footing
Heating Gas fired forced air — central air conditioning
Plumbing Standard 5, plus a half-bath — average grade fixtures and galvanized piping
Exterior walls 2" x 4" stud frame, 16" on-center (o.c.), with vinyl siding, painted — 1 3/4" doors — 1 3/8" double-hung windows — 288 SF of face brick trim, grade C
Roof Asphalt shingles over 1/2" plywood sheathing with 2" x 6" rafters, 24" o.c.
Floors Basement - 4" concrete — 1st floor - 2" x 8" joist, 16" o.c. — vinyl tile and average grade carpet with pad
Interior finish 1/2" drywall — pine doors and trim throughout — average grade kitchen cabinets
Miscellaneous Average quality electrical fixtures — average quality workmanship — 12' x 20' concrete drive and a 4' x 10' concrete walk
CDU Average
Quality grade **C**

Complete the PRC-2 on the next page.

Exercise 6-1										Building Record - Residential - Rural (Property - Type 1)										03-10-108-011-0040							
Occupancy							Interior Finish							Remodeled		Sold Date		Mo.	Day	Yr.	Age 15	Adj. Age					
1	2	3	4	5	6	7								NH		Amount \$		CDU Average									
Vacant Lot	Dwelling	Other	Mobile Home	A Frame	Summer Home	Apt.								Memo		Grade C											
Living Accommodations							Plaster/dry wall															Dwelling Computations					
Total Rooms			Bedrooms		Family Room		Fiberboard													1		Sty.	Constr.				
Foundation							Paneling																				
Pt. Msy Trim							Brk. Stone Art																				
8" Msy. Wall							Living							Condo. Comm.		Porch	SF	OFP ¹	EFP ²	OMP ³	EMP ⁴	2-Sty	Basement				
Basement							Recreation							Prorated %		Porch	SF	OFP ¹	EFP ²	OMP ³	EMP ⁴	2-Sty	Heating/Central air				
1	3	4	Fireplaces #							Stack #		With:		Porch	SF	OFP ¹	EFP ²	OMP ³	EMP ⁴	2-Sty	Sched. Comb.						
Full	Crawl	Slab	Integral garage							On grade ¹		Below ²		Wd. deck		SF	Wood deck ⁶		Plumbing +		-						
Area without bsmt.			Attached garage							Frm. ¹	Msy. ²	Carport ³								Attic							
Heating																											
1	2	3	4	Porches																							
None	Central	Air Condition	Other	Attach./Integral garage																							
Warm air				Total																							
Hot water/Steam				Grade																							
Floor furnace				Total																							
Unit heaters				Other features																							
Other				Pt. msy. Walls																							
				Fireplace																							
				Finished basement																							
Plumbing							Total																				
Standard (5)				Grade																							
Bathroom (3)				Total																							
Half bath (2)				Other features																							
Sink/Lavatory water closet				Pt. msy. Walls																							
Attic							Fireplace																				
1	2	3	4	Finished basement																							
None	Unfinished	Part	Full	Total																							
				NH x AP																							
				Replacement cost new																							
				Eff. Age		REL																					
				Depr.																							
				S C M I																							
Exterior Walls							Summary of Other Buildings																				
Wood/stucco/aluminum/vinyl siding				Type		No.		Construction		Size		Rate		Grade		Age		CDU		Factor		Repl. Cost new		REL		Full Value	
Concrete block				Garage (detached)				Frm ¹ Msy. ² Carport ³																			
Brick/stone				Other		1		Concrete								15 Avg											
Other				Drive		1		Concrete								15 Avg											
Roof							Walk							1		Concrete											
Shingle - asphalt/asbestos/wood				Concrete																							
Slate/tile				Wood																							
Composition				Tile																							
Other				Carpet																							
Floors							Listed by:																				
				Date:																							
							Total full value other buildings																				
							Total full value all buildings																				

Exercise 6-2



Cost factor

PIN 04-01-406-002-0040

Lot size 80' x 150' **Lot value** \$32,000

The lot is improved with a 65-year-old, 2-story frame dwelling with wood siding. The dwelling is on a crawl —housing 8 rooms, including 4 bedrooms — detached 1 car frame garage with wood siding. There is a 24 square foot open frame (OFP) porch.

Foundation	8" concrete block wall
Heating	Warm air system
Plumbing	Standard 5 with cheap grade fixtures and galvanized iron piping
Exterior walls	Painted wood siding over 2" x 4" studs, 16" o.c. — 1 3/8" pine doors – 1 3/8" pine double-hung windows
Roof	Asphalt shingles, 2" x 4" rafters, 24" o.c. with 3/8" plywood sheathing
Floors	1st and 2nd floors - 2" x 8" joist, 16" o.c. — cheap grade tile and soft wood floors
Interior finish	3/8" plaster board — cheap pine doors and trim throughout — cheap kitchen cabinets
Miscellaneous	Poor quality electrical fixtures — lack of electric outlets — below average workmanship — 8' x 100' crushed stone drive
CDU	Poor
Quality grade	C

Complete the PRC-2 on the next page.

Exercise 6-2

Building Record - Residential - Rural (Property - Type 1)

04-01-406-002-0040

Occupancy							Interior Finish					Remodeled	Sold Date Mo. Day Yr.			Age 65	Adj. Age																																																	
1 Vacant Lot	2 Dwelling	3 Other	4 Mobile Home	5 A e	6 Summer Home	7 Apt.						NH	Amount \$			CDU Poor																																																		
Living Accommodations							Plaster/dry wall					Memo					Dwelling Computations																																																	
Total Rooms 8							Fiberboard										Sty. Constr. SF																																																	
Bedrooms 4							Paneling										Sty. Constr. SF																																																	
Family Room -							Features					Quality					Type																																																	
Foundation							Pt. Msy Trim					Brk. ¹ Stone Art ³					Porches																																																	
8" Msy. Wall							Finished					Living					Condo. Comm					Porch 24 SF OFF EFP ² OMP EMP ⁴ 2-Sty					Basement																																							
Basement							Basement					Recreation					Prorated %					Porch SF OFF EFP ² OMP EMP ⁴ 2-Sty					Heating/Central air																																							
1 Full							3 Crawl					4 Slab					Fireplaces #					Stack #					With: Porch SF OFF EFP ² OMP EMP ⁴ 2-Sty					Sched. Comb.																																		
Area without bsmt.							Integral garage					On grade ¹					Below ²					Wd. deck SF Wood deck ⁶					Plumbing +																																							
Attached garage							Frm. ¹					Msy. ²					Carport ³										Attic																																							
Heating							1 None					2 Central					3 Air Condition					4 Other																																												
Warm air							Hot water/Steam					Floor furnace					Unit heaters					Other																																												
Plumbing							Standard (5)					Bathroom (3)					Half bath (2)					Sink/Lavatory water closet																																												
Attic							1 None					2 Unfinished					3 Part					4 Full																																												
							Concrete					Patio 10'																																																						
Exterior Walls							Wood/stucco/aluminum/vinyl siding					Concrete block					Brick/stone					Other																																												
							4' OFF					6'					18'					18'																																												
							25'					44'					1 - car frame garage					Crushed Stone Drive																																												
							10'					100'					8'					2 story frame crawl																																												
							4' OFF					6'																																																						
Roof							Shingle - asphalt/asbestos/wood					Slate/tile					Composition					Other																																												
							Type					No.					Construction					Size					Rate					Grade					Age					CDU					Factor					Repl. Cost new					REL					Full Value				
							Garage (detached)					1					Frm ¹ Msy. ² Carport ³										D/.82					65					Poor																													
							Drive					1															D/.82					65					Poor																													
							Patio					1															D/.82					65					Poor																													
Floors							Concrete					Wood					Tile					Carpet																																												
							B					1					2					3																																												
							Listed by:					Date:																																																						

Exercise 6-3



Cost factor _____

PIN 03-33-333-009-0040
Lot size 80' x 120' **Lot value** \$24,000

The lot is improved with a 56-year-old 1 ½ -story brick solid masonry dwelling — attached 2 car brick solid masonry garage — housing 6 rooms, including 3 bedrooms. The upper level has 650 square feet of finished space. There is also an unfinished basement.

Foundation 8" concrete block walls with concrete footing
Heating Gas fired forced air — central air conditioning
Plumbing Standard 5, plus an additional full bath and a half-bath — average grade fixtures and galvanized piping
Exterior walls Brick — 1 3/4" doors — 1 3/8" double-hung windows
Roof Gambrel with 2" x 6" rafters, 24" o.c. — 1/2" plywood sheathing and asphalt shingles
Floors Basement - 4" concrete, 1st and 2nd floors - 2" x 8" joist, 16" o.c.-sanded maple and some tile and carpeting
Interior finish Lath and plaster — pine doors and trim throughout — average grade kitchen cabinets
Miscellaneous Average quality electrical fixtures — average quality workmanship — 10' x 30' asphalt drive, 4' x 20' concrete walk, and a 1350 SF unfinished basement, enclosed frame porch 20' x 6'
CDU Good
Quality grade **C**

Complete the PRC-2 on the next page.

Exercise 6-3

Building Record - Residential - Rural (Property - Type 1)

03-33-333-009-0040

Occupancy							Interior Finish				Remodeled	Sold Date			Mo.	Day	Yr.	Age 56	Adj. Age																									
1	2	3	4	5	6	7					NH	Amount \$						CDU Good																										
Vacant Lot	Dwelling	Other	Mobile Home	A	Summer Home	Apt.					Memo									Grade C																								
Living Accommodations							Plaster/dry wall													Dwelling Computations																								
Total Rooms							Fiberboard													Sty. Constr. SF																								
Bedrooms							Paneling													Sty. Constr. SF																								
Family Room							Features				SF				Quality				Type																									
Foundation							Pt. Msy Trim				Brk. ¹ Stone Art ³				Porches																													
8" Msy. Wall							Finished				Living				Condo. Comm				Porch				SF OFF EFP ² OMP EMP ⁴ 2-Sty		Basement																			
Basement							Basement				Recreation				Prorated %				Porch				SF OFF EFP ² OMP EMP ⁴ 2-Sty		Heating/Central air																			
1 Full							3 Crawl				4 Slab				Fireplaces #				Stack #				With: Porch				SF OFF EFP ² OMP EMP ⁴ 2-Sty		Sched. Comb.															
Area without bsmt.							Integral garage				On grade ¹				Below ²				Wd. deck				SF Wood deck ⁶				Plumbing +																	
Attached garage							Frm. ¹				Msy. ²				Carport ³												Attic																	
Heating							<p style="text-align: center;">45'</p> <p style="text-align: center;">1 1/2 story brick/solid masonry basement</p> <p style="text-align: center;">Finished upper level 650 square feet</p> <p style="text-align: center;">25' 2-car brk/masonry garage</p> <p style="text-align: center;">10' Asphalt Drive</p> <p style="text-align: center;">20' EFP 6'</p> <p style="text-align: center;">4'</p> <p style="text-align: center;">20' ← Concrete</p>														Porches																							
1 None																					2 Central		3 Air Condition		4 Other		Warm air		Hot water/Steam		Floor furnace		Unit heaters		Other		Attach./Integral garage							
Plumbing																					Standard (5)		Bathroom (3)		Half bath (2)		Sink/Lavatory water closet		Total		Grade		Total		Other features									
Standard (5)																					Bathroom (3)		Half bath (2)		Sink/Lavatory water closet		Pt. msy. Walls		Fireplace		Finished basement		Total		C x D									
Attic																					1 None		2 Unfinished		3 Part		4 Full		Replacement cost new		Eff. Age		REL		Depr.									
																					% finished																							
Exterior Walls																					Wood/stucco/aluminum/vinyl siding		Concrete block		Brick/stone		Other		Full Value		S C M I													
Roof																					Shingle - asphalt/asbestos/wood		Slate/tile		Composition		Other																	
																					Type		No.		Construction		Size		Rate		Grade		Age		CDU		Factor		Repl. Cost new		REL		Full Value	
																					Garage (detached)		1		Frm ¹ Msy. ² Carport ³																			
							Drive		1		Asphalt						C/1.00		56		Good																							
							Floors		Walk		1		Concrete						C/1.00		56		Good																					
Concrete							B		1		2		3																															
Wood																																												
Tile																																												
Carpet																																												
Listed by:																	Total full value other buildings																											
Date:																	Total full value all buildings																											

You will encounter one residential PRC (PRC-2) on your exam that does not have a narrative. One of the purposes is to figure out the description of the property by the boxes that have been checked. An example of a PRC-2, in the same format, is on the next page.

Exercise 6-4 Example of Exam PRC

Building Record - Residential - Rural (Property - Type 1)

Occupancy							Interior Finish				Remodeled	Sold Date			Mo.	Day	Yr.	Age 5	Adj. Age																			
1 Vacant Lot	2 Dwelling	3 Other	4 Mobile Home	5 A Frame	6 Summer Home	7 Apt.		B	1	2	3	NH	Amount \$						CDU Average																			
Living Accommodations							Plaster/dry wall				Memo																											
Total Rooms 7							Fiberboard				Dwelling Computations																											
Bedrooms 3							Paneling				Sty. Constr. SF																											
Family Room 1							Features				SF				Quality				Type				Sty. Constr. SF															
Foundation							Pt. Msy Trim				Brk. Stone Art ³				Porches																							
8" Msy. Wall							Finished				Living				Condo. Comm				Porch				SF OFP ⁷ EFP ² OMP ² EMP ⁴ 2-Sty				Basement											
Basement							Basement				Recreation				Prorated %				Porch				SF OFP ⁷ EFP ² OMP ² EMP ⁴ 2-Sty				Heating/Central air											
1 Full							3 Crawl				4 Slab				Fireplaces # 1				masonry				Stack # 1				With: Porch				SF OFP ⁷ EFP ² OMP ² EMP ⁴ 2-Sty				Sched. Comb.			
Area without bsmt.							Integral garage				On grade ¹				Below ²				Wd. deck				SF Wood deck ⁶				Plumbing +											
Attached garage							Frm. ¹				Msy. ²				Carport ³								Attic															
Heating							<div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>10' 20' Wood Deck w/stairs and railing</p> <p>20' Brick Family Room Slab</p> <p>20'</p> <p>30' 1 - story brick/solid masonry unfinished basement</p> <p>60'</p> <p>20' Attached 2-car brk/masonry garage</p> <p>24'</p> <p>20' Concrete Drive 40'</p> </div>										1 None				2 Central				3 Air Condition				4 Other				Porches					
Warm air																																	Attach./Integral garage					
Hot water/Steam																																	Total					
Floor furnace																																	Grade					
Unit heaters																																	Total					
Other																																	Other features					
Plumbing																																	Pt. msy. Walls					
Standard (5)																																	Fireplace					
Bathroom (3)																																	Finished basement					
Half bath (2)																																	Total					
Sink/Lavatory water closet																							C x D															
Attic																							NH x AP															
1 None							2 Unfinished				3 Part				4 Full				% finished				Replacement cost new															
Exterior Walls																							Eff. Age															
Wood/stucco/aluminum/vinyl siding																							Depr.															
Concrete block																							REL															
Brick/stone																							Full Value															
Other																							S C M I															
Roof																	Summary of Other Buildings																					
Shingle - asphalt/asbestos/wood																																						
Slate/tile																																						
Composition																																						
Other																																						
Floors																																						
Concrete																																						
Wood																																						
Tile																																						
Carpet																																						
Listed by:																	Total full value other buildings																					
Date:																	Total full value all buildings																					

Unit 6 Summary

Mass Appraisal and Residential Square Foot Schedules

The purpose of **mass appraisal** is to produce equitable and efficient appraisals of all property in a jurisdiction for *ad valorem* tax purposes.

Mass appraisal systems provide quickly obtainable value estimates with reasonable substantiation in the records. A mass appraisal system should incorporate all three approaches to value, but most systems are primarily based on the cost approach.

A cost factor is designed to adjust the Publication 123 **replacement cost new (RCN)** value to reflect the local cost of labor and materials.

The **quality grade** represents quality of construction, workmanship, and material used in a project. The quality of workmanship and materials can greatly affect cost.

To determine a **design factor**, the assessor has to determine the percentage increase, or decrease, in cost due to the design features. The design factor is handled in the same manner as a quality grade factor; it is assigned to individual properties and should remain unchanged during the life of the structure.

The **remaining economic life (REL) factor** is applied to the true RCN to arrive at the full market value, which then reflects the adjustment made for depreciation.

Unit 6

Review questions

1. What type of quality does the quality grade factor “D” represent and what is the factor applied from the schedules?

2. A local assessor notices that an improvement has been greatly neglected and its physical condition is extremely poor. He or she notes that this particular improvement was originally built with excellent materials and workmanship. Which one of the following will the assessor adjust?

_____ Cost

_____ Quality grade

_____ CDU rating used to determine the REL factor

3. Quality grade refers to the

4. T or F PRC-2 is used for calculating land values.

5. T or F A frame house of 1,000 square feet on a slab will not have an adjustment for a basement.

6. T or F All detached garages are calculated using the **Summary of Other Buildings** section on the PRC.

7. T or F The quality grade is used to determine a REL factor.

8. T or F To compute the value for an enclosed frame porch of 60 square feet and an enclosed frame porch of 40 square feet, you should add the square footage of the porches together and price out a porch of 100 square feet from the cost tables.

Unit 7

Land Valuation

This unit covers land valuation using the front foot method, the square foot method, and the site method.

The purpose of this unit is to provide a basic understanding of calculating land values using the front foot method, the square foot method, the site method, and lot depth tables.

Learning objectives

After completing the assigned readings, you should be able to

- explain the basic methods for valuing land,
- define the front foot method of valuing land,
- define the square foot method of valuing land, and
- define the site method of valuing land.



Terms and concepts

“65-35 Rule”

Front foot value

Site value

Square foot value

Unit value

Land valuation

The assessor is responsible for placing a value on both land and improvements for each parcel of property located in the jurisdiction.

Legal descriptions fall into three categories — lots and block, land descriptions (which can be described either fractionally, by acreage, or lineally), and metes and bounds. When reading legal descriptions to locate property, read all legal descriptions backwards, except those written in metes and bounds.

Lots and blocks

Lots 1 and 4, in block 30, in the village of Good Hope, McDonough County, Illinois.

Lot 4 in block 28 in the city of Bushnell, according to plat #2 of said city, county of McDonough, state of Illinois.

Lot 6, block 10, Blevins 4th Addition to the city of Macomb, in the county of McDonough, Illinois.

Land descriptions

A true section of land contains 640 acres. Sections are often quartered, with the upper right quadrant, or $\frac{1}{4}$, being referred to as the northeast quarter; the upper left quadrant, or $\frac{1}{4}$, being referred to as the northwest quarter; the lower left quadrant, or $\frac{1}{4}$, as the southwest quarter; and the lower right quadrant, or $\frac{1}{4}$, as the southeast quarter. These quarter sections each contain 160 acres.

Fractional: E $\frac{1}{2}$, NE $\frac{1}{4}$, section 6, T.3N, R.4W, 3rd principal meridian (PM).
NW $\frac{1}{4}$, SW $\frac{1}{4}$, NE $\frac{1}{4}$, section 6, T.3N, R.4W, 3rd principal meridian.
W $\frac{1}{2}$, NE $\frac{1}{4}$, SW $\frac{1}{4}$, section 6, T.3N, R.4W, 3rd principal meridian

Acreage: W 80 acres, NE $\frac{1}{4}$, section 6, T.3N, R.4W of 3 P.M.

Lineal: The E 400' of SE $\frac{1}{4}$, sec. 7, T.2S, R.1E of 3 P.M.

Metes and bounds

Beginning at the SE corner of the NW quarter of section 4, T.7N, R.8E of the 3 P.M. Then north 50 feet to the point of beginning. Then west 550 feet. Then north 400 feet. Then east 550 feet. Then south 400 feet to the point of beginning.

A number of principles are involved in land valuation. Land is valued as vacant and at its highest and best use, meaning the use that will bring the greatest net return to the property over a reasonable period of time.

Highest and best use must be

- **Legal** — Use complies with zoning laws, not unlawful, *etc.*
- **Probable or physically possible** — Use is reasonable, not speculative.
- **Economically feasible** — Use is in demand, profitable.

Land and **site** have different meanings. Land is considered to be raw land without amenities, such as streets and utilities. Site is defined as a parcel that has been made ready for its intended purpose.

When valuing residential land, the assessor must first determine the most appropriate unit of value to be used in a particular area. The three most common units of value are

- 1 Front foot value** — the amount of frontage is the most significant factor in determining value.
- 2 Square foot value** — the size is the most significant factor in determining value and is also used to value irregular shaped lots.
- 3 Site value** — the location is the most significant factor in determining value.

In some situations, especially when rural residential land is being valued, the dollar per acre amount could be the most appropriate unit of value.

The assessor must analyze the market to support the unit of value to be used. **Unit value** is determined by dividing the selling price of vacant land by the number of units, arriving at a \$ per unit value. For example, the selling price for a lot is \$24,000. The lot is 80' x 150'. For lot dimensions, the first

number always refers to the width of the lot. The second number refers to the depth of the lot. Since the frontage (width) of the lot is 80' and the depth of the lot is 150', the lot contains 12,000 square feet.

$$\frac{\$24,000}{80'} = \$300/\text{FF} \quad \frac{\$24,000}{12,000} = \$2/\text{SF} \quad \frac{\$24,000}{1} = \text{site value}$$

To decide the most appropriate unit of value to be used, the assessor must determine which unit of value is the most consistent, or which reflects the least percent of deviation. The unit of value with the least percentage of deviation becomes the most appropriate unit of value. The median becomes the base unit of value to be used in the mass appraisal process.

Adjustments to the basic unit value **must be** supported by the market. Adjustments may be required for

- time,
- specific physical characteristics, e.g., trees, landscaping, topography, and
- location, whether a corner or interior lot.

Front Foot

A **front foot** (FF) is a strip of land one foot wide, running from the front of the lot to the rear. When using the front foot method, all front feet that front a street, lake, *etc.*, and run the entire depth of the lot have the same value.

When using the front foot unit method to value residential property, some adjustments to the standard front foot value may be necessary, since not all lots have the same dimensions. The front foot value takes the width into consideration.

Irregular lot adjustments are also made when the front foot value is the unit of comparison. These adjustments are based on the assumption that the utility of the lot may be affected by its shape. The most common rule for shape adjustment is known as the “**65-35 Rule.**” It is based on the premise that a right-angle triangular shaped lot, with its base on the street, has 65 percent of the value of a rectangular lot of the same frontage. It also assumes that a right-angle triangular shaped lot

with its apex, or point, on a street, has 35 percent of the value of a rectangular lot that has the frontage.

Other types of irregularly shaped lots may have to be measured and valued as though they are separate lots, with each value being combined into a final lot value. The most common methods would incorporate the use of rectangles and triangles.

Square Foot

As previously stated, when size is the dominant factor in determining value, the square foot unit of value is used. The value of the lot is found by multiplying the number of square feet by the \$/SF value. For example, a lot is 80' x 100' and the unit value is \$.90/SF. The lot has a value of \$7,200. (80' x 100' = 8,000 SF x \$.90.)

Irregular shaped lots will be valued similarly to the steps above. One must keep in mind that if a triangular shaped lot is being valued, the number of square feet contained in the lot is determined by:

$$\frac{\text{base} \times \text{height}}{2}$$

Exercise 7-1 (Front Foot)

65/35 Rule for right-angle triangular shaped lots

The “65-35 Rule” is based on the premise that a right-angle triangular shaped lot, with its base on the street, has 65 percent of the value of a rectangular lot of the same frontage. It also assumes that a right-angle triangular shaped lot with its apex, or point, on a street, has 35 percent of the value of a rectangular lot of the same dimensions.

Use the worksheet on the next page for this exercise.

Use the front foot method to value these lots, using the following formula:

$$\text{Lot value} = \text{number of FF} \times (\text{\$ per FF}) \times \text{factor (65/35)}$$

Compute the value for lot C first because it is a rectangular lot. To compute the lot value, multiply the 150' of frontage by the \$100 per front foot value. No shape factor is required.

Lot C 150' X \$100/FF = \$15,000

Lot A is a right-angle triangular shaped lot with its base on the street, and will carry 65 percent of the value of lot C, a full lot. To compute the value of lot A, chain multiply the 150' of frontage by the \$100 per front foot value by the shape adjustment factor of 65% (.65).

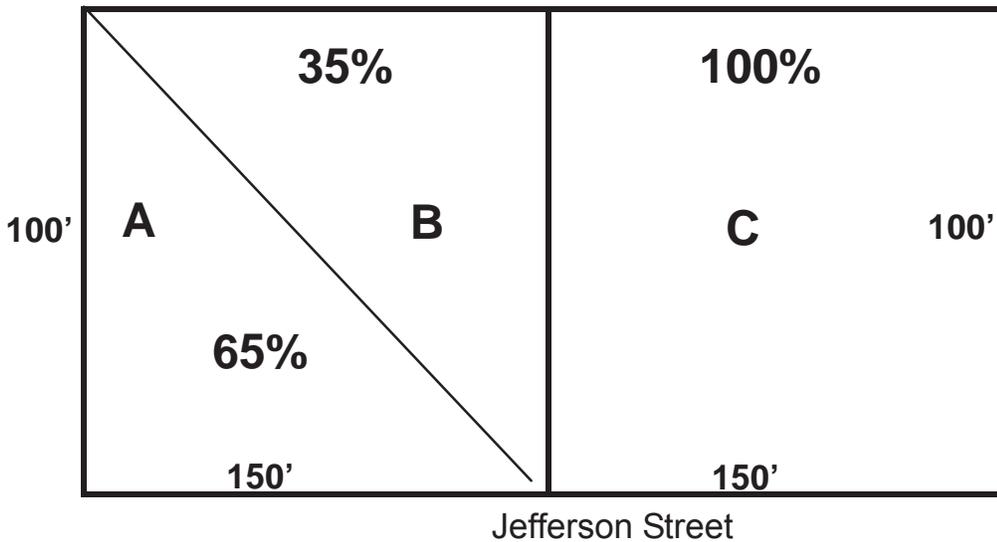
Lot A 150' X \$100/FF X 65% (.65) = \$9,750

Lot B is a right-angle triangular shaped lot with its apex, or point on the street, and will carry 35 percent of the value of lot C, a full lot. To compute the value of lot B, chain multiply the 150' of frontage by the \$100 per front foot value by the shape adjustment factor of 35% (.35).

Lot B 150' X \$100/FF X 35% (.35) = \$5,250

Check the accuracy of your computations by adding the values for lots A and B. This value should equal the value of a full lot, such as lot C

Exercises 7-1 65/35 Rule



Compute the values for the three parcels above if the front foot value is \$100/FF.

A _____
 B _____
 C _____

Exercise 7-2

Residential lots

The purpose of this exercise is to familiarize you with the valuation of lots with various shapes.

The lots in this exercise are numbered for identification purposes only. For this exercise, the front foot unit of comparison derived from the market is \$100 per front foot. The square foot value derived from the market is \$1/SF.

Value the lots using the formulas below.

Front foot formula

Lot value = number of FF X \$ per FF X factor for shape

Square foot formula

Lot value = number of SF X \$ per SF

Use the worksheet on page 183 as an example to work the similar exercise on page 184.

1 Lot 004

To compute the lot value, multiply the 100' of frontage by the \$100 per front foot value.

Value of lot 004 100' X \$100/FF = \$10,000

To compute the lot value using the square foot value as the unit value, multiply the frontage 100 ' by the depth of 100' by the square foot value (\$1/SF).

100' x 100' x \$1/SF = \$10,000

2 Lot 005

To compute the lot value, chain multiply the 75' of frontage by the \$100 per front foot value.

Value of lot 005 75' X \$100/FF = \$7,500

To compute the \$/SF value, simply multiply the frontage of 75' by the depth of 70'.

75' x 70' x \$1/SF = \$5,250

3 Lot 006

The lot is a right-angle triangular shaped lot with its apex, or point,

on the street and will carry 35 percent of the value of a rectangular lot having the same dimensions. To compute the lot value, chain multiply the 75' of frontage by the \$100 per front foot value, by the shape adjustment factor of 35% (.35).

Value of lot 006 75' X \$100/FF X 35% (.35) = \$2,625

To compute the \$/SF value, the first step is to determine the square footage of the triangular shaped lot. Multiply the base by the height and divide by 2. The square footage is then multiplied by the \$/SF value.

$$\frac{75' \times 100'}{2} = 3,750 \text{ SF} \times \$1/\text{SF} = \$3,750$$

4 Lot 007

The lot is a right-angle triangular shaped lot with its base on the street, and will carry 65 percent of the value of a rectangular lot having the same frontage. To compute the lot value, chain multiply the 75' of frontage by the \$100 per front foot value, by the shape adjustment factor of 65% (.65).

Value of lot 007 75' X \$100/FF X 65% (.65) = \$4875

Follow the same process for lot 007 as you did for lot 006.

$$\frac{75' \times 100'}{2} = 3,750 \text{ SF} \times \$1/\text{SF} = \$3,750$$

5 Lot 008

To compute the lot value using front foot, chain multiply the 75' of frontage by the \$100 per front foot value.

Value of lot 008 75' X \$100/FF = \$7,500

To compute the lot value using square foot, chain multiply the 75' of frontage by the depth of 120' and then by the \$/SF.

$$75' \times 120' \times \$1/\text{SF} = \$9,000$$

6 Lot 009

The sides of lot 009 are unequal in length. To compute the lot value, multiply the 75' of frontage by the \$100 per front foot value.

Value of lot 009 75' X \$100/FF = \$7500

When using \$/SF as the unit value, this lot will be divided into a triangular-shaped portion (40' x 75') containing 1,500 SF, and a

rectangular-shaped portion (75' x 80') containing 6,000 SF. Adding the 1,500 SF and the 6,000 SF gives a total of 7,500 SF for the entire lot.

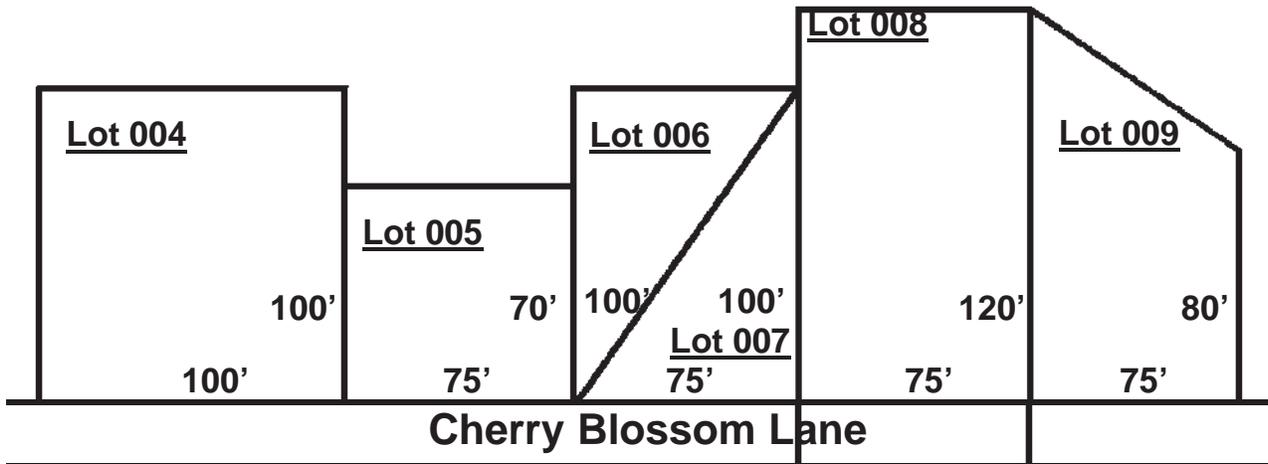
This lot contains 7,500 SF x \$1/SF = \$7,500.

Exercise 7-2 worksheet

\$100/ FF

\$ 1/SF

Residential lots



Front foot

Lot 004	$100' \times \$100/\text{FF} = \$10,000$
Lot 005	$75' \times \$100/\text{FF} = \$7,500$
Lot 006	$75' \times \$100/\text{FF} \times 35\% (.35) \text{ (shape adjustment factor)} = \$2,625$
Lot 007	$75' \times \$100/\text{FF} \times 65\% (.65) \text{ (shape adjustment factor)} = \$4,875$
Lot 008	$75' \times \$100/\text{FF} = \$7,500$
Lot 009	$75' \times \$100/\text{FF} = \$7,500$

Square foot

Lot 004	$100' \times 100' \times \$1/\text{SF} = \$10,000$
Lot 005	$75' \times 70' \times \$1/\text{SF} = \$5,250$
Lot 006	$75' \times 100' \div 2 = 3,750 \text{ SF} \times \$1/\text{SF} = \$3,750$
Lot 007	$75' \times 100' \div 2 = 3,750 \text{ SF} \times \$1/\text{SF} = \$3,750$
Lot 008	$75' \times 120' \times \$1/\text{SF} = \$9,000$
Lot 009	$75' \times 80' \times \$1/\text{SF} = \$6,000$
	$40' \times 75' \div 2 = 1,500 \text{ SF} \times \$1/\text{SF} = \$1,500$
	$\$6,000 + \$1,500 = \$7,500$

Exercise 7-3

Calculating FF values and SF values

Calculate the FF values and the SF values for lots 024 through 029.

The FF value is \$140/FF

The SF value is \$.80/SF

Lot 024 FF value = _____
SF value = _____

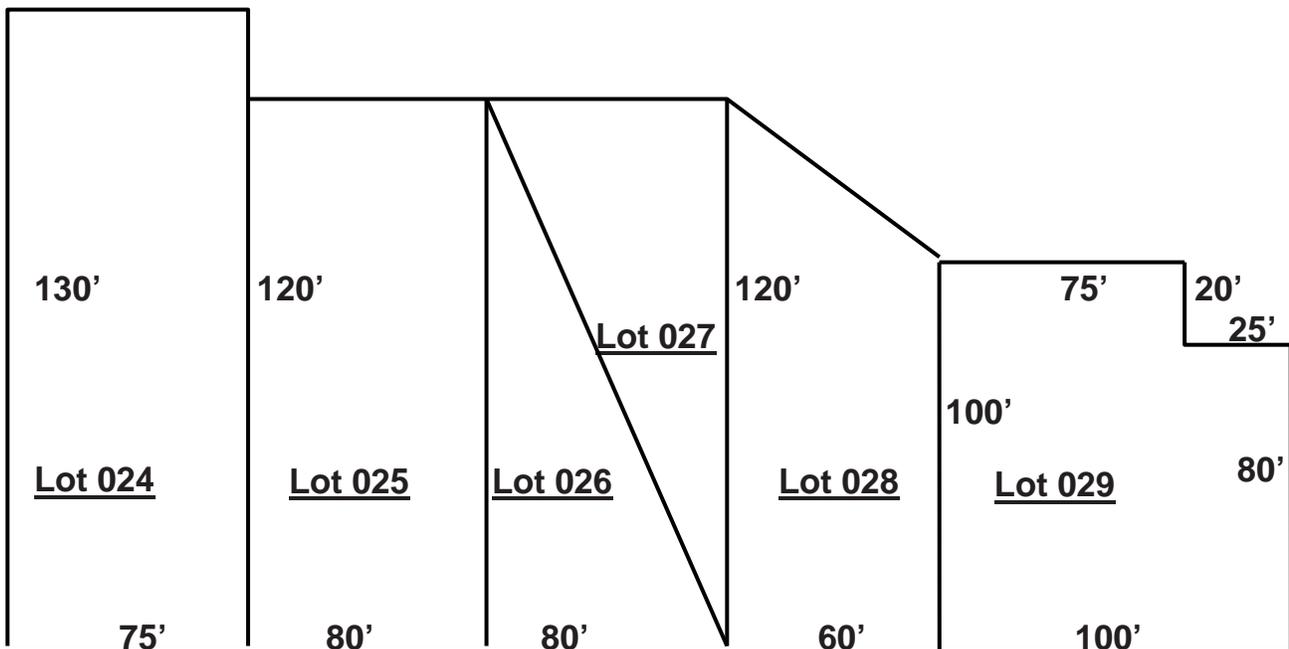
Lot 027 FF value = _____
SF value = _____

Lot 025 FF value = _____
SF value = _____

Lot 028 FF value = _____
SF value = _____

Lot 026 FF value = _____
SF value = _____

Lot 029 FF value = _____
SF value = _____



Exercise 7-4

Site unit of value

You are appraising a subdivision that began to be developed 10 years ago. Now it is nearing the end of its development life cycle. Approximately 70 percent of the sites are interior sites, lots with trees, and sites with level terrain. The remaining 30 percent consists of corner sites, sites with no trees, and sites with rolling terrain. It appears that the market responds to differences in location and physical features.

The seven sales below have been verified as arm's length transactions. Using the market data, determine the value for time, location, and physical features. Note: This exercise has been simplified for class purposes. When determining the value of features in the market, numerous pairs should be utilized.

Site	Sales price	Sale date	Size	Location	Physical features
1	\$ 9,000	Current	75 x 200	Interior	Level - trees
2	\$ 8,500	Current	75 x 200	Corner	Level - trees
3	\$ 10,000	Current	75 x 200	Interior	Rolling - trees
4	\$ 9,000	1 year ago	75 x 200	Interior	Rolling - trees
5	\$ 8,000	Current	75 x 200	Interior	Level - no trees
6	\$ 6,500	1 year ago	75 x 200	Corner	Level - no trees
7	\$ 7,500	Current	75 x 200	Corner	Level - no trees

Time adjustment instructions:

A time adjustment identifies sales with identical features, except the sale date. Sale 3 is identical to sale 4, except sale 3 is a current sale and sale 4 sold 1 year ago. The time adjustment indicated is + \$1,000 each year. Look for additional sales for number 1 below.

- Based on the above sales, a site that sold today is worth \$_____ more than a site that sold a year ago.
- A site that is on rolling terrain is worth \$_____ more than a site on level terrain.
- A site that has trees is worth \$_____ more than a site without trees.
- An interior site is worth \$_____ more than a corner site.

Alternate methods of developing land values

In areas where an inactive market for vacant land exists, alternate methods of valuation may have to be used. These methods are useful in certain restricted circumstances and should be used with caution, as they are poor substitutes for actual market information.

- 1 Allocation** — based on the proportion between the value of the land and the value of the improvements.
- 2 Abstraction** — an allocation method whereby comparable land values are abstracted (separated) from the sales price

Unit 7 Summary

Land Valuation

The assessor is responsible for determining the value of both the land and the improvement for all properties located in his or her jurisdiction. **Land** is valued as vacant and at its highest and best use.

Several principles may be used to value land. The three most common units of value are **front foot value, square foot value, and site value.**

A **front foot** is a strip of land 1 foot wide running from the front to the rear of the lot. Adjustments may be necessary when using the front foot (FF) method to value residential property. The adjustments described below may be necessary.

An irregular lot adjustment is also made when the front foot value is the unit of comparison. These adjustments are based on the assumption that the utility of the lot may be affected by its shape.

The most common rule for shape adjustment is known as the “**65-35 Rule.**” It is based on the premise that a right-angle triangular shaped lot with its base on the street has 65 percent of the value of a rectangular lot having the same frontage. It also assumes that a right-angle triangular shaped lot with its apex, or point on a street has 35 percent of the value of a rectangular lot having the same frontage.

The area of a triangle is found by multiplying the base by the height and dividing by 2.

Unit 7

Review questions

Match these terms with the correct definition.

- | | | | |
|-------|------------------------|----------|--|
| _____ | “65-35 Rule” | A | as vacant and at its highest and best use. |
| _____ | Front foot | B | based on the premise that the value of a right-angle triangular shaped lot is affected by its shape. |
| _____ | How land is valued | C | a strip of land 1 foot wide running from the front to the rear of the lot. |
| _____ | $\frac{b \times h}{2}$ | D | based on the assumption that the front portion of the lot is more valuable on a unit basis than the rear portion |
| _____ | $\frac{SP}{\#units}$ | E | area of a triangular-shaped lot |
| | | F | unit value |

Unit 8

PRC and Data Bank

This unit explains the computations and use of the data bank, located on the commercial property record card (PRC-4).

The purpose of this unit is to provide a basic understanding of how the values in the data bank are used to determine RCN values.

Learning objectives

After completing the assigned readings, you should be able to:

- identify data bank components on the PRC-4,
- calculate values for each data bank component, and
- understand the relationship between data bank values and various cost values and adjustment factors.

Terms and concepts

Data bank
Square feet of ground area (SFGA)
Effective perimeter (EP)
Party wall
Cubic feet (CF)
Height (H)
Square feet of wall area (SFWA)
Wall ratio (WR)

Commercial Property Record Card (PRC-4)

Each commercial property record card (PRC-4) must be completed in detail before the assessor can accurately compute the improvement's upper limit of value, or its RCN.

The assessor first lists the data regarding the physical construction of the building on PRC-4. Working with PRC-4 and appropriate Appraisal Publications, including the subsidiary schedules, and/or the component-in-place (CIP) schedules, the assessor has to cost out each floor of the improvement, adjust cost values when applicable, cost out various components found in the building, and arrive at a full value of the improvement.

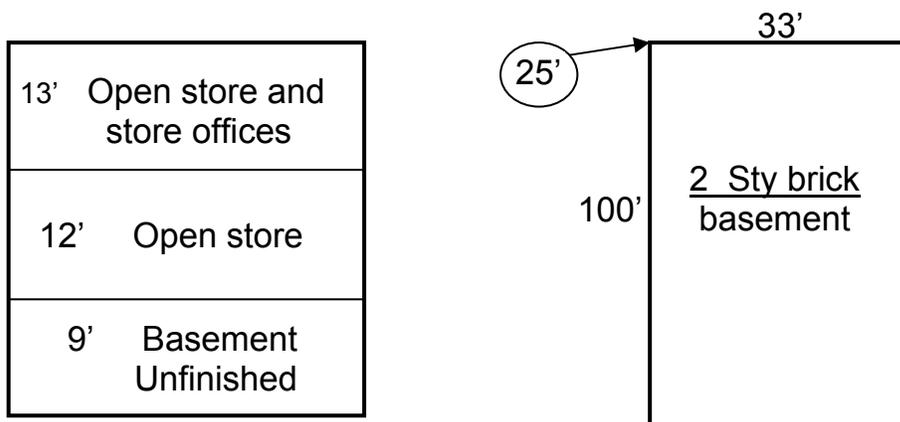
A thorough understanding of the relationship between the PRC-4 and the cost schedules is necessary for the assessor to calculate a valid RCN value.

Data Bank

Data bank values impact the final value of the improvement. Consequently, it is very important that these values are accurately computed

DATA BANK	
SF Ground Area	
Eff. Perim LF	
CF of Bldg.	
SF Wall Area	
Wall Ratio	

Building dimensions are found on the building and floor diagrams



Square feet of ground area (SFGA)

The square feet of ground area (SFGA) is the first component of the data bank. This value is obtained by multiplying the length of the building by the width of the building.

In the example on the previous page, the structure is 33' x 100'. Apply the formula:

$$\text{Length} \times \text{width} = \text{square feet of ground area}$$

to arrive at a SFGA of 3,300 square feet for the structure.

$$33' \times 100' = 3,300 \text{ SFGA}$$

Much of the cost is directly related to the SFGA.

Effective perimeter (EP)

The second component of the data bank is the effective perimeter (EP). This is the linear measurement around the outside boundaries of the ground floor.

$$\text{EP} = \text{L} + \text{W} + \text{L} + \text{W}$$

In the example, the structure is 33' x 100'. Apply the formula

$$\text{length} + \text{width} + \text{length} + \text{width} = \text{effective perimeter}$$

to arrive at a EP of 266' for the structure.
(33' + 100' + 33' + 100' = 266')

There may be instances when the subject building shares a common wall or walls with another building. This type of wall is referred to as a **party wall**. Party walls are often found in older downtown commercial structures. Years ago, the first commercial structure was built with four walls. When the adjoining structure was constructed, rather than building four exterior walls for the structure, only three walls were constructed and the builder tied in to the existing wall of the previously constructed building for the fourth wall. Due to building standard restrictions, this practice is no longer as widespread as it once was.

If a structure contains a party wall, the length of the shared wall is adjusted by 60 percent when calculating an EP. For example, if one of the 100' walls of the subject building was a shared or party wall, that wall would be factored at 60 percent of the 100' or 60' instead of 100'.

To calculate the EP, add 100' + 33' + 60' + 33'. This structure, if it had a party wall, would have an EP of 226' instead of 266'.

Cubic feet of building (CF)

The third component of the data bank is the **cubic feet** of the building (CF). This is computed by multiplying the square feet of the ground area (SFGA) by the **eave height (OH)**, which is the height from the ground level to the eaves.

$$\text{CF} = \text{SFGA} \times \text{OH}$$

In this example, the square feet of the ground area is 3,300 square feet. The height of the structure is 25' (12' first floor + 13' second floor).

$$(\text{CF} = \text{SFGA} \times \text{H} \quad 3,300 \times 25 = 82,500)$$

Square feet of wall area (SFWA)

The **square feet of wall area (SFWA)** is the fourth component of the data bank. This value is found by multiplying the EP by the eave height (H).

$$\text{SFWA} = \text{EP} \times \text{OH} \quad 266' \times 25' = 6650$$

Wall Ratio (WR)

The final component of the data bank is the **wall ratio (WR)** found by dividing the SFGA of the structure by the EP.

$$\text{WR} = \text{SFGA} \div \text{EP} \quad \text{Carry this figure 2 decimal places.}$$

In this example, the SFGA is 3,300 and the EP is 266'. The WR for the structure is 12.41. ($3,300 \div 266$).

The WR value is used in conjunction with the commercial cost schedule to determine the shape adjustment factor for the subject building.

Completing the Data Bank

This example shows how to complete the data bank portion for the structure shown at the top of the first column. Read through the first example and then complete the three remaining columns of the data bank for the structures listed at the top of each column.

The first structure has a length of 36', a width of 40', and a height of 28'. Since no other information is given regarding height, assume that the height given is the eave height for the purposes of these calculations.

- 1 To compute the **SFGA**, multiply the length of 36', by the width of 40', for a total of 1,440 square feet for the structure.
- 2 To compute the **EP**, add the length of 36', the width of 40', the length of 36', and the width of 40', for a total of 152' EP for the structure.
- 3 To compute the **CF**, chain multiply the length of 36', by the width of 40', by the eave H of 28', for a total of 40,320 CF for the structure.
- 4 To compute the **SFWA**, multiple the EP of 152', by the eave H of 28', for a total of 4,256 SFWA for the structure.
- 5 To compute the **WR**, divide the SFGA of 1,440 by the EP of 152 feet, for a WR of 9.47.

Exercise 8-1

Complete the remaining three columns.

	2-Story L36 W40 H28	2-Story L48 W50 H28	2-Story L44 W50 H28	3-Story L72 W48 H42
S/F ground area (SFGA)	1,440			
Eff. Perim L/F (EP)	152			
C/F of bldg. (CF)	40,320			
S/F wall area (SFWA)	4,256			
Wall Ratio (WR)	9.47			

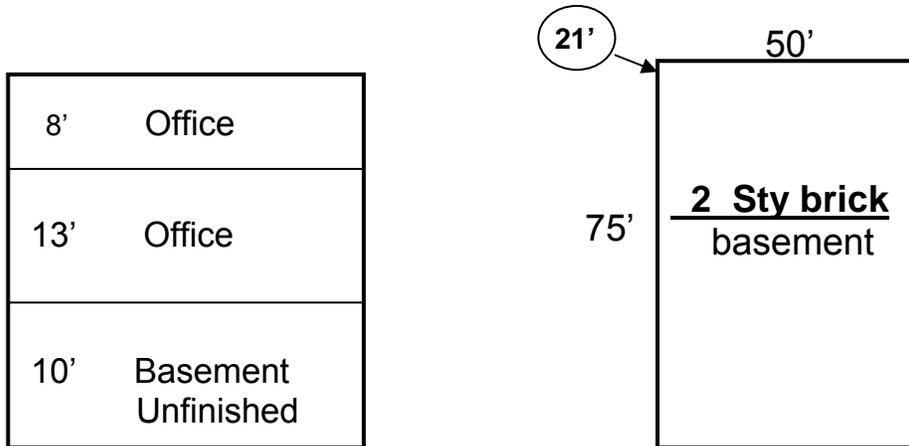
Unit 8 Summary

The collection of data is one of the most important steps. This information is used to calculate the replacement cost of a structure and can be used in the market approach for comparative sales data development. You should be familiar with the data bank, along with the formulas associated with the data bank below.

- Square feet of ground area $SFGA = L \times W$
- Effective perimeter $EP = L + W + L + W$
(party walls are factored at 60 percent)
- Cubic feet $CF = SFGA \times H$
- Square feet of wall area $SFWA = EP \times H$
- Wall ratio $WR = SFGA \div EP$

Unit 8 Review questions

Compute the following items in the data bank for this 2-story commercial building with a full basement.



- 1 Compute the EP if one of the 75' walls is a party wall. _____
- 2 Compute the EP if both of the 75' walls are party walls. _____

Unit 9

Commercial Square Foot Schedules

This unit explains the use of the commercial square foot and subsidiary cost schedules found in “Publication 126 Instructions for Commercial Schedules.”

The purpose of this unit is to provide a basic understanding of the format, values, and various adjustment factors found in the cost schedules.

Note: Download or Print Publication 126 Instructions for Commercial Schedules:

tax.illinois.gov/Publications/Pubs/Pub-126.pdf

Learning objectives

After completing the assigned readings, you should be able to

- locate base costs for the basement, first floor, and upper floors in the commercial schedules,
- locate and apply the wall height and shape adjustment factors,
- locate costs for plumbing, air conditioning, and sprinklers in the commercial supplemental cost schedules,
- identify pertinent construction specifications found on the PRC-4,
- determine the REL of a commercial improvement, and
- arrive at a correct estimate of market value using the commercial square foot schedules.

Terms and concepts

Base price adjustment (BPA) factor
Construction specifications
Wall height adjustment (WH) factor
Shape factor
Base cost
Remaining economic life (REL)

Commercial schedules

The commercial schedules in the IDOR Publication 126 are based on construction costs in central Illinois. The values given are also based on construction using average or typical quality for that occupancy, materials and workmanship. As discussed earlier, there are various factors that can be applied to adjust the Publication to reflect the values in various jurisdictions.

The Commercial Square Foot Schedule was developed for pricing the typical mercantile building (1-5 stories), office buildings (1 to 10 stories), and various other building types.

For large commercial buildings (above the sizes found in the cost schedules and high rise office complexes), the component-in-place (CIP) method from Publication 127 should be used.

It is important to use the appropriate schedule. As with any cost schedule, the assessor must be aware of the items that are included in the base cost. Before using a schedule, read all of the information on the schedules.

Getting started

In IDOR Publication 126 buildings are classified by occupancy or use. The initial step in SF estimation is determination of correct occupancy or use. We will only be valuing Retail Stores in this class.

The next step in valuing the property is to identify building construction based upon framing and exterior wall cover. On the next page is a sample for the Retail Store cost schedule. Notice the various kinds of construction.

It is important to use the appropriate schedule. As with any cost schedule, the assessor must be aware of items that are included in the base cost. Before using a schedule, read all of the information on the schedules.

The **base cost** is the cost indicated in the schedules representing the cost of construction per square foot of the structure.

Retail Store

Story	Wall height	Construction type	Average per floor area					
			2,000	3,000	4,000	5,000	6,000	8,000
Basement	9'	Unfinished storage	38.60	37.75	37.25	36.70	36.25	35.40
		Finished store	73.20	72.10	71.70	71.25	70.85	70.55
First floor	14'	Brick veneer on wood studs	131.15	119.95	115.50	108.05	102.15	93.20
		Siding on wood frame	126.40	112.05	108.80	106.90	104.90	102.95
		Brick on conc. blk/ joists	161.10	148.45	143.35	138.25	133.15	127.50
		Stucco on concrete block	158.95	140.40	139.20	127.55	124.05	116.00
		Decorative or split face concrete block	179.45	155.75	143.30	137.60	131.90	115.10
		Precast or tilt-up conc.	147.05	140.30	134.15	128.35	122.55	110.95
		Painted reinforced concrete	142.25	135.60	129.65	124.00	118.35	107.05
		Common brick	160.00	146.35	140.90	131.80	124.60	113.70
Second floor	12'	Brick veneer on wood studs	103.25	94.45	90.95	85.10	80.43	73.40
		Siding on wood frame	99.55	88.25	85.65	84.15	82.60	81.05
		Brick on conc. blk /joists	126.85	116.90	112.85	108.85	104.85	100.40
		Stucco on concrete block	125.15	110.55	109.60	100.45	97.70	91.35
		Decorative or split face concrete block	141.30	122.65	112.85	108.35	103.85	90.65
		Precast or tilt-up concrete	115.80	110.45	105.65	101.05	96.50	87.35
		Painted reinforced concrete	112.00	106.75	102.10	97.65	93.20	84.30
		Common brick	125.00	114.25	110.95	103.80	98.10	89.55

Items included in the base cost

The **base cost** is the cost indicated in the schedules representing the cost of construction per square foot of the structure. The **base cost schedules** include normal amounts for excavation, foundations, footings, framing, exterior wall construction, floor construction, roof construction, interior construction and finish, insulation, heating, and lighting. Air conditioning, and sprinklers are included for most types of buildings, but not all. Other features should be priced from the subsidiary schedules or the CIP schedules.

The information from the preceding paragraph is printed at the top of the various occupancy schedules. If you are not sure which items are included in the base price, you should refer to this information on the schedule. If a building has construction features other than those included in the base cost schedules, adjustments to the base cost must be made. Other additions may include such items as plumbing fixtures, air conditioning, and sprinkler systems. These costs are found in the subsidiary schedules. These subsidiary schedules are discussed in detail later in this unit.

Base Costs

The base price includes amounts for excavation, foundation, footings, framing, exterior wall construction, floor construction, roof construction, interior construction and finish, insulation, heating/air conditioning, sprinkler system, and lighting. Typical, standard plumbing exists of water heater and one fixture for every 800 square feet. Other features are to be priced from the subsidiary schedules or the CIP schedules. A shape or size adjustment is necessary for store use class. The given price is to be adjusted by a factor from the building shape adjustment table.

The commercial schedules are used in conjunction with the commercial **property record cards** (PRCs). PRC-4 is used for listing construction specifications, property use, and for computing building values. PRC-3 (on the opposite side of PRC-4) is used for valuing commercial or industrial land.

Property Record - Commercial - Industrial													
Construction Specifications				Use			Data Bank			Description			Computation
Foundation				Store	Office	Vacant	SF Ground Area			Fir. Price x Ht. Adj.		WH	
Sprd. Ftg.				Apt.	WH	Abandoned	Eff. Perim LF					Bsmt.	
Caisson				Factory			CF of Bldg.					1st Floor	
Wall Framing				No. of Units			SF Wall Area					2nd Floor	
B 1 2 3 A				Avg. Unit Size			Wall Ratio					3rd Floor	
Wood				No. Rooms Per Unit			Sty. Sched.						
Steel O/FP				Prorated @ _____ % with:									
Reinf. Concrete													
Load Bearing													
Frame Bay - Bay Area				SF			Size _____ x Shape _____ x Weight _____					BPA	
Floors												Adj. Base Price	
Wood												Heat	
Steel O/FP												A/C	
Reinf. Concrete												Electrical Light	
Frame				Wood	Steel	Conc.						Sprinkler	
Exterior Walls													
Siding													
Masonry Blk./Brk.												SF Price	
Steel												SF	
Glass												Subtotal	
Finish												Plumbing	
Unfinished												Partitions	
Finished Open												Front	
Finished Divd.												Canopy	
Heat												Dock	
Cent. Wm. Air													
Ht. Wt./Steam													
Unit Heaters													
None													
Air Conditioning													
Central												Depreciation =	REL
Unit													Full Value
None													
Summary of Other Buildings													
Roofing		Type	No.	Construction	Size	Rate	Grade	Age	CDU	Factor	Repl. Cost New	REL	Full Value
Composition	Shingle												
Slate	Metal												
Frame	Wood	Steel	Conc.										
Plumbing Type													
1	2												
3	4												
Listed by:										Total full value other buildings			
Date:										Total full value all buildings			

The PRC-3 shown below is for reference only. Since this class deals with the use of the commercial schedules, you will not be required to complete a PRC-3.

Property Record — Commercial — Industrial														
Ownership and Mailing Address				Township		Volume	Tax Code	Area	Sect.	Block	Parcel	Unit		
				Property Class	Land Use	Zoning	NH Code		Card No.	Condo. Comm.				
				Record of Ownership				Date	Deed Stamps	Sale Price				
Property Address														
				Street	Nghbhd.	Utilities	Topo.	Division						
				Private Rd.	Improved	Water	<input checked="" type="checkbox"/> Level	<input checked="" type="checkbox"/>						
	Cul-de-sac	Static	<input checked="" type="checkbox"/> Sewer	<input checked="" type="checkbox"/> High										
	Alley	Decline	Gas	<input checked="" type="checkbox"/> Low										
	Traffic Lt.	Blighted	Electric	<input checked="" type="checkbox"/> Rolling										
Memo				Traffic Hwy.	<input checked="" type="checkbox"/>		View							
				Building Permit Record										
				Date	Number	Amount	Yr Assessed	N/C	P/U Year	Purpose				
Summary of Assessed Values														
				Orig Asmt.:			Rev by:			Yr				
				Full Value	Asmt Level	Assess Value	Full Value	Asmt Level	Assessed Value					
Land Blgs Total														
				Orig Asmt.:			Rev by:			Yr				
				Full Value	Asmt Level	Assess Value	Full Value	Asmt Level	Assessed Value					
Land Blgs Total														
Land Computations														
Unit Type	No. Units	Depth	Unit Value	D. Fac.	I. Fac.	Full Value								
Land Blgs Total														
				Orig Asmt.:			Rev by:			Yr				
				Full Value	Asmt Level	Assess Value	Full Value	Asmt Level	Assessed Value					
Land Blgs Total														

On the PRC-4, the left portion of the card is used for listing construction specifications and use of the building. Construction specifications include foundation, framing, floors, exterior wall construction, interior finish, heat, air conditioning, roofing, and plumbing.

Property Record -													
Construction Specifications						Use							
Foundation						Store	Office	Vacant	SF Groun				
Sprd. Ftg		Pile				Apt.	WH	Abandoned	Eff. Perim				
Caisson		Other				Factory			CF of Bldg				
Wall Framing						No. of Units				SF Wall A			
	B	1	2	3	A	Avg. Unit Size				Wall Rati			
Wood						No. Rooms Per Unit							
Steel O/FP						Prorated @ _____ % with:							
Reinf. Concrete													
Load Bearing													
Frame Bay - Bay Area						SF							
Floors													
Wood													
Steel O/FP													
Reinf. Concrete													
Frame		Wood	Steel	Conc.									
Exterior Walls													
Siding													
Masonry Blk./Brk.													
Steel													
Glass													
Finish													
Unfinished													
Finished Open													
Finished Divd.													
Heat													
Cent. Wm. Air													
Ht. Wt/Steam													
Unit Heaters													
None													
Air Conditioning													
Central													
Unit													
None													
Roofing						Type	No.	Construction	Size				
Composition		Shingle											
Slate		Metal											
Frame		Wood	Steel	Conc.									
Plumbing Type													
1					2								
3					4								
Sprinkler						Listed by:							
						Date:							

Base prices

After calculating the components of the data bank, the next step is to determine the base cost of the structure. The base cost schedule is used to determine this base cost. The base cost of the structure is based on each floor's use in the structure, as well as the framing and exterior finish of the structure.

The schedule includes values for the basement, first floor, and upper floors. The construction type includes "wood joist," "wood stud," "steel frame," and "concrete frame," with exterior finishes of brick veneer, stone, siding, stucco, or concrete block.

A single square foot price for each story of the subject building is extracted from the schedule by correlating the story level and building use with the frame type and the exterior wall treatment.

Frame type and exterior wall type are found on the PRC-4 under Construction Specifications; building use is found under Use, and the story level is found under Description.

Retail Store

Story	Wall height	Construction type	Average per floor area					
			2,000	3,000	4,000	5,000	6,000	8,000
Basement	9'	Unfinished storage	38.60	37.75	37.25	36.70	36.25	35.40
		Finished store	73.20	72.10	71.70	71.25	70.85	70.55
First floor	14'	Brick veneer on wood studs	131.15	119.95	115.50	108.05	102.15	93.20
		Siding on wood frame	126.40	112.05	108.80	106.90	104.90	102.95
		Brick on conc. blk/ joists	161.10	148.45	143.35	138.25	133.15	127.50
		Stucco on concrete block	158.95	140.40	139.20	127.55	124.05	116.00
		Decorative or split face concrete block	179.45	155.75	143.30	137.60	131.90	115.10
		Precast or tilt-up conc.	147.05	140.30	134.15	128.35	122.55	110.95
		Painted reinforced concrete	142.25	135.60	129.65	124.00	118.35	107.05
		Common brick	160.00	146.35	140.90	131.80	124.60	113.70
Second floor	12'	Brick veneer on wood studs	103.25	94.45	90.95	85.10	80.43	73.40
		Siding on wood frame	99.55	88.25	85.65	84.15	82.60	81.05
		Brick on conc. blk /joists	126.85	116.90	112.85	108.85	104.85	100.40
		Stucco on concrete block	125.15	110.55	109.60	100.45	97.70	91.35
		Decorative or split face concrete block	141.30	122.65	112.85	108.35	103.85	90.65
		Precast or tilt-up concrete	115.80	110.45	105.65	101.05	96.50	87.35
		Painted reinforced concrete	112.00	106.75	102.10	97.65	93.20	84.30
		Common brick	125.00	114.25	110.95	103.80	98.10	89.55

A single square foot price for each story of the subject building is extracted from the schedule by correlating the story level and building use with the frame type and the exterior wall treatment.

Frame type and exterior wall type are found on the PRC-4, under **Construction Specifications**, building use is found under **Use**, and the story level is found under **Description**.

Example

The subject improvement is a 2-story commercial **retail building** with a **brick veneer exterior with wood studs and wood joists**. The building is 5 years old and in average condition. The desirability and utility are also average. It has a quality grade of “C” which is the average quality grade.

The basement (9' wall height) is unfinished; the first floor (12' wall height) is finished open and used as a store; the second story (13' wall height) is used as a store with a small manager's office. The base square footage is 3,420 (38 x 90)

Finished open refers to an open area that has finished floors, walls, and ceilings and has no partition walls.

There are 10 plumbing fixtures in the building.

There is a steel frame store front with aluminum trim along the entire front of the building and 10' high.

Refer to the completed PRC-4 on the next page and the **Retail Store schedules** in Publication 126 Instructions for Commercial Cost Schedules, pages 6-7.

The “Exterior Walls” are “Brk” (Brick) and the “Wall Framing” for the 1st and 2nd floors is marked as “Wood.” Also, the “Floors” section indicates “Wood” framing.

On the schedules we will use “Brick Veneer on Wood framing” for the construction type.

Now that we have determined that the occupancy is Retail Store, the next step is completing the Data Bank found at the top of the PRC-4.

SFGA = length x width

From the field notes and diagram, note that the structure measures 38' x 90'. Write "3,420" in the "SFGA cell."

$$38' \times 90' = 3,420 \text{ square feet}$$

The next item in the data bank is the Eff perim L/F (Linear Feet). When calculating an EP, if there is a party wall, factor that dimension at 60 percent.

The formula for the EP is

EP = length + width + length + width

$$38' + 90' + 38' + 90' = 256' \text{ Effective Perimeter}$$

The next item to calculate is the C/F of Bldg (CF). Multiply the SFGA times the height (H). Remember that the H does not include the basement.

CF = SFGA x H

$$3,420 \times 25 = 85,500 \text{ cubic feet}$$

The next item in the data bank is the S/F Wall Area (SFWA).

SFWA = EP x H

$$256' \times 25' = 6,400 \text{ SFWA}$$

The final item in the data bank is the Wall Ratio (WR).

WR = SFGA ÷ EP

$$3,420 \div 256 = 13.36$$

Wall ratios should be carried **two decimal places**.

Referencing the **Retail Store** schedule below, select the values from the “**brick veneer on wood studs**” row and correlate with the proper average floor size column

Base Costs								
The base price includes amounts for excavation, foundation, footings, framing, exterior wall construction, floor construction, roof construction, interior construction and finish, insulation, heating/air conditioning, sprinkler system, and lighting. Typical, standard plumbing exists of water heater and one fixture for every 800 square feet. Other features are to be priced from the subsidiary schedules or the CIP schedules. A shape or size adjustment is necessary for store use class. The given price is to be adjusted by a factor from the building shape adjustment table.								
Story	Wall height	Construction type	Average per floor area					
			2,000	3,000	4,000	5,000	6,000	8,000
Basement	9'	Unfinished storage	38.60	37.75	37.25	36.70	36.25	35.40
		Finished store	73.20	72.10	71.70	71.25	70.85	70.55
First floor	14'	Brick veneer on wood studs	131.15	119.95	115.50	108.05	102.15	93.20
		Siding on wood frame	126.40	112.05	108.80	106.90	104.90	102.95
		Brick on conc. blk/ joists	161.10	148.45	143.35	138.25	133.15	127.50
		Stucco on concrete block	158.95	140.40	139.20	127.55	124.05	116.00
		Decorative or split face concrete block	179.45	155.75	143.30	137.60	131.90	115.10
		Precast or tilt-up conc.	147.05	140.30	134.15	128.35	122.55	110.95
		Painted reinforced concrete	142.25	135.60	129.65	124.00	118.35	107.05
Common brick	160.00	146.35	140.90	131.80	124.60	113.70		
Second floor	12'	Brick veneer on wood studs	103.25	94.45	90.95	85.10	80.43	73.40
		Siding on wood frame	99.55	88.25	85.65	84.15	82.60	81.05
		Brick on conc. blk /joists	126.85	116.90	112.85	108.85	104.85	100.40
		Stucco on concrete block	125.15	110.55	109.60	100.45	97.70	91.35
		Decorative or split face concrete block	141.30	122.65	112.85	108.35	103.85	90.65
		Precast or tilt-up concrete	115.80	110.45	105.65	101.05	96.50	87.35
		Painted reinforced concrete	112.00	106.75	102.10	97.65	93.20	84.30
Common brick	125.00	114.25	110.95	103.80	98.10	89.55		

The example retail store has 3,420 square feet. The schedule has columns for 3,000 square feet and for 4,000 square feet. To find a value for 3,420 square feet, we will have to use a process called “interpolation” to find the appropriate value. The value per square foot will be between \$37.75 and \$37.25. Notice that the value per square foot goes **down** as the square footage goes from 3,000 to 4,000. We will have to **subtract** from the \$37.75 to find the appropriate value.

INTERPOLATION

Interpolation is the process of estimating a missing functional value by taking a weighted average of known functional values at neighboring points. (Calculating a more exact value than can be found directly from tables)

Note: If you already know how to interpolate using a different method, you may continue to use that method.

The steps are given in the left column and the numbers from the example retail store are in the right column.

Steps to Interpolate:

Do not clear your calculation until you have the final answer.

1.) The square foot number given is between _____ and _____ on the schedules. Write the larger square footage on the left and the smaller square footage on the right.

2.) Write the values that correspond to the square footages listed, above the square footages.

3.) Subtract the values to find the difference between the dollar amounts. Keep the answer in your calculator.

4.) On paper, subtract the square footages.

5.) Divide the difference between the values by the difference between the square footages. This is how much it costs per square foot in this range. Your result may be negative but just continue to step 6.

6.) On paper, find how many square feet you have in your number above the square feet for the smaller square footage.

7.) Multiply the answer in your calculator by the answer from step 6.

8.) **Add** your answer to the value associated with the **smaller** square footage.

Example: Find the base cost of a basement which is unfinished and used for storage. The SFGA is 3,420 SF .

$$1.) \quad 3,000 \qquad 4,000$$

$$2.) \quad \begin{array}{r} 37.25 \quad - \quad 37.75 \\ \hline 4,000 \quad - \quad 3,000 \end{array}$$

$$3.) \quad 37.25 \quad - \quad 37.75 = - .50$$

$$4.) \quad 4,000 - 3,000 = 1,000$$

$$5.) \quad \frac{-0.50}{1,000} = -0.0005$$

$$6.) \quad 3,420 - 3,000 = 420$$

$$7.) \quad -0.0005 \times 420 = -0.21$$

$$8.) \quad -0.21 + 37.75 = 37.54$$

The unfinished basement used for storage has a base price of **\$37.54**.

1st and 2nd floor base costs

Base Costs								
The base price includes amounts for excavation, foundation, footings, framing, exterior wall construction, floor construction, roof construction, interior construction and finish, insulation, heating/air conditioning, sprinkler system, and lighting. Typical, standard plumbing exists of water heater and one fixture for every 800 square feet. Other features are to be priced from the subsidiary schedules or the CIP schedules. A shape or size adjustment is necessary for store use class. The given price is to be adjusted by a factor from the building shape adjustment table.								
Story	Wall height	Construction type	Average per floor area					
			2,000	3,000	4,000	5,000	6,000	8,000
Basement	9'	Unfinished storage	38.60	37.75	37.25	36.70	36.25	35.40
		Finished store	73.20	72.10	71.70	71.25	70.85	70.55
First floor	14'	Brick veneer on wood studs	131.15	119.95	115.50	108.05	102.15	93.20
		Siding on wood frame	126.40	112.05	108.80	106.90	104.90	102.95
		Brick on conc. blk/ joists	161.10	148.45	143.35	138.25	133.15	127.50
		Stucco on concrete block	158.95	140.40	139.20	127.55	124.05	116.00
		Decorative or split face concrete block	179.45	155.75	143.30	137.60	131.90	115.10
		Precast or tilt-up conc.	147.05	140.30	134.15	128.35	122.55	110.95
		Painted reinforced concrete	142.25	135.60	129.65	124.00	118.35	107.05
		Common brick	160.00	146.35	140.90	131.80	124.60	113.70
Second floor	12'	Brick veneer on wood studs	103.25	94.45	90.95	85.10	80.43	73.40
		Siding on wood frame	99.55	88.25	85.65	84.15	82.60	81.05
		Brick on conc. blk/ joists	126.85	116.90	112.85	108.85	104.85	100.40
		Stucco on concrete block	125.15	110.55	109.60	100.45	97.70	91.35
		Decorative or split face concrete block	141.30	122.65	112.85	108.35	103.85	90.65
		Precast or tilt-up concrete	115.80	110.45	105.65	101.05	96.50	87.35
		Painted reinforced concrete	112.00	106.75	102.10	97.65	93.20	84.30
		Common brick	125.00	114.25	110.95	103.80	98.10	89.55

Determine the base price for the first floor.

Fill in the blanks to determine the base price for the first floor which is also brick veneer on wood studs.

- 1) The square footage of 3,420 is between _____ SF and _____ SF.
- 2) through 5)
$$\frac{\quad - \quad}{4,000 - 3,000} = - \frac{\quad}{1,000} = \underline{\quad}$$

(There will be a minus sign in your calculator. Do not clear your calculator.)

- 6) On paper, find the difference between the square footage of the subject building and the **smaller** SF. _____
- 7) Multiply the number in your calculator by the difference in the square footage and round to the nearest penny.
- 8) **Add** your answer to the value that corresponds to the **smaller** SF. $-1.87 + 119.95 = 118.08$
The base price of the first floor is **\$118.08**.

Story	Wall height	Construction type	Average per floor area					
			2,000	3,000	4,000	5,000	6,000	8,000
Basement	9'	Unfinished storage	38.60	37.75	37.25	36.70	36.25	35.40
		Finished store	73.20	72.10	71.70	71.25	70.85	70.55
First floor	14'	Brick veneer on wood studs	131.15	119.95	115.50	108.05	102.15	93.20
		Siding on wood frame	126.40	112.05	108.80	106.90	104.90	102.95
		Brick on conc. blk/ joists	161.10	148.45	143.35	138.25	133.15	127.50
		Stucco on concrete block	158.95	140.40	139.20	127.55	124.05	116.00
		Decorative or split face concrete block	179.45	155.75	143.30	137.60	131.90	115.10
		Precast or tilt-up conc.	147.05	140.30	134.15	128.35	122.55	110.95
		Painted reinforced concrete	142.25	135.60	129.65	124.00	118.35	107.05
		Common brick	160.00	146.35	140.90	131.80	124.60	113.70
Second floor	12'	Brick veneer on wood studs	103.25	94.45	90.95	85.10	80.43	73.40
		Siding on wood frame	99.55	88.25	85.65	84.15	82.60	81.05
		Brick on conc. blk /joists	126.85	116.90	112.85	108.85	104.85	100.40
		Stucco on concrete block	125.15	110.55	109.60	100.45	97.70	91.35
		Decorative or split face concrete block	141.30	122.65	112.85	108.35	103.85	90.65
		Precast or tilt-up concrete	115.80	110.45	105.65	101.05	96.50	87.35
		Painted reinforced concrete	112.00	106.75	102.10	97.65	93.20	84.30
		Common brick	125.00	114.25	110.95	103.80	98.10	89.55

Determine the base price for the second floor.

Use the schedule above and interpolation to find the base price of the second floor. _____

Upper floor finished into store and small offices has a base price of \$92.98

These values are listed on the computation ladder and the individual values are subject to an adjustment for height variance, if necessary.

Description		Computation
	WH	
37.54	9	Basement
118.08	12	1 st floor
92.98	13	2 nd floor
Total		

Wall height variation

A wall height adjustment may be necessary when costing out an individual floor. The retail schedule includes a standard wall height of 14' for the 1st story, 12' for upper

stories, and 9' for basements. If a subject building's wall height varies from these dimensions, an adjustment to the base cost is necessary before writing in the computation ladder of the PRC-4.

Story	Wall height	Construction type	Average per floor area					
			2,000	3,000	4,000	5,000	6,000	8,000
Basement	9'	Unfinished storage	38.60	37.75	37.25	36.70	36.25	35.40
		Finished store	73.20	72.10	71.70	71.25	70.85	70.55
First floor	14'	Brick veneer on wood studs	131.15	119.95	115.50	108.05	102.15	93.20
		Siding on wood frame	126.40	112.05	108.80	106.90	104.90	102.95
		Brick on conc. blk/ joists	161.10	148.45	143.35	138.25	133.15	127.50
		Stucco on concrete block	158.95	140.40	139.20	127.55	124.05	116.00
		Decorative or split face concrete block	179.45	155.75	143.30	137.60	131.90	115.10
		Precast or tilt-up conc.	147.05	140.30	134.15	128.35	122.55	110.95
		Painted reinforced concrete	142.25	135.60	129.65	124.00	118.35	107.05
		Common brick	160.00	146.35	140.90	131.80	124.60	113.70
Second floor	12'	Brick veneer on wood studs	103.25	94.45	90.95	85.10	80.43	73.40
		Siding on wood frame	99.55	88.25	85.65	84.15	82.60	81.05
		Brick on conc. blk /joists	126.85	116.90	112.85	108.85	104.85	100.40
		Stucco on concrete block	125.15	110.55	109.60	100.45	97.70	91.35
		Decorative or split face concrete block	141.30	122.65	112.85	108.35	103.85	90.65
		Precast or tilt-up concrete	115.80	110.45	105.65	101.05	96.50	87.35
		Painted reinforced concrete	112.00	106.75	102.10	97.65	93.20	84.30
		Common brick	125.00	114.25	110.95	103.80	98.10	89.55
Story Ht. adj., add or deduct per 1 foot			2%	2%	2%	2%		

The amount of this adjustment is 2 percent per foot of wall height variation for buildings up to 8,000 SF per floor, and 1 percent for buildings larger than 8,000 SF per floor. The standard "wall height" information column is located next to the "story" column on the retail store schedule.

If the wall height of the floor is greater than the wall height indicated on the schedules, you must make a plus adjustment and raise the values because additional construction materials are used.

If the wall height of the floor is less than the wall height indicated on the schedules, you must make a minus adjustment and lower the values to account for the decrease in price for materials not needed.

This information is located about two-thirds of the way down on the first page of the commercial square foot schedules.

The base costs listed in the schedule are based on a basement with a height of 9'. Since the subject property has a basement height of 9', **no adjustment** is necessary. Therefore, the base price would be factored at 100 percent of the base price noted in the schedule. The base cost is **\$37.54**.

The base costs listed in the schedule are based on a 1st story wall height of 14'. Since the subject property has a wall height of 12', a **minus** adjustment of 4 percent is necessary. (2 percent per foot x difference of 2 feet = 4 percent) Therefore, the base price would be adjusted by 96 percent (100 percent – 4 percent = 96 percent = 0.96).

$$\mathbf{\$118.08 \times 96\% (.96) = \$113.36}$$

The base costs listed in the schedule are based on an upper story wall height of 12'. Since the subject property has a wall height of 13', a **plus** adjustment of 2 percent is necessary. Therefore, the base price would be adjusted by 102 percent.

$$\mathbf{\$92.98 \times 102\% (1.02) = \$94.84}$$

The **total base cost** is the sum of the base costs after adjustment for wall height variation.

$$\mathbf{\text{The total base cost is } 37.54 + 113.36 + 94.84 = \$245.74}$$

Commercial - Industrial		RETAIL STORE		
Rank	Description			Computation
3,420	Flr. Price x Ht. Adj.	WH		
256	37.54 x 1.00	9	Bsmt.	37.54
85,500	118.08 x .96	12	1st Floor	113.36
6,400	92.98 x 1.02	13	2nd Floor	94.84
13.36			3rd Floor	
RETAIL				
			Base Price	245.74

Story	Wall height	Construction type	Average per floor area			
			2,000	3,000	4,000	5,000
Basement	9'	Unfinished storage	38.60	37.75	37.25	36.70
		Finished store	73.20	72.10	71.70	71.25
First floor	14'	Brick veneer on wood studs	131.15	119.95	115.50	108.05
		Siding on wood frame	126.40	112.05	108.80	106.90
		Brick on conc. blk/ joists	161.10	148.45	143.35	138.25
		Stucco on concrete block	158.95	140.40	139.20	127.55
		Decorative or split face concrete block	179.45	155.75	143.30	137.60
		Precast or tilt-up conc.	147.05	140.30	134.15	128.35
		Painted reinforced concrete	142.25	135.60	129.65	124.00
		Common brick	160.00	146.35	140.90	131.80
Second floor	12'	Brick veneer on wood studs	103.25	94.45	90.95	85.10
		Siding on wood frame	99.55	88.25	85.65	84.15
		Brick on conc. blk/ joists	126.85	116.90	112.85	108.85
		Stucco on concrete block	125.15	110.55	109.60	100.45
		Decorative or split face concrete block	141.30	122.65	112.85	108.35
		Precast or tilt-up concrete	115.80	110.45	105.65	101.05
		Painted reinforced concrete	112.00	106.75	102.10	97.65
		Common brick	125.00	114.25	110.95	103.80
Third floor	12'	Brick veneer on wood studs	97.05	88.75	85.45	79.95
		Brick on conc. blk/steel joists	119.20	109.85	106.10	102.30
		Stucco on concrete block	117.60	103.90	103.00	94.40
		Decorative or split face concrete block	132.80	115.25	106.05	101.80
		Precast concrete	108.80	103.80	99.25	95.00
		Common brick	118.40	108.30	104.00	97.90
Upper floors 4 & 5	12'	Brick on conc. blk/steel joists	118.00	108.75	105.00	101.30
		Precast concrete on steel	107.75	108.75	105.00	101.30
		Common brick	116.00	107.50	103.70	100.00
Story Ht. adj., add or deduct per 1 foot			2%	2%	2%	2%

Reference the appropriate story and wall height schedule from the retail store schedule above. Apply the appropriate adjustment factors to determine the correct adjusted floor prices for the following items.

Base price of floor x factor = adjusted floor price

Basement is 10' high \$37.25 x _____ = \$ _____
 First floor is 12' high \$115.50 x _____ = \$ _____
 Second floor is 16' high \$90.95 x _____ = \$ _____
 Third floor is 8' high \$85.45 x _____ = \$ _____

Shape factor

An adjustment for shape is necessary to account for area/perimeter ratio variations for retail stores. It costs less to build a square box than a rectangular box of the same area because the rectangular box has a greater wall area.

The building shape table is provided to adjust the base price for these variations in floor to wall area ratio.

The shape adjustment factor is based on the wall ratio that you calculated in the data bank. To compute the wall ratio, divide the square feet of the structure by the lineal feet of the effective perimeter.

The table for the shape adjustment factor is located at the bottom of the second page of the retail store square foot schedules.

Retail building shape adjustment table										
Wall ratio = avg. SFA ÷ avg. effective perimeter										
Wall ratio	7	7.5	8	8.5	9	9.5	10	10.5	11	12
Adjustment factor	1.350	1.322	1.283	1.256	1.239	1.211	1.183	1.166	1.148	1.115
Wall ratio	13	14	15	16	17	18	19	20	22	24
Adjustment factor	1.083	1.060	1.042	1.025	1.000	0.992	0.981	0.969	0.950	0.931
Wall ratio	26	28	30	32	34	36	38	40		
Adjustment factor	0.917	0.901	0.892	0.883	0.874	0.866	0.860	0.854		

Wall ratio calculation examples

For example, our subject had a square footage of 3,420 and an effective perimeter of 256. The **wall ratio is 13.36**; the **factor** would be **1.083**.

If the specific wall ratio is not shown, use the factor for the wall ratio that is closest. Referring to the shape adjustment table, indicate the appropriate shape adjustment factor for the following wall ratios.

8	_____	22.00	_____
10.5	_____	20.75	_____
35.80	_____	14.6	_____

Base price adjustment (BPA) factor

The shape adjustment factor becomes the base price adjustment (BPA) factor. Multiply the BPA by the total base price (which has already been adjusted for height variances) to arrive at an adjusted base price.

In our example, the total base price, after factoring in height variance, was \$245.74. Multiply this by the BPA of 1.083 to arrive at an adjusted base price of \$266.14.

Record - Commercial - Industrial				RETAIL STORE	
Data Bank		Description			Computation
SF Ground Area	3,420	Flr. Price x Ht. Adj.	WH		
Eff. Perim LF	256	37.54 x 1.00	9	Bsmt.	37.54
CF of Bldg.	85,500	118.08 x .96	12	1st Floor	113.36
SF Wall Area	6,400	92.98 x 1.02	13	2nd Floor	94.84
Wall Ratio	13.36			3rd Floor	
2	Sty.	Sched.	RETAIL		
				Base Price	245.74
		Size _____ x Shape (1.083) x Weight _____		BPA	1.083
				Adj. Base Price	266.14

Commercial subsidiary schedules

Additions or subtractions to the base price, now the adjusted base price, may be necessary if the building has features that are not included in the base cost from the schedule or if items are included in the schedule base cost that the building does not have.

The next item in the computation ladder is heat. Heating is included in the base price. The structure is heated so no adjustment is necessary.

Many of these items are found in the subsidiary schedules. If an item is not found there, the assessor has to refer to CIP schedules in IDOR Publication 127 Instructions for Industrial Schedules to obtain a cost value.

These values are then entered in the appropriate area on the computation ladder and added to or subtracted from the adjusted base cost.

Some features are priced based on the square feet of the floor area, such as sprinklers and air conditioning (A/C). The values are entered on the computation ladder, above the S/F price line, and represent a cost per square foot of ground area. The cost of each of these features added to, or subtracted from, the

First obtain a cost for each floor that is **not** air conditioned based on its use. Then, add the values for each floor to get a total cost. This amount, after adjustments, is entered on the computation ladder under A/C as a deduction.

Air Conditioning adjustment examples

If the subject has air conditioning, which is included in the base cost, no adjustment would be necessary.

However, since the retail store example does **not** have air conditioning, a deduction per SF would have to be made.

Do not consider air conditioning for the basement.

First floor used as a store	\$7.80
Second floor used as a store	\$7.80
Computation ladder	– \$15.60 *

* If you adjusted the base cost by a shape and/or wall height adjustment, that factor must be applied to the subtraction of those items from the base cost.

In our example we made both height adjustments and shape (BPA) adjustments, so we have to consider both these adjustments in subtracting out air conditioning from the base cost.

Since the height adjustments for the first and second floors are different we must account for that difference by factoring the two floors separately:

First floor:	$\$7.80 \times 0.96 \times 1.083 = \8.11
Second floor:	$\$7.80 \times 1.02 \times 1.083 = \8.62

Adjustment applied to the air conditioning base cost:
 $\$8.11 + \$8.62 = \$16.73$ The deduction would be — \$16.73

IMPORTANT TIP !!! If you adjusted the base cost by a wall height adjustment and/or a Base Price Adjustment factor, that same factor **must** be applied to any **subtractions**.

Do not apply the wall height adjustment and/or BPA to **additions** to the computation ladder.

Sprinkler system — The sprinkler cost is also based on the use of the floor. Refer to the sprinkler schedule to determine a square foot cost for each floor sprinkled.

Sprinkler system (per SF service area)	
Apartments	\$ 3.00
Office	3.90
Retail Store	3.85
Supermarket	3.40
Discount Store	2.70

The base cost section of the retail store schedule includes a sprinkling system. Since the retail store example does **not** have a sprinkling system, a deduction will have to be made. Do not consider the basement for sprinkler adjustments.

Base Costs
The base price includes amounts for excavation, foundation, footings, framing, exterior wall construction, floor construction, roof construction, interior construction and finish, insulation, heating/air conditioning, <u>sprinkler system</u> , and lighting. Typical, standard plumbing exists of water heater and one fixture for every 800 square feet. Other features are to be priced from the subsidiary schedules or the CIP schedules. A shape or size adjustment is necessary for store use class. The given price is to be adjusted by a factor from the building shape adjustment table.

First floor used as a retail store = \$ 3.85
 Second floor used as a retail store = \$ 3.85

Now adjust these values individually for wall height and BPA adjustments.

First floor $3.85 \times 0.96 \times 1.083 = \$ 4.00$
 Second floor $3.85 \times 1.02 \times 1.083 = \$ 4.25$

Total **deduction** on the computation ladder: – \$ 8.25

Computation ladder

Beginning with the total adjusted base price (\$266.14), add or subtract to find the total price per square foot.

Multiply the total square foot price (\$241.16) by the SFGA of 3,420 from the data bank to get the subtotal of \$824,767.

Items added below the subtotal will not be per square foot, but will be the total value of the item.

Commercial - Industrial		RETAIL STORE	
Rank	Description	Computation	
3,420	Flr. Price x Ht. Adj.	WH	
256	37.54 x 1.00	9 Bsmt.	37.54
85,500	118.08 x .96	12 1st Floor	113.36
6,400	92.98 x 1.02	13 2nd Floor	94.84
13.36		3rd Floor	
RETAIL			
		Base Price	245.74
Size _____ x Shape <u>1.083</u> x Weight _____		BPA	1.083
		Adj. Base Price	266.14
1st	2nd	Heat	
7.80 x .96 x 1.083 = 8.11 ; 7.80 x 1.02 x 1.083 = 8.62		A/C	- 16.73
		Electrical Light	
3.85 x .96 x 1.083 = 4.00 ; 3.85 x 1.02 x 1.083 = 4.25		Sprinkler	- 8.25
		SF Price	241.16
		SF	3,420
		Subtotal	824,767

Plumbing — Plumbing costs are based on the number of existing fixtures and the type of fixtures. These costs include the piping, installation, etc.

Typical plumbing by occupancy or use is included in the base cost. Plumbing must be adjusted if the number of fixtures in the building being valued varies from that included in the base cost.

Additions	
Item	Cost
Plumbing (per each existing fixture)	
Residential (type 1)	\$ 1,795
Commercial (type 2)	2,600
Special (refer to CIP Schedule Pub. 127)	

There are two types of fixtures listed in the schedule, “residential type 1” and “commercial type 2.” Commercial fixtures are of better construction than residential fixtures.

Refer to the base cost schedule for the occupancy or use to determine the number of plumbing fixtures included in the base cost. This will vary depending on what is typical for a specific building type.

If the subject property had 12 more “type 2” fixtures than what was included in the base cost, you would calculate the value by multiplying 12 by \$2,600 for a total plumbing value of \$31,200. This amount is entered on the computation ladder under “Plumbing.”

Retail Store

Base Costs
The base price includes amounts for excavation, foundation, footings, framing, exterior wall construction, floor construction, roof construction, interior construction and finish, insulation, heating/air conditioning, sprinkler system, and lighting. Typical, standard plumbing exists of <u>water heater and one fixture for every 800 square feet</u> . Other features are to be priced from the subsidiary schedules or the CIP schedules. A shape or size adjustment is necessary for store use class. The given price is to be adjusted by a factor from the building shape adjustment table.

The retail store base cost schedule includes “a water heater and one fixture for every 800 square feet.” The retail store example has 6,840 square feet (3,420 x 2). Do not include the basement when calculating total square footage. $6,840 \div 800 = 8.55$. Since plumbing fixtures are whole units, **always round up** to the nearest whole number. The base cost includes **9** fixtures + 1 water heater or a total of **10** plumbing fixtures for this building.

Roofing			
Composition	<input checked="" type="checkbox"/>	Shingle	
Slate		Metal	
Frame	<input checked="" type="checkbox"/>	Wood	Steel Conc.
Plumbing Type			
1		2	10
3		4	
Sprinkler			

The plumbing portion of the PRC is found in the lower left corner. The retail store example has 10 type 2 plumbing fixtures. Since the base cost also includes 10 fixtures, no plumbing adjustment is necessary.

If the base cost schedule includes “typical plumbing,” do not adjust for plumbing. Assume the number of fixtures in the building is typical.

Store front

Commercial structures are often constructed with glass store fronts. Refer to the base cost portion of the schedule for the occupancy to determine whether a store front is included in the base cost. If an adjustment is necessary, refer to the Store Front section of the Commercial Subsidiary Schedule.

The basic retail store square foot price includes a basic store front and entrance accounting for 10% of the entire store wall area.

This is calculated by multiplying the effective perimeter of the first floor by the height of the **first floor**.

Use this table for any **additional** store front area over the 10%.

In calculating the total display area include surface area of all glass, sign, and bulkhead areas, including entranceway, islands, etc.

Store Fronts	
Type	Per SF Display Area
Wood framed glass & trim with:	
Wood siding	\$ 32.65
Brick	41.25
Ceramic	43.60
Marble or granite	79.25
Steel framed glass & aluminum trim with:	
Brick	52.20
Ceramic	55.95
Marble or granite	91.60
Steel framed glass & stainless steel trim with:	
Brick	73.70
Ceramic	76.10
Marble or granite	111.70
The basic retail store square foot price includes a basic store front and entrance accounting for 10% of the entire store wall area. Use this table for any additional store front area over the 10%. In calculating the total display area include surface area of all glass, sign, and bulkhead areas, including entranceway, islands, etc.	

The retail store example has an effective perimeter of 256 feet and the **first floor** is 12' high. Use the effective perimeter of the first floor. Multiply the effective perimeter by the height of the first floor.

$$256 \times 12 = 3,072 \text{ SF}$$

Now multiply the total SFWA of the first floor by 10%.

$$3072 \times 0.10 (10\%) = 307 \text{ SF}$$

The store front schedule includes 307 SF of store front for this retail store.

The store front is **steel frame with aluminum trim** along the entire front of the building and 10' high. The retail store has 380 SF of store front. **38' frontage x 10' high = 380 SF**

The difference between the actual store front and what is allowed in the base cost schedule is (380 – 307) **73 SF**.

From the store front schedule on the preceding page, there are several choices for the steel framed glass and aluminum trim: brick, ceramic, and marble or granite. To determine which of these is appropriate, look at the left column of the PRC-4 in the Exterior Wall section. The exterior walls are **brick**. The price per square foot is \$52.20. Since this addition occurs **after** the total square foot price, multiply the 73 SF of store front area, that is more than what is included in the schedule, by the \$52.20.

$$52.20 \times 73 = \$ 3,811$$

Since this is an **addition** to the computation ladder, do **not** adjust for wall height or BPA. Enter \$3,811 in the computation ladder.

You do not have to make any adjustments for canopy or docks.

Note: The CIP schedules should be consulted for all other items not included in the commercial square foot schedules.

Beginning with the Subtotal, add the numbers in the computation ladder (824,767 + 3,811) to yield the **Total of \$828,578**.

Factors

Cost, Design, Quality grade, Neighborhood, and Appraiser factors are chain-multiplied to determine a single factor placed in the computation ladder. See the discussion in Unit 2.

The building has a quality grade of “C,” due to the average materials and workmanship used in its construction. Look at the schedule for “Quality Grade,” in Publication 127 Instructions for Industrial Schedules page 8 at the end of the unit. The factor for a “C” grade is 100 percent. Multiply the total of \$828,578 x 100 percent (1.00) to arrive at a RCN of \$828,578.

Commercial REL Depreciation Tables

The Commercial REL Depreciation Table is used to determine the subject’s Remaining Economic Life or REL factor. As discussed earlier, the condition, desirability, and utility of the property are

considered by using various CDU ratings. Structures can be rated excellent, good, average, poor, or unsound (undesirable).

Unlike the Residential REL Depreciation Table, the age column of the Commercial REL Depreciation Table represents the assigned age given by the assessor to the subject improvement, based on its physical condition in comparison to the physical condition of like commercial buildings having the same chronological age as the subject property. In this class the condition is always “Average” so the first effective age will be the same as the actual age.

The age based on the condition (C) is the first effective age; the desirability (D), and the utility (U) rating produces the second effective age of a property that determines the REL factor, which is applied to the RCN of a structure to adjust for depreciation.

REL + Depreciation = 100% of the RCN value

The Commercial REL Table is used to determine the REL factor. After the effective age considering condition has been assigned, a second effective age is determined based upon the desirability and utility of the subject property in comparison to other buildings within the neighborhood. This effective age is then used in Schedule B to determine the REL factor to be used on the PRC-4.

Looking at Schedule A, the left column reflects the age of the structure based on condition. Once you have located the age, move to the appropriate column to the right and find the effective age based on the desirability and utility (DU) rating assigned to the property.

Age* considering physical condition	Schedule A					Schedule B	
	Effective age considering desirability and utility					REL	
	E	G	A	P	U	Eff. age	REL
1	1	1	1	6	11	1	98
2	1	1	2	7	12	2	96
3	1	1	3	8	13	3	94
4	1	1	4	9	14	4	92
5	1	1	5	10	15	5	90
6	1	1	6	11	16	6	88
7	1	2	7	12	17	7	86
8	1	3	8	13	18	8	84
9	1	4	9	14	19	9	82
10	1	5	10	15	20	10	80

Structures can be rated as excellent (E), good (G), average (A), poor (P), or unsound (undesirable) (U). The condition refers to physical depreciation, such as wear and tear and action of the elements that has taken place. The desirability refers to the economic or external depreciation, such as lack of appeal due to location, or some type of adverse influences outside the boundary lines of the property. The utility refers to functional obsolescence, such as inefficient and impractical arrangement of rooms and any super-adequacy or inadequacy that may be present. The effective age is determined based upon the condition, desirability and utility of the subject property in comparison to other similar buildings within the jurisdiction.

Once you have determined the effective age, move over to Schedule B. The left column of Schedule B lists the effective age and the number next to it is the REL factor that will be used to adjust the value in the computation ladder on PRC-4.

The example for our subject property has an actual age of five and the condition, desirability and utility are all “average” resulting in an effective age of five. Schedule B indicates an REL factor for a building with a five year effective age of **90 percent (0.90)**.

Multiply the replacement cost new (RCN) by 0.90 for a Full Value of \$745,720.

$$828,578 \times 0.90 = 745,720$$

S	C	M	I	Grade	C	Total	828,578
C&D			G	1.00	NH	A	=FAC
Eff. Age		Eff. Age		CDU	Age	Replacement Cost New	
5		5		A/A	5	828,578	
Depreciation =						REL	0.90
						Full Value	745,720

There are no other buildings, so it is not necessary to fill out the Summary of Other Buildings portion of the PRC-4.

The following schedules show how the values were obtained.

Retail Store Schedules

Base Costs								
The base price includes amounts for excavation, foundation, footings, framing, exterior wall construction, floor construction, roof construction, interior construction and finish, insulation, heating/air conditioning, sprinkler system, and lighting. Typical, standard plumbing exists of water heater and one fixture for every 800 square feet. Other features are to be priced from the subsidiary schedules or the CIP schedules. A shape or size adjustment is necessary for store use class. The given price is to be adjusted by a factor from the building shape adjustment table.								
Story	Wall height	Construction type	Average per floor area					
			2,000	3,000	4,000	5,000	6,000	8,000
Basement	9'	Unfinished storage	38.60	37.75	37.25	36.70	36.25	35.40
		Finished store	73.20	72.10	71.70	71.25	70.85	70.55
First floor	14'	Brick veneer on wood studs	131.15	119.95	115.50	108.05	102.15	93.20
		Siding on wood frame	126.40	112.05	108.80	106.90	104.90	102.95
		Brick on conc. blk/ joists	161.10	148.45	143.35	138.25	133.15	127.50
		Stucco on concrete block	158.95	140.40	139.20	127.55	124.05	116.00
		Decorative or split face concrete block	179.45	155.75	143.30	137.60	131.90	115.10
		Precast or tilt-up conc.	147.05	140.30	134.15	128.35	122.55	110.95
		Painted reinforced concrete	142.25	135.60	129.65	124.00	118.35	107.05
		Common brick	160.00	146.35	140.90	131.80	124.60	113.70
Second floor	12'	Brick veneer on wood studs	103.25	94.45	90.95	85.10	80.43	73.40
		Siding on wood frame	99.55	88.25	85.65	84.15	82.60	81.05
		Brick on conc. blk /joists	126.85	116.90	112.85	108.85	104.85	100.40
		Stucco on concrete block	125.15	110.55	109.60	100.45	97.70	91.35
		Decorative or split face concrete block	141.30	122.65	112.85	108.35	103.85	90.65
		Precast or tilt-up concrete	115.80	110.45	105.65	101.05	96.50	87.35
		Painted reinforced concrete	112.00	106.75	102.10	97.65	93.20	84.30
		Common brick	125.00	114.25	110.95	103.80	98.10	89.55
Third floor	12'	Brick veneer on wood studs	97.05	88.75	85.45	79.95	75.60	68.95
		Brick on conc. blk/steel joists	119.20	109.85	106.10	102.30	98.55	94.35
		Stucco on concrete block	117.60	103.90	103.00	94.40	91.95	85.85
		Decorative or split face concrete block	132.80	115.25	106.05	101.80	97.60	85.15
		Precast concrete	108.80	103.80	99.25	95.00	90.70	82.10
		Common brick	118.40	108.30	104.00	97.90	92.25	84.10
Upper floors 4 & 5	12'	Brick on conc. blk/steel joists	118.00	108.75	105.00	101.30	97.55	93.40
		Precast concrete on steel	107.75	108.75	105.00	101.30	97.55	93.40
		Common brick	116.00	107.50	103.70	100.00	96.90	92.10
Story Ht. adj., add or deduct per 1 foot			2%	2%	2%	2%	2%	

Retail Store Schedules

Story	Wall height	Construction type	Average floor area				
			10,000	12,000	15,000	18,000	20,000
Basement	9'	Unfinished storage	34.55	33.75	33.05	32.55	32.45
		Finished store	69.85	69.20	68.70	68.45	68.30
First floor	14'	Brick veneer on wood studs	86.20	84.55	83.60	83.45	83.35
		Siding on wood frame	101.00	100.00	98.55	97.65	97.05
		Brick on conc. blk/joists	124.65	121.80	117.50	112.50	107.20
		Stucco on concrete block	111.40	105.30	100.00	97.70	92.50
		Decorative or split face concrete block	114.00	109.65	105.45	102.80	101.10
		Precast or tilt-up concrete	106.30	101.60	99.60	97.55	96.65
		Painted reinforced concrete	102.65	98.25	96.40	94.50	93.05
		Common brick	105.15	103.15	102.00	101.75	101.60
Second floor	12'	Brick veneer on wood studs	67.85	66.55	65.85	65.70	65.65
		Siding on wood frame	79.55	78.75	77.60	76.90	76.40
		Brick on conc.blk/joists	98.15	95.90	92.50	88.60	84.40
		Stucco on concrete block	87.70	82.90	78.75	76.95	72.85
		Decorative or split face concrete block	89.75	86.35	83.20	80.95	79.60
		Precast or tilt-up concrete	83.70	80.00	78.45	76.80	76.05
		Painted reinforced concrete	80.85	77.35	75.90	74.40	73.25
		Common brick	82.75	81.20	80.35	80.15	80.10
Third floor	12'	Brick veneer on wood studs	63.80	62.55	61.82	61.75	61.70
		Brick on conc. blk/steel joists	92.25	90.15	86.95	83.25	79.35
		Stucco on concrete block	82.45	77.90	74.00	72.30	68.45
		Decorative or split face concrete block	84.35	81.15	78.05	76.05	74.80
		Precast concrete	78.65	75.20	73.70	72.20	71.50
		Common brick	77.85	76.30	75.45	75.25	75.20
Upper floors 4 & 5	12'	Brick on conc. blk/steel joists	91.30	89.25	86.10	82.40	78.55
		Precast concrete on steel	77.90	74.45	72.95	71.45	70.80
		Common brick	91.15	89.10	85.85	82.00	78.40
Wall Ht. adj., add or deduct per 1 foot.			1%	1%	1%	1%	1%

Retail building shape adjustment table										
Wall ratio = avg. SFA ÷ avg. effective perimeter										
Wall ratio	7	7.5	8	8.5	9	9.5	10	10.5	11	12
Adjustment factor	1.350	1.322	1.283	1.256	1.239	1.211	1.183	1.166	1.148	1.115
Wall ratio	13	14	15	16	17	18	19	20	22	24
Adjustment factor	1.083	1.060	1.042	1.025	1.000	0.992	0.981	0.969	0.950	0.931
Wall ratio	26	28	30	32	34	36	38	40		
Adjustment factor	0.917	0.901	0.892	0.883	0.874	0.866	0.860	0.854		

Commercial Subsidiary Schedules

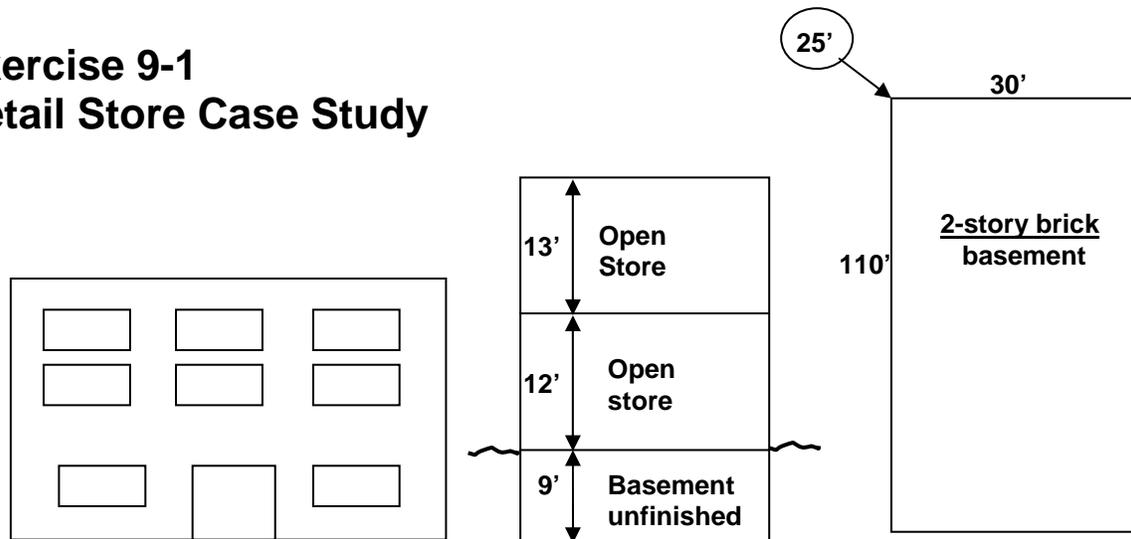
Additions		
Item	Cost	
Plumbing (per each existing fixture)		
Residential (type 1)	\$ 1,795	
Commercial (type 2)	2,600	
Special (refer to CIP Schedule Pub. 127)		
Air conditioning (per SF service area)		
Apartments*	\$ 17.35	
Retail store	7.80	
Office	16.50	
*For buildings and heating systems that do not require ducts, add 40%		
Sprinkler system (per SF service area)		
Apartments	\$ 3.00	
Office	3.90	
Retail Store	3.85	
Supermarket	9.40	
Discount Store	2.70	
Mezzanines (cost per SF floor area)		
Mezzanine costs include the framing support, the floor system, stairways, and lighting. Where applicable, typical partitioning, floor, wall, and ceiling finishes are also included. A height adjustment is not applicable to the mezzanine cost.		
Mezzanine finish	Construction	
	Steel framed	Wood framed
Unfinished/storage	\$ 38.10	\$ 24.75
Store display (finished open)	64.00	41.65
Office (finished divided)	85.85	55.80
Yard paving (per SFGA)		
Asphalt	\$ 4.35	
Concrete parking	5.50	
Concrete truck drive	6.60	
Crushed stone	3.60	

Store Fronts	
Type	Per SF Display Area
Wood framed glass & trim with:	
Wood siding	\$ 32.65
Brick	41.25
Ceramic	43.60
Marble or granite	79.25
Steel framed glass & aluminum trim with:	
Brick	52.20
Ceramic	55.95
Marble or granite	91.60
Steel framed glass & stainless steel trim with:	
Brick	73.70
Ceramic	76.10
Marble or granite	111.70
The basic retail store square foot price includes a basic store front and entrance accounting for 10% of the entire store wall area. Use this table for any additional store front area over the 10%. In calculating the total display area include surface area of all glass, sign, and bulkhead areas, including entranceway, islands, etc.	
Additions to store fronts	
Display platforms (per SF)	\$ 8.10
Display ceiling (per SF)	4.90
Display back (per SF)	8.50
Entrance doors	
Revolving door, each	\$ 41,100
Hinged aluminum & glass, each	1,600
Hinged stainless steel or bronze, each	3,400
Add for automatic door opener (per door)	6,050
Sliding automatic glass & stainless steel	16,750
Security gates (per SF of gate area)	
Scissor type folding gate steel	\$ 21.50
Roll-up grille, aluminum, manual	38.15
Add for motorized operation, each	1,525
Marquees (cost per SF)	
Metal, ornamental steel framed	\$ 45.05
Metal, plain, steel framed	35.00
Metal, plain, wood framed	32.60
Wood or stucco, wood framed	28.35
Sign, illuminated plastic, single face	93.95

Download or Print the Publication 126 Instructions for Commercial Schedules and turn to pages 6, 7, 10, and 12 in the Publication for values necessary for the following exercises.

The link to this publication is on the Formula sheet on page 13.

Exercise 9-1 Retail Store Case Study

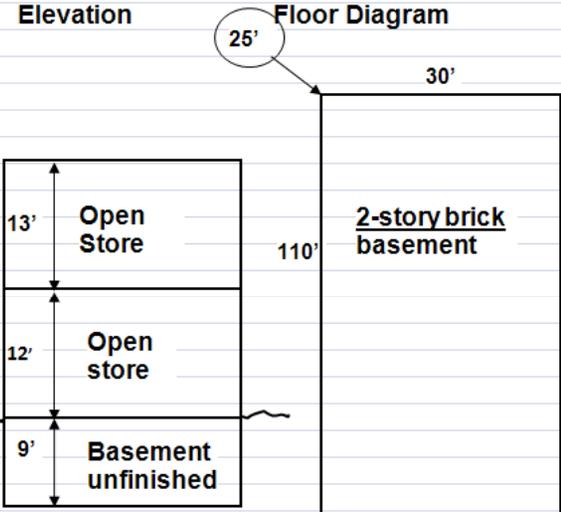


PIN: 02-20-200-001

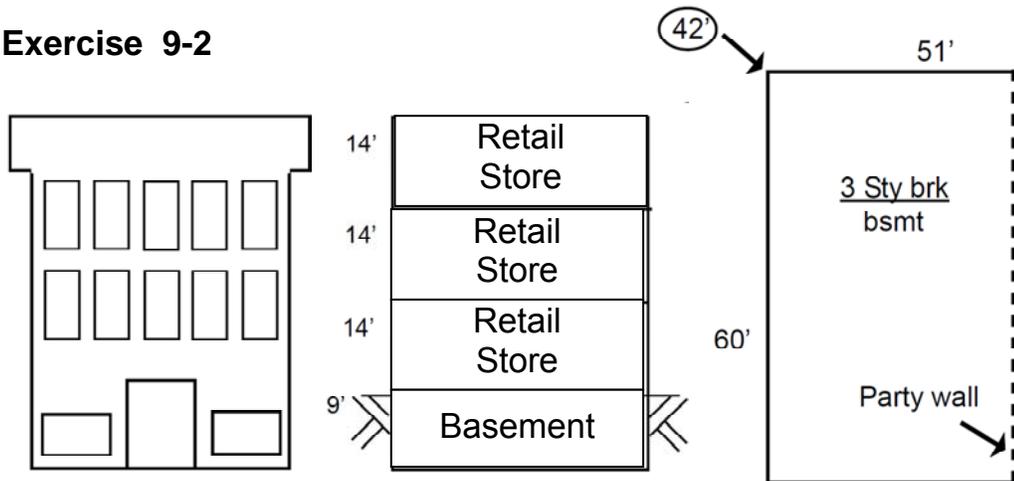
The subject property is a 2-story brick retail store building. The first floor is used as a clothing store and the second floor is used as a shoe store. The building is 12 years old, has a quality grade of “C,” its physical condition is average; the desirability and utility are also average. There is an unfinished basement used for storage.

Foundation	concrete spread footing and masonry foundation
Wall framing	wood frame
Floors	wood joist and wood sub-floor with typical, average grade finish
Exterior walls	4" brick veneer
Interior finish	typical, average grade according to use
Heating/central A/C	first and second floors have a central warm air heat and air-conditioning system
Roof	wood frame with wood deck and built-up composition cover
Plumbing/sprinkler	14 plumbing fixtures, type 2; the first and second stories are sprinkled with a wet pipe system
Store front	Steel framed glass & stainless steel trim with brick 9' x 30'
Quality Grade	C

Complete the PRC-4 on the opposite page.

Construction Specifications	Use	Data Bank	Description	Computation								
Foundation	Store <input type="checkbox"/> 1 Office <input type="checkbox"/> 2 Vacant <input type="checkbox"/> B	SF Ground Area	Flr. Price x Ht. Adj.	WH								
Sprd. Ftg <input checked="" type="checkbox"/> Pile <input type="checkbox"/>	Apt. <input type="checkbox"/> WH <input type="checkbox"/> Abandoned <input type="checkbox"/>	Eff. Perim LF		Bsmt.								
Caisson <input type="checkbox"/> Other <input type="checkbox"/>	Factory <input type="checkbox"/>	CF of Bldg.		1st Floor								
Wall Framing	No. of Units	SF Wall Area		2nd Floor								
B 1 2 3 A	Avg. Unit Size	Wall Ratio		3rd Floor								
Wood <input checked="" type="checkbox"/>	No. Rooms Per Unit	2 Sty. Brk Sched. Retail Store										
Steel O/FP <input type="checkbox"/>	Prorated @ _____ % with:											
Reinf. Concrete <input type="checkbox"/>			Size _____ x Shape _____ x Weight _____	Base Price								
Load Bearing <input checked="" type="checkbox"/>				BPA								
Frame Bay - Bay Area _____ SF				Adj. Base Price								
Floors	Elevation	Floor Diagram		Heat								
Wood <input type="checkbox"/>				A/C								
Steel O/FP <input type="checkbox"/>				Electrical Light								
Reinf. Concrete <input checked="" type="checkbox"/>				Sprinkler								
Frame <input checked="" type="checkbox"/> Wood <input type="checkbox"/> Steel <input type="checkbox"/> Conc. <input type="checkbox"/>												
Exterior Walls												
Siding <input type="checkbox"/>												
Masonry Blk./Brk. <input checked="" type="checkbox"/>												
Steel <input type="checkbox"/>												
Glass <input type="checkbox"/>												
Finish				SF Price								
Unfinished <input checked="" type="checkbox"/>				SF								
Finished Open <input type="checkbox"/>				Subtotal								
Finished Divd. <input checked="" type="checkbox"/>				Plumbing								
Heat				Partitions								
Cent. Wm. Air <input checked="" type="checkbox"/>				Front								
Ht. Wt/Steam <input type="checkbox"/>				Canopy								
Unit Heaters <input type="checkbox"/>				Dock								
None <input checked="" type="checkbox"/>												
Air Conditioning												
Central <input type="checkbox"/>												
Unit <input type="checkbox"/>												
None <input checked="" type="checkbox"/>												
			S C M I Grade C	Total								
			C&D _____ G 1.00 NH _____	A _____ =FAC								
			Eff. Age _____ Eff. Age _____ CDU _____ Age 12	Replacement Cost New								
			Avg/Avg	Depreciation = _____ REL _____								
				Full Value								
			Summary of Other Buildings									
Roofing	Type	No.	Construction	Size	Rate	Grade	Age	CDU	Factor	Repl. Cost New	REL	Full Value
Composition <input checked="" type="checkbox"/> Shingle <input type="checkbox"/>												
Slate <input type="checkbox"/> Metal <input type="checkbox"/>												
Frame <input checked="" type="checkbox"/> Wood <input type="checkbox"/> Steel <input type="checkbox"/> Conc. <input type="checkbox"/>												
Plumbing Type												
1 _____ 2 14												
3 _____ 4 _____												
Sprinkler <input checked="" type="checkbox"/> 1st & 2nd	Listed by:								Total full value other buildings			
	Date:								Total full value all buildings			

Exercise 9-2



PIN: 02-20-200-002

The subject property is a 3-story retail store with a full basement. There is a party wall found on the east side of the building that extends from the basement floor up to the eaves. The first floor is a toy and game store, the second floor is an antique shop, and the third floor is a thrift store. The structure is 30 years old, has a quality grade of “C,” its physical condition is average; the desirability and utility are poor. The cost factor derived from the market study for this jurisdiction is 1.10.

Foundation	concrete spread footing and brick foundation
Wall framing	load bearing with some interior supports
Floors	wood joists and wood sub-floor
Exterior walls	12" common brick
Interior finish	typical with average grade finish
Heating/ AC	all floors above grade are centrally heated with forced warm air; only the first floor has central air conditioning
Roof	roof structure is wood deck and frame with built-up composition cover
Plumbing	6 plumbing fixtures, type 2; all three floors above grade are equipped with a wet pipe sprinkler system (ordinary hazard)
Miscellaneous	7' x 40' of steel frame glass and aluminum trim store front surrounded by brick

Complete the PRC-4 on the opposite page.

Exercise 9-2 02-20-200-002 Property Record — Commercial — Industrial

Construction Specifications	Use	Data Bank	Description	Computation							
Foundation Sprd. Ftg. <input type="checkbox"/> Pile <input type="checkbox"/> Caisson <input type="checkbox"/> Other <input type="checkbox"/>	Store <input type="checkbox"/> Office <input type="checkbox"/> Vacant <input type="checkbox"/> Apt. <input type="checkbox"/> WH <input type="checkbox"/> Abandoned <input type="checkbox"/> Factory <input type="checkbox"/>	SF Ground Area _____ Eff. Perim LF _____ CF of Bldg. _____ SF Wall Area _____ Wall Ratio _____ No. Rooms Per Unit _____ Sty. _____ Sched. _____	Flr. Price x Ht. Adj. _____ WH _____ Bsmt. _____ 1st Floor _____ 2nd Floor _____ 3rd Floor _____								
Wall Framing Wood <input type="checkbox"/> Steel O/FP <input type="checkbox"/> Reinf. Concrete <input type="checkbox"/> Load Bearing <input type="checkbox"/> Frame Bay - Bay Area _____ SF	No. of Units _____ Avg. Unit Size _____ Prorated @ _____% with:										
Floors Wood <input type="checkbox"/> Steel O/FP <input type="checkbox"/> Reinf. Concrete <input type="checkbox"/> Frame <input type="checkbox"/> Wood <input type="checkbox"/> Steel <input type="checkbox"/> Conc. <input type="checkbox"/>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> Elevation </div> <div style="text-align: center;"> Floor diagram </div> </div>	Size _____ x Shape _____ x Weight _____	Base Price _____ BPA _____ Adj. Base Price _____ Heat _____ A/C _____ Electrical Light _____ Sprinkler _____								
Exterior Walls Siding _____ Masonry Blk./Brk. _____ Steel _____ Glass _____				SF Price _____ SF _____ Subtotal _____ Plumbing _____							
Finish Unfinished _____ Finished Open _____ Finished Divd. _____				Partitions _____ Front _____ Canopy _____ Dock _____							
Heat Gent. Wm. Air _____ Ht. Wt/Steam _____ Unit Heaters _____				Total _____ = FAC _____							
Air Conditioning Central Unit _____ None _____				Replacement Cost New _____ REL _____ Full Value _____							
Roofing Composition _____ Shingle _____ Slate _____ Metal _____ Frame _____ Wood _____ Steel _____ Conc. _____											
Plumbing Type 1 _____ 2 _____ 3 _____ 4 _____ Sprinkler <input checked="" type="checkbox"/> 1, 2, & 3											
Listed by: _____ Date: _____				Total full value other buildings _____ Total full value all buildings _____							
Summary of Other Buildings											
Type		No.	Construction	Size	Rate	Grade	Age	CDU	Factor	Repl. Cost New	REL

Unit 9 Commercial Square Foot Schedules Summary

The Appraisal Publications are a mass appraisal system. The schedules in the manual are based on construction costs in central Illinois. The values given are also based on construction using average quality materials and workmanship. There are various factors that can be applied to adjust the Appraisal Publications to reflect the values in various jurisdictions.

The Retail Store Schedule has been developed for pricing the typical mercantile building of 1-5 stories.

The **base cost** is the cost indicated in the schedules representing the cost of construction per square foot of the structure. Other features should be priced from the subsidiary schedules or the Component in Place (CIP) schedules. The base price must be adjusted by factors from the shape adjustment tables where applicable.

The information from the preceding paragraphs is printed at the top of the Appraisal Publication schedules found in Publication 126 for commercial improvements.

If you are not sure which items are included in the base price, you should refer to the information on the schedule.

If a building has construction features other than those included in the base cost schedules, adjustments to the base cost must be made. Other additions may include such items as plumbing fixtures, air conditioning, and sprinkler systems. The Appraisal Publications include various subsidiary schedules to assist in valuing these variances.

The commercial schedules are used in conjunction with the commercial property record cards (PRCs). PRC-4 is used for listing construction specifications, property use, and for computing building values. PRC-3 (on the opposite side of PRC-4) is used for valuing commercial or industrial land information on the schedule.

You will encounter one commercial PRC on your exam that does not have any narrative.

Unit 9 Commercial Square Foot Schedules

Review questions

1. T or F A retail store is 70' x 100'. The first floor has a wall height of 16'. The wall height adjustment would be .98.
2. T or F A 2-story retail building with a full basement has a width of 40' and length of 80'. The first floor wall height is 16', basement height is 9', and the second story wall height is 14'. The square feet of wall area would be 9,360.
3. T or F Using the building specifications above, the wall ratio would be 13.33.
4. T or F Always adjust your square feet of ground area (SFGA) by the eave height to arrive at the cubic foot.
5. A commercial building with a width of 100' and a length of 200' and an overall height of 36' would have:
 - a. a shape adjustment of .925
 - b. wall height adjustment of 1.00
 - c. a wall ratio of 33.33
 - d. a size adjustment of 1.05
6. A 2-story retail building on a slab with a length of 70' and a width of 50' is fully sprinkled. What is the sprinkled adjustment?
 - a. sprinkler costs are included in the base price
 - b. sprinkler cost of \$26,950
 - c. sprinkler cost of \$3.90 per square foot
 - d. sprinkler cost of \$7.70
 - e. They were too expensive and per square foot the landlord could not afford to install them
7. Using the same dimensions above, what would be the air conditioning adjustment amount placed in the computation ladder if the building did **not** have air conditioning?
 - a. — \$7.80 per square foot
 - b. not included in the base price
 - c. —\$16.26 per square foot
 - d. \$15.60 per square foot
 - e. \$56,910

Unit 10

Sales Ratio and Equalization

This unit covers the equalization process and the purpose of the sales ratio studies.

The purpose of this unit is to provide a basic understanding of how equalization is used to bring about a fair distribution of the property tax burden, and to teach the skills necessary to perform a simple sales ratio study.

Learning objectives

After completing the assigned readings, you should be able to

- define equalization,
- explain the use of an assessment/sales ratio study, and
- calculate an equalization factor, or multiplier.

Terms and concepts

Equalization
Equalization factor
Median
Market value
Level of assessments
Equalized assessed value (EAV)
Assessment/sales ratio study
Coefficient of dispersion (COD)
Mean

Equalization

Equalization is defined as the application of a uniform percentage increase or decrease to assessed values of various areas or classes of property, to bring assessment levels, on the average, to a uniform percentage of market value.

Assessors, CCAOs, boards of review, and the department have the authority to apply **equalization factors**, sometimes referred to as multipliers. Assessing officials in Cook County do not have the authority to apply equalization factors.

Equalization that occurs within the boundaries of a county is called intra-county equalization. Examples of intra-county equalization include: neighborhood or township multipliers (area equalization) and residential, commercial, or industrial multipliers (class equalization).

Inter-county equalization factors, sometimes called state multipliers, or state equalization factors, are issued annually for each county by the department. The application of these factors to all appropriate property in each county ensures that the **median**, or middle, assessment level in all counties is statutorily at 33 $\frac{1}{3}$ percent of **market value**. This median is sometimes referred to as the **median level of assessment**, or median assessment level.

If a county receives a multiplier of 1.0000, this means that the median assessment level in the county is 33 $\frac{1}{3}$ percent. Intra-county equalization may be necessary before a 33 $\frac{1}{3}$ percent level is achieved.

Equalization factors will not correct inequities in individual assessments. Inequities in individual assessments may result in a lack of assessment uniformity within an area or class and may necessitate a reassessment of individual properties before intra-county equalization. The importance of having uniform assessment levels that are grouped closely around the median level of assessments cannot be over-emphasized, because it is the median level of assessments that is adjusted to 33 $\frac{1}{3}$ percent.

Equalization is the process of applying a factor to each jurisdiction so that all jurisdictions throughout the state have assessment levels at the same average percentage of market value. This example shows how the tax bills of two similar properties in one school district, which overlaps two counties, are affected by unequal assessment levels. The example then shows how the application of an equalization factor establishes equity.

Without applying the equalization factors, the taxpayers in this overlapping taxing district would not pay the same amount to the taxing district, even though both properties have a market value of \$90,000. With the application of equalization factors, the **equalized assessed values (EAV)** of both properties are the same and both property owners share equally in the tax burden.

		County A	County B
Example with no equalization	Property market value	\$90,000	\$90,000
	3-Year average assessment level	33.33%	23.00%
	Assessed value (AV)	\$30,000	\$20,700
	Overlapping district tax rate \$3.43/\$100 EAV	3.43%	3.43%
	Tax bill (for district)	\$1,029	\$710
Example with no equalization	Equalization factor	$\frac{33.33\%}{3\text{-year level } 33.33\%} = 1.0000$	$\frac{33.33\%}{23.00\%} = 1.4491$
		County A	County B
	Same properties' assessed values	\$30,000	\$20,700
	Equalization factor	1.0000	1.4491
	EAV	\$30,000	\$30,000
	Overlapping district tax rate \$2.90/\$100 EAV*	2.9%	2.9%
	Tax bill (for district)	\$870	\$870

*The increase in EAV resulted in a lower tax rate calculated by the county clerk.

Not all properties are subject to equalization factors. State-assessed properties, coal rights, farmland, farm buildings and wind turbines with at least a 0.5 MW nameplate capacity are not affected by state multipliers; their assessed values are defined by law as equalized assessed values. However, both the farm residence and homesite are subject to the state multiplier because their assessed values are based on market values.

The assessment/sales ratio study

The primary tool in the equalization process is the **assessment/sales ratio study**. The assessment/sales ratio study provides information on the percentage relationship of assessed value to market value for real property in certain classes of property and geographic areas. This percentage is called the median level of assessment. Assessment/sales ratio studies also provide information on the variation in assessment levels among, and within, these classes of property and geographic areas.

Assessment/sales ratio studies are used

- **In the computation of equalization factors.**
State-issued county multipliers are used by the department to carry out the statutory responsibility of equalizing the levels of assessments among counties (inter-county). Township multipliers are issued by the county (intra-county) to equalize the level of assessments within that county.
- **In the review and appeal of assessments.**
These studies provide a measure of the average assessment level for a given geographic area, or category of property, against which assessments of individual parcels may be judged in determining the degree of any over-assessment or underassessment.
- **As a diagnostic tool for local assessing officials to evaluate assessment practices.**
It is the responsibility of local assessing officials to use assessment/sales ratio studies to evaluate their assessment policies and make assessment changes, when warranted, so that the final assessments of all property in their jurisdiction are at a uniform percentage of market value.

A minimum of 25 useable sales (arms-length transactions) are needed to conduct an assessment/sales ratio study. Appraisals may also be used if sales are not available.

The following are examples of some types of sales that would **not** be used in an assessment/sales ratio study:

- Land and improvements that are classified as farm,
- Sales conveying less than full title,
- Sales between related parties,
- Sales involving government organizations,
- Sales involving lending institutions, and
- Sales in which the assessed value and the sales price are not comparable, such as splits, partial assessments, and the destruction of an improvement.

Form PTAX-203, Real Estate Transfer Declaration, referred to as the “RETD,” is the primary source of sale information used in a assessment/sales ratio study. The RETD, a portion of which is shown below, contains information on the amount of the sale, the use of the property, and the conditions of the sale. An RETD must be filed with the county recorder when a deed is recorded. The RETDs are then given to the CCAO, who supplies copies to the township or multi-township assessor.



PTAX-203 Illinois Real Estate Transfer Declaration

Please read the instructions before completing this form.
This form can be completed electronically at tax.illinois.gov/retd.

Step 1: Identify the property and sale information.

1

Street address of property (or 911 address, if available)

City or village ZIP

Township

2 Write the total number of parcels to be transferred. _____

3 Write the parcel identifying numbers and lot sizes or acreage.

Property index number (PIN) Lot size or acreage

a _____

b _____

c _____

d _____

Write additional property index numbers, lot sizes or acreage in Step 3.

4 Date of instrument: _____ / _____
Month Year

5 Type of instrument (Mark with an "X."); _____ Warranty deed
_____ Quit claim deed _____ Executor deed _____ Trustee deed
_____ Beneficial interest _____ Other (specify): _____

6 _____ Yes _____ No Will the property be the buyer's principal residence?

7 _____ Yes _____ No Was the property advertised for sale?
(i.e., media, sign, newspaper, realtor)

8 Identify the property's current and intended primary use.
Current Intended (Mark **only one item per column** with an "X.")

a _____ Land/lot only

b _____ Residence (single-family, condominium, townhome, or duplex)

c _____ Mobile home residence

d _____ Apartment building (6 units or less) No. of units: _____

Do not write in this area.
County Recorder's Office use.

County:

Date:

Doc. No.:

Vol.:

Page:

Received by:

9 Identify any significant physical changes in the property since January 1 of the previous year and **write the date of the change**.
Date of significant change: _____ / _____
Month Year

(Mark with an "X.")

_____ Demolition/damage _____ Additions _____ Major remodeling

_____ New construction _____ Other (specify): _____

10 Identify only the items that apply to this sale. (Mark with an "X.")

a _____ Fulfillment of installment contract —
year contract initiated : _____

b _____ Sale between related individuals or corporate affiliates

c _____ Transfer of less than 100 percent interest

d _____ Court-ordered sale

e _____ Sale in lieu of foreclosure

f _____ Condemnation

g _____ Short sale

h _____ Bank REO (real estate owned)

i _____ Auction sale

j _____ Seller/buyer is a relocation company

k _____ Seller/buyer is a financial institution or government agency

l _____ Buyer is a real estate investment trust

m _____ Buyer is a pension fund

n _____ Buyer is an adjacent property owner

o _____ Buyer is exercising an option to purchase

Assessment uniformity indicators

Coefficient of Dispersion (COD)

The most commonly used statistical measure of assessment uniformity is the **coefficient of dispersion** (COD). The COD provides a measure of the variation of individual assessment ratios around the median level of assessment. If individual ratios are found to be grouped closely around the median, assessments are relatively uniform and the COD will be low. Higher CODs indicate that individual ratios vary widely from the median, and that property is not uniformly assessed. This also indicates that the property tax burden is not fairly distributed among taxpayers in that particular area or jurisdiction.

Assume that a county has a median level of assessment at 30 percent and a COD of 40 percent. The assessment levels of individual properties, on the average, can be expected to deviate from the median level by plus or minus 40 percent, from 18 percent to 42 percent.

Formula for arriving at the COD

Step 1 Determine the sales ratio for each sale.

$$\text{Sales ratio} = \frac{\text{Prior year's assessed value}}{\text{Current year's sale price}} \times 100(\%)$$

Step 2 Rank sales ratios & determine the **median**, or middle value.

Step 3 Calculate deviations of each ratio.

$$\text{Deviation} = \text{sales ratio} - \text{median}^*$$

*When subtracting the median from the sales ratio, ignore plus or minus signs.

Step 4 Find the average deviation.

$$\text{Average deviation} = \frac{\text{Sum of deviation}}{\text{Number of sales}}$$

Step 5 Calculate the COD.

$$\text{COD} = \frac{\text{Average deviation}}{\text{Median}} \times 100(\%)$$

Exercise 9-1

Assessment/sales ratio study and determining a COD

The primary purpose of an assessment/sales ratio study is to determine the median level of assessments for a particular jurisdiction. The assessment/sales ratio study may also be used in determining a COD.

Follow the steps below, and use the worksheet on page 244 for this exercise.

Step 1

Determine the percent relationship of assessed value to actual market value using the sales ratio formula. For each sale, divide the prior year's assessed value by the current year's selling price and then multiply it by 100 to change it to a percent.

$$\text{Sales ratio} = \frac{\text{assessed value}}{\text{sale price}} \times 100(\%)$$

$$\text{Sales ratio} = \frac{10,000}{35,000} \times 100 = 28.57\%$$

The first sale has an assessed value for the prior year of \$10,000, and the current year's selling price is \$35,000.

Divide the assessed value of \$10,000 by the sale price of \$35,000, then multiply it by 100 to change to a percent. This gives you a sales ratio of 28.57%.

Round to 2 decimal places consistently throughout this exercise. To round numbers, first carry the answer out 3 decimal places. If the last digit is 5 or greater, round up the number in the second decimal place. If the last digit is less than 5, leave the number in the second decimal place as it is. For example, 28.575 is rounded to 28.58, and 28.571 is rounded to 28.57.

Follow Step 1 to find the sales ratios for the remaining 10 sales.

Step 2

Next, rank all of the ratios and determine the median level of assessments. You may rank your ratios from highest to lowest, or vice versa, since either ranking will produce the

same result. In this exercise, rank the ratios from lowest to highest in the space designated in the lower left corner of the worksheet on page 244.

The middle ratio is the median when there are an odd number of ratios. The **mean**, or average, of the middle two ratios is the median when there are an even number of ratios.

This example has an odd number of ratios. When you rank all 11 ratios, starting with the lowest ratio of 15.83% and ending with the highest ratio of 41.18%, the middle ratio, or median, is 28.72%. There are exactly 5 ratios above 28.72%, and 5 ratios below 28.72%. Therefore, for this jurisdiction, the median level of assessments has been determined to be 28.72%. Write the derived median of 28.72% in all of the blank spaces under the median column.

Complete the following steps to determine a COD, which will indicate the degree of uniformity in the assessments.

Step 1

Subtract the median ratio from each of the sale ratios.

Deviation = sales ratio - median* 28.57 - 28.72 = .15

*When subtracting the median from the sales ratio, ignore plus or minus signs.

For the first sales ratio, take the sales ratio of 28.57 and subtract the median of 28.72. The difference, or deviation, is .15. The second difference is determined by taking the ratio of 41.18 and subtracting the median of 28.72. The difference, or deviation, is 12.46. Again, ignore the plus or minus signs. Continue this process for each remaining ratio.

Step 2

Add all the deviations to obtain the sum of deviations. Write this answer on the line directly below the last deviation of .36.

Add the first deviation of .15 through the last deviation of .36, which gives you a sum of deviations of 50.52.

Step 3

To find the average deviation from the median ratio, divide the sum of deviations by the number of sales.

$$\text{Average deviation} = \frac{\text{sum of deviations}}{\text{\# of sales}} = \frac{50.52}{11} = 4.59\%$$

Divide the sum of deviations of 50.52% by 11, the number of sales that you have, which gives you an average deviation of 4.59%.

Step 4

To determine the COD, divide the average deviation of 4.59 by the median ratio of 28.72, which gives you a COD of 15.98%.

$$\text{COD} = \frac{\text{average deviation}}{\text{median}} \times 100(\%) = \frac{4.59}{28.72} \times 100(\%) = 15.98\%$$

Once you complete Exercise 10-1, refer to the answer key in the back of this booklet to check your answers.

Exercise 10-1 worksheet

Assessment/sales ratio study and determining a COD

Assessed value	Sale price	Sales ratio	Median	Deviation
\$10,000	\$35,000	28.57	_____	_____
17,500	42,500	_____	_____	_____
1,900	12,000	15.83	_____	_____
9,000	26,000	_____	_____	_____
9,000	31,000	29.03	_____	_____
1,400	8,000	_____	_____	_____
7,200	23,000	31.30	_____	_____
8,000	24,500	_____	_____	_____
5,600	19,500	28.72	_____	_____
14,000	50,000	_____	_____	_____
19,000	67,000	28.36	_____	_____
			Sum of deviations	_____

	Sale ratios ranked
1	_____
2	_____
3	_____
4	_____
5	_____
6	_____
7	_____
8	_____
9	_____
10	_____
11	_____

Formulas

$$\text{Sales ratio} = \frac{\text{assessed value}}{\text{sales price}} \times 100(\%)$$

$$\text{Deviation} = \text{sales ratio} - \text{median}^*$$

$$\text{Average deviation} = \frac{\text{sum of deviations}}{\text{number of sales}}$$

$$\text{COD} = \frac{\text{average deviation}}{\text{median}} \times 100\%$$

*Ignore plus or minus signs when subtracting the median from the sales ratios.

Exercise 10-2

Assessment/sales ratio study with additional sale

Using the same ratios found in the previous exercise, you will see the effect one additional sale has upon the median level of assessment and the COD.

Step 1

Look at the last sale, which has a prior year's assessed value of **\$3,000**, and a current year's selling price of **3,000**. When you divide the assessed value by the sale price, you obtain a sales ratio of **100%**. Comparing this ratio to the statutory level of **33.33%**, you realize that this particular ratio differs greatly from the desired level.

Step 2

Rank all of the ratios, paying particular attention to the fact that you have 12 sales, versus the previous example of 11 sales. When you have an even number of sales, you must first find the mean, or average, of the two middle values to determine the median.

$$28.72 + 29.03 = 57.75 \quad 57.75 \div 2 = 28.88$$

The two middle ratios are **28.72** and **29.03**. Add these two ratios, which gives you a sum of **57.75**. Divide **57.75** by **2** to find the new median.

28.88 is now the median level of assessments for this jurisdiction.

Step 3

Complete the same steps you followed in the previous exercise to determine the COD in this exercise. Subtract the median of **28.88** from each sales ratio to get the deviation, or difference, for each ratio. The additional sale causes the sum of deviations to increase from **50.52** to **121.80**.

Step 4

Divide the sum of deviations of **121.80** by 12, the number of sales you have, which gives you an average deviation of **10.15**.

Step 5

To determine the COD, divide the average deviation of **10.15** by the median of **28.88**. For this example, the one additional sale increases the COD from **15.98** to **35.15**, or from **15.98%** to **35.15%**.

Exercise 10-2 worksheet

Assessment/sales ratio study with additional sale

Assessed value	Sale price	Sales ratio %	Median	Deviation %
\$10,000	\$35,000	28.57	28.88	.31
17,500	42,500	41.18	28.88	12.30
1,900	12,000	15.83	28.88	13.05
9,000	26,000	34.62	28.88	5.74
9,000	31,000	29.03	28.88	.15
1,400	8,000	17.50	28.88	11.38
7,200	23,000	31.30	28.88	2.42
8,000	24,500	32.65	28.88	3.77
5,600	19,500	28.72	28.88	.16
14,000	50,000	28.00	28.88	.88
19,000	67,000	28.36	28.88	.52
3,000	3,000	100.00	28.88	<u>71.12</u>
Sum of deviations				121.80

Sale ratios
ranked

Formulas

1	15.83		Average deviation	= <u>sum of deviations</u>
2	17.50			# of sales
3	28.00			= <u>121.80</u> = 10.15 %
4	28.36			12
5	28.57			
6	28.72] Median = 28.88	COD =	<u>average deviation</u> x 100(%)
7	29.03			median
8	31.30			
9	32.65			= <u>10.15</u> x 100(%)
10	34.62			28.88
11	41.18			
12	100.00			= 35.15 or 35%

According to the standards of the International Association of Assessing Officers, the COD for residential property should be 15 percent or less, and the COD for vacant land and income-producing property should be 20 percent or less.

In Illinois, a bonus of \$3,000 is paid to assessors who maintain a level of assessment between 31 1/3 percent and 35 1/3 percent and have a COD of no greater than 15. In counties with 50,000 or fewer inhabitants, the COD must be 30 or less.

Unit 10 Sales Ratio and Equalization Summary

Equalization is the process of applying a factor to each jurisdiction so that all jurisdictions throughout the state have assessment levels at the same average percentage of market value.

An **assessment/sales ratio study** is performed to determine the level of assessment in a particular jurisdiction.

The **state equalization factor** is determined by taking the statutory level of assessment and dividing it by the prior 3-year average median level of assessments for a jurisdiction.

Unit 10 Review questions

1. T or F Equalization means a factor is applied to each jurisdiction so that all jurisdictions are assessed at the same average percentage of market value.
2. T or F A sales ratio study is used to determine the percentage of homes that have sold during a certain period of time.
3. T or F The state equalization factor is always 1.0000.
4. T or F Only jurisdictions with a COD of 16 qualify for the bonus.

Unit 11

Special Properties

This unit covers valuation procedures for special properties.

The purpose of this unit is to provide a basic understanding of special properties the assessor may encounter.

Learning objectives

After completing the assigned readings, you should be able to identify various types of special properties.

Valuation procedures for special properties

Occasionally, some of the property an assessor may encounter is not assessed in the typical fashion and must be handled in a special manner.

Some of these special properties are covered in Article 10 of the Property Tax Code. Many of these properties are assessed by the CCAO, but as a township or multi-township assessor, you should be familiar with such types of properties, and know where to look in the code for specific information in handling these assessments.

Sections 10-5 and 10-10 of the code cover solar energy systems. Section 10-5 states, “It is the policy of this state that the use of solar energy systems should be encouraged because they conserve nonrenewable resources, reduce pollution and promote the health and well-being of the people of this state, and should be valued in relation to these benefits.”

Section 10-10 of the code states, “When a solar energy system has been installed in improvements on any property, the owner of that property is entitled to claim, by filing with the chief county assessment officer, an alternate valuation of those improvements.” The value that is assigned remains with the property until it ceases to be used as the means of heating and cooling those

improvements. If this happens, the owner must notify the CCAO in writing by certified mail.

Section 10-15 of the code covers condominiums and cooperatives. “In counties with 200,000 or more inhabitants which classify property, condominiums occupied by the owner as a residence for a minimum of 6 months during the year and created in accordance with the provisions of the ‘Condominium Property Act’, as well as land with improvements owned and operated as a cooperative, shall be assessed on the same basis of assessment as single family residences in such counties.”

Section 10-20 of the code covers repairs and maintenance of residential properties. “Maintenance and repairs to residential property owned and used exclusively for a residential purpose shall not increase the assessed valuation of the property. For purposes of this Section, work shall be deemed repair and maintenance when it (1) does not increase the square footage of improvements and does not materially alter the existing character and condition of the structure but is limited to work performed to prolong the life of the existing improvements or to keep the existing improvements in a well maintained condition; and (2) employs materials, such as those used for roofing or siding, whose value is not greater than the replacement values of the materials being replaced.”

For example: If the property owner replaces an asphalt roof with a new asphalt roof, it would be considered maintenance.

Section 10-25 of the code concerns single family residential developments, model homes, townhouses, and condominium units used for display purposes. If the structure meets the criteria established in this section, “the assessed value of the property on which the dwelling, townhome, or condominium was constructed shall be the same as the assessed value of the property prior to construction.” Refer to Section 10-25 for specific information.

Sections 10-30 and 10-35 of the code pertain to subdivisions and subdivision common areas.

Sections 10-40 through 10-85 of the code deal with the complex issue of assessing historical residences. Several factors are considered in the valuation process, which also involves the Historical Preservation Agency. The process is described at length in the statutes.

Sections 10-110 through 10-169 of the code cover farmland, farm dwellings, forestry management, open space land, land encumbered by conservation rights, and land for public benefit.

Section 10-205 of the code covers sports stadium properties.

Section 10-225 of the code states that “The stock of nurseries, when growing, shall be assessed as property and when severed shall be considered merchandise.”

Sections 11-5 through 11-125 of the code address pollution control facilities, low sulfur dioxide emission coal fueled devices, and railroads. All of these properties are valued by the state.

Note: You will not be responsible for section numbers and specific statutory language.

Unit 11 Special Properties and Exemptions

Summary

The Property Tax Code is an excellent resource for information relating to the assessment of special properties.

Unit 11

Review questions

- 1 List four types of special properties assessors may encounter.

- 2 List two properties assessed by the state.

Unit 12

Mapping and the Property Index Numbering System

This unit covers the U.S. Rectangular Land Survey System and the property index number (PIN).

The purpose of this unit is to provide a basic understanding of legal descriptions and the property index numbering system

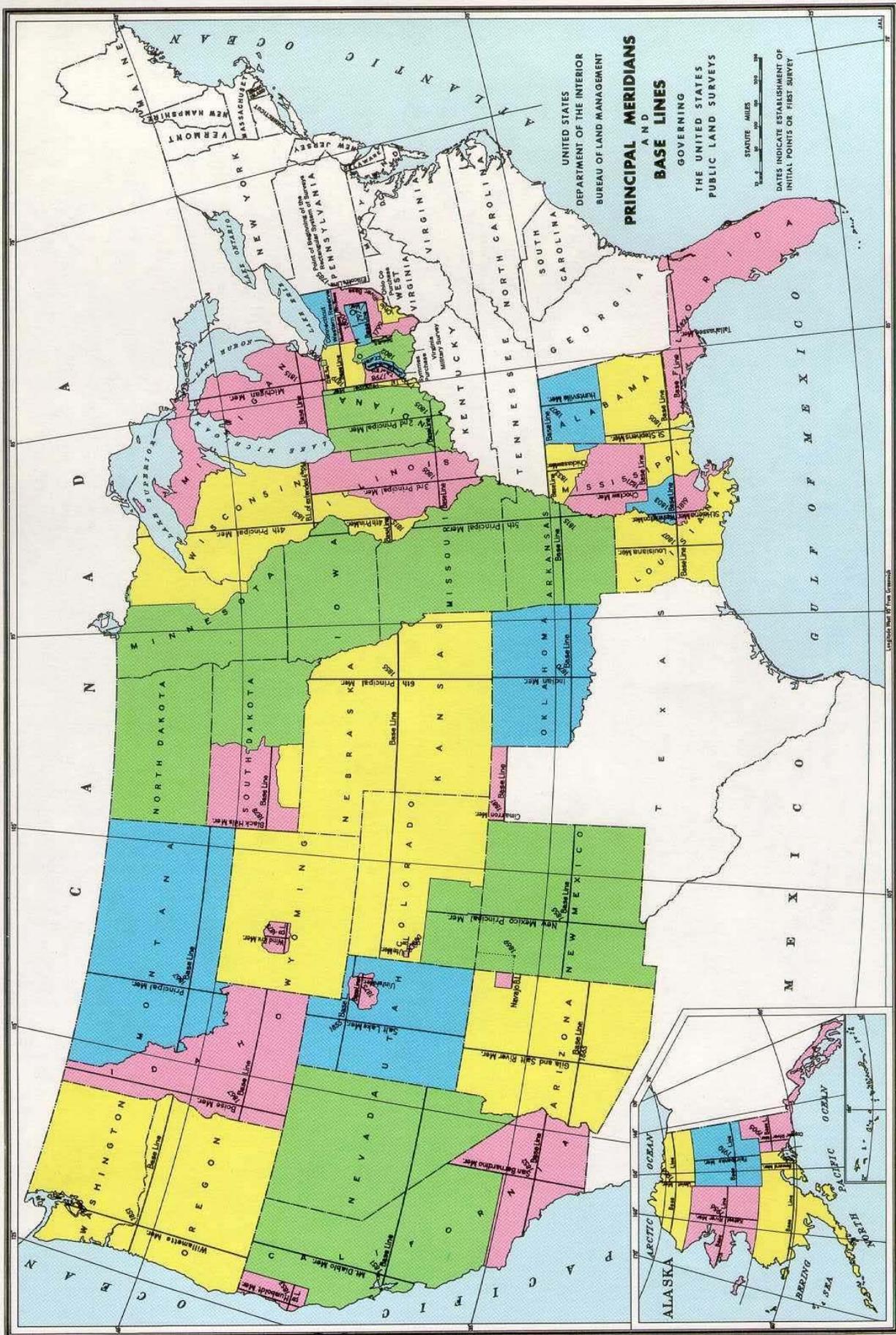
Learning Objectives

After completing the assigned readings, you should be able to

- correctly number jurisdictional townships within a county,
- correctly number sections within a township/range tier,
- understand the different types of legal descriptions and how to locate a property,
- define property index number (PIN), and
- explain the composition and use of the segments of a PIN.

Terms and Concepts:

Principal meridian
Base line
Township
Range
Section
Metes and bounds
Legal description
Property index number (PIN)



Unit 12: Mapping and the Property Index Numbering System

The Rectangular Survey System

The foundation for most legal descriptions is the Rectangular Survey System established in 1785. The Rectangular Survey System is a system by which land is divided in a grid-like fashion, using principal meridians, base lines, townships, ranges, and sections.

Illinois Meridians and Baselines

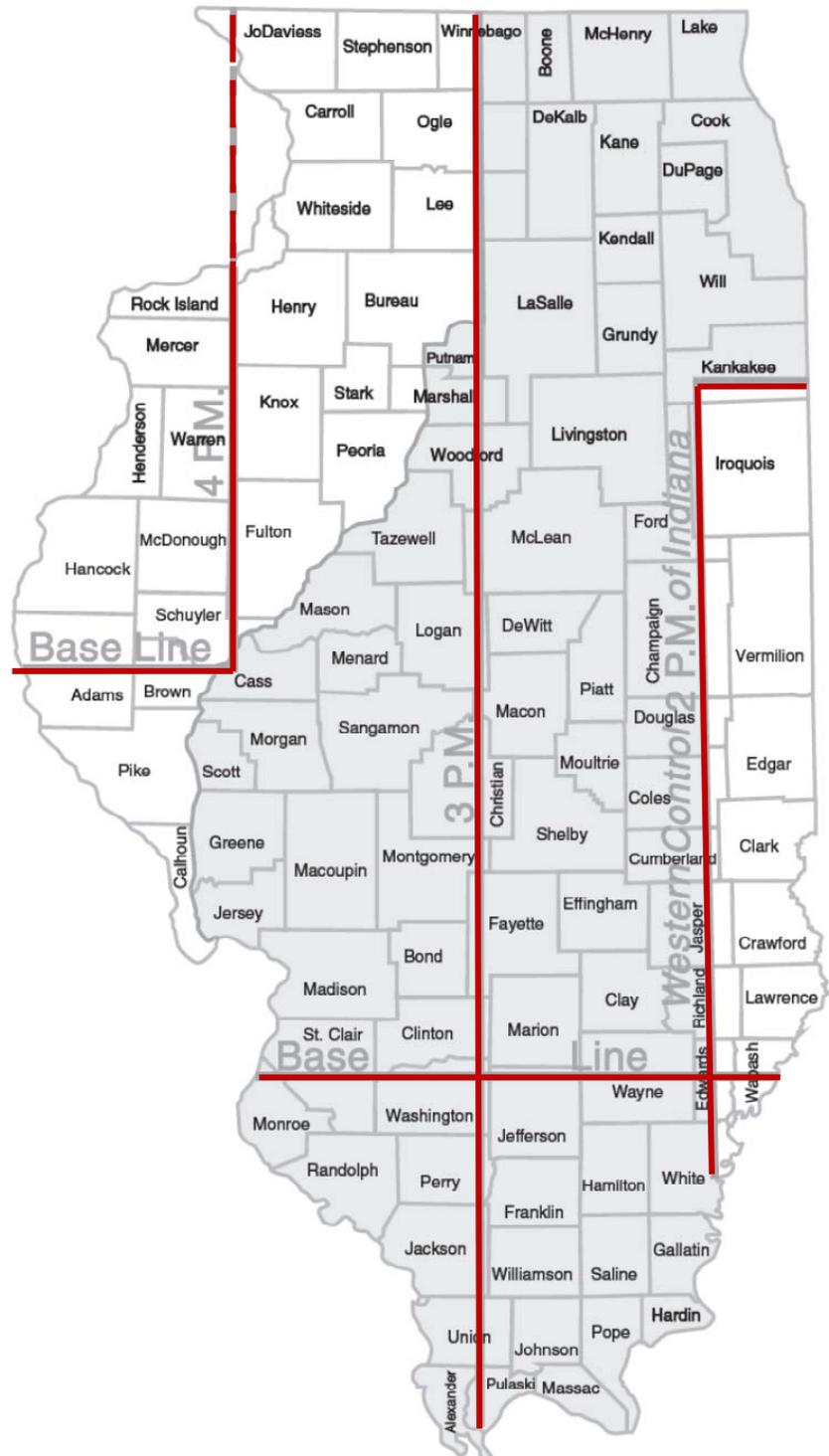
A latitude line is an east-west circle, measuring degrees north or south of the Equator. A **baseline** is a parallel of latitude running **east and west**.

A longitude line is a north-south circle measuring degrees east and west of zero longitude at Greenwich, England. A **principal meridian** is an arbitrary line of longitude used as a starting point and reference for all sectionalized land. **Principal meridians run north and south**.

In Illinois, there are **two baselines** and reference to **three principal meridians**.

The most prominent meridian is the **Third Principal Meridian**, which virtually cuts Illinois in half.

A reference occurs where a baseline and principal meridian intersect. The reference for the Third Principal Meridian exists at the intersection of the



Centralia Baseline. This baseline runs east and west through Centralia, Illinois. The Second Principal Meridian, located in Indiana, shares the Centralia Baseline for its reference.

Property located in eastern Illinois is unique. Part of it is referenced to the Third Principal Meridian, and part of it is referenced to the **Western Control of the Second Principal Meridian**, which is actually located in Indiana.

Property in Illinois, west of the Illinois River or west of the Third Principal Meridian, is referenced to the **Fourth Principal Meridian**. The reference point for the Fourth Principal Meridian is the **Beardstown Baseline**. The baseline runs west of Beardstown, Illinois.

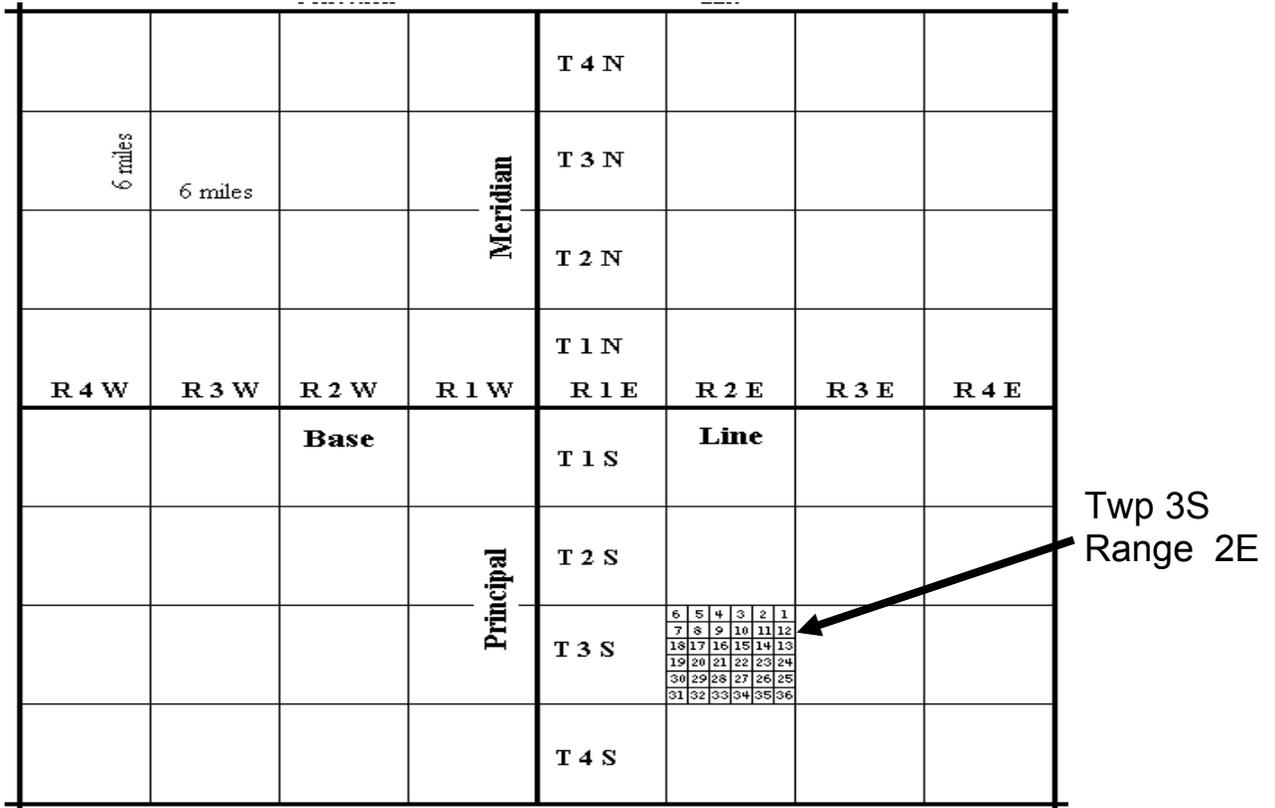
Once we know the meridian and the baseline for a property, we can determine the general location of any property anywhere in the country governed by the **Rectangular Survey System**.

Congressional Townships and Ranges

Survey townships run north and south of base lines and are laid out in approximate 6-mile increments. The first tier of townships north or south of a base line is called township 1, the next tier, township 2, *etc.*

Ranges are laid out in approximate 6-mile increments, east and west of principal meridians. The first tier east or west is called range 1, the next tier, range 2, *etc.*

Survey townships are identified by township and range numbers. For example, a township in the third tier south of the base line and in the second tier east of the 3rd principal meridian, is identified as “township 3 south range 2 east of the 3rd principal meridian.”



Townships

Numbering of townships and ranges begins at the reference point of a principal meridian and a baseline. Township numbers increase away from the baseline using the direction from the baseline as an indicator (north or south). Range numbers increase away from a principal meridian using the direction from the principal meridian as an indicator (east or west).

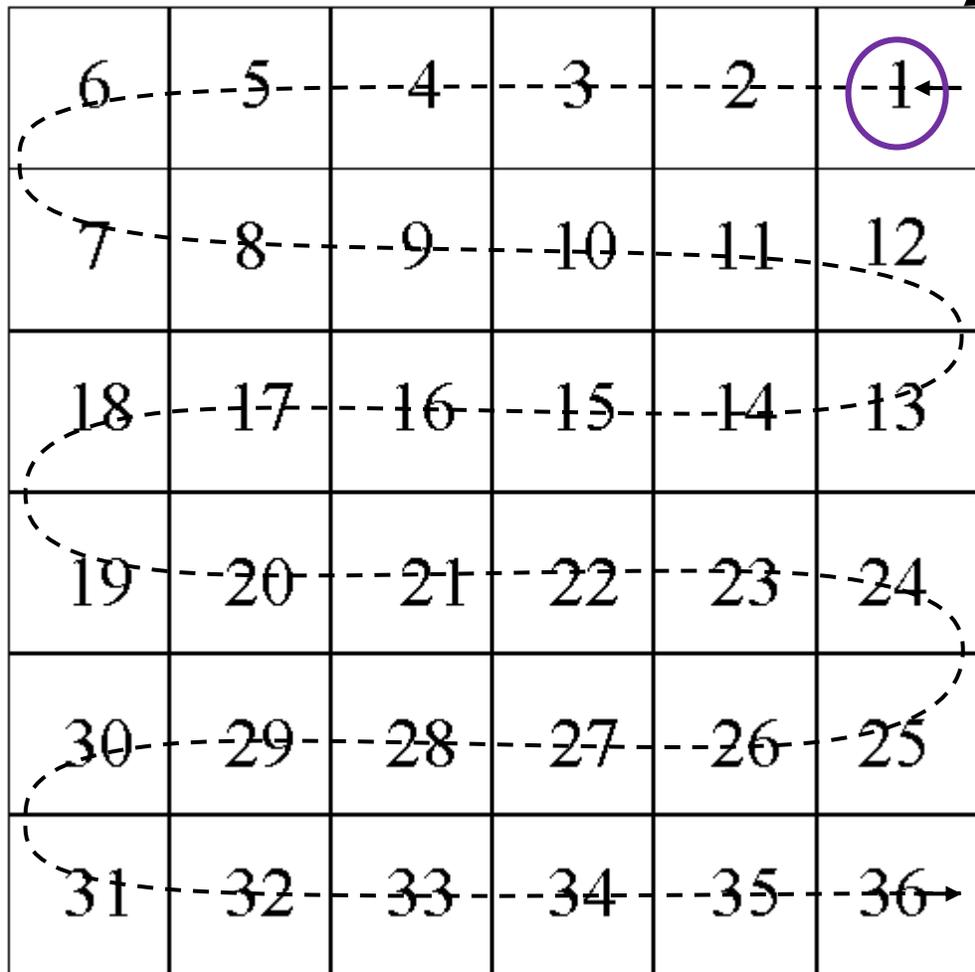
Each township is six miles by six miles, or thirty-six square miles in size (6 miles square). The township identified with the arrow is three townships south of the baseline and two ranges east of the principal meridian. These 6-mile square (6 miles on a side) townships are further divided into sections.

Sections

A **section** is a one mile square block of land containing 640 acres. There are 36 sections within each township. Numbering of the sections begins in the northeast corner of the township, and progresses west then east, back and forth in a serpentine manner as illustrated by the dashed line. Section 36 is in the southeast, or lower right corner.

See the diagram on the next page.

Northeast corner



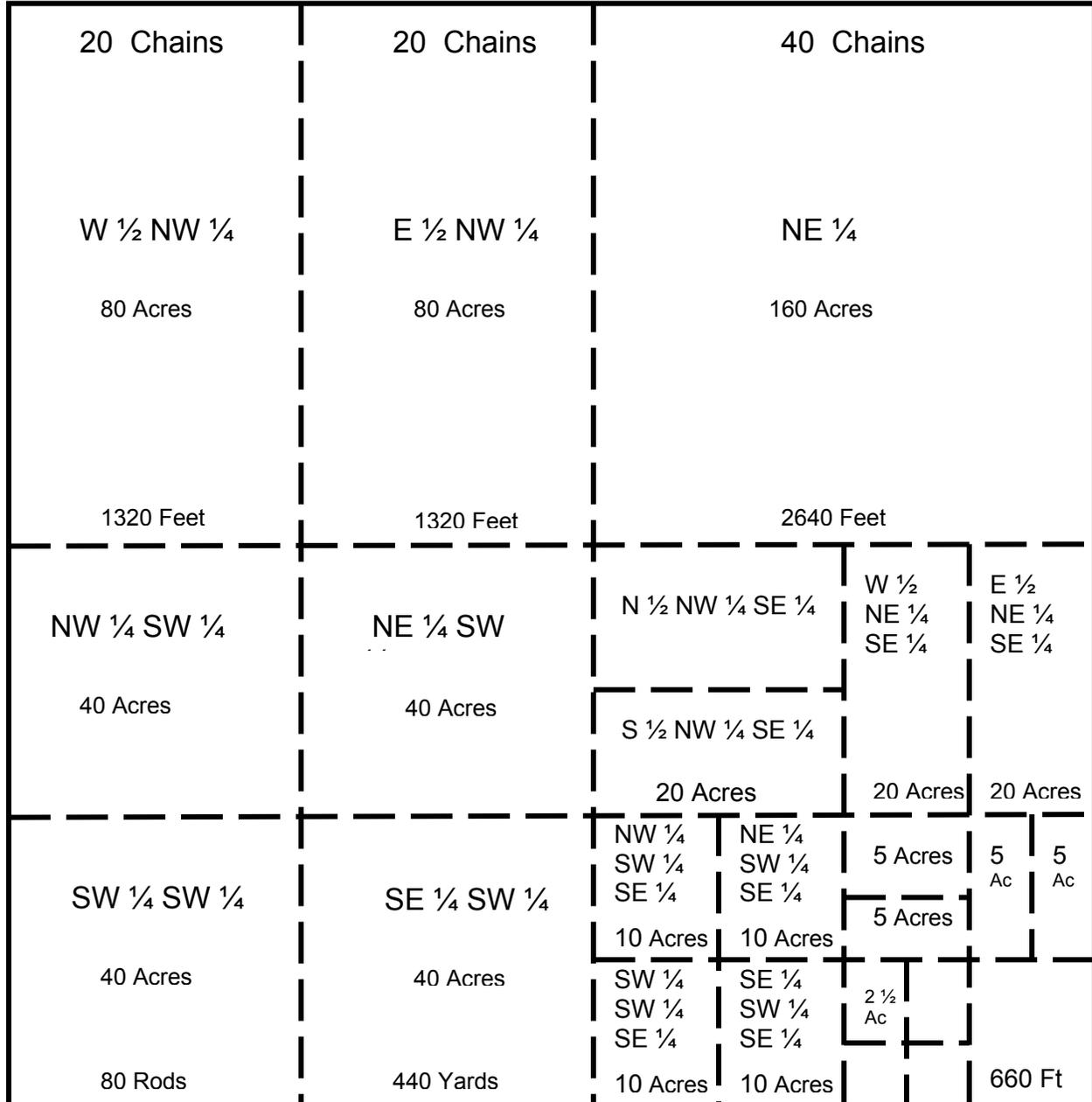
A true section of land contains 640 acres. Sections are often quartered, with the upper right quadrant, or $\frac{1}{4}$, being referred to as the northeast quarter; the upper left quadrant, or $\frac{1}{4}$, being referred to as the northwest quarter; the lower left quadrant, or $\frac{1}{4}$, as the southwest quarter; and the lower right quadrant, or $\frac{1}{4}$, as the southeast quarter. These quarter sections each contain 160 acres.

Quarter sections are often further divided into quarter-quarter sections, containing 40 acres each; or quarter-quarter-quarter sections, containing 10 acres each. Occasionally, they are further divided into quarter-quarter-quarter-quarter sections each containing $2\frac{1}{2}$ acres.

Most tracts containing less than $2\frac{1}{2}$ acres are described using a **metes and bounds** description. Metes and bounds descriptions

first describe a beginning point, and then use directions and distances to describe the perimeter of the property. Metes and bounds descriptions should always end back at the point of beginning.

Section Divisions and Land Measurement



Legal descriptions fall into three categories — lots and block, land descriptions (which can be described either fractionally, by acreage, or lineally), and metes and bounds. When reading legal descriptions to locate property, read all legal descriptions backwards, except those written in metes and bounds.

Lots and Blocks

Lots and Blocks descriptions are often used in assessment books, typically referring to appropriate page numbers within those books. For example:

Lots 1 and 4 in Block 30 in the Village of Good Hope, McDonough County, Illinois.

Lot 4 in Block 28 in the City of Bushnell, according to Plat #2 of said City, County of McDonough, State of Illinois.

When locating a parcel written in a lots and blocks description, it is necessary to **read the description backwards** to specifically locate the property. In the first example above, if we were to read the description in the order written, we would start with Lots 1 and 4. The question becomes Lots 1 and 4 where? It could be anywhere in the world. By starting at the end of the description, we know that the lots are in the state of Illinois, the county of McDonough, the village of Good Hope, and in Block 30 of the village.

Land descriptions

Land descriptions are referenced to the government surveys. A strength of the rectangular survey systems is that the land has been, for the most part, divided evenly. This makes property descriptions more uniform and predictable. Under the rectangular survey system, land can be described one of three ways. When locating these parcels the descriptions are read backwards to specifically locate the property:

Fractional:

Describing property using fractions of rectangles.

E 1/2, NE 1/4, Section 6, Township 3 N, Range 4 West of the 3rd Principal Meridian.

NW 1/4, SW 1/4, NE 1/4, section 6, T.3N, R.4W, 3rd Principal Meridian.

W 1/2, NE 1/4, SW 1/4, section 6, T.3N, R.4W, 3rd principal meridian

Acreage

Describing property using the acreage values associated with each fraction of a rectangle.

West 80 acres, NE 1/4 Section 6, Township 3 North, Range 4 West of the 3rd Principal Meridian.

Lineal:

Describing property using the perimeter measurement of each fraction of a rectangle.

The East 400' of the Southeast Quarter of Section 7, Township 2 South, Range 1 East of the 3rd Principal Meridian.

The diagram on page 261 illustrates how an individual section of the rectangular survey system can be dissected using land descriptions in order to describe property. The diagram shows section divisions and land measurements. A section is simply a large square that is one mile from east to west and one mile from north to south.

The large square, or section, can be divided into four equal parts creating the Northeast Quarter, the Northwest Quarter, the Southeast Quarter and the Southwest Quarter of the entire section.

Considering an entire section is 640 acres, by dividing the section by four (quartering the section) each quarter section is 160 acres ($640 \div 4 = 160$). Therefore, if a property is described as the NW $\frac{1}{4}$ section, the total acreage of that property is 160 acres. Property can be further divided into a quarter-quarter section. If the property is described as the NW $\frac{1}{4}$ of the NW $\frac{1}{4}$, the section has been quartered twice ($640 \div 4 = 160 \div 4 = 40$); the property contains 40 acres. This division by one-fourth can continue to a quarter-quarter-quarter which would contain 10 acres, and a quarter-quarter-quarter-quarter containing 2.5 acres. Tracts smaller than 2.5 acres are generally described using the metes and bounds description.

Property can be dissected using any combination of fractional portions. For example, a single parcel can be the equivalent of one half of a section, or 320 acres. The half section can be the north half or the south half or the east half or west half.

Metes & bounds

Metes and bounds are used to describe the perimeter of property. When locating a parcel written in a metes and bounds

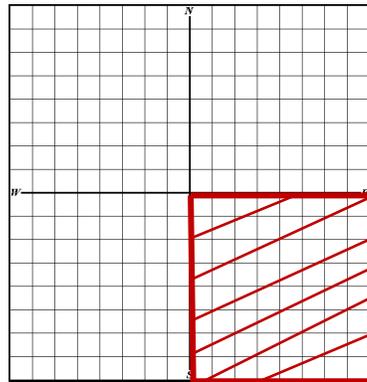
description, it is necessary to read the first part of the land description portion backward to locate the point of beginning. Once the point of beginning is determined, the metes and bounds portion of the description is read in the order written.

For example:

Commencing at the Southeast corner of the Northwest Quarter of Section 4, Township 7 North, Range 8 East of the 3rd Principal Meridian, thence North 50 feet to the point of beginning; thence West 550 feet; thence North 400 feet; thence East 550 feet; thence South 400 feet to the point of beginning.

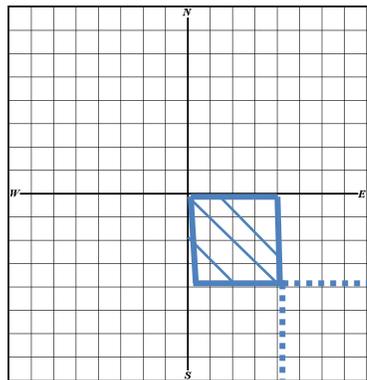
Locating Legal Descriptions

When locating legal descriptions that are **fractional** (NE $\frac{1}{4}$ of the NW $\frac{1}{4}$ of the SE $\frac{1}{4}$), begin with the whole 640 acres of the section. Go to the end of the legal description for the last part of the section. In this example the last part mention is “SE $\frac{1}{4}$.” Divide the section into 4 equal parts (since the SE $\frac{1}{4}$ is described). Each part is 160 acres (640 acres in a section divided by 4). Now locate the SE $\frac{1}{4}$ on the grid.



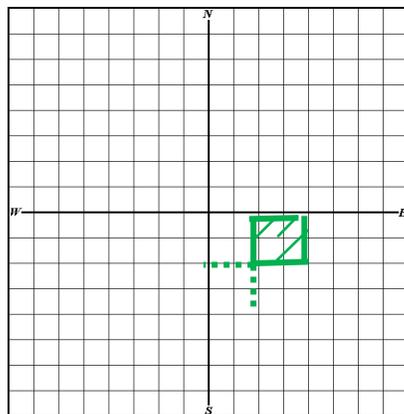
NE $\frac{1}{4}$ of the NW $\frac{1}{4}$ of the SE $\frac{1}{4}$

$$\text{SE } \frac{1}{4} = 640 \text{ acres} \div 4 = 160 \text{ acres}$$



Next, find the NW $\frac{1}{4}$ of this SE $\frac{1}{4}$.

$$\text{NW } \frac{1}{4} \text{ of the SE } \frac{1}{4} = 160 \text{ acres (SE } \frac{1}{4}) \div 4 = 40 \text{ acres}$$



Now locate the NE $\frac{1}{4}$ of the NW $\frac{1}{4}$ of the SE $\frac{1}{4}$.

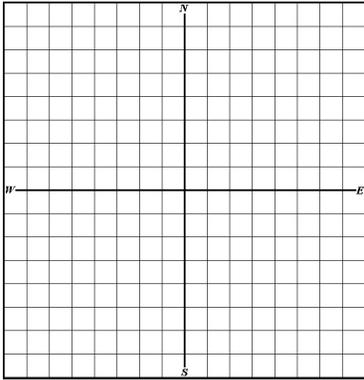
$$\text{NE } \frac{1}{4} \text{ of the NW } \frac{1}{4} \text{ of the SE } \frac{1}{4} = 40 \text{ acres} \div 4 = 10 \text{ acres}$$

Exercise 11 – 1 Locating Legal Descriptions

Identify these parcels on the grid provided by shading in the appropriate parts on the grid.

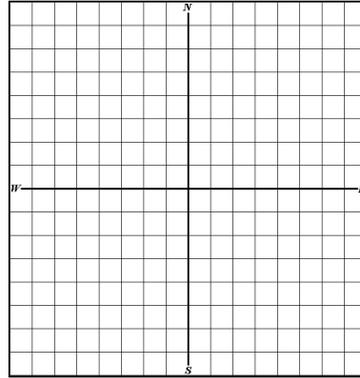
1. SE $\frac{1}{4}$ of SE $\frac{1}{4}$

_____ Acres



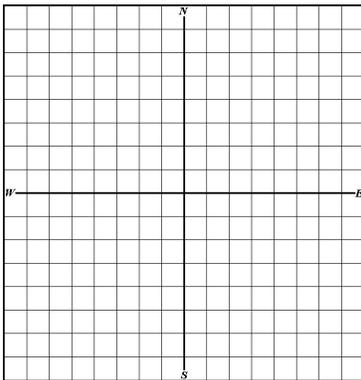
4. E $\frac{1}{2}$ of NW $\frac{1}{4}$ **and** NW $\frac{1}{4}$ of NW $\frac{1}{4}$

_____ Acres



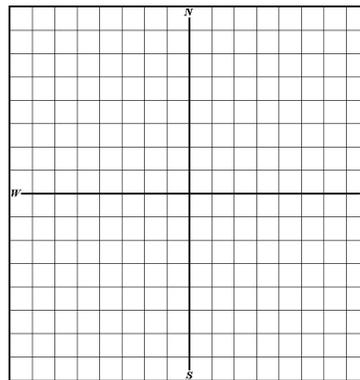
2. S $\frac{1}{2}$ of NW $\frac{1}{4}$

_____ Acres



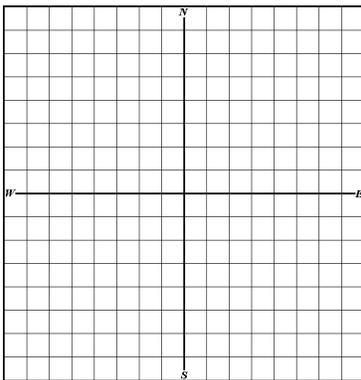
5. SW $\frac{1}{4}$ of SE $\frac{1}{4}$ of SW $\frac{1}{4}$

_____ Acres



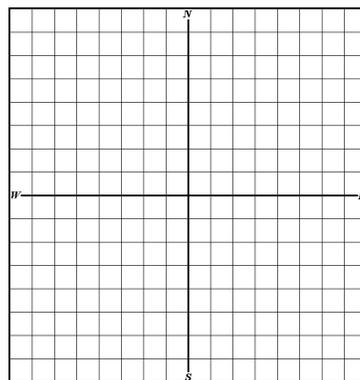
3. N $\frac{1}{2}$ of NE $\frac{1}{4}$ of SE $\frac{1}{4}$

_____ Acres



6. NE $\frac{1}{4}$ of NW $\frac{1}{4}$ of SW $\frac{1}{4}$

_____ Acres



Property index number

A **property index number**, or **PIN**, is a series of numbers that denote the geographic location and use of a parcel of land.

A PIN is a 14-character series of numbers that describe the geographic location and use of a specific tax parcel. No two parcels share the same PIN.

Example

07 – 32 – 203 – 021 – 0040

07 = County Township Number

32 = Township Section Number

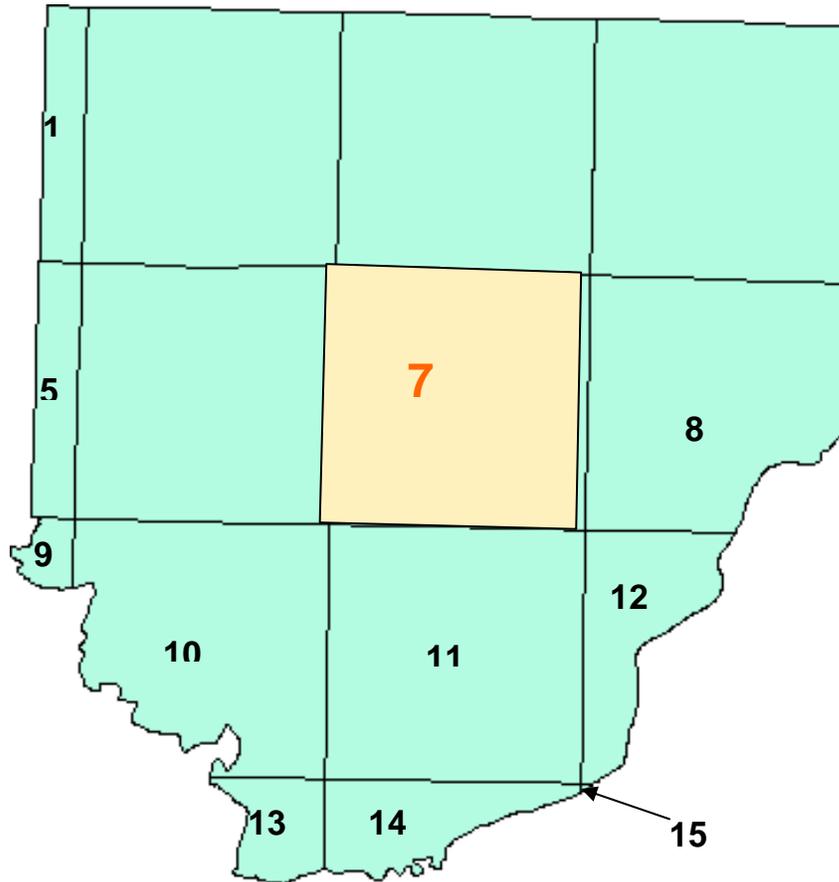
203 = Block Number

021 = Parcel Number

0040 = Use or Unit Number

The first two digits, known as the **area** or **township** number, indicate the survey township in which the parcel is located. **The area or survey townships are numbered from left to right in the county beginning in the NORTHWEST corner.**

County Township Number Derivation



The County Township Number is assigned by overlaying the government survey townships over the county. Then beginning in the northwest government survey township of the county, and progressing west to east, and north to south each township is assigned a number. Note: These numbers **do not** correspond to the numbers of the congressional township or ranges (i.e. T12N or R 3E) that we discussed earlier.

In this example, there are 15 County Townships. Referring back to the example PIN, County Township “07” is highlighted. The first and second digits in the property

index number indicate the county township in which the

parcel is located. The next two digits in the series represent the **section** number. This number corresponds to the actual geographic section.

Section Number Derivation

The numbering of **sections** begins in the **northeast corner** of the township, and progresses west then east, back and forth in a serpentine manner.

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Section Number

07

32

000

000

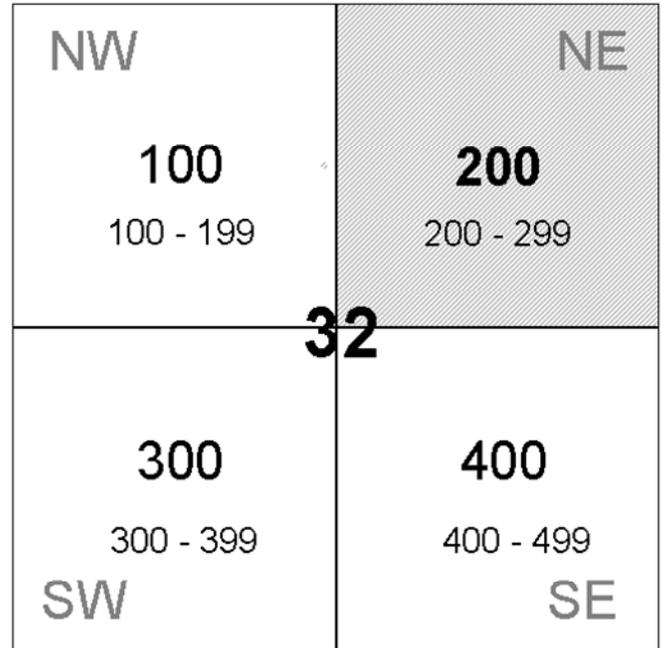
0000

Referring back to the example PIN on **page 265**, Section “32” is highlighted. The third and fourth digits in the property index number indicate the section in which the parcel is located.

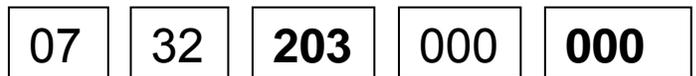
Block Number Derivation

The next three digits correspond to the **block** or quarter section in which the parcel is located.

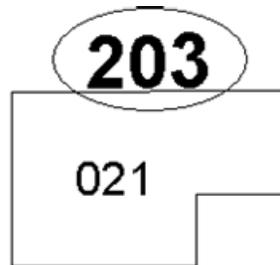
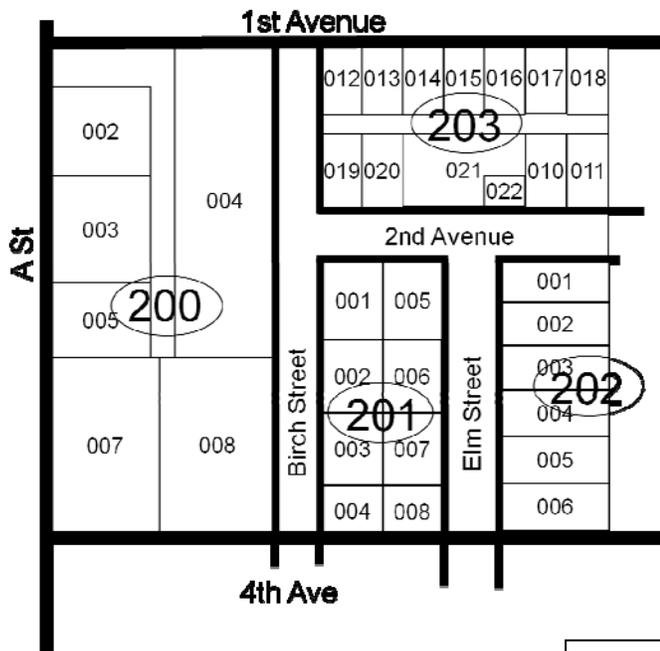
- 100 — 199 Blocks are in the northwest quarter section.
- 200 — 299 Blocks are in the northeast quarter section.
- 300 — 399 Blocks are in the southwest quarter section.
- 400 — 499 Blocks are in the southeast quarter section.



Block Number

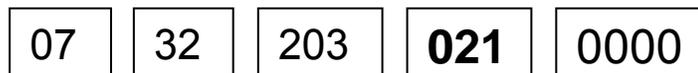


Parcel Number Derivation



The next 3 digits, the 8th, 9th and 10th digits of the property index number, indicate the particular legal description within the quarter section in which the parcel is located.

Parcel Number



Unit Number Derivation

The Unit or Use Number refers to the taxable use of the property, or in the case of condominiums, the unit number.

Unit Number

07 32 203 021 **0040**

The Use Number “0040” is highlighted. The “0040” refers to a residential parcel, with a dwelling. The 11th, 12th, 13th and 14th digits of the property index number indicate the use of the property.

Common Use/Unit numbers:

- 0010 Rural property improved with buildings. Not assessed under the Farm Bill.
- 0011 Rural property improved with buildings. Assessed under the Farm Bill.
- 0020 Rural property not improved with buildings. Not assessed under the Farm Bill
- 0021 Rural property not improved with buildings, but assessed under the Farm Bill
- 0030 Residential vacant land
- 0040 Residential with dwelling**
- 0050 Commercial residence – 6 units or more
- 0060 Commercial business
- 0070 Commercial office
- 0080 Industrial
- 0090 Miscellaneous
- 7000 = Mineral rights
- 7400 = Sand-gravel

The PIN number has 14 digits. The first 10 digits refer to the geographical location and the last 4 digits refer to the use of the property.

PINs are considered legal descriptions under the Property Tax Code, and every time the legal description of a parcel changes, a new PIN must be assigned.

Unit 12 Mapping and the Property Index Numbering System

Summary

The **Rectangular Survey System** is comprised of townships, ranges, and sections.

Townships are numbered from left to right, and sections are numbered in a serpentine fashion.

A **Property Index Number**, or **PIN**, is a series of 14 numbers that denotes the geographic location and use of a parcel of land. The first two digits denote the **area** number, the second two digits denote the **section** number, the next three digits denote the **block** number, the next three digits denote the **parcel** number, and the last four digits denote the **unit** number.

Unit 12

Review questions

Match these terms to the correct definition.

- | | |
|----------------------|---|
| ___ Section | A abbreviated legal description consisting of the area, section, block, parcel, and unit numbers |
| ___ Base line | B 6 mile X 6 mile square block of land numbered from left to right |
| ___ 3rd Principal | C a legal description that describes the Meridian perimeter of a property. |
| ___ Township | D a 14-digit number denoting geographic location and use. |
| ___ Metes and bounds | E a township has 36 of these and they are numbered in a serpentine fashion. |
| ___ PIN | F line of latitude running east and west through the state of Illinois. |
| ___ PIN | G line of longitude running north and south through the state of Illinois. |

Unit 13

Ethics and Resources

This unit covers ethics and resources for assessors.

The purpose of this unit is to discuss the importance of conducting business in an ethical manner and provide resources assessors can turn to for assistance.

Learning objectives

After completing the assigned readings, you should be able to

- understand the importance of ethical behavior, and
- have a better understanding of where to seek assistance.

Ethics

Ethics is an important issue in government. As an assessor, you may be governed by a code of ethics that has been adopted by either the governing body in your assessment jurisdiction or by a professional organization with which you are affiliated.

It is to your advantage to obtain a copy of the ethics code from your CCAO, township board, or the assessment organization with which you are affiliated.

The Ethics Committee drafted a proposed Code of Ethics and Standards of Professional Assessment Practices for Illinois. This proposed draft has been submitted for approval to the state “Core Group” of the Project on Education and Professionalism for Assessors. Included in the draft are four canons, as well as eleven standards.

This draft is included as an example only. Assessors should contact their county officials for a copy of the ethics code adopted for their jurisdictions.

Proposed Code of Ethics and Standards of Professional Assessment Practice for Illinois

An assessing official, as used within this code, is any person, elected, appointed, or employed by any unit of state or local government whose duties include any aspect of the assessment of real property for ad valorem taxation purposes.

Canon 1

An assessing official shall conduct himself or herself in a manner that promotes professionalism in the assessment process.

Canon 2

An assessing official must follow the Illinois state statutes and cooperate with all other public officials in carrying out his or her responsibilities to the assessment profession and the public.

Canon 3

In the assessment of any property, an assessing official must develop each analysis and opinion without bias and without intent to benefit his or her own self or another individual.

Canon 4

An assessing official must comply with these Standards of Professional Assessment Practice for Illinois.

Standards of Professional Assessment Practice

Standard 1

An assessing official must conform in all respects to these Canons of Ethics and Standards of Professional Assessment Practice, as they may be amended from time to time, and give full faith and allegiance to such oaths of office as the official may take. The official shall obey and apply equitably all applicable laws and regulations as may be required in the pursuance of his or her duties.

Standard 2

In developing a real property assessment and/or appraisal, an assessing official must be aware of, understand, and correctly employ those recognized methods and techniques that are necessary to produce a credible assessment and/or appraisal. The officer shall seek guidance from other assessment or appraisal professionals as necessary to meet this standard.

Standard 3

In developing a mass appraisal, an assessing official must be aware of, understand, and correctly employ those recognized methods and techniques that are necessary to produce credible assessments. The officer shall seek guidance from other assessment or appraisal professionals as necessary to meet this standard.

Standard 4

In estimating values for assessment purposes, an assessing official must estimate “market value” as that concept is defined by the courts of Illinois, regardless of the assessment percentage to be used, except when the law requires special valuation techniques.

Standard 5

An assessing official must conduct all official activities in a manner that will reflect credit on the assessment profession. The official must cooperate fully with other public officials in all matters affecting equity and the efficiency of the property tax system.

Standard 6

An assessing official must make available for public review all public records in his or her custody unless access to such records is specifically limited or prohibited by law, or the information has been obtained on a confidential basis and the law permits such information to be treated confidentially. The official must make every effort to inform the public about their rights and responsibilities under the law and the property tax system.

Standard 7

An assessing official must avoid the appearance of impropriety and must uphold the professional reputation of other assessing officials.

Standard 8

An assessing official must use no professional designation unless duly authorized to do so, and must claim no qualifications in any report, testimony or elsewhere, that are not factual or that may be subject to erroneous interpretation.

Standard 9

An assessing official must accept no fee appraisal or other assignment in which the official has an unrevealed personal interest or bias, or which cannot be completed without placing the official's personal integrity or that of the assessment profession in jeopardy. The official may accept no fee appraisal or other assignment that could foreseeably conflict with any assessment jurisdiction or responsibility the official may have.

Standard 10

An assessing official must not accept any assessment or appraisal engagement for which the amount of the official's compensation is contingent upon reporting a predetermined value; or on the amount of the value estimate; or on reporting a predetermined opinion, conclusion, or recommendation; or on the amount of a tax reduction obtained by a client using the official's services; or on any other result, value, or subsequent transaction that might impair or give the appearance of impairing the official's objectivity and professionalism.

Standard 11

An assessing official must not only uphold this Code of Ethics and Standards of Professional Assessment Practice by example, but must also encourage, by counsel and advice, adherence to this code and standards by others in the profession.

Note: Canons 1 through 4 and Standards 2 and 3 were adapted from those promulgated by the Appraisal Institute. Standards 1, and 4 through 10 were adapted from those promulgated by the International Association of Assessing Officers.

Where to go for help

When individuals are just starting out in the assessment field, they may often feel overwhelmed by their duties. In addition to the Property Tax Code and the Appraisal Publications, there are many other resources available to the assessor. It is often helpful to talk with other assessors in your area for information on handling troublesome situations.

The CCAO for your county can be very helpful regarding how you can better perform work-related responsibilities. Also, there are numerous assessment classes available from professional appraisal/assessment organizations to give you the tools to better perform your job, and the department is available to provide technical assistance in many areas.

When the question is of a legal nature, such as interpreting the statutes, you should check with your state's attorney, who is charged with enforcing the statutes in your county.

Unit 13: Ethics and Resources

Summary

As an assessor, you should conduct yourself in an ethical manner at all times. Remember that you are not alone in tackling your job. There are numerous sources of assistance available to you.

Unit 13

Review questions

1 List four resources available to assessors for assistance.

2 Do township assessors operate under a code of ethics?

Answer key

I-T Township Assessor — Introductory Course

Answer Key for Exercises 1 and 2

Exercise 1 — Converting decimals to percents and percents to decimals

	Decimal	Percent	\$/100 AV	\$/1000 AV
1.	<u>.1200</u>	<u>12 %</u>	<u>\$12/\$100</u>	<u>120 mills</u>
2.	<u>.0175</u>	<u>1.75 %</u>	<u>\$1.75/\$100</u>	<u>17.50 mills</u>
3.	<u>.0325</u>	<u>3.25 %</u>	<u>\$3.25/\$100</u>	<u>32.50 mills</u>
4.	<u>.0004</u>	<u>.04 %</u>	<u>\$.0400/\$100</u>	<u>.400 mills</u>
5.	<u>.0255</u>	<u>2.55 %</u>	<u>\$2.55/\$100</u>	<u>25.50 mills</u>
6.	<u>.0006</u>	<u>.06 %</u>	<u>\$.06/\$100</u>	<u>.60 mills</u>
7.	<u>.1234</u>	<u>12.34 %</u>	<u>\$12.34/\$100</u>	<u>123.40 mills</u>
8.	<u>.00033</u>	<u>.033 %</u>	<u>\$.033/\$100</u>	<u>.33 mills</u>
9.	<u>.00428</u>	<u>.428 %</u>	<u>\$.428/\$100</u>	<u>4.28 mills</u>
10.	<u>.0225</u>	<u>2.25 %</u>	<u>\$2.25/\$100</u>	<u>22.50 mills</u>
11.	<u>.00450</u>	<u>.450 %</u>	<u>\$.450/\$100</u>	<u>4.50 mills</u>
12.	<u>.00162</u>	<u>.162 %</u>	<u>\$.162/\$100</u>	<u>1.62 mills</u>

Exercise 2 — Land values

	Site shape	Measurements	Square footage	Approx. acreage
1.	Rectangular	400' x 800'	320,000	7.3 (7.34)
2.	Rectangular	320' x 480'	153,600	3.5 (3.52)
3.	Triangular	320' x 480'	76,800	1.8 (1.76)
4.	Triangular	150' x 180'	13,500	.3 (.30)
5.	Square	150' x 150'	22,500	.5 (.51)
6.	Triangular	600' x 900'	270,000	6.2 (6.19)

Answer Key for Exercises 3 and 4

Exercise 3 — Tax rates

	L	A	R
1.	\$ 660,000	\$ 30,000,000	<u>2.2000% (.022000)</u>
2.	<u>\$ 400,000</u>	\$ 10,000,000	4.0000 %
3.	\$ 55,000	<u>\$ 8,000,000</u>	.6875 %
4.	<u>\$ 2,254,760</u>	\$ 95,480,000	2.3615 %
5.	\$ 200,000	\$ 50,000,000	<u>.4000% (.004000)</u>
6.	\$ 90,000	<u>\$ 12,000,000</u>	.7500 %
7.	\$ 44,600	\$ 54,257,900	<u>.0822% (.000822)</u>
8.	\$ 150,000	<u>\$ 42,253,521</u>	.3550 %
9.	<u>\$ 83,436</u>	\$ 12,750,000	.6544 %

Exercise 4 — Tax bills

Determine the tax bill on a residential property with a market value of \$96,750 and an EAV of \$32,250. The property is situated in six taxing districts. Compute the tax rate for each taxing district and then determine the amount of tax (taxable EAV x rate).

	District	Levy	Taxable EAV	Rate	Tax
1.	School	\$996,173	\$31,425,000	<u>3.1700 %</u>	<u>\$1,022.33</u>
2.	County	\$473,630	\$94,726,000	<u>.5000 %</u>	<u>161.25</u>
3.	Township	\$178,994	\$25,482,000	<u>.7024 %</u>	<u>\$226.52</u>
4.	City	\$144,661	\$15,272,000	<u>.9472 %</u>	<u>\$305.47</u>
5.	Fire	\$110,707	\$37,846,000	<u>.2925 %</u>	<u>\$94.33</u>
6.	Library	\$76,360	\$15,272,000	<u>.5000 %</u>	<u>\$161.25</u>

Aggregate tax rate = 6.1121 % x taxable EAV \$ 32,250 =
 Tax bill \$ 1,971.15 1,971.14*

*The amount of the tax bill is rounded to the nearest even number for two equal installment amounts.

Unit 1

Review questions

- 1 Define ad valorem tax.
A tax that is based on the value of the property owned. It is assessed according to its value.
- 2 Property tax is the major source of tax revenue for local governments.
- 3 What are the two classifications of property?
 - 1 Real
 - 2 Personal
- 4 The largest share of property tax goes to schools
- 5 List the three approaches to value.
 - 1 Sales comparison or market approach
 - 2 Cost approach
 - 3 Income approach
- 6 What four steps are involved in the assessment of any property?
 - 1 Identifying the real property
 - 2 Listing it
 - 3 Appraising it
 - 4 Placing a value on the tax rolls
- 7 What two types of properties are assessed by the state?
 - 1 Railroad operating property
 - 2 Pollution control facilities
- 8 What happens if an individual does not pay his taxes?
The county treasurer prepares a delinquent tax list and publishes in a newspaper. If unpaid, the courts order a lien for unpaid taxes, penalty, and fees to be sold at a tax sale.

Unit 1

Review questions (cont.)

9 Who has the statutory authority to review assessments made by the township assessor and make changes when deemed necessary?

1. Chief county assessment officer (CCAO)

2. Board of review

10 List, in order, the offices that actually handle the assessment books, from the time they are created until the taxes are extended.

1. County clerk

2. Chief county assessment officer (CCAO)

3. Township assessor

4. Chief county assessment officer (CCAO)

5. Board of review

6. County clerk

11 Property is valued as to its condition on January 1, the assessment date.

12 The board of review makes the final decision on property values at the county level.

Exercise 2-1 Using the Property Tax Code

Use the Property Tax Code to answer the following questions and cite the correct section.

1. What is the education requirement for the assessor in a township or multi-township with a non-farm, non-mineral equalized assessed valuation of less than \$10 million and less than \$1 million commercial and industrial valuation?

Introductory course Section 2-45

2. Are assessing officials required to take an oath of office?

Yes Section 4-30

3. Must a supervisor of assessments hold an annual meeting for his or her township and multi-township assessors?

Yes Section 9-15

4. Are individuals permitted to obtain copies of property record cards?

Yes Section 9-20

5. Are township assessors required to provide the supervisor of assessments with a copy of all new property record cards as they are added to the tax rolls?

Yes Section 9-25

6. Must the supervisor of assessments provide “rules” for the assessment of property by township assessors?

Yes Section 9-5

7. Is there a provision in the statutes for the revisions of assessment in counties of less than 3 million?

Yes Section 9-75

Exercise 2-1 (cont.)

8. What is the date specified by statute for the return of the assessment books by the township assessor to the supervisor of assessments?
June 15 in most counties Section 9-230
9. May township assessors appoint deputies to assist them with their duties?
Yes Section 2-65
10. Is there a provision in the statutes for setting the salary of an assessor?
Yes Section 2-70
11. Can township assessors be reimbursed for their education expenses?
Yes Section 2-80
12. Are there any penalties for assessors who knowingly fail to perform their duties?
Yes Section 25-15, 25-20, & 25-25
13. Who is responsible for prosecuting violators of the Property Tax Code?
States attorney Section 25-45
14. How are vacancies in the office of township assessor filled?
Either by appointment or contractual agreement
with a person qualified under Section 2-45 Section 2-60
15. What is the statutory level of assessment?
33 1/3 % Section 9-145
16. Can candidates “get qualified” after they are elected or appointed, as long as they are qualified when they take their oath?
No Section 2-45

Unit 2

Review questions

1. Section 2-45 outlines the pre-election and pre-appointment requirements for township and multi-township assessors.
2. Section 2-52 provides for the revision of assessor qualifications.
3. The revised CIAO criteria requires an individual to complete 3 core courses and 2 of 6 electives.
4. Individuals in jurisdictions with more than \$25 million in non-farm/non-mineral EAV or more than \$1 million in commercial/industrial EAV, are required to have a CIAO designation before running for office or being appointed to office.
5. Individuals in jurisdictions with more than \$10 million and less than \$25 million of non-farm/non-mineral EAV and less than \$1 million of commercial/industrial EAV who have previously held office will be required to have an approved designation prior to running for office.

Unit 3 Comparables

Parcel	Sale 1	Sale 2	Sale 3	Sale 4	Sale 5
Address	1306 Archer	814 Adams	1414 State	6607 Healey	1209 Monroe
Sale Price	\$75,000	\$63,000	\$69,500	\$62,800	\$59,700
No of months since sale (\$500 per month)	5 \$2,500	4 \$2,000	3 \$1,500	5 \$2,500	12 \$6,000
Adjusted Sale Price	\$77,500	\$65,000	\$71,000	\$65,300	\$65,700
Foundation	Basement – \$2,500	Crawl -0-	Basement – \$2,500	Basement – \$2,500	Slab + \$1,000
Plumbing Fixtures	5 -0-	7 – \$1,000	8 –\$1,500	7 –\$1,000	5 -0-
Bedrooms	3 \$1,500	4 -0-	4 -0-	3 \$1,500	3 \$1,500
Garage (# of stalls)	1 -0-	1 -0-	2 –\$5,000	1 -0-	1 -0-
Central Air Conditioning	No \$1,500	Yes -0-	Yes -0-	No \$1,500	Yes -0-
Fireplaces	1 -0-	0 \$1,200	2 –\$1,200	1 -0-	0 \$1,200
Location adjustment	+ 2% \$1,550	No adj -0-	–3% –\$2,130	+4% \$2,612	No adj -0-
Lot size adjustment	+ 6% \$4,650	No adj -0-	+2% \$1,420	No adj -0-	No adj -0-
Net adjustment	\$6,700	\$200	– \$10,910	\$2,112	\$3,700
Number of adjustments	5	2	6	5	3
Final Adjusted Sale Price (Adj. sale price + Net Adj)	\$84,200	\$65,200	\$60,090	\$67,412	\$69,400

Looking at the least number of adjustments, which sale is most comparable to the subject property? **Comparable 2**

Answer Key

	Adj. sales price	No of Adjustments
Comparable 1	<u>\$84,200</u>	<u>5</u>
Comparable 2	<u>\$65,200</u>	<u>2</u>
Comparable 3	<u>\$60,090</u>	<u>6</u>
Comparable 4	<u>\$67,412</u>	<u>5</u>
Comparable 5	<u>\$69,400</u>	<u>3</u>

Looking at the least number of adjustments, which sale is most comparable to the subject property? **Sale 2**

Unit 3

Review Questions

1. T or F The three approaches to value are the market approach, the income approach, and the sales comparison approach.
2. T or F When using the sales comparison, or market approach, one never adjusts the subject property.
3. T or F Make a minus adjustment to your comparable property if it is inferior to your subject property.
4. T or F If the market is showing an annual increase of 3 percent, a sale occurring 2 years ago would have a minus adjustment of 6 percent.
5. T or F Three to five sales are recommended when using the sales comparison, or market approach, to value property.
6. T or F The property most comparable to the subject is the comparable with the least number of adjustments.

Unit 4

Review questions

1. What is the formula for the income approach? $\frac{I}{R \times V}$
2. A 100 space parking lot rents for \$30 a month per space. The effective tax rate is 2.54 percent, the mortgage interest rate is 9.35 percent, and the equity rate is 3.00 percent.

$$\frac{I}{R \times V} = \frac{36,000}{0.1489} \quad 30 \times 12 \times 100 = \$36,000$$

What is the value of the parking lot? \$241,773

3. A 2-story commercial building has a value of \$960,000. The building provides its owner with a monthly income of \$6,000 per floor. This is well in line with similar properties.

$$\frac{I}{R \times V} = \frac{144,000}{960,000} \quad \text{Income} = 6,000 \times 2 \times 12 = 144,000$$

What is the building capitalization rate? 15%

4. Land used as a parking lot recently sold for \$270,000. The equity rate is 3.25 percent, the mortgage interest rate is 8.15 percent, and the effective tax rate is 2.50 percent.

$$\frac{I}{R \times V} \quad R \times V = 270,000 \times .1390$$

What is the net income of this parking lot? \$37,530

5. A 12-unit apartment building has (6) 1-bedroom units, (4) 2-bedroom units, and (2) 3-bedroom units. The 3-bedroom units rent for \$400 a month, the 2-bedroom units rent for \$350 a month, and the 1-bedroom units rent for \$275 a month. Similar properties in the area have recorded their monthly income to be at \$3500 a month. PGI = 3,500 x 12 = 42,000

What is the PGI of this 12-unit apartment building? \$42,000

Unit 4

Review questions (cont.)

Match these terms to the correct definition. Some terms may require more than one definition.

<u>F</u>	Potential gross income	A	Equity rate
<u>A, B, D</u>	Land capitalization rate	B	Mortgage interest rate
<u>E</u>	Unallowable expenses	C	Certain amount set aside over a period of time for wear and tear items to be replaced
<u>A, B, D</u>	Building capitalization rate	D	Effective tax rate
<u>C</u>	Reserve for replacements	E	Real estate taxes
		F	Based on 100 percent occupancy using economic rent versus contract rent

Unit 5 Exercise

5-1 worksheet — Cost factor study

Sale Number	Age	Sale Price	Lot Value	Building Residual	Publication Value	Cost Facto
1	N	\$104,000	\$17,000	\$87,000	\$82,300	1.06
2	N	97,700	17,000	<u>80,700</u>	78,400	<u>1.03</u>
3	N	67,800	10,500	57,300	54,500	1.05
4	N	62,900	8,000	<u>54,900</u>	51,800	<u>1.06</u>
5	N	85,600	15,500	70,100	63,700	1.10
6	N	89,200	16,000	<u>73,200</u>	63,100	<u>1.16</u>
7	N	80,300	16,000	64,300	61,200	1.05
8	N	88,300	16,500	<u>71,800</u>	69,000	<u>1.04</u>
9	30	53,500	8,000	45,500	47,900	.95
10	N	93,100	16,500	<u>76,600</u>	72,100	<u>1.06</u>
11	N	76,700	15,500	61,200	58,300	1.05
12	N	86,500	16,000	<u>70,500</u>	66,500	<u>1.06</u>
13	44	67,900	11,000	56,900	59,300	.96
14	N	92,700	16,000	<u>76,700</u>	69,500	<u>1.10</u>
15	12	72,400	11,000	61,400	60,200	1.02

	Rank
1.	<u>1.03</u>
2.	<u>1.04</u>
3.	<u>1.05</u>
4.	<u>1.05</u>
5.	<u>1.05</u>
6.	<u>1.06</u>
7.	<u>1.06</u>
8.	<u>1.06</u>
9.	<u>1.06</u>
10.	<u>1.10</u>
11.	<u>1.10</u>
12.	<u>1.16</u>
13.	_____
14.	_____
15.	_____

}

$$1.06 + 1.06 = 2.12$$

$$2.12 \div 2 = 1.06$$

Median = 1.06

Note: Sales 9, 13, and 15 are not used because the properties are over one year in age.

Unit 5

Review questions

1. What are the three types of depreciation? Place a ✓ next to the one that is generally incurable.

_____ Physical

_____ Functional

✓ _____ Economic

2. What is the purpose of a cost factor?

To adjust Publication 123's values to the local labor and material rates.

3. What is a mass appraisal system?

The valuation of many properties as of January 1 of the assessment year, using standard procedures that provide uniformity.

Exercise 6-1

Building Record - Residential - Rural (Property - Type 1)

03-10-108-011-0040

Occupancy							Interior Finish							Remodeled			Sold Date			Mo. Day Yr.			Age 15		Adj. Age																
1	2	3	4	5	6	7								NH			Amount \$						CDU Average																		
Vacant Lot	Dwelling	Other	Mobile Home	A	Summer Home	Apt.																	Grade C																		
Living Accommodations							Plaster/dry wall																Memo		Grade C																
Foundation							Fiberboard																			Dwelling Computations															
Total Rooms 5		Bedrooms 2		Family Room			Paneling																			1		Sty. Constr. FRM		900		SF									
Basement							Features SF Quality Type																																		
8" Msy. Wall Pier							Pt. Msy Trim 288 C Brk Stone Art																																		
Basement							Basement							Recreation			Prorated			Porch			24 SF			OFP ¹ EFP ² OMP ³ EMP ⁴ 2-Story			Basement		900		SF		94,050						
1 Full							3 Crawl							4 Slab							Fireplaces #			Stack #			With: Porch			SF			OFP ¹ EFP ² OMP ³ EMP ⁴ 2-Story			Heating/Central air		2,730			
Area without bsmt. SF							Integral garage							On grade ¹			Below ²			Wd. deck			SF			Wood deck ⁶			Sched. Comb.												
Attached garage 600							Frm ¹ Msy. ² Carport ³																						Plumbing + 2		3,770										
Heating																																									
1 None		2 Central		3 Air Condition		4 Other																																			
Warm air																																									
Hot water/Steam																																									
Floor furnace																																									
Unit heaters																																									
Other																																									
Plumbing																																									
Standard (5)																																									
Bathroom (3)																																									
Half bath (2)																																									
Sink/Lavatory water closet																																									
Attic																																									
1 None		2 Unfinished		3 Part		4 Full																																			
% finished																																									
Exterior Walls																																									
Wood/stucco/aluminum/vinyl siding																																									
Concrete block																																									
Brick/stone TRIM																																									
Other																																									
Roof																																									
Shingle - asphalt/asbestos/wood																																									
Slate/tile																																									
Composition																																									
Other																																									
Floors																																									
B		1		2		3																																			
Concrete																																									
Wood																																									
Tile																																									
Carpet																																									
Listed by:																																									
Date:																																									

Summary of Other Buildings											
Type	No.	Construction	Size	Rate	Grade	Age	CDU	Factor	Repl. Cost new	REL	Full Value
Garage (detached)		Frm ¹ Msy. ² Carport ³									
Drive	1	Concrete	240	4.90	1.00	15 Avg	1.06		1,247	0.84	1047
Walk	1	Concrete	40	4.90	1.00	15 Avg	1.06		208	0.84	175
Total full value other buildings									1,222		
Total full value all buildings									119,635		

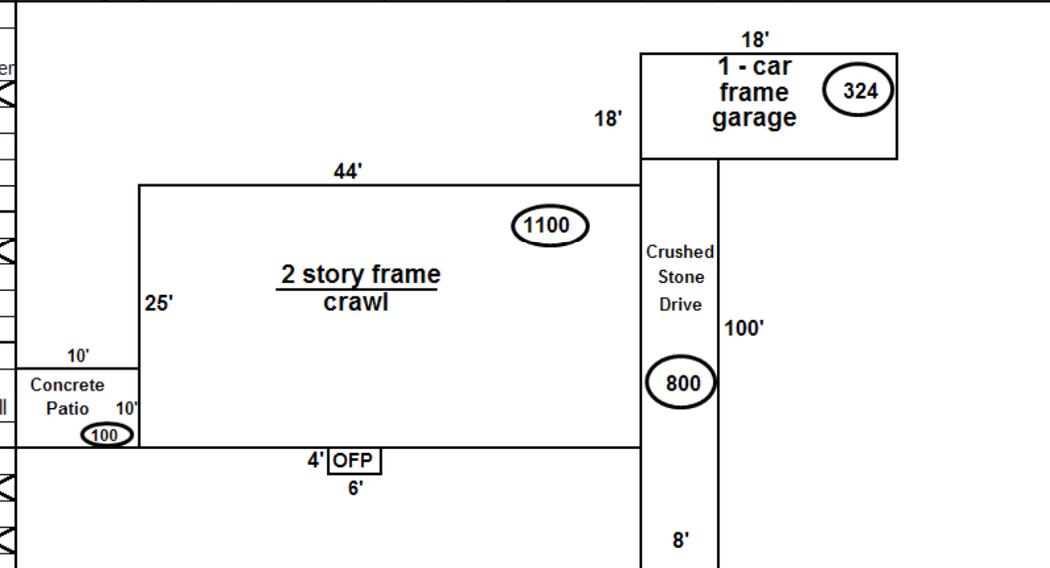
Answer Key

Exercise 6-2

Building Record - Residential - Rural (Property - Type 1)

04-01-406-002-0040

Occupancy							Interior Finish				Remodeled		Sold Date		Mo.	Day	Yr.	Age 65	Adj. Age							
1	2	3	4	5	6	7					NH		Amount \$				CDU Poor									
Vacant Lot	Dwelling	Other	Mobile Home	A	Summer Home	Apt.					Memo						Grade D									
Living Accommodations							Plaster/dry wall				Crawl (7370+8350) / 2 based on 1100 SF						Dwelling Computations									
Total Rooms 8							Fiberboard				2		Sty FRM		Const		1100		SF							
Bedrooms 4			Family Room -				Paneling										Sty		Const. SF							
Foundation							Features				SF		Quality		Type											
8" Msy. Wall							Pt. Msy Trim						Brk. Stone Art ³		Porches		1100 x 2 = 2200		187,550							
Basement							Finished				Living		Condo. Comm.		Porch 24 SF OFF		EFP ² OMP EMP ⁴ 2-Sty		Basement 7,860							
Basement							Basement				Recreation		Prorated ⁹		Porch SF		OFF EFP ² OMP EMP ⁴ 2-Sty		Heating/Central air							
1 Full		3 Crawl		4 Slab			Fireplaces #				Stack #		With: Porch SF		OFF EFP ² OMP EMP ⁴ 2-Sty		Sched. Comb.									
Area without bsmt.							Integral garage				On grade ¹		Below ²		Wd. deck SF		Wood deck ⁶		Plumbing + 0							
Heating							Attached garage				Frm. ¹		Msy. ²		Carpport ³				Attic							
1 None							2 Central		3 Air Condition		4 Other															
Warm air																			Porches 24 SF OFF		1,120					
Hot water/Steam																					Attach./Integral garage					
Floor furnace																					Total		196,530			
Unit heaters																					Grade D		0.82			
Other																					Total		161,155			
Plumbing																					Other features					
Standard (5)																					Pt. msy. Walls					
Bathroom (3)																					Fireplace					
Half bath (2)																					Finished basement					
Sink/Lavatory water closet																					Total		161,155			
Attic							Concrete Patio 10'				10'										C/D		1.06			
1 None		2 Unfinished		3 Part		4 Full														NH x AP						
																					Replacement cost new		170,824			
Exterior Walls							4' OFF				6'										Eff. Age 78		REL			
Wood/stucco/aluminum/vinyl siding																					Depr. 61%		39%			
Concrete block																							0.39			
Brick/stone																					S C M I		Full Value			
Other																							66,621			
Roof																										
Shingle - asphalt/asbestos/wood																										
Slate/tile																										
Composition																										
Other																										
Floors																										
Concrete																										
Wood																										
Tile																										
Carpet																										
Listed by:																							Total full value other buildings		4,724	
Date:																							Total full value all buildings		71,345	



Summary of Other Buildings													
Type	No.	Construction	Size	Rate	Grade	Age	CDU	Factor	Repl. Cost new	REL	Full Value		
Garage (detached)	1	Frm. /msy. ² Carport ³	324	39.45	D/.82	65	Poor	1.06	11,110	0.39	4,333		
Drive	1	Crushed Stone	800	0.65	D/.82	65	Poor	1.06	452	0.39	176		
Patio	1	Concrete	100	6.35	D/.82	65	Poor	1.06	552	0.39	215		

Answer Key

Exercise 6-3

Building Record - Residential - Rural (Property - Type 1)

03-33-333-009-0040

Occupancy							Interior Finish							Remodeled			Sold Date			Mo. Day Yr.		Age 56		Adj. Age		
1	2	3	4	5	6	7								NH			Amount \$			CDU Good						
Vacant Lot	Dwelling	Other	Mobile Home	A	Summer Home	Apt.														Grade C						
Living Accommodations							Plaster/dry wall																			
Total Rooms 6							Fiberboard																			
Bedrooms 3							Paneling																			
Family Room							Features							SF			Quality			Type						
Foundation							Pt. Msy Trim																			
8" Msy. Wall							Finished																			
Pier							Brk. Stone Art ³																			
Basement							Basement																			
1 Full							Recreation																			
3 Crawl							Fireplaces #																			
4 Slab							Integral garage																			
Area without bsmt. SF							Attached garage 625							Frm. ¹			Msy. ²			Carport ³						
Heating																										
1 None							2 Central							3 Air Condition			4 Other									
Warm air																										
Hot water/Steam																										
Floor furnace																										
Unit heaters																										
Other																										
Plumbing																										
Standard (5)																										
Bathroom (3)																										
Half bath (2)																										
Sink/Lavatory water closet																										
Attic																										
1 None							2 Unfinished							3 Part			4 Full									
Exterior Walls																										
Wood/stucco/aluminum/vinyl siding																										
Concrete block																										
Brick/stone																										
Other																										
Roof																										
Shingle - asphalt/astbestos/wood																										
Slate/tile																										
Composition																										
Other																										
Floors																										
Concrete																										
Wood																										
Tile																										
Carpet																										
Listed by:																										
Date:																										

45'

1 1/2 story brick/solid masonry basement

30'

625

25' 2-car brk/masonry garage

120

20' EFP 6'

4'

20'

Concrete

80

300

10'

Asphalt Drive

30'

1350

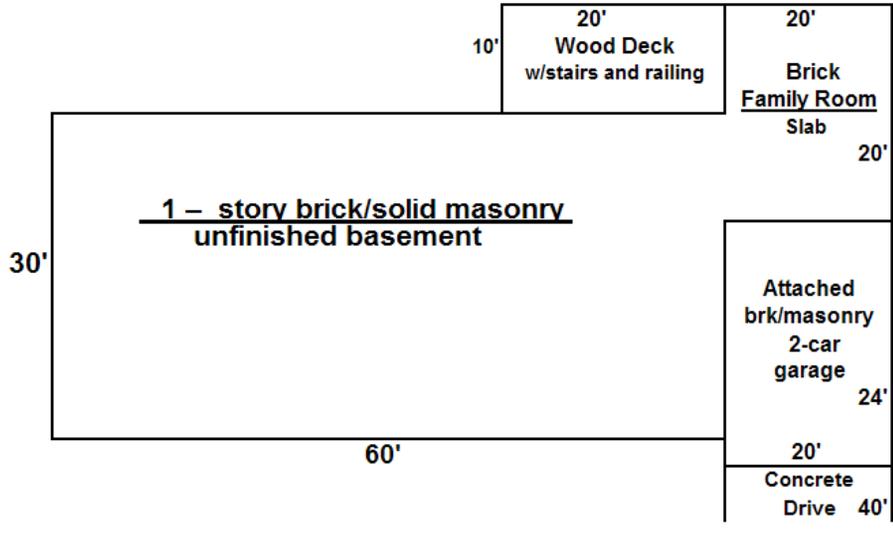
Finished upper level 650 square feet

Summary of Other Buildings											
Type	No.	Construction	Size	Rate	Grade	Age	CDU	Factor	Repl. Cost new	REL	Full Value
Garage (detached)		Frm ¹ Msy. ² Carport ³									
Drive	1	Asphalt	300	2.90	C/1.00	56	Good	1.06	922	0.55	507
Walk	1	Concrete	80	4.90	C/1.00	56	Good	1.06	416	0.55	229
Total full value other buildings									736		
Total full value all buildings									156,435		

Exercise 6-4 Example of Exam PRC

Building Record - Residential - Rural (Property - Type 1)

Occupancy							Interior Finish					Remodeled	Sold Date			Mo.	Day	Yr.	Age	Adj. Age	
1	2	3	4	5	6	7							NH	Amount \$						5	
Vacant Lot	Dwelling	Other	Mobile Home	A	Summer Home	Apt.		B	1	2	3		Memo					CDU Average			
Living Accommodations							Plaster/dry wall										Grade B				
Total Rooms 7							Fiberboard										1 Sty Brk Constr. 2200 SF				
Bedrooms 3							Paneling										Sty. Constr. SF				
Family Room 1							Features					SF									
Foundation							Pt. Msy Trim					Brk. Stone Art ³					2200 SF				
8" Msy. Wall							Finished					Living					228,700				
Basement							Basement					Recreation					Basement 16,470				
1 Full							Fireplaces # 1					masonry Stack # 1					Heating/Central air 5,440				
3 Crawl							Integral garage					On grade ¹ Below ²					Sched. Comb.				
4 Slab							Attached garage					Frm. ¹ Msy. ² Carport ³					Plumbing + 3 5,655				
Area without bsmt. 400 SF																	Attic				
Heating																	Deck 17.35 x 200 3,470				
1 None							2 Central					3 Air Condition					Porches				
Warm air																	480 SF x 37.60				
Hot water/Steam																	Attach./Integral garage 18,048				
Floor furnace																	Total 277,783				
Unit heaters																	Grade B 1.22				
Other																	Total 338,895				
Plumbing																	Other features				
Standard (5)																	Pt. msy. Walls				
Bathroom (3)																	Fireplace 5,340				
Half bath (2)																	Finished basement				
Sink/Lavatory water closet																	Total 344,235				
Attic																	C x D				
1 None							2 Unfinished					3 Part					NH x AP 1.06				
																	Replacement cost new 364,889				
Exterior Walls																	Eff. Age 5 REL 94% 0.94				
Wood/stucco/aluminum/vinyl siding																	Depr. 6% Full Value 342,996				
Concrete block																	S C M I				
Brick/stone																					
Other																					
Roof																	Summary of Other Buildings				
Shingle - asphalt/asbestos/wood																	Type No. Construction Size Rate Grade Age CDU Factor Repl. Cost new REL Full Value				
Slate/tile																	Garage (detached) Frm ¹ Msy. ² Carport ³				
Composition																	Drive 1 Concrete 800 4.90 B/1.22 5 Avg 1.06 5,069 0.94 4,765				
Other																					
Floors																					
Concrete																					
Wood																					
Tile																					
Carpet																					
																	Listed by:				
																	Date:				
																	Total full value other buildings 4,765				
																	Total full value all buildings 347,761				



Unit 6

Review questions

- 1 What type of quality does the quality grade factor “D” represent and what is the factor applied from the schedules?

Cheap quality 82% or .82

- 2 A local assessor notices that an improvement has been greatly neglected and its physical condition is extremely poor. He or she notes that this particular improvement was originally built with excellent materials and workmanship. Which one of the following will the assessor adjust?

Cost

Quality grade

CDU rating used to determine the REL factor

- 3 Quality grade refers to the Quality of materials and workmanship.

- 4 T or F PRC-2 is used for calculating land values.

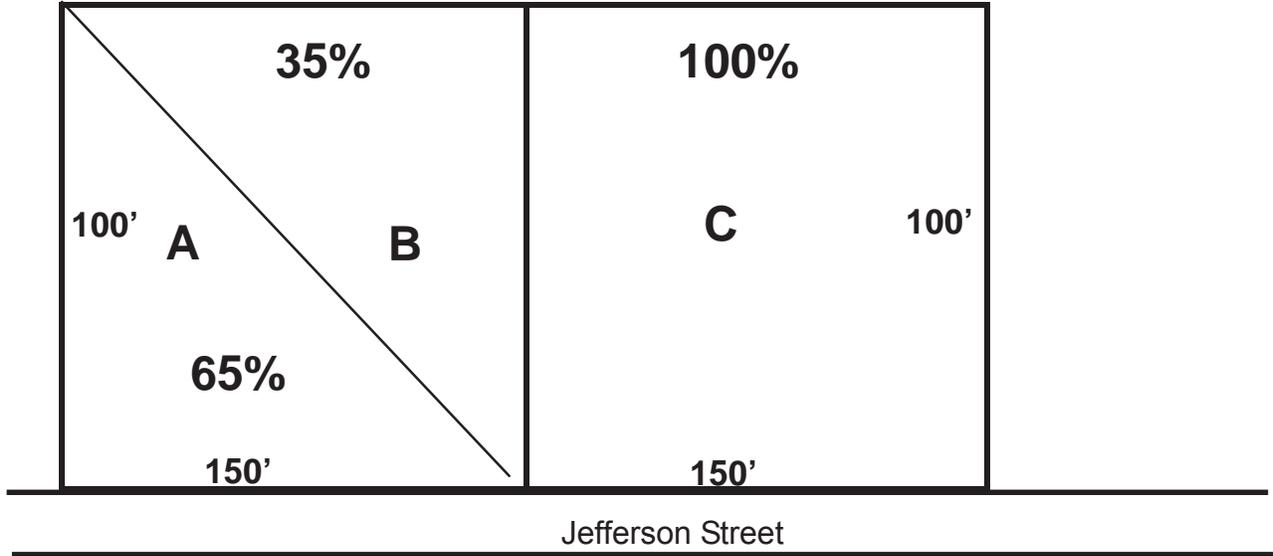
- 5 T or F A frame house of 1000 square feet on a slab will not have an adjustment for a basement.

- 6 T or F All detached garages are calculated using the **Summary of Other Buildings** section on the PRC.

- 7 T or F The quality grade is used to determine an REL factor.

- 8 T or F To compute the value for an enclosed frame porch of 60 square feet and an enclosed frame porch of 40 square feet, you should add the square footage of the porches together and price out a porch of 100 square feet from the cost tables.

Exercises 7-1 65/35 Rule



Compute the values for the three parcels above if the front foot value is \$100/FF.

- A \$ 9,750 (15' X \$100/FF X 65%)
 B \$ 5,250 (15' X \$100/FF X 35%)
 C \$15,000 (15' X \$100/FF)

Exercises 7-2 (Answers given in the text)

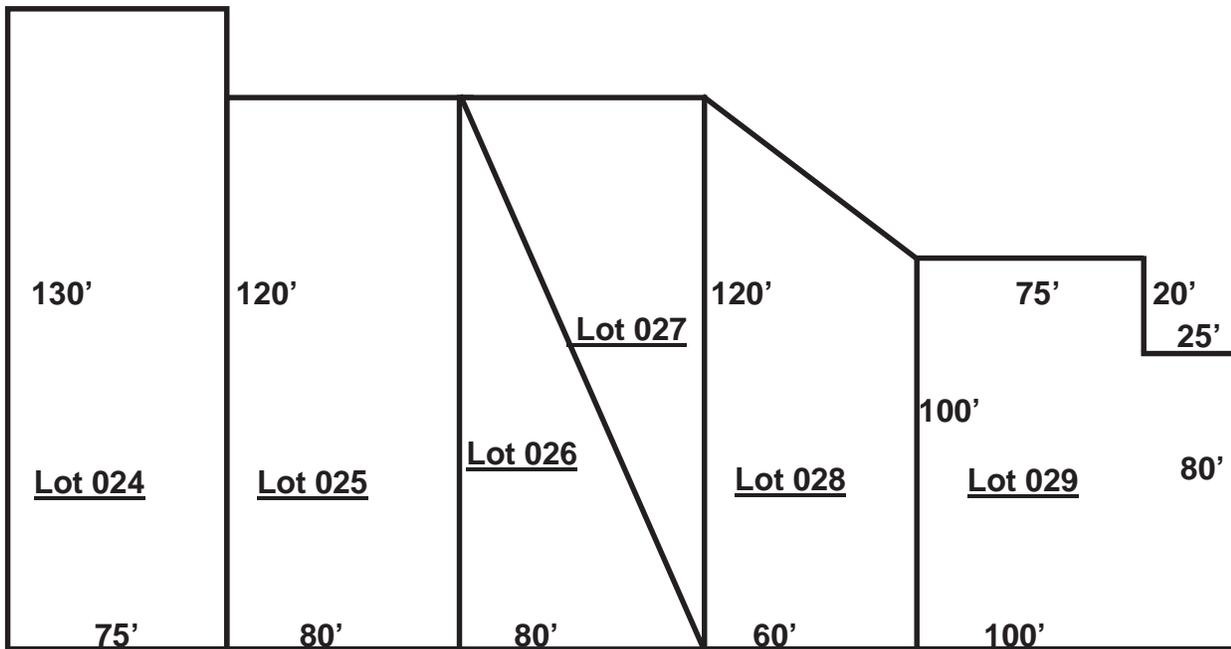
Exercise 7-3 Calculating FF values and SF values

Calculate the FF values and the SF values for lots 024 through 029.

The FF value is $140/FF$

The SF value is $.80/SF$

Lot 024	FF value = <u>10,500</u>	Lot 027	FF value = <u>3,920</u>
	SF value = <u>7,800</u>		SF value = <u>3,840</u>
Lot 025	FF value = <u>11,200</u>	Lot 028	FF value = <u>8,400</u>
	SF value = <u>7,680</u>		SF value = <u>5,280</u>
Lot 026	FF value = <u>7,280</u>	Lot 029	FF value = <u>14,000</u>
	SF value = <u>3,840</u>		SF value = <u>7,600</u>



Lot 024 $75 \times 140 = 10,500$ $75 \times 130 = 7,800$	Lot 025 $80 \times 140 = 11,200$ $80 \times 120 \times .80 = 7,680$	Lot 026 $80 \times 140 \times 65\% = 7,280$ $\frac{80 \times 120}{2} \times .80 = 3,840$ Lot 027 $80 \times 140 \times 35\% = 3,920$ $\frac{80 \times 120}{2} \times .80 = 3,840$	Lot 028 $60 \times 140 = 8,400$ $600 + 6,000 = 6,600$ $\times .80 = 5,280$	Lot 029 $100 \times 140 = 14,000$ $100 \times 80 \times .80 = 6,400$ $75 \times 20 \times .80 = \frac{1,200}{7,600}$
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Exercise 7-4

Site unit of value

You are appraising a subdivision that began to be developed 10 years ago. Now it is nearing the end of its development life cycle. Approximately 70 percent of the sites are interior sites, lots with trees, and sites with level terrain. The remaining 30 percent consists of corner sites, sites with no trees, and sites with rolling terrain. It appears that the market responds to differences in location and physical features.

The seven sales below have been verified as arm's length transactions. Using the market data, determine the contributory value for time, location, and physical features.

Site	Sales price	Sale date	Size	Location	Physical features
1	\$ 9,000	Current	75 x 200	Interior	Level - trees
2	\$ 8,500	Current	75 x 200	Corner	Level - trees
3	\$ 10,000	Current	75 x 200	Interior	Rolling - trees
4	\$ 9,000	1 year ago	75 x 200	Interior	Rolling - trees
5	\$ 8,000	Current	75 x 200	Interior	Level - no
6	\$ 6,500	1 year ago	75 x 200	Corner	Level - no
7	\$ 7,500	Current	75 x 200	Corner	Level - no

- 1 Based on the above sales, a site that sold today is worth \$ 1,000 more than a site that sold a year ago.
(3 & 4 — 6 & 7)
- 2 A site that is on rolling terrain is worth \$ 1,000 more than a site on level terrain. (1 & 3)
- 3 A site that has trees is worth \$ 1,000 more than a site without trees. (1 & 5 — 2 & 7)
- 4 An interior site is worth \$ 500 more than a corner site. (1 & 2 — 5 & 7)

Unit 7

Review questions

Match these terms with the correct definition.

 B “65-35 Rule”

A as vacant and at its highest and best use.

C & D Front foot

B based on the premise that the utility of a right-angle triangular shaped lot is affected by its shape.

 A How land is valued

C a strip of land 1 foot wide running from the front to the rear of the lot.

 E $\frac{b \times h}{2}$

D based on the assumption that the front portion of the lot is more valuable on a unit basis than the rear portion

 F $\frac{SP}{\# \text{ units}}$

E area of a triangular-shaped lot

F unit value

Unit 8

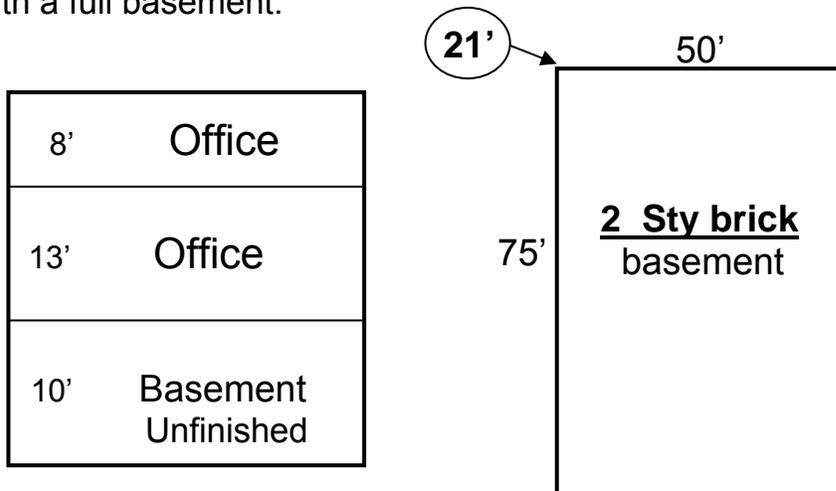
Exercise 8-1

	2-Story L36 W40 H28	2-Story L48 W50 H28	2-Story L44 W50 H28	3-Story L72 W48 H42
S/F ground area (SFGA)	1,440	2,400	2,200	3,456
Eff. Perim L/F (EP)	152	196	188	240
C/F of bldg. (CF)	40,320	67,200	61,600	145,152
S/F wall area (SFWA)	4,256	5,488	5,264	10,080
Wall Ratio (WR)	9.47	12.24	11.70	14.40

Unit 8

Review questions

Compute the following items in the data bank for this 2-story commercial building with a full basement.



Data Bank:

S/F ground area (SFGA)	3,750
Eff. Perim L/F (EP)	250
C/F of bldg. (CF)	78,750
S/F wall area (SFWA)	5,250
Wall Ratio (WR)	15.00

- 1 Compute the EP if one of the 75' walls is a party wall. 220 SF
- 2 Compute the EP if both of the 75' walls are party walls. 190 SF

Answer Key

Unit 9

Fill in the blanks to determine the base price for the first floor which is also brick veneer on wood studs.

1) The square footage of 3,420 is between 3,000 SF and 4,000 SF.

2) through 5) $\frac{115.50 - 119.95}{4,000 - 3,000} = -\frac{4.45}{1,000} = \underline{\underline{-.00445}}$

(There will be a minus sign in your calculator. Do not clear your calculator.)

6) On paper, find the difference between the square footage of the subject building and the **smaller** SF. 420

7) Multiply the number in your calculator by the difference in the square footage and round to the nearest penny. $-.00445 \times 420 = \underline{\underline{-1.87}}$

8) **Add** your answer to the value that corresponds to the smaller SF.
 $-1.87 + 119.95 = 118.08$

The base price of the first floor is **\$118.08**.

Base price of floor x factor = adjusted floor price

Basement is 10' high \$37.25 x 1.02 = \$ 38.00

First floor is 12' high \$115.50 x .96 = \$ 110.88

Second floor is 16' high \$90.95 x 1.08 = \$ 98.23

Third floor is 8' high \$85.45 x .92 = \$ 78.61

Wall ratio calculation examples

Referring to the shape adjustment table, indicate the appropriate shape adjustment factor for the following wall ratios.

8	<u>1.283</u>	22.00	<u>.950</u>
10.5	<u>1.166</u>	20.75	<u>.969</u>
35.80	<u>.866</u>	14.6	<u>1.042</u>

Unit 9

Review questions

Use Publication 126 Instructions for Commercial Schedules to answer the following questions.

1. T or F A retail store is 70' x 100'. The first floor has a wall height of 16'. The wall height adjustment would be .98.
2. T or F A 2-story retail building with a full basement has a width of 40' and a length of 80'. The first floor wall height is 16', basement height is 9', and the second story wall height is 14'. The square feet of wall area would be 9,360.
3. T or F Using the building specifications above, the wall ratio would be 13.33.
4. T or F Always adjust your square feet of ground area (SFGA) by the eave height to arrive at the cubic foot.
5. An retail store with a width of 100' and a length of 200' and an overall height of 12' would have
 - a. shape adjustment of .925
 - b. wall height adjustment of 1.00
 - c. a wall ratio of 33.33
 - d. a size adjustment of 1.05
6. A 2-story retail building on a slab with a length of 70' and a width of 50' is fully sprinkled. What is the sprinkler adjustment?
 - a. sprinkler costs are included in base price
 - b. sprinkler cost of \$26,950
 - c. sprinkler cost of \$3.90 per square foot
 - d. sprinkler cost of \$7.70 per square foot
 - e. they were too expensive and the landlord could not afford to install them
7. Using the same dimensions above, what would be the air conditioning adjustment amount placed in the computation ladder if building did **not** have air conditioning? The two stories are each at the standard height.
 - a. -\$7.80 per square foot
 - b. not included in the base price
 - c. -\$16.26 per square foot
 - d. \$15.60 per square foot
 - e. \$56,910

Exercise 10-1 worksheet

Assessment/sales ratio study and determining a COD

Assessed value	Sale price	Sales ratio %	Median	Deviation %
\$10,000	\$35,000	28.57	28.72	0.15
17,500	42,500	41.18		12.46
1,900	12,000	15.83		12.89
9,000	26,000	34.62		5.90
9,000	31,000	29.03		0.31
1,400	8,000	17.50		11.22
7,200	23,000	31.30		2.58
8,000	24,500	32.65		3.93
5,600	19,500	28.72		0.00
14,000	50,000	28.00		0.72
19,000	67,000	28.36		0.36
Sum of deviations				50.52

Sale ratios ranked

Formulas

1	<u>15.83</u>	Sales ratio = $\frac{\text{assessed value}}{\text{sales price}} \times 100(\%)$
2	<u>17.50</u>	
3	<u>28.00</u>	Deviation = sales ratio - median*
4	<u>28.36</u>	Average deviation = $\frac{\text{sum of deviations}}{\# \text{ of sales}} = \frac{50.52}{11} = 4.59$
5	<u>28.57</u>	
6	<u>28.72</u>	COD = $\frac{\text{average deviation}}{\text{median}} \times 100(\%) = \frac{4.59}{28.72} \times 100 = 15.98\%$
7	<u>29.03</u>	
8	<u>31.30</u>	*Ignore plus or minus signs when subtracting the median from the sales ratios.
9	<u>32.65</u>	
10	<u>34.62</u>	
11	<u>41.18</u>	

Unit 10

Review questions

1. or F Equalization means a factor is applied to each jurisdiction so that all jurisdictions are assessed at the same average percentage of market value.
2. T or F A sales ratio study is used to determine the percentage of homes that have sold during a certain period of time.
3. T or F The state equalization factor is always 1.0000.
4. T or F Only jurisdictions with a COD of 16 qualify for the bonus.

Unit 11

Review questions

- 1 List four types of special properties assessors may encounter.

**Solar energy, Residential developments, Historic residences,
Farmland**

- 2 List two properties assessed by the state.

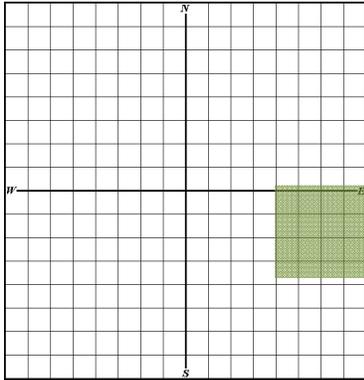
**Railroad operating property, railroad right-of-way and track
Pollution-control facilities, pollution-control devices**

Unit 12-1 – Locating Legal Descriptions

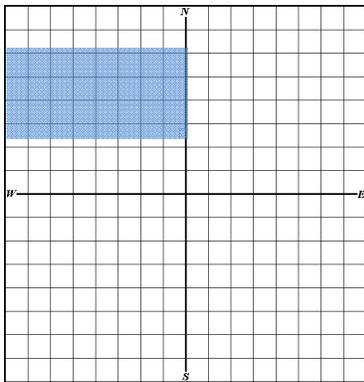
Identify these parcels on the grid provided by shading in the appropriate parts on the grid.

1. SE $\frac{1}{4}$ of SE $\frac{1}{4}$

40 Acres

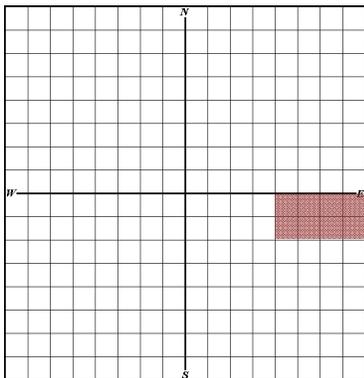


80 Acres



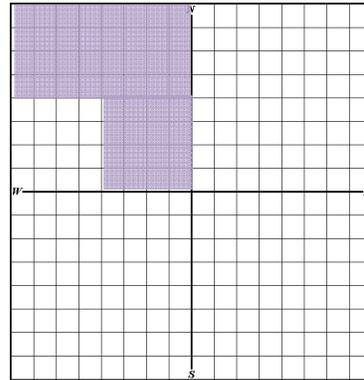
2. S $\frac{1}{2}$ of NW
of SW $\frac{1}{4}$

3. N $\frac{1}{2}$ of NE
NW $\frac{1}{4}$ of SW
20

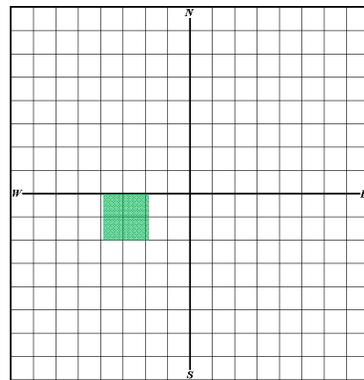


4. E $\frac{1}{2}$ of NW $\frac{1}{4}$ and NW $\frac{1}{4}$ of NW $\frac{1}{4}$

120 Acres



10 Acres

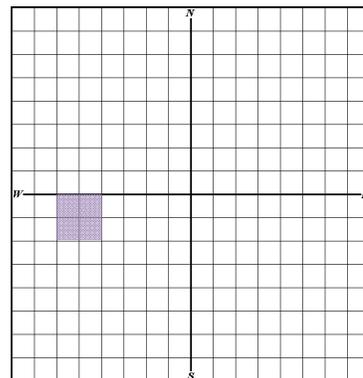


10 Acres

$\frac{1}{4}$
SW $\frac{1}{4}$ of SE $\frac{1}{4}$

$\frac{1}{4}$ of SE $\frac{1}{4}$
 $\frac{1}{4}$
Acres

6.



Unit 12

Review questions

Match these terms to the correct definition.

<u>E</u>	Section	A	abbreviated legal description consisting of the area, section, block, parcel, and unit numbers.
<u>F</u>	Base line	B	6 mile X 6 mile square block of land numbered from left to right.
<u>G</u>	3rd Principal Meridian	C	a legal description that describes the perimeter of a property.
<u>B</u>	Township	D	a 14-digit number denoting geographic location and use.
<u>C</u>	Metes and bounds	E	a township has 36 of these and they are numbered in a serpentine fashion.
<u>A or D</u>	PIN	F	line of latitude running east and west through the state of Illinois.
<u>A or D</u>	PIN	G	line of longitude running north and south through the state of Illinois.

Unit 13

Review questions

- 1 List four resources available to assessors for assistance.

CCAO, other assessors, States attorney, Department of Revenue

- 2 Do township assessors operate under a code of ethics?

Yes

