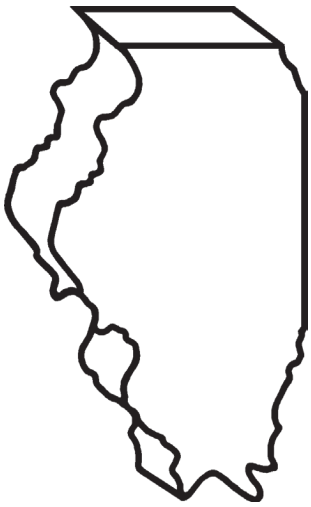


PTAX 1-A

Introduction to Residential Assessment Practices

January 2024

Printed by the authority of the state of Illinois
PO # 2240212, 30 copies

Table of Contents

Glossary: Intro to Residential Assessment Practices

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

Ad valorem - according to value.

***Ad valorem* tax** - a tax levied according to value.

Assessed Value (AV) - the value placed on property for tax purposes and used as a basis for distribution of the tax burden. Most of the time, this amount is subject to the State-issued equalization factor and the deduction of various homestead exemptions on residential parcels.

Building residual - the building value derived from the sales price minus the lot value.

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 reproducing the improvements, subtracting accrued depreciation, and adding land value.

Cost factor - used to adjust the cost schedules 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.

Equalized Assessed Value (EAV) - the assessed value multiplied by the State equalization factor. This gives the property value from which the tax rate is calculated after deducting all qualified homestead exemptions. For farm acreage, farm buildings, and coal rights, the final assessed value is the equalized assessed value. Individual tax bills are calculated by multiplying the individual district's tax rates by the equalized assessed value after all qualifying exemptions have been removed.

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.

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

Market Value - the most probable sales 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 ranked set of numbers.

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

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

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

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

Remaining Economic Life (REL) - period of time over which a prudent investor would reasonably expect to recapture his or her investment.

Sales comparison (or market) approach - calculating the value of properties by observing and analyzing the selling prices of comparable properties.

Acronyms

AEV = Agricultural Economic Value
AV = Assessed Value
BOR = Board of Review
CCAO = Chief County Assessment Officer
CDU = Condition, Desirability, Utility
EAV = Equalized Assessed Value
EGI = Effective Gross Income
IDOR = Illinois Department of Revenue
NI = Net Income
PGI = Potential Gross Income
PIN = Property Index Number
PRC = Property Record Card
PTAB = Property Tax Appeal Board
RCN = Replacement Cost New
REL = Remaining Economic Life
SF = Square Footage
SFFA = Square Foot Floor Area
SFGA = Square Foot Ground Area

Where to get Assistance or Information

Web Sites

- Property Tax Division: https://tax.illinois.gov/localgovernments/property.html
- Property Tax Code (35 ILCS 200): www.ilga.gov
- Illinois Property Tax Appeal Board: http://www.ptab.illinois.gov/

Publications

- PTAX-1004 The Illinois Property Tax System
  https://tax.illinois.gov/content/dam/soi/en/web/tax/research/publications/documents/localgovernment/ptax-1004.pdf
- Publication 123, Instructions for Residential Schedules
  https://tax.illinois.gov/content/dam/soi/en/web/tax/research/publications/pubs/documents/pub-123.pdf
- Publication 126, Instructions for Commercial Schedules
  https://tax.illinois.gov/content/dam/soi/en/web/tax/research/publications/pubs/documents/pub-126.pdf
- PIO-62, An Overview of the Property Tax Extension Limitation Law by Referendum
  https://tax.illinois.gov/content/dam/soi/en/web/tax/research/publications/documents/pios/pio-62.pdf

Unit 1 – An Overview of the Property Tax Cycle and the Appeal Process

This unit covers the history of property taxation and 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.
- identify established completion dates for various processes.

Terms and Concepts

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

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, approves 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. (Section 1-130.) **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. 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 on individuals was eliminated by the 1969 law that instituted the Illinois Income Tax. 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, which 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 that 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** or a tax according to value. 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 sale price of a property in terms of money in a competitive and open market, assuming that the buyer and seller are acting prudently and knowledgeably, allowing sufficient time for the sale, and assuming that the price is not affected by undue stimulus.

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 income approach, while an option for residential assessment, is not the recommended approach and therefore will not be covered in-depth in this training.

The determination of market value requires skilled and knowledgeable assessing officials. To encourage assessing officials to improve their knowledge and skill in determining value, the state pays a stipend to any chief county assessment officer (CCAO), township assessor, deputy assessor, or member of a board of review who earns certain professional designations and continues his or her 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 properties. Some steps take place concurrently, but essentially can be divided into six steps.

1. Assessment
2. Review
3. Equalization
4. Levy
5. Extension
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
3. equalization

Step 1: Assessment

An assessment involves four steps:

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. Several tools can be used to do this, including GIS software, Google, or sales records.
2. **List -** Describe the characteristics of land and improvements on property record cards, including the measurement and description of the 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 to arrive 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.

This value is known as the assessment and is the basis for determining what portion of the total tax burden each property owner as of January 1 will bear. (Section 9-175) In Illinois, the statutory assessment level is one-third or 33 1/3 percent of market value, unless set otherwise by law. (Section 9-145)

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 the primary assessment responsibility. Assessors must qualify to hold office on the basis of prescribed coursework 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 County, the county assessor takes the primary responsibility for the assessment of property.

Supervisors of assessments and county assessors are referred to as Chief County Assessment Officers (CCAOs). The work of township and multi-township assessors are 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 county assessor or supervisor of assessments.

A few types of property are assessed by the state, such as railroad operating property, railroad right-of-way and track, water treatment facilities, 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. 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 this 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 the owner, the assessment by the township assessor, the assessment by the CCAO, and the final 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. (Section 10-110 through 10-135)

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 latter of the third Monday in June or 90 days after the Township certification of the books to the CCAO 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.

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. (Section 9-30)

Steps 2 and 3: Review and Equalization

Review and intra-county equalization 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. A formal review of 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 either 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 own column in the assessment books. The CCAO certifies the assessment books to the county board of review by the latter of the third Monday in June or 90 days after the Township certification of the books to the CCAO. The CCAO compiles and sends a tentative abstract of assessments to the Department. The information on the abstract is used 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 (Section 16-30) and completes its work no later than March 15th of the following year (Section 16-35). 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 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 own column in the assessment books. Individual notices must be sent to the affected taxpayers when any change by the board of review, whether it is an individual assessment change or a change resulting from equalization, is made. 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, water treatment facilities, 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 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.
Township assessor:	Values real estate as of January 1 and returns books to CCAO by June 15; can equalize.
CCAO:	1. Reviews assessments made by township assessors; makes changes. 2. Equalizes assessments within county by class, by area, or by township. 3. Mails changes 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 or 90 days after the TA certifies the books to CCAO. 6. Prepares tentative abstract of assessment report; mails report to the Department.
Department of Revenue:	Develops tentative equalization factor; publishes factor in newspaper. Holds public hearing.
Board of review:	1. Assesses omitted property. 2. Acts on non-homestead exemptions and mails to Department for approval. 3. Hears complaints from taxpayers and makes assessment changes on any property when deemed necessary. 4. Mails changes of assessment notices to taxpayers. 5. Equalizes assessments within county by class or area, if necessary. 6. Delivers books to county clerk. 7. Mails report on equalization to Department. 8. Makes a list of changes and gives the list to the CCAO and county clerk.
County clerk:	Prepares final abstract of assessments and mails to Department.
Department of Revenue:	Certifies final equalization and mails to county clerk.
County clerk:	Applies equalization factor to all local assessments, except farmland, coal rights, farm buildings, and state-assessed property.
Department of Revenue:	Certifies state assessments and mails to county clerk.
County Clerk:	Totals the EAV for each taxing district.

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
3. collection and distribution

Step 1: Levy

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 property tax.

After the budget is approved, the taxing districts can then calculate the amount of revenue needed from 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 total 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 in dist	=	$100,000
Tax rate	=	Levy / EAV
Tax rate	=	$1,000 / $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 Computation of Tax Extension:

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

Tax bill	=	EAV x aggregate tax rate
Tax bill	=	$20,000 x $7.00/$100 (or .07)
Tax bill	=	$1,400

For this example, the collector's book 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.

Step 3: Collection and Distribution

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 percentage 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 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

County clerk:	Totals the equalized assessed value for each taxing district.
Taxing body:	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 an ordinance 5. Publishes levy and holds public hearing 6. If necessary, makes truth-in-taxation publication and holds hearing 7. Gives certificate of levy to county clerk by the last Tuesday in December
County clerk:	1. Calculates tax rates and computes aggregate tax rate for each combination of taxing districts 2. Extends taxes on the 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):	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 taxes by September 1* 5. Prepares delinquent tax list and sends notice of application for judgment on real estate
Circuit court:	1. Pronounces judgment for sale of a lien on real estate due to nonpayment of taxes 2. Rules on tax objections
County clerk and treasurer:	Administers sale of lien on real estate due to nonpayment of taxes

* For counties that use accelerated billing, the estimated bill is mailed by January 31; the first installment is due by March 1 (or the date provided in the county ordinance or resolution); the last installment is normally due by August 1. Counties can also adopt a four-installment payment schedule.

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, and 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 the 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.

Formal Appeal

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.

Steps in the Appeal Process

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 in counties or to the board of appeals in Cook County. If a property owner is dissatisfied with the board's decision, the owner can appeal the decision to the State Property Tax Appeal Board (PTAB) 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 farmland or farm building assessment.

Evidence Needed

To support a claim of an unfair assessment, substantial 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 should include some or all 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.

Role of the Board of Review

Section 16-55 of the Property Tax Code states, “On written complaint that any property is over assessed or under assessed, the board shall review the assessment, and correct it, as appears to be just, but in no case shall the property be assessed at a higher percentage of fair cash value than other property in the assessment district prior to equalization by the board or the Department.”

Reviewing assessment complaints is perhaps the most important function performed by the board during its session. A great deal of time, energy, and resources is required to ensure that a fair sharing of the tax burden through equity of assessments is achieved throughout the jurisdiction.

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 sale price of a property in terms of money in a competitive and open market, assuming that the buyer and seller are acting prudently and knowledgeably, allowing sufficient time for the sale, 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 a 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?

   a.

   b.

4. The largest share of property tax goes to _____.

5. List three approaches to value.

   a.

   b.

   c.

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

   a.

   b.

   c.

   d.

7. What three types of properties are assessed by the state?

   a.

   b.

   c.

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

9. Who has the statutory authority to review assessments made by the township assessor and make changes when deemed necessary?

   a.

   b.

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

a.

b.

c.

d.

e.

f.

11. Property is valued as to its condition on _____, the assessment date.

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

Unit 2 – 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.
- define a mass appraisal system.

Key Terms and Concepts

- Cost approach
- Replacement cost new (RCN)
- Physical depreciation
- Functional depreciation
- Economic depreciation
- Cost factor
- Cost factor study
- Mass appraisal
- Highest and best use
- Principle of substitution
- Assessment publications

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. The **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, not involve criminal activities, and 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 complimentary 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 to comparable properties that are being bought and sold 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.
2. **The cost approach —** involves calculating the replacement cost of the building, subtracting accrued depreciation, and adding land value.
3. **The income approach —** involves capitalizing the property's net earnings.

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.

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 that 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, whereas **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 represents the upper limit of the 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.

The 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 condition. Obsolescence occurs as the property phases 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 curable and incurable depreciation 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** is 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 an imbalance in construction features or inadequate design or arrangement that lessen its usefulness or utility.

Examples of the two types of curable and incurable functional obsolescence 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 on the stability and quality of the neighborhood in general.

Examples of economic obsolescence, usually incurable, are:

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

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 prevent 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 the measurement 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 to arrive 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 cost schedules discussed in Unit 3 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

The figures provided in Publication 123, Instructions for Residential Schedules (Pub-123), represent the cost of labor and materials in central Illinois. A **cost factor** is designed to adjust the Publication 123 Replacement Cost New (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 4.

Steps in Calculating a Cost Factor

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

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

   Building value = sale price - land value

3. Determine the RCN for each building.

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

   $$\text{Cost factor} = \frac{\text{Building value}}{\text{Pub-123 RCN}}$$

5. Rank the factors.

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

7. Apply the overall cost factor to the Pub-123 RCN of all property within the jurisdiction.

   The true RCN is equal to the Pub-123 RCN multiplied by the cost factor.

   True RCN = Pub-123 RCN x Cost Factor

Exercise 2-1: Cost Factor Study

The purpose of a cost factor study is to determine the factor to be used to adjust the values found in Pub-123 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, eliminating the need to factor in depreciation.

A cost factor greater than 1.00 indicates that Pub-123 values are too **low** for the jurisdiction, so you must **increase** the RCN values. A cost factor less than 1.00 indicates that Pub-123 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
$104,000 - $17,000 = $87,000

Step 2:
Divide the building residual of $87,000 by the Pub-123 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 ÷ Pub-123 Value
$87,000 ÷ $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.

$97,700 - $17,000 = $80,700

Divide the building residual of $80,700 by Pub-123 RCN of $78,400, which gives you a cost factor of 1.03.

$80,700 ÷ $78,400 = 1.03 cost factor

Continue the computations for the remaining sales as outlined above.

Exercise 2-1 Worksheet: Cost Factor Study

Sale Number	Age	Sale Price	-	Lot Value	=	Building Residual	÷	Pub Value	=	Cost Factor
1	N	$104,000		$17,000		$87,000		$82,300		1.06
2	N	$ 97,700		$17,000		_____		$78,400		_____
3	N	$ 67,800		$10,500		$57,300		$54,500		1.05
4	N	$ 62,900		$ 8,000		_____		$51,800		_____
5	N	$ 85,600		$15,500		$70,100		$63,700		1.10
6	N	$ 89,200		$16,000		_____		$63,100		_____
7	N	$ 80,300		$16,000		$64,300		$61,200		1.05
8	N	$ 88,300		$16,500		_____		$69,000		_____
9	30	$ 53,500		$ 8,000		$45,500		$47,900		.95
10	N	$ 93,100		$16,500		_____		$72,100		_____
11	N	$ 76,700		$16,500		$60,200		$58,300		1.03
12	N	$ 86,500		$16,000		_____		$66,500		_____
13	44	$ 67,900		$11,000		$56,900		$59,300		.96
14	N	$ 92,700		$16,000		_____		$69,500		_____
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 (PRC) examples in this workbook.

Rank:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____ **Median = _____**
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____

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 the 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.**

A cost factor is designed to adjust Publication 123 **replacement cost new (RCN)** value to reflect the local cost of labor and materials.

Unit 2 Review Questions

1. What are the three types of depreciation? Place a checkmark 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 3 – 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 Publication 123, Instructions for Residential Schedules (Pub-123).

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 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 Pub-123.
- explain how the various factors are obtained and used.
- identify the use of Pub-123.
- identify and use the various cost tables in the manual.
- understand and use a remaining economic life (REL) depreciation table.

Key Terms and Concepts

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

Factors used in Publication 123

Cost Factor

As discussed in Unit 2, a **cost factor** is designed to adjust Pub-123 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 Pub-123 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. It is best to determine the quality grade when a property is being built and when fieldwork is being performed.

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 Pub-123 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 Pub-123.

Grade	Factor
AA	225 percent
A	150 percent
B	122 percent
C	100 percent
D	82 percent
E	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.

A quality grade must be assigned to each improvement and should be established during construction if at all possible.

It is important **not** to confuse quality and condition. **Condition** refers to the physical condition of the improvement. Condition changes due to depreciation, such as wear and tear, use, and abuse. Quality, as stated above, refers to the construction, workmanship, and materials used.

Design Factor

Another factor that may be used to adjust a building's RCN is the **design factor**. The cost schedules in Pub-123 are designed for use in determining RCN values for conventional, rectangular-shaped structures of compact, efficient design. In recent years though, architectural designs have become more diverse. There is an increased cost associated with such structures due to the need for more material and more labor per square foot.

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
- Unusual architectural designs

The design factor is handled in the same manner as a quality grade factor; it is assigned to individual homes and usually remains 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:

$$\frac{\textbf{Contractor's Costs}}{\textbf{Pub-123 RCN}}$$

Typically, a minus 13 percent to a plus 50 percent adjustment is made to Pub-123 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 Pub-123.

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 future use and value.

A Review of the Factors

The **quality grade** is used to adjust Pub-123 RCN values to reflect the quality of materials and workmanship of the improvement. This grade typically remains unchanged during the lifetime of the structure.

Cost factor x design factor x neighborhood factor x appraiser factor - These factors are chain-multiplied to reflect a true RCN of the improvement.

Exercise 3-1 – Multiplying Factors

Remember to round to two decimal places when computing your Factor.

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 the **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 the action of the elements that have taken place. **Desirability** refers to 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. **Utility** refers to functional obsolescence, such as an 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 a REL of 92%.

  REL % + Depr % = 100%, or

  100% - REL factor expressed as a percent = percent of depreciation

  For example, a property with a 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			
	Effective Age						Effective Age						Eff.		Eff.	
Age	E	G	A	P	U	Age	E	G	A	P	U		Age	REL	Age	REL
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

Residential Square Foot Schedules

The schedules in Pub-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 Pub-123 to reflect the values in various jurisdictions.

For residential structures, Pub-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, central air conditioning, 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. Pub-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 includes property ownership information, and 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.”

Blank PRC-1

Property Record - Residential - Rural

Ownership & Mailing Address

Township	Volume	Tax Code	Area	Sect.	Block	Parcel	Unit
			03	32	207	021	0040

Property Class	Land Use	Zoning	NH Code	Card No. of	Condo. Comm.

Record of Ownership	Date	Deed Stamps	Sale Price

Property Address

Street		Nghbhd.		Utilities		Topo.		Division
Private Rd.		Improved	X	Water	X	Level		
Cul-de-sac	X	Static		Sewer	X	High		
Alley		Decline		Gas	X	Low		
Traffic Lt.		Blighted		Electric	X	Rolling	X	
Traffic Hvy.						View		

Building Permit Record

Date	Number	Amount	Yr. Assessed	N/C	P/U Year	Purpose

Land Computations

Unit Type	No. Units	Depth	Unit Value	D. Fac.	I. Fac.	Full Value
FF	100 '	200 '	$300/FF	1.00		$30,000

Roll Backs

Year	Unit	Unit Value	Full Value	App. File	Year	Unit	Unit Value	Full Value	App. File

Summary of Assessed Values

	Orig. Asmt.: Year:			Rev. by: Year:			Rev. by: Year:			Rev. by: Year:		
	Full Value	Asmt. Level	Assessed Value	Full Value	Asmt. Level	Assessed Value	Full Value	Asmt. Level	Assessed Value	Full Value	Asmt. Level	Assessed Value
Land												
Bldgs.												
Total												

	Rev. by: Year:			Rev. by: Year:			Rev. by: Year:			Rev. by: Year:		
	Full Value	Asmt. Level	Assessed Value	Full Value	Asmt. Level	Assessed Value	Full Value	Asmt. Level	Assessed Value	Full Value	Asmt. Level	Assessed Value
Land												
Bldgs.												
Total												

	Rev. by: Year:			Rev. by: Year:			Rev. by: Year:			Rev. by: Year:		
	Full Value	Asmt. Level	Assessed Value	Full Value	Asmt. Level	Assessed Value	Full Value	Asmt. Level	Assessed Value	Full Value	Asmt. Level	Assessed Value
Land												
Bldgs.												
Total												

Blank PRC-2

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

Occupancy

1 Vacant Lot	2 Dwelling	3 Other	4 Mobile Home	5 A.	6 Summer Home	7 Row House	8 Post Frm.	9 Log e

Style/No. stories: Unit type:

Exterior Wall Construction

Stud Frame | Concrete Block | Solid Stone

Exterior Wall Cover Material

	LL	1	2	3	½
Wood (Cost Grps 1, 2, 3)					
Vinyl (Cost Grp 1)					
Metal (Cost Grps 1, 2)					
Fiber/Comp. (Cost Grps 1, 2)					
Resin (Cost Grp 3)					
EIFS (Cost Grps 3, 6)					
Stucco (Cost Grps 3, 6)					
Paint on CC Blk (Cost Grp 3)					
Brick Veneer (Cost Grps 4, 7)					
Stone Veneer (Cost Grps 5, 8)					
Limestone Blks (Cost Grp 3)					
6-10" Logs (Log Hm Sch)					
12" Logs (Log Hm Sch)					
Other					

Partial Masonry Trim

SF: Quality C Brk.[1] Stone[2] Art.[3]

Roof

Shingle - asphalt/composite/wood	
Slate/tile	
Metal/Other	
Solar Panel	

Attic

1 None	2 Unfinished	3 Part fin.	4 Full fin.

% finished

Basement

1 Full	3 Crawl	4 Slab

Area without bsmt. SF

Heating / AC

1 None	2 Central Heat	3 Air Cond.	4 Other

Other (descr.)

Plumbing

Standard (5)	
Additional Bathroom (3)	
Additional Half bath (2)	
Additional Sink/Fixture (1)	

Living Accommodations

Total Rooms	Bedrooms	Family Room

Interior Finish

Finished Basement / Lower Level — Living area SF: — Recreation SF:

Half Upper Sty Finished Living Area SF:

Porches / Wood Deck

SF: OFP Scrn-in Kn-Wal EFP OMP EMP 2-Sty

SF: OFP Scrn-in Kn-Wal EFP OMP EMP 2-Sty

SF: OFP Scrn-in Kn-Wal EFP OMP EMP 2-Sty

SF: Wood deck — No Steps / No Rail

Remodeled | Sold Date: Mo. Day Yr. | Age: | Adj. Age:

NH | Amount $ | CDU: | Grade:

Fireplaces

Type: # # Stacks: Sty Hght:

Masonry

Garage

Type	Cost Grp	SF	Area over Garage
Attached			Bonus Rm / Storage
Built-in			(On grade)
Basement garage		1-Car 2-Car 3-Car	

Memo

Base Cost Computation

Sty	CG	% (if app.)	x Rate	x SF	= Sub-total
					$

SFLA: Total Base Cost $

Basement +

Heating/Central air -

Plumbing + -

Attic +

Porches +

+

Attach./Built-in garage +

Sub-total

Grade x

Graded total

Other features

Pt. Msy Trim +

Fireplace +

Finished basement +

Schedule's RCN

C x D

NH x AP x

True replacement cost new

Eff. Age: REL x

Depr:

Full Value

Summary of Other Improvements (Detached garage, deck, patio, driveway, storage shed, etc.)

Type	No.	Constr./CG	Size	Rate	Sub-total	Grade	Factor(s)	RCN	Age	CDU	REL	Full Value

Listed by: **Total full value other improvements**

Date: **Total full value all bldgs & improvements**

PRC-2 (R-11/19) (opposite PRC-1)

Determine the Base Cost of the Structure

Several changes have been made when determining the base cost of the residential structure. The starting point is to determine the type of construction. Nine different cost groups have been established that represent combinations of various exterior wall construction types and typical exterior cover materials. The nine combinations are in the table below.

Exterior Construction Type & Typical Wall Cover			
Cost Group	**Exterior Wall Construction**	**Exterior Cover Material Type**	**Description of Typical Exterior Cover Materials**
1	Stud Frame	Wood	Plywood siding 4'x8' panels 3/8"-15/32", grooved T-1-11 siding Southern Pine 4" 3/8" (or 4" 5/8") x 4' x 8'
		Vinyl	Vinyl .040-.044" siding, 4"-5" lap, 8"-10" exposure, with trim
		Metal	Alum. smooth 24 gauge, 8"-12" width w/starter strip,corner,etc Galvanized steel siding, 26 gauge, 26" wide, 6' to 12' length Galvanized steel siding, 28 gauge, 27-1/2" wide, 6' to 12' length
		Fiber/ composite	Hardboard 4'x8' panel siding 7/16", Duratemp & SmartSide Hardboard primed plank siding 7/16" x 6"/8" x 16' OSB Smart Panel II siding, 3/8" & 7/16" x 4' x 8'
2	Stud Frame	Wood	Plywood siding 4'x8' panels 19/32"-5/8" grooved
		Metal	Alum corrug. 4-V x 2-1/2" 17-19 gauge, 26" x 6' to 24' +flashing
		Fiber/ composite	Fiber cement 4'x8' panel siding, with trim Fiber cement lap siding, 6-1/4", 7-1/4", & 8-1/4" x 12' Hardboard primed plank siding 1/2" x 8" x 16' OSB lap siding, 3/8" & 7/16" x 6" & 8" x 16'
3	Stud Frame	Wood	Cedar siding, beveled & shingle Log cabin siding 1-1/2" x 8" x 12' Log lap spruce siding 1-1/2" x 8" x 10' Pine siding Redwood siding 5/8" x 5-3/8" x 12'
		Thermo. resin	Nailite thermoplastic resin siding, with trim
		Polymer based	EIFS - Exterior Wall Insulation & Finish System, 2" thick R-10
		Stucco	Portland cement 1" stucco on exterior walls
	Conc. Block (8" thick)	Concrete Block	Paint on exterior block walls
4	Stud Frame	Brick	Colonial 3"w x 3-1/2" x 10" single wythe veneer facing
5	Stud Frame	Stone Veneer	Most common stone, 4" veneer Granite, 1-1/4" exterior Limestone or Sandstone, 3" thick
6	Conc. Block (8" thick)	Stucco	Stucco, EIFS (see Group 3 cover)
7	Conc. Block (8" thick)	Brick	Brick veneer (see Group 4 cover)
8	Conc. Block (8" thick)	Stone Veneer	Common stone, granite, etc. (see Group 5 cover)
9	Solid Stone	Limestone Blks	Limestone rough cut large blocks, 12" x 12" x 12", per cf.

Once you have determined the cost group, this will be utilized to determine the base cost of each story. The residential structures are now valued by correlating the square footage of each story in the applicable base cost schedule by story level. For each structure, a base cost value must be determined by using the "One-Story or First Floor" schedule with the first-floor square footage. The costs in this schedule are higher than the other story schedules because they include a slab foundation, roofing, and all the plumbing fixtures. If other stories exist in the structure, correlate the appropriate square footage on that story with the applicable story schedule (i.e., full upper, half upper, or lower level). Some schedules require an unfinished story computation with the addition of finishing costs for the actual finished living area. The schedules for post-frame homes and log homes have their own costs based on the story level, but costs for certain additional features can be determined by using the residential supplemental schedules.

A combination of floor-based schedules will be used to determine the base costs of the residential structure. Special base cost schedules have been developed for **Post Frame Homes** and **Log Homes**. For certain features in these home types, you will be referred to other schedules to adjust costs.

See Appendix A for the full set of these schedules.

Utilizing the schedules – Example

Let's consider the following example to determine the base cost of a residential structure.

- 2-story stud frame structure with vinyl siding (both floors),
- 1,000 square feet on the first floor,
- 900 square feet in a full upper story

For this simple example, we will not consider a basement, attic, or garage and assume no additional plumbing fixtures and no outside structures.

The stud frame and vinyl siding exterior put this example into Cost Group 1. Use this information to find the first-floor base cost by finding the **1,000 square feet** row matched to the **cost group 1** amount. From the first floor table, you should find **93.92**. Multiply this value by 1,000 square feet to find the base cost value of the first floor.

1,000 x 93.92 = $93,920

Then you should move to the Full Upper Story table to determine the additional amount for the second story. Use this information to find the second story base cost by finding the **900 square feet** row matched to the **cost group 1** amount. From the full upper story table, you should find **60.78**. Multiply this value by 900 square feet to find the base cost value of the second story.

900 x 60.78 = $54,702

To find the total base cost, add the base cost of the two floors together.

$93,920 + $54,702 = $148,622

After you have calculated the base cost price, adjustments may need to be made based on additional features of the dwelling. Following is a brief explanation for certain features along with their associated adjustment schedules.

See Appendix B for a complete set of adjustment schedules.

The base cost schedules include the **standard five plumbing** fixtures: bathroom toilet, bathroom basin, tub or shower, kitchen sink, and hot water heater. If the structure has more than the standard five fixtures, add $930 per fixture to the base cost. If you have fewer than the standard five fixtures, a deduction of $930 per fixture should be made.

Plumbing (+/-)	
Plumbing cost per fixture; add or deduct for each fixture above or below the residential standard five fixtures.	$930

Quality grade refers to the quality of the material and workmanship. Pub-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%

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

No Heat Schedule (-)	
Subtract per SF cost for any dwelling type with no heat.	
Total SF of Living Area	**Deduct per SF**
Up to 1,000	5.95
1,200	5.74
1,400	5.37
1,600	5.01
1,800	4.72
Over 1,800	4.60

Central air conditioning is included in the base price. If the structure does not have central air conditioning, a subtraction from the base price must be made.

No Central Air Conditioning Schedule (-)	
Subtract per SF cost for any dwelling with no central air conditioning. For mobile homes, see Mobile Home Supplemental Schedules for rate.	
Total SF of Living Area	**Deduct per SF**
Up to 400	9.52
600	7.02
800	4.17
1,000	3.34
1,200	2.78
Over 1,200	2.55

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

Fireplace (+)			
Type	**1-Story**	**2-Story**	**3-Story**
Masonry 5' base brick fireplace & stack	5,500	6,100	6,700
Second masonry fireplace on same stack	4,600	5,000	5,400
Pre-fab metal wood burning fireplace	2,100	2,500	3,000
Second Pre-fab metal fireplace on same stack	1,000	1,400	1,800

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 a 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.

Basement/Foundation (+)

For finished or partially finished basements, first cost the total unfinished basement area. Then add the cost of the finished area from the applicable "Basement Finish" column using the SF of the actual finished area.

Split-level & Bi-level: see Unfinished Lower Level schedule to first determine the unfinished cost. Then add the cost of the actual finished area using the "Basement Finish" rates.

Total SF	Crawl Space	Unfinished Bsmt	Basement Finish	
			Living Area Quality	Rec Room Quality
400	11.26	37.20	33.25	17.12
500	10.57	34.71	32.50	16.71
600	9.81	32.11	31.74	15.89
700	8.99	29.86	30.64	15.23
800	8.50	28.68	30.44	14.83
900	8.12	27.45	29.47	14.52
1,000	7.85	26.54	29.02	14.31
1,100	7.64	26.05	28.57	14.14
1,200	7.50	25.47	28.12	14.03
1,300	7.35	25.04	27.67	13.91
1,400	7.08	24.45	27.24	13.69
1,500	6.94	24.00	26.73	13.58
1,600	6.83	23.60	26.62	13.53
1,700	6.76	23.39	26.39	13.50
1,800	6.69	23.02	26.13	13.44
1,900	6.53	22.61	25.71	13.31
2,000	6.38	22.54	25.42	13.18
2,100	6.25	22.02	25.34	13.07
2,200	6.14	21.72	25.26	12.99
2,300	6.03	21.49	25.13	12.89
2,400	5.93	21.20	25.01	12.85
2,500	5.91	21.14	24.83	12.82
2,600	5.89	21.07	24.65	12.80
2,700	5.88	20.96	24.59	12.78
2,800	5.87	20.92	24.53	12.77
2,900	5.86	20.87	24.48	12.75
3,000	5.85	20.83	24.45	12.74
3,100	5.84	20.71	24.43	12.72
3,200	5.79	20.60	24.37	12.69
3,300	5.75	20.48	24.33	12.68
3,400	5.72	20.41	24.30	12.65
3,500	5.68	20.31	24.27	12.62
3,600	5.65	20.21	24.25	12.60
Over 3,600	5.62	20.15	24.23	12.57

The base price of the dwelling does not include any value for **garages**. You must make an adjustment (addition) for a dwelling that has any type of garage structure. To use the schedule, you must determine the cost group for your garage type (may not be the same as your base dwelling) and then apply the rate that is appropriate for the type, cost group, and square footage of your garage.

This schedule is also designed to estimate the cost of garages based on whether the garage is attached, built-in, or has additional living space associated with the structure.

Garages

The cost of a garage is not included in the base residence cost. The garage costs include wall surfaces, roof surfaces when applicable, a concrete floor, doors, and electric lighting. Total SF refers to the actual square footage of the garage. Determine the applicable Group column by the exterior wall construction and cover material of the garage.

Attached Garages

Attached garages share one or more common wall(s) with the residence and costs include interior finish for only the common wall(s).

Total SF	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9
200	39.40	41.05	46.33	52.72	100.66	59.14	65.53	113.47	141.21
250	37.58	39.03	43.64	49.23	91.18	54.85	60.44	102.38	126.66
300	35.75	37.06	41.24	46.29	84.24	51.38	56.44	94.38	116.35
350	33.92	35.16	39.12	43.91	79.86	48.73	53.51	89.47	110.28
400	31.89	33.00	36.55	40.84	73.05	45.16	49.45	81.65	100.29
450	31.17	32.27	35.79	40.05	72.01	44.33	48.59	80.55	99.04
500	30.25	31.32	34.76	38.91	70.07	43.08	47.23	78.39	96.42
550	29.33	30.34	33.58	37.50	66.92	41.44	45.36	74.78	91.80
600	29.11	30.07	33.15	36.88	64.84	40.63	44.35	72.31	88.50
650	28.64	29.58	32.64	36.33	64.00	40.05	43.72	71.40	87.42
700	28.17	29.11	32.13	35.78	63.17	39.45	43.10	70.49	86.34
800	27.87	28.70	31.34	34.53	58.50	37.74	40.93	64.90	78.77
1,000	27.27	27.98	30.26	33.01	53.69	35.78	38.54	59.21	71.17
1,200	25.62	26.27	28.36	30.89	49.87	33.43	35.96	54.94	65.92
1,500	25.22	25.85	27.85	30.27	48.45	32.71	35.13	53.30	63.82

Built-in Garages

Built-in garages have areas of the residence that are both adjacent to and above the garage.

Total SF	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9
200	43.18	44.32	47.95	52.34	85.29	56.75	61.14	94.10	113.18
250	39.58	40.51	43.48	47.07	74.03	50.68	54.28	81.24	96.84
300	38.53	39.32	41.85	44.91	67.88	47.99	51.05	74.02	87.31
350	37.34	38.06	40.37	43.17	64.14	45.98	48.77	69.74	81.88
400	35.10	35.69	37.59	39.89	57.11	42.20	44.49	61.72	71.69
450	34.38	34.96	36.84	39.10	56.07	41.37	43.63	60.61	70.44
500	33.42	33.98	35.76	37.92	54.09	40.08	42.24	58.42	67.78
550	32.90	33.44	35.18	37.29	53.09	39.41	41.51	57.31	66.45
600	32.47	33.00	34.71	36.77	52.25	38.85	40.91	56.39	65.35
650	32.16	32.69	34.42	36.39	51.62	38.44	40.45	55.69	64.50
700	31.86	32.38	34.03	36.02	51.00	38.03	40.02	55.00	63.68
800	31.11	31.52	32.84	34.44	46.42	36.05	37.64	49.63	56.56

Garages - continued

Detached Garages

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

Total SF	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9
200	47.39	50.08	58.66	69.03	146.93	79.47	89.85	167.75	212.82
250	42.58	44.93	52.46	61.56	129.87	70.71	79.81	148.12	187.65
300	39.33	41.46	48.28	56.53	118.45	64.83	73.08	135.00	170.83
350	38.99	40.97	47.28	54.92	112.28	62.61	70.25	127.60	160.79
400	35.36	37.01	42.29	48.68	96.62	55.10	61.49	109.42	137.17
450	33.88	35.46	40.52	46.64	92.58	52.80	58.92	104.86	131.44
500	32.69	34.22	39.10	45.01	89.35	50.95	56.86	101.20	126.86
600	29.83	31.33	36.13	41.94	85.52	47.78	53.58	97.16	122.38
700	28.71	30.19	34.92	40.64	83.58	46.39	52.12	95.06	119.91
800	28.68	30.08	34.54	39.95	80.51	45.38	50.79	91.35	114.82
1,000	26.69	28.16	32.88	38.58	80.00	44.32	49.77	91.02	112.50
1,200	25.89	27.33	31.96	37.54	79.49	43.16	48.75	90.70	110.21
1,500	25.04	26.30	30.32	35.19	71.75	40.09	44.96	81.51	102.67
1,800	24.25	25.44	29.23	33.82	68.28	38.44	43.03	77.48	97.42

Basement Garages

Add lump sum to unfinished basement or lower level costs: **1 car:** $3,100 **2 car:** $4,200 **3 car:** $5,600

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 upper story of the residence and price the garage as a built-in. If minimal finish, like a bonus room, use 65% of the garage SF cost. If storage only with high-pitched gable roof, add 30% to the garage cost to cover roof and floor costs.

The base price of the dwelling does not include consideration for an attic. In order to determine an addition for the inclusion of an attic, use the **Attic** schedule to estimate the cost of an attic. An attic, for the purposes of this class/manual, is defined as "an attic accessible by a stationary permanent staircase." In this schedule, columns headed "Finished" refer to walls, ceilings, and floors constructed to allow the attic to be used as living quarters. The "½-Finished" column is for attics partially finished with a portion left unfinished. To use this schedule, correlate the SF of the attic area to the finish type (Unfinished, ½-Finished, or Finished). The attic area refers to the attic footprint size on the floor level below the attic. To determine the amount of the addition, multiply the square footage of the attic times the indicated value.

Attic (+)			
Use the attic footprint SF on the floor level below the attic.			
Total SF	**Unfinished**	**1/2 Finished**	**Finished**
400	12.37	22.85	33.33
600	10.30	20.77	31.24
800	9.49	19.28	29.07
1,000	8.76	17.60	26.45
1,200	8.25	16.63	25.01
1,400	7.90	16.02	24.13
1,600	7.63	15.57	23.52
1,800	7.42	15.39	23.36
2,000	7.23	14.92	22.62
2,200	7.09	14.62	22.15
2,400	6.97	14.38	21.80
2,600	6.86	14.16	21.50
2,800	6.78	14.12	21.44
3,000	6.70	14.07	21.40
3,200	6.64	13.96	21.36
3,400	6.58	13.92	21.32
3,600	6.56	13.90	21.28
3,800	6.54	13.88	21.24
4,000	6.52	13.87	21.22

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.

Porches (+)						
SFGA	Open Frame	Screened-in Frame	Knee Wall with Glass	Solid Wall Encl. Frame	Open Masonry	Enclosed Masonry
25	65.60	90.94	113.24	100.08	77.36	147.60
50	45.92	62.82	80.12	70.80	52.14	102.28
75	39.36	53.44	69.06	61.03	43.25	86.68
100	36.04	48.71	63.51	56.12	38.75	78.84
125	34.74	45.89	57.98	51.42	37.30	73.30
150	32.68	42.54	53.43	47.59	35.92	66.65
175	31.35	40.52	50.91	45.43	34.01	62.93
200	30.22	38.67	48.37	43.30	32.44	59.24
225	29.46	37.53	46.98	42.12	31.35	57.17
250	28.75	36.35	45.35	40.75	30.98	54.80
275	28.40	35.62	44.00	39.62	30.62	53.85
300	28.05	34.89	42.86	38.67	30.27	52.97
350	27.76	34.16	41.11	37.20	29.92	50.18
375	27.39	33.59	40.40	36.61	29.56	49.06
400	27.06	33.08	39.78	36.08	29.04	48.08
500	25.78	31.27	37.00	33.60	28.23	45.26
600	24.54	29.47	34.50	31.45	26.88	42.07
700	23.68	28.21	32.73	29.92	25.93	39.81
800	22.85	27.07	31.42	28.79	24.71	37.79
900	22.39	26.38	30.41	27.92	24.23	36.53
1,000	21.87	25.67	29.62	27.24	23.45	35.27

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.

Partial Masonry Trim (+)				
Per SF of surface area				
Quality	**A**	**B**	**C**	**D**
Brick	19.07	15.51	12.71	10.42
Stone	51.45	41.85	34.30	28.13
Artificial stone	24.68	20.07	16.45	13.49

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. Be sure to use the appropriate schedule depending on whether you are valuing sidewalks and driveways versus patios and stoops. The values differ between the two schedules.

Paving (+)	
Crushed stone, 6"	$1.17/SF
Concrete, 6" with wire mesh, no base	$6.15/SF
Asphalt, 2" with 4" base	$4.74/SF

A special note about valuing paving/driveways: be sure to check with your county Supervisor of Assessments for guidance regarding the valuation of driveways and sidewalks to ensure consistency. Some counties only adjust for paving for certain features or materials used.

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.

Stoops, Decks, Patios (+)					
Total SF	Stoop - Masonry Elevated		Deck - Wood Elevated		
	1 Riser	2 Risers	Steps & Rail	No Steps (-)	No Rail (-)
25	31.52	42.64	36.55	10.72	10.91
50	22.34	28.28	27.58	5.36	7.30
75	19.28	23.51	24.59	3.57	6.08
100	17.74	21.11	23.07	2.68	5.47
125	16.36	19.15	21.88	2.14	4.81
150	15.27	17.64	20.96	1.79	4.25
175	14.63	16.74	20.42	1.53	3.96
200	14.03	15.91	19.90	1.34	3.64
225	13.68	15.40	19.60	1.19	3.48
250	13.29	14.87	19.28	1.07	3.28
275	12.97	14.44	19.01	0.97	3.11
300	12.70	14.07	18.79	0.89	2.97
350	12.29	13.51	18.45	0.77	2.76
375	12.12	13.28	18.31	0.71	2.67
400	11.97	13.08	18.19	0.67	2.60
500	11.53	12.48	17.83	0.54	2.37
600	11.10	11.93	17.49	0.45	2.12
700	10.79	11.53	17.26	0.38	1.95
800	10.56	11.23	17.08	0.34	1.82
900	10.38	11.00	16.94	0.30	1.72
1,000	10.24	10.81	16.83	0.27	1.64
Patio - concrete.....		$6.15 per SF	**Patio - brick in sand**.....		$12.90 per SF

Residential Pools in ground are not included in the base price, so an addition must be made. To determine the value, correlate the square footage of the structure to the appropriate value based on construction. Make a plus adjustment if a pool heater is present based on the type of heater and its output.

Residential Pools in ground (+)		
Cost includes excavation, filtering system, chlorinator, pump, ladder, and 3' concrete apron 4" thick around pool. Price permanent type above-ground pools at 40% of vinyl liner cost.		
SFSA	**Gunite/Concrete**	**Vinyl Liner**
300	22,000	18,000
450	28,100	23,000
525	30,800	25,200
650	35,000	28,600
800	39,600	32,400
1,000	45,300	37,100
Note: Prices in this schedule represent pool costs. The extent to which a pool may enhance an individual property's market value is determined by the area or subdivision in which it is located. In certain areas, the presence of a swimming pool may even diminish the market value.		

Pool Heaters (+)	
Gas	
155 MBH	2,500
190 MBH	3,000
500 MBH	7,500
Electric	
15KW	3,000
24KW	4,500
54KW	5,000

A special note about valuing residential pools: some counties do not make an addition for in-ground pools due to the impact they may have on sales in that particular market. Always check with your county Supervisor of Assessments to ensure consistency.

Interpolation and extrapolation

The use of interpolation or extrapolation may be needed to calculate the base cost when:

- the finished area falls between two total areas in the table, or
- the exterior wall is of more than one type (e.g., vinyl siding and brick veneer).

The square footage increments given in basic cost tables are the most common sizes of residences. If the square footage of the property falls between the increments given in the table, interpolate the cost by using the known information.

Steps to Interpolate

1. Determine the appropriate base cost table along with the associated cost group(s) based on construction type.
2. Identify the square footage and cost immediately before and immediately after the actual square footage of your structure.
3. Subtract the low number from the high number for both the square footage and the cost.
4. Divide the cost value by the difference in square footage. This is your cost per square foot.
5. Multiply your cost per square foot by the difference of square feet between your actual square footage and the low number in your chosen range. Subtract this new value from the high-cost amount to determine your interpolated rate.
6. Multiply the result by your actual square footage. The result is your base cost.

Example

- Home is a one-story house with 850 square foot built with stud frame and brick.
- Assume no basement, garage, attic, or other adjustments.
- Interpolate to find the base cost.

Steps 1, 2 & 3:

- One-Story or First Floor table to be used.
- Cost Group 4 construction.

Total SF	Cost Group 4
800	110.59
900	106.29

Difference in SF: 900 – 800 = 100
Difference in Cost Base: 110.59 – 106.29 = 4.30

Step 4:

4.30 / 100 = .043 per sq. ft.

Step 5:

.043 X (850-800) = 2.15
110.59 – 2.15 = 108.44

Step 6:

108.44 X 850 = $92,174

Note: Your interpolated/extrapolated result should fall in between the two known numbers. For the example above, our interpolated cost was $108.44, which falls between our higher known cost of $110.59 and our lower known cost of $106.29. If your interpolated result does not fall within the range of known values, check your work to ensure all steps were followed.

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			
	Effective Age						Effective Age					Eff.		Eff.	
Age	E	G	A	P	U	Age	E	G	A	P	U	Age	REL	Age	REL
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

Summary

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 Pub-123 **replacement cost new (RCN)** value to reflect the local cost of labor and materials.

The **quality grade** represents the 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 3 Review Questions

1. What is the factor applied from the schedules for a quality grade “D”?

   _____

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** Air Conditioning is included in the base cost on the cost schedules for residential assessment purposes.

6. List the five plumbing fixtures that are included in the base cost on the residential cost schedules for assessment purposes.

Unit 4 – Using Residential Square Foot Schedules

This unit covers the application of the residential square foot schedules in the valuation of residential properties.

The purpose of this unit is to provide a basic understanding of the use of schedules. Following this segment, you will be able to arrive at a value for simple residential properties using the cost approach.

Learning Objectives

After completing the assigned readings, you should be able to

- identify the pertinent construction specifications found on the property record card, PRC-2.
- determine the square foot of ground area.
- determine the base cost for a residential structure.
- determine appropriate adjustments to the base cost price.
- arrive at a correct estimate of market value by using the residential square foot schedules.
- understand and use a remaining economic life (REL) depreciation table.

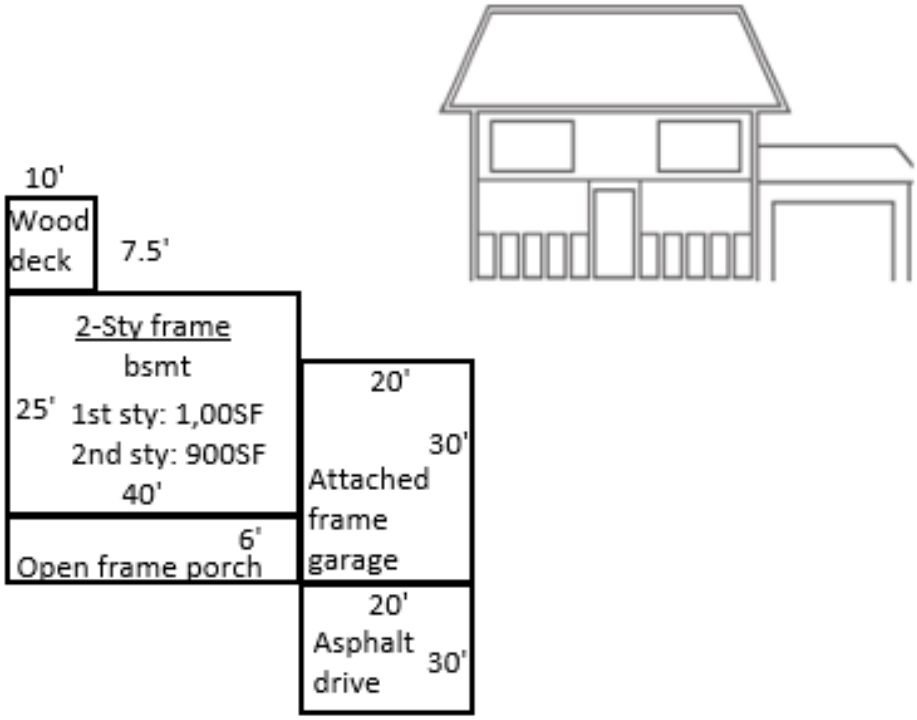
Key Terms and Concepts

- Base Price
- Full Price

Computing the Value of a Structure

The subject property is a 10-year-old, 2-story stud frame structure with 8 rooms, including 4 bedrooms and a family room. The first floor is 1,000 square feet, and the second story is 900 square feet.

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 a 240 square foot open frame porch on the front and a 75 square foot wood deck with stairs and railings on the rear of the structure — 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

1 Vacant Lot	2 Dwelling	3 Other	4 Mobile Home	5 A.	6 Summer Home	7 Row House	8 Post Frm.	9 Log c

Style/No. stories: 2-sty Unit type:

Exterior Wall Construction

Stud Frame | Concrete Block | Solid Stone

Exterior Wall Cover Material

	LL	1	2	3	½
Wood (Cost Grps 1, 2, 3)					
Vinyl (Cost Grp 1)		X	X		
Metal (Cost Grps 1, 2)					
Fiber/Comp. (Cost Grps 1, 2)					
Resin (Cost Grp 3)					
EIFS (Cost Grps 3, 6)					
Stucco (Cost Grps 3, 6)					
Paint on CC Blk (Cost Grp 3)					
Brick Veneer (Cost Grps 4, 7)					
Stone Veneer (Cost Grps 5, 8)					
Limestone Blks (Cost Grp 9)					
6-10" Logs (Log Hm Sch)					
12" Logs (Log Hm Sch)					
Other					

Partial Masonry Trim

SF: 300 Quality: C Brk.[1] Stone[2] Art.[3]

Roof

Shingle - Asphalt/Composite/wood	X
Slate/tile	
Metal/Other	
Solar Panel	

Attic

1 None | 2 Unfinished | 3 Part fin. | 4 Full fin.

% finished

Basement

1 Full | 3 Crawl | 4 Slab

Area without bsmt. SF

Heating / AC

1 None | 2 Central Heat | 3 Air Cond. | 4 Other

Other (descr.)

Plumbing

Standard (5)	1
Additional Bathroom (3)	1
Additional Half bath (2)	1
Additional Sink/Fixture (1)	

Living Accommodations

Total Rooms	Bedrooms	Family Room
8	4	1

Interior Finish

Finished Basement / Lower Level	Living area	SF:
	Recreation	SF:
Half Upper Sty Finished Living Area		SF:

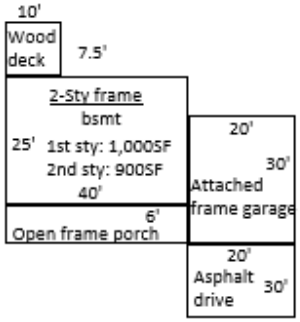
Porches / Wood Deck

SF: 240 OFP Scrn-in Kn-Wal EFP OMP EMP 2-Sty

SF: OFP Scrn-in Kn-Wal EFP OMP EMP 2-Sty

SF: OFP Scrn-in Kn-Wal EFP OMP EMP 2-Sty

SF: 75 Wood deck No Steps / No Rail



Remodeled Sold Date: Mo. Day Yr. Age: 10 Adj. Age: 10

NH Amount $ CDU: Avg. Grade: C

Fireplaces

Type:	#	# Stacks:	Sty Hght:
Masonry	1	1	2

Garage

Type	Cost Grp	SF	Area over Garage
Attached	1	600	Bonus Rm / Storage
Built-in			(On grade)
Basement garage		1-Car 2-Car 3-Car	

Memo

Base Cost Computation

Sty	CG	% (if app.)	x Rate	x SF	= Sub-total
1/Main	1	100	93.92	1,000	$ 93,920
2	1	100	60.78	900	54,702

SFLA: 1,900 Total Base Cost $ 148,622

Basement	+	26,540
Heating/Central air	-	
Plumbing	+ 5 -	4,650
Attic	+	
Porches 240 OFP	+	6,362
	+	
Attach./Built-in garage	+	17,466
Sub-total		204,240
Grade C	x	1.00
Graded total		204,240
Other features		
Pt. May Trim	+	10,290
Fireplace	+	6,100
Finished basement	+	
Schedule's RCN		220,630
C x D / NH x AP	x	1.06
True replacement cost new		233,868
Eff. Age: 10 / Depr: 11%	REL x	0.89
Full Value		208,142

Summary of Other Improvements (Detached garage, deck, patio, driveway, storage shed, etc.)

Type	No.	Constr./CG	Size	Rate	Sub-total	Grade	Factor(s)	RCN	Age	CDU	REL	Full Value
Drive	1	Asphalt	600	4.74	2,844	C	1.06	3,015	10	Avg.	0.89	2,683
Wood Deck	1		75	24.59	1844	C	1.06	1955	10	Avg.	0.89	1,740

Listed by: **Total full value other improvements** 4,423

Date: **Total full value all bldgs & improvements** 212,565

PRC-2 (R-11/19) (opposite PRC-1)

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, stud frame/vinyl siding structure with 1,000 square feet on the ground floor and 900 square feet in the second story.

5. Looking at the **Main floor schedule in Cost Group 1,** the base cost for the main floor is 93.92. Looking at the **Full Upper Story schedule in Cost Group 1**, the base cost for the second story is 60.78. After multiplying by the square footage of each and adding the products, your base price is $148,622.

6. The structure has an unfinished basement. You must make a plus adjustment of $26,540 for the 1,000 square foot basement.

7. In addition to the standard 5 plumbing figures, 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 $930 per fixture, or a plus $4,650 (5 x $930).

8. No adjustment is needed since there is no attic.

9. The listing indicated 1 “open frame porch,” which is 240 square feet. Refer to the **Porch schedule**. There is no correlated cost for 240 square feet so you must use the interpolation calculation and reference the two rows associated with 225 square feet and 250 square feet.

10. There is a 600 square foot 2 car attached frame garage with vinyl siding. Look at the **Attached Garages schedule for Cost Group 1** – the base cost is 29.11 per square foot. A plus $17,466 adjustment is required.

11. The base cost of $148,622 and the adjustments made so far (for the basement, plumbing, porch, and attached garage) are totaled to arrive at $204,240.

12. 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.

13. Taking 100 percent (1.00) times $204,240, the value remains $204,240.

14. 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.

15. 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 cost is 34.30. Taking 300 square feet x 34.30 produces a value of $10,290 to add to the cost.

16. The structure contains 1 masonry fireplace. Referencing the **Fireplace schedule** – the value for a fireplace and stack for a 2-story dwelling is $6,100.

17. There are no more adjustments to make to the computation ladder at this point. Adding the adjusted base price of $204,240 to the value of the trim and fireplace results in a total of $220,630.

18. 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.

19. When the adjusted value of $220,630 is multiplied by 106 percent (1.06), the resulting value of $233,868 is the RCN of this structure.

20. 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 a REL factor of 89 percent. This property has depreciated 11 percent (REL + depreciation = 100 percent).

21. Taking 89 percent (.89) of the RCN of $233,868 produces a full value of $208,142 for this structure today.

22. The listing also indicates that there is a 600-square-foot asphalt driveway. Reference the **Paving schedule** – the cost per square foot of asphalt paving is 4.74. To arrive at a value, take 600 SF x 4.74 = $2,844 x 1.00 (quality grade) = $1,844 x 1.06 (cost factor) = $3,015 (RCN). $3,015 (RCN) x .89 (REL) = $2,683 full value.

23. The next addition needed is a 75-square-foot wood deck with **stairs** and **railings**. Looking at the schedules for **Stoops, Decks, Patios (+)** – the base cost is 24.59 per square foot. To arrive at a value, take 75 SF x 24.59 = $1,844 x 1.00 (quality grade) = $1,844 x 1.06 (cost factor) = $1,955 (RCN). $1,955 (RCN) x .89 (REL) = $1740 full value.

24. The value for the asphalt drive ($2,683) is added to the value for the wood deck ($1,740) and this becomes the full value of the other improvements ($4,423).

25. The final step is adding $4,423, the full value of other improvements, to $208,142, the full value of the dwelling, which results in a full value of $212,565 for all buildings.

Classroom Exercises

The cost factor of 1.06, developed in Unit 2, Exercise 2-1, will be used for all four 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 you are 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 4-1 through 4-3. 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.

Exercise 4-1

Cost Factor: **1.06**

PIN: 03-10-108-011-0040

Lot Size: 80’ x 120’ **Lot Value:** $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 attached 2 car frame garage with vinyl siding – housing 5 rooms, including 2 bedrooms. There is a 25-square-foot enclosed masonry porch (EMP).

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 with vinyl siding; painted 1 ¾” doors; 1 3/8” double hung windows; 288 SF of face brick trim, grade C
Roof	Asphalt shingles over ½” plywood sheathing with 2” x 6” rafters, 24” on center (oc)
Floors	Basement – 4” concrete; 1st floor – 2” x 8” joist, 16” oc; vinyl tile and average grade carpet with pad
Interior Finish	½” drywall; pine doors and trim throughout; average grade 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 following PRC-2.

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

Exercise 4-1

PRC-2 for 03-10-108-011-0040

Occupancy

1 Vacant Lot	2 Dwelling	3 Other	4 Mobile Home	5 A.	6 Summer Home	7 Row House	8 Post Frm.	9 Log

Style/No. stories: Unit type:

Exterior Wall Construction

Stud Frame | Concrete Block | Solid Stone

Exterior Wall Cover Material

	LL	1	2	3	½	SF:
Wood (Cost Grps 1, 2, 3)						SF:
Vinyl (Cost Grp 1)						SF:
Metal (Cost Grps 1, 2)						SF:
Fiber/Comp. (Cost Grps 1, 2)						
Resin (Cost Grp 3)						
EIFS (Cost Grps 3, 6)						
Stucco (Cost Grps 3, 6)						
Paint on CC Blk (Cost Grp 3)						
Brick Veneer (Cost Grps 4, 7)						
Stone Veneer (Cost Grps 5, 8)						
Limestone Blks (Cost Grp 9)						
6-10" Logs (Log Hm Sch)						
12" Logs (Log Hm Sch)						
Other						

Partial Masonry Trim

SF: Quality: Brk.[1] Stone[2] Art.[3]

Roof

Shingle - asphalt/composite/wood	
Slate/tile	
Metal/Other	
Solar Panel	

Attic

1 None	2 Unfinished	3 Part fin.	4 Full fin.

% finished

Basement

1 Full	3 Crawl	4 Slab

Area without bsmt. SF

Heating / AC

1 None	2 Central Heat	3 Air Cond.	4 Other

Other (descr.)

Plumbing

Standard (5)	
Additional Bathroom (3)	
Additional Half bath (2)	
Additional Sink/Fixture (1)	

Living Accommodations

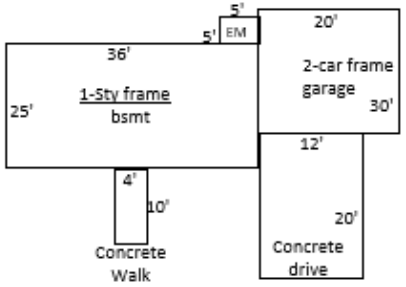
Total Rooms	Bedrooms	Family Room

Interior Finish

Finished Basement / Lower Level	Living area	SF:
	Recreation	SF:
Half Upper Sty Finished Living Area		SF:

Porches / Wood Deck

SF:	OFP	Scrn-in	Kn-Wal	EFP	OMP	EMP	2-Sty
SF:	OFP	Scrn-in	Kn-Wal	EFP	OMP	EMP	2-Sty
SF:	OFP	Scrn-in	Kn-Wal	EFP	OMP	EMP	2-Sty
	Wood deck		No Steps / No Rail				



Remodeled: NH | Sold Date: Mo. Day Yr. | Amount $ | Age: | CDU: | Adj. Age: | Grade:

Fireplaces

Type:	#	# Stacks:	Sty Hght:

Garage

Type	Cost Grp	SF	Area over Garage
Attached			Bonus Rm / Storage
Built-in			(On grade)
Basement garage		1-Car	2-Car 3-Car

Memo

Base Cost Computation

Sty	CG	%(if app.)	x Rate	x SF	= Sub-total
1/Main					$

SFLA: Total Base Cost $

Basement	+	
Heating/Central air	-	
Plumbing	+ -	
Attic	+	
Porches	+	
	+	
Attach./Built-in garage	+	
Sub-total		
Grade		x
Graded total		
Other features		
Pt. Msy Trim	+	
Fireplace	+	
Finished basement	+	
Schedule's RCN		
C x D / NH x AP		x 1.06
True replacement cost new		
Eff. Age: / Depr:	REL	x
Full Value		

Summary of Other Improvements (Detached garage, deck, patio, driveway, storage shed, etc.)

Type	No.	Constr./CG	Size	Rate	Sub-total	Grade	Factor(s)	RCN	Age	CDU	REL	Full Value
Drive	1	Concrete				C	1.06		15	Avg.		
Walk	1	Concrete				C	1.06		15	Avg.		

Listed by: Date:

Total full value other improvements

Total full value all bldgs & improvements

PRC-2 (R-11/19) (opposite PRC-1)

Exercise 4-2

Cost Factor: **1.06**

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. Each floor has 1,100 square feet. The dwelling is on a crawl, housing 8 rooms, including 4 bedrooms and a detached 1-car frame garage with wood siding. There is a 50-square-foot open frame porch (OFP) and a 100-square-foot 1-riser masonry patio.

Foundation	8” concrete block wall
Heating	Hot air heat (gas-fired) – central air conditioning
Plumbing	Standard 5 with poor-grade fixtures and galvanized iron piping
Exterior Walls	Plywood siding 4’x8’ panels 19/32”-5/8”over 2” x 4” studs, 16” oc; 1 3/8” pine doors; 1 3/8” pine double-hung windows
Roof	Asphalt shingles with 2” x 4” rafters, 24” oc with 3/8” plywood sheathing
Floors	1st & 2nd floors – 2” x 8” joist, 16” oc; poor grade tile and softwood floors
Interior Finish	3/8” plasterboard; cheap pine doors and trim throughout; poor kitchen cabinets
Miscellaneous	Poor quality electrical fixtures; lack of electrical outlets; below average workmanship; 8’ x 100’ crushed stone drive
CDU	Poor
Quality Grade	**D**

Complete the following PRC-2.

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

Exercise 4-2

PRC-2 for 04-01-406-002-0040

Occupancy

1 Vacant Lot	2 Dwelling	3 Other	4 Mobile Home	5 A.	6 Summer Home	7 Row House	8 Post Frm.	9 Log e

Style/No. stories: Unit type:

Exterior Wall Construction

Stud Frame	Concrete Block	Solid Stone

Exterior Wall Cover Material

	LL	1	2	3	½
Wood (Cost Grps 1, 2, 3)					
Vinyl (Cost Grp 1)					
Metal (Cost Grps 1, 2)					
Fiber/Comp. (Cost Grps 1, 2)					
Resin (Cost Grp 3)					
EIFS (Cost Grps 3, 6)					
Stucco (Cost Grps 3, 6)					
Paint on CC Blk (Cost Grp 3)					
Brick Veneer (Cost Grps 4, 7)					
Stone Veneer (Cost Grps 5, 8)					
Limestone Blks (Cost Grp 9)					
6-10" Logs (Log Hm Sch)					
12" Logs (Log Hm Sch)					
Other					

Partial Masonry Trim

SF: Quality: Brk.[1] Stone[2] Art.[3]

Roof

Shingle - asphalt/composite/wood	
Slate/tile	
Metal/Other	
Solar Panel	

Attic

1 None	2 Unfinished	3 Part fin.	4 Full fin.

% finished

Basement

1 Full	3 Crawl	4 Slab

Area without bsmt. SF

Heating / AC

1 None	2 Central Heat	3 Air Cond.	4 Other

Other (descr.)

Plumbing

Standard (5)	
Additional Bathroom (3)	
Additional Half bath (2)	
Additional Sink/Fixture (1)	

Living Accommodations

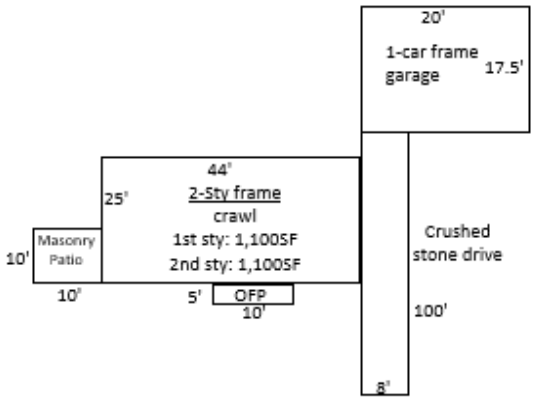
Total Rooms	Bedrooms	Family Room

Interior Finish

Finished Basement / Lower Level	Living area	SF:
	Recreation	SF:
Half Upper Sty Finished Living Area		SF:

Porches / Wood Deck

SF:	OFP	Scrn-in	Kn-Wal	EFP	OMP	EMP	2-Sty
SF:	OFP	Scrn-in	Kn-Wal	EFP	OMP	EMP	2-Sty
SF:	OFP	Scrn-in	Kn-Wal	EFP	OMP	EMP	2-Sty
SF:	Wood deck		No Steps / No Rail				



Remodeled | Sold Date: Mo. Day Yr. | Age: | Adj. Age:

NH | Amount $ | CDU: | Grade:

Fireplaces

Type:	#	# Stacks:	Sty Hght:

Garage

Type	Cost Grp	SF	Area over Garage
Attached			Bonus Rm / Storage
Built-in			(On grade)
Basement garage		1-Car 2-Car 3-Car	

Memo

Base Cost Computation

Sty	CG	% (if app.)	x Rate	x SF	= Sub-total
1/Main					

SFLA: Total Base Cost

Basement	+	
Heating/Central air	-	
Plumbing	+ -	
Attic	+	
Porches	+	
	+	
Attach./Built-in garage	+	
Sub-total		
Grade		
Graded total		
Other features		
Pt. Msy Trim	+	
Fireplace	+	
Finished basement	+	
Schedule's RCN		
C x D	x	1.06
NH x AP		
True replacement cost new		
Eff. Age: REL	x	
Depr: %		
Full Value		

Summary of Other Improvements (Detached garage, deck, patio, driveway, storage shed, etc.)

Type	No.	Constr./CG	Size	Rate	Sub-total	Grade	Factor(s)	RCN	Age	CDU	REL	Full Value
Drive	1	Crushed Stone				D	1.06		65	Poor		
Masonry Patio (1 Riser)	1	Concrete				D	1.06		65	Poor		
Detached 1-car garage	1					D	1.06		65	Poor		

Listed by: **Total full value other improvements**

Date: **Total full value all bldgs & improvements**

PRC-2 (R-11/19) (opposite PRC-1)

Exercise 4-3

Cost Factor: **1.06**

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 veneer dwelling with an attached 2-car brick veneer garage. The dwelling is on an unfinished basement, housing 6 rooms, including 3 bedrooms. The upper level has 650 square feet of finished space.

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 ¾” doors; 1 3/8” double-hung windows
Roof	2” x 6” rafters, 24” oc; 1/2” plywood sheathing and asphalt shingles
Floors	Basement – 4” concrete; 1st and 2nd floors – 2” x 8” joist 16” oc; 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; 1400 SF unfinished basement; 25’ x 5’ enclosed frame porch
CDU	Good
Quality Grade	**C**

Complete the following PRC-2.

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

Exercise 4-3

PRC-2 for 03-33-333-009-0040

Occupancy

1 Vacant Lot	2 Dwelling	3 Other	4 Mobile Home	5 A.	6 Summer Home	7 Row House	8 Post Frm.	9 Log e

Style/No. stories: Unit type:

Exterior Wall Construction

Stud Frame | Concrete Block | Solid Stone

Exterior Wall Cover Material

	LL	1	2	3	½
Wood (Cost Grps 1, 2, 3)					
Vinyl (Cost Grp 1)					
Metal (Cost Grps 1, 2)					
Fiber/Comp. (Cost Grps 1, 2)					
Resin (Cost Grp 3)					
EIFS (Cost Grps 3, 6)					
Stucco (Cost Grps 3, 6)					
Paint on CC Blk (Cost Grp 3)					
Brick Veneer (Cost Grps 4, 7)					
Stone Veneer (Cost Grps 5, 8)					
Limestone Blks (Cost Grp 9)					
6-10" Logs (Log Hm Sch)					
12" Logs (Log Hm Sch)					
Other					

Partial Masonry Trim

SF: Quality: Brk.[1] Stone[2] Art.[3]

Roof

Shingle - asphalt/composite/wood	
Slate/tile	
Metal/Other	
Solar Panel	

Attic

1 None	2 Unfinished	3 Part fin.	4 Full fin.

% finished

Basement

1 Full	3 Crawl	4 Slab

Area without bsmt. SF

Heating / AC

1 None	2 Central Heat	3 Air Cond.	4 Other

Other (descr.)

Plumbing

Standard (5)	
Additional Bathroom (3)	
Additional Half bath (2)	
Additional Sink/Fixture (1)	

Living Accommodations

Total Rooms	Bedrooms	Family Room

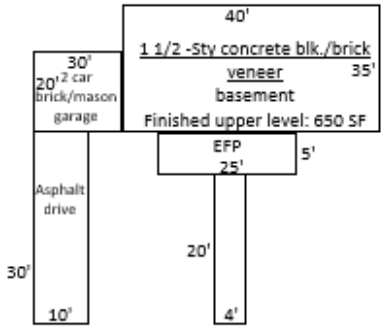
Interior Finish

Finished Basement / Lower Level — Living area SF: — Recreation SF:

Half Upper Sty Finished Living Area SF:

Porches / Wood Deck

SF:	OFP	Scrn-in	Kn-Wal	EFP	OMP	EMP	2-Sty
SF:	OFP	Scrn-in	Kn-Wal	EFP	OMP	EMP	2-Sty
SF:	OFP	Scrn-in	Kn-Wal	EFP	OMP	EMP	2-Sty
SF:	Wood deck		No Steps / No Rail				



Remodeled — Sold Date: Mo. Day Yr. — Age: — Adj. Age:

NH — Amount $ — CDU: — **Grade:**

Fireplaces

Type:	#	# Stacks:	Sty Hght:

Garage

Type	Cost Grp	SF	Area over Garage
Attached			Bonus Rm / Storage
Built-in			(On grade)
Basement garage		1-Car	2-Car 3-Car

Memo

Base Cost Computation

Sty	CG	% (if app.)	x Rate	x SF	= Sub-total
1/Main					$

SFLA: Total Base Cost $

Basement	+	
Heating/Central air	-	
Plumbing	+ -	
Attic	+	
Porches	+	
	+	
Attach./Built-in garage	+	
Sub-total		
Grade		x
Graded total		
Other features		
Pt. Msy Trim	+	
Fireplace	+	
Finished basement	+	
Schedule's RCN		
C x D		x 1.06
NH x AP		
True replacement cost new		
Eff. Age:	REL	x
Depr:		
Full Value		

Summary of Other Improvements (Detached garage, deck, patio, driveway, storage shed, etc.)

Type	No.	Constr./CG	Size	Rate	Sub-total	Grade	Factor(s)	RCN	Age	CDU	REL	Full Value
Drive	1	Asphalt				C	1.06		56	Good		
Concrete Walk	1	Concrete				C	1.06		56	Good		

Listed by: — **Total full value other improvements**

Date: — **Total full value all bldgs & improvements**

PRC-2 (R-11/19) (opposite PRC-1)

Exercise 4-4

You will encounter one residential PRC (PRC-2) on your exam that does not have any 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 4-4

Example of an examination PRC-2

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

Occupancy

1 Vacant Lot	2 Dwelling	3 Other	4 Mobile Home	5 A.	6 Summer Home	7 Row House	8 Post Frm.	9 Log
	(2)							

Style/No. stories: 1-sty Unit type:

Exterior Wall Construction

Stud Frame	(Concrete Block)	Solid Stone

Exterior Wall Cover Material

	LL	1	2	3	½
Wood (Cost Grps 1, 2, 3)					
Vinyl (Cost Grp 1)					
Metal (Cost Grps 1, 2)					
Fiber/Comp. (Cost Grps 1, 2)					
Resin (Cost Grp 3)					
EIFS (Cost Grps 3, 6)					
Stucco (Cost Grps 3, 6)					
Paint on CC Blk (Cost Grp 3)					
Brick Veneer (Cost Grps 4, (7))		X			
Stone Veneer (Cost Grps 5, 8)					
Limestone Blks (Cost Grp 9)					
6-10" Logs (Log Hm Sch)					
12" Logs (Log Hm Sch)					
Other					

Partial Masonry Trim

SF:	Quality:	Brk. [1]	Stone [2]	Art. [3]

Roof

Shingle - (asphalt/composite/wood)	X
Slate/tile	
Metal/Other	
Solar Panel	

Attic

(1) None	2 Unfinished	3 Part fin.	4 Full fin.

% finished

Basement

(1) Full	3 Crawl	(4) Slab

Area without bsmt. SF

Heating / AC

1 None	(2) Central Heat	(3) Air Cond.	4 Other

Other (descr.)

Plumbing

Standard (5)	1
Additional Bathroom (3)	1
Additional Half bath (2)	
Additional Sink/Fixture (1)	

Living Accommodations

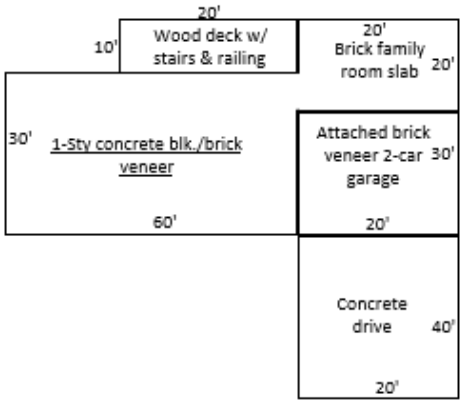
Total Rooms	Bedrooms	Family Room
7	3	1

Interior Finish

Finished Basement / Lower Level	Living area	SF:
	Recreation	SF:
Half Upper Sty Finished Living Area		SF:

Porches / Wood Deck

SF:	OFP	Scrn-in	Kn-Wal	EFP	OMP	EMP	2-Sty
SF:	OFP	Scrn-in	Kn-Wal	EFP	OMP	EMP	2-Sty
SF:	OFP	Scrn-in	Kn-Wal	EFP	OMP	EMP	2-Sty
SF:	(Wood deck)		No Steps / No Rail				



Remodeled: NH | Sold Date: Mo. Day Yr. | Amount $ | Age: 5 | CDU: Avg. | Adj. Age: | Grade: B

Fireplaces

Type:	#	# Stacks:	Sty Hght:
Masonry	1	1	1

Garage

Type	Cost Grp	SF	Area over Garage
Attached			Bonus Rm / Storage
Built-in			(On grade)
Basement garage		1-Car 2-Car 3-Car	

Memo

Base Cost Computation

Sty	CG	% (if app.)	x Rate	x SF	= Sub-total
1/Main					$

SFLA:	Total Base Cost	$
Basement	+	
Heating/Central air	-	
Plumbing	+ -	
Attic	+	
Porches	+	
	+	
Attach./Built-in garage	+	
Sub-total		
Grade		x
Graded total		
Other features		
Pt. Msy Trim	+	
Fireplace	+	
Finished basement	+	
Schedule's RCN		
C x D	x	1.06
NH x AP		
True replacement cost new		
Eff. Age: / Depr:	REL	x
Full Value		

Summary of Other Improvements (Detached garage, deck, patio, driveway, storage shed, etc.)

Type	No.	Constr./CG	Size	Rate	Sub-total	Grade	Factor(s)	RCN	Age	CDU	REL	Full Value
Drive	1	Concrete				B	1.06		5	Avg.		
Wood Deck	1					B	1.06		5	Avg.		

Listed by:

Date:

Total full value other improvements

Total full value all bldgs & improvements

PRC-2 (R-11/19) (opposite PRC-1)

Summary

Use the residential schedules to develop a replacement cost new (RCN) of a dwelling. When using the residential cost schedules, you must determine the building style and type of construction. Then use the base cost schedule to correlate the total square foot of living area with the type of exterior construction.

The base cost schedule (for the first floor) includes standard design from stock plans and average material and workmanship. The following features are included: a kitchen, water heater, one full bath, hot air heat (gas-fired), central air conditioning, asphalt/fiberglass shingles, painted drywall interior, and a slab foundation (i.e., no basement). Schedules for additional floors indicate in the heading what is considered in the base costs.

The base price includes the standard 5 plumbing fixtures. If the structure has more than the standard 5 fixtures, you must make an addition for each additional fixture. If the structure has less than the standard 5 fixtures, you must make a subtraction for each additional fixture.

Porches are not included in the base cost. If the structure has one or more porches, you must make an addition to the base price. If you have more than one porch attached to the structure, you must price each porch individually.

The base price includes a slab. If the structure has a basement or crawl, you must make an addition.

Several other features have specialized cost schedules that must be evaluated to arrive at an estimated cost. Make sure you review the full set of schedules in Appendices A and B for single-family dwellings.

Unit 4 Review Questions

1. **T or F** You need to make an adjustment if an improvement has 5 plumbing fixtures.

2. **T or F** A frame house of 1,000 square feet on a slab will not have an adjustment for a basement.

3. **T or F** All detached garages are calculated using the Summary of Other Improvements section on the PRC.

4. **T or F** The quality grade is used to determine a REL factor.

5. **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 5 – Other Residential Structures

The purpose of this unit is to give a brief understanding of residential structures, different from the single-family structures already covered in this coursework. We will cover a general understanding of these structures along with resources used for valuation, but we will not cover the full valuation of these properties.

Learning Objectives

After completing the assigned readings, you should be able to

- identify other residential structure types.
- know where to find cost schedules that are applied to these structures.
- locate costs for plumbing, basements, and air conditioning.
- reference supplemental schedules.

Terms and Concepts

- Determining tax assessment of mobile/manufactured homes
- Limited use of PRC-2 for row houses and apartment buildings

Mobile/manufactured Homes

Mobile/manufactured homes are a unique type of dwelling in terms of treatment for property tax assessment. First, you must determine whether the home is subject to Property Tax (rather than falling under other tax requirements). The determining factor is the location and the ownership of the home:

Outside a Mobile Home Park

- If the mobile home or manufactured home is outside a mobile home park and was taxed under the Mobile Home Local Services Tax Act on January 1, 2011, it continues to be taxed under that Act until the home is 1) sold, 2) transferred, or 3) relocated to another parcel outside a mobile home park. If any of these three events occur, then the mobile or manufactured home must be assessed as real property.
- If the mobile or manufactured home outside a mobile home park is assessed as real property on January 1, 2011, then it continues to be assessed as real property after January 1, 2011.
- If the mobile or manufactured home is located outside a mobile home park and is moved into a mobile home park, it is no longer assessed as real property; instead, it is taxed under the Mobile Home Local Services Tax Act.

Inside a Mobile Home Park

- If the mobile home or manufactured home is inside a mobile home park on January 1, 2011, it is taxed under the Mobile Home Local Services Tax Act.
- Though not stated specifically, it logically follows that if a mobile or manufactured home located in a mobile home park on January 1, 2011, and is relocated to a parcel outside a mobile home park, it must then be assessed as real property.

If the mobile/manufactured home is subject to Property Tax, use the following to determine the method for valuation.

Mobile/manufactured homes that meet local building codes are priced using the Single-Family Residential Cost Schedules. This is also true for manufactured homes of very good and excellent quality with comparable exterior wall cover, roofing, and drywall interior finish to site-built residences. For all others, special schedules have been developed to estimate costs more accurately.

The base cost figure represents the RCN of an average quality mobile home including setup on posts and piers, a central heating and air conditioning system, lighting, and eight standard plumbing fixtures. Given these standards, the base cost of mobile/manufactured homes is determined strictly by the dimensions of the residence. The cost of the furnishings is not included in the base price.

Additional schedules have been developed to account for features that are specific to mobile/manufactured homes. These adjustments include type of basement, material/construction of external features, and features designed to expand the living space available (tag-a-longs, tip-outs, expandos, etc.).

Mobile/manufactured homes need to have REL applied to overall value as well. For this, a dedicated REL table has been included for calculation. All metrics should be recorded on the PRC-2, as you would with regular residential dwellings.

We will briefly go through the full series of schedules, and the full set is in Appendix C.

Mobile/Manufactured Homes

Base cost per width and length includes average construction features. Costs are retail prices, including normal charges for delivery and setup on post and piers. Exteriors are either prefinished aluminum, hardboard, vinyl, or lap siding and include the northern insulation package. Interiors are a combination of hardboard, plywood paneling and drywall. Heating is forced air through insulated ducting and central air conditioning is also included. Plumbing includes kitchen, water heater, and two full baths for a total of eight fixtures. Furnishings or appliances are not included in the base costs. Skirting, patio roofs, carports, entry steps, crawl spaces, or basements should be added where applicable.

Length	Single-wide						Double/Triple-wide					
	8'	10'	12'	14'	16'	18'	20'	22'	24'	28'	32'	36'
40'	23,940	26,440	28,940	30,940	32,950	34,810	49,810	51,330	52,730	55,360	57,250	59,590
44'	25,820	28,530	31,220	33,370	35,540	37,550	52,740	54,340	55,830	58,610	60,610	63,070
48'	27,650	30,550	33,430	35,740	38,060	40,210	55,560	57,260	58,820	61,760	63,870	66,460
52'	29,460	32,540	35,610	38,070	40,550	42,840	58,320	60,110	61,750	64,820	67,040	69,770
56'	31,240	34,510	37,770	40,370	43,000	45,420	61,000	62,840	64,570	67,780	70,100	72,960
60'	33,000	36,450	39,890	42,640	45,420	47,970	63,590	65,520	67,320	70,680	73,090	76,050
64'	34,720	38,350	41,970	44,870	47,790	50,480	66,010	68,020	69,890	73,360	75,880	78,960
68'	36,420	40,240	44,030	47,070	50,140	52,960	68,570	70,660	72,590	76,200	78,810	82,010
70'	37,270	41,170	45,050	48,160	51,300	54,190	69,760	71,890	73,850	77,540	80,190	83,460
72'	38,110	42,090	46,070	49,240	52,450	55,400	70,980	73,130	75,130	78,890	81,580	84,890
76'	39,770	43,940	48,080	51,400	54,740	57,830	73,370	75,610	77,680	81,540	84,340	87,770
80'	41,420	45,750	50,070	53,520	57,010	60,220	75,630	77,930	80,060	84,070	86,940	90,460

Mobile/Manufactured Home - Basements

Add to base cost per SF of area (+)

	300 - 600	601 -1,000	1,001 - 1,500	1,501 - 2,000	2,001 - 2,500	Over 2,500
Unfinished basement	$28.54	$22.30	$19.28	$17.08	$15.59	$15.15
Crawl	$50.43 per LF					

Mobile/Manufactured Home Supplemental Schedules	
Skirting, per linear foot up to 30" height	
Metal/Vinyl vertical	$6.62
Hardwood or plywood	$9.17
Concrete block (curtain wall only, not resting on)	$35.85
Entry steps	
Metal, per step	$104
Add for metal landing	$296
Wood, per step	$147
Precast concrete	
Two steps	$314
Three steps	$489
Fiberglass, per step	$125
Patio and carport roofs	
Concrete slab for patios or carports per SF	$6.15
Patio screening for walls (attached 10'x20'), with metal roof, per SF (add to concrete slab cost)	$20.47
Fiberglass carport roof and posts, per SF (add to concrete slab cost)	$8.19
Steel carport roof and posts, 12' x 20', per SF (add to concrete slab cost)	$9.21
Aluminum carport roof and posts, 12' x 20', per SF (add to concrete slab cost)	$9.93
Central air conditioning, deduct per SF if not present	$2.55
Plumbing, add or deduct for each fixture above or below 8	$820
Tip-outs or expandos (slide-outs), per SF of area, add	$32.20
Tag-a-longs, use single wide schedule based on size of tag-a-long, less 10%	

Mobile Home REL							
Age	**REL**	**Age**	**REL**	**Age**	**REL**	**Age**	**REL**
1	.97	10	.77	19	.60	28	.44
2	.94	11	.75	20	.59	29	.42
3	.92	12	.74	21	.57	30	.40
4	.90	13	.72	22	.55	31	.38
5	.88	14	.70	23	.53	32	.37
6	.86	15	.68	24	.51	33 & over	.35
7	.84	16	.66	25	.49		
8	.81	17	.64	26	.48		
9	.79	18	.62	27	.46		

Row House Residential Structures

A row house is a residential structure that shares one or more adjacent wall(s) with a similarly constructed residential structure. Depending on ownership, a row house may be valued separately by unit or by totaling the value of all units that make up the row house structure. Regardless of valuation on a single unit of the total of all units, row house schedules should be utilized the same. The only difference will come when determining whether to total each unit together.

Similar to single-family dwellings, schedules for row houses have been updated to incorporate cost groups based on construction materials and the square footage of each floor. A distinction is made within the schedules for whether the particular unit is an end unit or an interior unit. Base cost includes standard design from stock plans, average material and workmanship, and one shared party wall. The following features are included: a kitchen, water heater, one full bath, hot air heat (gas-fired), central air conditioning, asphalt/fiberglass shingles, painted drywall interior, and a slab foundation (i.e., no basement).

All schedules were developed based on costs in Central Illinois. Local cost facts must be used to reflect local differences in replacement costs. After all adjustments have been made, the standard residential REL table should be used to arrive at an estimate of market value.

All information taken from the row house schedules should be used with PRC-2. This computation ladder acts as a guide in developing the final estimate of value.

Note: The row house schedules included in this publication may be used for structures up to three stories. For taller multi-family structures or structures in which individual housing units are located on separate story levels, use the commercial schedules found in Publication 126.

We will go briefly through the full set of schedules, and the full set can be found in Appendix C.

Row House One-Story or First Floor - END UNITS

Base cost includes standard design from stock plans, average material and workmanship, and one shared party wall. The following features are included: a kitchen, water heater, one full bath, hot air heat (gas fired), central air conditioning, asphalt/fiberglass shingles, painted drywall interior, and a slab foundation (i.e., no basement).

Total SF	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9
400	113.78	115.13	119.45	124.68	163.91	129.93	135.16	174.39	197.09
500	107.70	108.97	113.02	117.92	154.71	122.85	127.76	164.55	185.84
600	100.61	101.76	105.43	109.88	143.25	114.35	118.80	152.16	171.47
700	96.30	97.35	100.71	104.78	135.31	108.87	112.94	143.47	161.14
800	93.09	94.08	97.25	101.08	129.82	104.93	108.76	137.50	154.14
900	89.70	90.63	93.61	97.22	124.27	100.84	104.45	131.50	147.16
1,000	87.63	88.53	91.39	94.85	120.82	98.33	101.79	127.76	142.79
1,100	84.77	85.63	88.40	91.74	116.83	95.10	98.44	123.53	138.05
1,200	82.82	83.66	86.34	89.59	113.93	92.85	96.09	120.44	134.53
1,300	81.17	81.99	84.60	87.76	111.49	90.94	94.10	117.83	131.55
1,400	79.05	79.84	82.35	85.39	108.19	88.44	91.48	114.28	127.48
1,500	77.50	78.26	80.71	83.66	105.85	86.64	89.59	111.78	124.61
1,600	76.11	76.86	79.24	82.12	103.77	85.02	87.91	109.55	122.08
1,700	74.89	75.62	77.95	80.77	101.94	83.61	86.43	107.59	119.84
1,800	74.23	74.95	77.25	80.03	100.93	82.83	85.62	106.51	118.60
1,900	72.81	73.51	75.73	78.43	98.65	81.14	83.83	104.05	115.75
2,000	71.79	72.47	74.65	77.28	97.03	79.92	82.55	102.30	113.73
2,100	71.59	72.25	74.37	76.92	96.12	79.49	82.05	101.25	112.36
2,200	71.10	71.75	73.82	76.33	95.14	78.85	81.36	100.17	111.06
2,300	70.21	70.84	72.86	75.31	93.66	77.77	80.21	98.56	109.18
2,400	69.86	70.48	72.47	74.87	92.91	77.29	79.69	97.73	108.16
Over 2,400	69.12	69.73	71.70	74.08	91.94	76.47	78.85	96.71	107.04

Row House One-Story or First Floor - INTERIOR UNITS

Base cost includes standard design from stock plans, average material and workmanship, and two shared party walls. The following features are included: a kitchen, water heater, one full bath, hot air heat (gas fired), central air conditioning, asphalt/fiberglass shingles, painted drywall interior, and a slab foundation (i.e., no basement).

Total SF	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9
400	106.47	107.28	109.87	113.01	136.55	116.16	119.30	142.84	156.46
500	100.15	100.88	103.20	106.01	127.11	108.84	111.65	132.75	144.97
600	93.60	94.26	96.38	98.94	118.14	101.51	104.07	123.28	134.39
700	89.36	89.97	91.93	94.30	112.08	96.68	99.05	116.83	127.12
800	85.95	86.52	88.36	90.57	107.21	92.80	95.02	111.66	121.29
900	83.03	83.57	85.30	87.39	103.08	89.49	91.58	107.27	116.36
1,000	81.20	81.71	83.35	85.33	100.21	87.33	89.31	104.19	112.80
1,100	78.98	79.47	81.03	82.93	97.15	84.83	86.73	100.94	109.17
1,200	77.11	77.58	79.07	80.88	94.45	82.70	84.51	98.08	105.93
1,300	75.50	75.95	77.39	79.13	92.20	80.88	82.62	95.69	103.26
1,400	73.67	74.10	75.49	77.17	89.77	78.86	80.54	93.14	100.43
1,500	71.98	72.40	73.74	75.36	87.51	76.99	78.61	90.76	97.80
1,600	70.69	71.10	72.39	73.96	85.73	75.54	77.10	88.87	95.68
1,700	69.59	69.98	71.24	72.76	84.19	74.30	75.82	87.24	93.86
1,800	68.70	69.08	70.30	71.78	82.87	73.27	74.75	85.84	92.26
1,900	67.73	68.10	69.29	70.73	81.52	72.17	73.61	84.41	90.65
2,000	66.85	67.21	68.37	69.77	80.30	71.18	72.59	83.11	89.20
2,100	66.80	67.15	68.29	69.66	79.94	71.03	72.40	82.68	88.63
2,200	66.22	66.57	67.67	69.01	79.04	70.35	71.69	81.72	87.53
2,300	65.48	65.82	66.90	68.21	78.02	69.52	70.83	80.64	86.31
2,400	65.02	65.35	66.41	67.69	77.29	68.98	70.25	79.86	85.42
Over 2,400	64.32	64.64	65.68	66.94	76.35	68.20	69.45	78.87	84.32

Row House Full Upper Story - END UNITS

Use this cost schedule to separately cost each full upper floor level of units with one shared party wall. A full upper floor level has all or almost all vertical 8' or higher exterior walls. This schedule improves the cost estimate when the floor levels are different sizes. Use the "One-Story or First Floor" cost schedule for the ground floor level. Use this schedule for the second and third full story levels.

Total SF	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9
400	70.27	71.79	76.65	82.53	126.67	88.44	94.32	138.46	163.99
500	66.81	68.24	72.80	78.31	119.70	83.85	89.38	130.77	154.72
600	64.30	65.59	69.72	74.73	112.27	79.76	84.76	122.29	144.02
700	60.89	62.07	65.85	70.43	104.78	75.03	79.61	113.96	133.84
800	58.96	60.07	63.64	67.95	100.28	72.28	76.59	108.92	127.64
900	56.88	57.93	61.28	65.34	95.77	69.41	73.47	103.91	121.52
1,000	55.63	56.64	59.86	63.75	92.97	67.67	71.56	100.78	117.69
1,100	54.47	55.44	58.55	62.31	90.54	66.09	69.85	98.08	114.41
1,200	52.85	53.80	56.81	60.47	87.85	64.13	67.78	95.17	111.02
1,300	51.13	52.05	54.99	58.54	85.24	62.12	65.68	92.37	107.81
1,400	49.83	50.72	53.54	56.96	82.61	60.39	63.81	89.46	104.31
1,500	49.17	50.03	52.78	56.10	81.06	59.45	62.77	87.74	102.17
1,600	48.94	49.78	52.46	55.70	80.06	58.96	62.22	86.56	100.66
1,700	48.80	49.62	52.24	55.42	79.23	58.61	61.78	85.59	99.37
1,800	48.35	49.16	51.75	54.88	78.39	58.03	61.16	84.67	98.27
1,900	47.56	48.35	50.85	53.88	76.63	56.93	59.96	82.71	95.87
2,000	46.90	47.67	50.12	53.08	75.30	56.05	59.01	81.22	94.08
2,100	46.69	47.43	49.82	52.69	74.29	55.58	58.46	80.06	92.56
2,200	46.37	47.10	49.43	52.25	73.42	55.09	57.91	79.07	91.33
2,300	46.02	46.73	49.00	51.76	72.40	54.53	57.27	77.91	89.86
2,400	45.64	46.34	48.58	51.28	71.57	54.00	56.70	76.99	88.73
Over 2,400	45.23	45.92	48.13	50.81	70.90	53.50	56.18	76.27	87.89

Row House Full Upper Story - INTERIOR UNITS

Use this cost schedule to separately cost each full upper floor level of units with two shared party walls. A full upper floor level has all or almost all vertical 8' or higher exterior walls. This schedule improves the cost estimate when the floor levels are different sizes. Use the "One-Story or First Floor" cost schedule for the ground floor level. Use this schedule for the second and third full story levels.

Total SF	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9
400	64.59	65.50	68.42	71.95	98.43	75.49	79.02	105.51	120.83
500	61.30	62.12	64.73	67.89	91.63	71.08	74.24	97.98	111.72
600	58.73	59.47	61.86	64.74	86.34	67.63	70.51	92.12	104.62
700	56.49	57.18	59.38	62.05	82.05	64.73	67.39	87.39	98.97
800	54.81	55.45	57.52	60.01	78.73	62.52	65.01	83.73	94.57
900	53.02	53.63	55.57	57.93	75.58	60.29	62.64	80.29	90.52
1,000	51.91	52.48	54.33	56.56	73.30	58.81	61.03	77.77	87.46
1,100	50.87	51.42	53.18	55.31	71.31	57.45	59.59	75.58	84.83
1,200	49.28	49.81	51.49	53.52	68.79	55.57	57.61	72.87	81.70
1,300	47.65	48.16	49.78	51.73	66.44	53.70	55.66	70.36	78.88
1,400	46.48	46.96	48.53	50.42	64.59	52.32	54.21	68.38	76.59
1,500	45.88	46.35	47.86	49.68	63.35	51.52	53.34	67.01	74.93
1,600	45.75	46.21	47.66	49.43	62.67	51.21	52.96	66.20	73.86
1,700	45.42	45.86	47.28	48.99	61.85	50.72	52.43	65.28	72.72
1,800	44.98	45.41	46.78	48.45	60.92	50.12	51.79	64.26	71.49
1,900	44.54	44.96	46.30	47.92	60.05	49.54	51.16	63.31	70.33
2,000	43.95	44.36	45.66	47.24	59.08	48.82	50.41	62.24	69.09
2,100	43.85	44.24	45.53	47.07	58.63	48.61	50.15	61.72	68.41
2,200	43.39	43.78	45.02	46.53	57.81	48.04	49.54	60.83	67.36
2,300	43.10	43.48	44.70	46.17	57.21	47.65	49.12	60.16	66.53
2,400	42.77	43.14	44.33	45.77	56.57	47.23	48.65	59.47	65.72
Over 2,400	42.38	42.74	43.91	45.33	55.91	46.75	48.15	58.75	64.88

Row House Unfinished Half Upper Story Structure

Use this schedule to separately cost half story structural components. Structural components include higher roof pitch, dormers, floor joists, subfloor, and stairs. In this schedule, Total SF refers to the half story footprint size on the floor level below the half story. Add the actual half story finished living area cost from the separate "Half Upper Story Finished Living Area" cost schedule found on page 27.

End Units - One Gable End Wall

Total SF	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9
400	28.15	28.35	28.98	29.76	35.55	30.54	31.31	36.88	40.15
500	25.77	25.97	26.60	27.38	33.17	28.16	28.93	34.50	37.77
600	24.02	24.22	24.85	25.63	31.42	26.41	27.18	32.75	36.02
700	22.60	22.80	23.43	24.21	30.00	24.99	25.76	31.33	34.60
800	21.08	21.28	21.91	22.69	28.48	23.47	24.24	29.81	33.08
900	20.32	20.51	21.12	21.85	27.38	22.59	23.33	28.85	32.05
1,000	19.72	19.90	20.49	21.21	26.55	21.92	22.63	27.98	31.07
1,100	18.76	18.93	19.51	20.11	24.97	20.76	21.41	26.27	29.08
1,200	18.01	18.17	18.74	19.33	24.10	19.97	20.61	25.37	28.13
1,300	17.45	17.61	18.15	18.75	23.38	19.38	20.00	24.72	27.35
1,400	16.84	17.00	17.51	18.13	22.57	18.75	19.34	24.01	26.50
1,500	16.33	16.48	16.96	17.56	21.86	18.15	18.69	23.02	25.52
1,600	15.92	16.07	16.54	17.12	21.33	17.70	18.22	22.48	24.92
1,700	15.52	15.66	16.11	16.67	20.73	17.24	17.77	21.79	24.18
1,800	15.21	15.35	15.80	16.34	20.22	16.89	17.43	21.31	23.54
1,900	14.88	15.01	15.44	15.95	19.82	16.47	16.99	20.85	23.08
2,000	14.81	14.94	15.34	15.83	19.50	16.37	16.81	20.48	22.60
2,100	14.57	14.70	15.09	15.57	19.17	16.10	16.54	20.14	22.23
2,200	14.32	14.44	14.83	15.30	18.84	15.78	16.25	19.78	21.83
2,300	14.08	14.20	14.58	15.02	18.40	15.47	15.92	19.31	21.38
2,400	13.90	14.02	14.40	14.82	18.18	15.27	15.72	19.05	21.17
Over 2,400	13.89	14.00	14.37	14.80	18.09	15.24	15.68	18.97	20.89

Interior Units - No Exterior Walls

Total SF	All Groups	Total SF	All Groups
400	27.33	1,500	16.19
500	25.17	1,600	15.80
600	23.56	1,700	15.41
700	22.22	1,800	15.12
800	20.77	1,900	14.79
900	20.05	2,000	14.72
1,000	19.49	2,100	14.49
1,100	18.55	2,200	14.24
1,200	17.83	2,300	14.01
1,300	17.30	2,400	13.84
1,400	16.70	Over 2,400	13.83

Row House Basement/Foundation (+)

For finished or partially finished basements, first cost the total unfinished basement area of the unit. Then add the cost of the finished area from the applicable column in the single-family "Basement Finish" schedule (page 27) using the SF of the actual finished area.

Total SF	End Units		Interior Units	
	Crawl Space	Unfinished Basement	Crawl Space	Unfinished Basement
400	9.02	33.86	6.81	30.67
500	8.50	31.68	6.26	28.47
600	7.79	29.18	5.80	26.38
700	7.18	27.24	5.35	24.66
800	6.80	26.05	5.04	23.57
900	6.45	25.09	4.82	22.64
1,000	6.23	24.25	4.64	21.89
1,100	6.04	23.67	4.49	21.39
1,200	5.90	23.11	4.35	20.86
1,300	5.77	22.73	4.25	20.53
1,400	5.57	22.25	4.10	20.12
1,500	5.45	21.83	4.00	19.74
1,600	5.34	21.46	3.93	19.45
1,700	5.26	21.16	3.86	19.20
1,800	5.20	20.89	3.80	18.83
1,900	5.06	20.53	3.72	18.56
2,000	4.96	20.45	3.64	18.52
2,100	4.84	19.96	3.58	18.11
2,200	4.76	19.72	3.52	17.90
2,300	4.67	19.52	3.44	17.74
2,400	4.61	19.28	3.39	17.52
Over 2,400	4.57	19.21	3.36	17.40

Apartment Schedules

The schedules in Pub-126 are based on construction costs in central Illinois. The values given are also based on construction using average-quality materials and workmanship. As discussed in Unit 3, there are various factors that can be applied to adjust these publications to reflect the values in various jurisdictions.

Pub-126 has been developed for estimating the RCN of apartment buildings of six or more units per structure. The RCN of apartments of less than six units per structure should be estimated using Pub-123.

The PRC-4 is used to value commercial structures and apartment structures of six or more units. The left portion of the card is used for listing construction specifications. Construction specifications include foundation, framing, floors, exterior wall construction, finish, heat, air conditioning, roofing, plumbing, and use. The computation column on the right side of the card is used to value the property.

Apartments have a specific set of schedules that must be used for valuing. Similar to other residential structures, these start with base cost schedules, and then adjustments are made based on specific features. Apartments are covered more thoroughly in the commercial course and will not be covered in-depth here.

Summary

There are three types of residential homes, other than single-family dwellings, that should be priced based on unique schedules or a combination of schedules. Apartments are the most unique of these three and have additional dedicated publications for pricing. Publication 126, Instructions for Commercial and Industrial Cost Schedules, has been developed to estimate the RCN of apartment buildings of more than six units. The RCN of apartments of six or fewer units is estimated using Publication 123, Instructions for Residential Schedules.

Mobile/manufactured homes and row houses utilize the PRC-2, while apartments utilize the PRC-4. These tools assist you in walking through the calculation to arrive at the estimated market value of the residential structure. It is important to recall that each base cost has its own set of standards that must be adjusted (based on features) from supplemental schedules.

Unit 5 Review Questions

1. **T or F** All mobile/manufactured homes are assessed as real property with no bearing on where they are located.

2. **T or F** Only row houses up to 3 stories should utilize the schedules indicated as row house schedules.

3. **T or F** Apartment buildings of six or more units can be calculated on the PRC-2.

Unit 6 – Using the Sales Comparison, or Market Approach, to Arrive at Value

This unit covers the sales comparison, or market approach, to arrive at value.

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

- explain the formula for sales comparison or market approach.
- make the necessary market adjustments to the comparables.
- select the property that is more comparable to the subject property.

Terms and Concepts

- Sales Comparison or Market Approach

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 usefulness.

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.

Three to five comparable properties must be used when conducting a sales comparison study. Generally, you will choose the one best property that has the fewest number of adjustments, NOT the one that has the lowest dollar amount of adjustments. The time adjustment does not count toward the total number of adjustments.

Remember

Comparable is **SUPERIOR = SUBTRACT** from the comp's sales price

Comparable is **INFERIOR = INCREASE, or ADD** to the comp's sales price

Prior to comparing the subject property, an appraiser must first identify recent sales of similar properties. For this process, the appraiser will identify all comparable sales in the area and compare their features in order to determine the features of the homes. See the table and steps on the following pages to walk through a sales study.

Exercise 6 - Together

	Sale Price	Months since sale	Foundation	Plumbing Fixtures	Bedrooms	Garage (# of stalls)	AC
Comp 1	$125,000	0	Basement	5	3	1	yes
Comp 2	$122,500	0	Slab	5	3	1	yes
Comp 3	$122,000	6	Basement	5	3	1	yes
Comp 4	$126,000	0	Basement	5	4	1	yes
Comp 5	$131,000	0	Basement	5	4	2	yes
Comp 6	$123,500	3	Slab	8	4	1	yes
Comp 7	$125,000	3	Basement	8	3	1	yes
Comp 8	$118,000	6	Slab	5	3	1	no

Step 1

Analyze the information shown to determine common and variable features. Note the features of the comparable properties and identify features that are the same as and that differ from the subject property.

Step 2

Compare the values associated with the various features.

Step 3

Determine values for the adjustments.

1. A home with a basement is worth $_____ more than a home with a slab foundation.

   Hint: Look at Comps 1 and 2. All other variables are equal, such as plumbing fixtures, garage stalls, etc.

2. A home that was sold 6 months ago is worth $_____ (per month) less than a sale that just occurred.

   Hint: Look at Comps 1 and 3.

3. Based on the above sales, each extra bedroom is worth $_____ more than a home with fewer bedrooms.

   Hint: Look at Comps 1 and 4.

4. A home with a higher number of garage stalls is worth $_____ (per stall) more than a sale with fewer.

   Hint: Look at Comps 4 and 5.

5. A home with additional plumbing fixtures is worth $_____ (per fixture) more than a home with the standard 5 fixtures.

   Hint: Comps 3 and 7 can be used to determine this value. Make sure to adjust for the months since sale difference prior to calculating fixtures difference.

6. A home with AC is worth $_____ more than a home without AC.

   Hint: Look at Comps 2 and 8. Make sure to adjust for the months since sale difference prior to calculating fixtures difference.

Now that you have identified the features and associated values of comparable sales, you must now use that information to consider the correct assessment value for your subject property. Let's review the grid below to see how this information is utilized.

Exercise 6 – Together (2)

	Subject Property	Comp 1	Comp 2	Comp 3
Sale Price		$135,500	$128,000	$139,000
Number of months since sale	0	5 **+$2500**	4 **+$2000**	3 **+$1500**
Adjusted sale price		**$138,000**	**$130,000**	**$140,500**
Foundation	Basement	Basement $0	Slab **+$2500**	Basement $0
Number of plumbing fixtures	8	5 **+1,500**	7 **+$500**	8 $0
Number of bedrooms	3	3 $0	4 **-$1,000**	4 **-$1,000**
Garage (# of stalls)	2	1 **+$5,000**	1 **+$5,000**	2 $0
Central air conditioning	Yes	No **+$1500**	Yes $0	Yes $0
Number of fireplaces	0	1 **-$1200**	0 **$0**	2 **-$2400**
Location adjustment	Good	Inferior **+4%** **+$5,520**	Inferior **+2%** **+$2,600**	Superior **-3%** **-$4,215**
Lot size adjustment	Average	Average $0	Average $0	Superior -2% **-$2,810**
Net adjustment		**$12,320**	**$9,600**	**-$10,425**
Total number of adjustments		**5**	**5**	**4**
Final adjusted sale price (adj. sale price + net adj.)		**$150,320**	**$139,600**	**$130,075**

Let’s review Comparable 1 of this grid.

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 $135,500 is added to $2,500 for an adjusted sale price of $138,000.

Basement Adjustment
Comparable 1 is built with a full basement, which matches our subject property. No adjustment is necessary.

Plumbing Adjustment
Comparable 1 has 5 plumbing fixtures; our subject property has 8 fixtures. It was determined that each additional feature is worth $500. Multiply $500 by the additional 3 features. A plumbing adjustment of + $1,500 is necessary.

Bedroom Adjustment
Comparable 1 has 3 bedrooms; our subject property has 3 bedrooms. No adjustment is necessary.

Garage Adjustment
Comparable 1 has a 1-car garage; our subject property has a 2-car garage. It was determined that each additional stall is worth $5,000. A garage adjustment of + $5,000 is necessary.

Central Air Conditioning Adjustment
Comparable 1 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
Comparable 1 has 1 fireplace; our subject has 0 fireplace. A home with a fireplace is considered to be superior, so a - $1,200 adjustment is necessary.

Location Adjustment
Comparable 1 is an inferior location. The adjusted sales price of $138,000 is multiplied by the location adjustment of + 4% (138,000 X .04), resulting in an adjustment of + $5,520.

Lot Size Adjustment
Comparable 1 has a lot that is average in size, the same as our subject property. No adjustment is necessary.

The final step is to determine what the net adjustment is for Comparable 1. 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 or subtracted from the adjusted sales price, which produces an indication of value for the subject property.

The net adjustment for Comparable 1 is + $12,320. This is added to the adjusted sale price of $138,000, resulting in an adjusted sales price of $150,320.

Following the steps outlined above, the data for the remaining Comparables has been completed. When determining which comparable to use for our subject property assessment, the **total number of adjustments** is the most important factor. Comparables 1 and 2 both have 5 adjustments, and Comparable 3 has only 4. Because of this, Comparable 3's **final adjusted sale price** of **$130,075** best represents the value of our subject property.

Use the information you have learned in the exercises we have just completed in order to perform your own sales comparisons in the following.

Exercise 6-1

	Sale Price	Months since sale	Foundation	Plumbing Fixtures	Bedrooms	Garage (# of stalls)	AC	Fireplaces	Location Description	Lot size
Comp 1	$125,000	0	Basement	5	4	1	yes	1	Corner	1 acre
Comp 2	$124,000	0	Basement	5	3	1	yes	1	Corner	1 acre
Comp 3	$122,000	6	Basement	5	4	1	yes	1	Corner	1 acre
Comp 4	$129,000	0	Basement	5	3	2	yes	1	Corner	1 acre
Comp 5	$130,000	0	Basement	5	4	1	yes	1	Interior	1 acre
Comp 6	$126,000	3	Slab	5	4	1	yes	1	Interior	1 acre
Comp 7	$119,800	9	Basement	8	3	1	yes	0	Corner	1 acre
Comp 8	$127,500	12	Slab	7	4	2	yes	1	Interior	1 acre
Comp 9	$129,500	12	Slab	7	4	2	yes	1	Interior	1.5 acre
Comp 10	$128,000	12	Slab	7	4	2	no	1	Interior	1.5 acre
Comp 11	$127,500	3	Slab	8	4	1	yes	1	Interior	1 acre
Comp 12	$121,000	9	Basement	8	3	1	yes	1	Corner	1 acre

Step 1

Analyze the information shown to determine common and variable features. Note the features of the comparable properties, and identify features that are the same as and that differ from the subject property.

Step 2

Compare the values associated with the various features.

Step 3

Determine values for the adjustments.

1. Based on the above sales, each extra bedroom is worth $_____ more than a home with fewer bedrooms.

   Hint: By comparing Comp 1 and Comp 2, note that all other variables are equal, such as foundation, garage stalls, etc. The only variable is the number of rooms. Therefore, by comparing the sale price, we could arrive at a value of $1,000 for each bedroom.

2. A home that was sold 6 months ago is worth $_____ (per month) less than a sale that just occurred.

3. A home with a higher number of garage stalls is worth $_____ (per stall) more than a sale with fewer.

4. A home with an interior location is worth $_____ more than a corner location.

5. A home with a basement is worth $_____ more than a home with a slab foundation.

6. A home with additional plumbing fixtures is worth $_____ (per fixture) more than a home with the standard 5 fixtures.

7. A home with AC is worth $_____ more than a home without AC.

8. A home with at least 1 fireplace is worth $_____ (per fireplace) more than a home without a fireplace.

9. A home with extra lot acreage is worth $_____ (per additional half acre) more than a sale on a one-acre lot.

After determining the appropriate values for the variables, you could then use this information to adjust any of the properties you needed to value. Let's apply the values that we just determined to work the following exercise.

Exercise 6-2:

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 represented in the first column of the table. Use the adjustment values you determined in the last exercise to apply appropriate adjustments.

The 5 sales listed in the following exercise were selected as the most comparable to the subject property. The market data for each property is indicated on the grid.

The first comparable is 1306 Archer.

Using the grid that follows, 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 slab. A basement is considered to be superior to a slab; 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 are considered to be inferior to 4 bedrooms, so an adjustment of + $1,000 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 interior lot. Since both features are the same, no adjustment is necessary.

Lot Size Adjustment
1306 Archer has a one-acre lot. Since both features are the same, no adjustment is necessary.

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 or subtracted from the adjusted sales price, which produces an indication of value for the subject property.

The net adjustment for Comparable 1 is + $0. This does not change the value of the adjusted sale price of $77,500, so that is our final adjusted sales price.

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.

Adjustments:
Slab: +$0; Basement: -$2,500
Plumbing: +/- $500 per fixture
No Central Air: +$1,500
Location: +$5,000 if corner
Bedrooms: +/- $1,000
Garage: None = +$5,000, larger = -$5,000
Fireplace: +/- $1,200
Lot: +/-$2,000 per half acre

	Subject Property	Comp 1 1306 Archer	Comp 2 814 Adams	Comp 3 1414 State	Comp 4 6607 Healey	Comp 5 1209 Monroe
Sale Price		$75,000	$63,000	$69,500	$62,800	$59,700
Number of months since sale	0	5	4	3	5	12
Adjusted sale price						
Foundation	Slab	Basement	Slab	Basement	Basement	Slab
Number of plumbing fixtures	5	5	7	8	7	5
Number of bedrooms	4	3	4	4	3	3
Garage (# of stalls)	1	1	1	2	1	1
Central air conditioning	Yes	No	Yes	Yes	No	Yes
Number of fireplaces	1	1	0	2	1	0
Location adjustment	Interior	Interior	Interior	Corner	Interior	Corner
Lot size adjustment	1 acre	1 acre	1 acre	1.5 acre	1.5 acre	1.5 acre
Net adjustment						
Total number of adjustments						
Final adjusted sale price (adj. sale price + net adj.)						

Write the adjusted sales price and the number of adjustments for each sale.

	Final Adj. Sales Price	**No. of Adj.**
Comparable 1	_____	_____
Comparable 2	_____	_____
Comparable 3	_____	_____
Comparable 4	_____	_____
Comparable 5	_____	_____

After making all of the necessary adjustments and calculations, study the grid to determine the sale 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 be the median value of the 5 comparables.

Summary

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 6 Review Questions

1. **T or F** When using the sales comparison, or market approach, one never adjusts the subject property.

2. **T or F** Make a minus adjustment to your comparable property if it is inferior to your subject property.

3. **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.

4. **T or F** Three to five sales are recommended when using the sales comparison, or market approach, to value property.

5. **T or F** The property most comparable to the subject is the comparable with the least number of adjustments.

Unit 6 Review Problem

Use the Sales Comparison Approach to arrive at a value for the subject property.

The subject property contains:
4 bedrooms, 2 bathrooms, air conditioning, 2 car garage

The adjustments are:

$1,200 per bathroom fixture
$2,000 per bedroom variance
$6,000 per garage variance
Time adjustment of +$500
No A/C $5,000
Location adjustment is 5%

Address	Sale 1	Sale 2	Sale 3	Sale 4	Sale 5
Sale Price	$115,700	$103,800	$100,500	$113,600	$112,100
Number of months since sale ($500/mo)	2	12	4	3	6
Adjusted sale price					
Number of bathrooms	2	1 ½	1	2	1 ½
Number of bedrooms	4	3	3	4	4
Garage (# of stalls)	1	1	2	2	1
Central air conditioning	Yes	Yes	No	No	Yes
Location adjustment	Inferior	Comparable	Superior	Comparable	Inferior
Net adjustment					
Total number of adjustments					
Final adjusted Sale Price (Adj. sale price + net adj.)					

The value the assessor would place on the property is: _____

The most comparable property is: _____

Answer the following questions:

a. The adjustment for bedrooms for Sale #2 is: _____
b. The time adjustment for Sale #5 is: _____
c. The adjustment for bathroom fixtures for Sale #4 is: _____
d. The location adjustment for Sale #1 is: _____
e. The adjustment for air conditioning for Sale #3 is: _____
f. The final adjusted sale price for Sale #2 is: _____
g. The adjustment for garages for Sale #5 is: _____

Unit 7 – Land Valuation

This unit covers land valuation using the sales comparison, or market approach method.

The purpose of this unit is to provide a basic understanding of calculating land values using the sales comparison, or market approach method.

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.
- apply the sales comparison, or market approach method, to value land.

Terms and Concepts

- Front foot value
- Square foot value
- Site value
- Corner lot influence

Land Valuation

The assessor is responsible for placing a value on both land and improvements for each parcel of property located in the jurisdiction. 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

1. **Legal** – Use complies with zoning laws, not unlawful, *etc.*
2. **Probable or physically possible** – Use is reasonable, not speculative.
3. **Economically feasible** – Use is in demand and profitable.

Land and site have different meanings. Land is considered to be raw land without amenities, such as streets and utilities. A 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.

When valuing rural residential land, the sales comparison, or market approach, is the most appropriate approach to value.

Corner Lots

An adjustment may also need to be made for corner lots. Corner influence factors should be developed by using actual market transactions. As with all other factors and tables, they must be localized, or extracted from the local market, to be of benefit in a particular jurisdiction. In some markets, a corner lot may bring less than an interior lot because of greater traffic and the possibility of paying higher special assessments based on frontage. In many markets, there is no corner influence factor.

Exercise 7-1 (together)

Site	Sales Price	Sale Date	Size	Location	Physical Features
1	$25,000	Current	100 x 250	Interior	Level, trees
2	$26,500	Current	100 x 250	Corner	Level, trees
3	$24,000	Current	100 x 250	Interior	Rolling, trees
4	$22,500	1 Year Ago	100 x 250	Interior	Rolling, trees
5	$24,000	Current	100 x 250	Corner	Level, no trees

Complete the comparisons on the next page.

Step 1

Analyze the information shown to determine common and variable features. Note which lots have like sale dates, locations, and physical features, such as level, rolling, trees, and no trees.

Step 2

Compare the values associated with the various features.

Step 3

Determine values for the adjustments.

1. Based on the above sales, a site that sold today is worth $_____ more than a site that sold a year ago.

   Hint: By comparing Sites 3 and 4, note that all other variables are equal, such as rolling, with trees, and interior locations. The only variables are the dates of the sales. Therefore, by comparing the values, we could arrive at a value for time adjustment of $1,500.

2. A site that is on rolling terrain is worth $_____ less than a site on level terrain.

   Hint: Look at Sites 1 and 3.

3. A site that has trees is worth $_____ more than a site without trees.

   Hint: Remember that you want to look at sites whose features match except for the physical feature of trees.

   Sites _____ and _____

4. A corner site is worth $_____ more than an interior site.

   Hint: Sites _____ and _____

Exercise 7-2: Sales Comparison or Market Approach

As discussed in Unit 6, when using the sales comparison, or market approach to value, the assessor 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. Adjustments to the comparable sales may be necessary for the time of sale, the location of the property, the physical features of the property, such as flat, rolling, trees, *etc.,* condition, desirability, and usefulness.

Use the **sales comparison, or market approach,** to appraise the six lots as follows, based on the indicated market values of the eight recent lot sales listed in Part 1. Using the sales information for these eight lots, determine whether there are any factors, such as view, corner influence, and topography, that impact the lot's valuation for each of the six lots. The site unit of comparison is the most appropriate unit of value.

Use the worksheet that follows for this exercise.

Step 1

The first sale is identified by the PIN.

05	21	101	003
Area	Section	Block	Parcel

Block number 101 indicates the block where the parcel is located. The parcel number 003 indicates the parcel within block 101. Identify this parcel by writing the sale price on the map where the parcel is located. The sale price for parcel 003, in block 101, is $43,000.

Write the sale price on each of the seven remaining parcels listed in Part 1 of the worksheet to identify the location and sale price on the map.

Step 2

Determine a value for the six lots listed in Part 2 of the worksheet based on recent sales information. The first lot is identified by the PIN

05	21	101	005
Area	Section	Block	Parcel

Block number 101 indicates the block where the parcel is located. The parcel number 005 indicates the parcel within block 101 you need to value. Parcel 003 in block 101 sold recently for $43,000. The sale is recent, and the location is similar to this lot; therefore, you can support a similar value of $43,000 for parcel 005.

Step 3

The next lot is identified by the PIN

05	21	102	013
Area	Section	Block	Parcel

Parcels 012 and 014, in block 102, recently sold for $42,500. The sales are recent, and each of the sales is located adjacent to this lot. You can support a similar value of $42,500 based on comparing these recent sales to parcel 013.

Step 4

The next lot to appraise is identified by the PIN

05	21	105	001
Area	Section	Block	Parcel

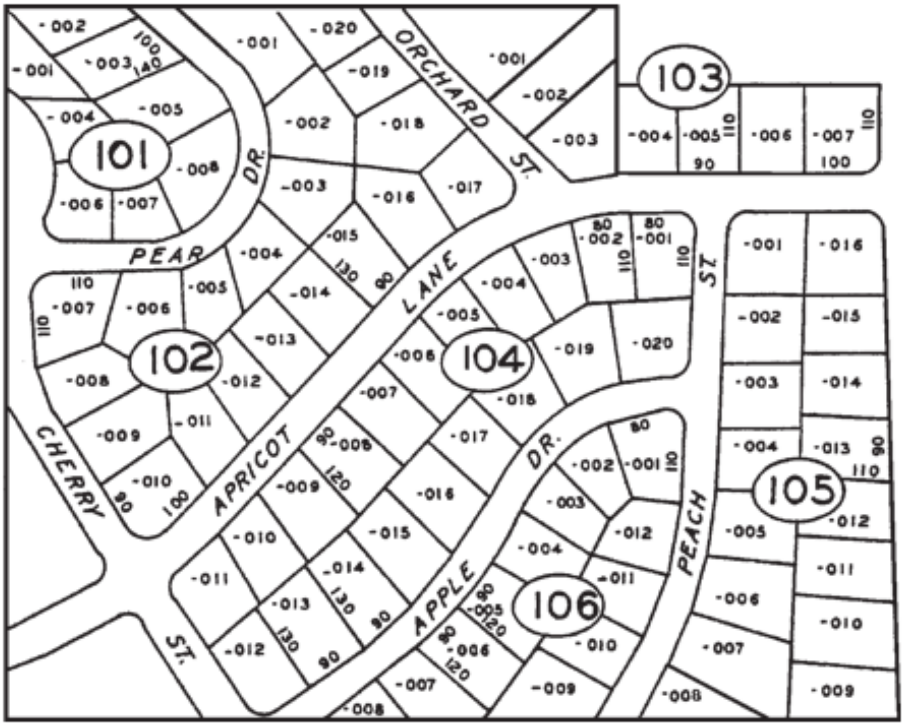
The recent sales information indicates that parcel 001, in block 104, and parcel 001, in block 106, have sold for $45,000. Based on a sales comparison of these lots to the subject lot, you can support a similar value of $45,000.

The indicated site value for interior lots on this portion of the land value map regardless of frontage or depth, is approximately $42,500 — $43,000. Further analysis of the market indicates that corner lots are selling for approximately $2,000 — $2,500 more than interior lots, regardless of size.

Step 5

Complete the three remaining sales comparisons for this subdivision.

Exercise 7-2 Worksheet: Sales Comparison or Market Approach



You are appraising lots in a subdivision that began development five years ago. All of the lots are level with mature trees. The area surrounding the subdivision is wooded and undeveloped. Based on the eight lots that have sold recently, what is the indicated value of the lots you are appraising?

Part 1: Recent Sales in the Subdivision

Write each sale price on the applicable parcel.

05-21-101-003	$43,000	05-21-104-007	$43,000
05-21-102-012	$42,500	05-21-104-001	$45,000
05-21-102-014	$42,500	05-21-104-010	$43,000
05-21-103-004	$43,000	05-21-106-001	$45,000

Part 2: Write the indicated value of these lots.

05-21-101-005	$_____	05-21-105-001	$_____
05-21-102-013	$_____	05-21-105-007	$_____
05-21-104-014	$_____	05-21-106-010	$_____

Exercise 7-3: Demonstration of Adjustments from Market Analysis

In the previous exercise, it was noted that the lots were all level with mature trees, the areas surrounding the lots were wooded and undeveloped, and the sales were all recent. No adjustments were necessary to arrive at a value.

In this exercise, by using the sales comparison, or market approach, method, you will determine the value of adjustments that would be needed to adjust the comparables to the subject property.

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, sites 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 listed 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	$19,000	Current	75 x 200	Interior	Level, trees
2	$18,500	Current	75 x 200	Corner	Level, trees
3	$20,000	Current	75 x 200	Interior	Rolling, trees
4	$19,000	1 Year Ago	75 x 200	Interior	Rolling, trees
5	$18,000	Current	75 x 200	Interior	Level, no trees
6	$16,500	1 Year Ago	75 x 200	Corner	Level, no trees
7	$17,500	Current	75 x 200	Corner	Level, no trees

Step 1

Analyze the information shown to determine common and variable features. Note which lots have like sale dates, locations, and physical features, such as level, rolling, trees, no trees.

Step 2

Compare the values associated with the various features.

Step 3

Determine values for the adjustments.

1. Based on the above sales, a site that sold today is worth $_____ more than a site that sold a year ago.

   Hint: By comparing Sites 3 and 4, note that all other variables are equal, such as rolling, with trees, and interior locations. The only variables are the dates of the sales. Therefore, by comparing the values, we could arrive at a value for time adjustment of $1,000.

2. A site that is on rolling terrain is worth $_____ more than a site on level terrain.

   Hint: Look at Sites 1 and 3.

3. A site that has trees is worth $_____ more than a site without trees.

   Hint: Remember that you want to look at sites whose features match except for the physical feature of trees.

   Sites _____ and _____ & Sites _____ and _____

4. An interior site is worth $_____ more than a corner site.

   Hint: Sites _____ and _____ & Sites _____ and _____

After determining the appropriate values for the variables, you could then use this information to adjust any of the properties you needed to value.

Use the values established previously to make the necessary adjustments to the comparables listed below. Use the sales comparison, or market approach, method to arrive at a value for our subject property.

The subject property is a 75 x 200 foot lot. It is an interior lot with level terrain and nice trees.

Comparable 1 sold one year ago for $35,000. It is an interior lot with rolling terrain and nice trees.

Comparable 2 sold recently for $35,500. It is a corner lot with level terrain and nice trees.

Comparable 3 sold one year ago for $35,000. It is an interior lot with rolling terrain and no trees.

1. Write the adjusted value for Comparable 1. $_____
2. Write the adjusted value for Comparable 2. $_____
3. Write the adjusted value for Comparable 3. $_____
4. Based on the three sales provided, what is the value for the subject property?

   $_____

Summary

The assessor is responsible for determining the value of both the land and the improvements 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**.

In the sales comparison, or market approach to value, the assessor arrives at a value for the subject property by comparing it to similar properties that have sold.

Unit 7 Review Questions

1. When valuing residential land in rural areas, the

   _____ or _____

   approach to value is the best method to use.

2. List three adjustments that may be necessary to determine a value when comparing property that has sold.

   a. _____

   b. _____

   c. _____

3. Does the location of a property on a corner affect the value?

   _____

Exam Preparation

Examination Information

- The exam consists of 50 multiple choice questions.
- Each question is worth an equal number of points when the exam is graded.
- There is only one best answer for each question on the examination.
- Two hours are allotted for the completion of the exam.
- The exam is closed book. All class materials, papers, computers, and cellular devices must be removed from the table before taking the exam.
- Cellular phones may not be used as calculators.

Test-Taking Strategies

- Read each question thoroughly and choose the one best answer provided.
- Review the answer sheet for any skipped answers or multiple answers for the same question.
- Tips for taking a multiple-choice exam:
    - Some test-takers prefer to answer questions that they are confident in the answers first and choose to skip over harder questions or questions that involve mathematical calculations. If this is done, be sure to complete the correct answer on the answer sheet for the questions being answered. The answer sheets are graded by hand, so question numbers may be circled so that they can be easily identified during the second pass through the exam.
    - Be mindful of the time allotted. If a question is taking a lot of time to answer, move past it and come back to it at a later time.
    - Guessing an answer is better than leaving it blank if time becomes an issue.

Appendix A – Base Cost Schedules for Single-Family Residential Structures

One-Story or First Floor									
Base cost includes standard design from stock plans and average material and workmanship. The following features are included: a kitchen, water heater, one full bath, hot air heat (gas fired), central air conditioning, asphalt/fiberglass shingles, painted drywall interior, and a slab foundation (i.e., no basement).									
Total SF	**Group 1**	**Group 2**	**Group 3**	**Group 4**	**Group 5**	**Group 6**	**Group 7**	**Group 8**	**Group 9**
600	106.93	108.55	113.73	120.05	167.05	126.31	132.57	179.62	206.85
700	101.93	103.40	108.09	113.82	156.38	119.48	125.15	167.77	192.43
800	99.44	100.82	105.22	110.59	150.49	115.89	121.21	161.16	184.28
900	95.72	97.02	101.20	106.29	144.12	111.32	116.36	154.24	176.16
1,000	93.92	95.18	99.20	104.11	140.54	108.94	113.81	150.29	171.41
1,100	91.11	92.33	96.22	100.98	136.28	105.67	110.38	145.72	166.18
1,200	88.97	90.16	93.98	98.64	133.21	103.23	107.84	142.46	162.50
1,300	87.22	88.38	92.11	96.66	130.41	101.14	105.64	139.44	159.01
1,400	84.74	85.85	89.42	93.77	126.06	98.06	102.37	134.70	153.42
1,500	82.69	83.78	87.26	91.52	123.07	95.70	99.92	131.52	149.81
1,600	81.20	82.27	85.68	89.85	120.76	93.95	98.07	129.03	146.95
1,700	80.11	81.16	84.53	88.65	119.14	92.69	96.76	127.31	144.99
1,800	79.38	80.42	83.74	87.82	117.95	91.81	95.83	126.01	143.48
1,900	77.77	78.78	82.01	85.96	115.20	89.83	93.74	123.03	139.98
2,000	76.76	77.74	80.88	84.73	113.17	88.50	92.29	120.79	137.28
2,100	76.25	77.21	80.27	84.02	111.74	87.69	91.39	119.16	135.23
2,200	75.59	76.52	79.51	83.17	110.24	86.76	90.37	117.48	133.18
2,300	74.58	75.49	78.41	82.00	108.46	85.50	89.03	115.55	130.89
2,400	74.14	75.03	77.89	81.40	107.32	84.83	88.29	114.26	129.29
2,500	73.36	74.25	77.10	80.60	106.44	84.02	87.47	113.35	128.34
2,600	72.78	73.67	76.51	80.00	105.76	83.41	86.85	112.66	127.60
2,700	72.54	73.43	76.26	79.74	105.44	83.14	86.57	112.31	127.21
2,800	72.26	73.14	75.97	79.44	105.08	82.84	86.26	111.94	126.80
2,900	72.12	73.00	75.82	79.29	104.86	82.67	86.08	111.71	126.53
3,000	71.93	72.81	75.63	79.08	104.60	82.46	85.86	111.43	126.23
3,100	71.44	72.32	75.13	78.58	104.04	81.95	85.35	110.86	125.63
3,200	71.22	72.09	74.87	78.28	103.44	81.60	84.96	110.18	124.77
3,300	70.72	71.58	74.34	77.72	102.69	81.02	84.36	109.37	123.85
3,400	70.40	71.26	73.99	77.35	102.13	80.63	83.93	108.76	123.13
3,500	70.09	70.94	73.65	76.99	101.59	80.24	83.53	108.18	122.45
3,600	70.06	70.90	73.60	76.91	101.35	80.14	83.41	107.89	122.06
Over 3,600	70.04	70.88	73.56	76.85	101.13	80.06	83.30	107.63	121.71

Unfinished Half Upper Story Structure

Use this schedule to separately cost half story structural components. Structural components included are higher roof pitch, dormers, floor joists, subfloor, and stairs. In this schedule, **Total SF** refers to the half story footprint size on the floor level below the half story. Add the actual half story finished living area cost from the separate Half Upper Story Finished Living Area cost schedule.

Total SF	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9
400	29.24	29.74	31.34	33.14	47.71	35.19	37.12	51.58	58.61
500	26.60	27.10	28.70	30.50	45.07	32.55	34.48	48.94	55.97
600	24.70	25.20	26.80	28.60	43.17	30.65	32.58	47.04	54.07
700	23.19	23.69	25.29	27.09	41.66	29.14	31.07	45.53	52.56
800	22.06	22.56	24.16	25.96	40.53	28.01	29.94	44.40	51.43
900	21.22	21.70	23.22	25.06	38.89	26.91	28.76	42.58	50.59
1,000	20.54	21.00	22.47	24.24	37.57	26.03	27.80	41.13	47.84
1,100	19.51	19.93	21.26	22.88	34.99	24.50	26.11	38.22	45.23
1,200	18.74	19.15	20.46	22.04	33.94	23.64	25.22	37.11	44.00
1,300	18.13	18.56	19.83	21.60	33.09	22.80	24.53	36.03	43.15
1,400	17.48	17.88	19.16	20.70	32.30	22.05	23.80	34.88	42.10
1,500	16.93	17.31	18.50	19.94	30.76	21.39	23.05	33.65	39.91
1,600	16.50	16.87	18.03	19.49	30.27	20.84	22.38	33.15	38.99
1,700	16.07	16.43	17.54	18.89	29.03	20.25	21.60	32.04	38.02
1,800	15.75	16.10	17.18	18.58	28.76	19.84	21.15	31.48	37.38
1,900	15.39	15.72	16.78	18.07	27.72	19.36	20.65	30.29	35.88
2,000	15.30	15.62	16.63	17.85	27.01	19.07	20.30	29.46	34.76
2,100	15.04	15.35	16.35	17.61	26.85	18.74	19.94	28.94	34.17
2,200	14.77	15.07	16.05	17.22	26.04	18.40	19.58	28.40	33.51
2,300	14.52	14.81	15.78	16.86	25.30	18.00	19.12	27.85	32.44
2,400	14.33	14.61	15.57	16.71	25.28	17.77	18.87	27.35	31.99
2,500	14.31	14.59	15.50	16.60	24.82	17.70	18.79	27.02	31.78
2,600	14.11	14.38	15.25	16.31	24.22	17.37	18.42	26.33	30.91
2,700	13.93	14.28	15.03	16.05	23.66	17.07	18.08	25.70	30.40
2,800	13.87	14.16	15.00	15.95	23.51	17.01	18.01	25.55	30.07
2,900	13.80	14.06	14.90	15.88	23.30	16.88	17.88	25.37	29.70
3,000	13.64	13.96	14.80	15.71	22.95	16.70	17.70	24.88	29.07
3,100	13.59	13.91	14.75	15.60	22.60	16.65	17.65	24.65	28.65
3,200	13.54	13.81	14.65	15.54	22.44	16.55	17.55	24.55	28.55
3,300	13.47	13.72	14.56	15.39	22.33	16.46	17.46	24.46	28.46
3,400	13.43	13.67	14.51	15.28	22.01	16.41	17.41	24.41	28.41
3,500	13.39	13.63	14.47	15.19	21.73	16.37	17.37	24.37	28.37
3,600	13.35	13.61	14.45	15.12	21.48	16.35	17.35	24.35	28.35
3,700	13.30	13.57	14.41	15.07	21.42	16.31	17.31	24.31	28.31
3,800	13.26	13.52	14.36	15.02	21.37	16.26	17.26	24.26	28.26
3,900	13.23	13.50	14.34	14.96	21.30	16.24	17.24	24.24	28.24
4,000	13.20	13.46	14.30	14.90	21.20	16.20	17.20	24.20	28.20
Over 4,000	13.10	13.36	14.20	14.82	21.00	16.10	17.10	24.10	28.10

Full Upper Story

Use this cost schedule to separately cost each full upper floor level. A full upper floor level has all or almost all vertical 8' or higher exterior walls. This schedule improves the cost estimate when the floor levels are different sizes. Use the "One-Story or First Floor" cost schedule for the ground floor level. Use this schedule for the second and third full story levels.

Total SF	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9
400	76.46	78.34	84.36	91.68	146.22	98.94	106.22	160.81	192.41
500	73.36	75.12	80.75	87.62	138.70	94.42	101.23	152.36	181.95
600	70.49	72.11	77.29	83.61	130.61	89.87	96.13	143.18	170.41
700	66.03	67.50	72.19	77.92	120.48	83.58	89.25	131.87	156.53
800	63.37	64.75	69.15	74.52	114.42	79.82	85.14	125.09	148.21
900	60.78	62.08	66.26	71.35	109.18	76.38	81.42	119.30	141.22
1,000	59.49	60.75	64.77	69.68	106.11	74.51	79.38	115.86	136.98
1,100	58.31	59.53	63.42	68.18	103.48	72.87	77.58	112.92	133.38
1,200	56.71	57.90	61.72	66.38	100.95	70.97	75.58	110.20	130.24
1,300	55.87	57.03	60.76	65.31	99.06	69.79	74.29	108.09	127.66
1,400	54.72	55.83	59.40	63.75	96.04	68.04	72.35	104.68	123.40
1,500	53.69	54.78	58.26	62.52	94.07	66.70	70.92	102.52	120.81
1,600	53.39	54.46	57.87	62.04	92.95	66.14	70.26	101.22	119.14
1,700	53.23	54.28	57.65	61.77	92.26	65.81	69.88	100.43	118.11
1,800	52.53	53.57	56.89	60.97	91.10	64.96	68.98	99.16	116.63
1,900	51.68	52.69	55.92	59.87	89.11	63.74	67.65	96.94	113.89
2,000	51.15	52.13	55.27	59.12	87.56	62.89	66.68	95.18	111.67
2,100	50.88	51.84	54.90	58.65	86.37	62.32	66.02	93.79	109.86
2,200	50.12	51.05	54.04	57.70	84.77	61.29	64.90	92.01	107.71
2,300	50.10	51.01	53.93	57.52	83.98	61.02	64.55	91.07	106.41
2,400	49.49	50.38	53.24	56.75	82.67	60.18	63.64	89.61	104.64
2,500	49.09	49.98	52.83	56.33	82.17	59.75	63.20	89.08	104.07
2,600	48.98	49.87	52.71	56.20	81.96	59.61	63.05	88.86	103.80
2,700	48.86	49.80	52.58	56.06	81.76	59.47	62.90	88.64	103.54
2,800	48.75	49.63	52.46	55.93	81.57	59.33	62.75	88.43	103.29
2,900	48.66	49.54	52.36	55.83	81.40	59.21	62.62	88.25	103.07
3,000	48.58	49.46	52.27	55.73	81.25	59.11	62.51	88.08	102.88
3,100	48.50	49.38	52.19	55.64	81.10	59.01	62.41	87.92	102.69
3,200	48.35	49.22	52.00	55.41	80.57	58.73	62.09	87.31	101.90
3,300	48.17	49.03	51.79	55.17	80.14	58.47	61.81	86.82	101.30
3,400	48.06	48.92	51.65	55.01	79.79	58.29	61.59	86.42	100.79
3,500	47.92	48.77	51.48	54.82	79.42	58.07	61.36	86.01	100.28
3,600	47.82	48.67	51.36	54.67	79.23	57.90	61.29	85.77	99.94
3,700	47.72	48.56	51.24	54.53	78.81	57.74	60.98	85.31	99.39
3,800	47.66	48.49	51.16	54.43	78.63	57.62	60.91	85.09	99.08
3,900	47.60	48.42	51.08	54.33	78.45	57.50	60.84	84.88	98.79
4,000	47.54	48.36	51.00	54.23	78.08	57.38	60.57	84.47	98.30
Over 4,000	47.46	48.28	50.90	54.11	77.84	57.25	60.42	84.19	97.95

Half Upper Story Finished Living Area (+)

Use this schedule to separately cost the actual existing half story finished living area. Costs included are ceiling structure, knee walls, partitions, doors, wall, ceiling and floor finish, electrical, heating, and air conditioning.

Total SF	Cost per Finished SF
Below 800	46.30
800	45.81
900	43.77
1,000	41.08
1,100	40.09
1,200	38.48
1,300	37.38
1,400	37.00
1,500	36.44
1,600	35.98
1,700	35.91
1,800	35.74
1,900	35.03
2,000	34.37
2,100	34.20
2,200	33.53
2,300	33.27
2,400	32.85
Over 2,400	32.50

In this schedule, **Total SF** refers to the total actual existing half story finished living area size. To determine the total half upper story cost, add the finished living area cost to the cost that was obtained from the Unfinished Half Upper Story Structure cost schedule.

Unfinished Lower Level

Use this schedule to separately cost the lower level of a bi-level or split-level home. Cost the main floor from the "One-Story or First Floor" schedule. The lower level is like a basement, except that it is 42" out of the ground, has exterior cover, and has windows. **Total SF** refers to the area of the footprint of the lower level. Add the actual lower level finished living area cost from the basement finish column of the separate Basement/Foundation schedule.

Total SF	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9
400	40.61	41.27	43.41	46.00	65.41	48.60	51.18	70.60	81.83
500	37.92	38.55	40.55	42.97	61.15	45.41	47.83	66.01	76.53
600	35.16	35.74	37.58	39.81	56.54	42.05	44.28	61.01	70.69
700	32.75	33.28	34.95	36.96	52.11	38.99	41.01	56.16	64.93
800	31.48	31.97	33.54	35.43	49.63	37.33	39.23	53.43	61.65
900	30.18	30.64	32.13	33.92	47.39	35.73	37.52	50.99	58.78
1,000	29.22	29.67	31.10	32.83	45.80	34.56	36.29	49.27	56.77
1,100	28.64	29.08	30.46	32.13	44.70	33.82	35.49	48.06	55.33
1,200	27.99	28.41	29.77	31.41	43.72	33.06	34.70	47.01	54.13
1,300	27.43	27.84	29.17	30.77	42.79	32.38	33.98	46.00	52.95
1,400	26.70	27.09	28.36	29.89	41.39	31.43	32.96	44.46	51.12
1,500	26.15	26.54	27.78	29.27	40.51	30.78	32.28	43.51	50.02
1,600	25.70	26.08	27.29	28.76	39.77	30.23	31.70	42.71	49.08
1,700	25.47	25.85	27.05	28.49	39.35	29.95	31.40	42.26	48.54
1,800	25.09	25.46	26.64	28.07	38.81	29.51	30.94	41.67	47.88
1,900	24.65	25.01	26.16	27.54	37.96	28.94	30.33	40.74	46.77
2,000	24.55	24.90	26.02	27.37	37.50	28.73	30.08	40.21	46.07
2,100	24.01	24.35	25.44	26.75	36.63	28.07	29.39	39.26	44.98
2,200	23.69	24.02	25.08	26.36	36.01	27.66	28.94	38.58	44.16
2,300	23.43	23.76	24.80	26.05	35.48	27.32	28.57	38.00	43.46
2,400	23.13	23.44	24.46	25.69	34.92	26.93	28.16	37.39	42.73
2,500	23.06	23.38	24.39	25.62	34.82	26.85	28.08	37.28	42.61
2,600	22.99	23.31	24.32	25.54	34.72	26.77	27.99	37.17	42.48
2,700	22.88	23.19	24.20	25.42	34.57	26.65	27.87	37.02	42.32
2,800	22.84	23.15	24.16	25.37	34.50	26.60	27.81	36.94	42.23
2,900	22.78	23.10	24.10	25.31	34.42	26.53	27.75	36.86	42.13
3,000	22.74	23.05	24.06	25.27	34.36	26.48	27.70	36.79	42.05
3,100	22.62	22.93	23.93	25.14	34.21	26.36	27.56	36.64	41.89
3,200	22.50	22.81	23.80	24.99	33.96	26.19	27.39	36.35	41.54
3,300	22.37	22.68	23.66	24.84	33.74	26.04	27.22	36.12	41.26
3,400	22.30	22.60	23.57	24.75	33.58	25.93	27.11	35.94	41.05
3,500	22.19	22.49	23.46	24.62	33.39	25.80	26.97	35.73	40.81
3,600	22.08	22.38	23.34	24.50	33.21	25.67	26.83	35.53	40.57
Over 3,600	22.02	22.32	23.27	24.42	33.07	25.58	26.73	35.38	40.39

Post Frame Homes

Base cost includes a kitchen, water heater, one full bath, gas-fired hot air heat, central air conditioning, painted drywall on stud partition interior walls, and no basement. Exterior walls are frequently metal, but can be any material not requiring a concrete foundation for support such as brick or stone. Roof cover is frequently metal, but can also be 3-tab fiberglass or asphalt shingles. If masonry trim or veneer exists, it must be costed separately with a foundation. If a post frame home has a brick or stone exterior, use the traditional residential schedules for costing. Use the regular half story and attic schedules where these exist in post frame homes.

Total SF	One-story/First Floor Post Frame		
	Group 1	Group 2	Group 3
400	114.84	116.72	122.74
500	108.19	109.95	115.58
600	101.44	103.06	108.24
700	96.85	98.32	103.01
800	94.08	95.44	99.81
900	91.59	92.91	97.15
1,000	89.16	90.42	94.44
1,100	86.55	87.77	91.66
1,200	84.51	85.70	89.52
1,300	82.78	83.94	87.67
1,400	80.50	81.61	85.18
1,500	78.59	79.68	83.16
1,600	77.17	78.24	81.65
1,700	76.17	77.22	80.59
1,800	75.47	76.51	79.83
1,900	73.97	74.98	78.21
2,000	73.07	74.05	77.19
2,100	72.61	73.57	76.63
2,200	72.03	72.96	75.95
2,300	71.11	72.02	74.94
2,400	70.70	71.59	74.45
2,500	69.96	70.85	73.70
2,600	69.41	70.30	73.14
2,700	69.20	70.09	72.92
2,800	68.92	69.80	72.63
2,900	68.81	69.69	72.51
3,000	68.64	69.52	72.34
3,100	68.18	69.06	71.87
3,200	67.97	68.84	71.62
3,300	67.51	68.37	71.13
3,400	67.07	67.93	70.66
3,500	66.78	67.63	70.34
3,600	66.42	67.27	69.97
3,700	66.39	67.23	69.91
3,800	66.13	66.96	69.63
3,900	65.88	66.71	69.36
4,000	65.59	66.41	69.05
Over 4,000	65.26	66.08	68.70

Total SF	Full Upper Story Post Frame		
	Group 1	Group 2	Group 3
400	76.17	78.05	84.07
500	73.13	74.89	80.52
600	70.33	71.95	77.13
700	65.96	67.43	72.12
800	63.30	64.66	69.03
900	60.98	62.30	66.54
1,000	59.56	60.82	64.84
1,100	58.40	59.62	63.51
1,200	56.83	58.02	61.84
1,300	56.01	57.17	60.90
1,400	54.88	55.99	59.56
1,500	53.87	54.96	58.44
1,600	53.59	54.66	58.07
1,700	53.43	54.48	57.85
1,800	52.75	53.79	57.11
1,900	51.91	52.92	56.15
2,000	51.40	52.38	55.52
2,100	51.14	52.10	55.16
2,200	50.40	51.33	54.32
2,300	50.38	51.29	54.21
2,400	49.78	50.67	53.53
2,500	49.39	50.28	53.13
2,600	49.28	50.17	53.01
2,700	49.17	50.05	52.89
2,800	49.06	49.94	52.77
2,900	48.97	49.85	52.67
3,000	48.89	49.77	52.58
3,100	48.81	49.69	52.50
3,200	48.67	49.54	52.32
3,300	48.48	49.34	52.10
3,400	48.24	49.10	51.83
3,500	48.12	48.97	51.68
3,600	48.04	48.89	51.59
3,700	47.81	48.65	51.33
3,800	47.71	48.54	51.21
3,900	47.61	48.44	51.09
4,000	47.32	48.14	50.78
Over 4,000	47.25	48.07	50.69

Log Homes

Base cost includes standard design from stock plans and average material and workmanship. The following features are included: post & beam frame, log exterior walls, a kitchen, water heater, one full bath, hot air heat (gas fired), central air conditioning, asphalt/fiberglass shingles, painted drywall interior, and a slab foundation (i.e., no basement).

* For half story, add cost per SF for existing finished living area from the Half Upper Story Finished Living Area schedule.

Total SF	One-Story or First Floor		Unfinished Half Story*		Full Upper Story	
	6-10" Logs	12" Logs	6-10" Logs	12" Logs	6-10" Logs	12" Logs
400	165.91	170.99	39.20	40.32	121.74	126.82
500	156.65	161.41	35.93	36.98	115.77	120.53
600	145.95	150.33	33.28	34.25	109.51	113.89
700	137.27	141.24	30.96	31.84	101.37	105.34
800	132.57	136.29	29.35	30.17	96.50	100.22
900	127.13	130.66	28.13	28.91	92.19	95.72
1,000	124.18	127.58	27.20	27.95	89.75	93.15
1,100	120.43	123.72	25.96	26.68	87.63	90.92
1,200	117.68	120.91	25.06	25.77	85.42	88.65
1,300	115.25	118.40	24.30	24.99	83.90	87.05
1,400	111.56	114.57	23.38	24.04	81.54	84.55
1,500	108.90	111.84	22.70	23.34	79.90	82.84
1,600	106.88	109.76	22.15	22.78	79.07	81.95
1,700	105.45	108.29	21.64	22.27	78.57	81.41
1,800	104.41	107.22	21.26	21.87	77.56	80.37
1,900	102.07	104.79	20.74	21.33	75.98	78.70
2,000	100.39	103.05	20.50	21.08	74.78	77.44
2,100	99.28	101.87	20.11	20.68	73.91	76.50
2,200	98.08	100.60	19.72	20.27	72.61	75.13
2,300	96.57	99.04	19.36	19.90	72.09	74.56
2,400	95.68	98.09	19.07	19.60	71.03	73.44
2,500	94.83	97.24	19.03	19.56	70.56	72.97
2,600	94.19	96.59	18.82	19.35	70.39	72.79
2,700	93.89	96.29	18.63	19.16	70.22	72.61
2,800	93.56	95.95	18.55	19.08	70.05	72.44
2,900	93.37	95.75	18.48	19.00	69.91	72.29
3,000	93.13	95.51	18.30	18.83	69.78	72.16
3,100	92.60	94.98	18.22	18.74	69.66	72.04
3,200	92.13	94.48	18.14	18.66	69.26	71.61
3,300	91.47	93.80	18.11	18.62	68.92	71.25
3,400	90.99	93.30	17.94	18.45	68.65	70.96
3,500	90.54	92.83	17.79	18.29	68.37	70.66
3,600	90.34	92.62	17.75	18.25	68.25	70.53
3,700	90.15	92.42	17.71	18.21	67.90	70.16
3,800	89.97	92.22	17.67	18.17	67.78	70.03
3,900	89.84	92.08	17.61	18.11	67.57	69.81
4,000	89.72	91.95	17.56	18.05	67.36	69.59
Over 4,000	89.23	91.44	17.44	17.92	67.18	69.39

Appendix B – Adjustment Schedules for Single-Family Residential Structures

Plumbing (+/-)	
Plumbing cost per fixture; add or deduct for each fixture above or below the residential standard five fixtures.	$930

Paving (+)	
Crushed stone, 6"	$1.17/SF
Concrete, 6" with wire mesh, no base	$6.15/SF
Asphalt, 2" with 4" base	$4.74/SF

No Central Air Conditioning Schedule (-)

Subtract per SF cost for any dwelling with no central air conditioning. For mobile homes, see Mobile Home Supplemental Schedules for rate.

Total SF of Living Area	Deduct per SF
Up to 400	9.52
600	7.02
800	4.17
1,000	3.34
1,200	2.78
Over 1,200	2.55

No Heat Schedule (-)

Subtract per SF cost for any dwelling type with no heat.

Total SF of Living Area	Deduct per SF
Up to 1,000	5.95
1,200	5.74
1,400	5.37
1,600	5.01
1,800	4.72
Over 1,800	4.60

Fireplace (+)			
Type	1-Story	2-Story	3-Story
Masonry 5' base brick fireplace & stack	5,500	6,100	6,700
Second masonry fireplace on same stack	4,600	5,000	5,400
Pre-fab metal wood burning fireplace	2,100	2,500	3,000
Second Pre-fab metal fireplace on same stack	1,000	1,400	1,800

Basement/Foundation (+)

For finished or partially finished basements, first cost the total unfinished basement area. Then add the cost of the finished area from the applicable "Basement Finish" column using the SF of the actual finished area.

Split-level & Bi-level: see Unfinished Lower Level schedule to first determine the unfinished cost. Then add the cost of the actual finished area using the "Basement Finish" rates.

Total SF	Crawl Space	Unfinished Bsmt	Basement Finish	
			Living Area Quality	Rec Room Quality
400	11.26	37.20	33.25	17.12
500	10.57	34.71	32.50	16.71
600	9.81	32.11	31.74	15.89
700	8.99	29.86	30.64	15.23
800	8.50	28.68	30.44	14.83
900	8.12	27.45	29.47	14.52
1,000	7.85	26.54	29.02	14.31
1,100	7.64	26.05	28.57	14.14
1,200	7.50	25.47	28.12	14.03
1,300	7.35	25.04	27.67	13.91
1,400	7.08	24.45	27.24	13.69
1,500	6.94	24.00	26.73	13.58
1,600	6.83	23.60	26.62	13.53
1,700	6.76	23.39	26.39	13.50
1,800	6.69	23.02	26.13	13.44
1,900	6.53	22.61	25.71	13.31
2,000	6.38	22.54	25.42	13.18
2,100	6.25	22.02	25.34	13.07
2,200	6.14	21.72	25.26	12.99
2,300	6.03	21.49	25.13	12.89
2,400	5.93	21.20	25.01	12.85
2,500	5.91	21.14	24.83	12.82
2,600	5.89	21.07	24.65	12.80
2,700	5.88	20.96	24.59	12.78
2,800	5.87	20.92	24.53	12.77
2,900	5.86	20.87	24.48	12.75
3,000	5.85	20.83	24.45	12.74
3,100	5.84	20.71	24.43	12.72
3,200	5.79	20.60	24.37	12.69
3,300	5.75	20.48	24.33	12.68
3,400	5.72	20.41	24.30	12.65
3,500	5.68	20.31	24.27	12.62
3,600	5.65	20.21	24.25	12.60
Over 3,600	5.62	20.15	24.23	12.57

Garages

The cost of a garage is not included in the base residence cost. The garage costs include wall surfaces, roof surfaces when applicable, a concrete floor, doors, and electric lighting. Total SF refers to the actual square footage of the garage. Determine the applicable Group column by the exterior wall construction and cover material of the garage.

Attached Garages

Attached garages share one or more common wall(s) with the residence and costs include interior finish for only the common wall(s).

Total SF	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9
200	39.40	41.05	46.33	52.72	100.66	59.14	65.53	113.47	141.21
250	37.58	39.03	43.64	49.23	91.18	54.85	60.44	102.38	126.66
300	35.75	37.06	41.24	46.29	84.24	51.38	56.44	94.38	116.35
350	33.92	35.16	39.12	43.91	79.86	48.73	53.51	89.47	110.28
400	31.89	33.00	36.55	40.84	73.05	45.16	49.45	81.65	100.29
450	31.17	32.27	35.79	40.05	72.01	44.33	48.59	80.55	99.04
500	30.25	31.32	34.76	38.91	70.07	43.08	47.23	78.39	96.42
550	29.33	30.34	33.58	37.50	66.92	41.44	45.36	74.78	91.80
600	29.11	30.07	33.15	36.88	64.84	40.63	44.35	72.31	88.50
650	28.64	29.58	32.64	36.33	64.00	40.05	43.72	71.40	87.42
700	28.17	29.11	32.13	35.78	63.17	39.45	43.10	70.49	86.34
800	27.87	28.70	31.34	34.53	58.50	37.74	40.93	64.90	78.77
1,000	27.27	27.98	30.26	33.01	53.69	35.78	38.54	59.21	71.17
1,200	25.62	26.27	28.36	30.89	49.87	33.43	35.96	54.94	65.92
1,500	25.22	25.85	27.85	30.27	48.45	32.71	35.13	53.30	63.82

Built-in Garages

Built-in garages have areas of the residence that are both adjacent to and above the garage.

Total SF	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9
200	43.18	44.32	47.95	52.34	85.29	56.75	61.14	94.10	113.18
250	39.58	40.51	43.48	47.07	74.03	50.68	54.28	81.24	96.84
300	38.53	39.32	41.85	44.91	67.88	47.99	51.05	74.02	87.31
350	37.34	38.06	40.37	43.17	64.14	45.98	48.77	69.74	81.88
400	35.10	35.69	37.59	39.89	57.11	42.20	44.49	61.72	71.69
450	34.38	34.96	36.84	39.10	56.07	41.37	43.63	60.61	70.44
500	33.42	33.98	35.76	37.92	54.09	40.08	42.24	58.42	67.78
550	32.90	33.44	35.18	37.29	53.09	39.41	41.51	57.31	66.45
600	32.47	33.00	34.71	36.77	52.25	38.85	40.91	56.39	65.35
650	32.16	32.69	34.42	36.39	51.62	38.44	40.45	55.69	64.50
700	31.86	32.38	34.03	36.02	51.00	38.03	40.02	55.00	63.68
800	31.11	31.52	32.84	34.44	46.42	36.05	37.64	49.63	56.56

Garages - continued

Detached Garages

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

Total SF	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9
200	47.39	50.08	58.66	69.03	146.93	79.47	89.85	167.75	212.82
250	42.58	44.93	52.46	61.56	129.87	70.71	79.81	148.12	187.65
300	39.33	41.46	48.28	56.53	118.45	64.83	73.08	135.00	170.83
350	38.99	40.97	47.28	54.92	112.28	62.61	70.25	127.60	160.79
400	35.36	37.01	42.29	48.68	96.62	55.10	61.49	109.42	137.17
450	33.88	35.46	40.52	46.64	92.58	52.80	58.92	104.86	131.44
500	32.69	34.22	39.10	45.01	89.35	50.95	56.86	101.20	126.86
600	29.83	31.33	36.13	41.94	85.52	47.78	53.58	97.16	122.38
700	28.71	30.19	34.92	40.64	83.58	46.39	52.12	95.06	119.91
800	28.68	30.08	34.54	39.95	80.51	45.38	50.79	91.35	114.82
1,000	26.69	28.16	32.88	38.58	80.00	44.32	49.77	91.02	112.50
1,200	25.89	27.33	31.96	37.54	79.49	43.16	48.75	90.70	110.21
1,500	25.04	26.30	30.32	35.19	71.75	40.09	44.96	81.51	102.67
1,800	24.25	25.44	29.23	33.82	68.28	38.44	43.03	77.48	97.42

Basement Garages

Add lump sum to unfinished basement or lower level costs: **1 car:** $3,100 **2 car:** $4,200 **3 car:** $5,600

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 upper story of the residence and price the garage as a built-in. If minimal finish, like a bonus room, use 65% of the garage SF cost. If storage only with high-pitched gable roof, add 30% to the garage cost to cover roof and floor costs.

Attic (+)			
Use the attic footprint SF on the floor level below the attic.			
Total SF	**Unfinished**	**1/2 Finished**	**Finished**
400	12.37	22.85	33.33
600	10.30	20.77	31.24
800	9.49	19.28	29.07
1,000	8.76	17.60	26.45
1,200	8.25	16.63	25.01
1,400	7.90	16.02	24.13
1,600	7.63	15.57	23.52
1,800	7.42	15.39	23.36
2,000	7.23	14.92	22.62
2,200	7.09	14.62	22.15
2,400	6.97	14.38	21.80
2,600	6.86	14.16	21.50
2,800	6.78	14.12	21.44
3,000	6.70	14.07	21.40
3,200	6.64	13.96	21.36
3,400	6.58	13.92	21.32
3,600	6.56	13.90	21.28
3,800	6.54	13.88	21.24
4,000	6.52	13.87	21.22

Partial Masonry Trim (+)				
Per SF of surface area				
Quality	**A**	**B**	**C**	**D**
Brick	19.07	15.51	12.71	10.42
Stone	51.45	41.85	34.30	28.13
Artificial stone	24.68	20.07	16.45	13.49

Porches (+)						
SFGA	Open Frame	Screened-in Frame	Knee Wall with Glass	Solid Wall Encl. Frame	Open Masonry	Enclosed Masonry
25	65.60	90.94	113.24	100.08	77.36	147.60
50	45.92	62.82	80.12	70.80	52.14	102.28
75	39.36	53.44	69.06	61.03	43.25	86.68
100	36.04	48.71	63.51	56.12	38.75	78.84
125	34.74	45.89	57.98	51.42	37.30	73.30
150	32.68	42.54	53.43	47.59	35.92	66.65
175	31.35	40.52	50.91	45.43	34.01	62.93
200	30.22	38.67	48.37	43.30	32.44	59.24
225	29.46	37.53	46.98	42.12	31.35	57.17
250	28.75	36.35	45.35	40.75	30.98	54.80
275	28.40	35.62	44.00	39.62	30.62	53.85
300	28.05	34.89	42.86	38.67	30.27	52.97
350	27.76	34.16	41.11	37.20	29.92	50.18
375	27.39	33.59	40.40	36.61	29.56	49.06
400	27.06	33.08	39.78	36.08	29.04	48.08
500	25.78	31.27	37.00	33.60	28.23	45.26
600	24.54	29.47	34.50	31.45	26.88	42.07
700	23.68	28.21	32.73	29.92	25.93	39.81
800	22.85	27.07	31.42	28.79	24.71	37.79
900	22.39	26.38	30.41	27.92	24.23	36.53
1,000	21.87	25.67	29.62	27.24	23.45	35.27

Stoops, Decks, Patios (+)					
Total SF	Stoop - Masonry Elevated		Deck - Wood Elevated		
	1 Riser	2 Risers	Steps & Rail	No Steps (-)	No Rail (-)
25	31.52	42.64	36.55	10.72	10.91
50	22.34	28.28	27.58	5.36	7.30
75	19.28	23.51	24.59	3.57	6.08
100	17.74	21.11	23.07	2.68	5.47
125	16.36	19.15	21.88	2.14	4.81
150	15.27	17.64	20.96	1.79	4.25
175	14.63	16.74	20.42	1.53	3.96
200	14.03	15.91	19.90	1.34	3.64
225	13.68	15.40	19.60	1.19	3.48
250	13.29	14.87	19.28	1.07	3.28
275	12.97	14.44	19.01	0.97	3.11
300	12.70	14.07	18.79	0.89	2.97
350	12.29	13.51	18.45	0.77	2.76
375	12.12	13.28	18.31	0.71	2.67
400	11.97	13.08	18.19	0.67	2.60
500	11.53	12.48	17.83	0.54	2.37
600	11.10	11.93	17.49	0.45	2.12
700	10.79	11.53	17.26	0.38	1.95
800	10.56	11.23	17.08	0.34	1.82
900	10.38	11.00	16.94	0.30	1.72
1,000	10.24	10.81	16.83	0.27	1.64
Patio - concrete..... $6.15 per SF			**Patio - brick in sand**..... $12.90 per SF		

Residential Pools in ground (+)		
Cost includes excavation, filtering system, chlorinator, pump, ladder, and 3' concrete apron 4" thick around pool. Price permanent type above-ground pools at 40% of vinyl liner cost.		
SFSA	Gunite/Concrete	Vinyl Liner
300	22,000	18,000
450	28,100	23,000
525	30,800	25,200
650	35,000	28,600
800	39,600	32,400
1,000	45,300	37,100
Note: Prices in this schedule represent pool costs. The extent to which a pool may enhance an individual property's market value is determined by the area or subdivision in which it is located. In certain areas, the presence of a swimming pool may even diminish the market value.		

Pool Heaters (+)	
Gas	
155 MBH	2,500
190 MBH	3,000
500 MBH	7,500
Electric	
15KW	3,000
24KW	4,500
54KW	5,000

Appendix C – Base Cost and Adjustment Schedules for Other Residential Structures

Mobile/manufactured home schedules

Mobile/Manufactured Homes												
Base cost per width and length includes average construction features. Costs are retail prices, including normal charges for delivery and setup on post and piers. Exteriors are either prefinished aluminum, hardboard, vinyl, or lap siding and include the northern insulation package. Interiors are a combination of hardboard, plywood paneling and drywall. Heating is forced air through insulated ducting and central air conditioning is also included. Plumbing includes kitchen, water heater, and two full baths for a total of eight fixtures. Furnishings or appliances are not included in the base costs. Skirting, patio roofs, carports, entry steps, crawl spaces, or basements should be added where applicable.												
Length	**Single-wide**						**Double/Triple-wide**					
	8'	**10'**	**12'**	**14'**	**16'**	**18'**	**20'**	**22'**	**24'**	**28'**	**32'**	**36'**
40'	23,940	26,440	28,940	30,940	32,950	34,810	49,810	51,330	52,730	55,360	57,250	59,590
44'	25,820	28,530	31,220	33,370	35,540	37,550	52,740	54,340	55,830	58,610	60,610	63,070
48'	27,650	30,550	33,430	35,740	38,060	40,210	55,560	57,260	58,820	61,760	63,870	66,460
52'	29,460	32,540	35,610	38,070	40,550	42,840	58,320	60,110	61,750	64,820	67,040	69,770
56'	31,240	34,510	37,770	40,370	43,000	45,420	61,000	62,840	64,570	67,780	70,100	72,960
60'	33,000	36,450	39,890	42,640	45,420	47,970	63,590	65,520	67,320	70,680	73,090	76,050
64'	34,720	38,350	41,970	44,870	47,790	50,480	66,010	68,020	69,890	73,360	75,880	78,960
68'	36,420	40,240	44,030	47,070	50,140	52,960	68,570	70,660	72,590	76,200	78,810	82,010
70'	37,270	41,170	45,050	48,160	51,300	54,190	69,760	71,890	73,850	77,540	80,190	83,460
72'	38,110	42,090	46,070	49,240	52,450	55,400	70,980	73,130	75,130	78,890	81,580	84,890
76'	39,770	43,940	48,080	51,400	54,740	57,830	73,370	75,610	77,680	81,540	84,340	87,770
80'	41,420	45,750	50,070	53,520	57,010	60,220	75,630	77,930	80,060	84,070	86,940	90,460

Mobile/Manufactured Home - Basements						
Add to base cost per SF of area (+)						
Unfinished basement	**300 - 600**	**601 -1,000**	**1,001 - 1,500**	**1,501 - 2,000**	**2,001 - 2,500**	**Over 2,500**
	$28.54	$22.30	$19.28	$17.08	$15.59	$15.15
Crawl	$50.43 per LF					

Mobile/Manufactured Home Supplemental Schedules	
Skirting, per linear foot up to 30" height	
Metal/Vinyl vertical	$6.62
Hardwood or plywood	$9.17
Concrete block (curtain wall only, not resting on)	$35.85
Entry steps	
Metal, per step	$104
Add for metal landing	$296
Wood, per step	$147
Precast concrete	
Two steps	$314
Three steps	$489
Fiberglass, per step	$125
Patio and carport roofs	
Concrete slab for patios or carports per SF	$6.15
Patio screening for walls (attached 10'x20'), with metal roof, per SF (add to concrete slab cost)	$20.47
Fiberglass carport roof and posts, per SF (add to concrete slab cost)	$8.19
Steel carport roof and posts, 12' x 20', per SF (add to concrete slab cost)	$9.21
Aluminum carport roof and posts, 12' x 20', per SF (add to concrete slab cost)	$9.93
Central air conditioning, deduct per SF if not present	$2.55
Plumbing, add or deduct for each fixture above or below 8	$820
Tip-outs or expandos (slide-outs), per SF of area, add	$32.20
Tag-a-longs, use single wide schedule based on size of tag-a-long, less 10%	

Mobile Home REL							
Age	**REL**	**Age**	**REL**	**Age**	**REL**	**Age**	**REL**
1	.97	10	.77	19	.60	28	.44
2	.94	11	.75	20	.59	29	.42
3	.92	12	.74	21	.57	30	.40
4	.90	13	.72	22	.55	31	.38
5	.88	14	.70	23	.53	32	.37
6	.86	15	.68	24	.51	33 & over	.35
7	.84	16	.66	25	.49		
8	.81	17	.64	26	.48		
9	.79	18	.62	27	.46		

Row house schedules

Row House One-Story or First Floor - END UNITS									
Base cost includes standard design from stock plans, average material and workmanship, and one shared party wall. The following features are included: a kitchen, water heater, one full bath, hot air heat (gas fired), central air conditioning, asphalt/fiberglass shingles, painted drywall interior, and a slab foundation (i.e., no basement).									
Total SF	**Group 1**	**Group 2**	**Group 3**	**Group 4**	**Group 5**	**Group 6**	**Group 7**	**Group 8**	**Group 9**
400	113.78	115.13	119.45	124.68	163.91	129.93	135.16	174.39	197.09
500	107.70	108.97	113.02	117.92	154.71	122.85	127.76	164.55	185.84
600	100.61	101.76	105.43	109.88	143.25	114.35	118.80	152.16	171.47
700	96.30	97.35	100.71	104.78	135.31	108.87	112.94	143.47	161.14
800	93.09	94.08	97.25	101.08	129.82	104.93	108.76	137.50	154.14
900	89.70	90.63	93.61	97.22	124.27	100.84	104.45	131.50	147.16
1,000	87.63	88.53	91.39	94.85	120.82	98.33	101.79	127.76	142.79
1,100	84.77	85.63	88.40	91.74	116.83	95.10	98.44	123.53	138.05
1,200	82.82	83.66	86.34	89.59	113.93	92.85	96.09	120.44	134.53
1,300	81.17	81.99	84.60	87.76	111.49	90.94	94.10	117.83	131.55
1,400	79.05	79.84	82.35	85.39	108.19	88.44	91.48	114.28	127.48
1,500	77.50	78.26	80.71	83.66	105.85	86.64	89.59	111.78	124.61
1,600	76.11	76.86	79.24	82.12	103.77	85.02	87.91	109.55	122.08
1,700	74.89	75.62	77.95	80.77	101.94	83.61	86.43	107.59	119.84
1,800	74.23	74.95	77.25	80.03	100.93	82.83	85.62	106.51	118.60
1,900	72.81	73.51	75.73	78.43	98.65	81.14	83.83	104.05	115.75
2,000	71.79	72.47	74.65	77.28	97.03	79.92	82.55	102.30	113.73
2,100	71.59	72.25	74.37	76.92	96.12	79.49	82.05	101.25	112.36
2,200	71.10	71.75	73.82	76.33	95.14	78.85	81.36	100.17	111.06
2,300	70.21	70.84	72.86	75.31	93.66	77.77	80.21	98.56	109.18
2,400	69.86	70.48	72.47	74.87	92.91	77.29	79.69	97.73	108.16
Over 2,400	69.12	69.73	71.70	74.08	91.94	76.47	78.85	96.71	107.04

Row House One-Story or First Floor - INTERIOR UNITS

Base cost includes standard design from stock plans, average material and workmanship, and two shared party walls. The following features are included: a kitchen, water heater, one full bath, hot air heat (gas fired), central air conditioning, asphalt/fiberglass shingles, painted drywall interior, and a slab foundation (i.e., no basement).

Total SF	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9
400	106.47	107.28	109.87	113.01	136.55	116.16	119.30	142.84	156.46
500	100.15	100.88	103.20	106.01	127.11	108.84	111.65	132.75	144.97
600	93.60	94.26	96.38	98.94	118.14	101.51	104.07	123.28	134.39
700	89.36	89.97	91.93	94.30	112.08	96.68	99.05	116.83	127.12
800	85.95	86.52	88.36	90.57	107.21	92.80	95.02	111.66	121.29
900	83.03	83.57	85.30	87.39	103.08	89.49	91.58	107.27	116.36
1,000	81.20	81.71	83.35	85.33	100.21	87.33	89.31	104.19	112.80
1,100	78.98	79.47	81.03	82.93	97.15	84.83	86.73	100.94	109.17
1,200	77.11	77.58	79.07	80.88	94.45	82.70	84.51	98.08	105.93
1,300	75.50	75.95	77.39	79.13	92.20	80.88	82.62	95.69	103.26
1,400	73.67	74.10	75.49	77.17	89.77	78.86	80.54	93.14	100.43
1,500	71.98	72.40	73.74	75.36	87.51	76.99	78.61	90.76	97.80
1,600	70.69	71.10	72.39	73.96	85.73	75.54	77.10	88.87	95.68
1,700	69.59	69.98	71.24	72.76	84.19	74.30	75.82	87.24	93.86
1,800	68.70	69.08	70.30	71.78	82.87	73.27	74.75	85.84	92.26
1,900	67.73	68.10	69.29	70.73	81.52	72.17	73.61	84.41	90.65
2,000	66.85	67.21	68.37	69.77	80.30	71.18	72.59	83.11	89.20
2,100	66.80	67.15	68.29	69.66	79.94	71.03	72.40	82.68	88.63
2,200	66.22	66.57	67.67	69.01	79.04	70.35	71.69	81.72	87.53
2,300	65.48	65.82	66.90	68.21	78.02	69.52	70.83	80.64	86.31
2,400	65.02	65.35	66.41	67.69	77.29	68.98	70.25	79.86	85.42
Over 2,400	64.32	64.64	65.68	66.94	76.35	68.20	69.45	78.87	84.32

Row House Full Upper Story - END UNITS

Use this cost schedule to separately cost each full upper floor level of units with one shared party wall. A full upper floor level has all or almost all vertical 8' or higher exterior walls. This schedule improves the cost estimate when the floor levels are different sizes. Use the "One-Story or First Floor" cost schedule for the ground floor level. Use this schedule for the second and third full story levels.

Total SF	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9
400	70.27	71.79	76.65	82.53	126.67	88.44	94.32	138.46	163.99
500	66.81	68.24	72.80	78.31	119.70	83.85	89.38	130.77	154.72
600	64.30	65.59	69.72	74.73	112.27	79.76	84.76	122.29	144.02
700	60.89	62.07	65.85	70.43	104.78	75.03	79.61	113.96	133.84
800	58.96	60.07	63.64	67.95	100.28	72.28	76.59	108.92	127.64
900	56.88	57.93	61.28	65.34	95.77	69.41	73.47	103.91	121.52
1,000	55.63	56.64	59.86	63.75	92.97	67.67	71.56	100.78	117.69
1,100	54.47	55.44	58.55	62.31	90.54	66.09	69.85	98.08	114.41
1,200	52.85	53.80	56.81	60.47	87.85	64.13	67.78	95.17	111.02
1,300	51.13	52.05	54.99	58.54	85.24	62.12	65.68	92.37	107.81
1,400	49.83	50.72	53.54	56.96	82.61	60.39	63.81	89.46	104.31
1,500	49.17	50.03	52.78	56.10	81.06	59.45	62.77	87.74	102.17
1,600	48.94	49.78	52.46	55.70	80.06	58.96	62.22	86.56	100.66
1,700	48.80	49.62	52.24	55.42	79.23	58.61	61.78	85.59	99.37
1,800	48.35	49.16	51.75	54.88	78.39	58.03	61.16	84.67	98.27
1,900	47.56	48.35	50.85	53.88	76.63	56.93	59.96	82.71	95.87
2,000	46.90	47.67	50.12	53.08	75.30	56.05	59.01	81.22	94.08
2,100	46.69	47.43	49.82	52.69	74.29	55.58	58.46	80.06	92.56
2,200	46.37	47.10	49.43	52.25	73.42	55.09	57.91	79.07	91.33
2,300	46.02	46.73	49.00	51.76	72.40	54.53	57.27	77.91	89.86
2,400	45.64	46.34	48.58	51.28	71.57	54.00	56.70	76.99	88.73
Over 2,400	45.23	45.92	48.13	50.81	70.90	53.50	56.18	76.27	87.89

Row House Full Upper Story - INTERIOR UNITS

Use this cost schedule to separately cost each full upper floor level of units with two shared party walls. A full upper floor level has all or almost all vertical 8' or higher exterior walls. This schedule improves the cost estimate when the floor levels are different sizes. Use the "One-Story or First Floor" cost schedule for the ground floor level. Use this schedule for the second and third full story levels.

Total SF	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9
400	64.59	65.50	68.42	71.95	98.43	75.49	79.02	105.51	120.83
500	61.30	62.12	64.73	67.89	91.63	71.08	74.24	97.98	111.72
600	58.73	59.47	61.86	64.74	86.34	67.63	70.51	92.12	104.62
700	56.49	57.18	59.38	62.05	82.05	64.73	67.39	87.39	98.97
800	54.81	55.45	57.52	60.01	78.73	62.52	65.01	83.73	94.57
900	53.02	53.63	55.57	57.93	75.58	60.29	62.64	80.29	90.52
1,000	51.91	52.48	54.33	56.56	73.30	58.81	61.03	77.77	87.46
1,100	50.87	51.42	53.18	55.31	71.31	57.45	59.59	75.58	84.83
1,200	49.28	49.81	51.49	53.52	68.79	55.57	57.61	72.87	81.70
1,300	47.65	48.16	49.78	51.73	66.44	53.70	55.66	70.36	78.88
1,400	46.48	46.96	48.53	50.42	64.59	52.32	54.21	68.38	76.59
1,500	45.88	46.35	47.86	49.68	63.35	51.52	53.34	67.01	74.93
1,600	45.75	46.21	47.66	49.43	62.67	51.21	52.96	66.20	73.86
1,700	45.42	45.86	47.28	48.99	61.85	50.72	52.43	65.28	72.72
1,800	44.98	45.41	46.78	48.45	60.92	50.12	51.79	64.26	71.49
1,900	44.54	44.96	46.30	47.92	60.05	49.54	51.16	63.31	70.33
2,000	43.95	44.36	45.66	47.24	59.08	48.82	50.41	62.24	69.09
2,100	43.85	44.24	45.53	47.07	58.63	48.61	50.15	61.72	68.41
2,200	43.39	43.78	45.02	46.53	57.81	48.04	49.54	60.83	67.36
2,300	43.10	43.48	44.70	46.17	57.21	47.65	49.12	60.16	66.53
2,400	42.77	43.14	44.33	45.77	56.57	47.23	48.65	59.47	65.72
Over 2,400	42.38	42.74	43.91	45.33	55.91	46.75	48.15	58.75	64.88

Row House Unfinished Half Upper Story Structure

Use this schedule to separately cost half story structural components. Structural components include higher roof pitch, dormers, floor joists, subfloor, and stairs. In this schedule, Total SF refers to the half story footprint size on the floor level below the half story. Add the actual half story finished living area cost from the separate "Half Upper Story Finished Living Area" cost schedule found on page 27.

End Units - One Gable End Wall

Total SF	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9
400	28.15	28.35	28.98	29.76	35.55	30.54	31.31	36.88	40.15
500	25.77	25.97	26.60	27.38	33.17	28.16	28.93	34.50	37.77
600	24.02	24.22	24.85	25.63	31.42	26.41	27.18	32.75	36.02
700	22.60	22.80	23.43	24.21	30.00	24.99	25.76	31.33	34.60
800	21.08	21.28	21.91	22.69	28.48	23.47	24.24	29.81	33.08
900	20.32	20.51	21.12	21.85	27.38	22.59	23.33	28.85	32.05
1,000	19.72	19.90	20.49	21.21	26.55	21.92	22.63	27.98	31.07
1,100	18.76	18.93	19.51	20.11	24.97	20.76	21.41	26.27	29.08
1,200	18.01	18.17	18.74	19.33	24.10	19.97	20.61	25.37	28.13
1,300	17.45	17.61	18.15	18.75	23.38	19.38	20.00	24.72	27.35
1,400	16.84	17.00	17.51	18.13	22.57	18.75	19.34	24.01	26.50
1,500	16.33	16.48	16.96	17.56	21.86	18.15	18.69	23.02	25.52
1,600	15.92	16.07	16.54	17.12	21.33	17.70	18.22	22.48	24.92
1,700	15.52	15.66	16.11	16.67	20.73	17.24	17.77	21.79	24.18
1,800	15.21	15.35	15.80	16.34	20.22	16.89	17.43	21.31	23.54
1,900	14.88	15.01	15.44	15.95	19.82	16.47	16.99	20.85	23.08
2,000	14.81	14.94	15.34	15.83	19.50	16.37	16.81	20.48	22.60
2,100	14.57	14.70	15.09	15.57	19.17	16.10	16.54	20.14	22.23
2,200	14.32	14.44	14.83	15.30	18.84	15.78	16.25	19.78	21.83
2,300	14.08	14.20	14.58	15.02	18.40	15.47	15.92	19.31	21.38
2,400	13.90	14.02	14.40	14.82	18.18	15.27	15.72	19.05	21.17
Over 2,400	13.89	14.00	14.37	14.80	18.09	15.24	15.68	18.97	20.89

Interior Units - No Exterior Walls

Total SF	All Groups	Total SF	All Groups
400	27.33	1,500	16.19
500	25.17	1,600	15.80
600	23.56	1,700	15.41
700	22.22	1,800	15.12
800	20.77	1,900	14.79
900	20.05	2,000	14.72
1,000	19.49	2,100	14.49
1,100	18.55	2,200	14.24
1,200	17.83	2,300	14.01
1,300	17.30	2,400	13.84
1,400	16.70	Over 2,400	13.83

Row House Basement/Foundation (+)				
For finished or partially finished basements, first cost the total unfinished basement area of the unit. Then add the cost of the finished area from the applicable column in the single-family "Basement Finish" schedule (page 27) using the SF of the actual finished area.				
Total SF	End Units		Interior Units	
	Crawl Space	Unfinished Basement	Crawl Space	Unfinished Basement
400	9.02	33.86	6.81	30.67
500	8.50	31.68	6.26	28.47
600	7.79	29.18	5.80	26.38
700	7.18	27.24	5.35	24.66
800	6.80	26.05	5.04	23.57
900	6.45	25.09	4.82	22.64
1,000	6.23	24.25	4.64	21.89
1,100	6.04	23.67	4.49	21.39
1,200	5.90	23.11	4.35	20.86
1,300	5.77	22.73	4.25	20.53
1,400	5.57	22.25	4.10	20.12
1,500	5.45	21.83	4.00	19.74
1,600	5.34	21.46	3.93	19.45
1,700	5.26	21.16	3.86	19.20
1,800	5.20	20.89	3.80	18.83
1,900	5.06	20.53	3.72	18.56
2,000	4.96	20.45	3.64	18.52
2,100	4.84	19.96	3.58	18.11
2,200	4.76	19.72	3.52	17.90
2,300	4.67	19.52	3.44	17.74
2,400	4.61	19.28	3.39	17.52
Over 2,400	4.57	19.21	3.36	17.40

Apartments

See Publication 126 for the full set of schedules.

Answer Key

Units 1 through 7

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 value.**

2. **Property Tax** is the major source of tax revenue for local governments.

3. What are the two classifications of property?
    a. **Real**
    b. **Personal**

4. The largest share of property tax goes to **schools**.

5. List three approaches to value.
    a. **Sales Comparison or Market Approach**
    b. **Cost Approach**
    c. **Income Approach**

6. What four steps are involved in the assessment of any property?
    a. **Discover**
    b. **List**
    c. **Value**
    d. **Assess**

7. What three types of properties are assessed by the state?
    a. **Railroad operating property**
    b. **Pollution control facilities**
    c. **Water treatment facilities**

8. What happens if an individual does not pay his or her taxes?
    The county treasurer prepares a delinquent tax list and publishes in a newspaper. If unpaid, the courts order a lien for unpaid taxes, penalties, and fees to be sold at a tax sale.

9. Who has the statutory authority to review assessments made by the township assessor and make changes when deemed necessary?
    a. **CCAO**
    b. **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.
    a. **County Clerk**
    b. **CCAO**
    c. **Township Assessor**
    d. **CCAO**
    e. **Board of Review**
    f. **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.

Unit 2 Exercise 2-1 worksheet — Cost Factor Study

Sale Number	Age	Sale Price	-	Lot Value	=	Building Residual	÷	Pub Value	=	Cost Factor
1	**N**	$104,000		$17,000		$87,000		$82,300		1.06
2	**N**	$ 97,700		$17,000		**$80,700**		$78,400		**1.03**
3	**N**	$ 67,800		$10,500		$57,300		$54,500		1.05
4	**N**	$ 62,900		$ 8,000		**$54,900**		$51,800		**1.06**
5	**N**	$ 85,600		$15,500		$70,100		$63,700		1.10
6	**N**	$ 89,200		$16,000		**$73,200**		$63,100		**1.16**
7	**N**	$ 80,300		$16,000		$64,300		$61,200		1.05
8	**N**	$ 88,300		$16,500		**$71,800**		$69,000		**1.04**
9	**30**	$ 53,500		$ 8,000		$45,500		$47,900		.95
10	**N**	$ 93,100		$16,500		**$76,600**		$72,100		**1.06**
11	**N**	$ 76,700		$16,500		$60,200		$58,300		1.03
12	**N**	$ 86,500		$16,000		**$70,500**		$66,500		**1.06**
13	**44**	$ 67,900		$11,000		$56,900		$59,300		.96
14	**N**	$ 92,700		$16,000		**$76,700**		$69,500		**1.10**
15	**12**	$ 72,400		$11,000		$61,400		$60,200		1.02

Rank

1. **1.03**
2. **1.03**
3. **1.04**
4. **1.05**
5. **1.05**
6. **1.06**
7. **1.06**
8. **1.06**
9. **1.06**
10. **1.10**
11. **1.10**
12. **1.16**
13. _____
14. _____
15. _____

1.06 + 1.06 = 2.12
2.12 ÷ 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 2 Review Questions

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

_____	**Physical**
_____	**Functional**
X	**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.

Unit 3

Exercise 3-1 – Multiplying Factors

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	=	**1.02**
1.06	x	1.05	x	1.00	x	1.00	=	**1.11**
1.06	x	1.01	x	1.10	x	1.00	=	**1.18**

Unit 3 Review Questions

1. What is the factor applied from the schedules for a quality grade “D”?

   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

   __**X**___ CDU rating used to determine the REL factor

3. Quality grade refers to the **quality of materials and workmanship.**

4. **False** PRC-2 is used for calculating land values.

5. **True** Air Conditioning is included in the base cost on the cost schedules for residential assessment purposes.

6. List the five plumbing fixtures that are included in the base cost on the residential cost schedules for assessment purposes.

   Kitchen sink, hot water heater, toilet, bathroom sink, bathtub

Unit 4 Exercises – see following pages.

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

Exercise 4-1

PRC-2 for 03-10-108-011-0040

Occupancy

1 Vacant Lot	2 Dwelling	3 Other	4 Mobile Home	5 A Frm.	6 Summer Home	7 Row House	8 Post Frm.	9 Log Home

Style/No. stories: 1-sty Unit type:

Exterior Wall Construction

Stud Frame | Concrete Block | Solid Stone

Exterior Wall Cover Material

	LL	1	2	3	½
Wood (Cost Grps 1, 2, 3)					
Vinyl (Cost Grp 1)		X			
Metal (Cost Grps 1, 2)					
Fiber/Comp. (Cost Grps 1, 2)					
Resin (Cost Grp 3)					
EIFS (Cost Grps 3, 6)					
Stucco (Cost Grps 3, 6)					
Paint on CC Blk (Cost Grp 3)					
Brick Veneer (Cost Grps 4, 7)					
Stone Veneer (Cost Grps 5, 8)					
Limestone Blks (Cost Grp 9)					
6-10" Logs (Log Hm Sch)					
12" Logs (Log Hm Sch)					
Other					

Partial Masonry Trim

SF: 288 | Quality: C | Brk.[1] | Stone[2] | Art.[3]

Roof

Shingle - asphalt/composite/wood	X
Slate/tile	
Metal/Other	
Solar Panel	

Attic

1 None | 2 Unfinished | 3 Part fin. | 4 Full fin.

% finished

Basement

1 Full | 3 Crawl | 4 Slab

Area without bsmt. SF

Heating / AC

1 None | 2 Central Heat | 3 Air Cond. | 4 Other

Other (descr.)

Plumbing

Standard (5)	1
Additional Bathroom (3)	
Additional Half bath (2)	1
Additional Sink/Fixture (1)	

Living Accommodations

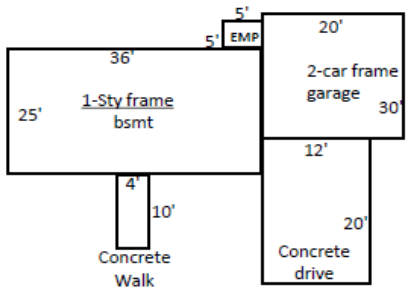
Total Rooms	Bedrooms	Family Room
5	2	

Interior Finish

Finished Basement / Lower Level	Living area	SF:
	Recreation	SF:
Half Upper Sty Finished Living Area		SF:

Porches / Wood Deck

SF: 25	OFP	Scrn-in	Kn-Wal	EFP	OMP	EMP	2-Sty
SF:	OFP	Scrn-in	Kn-Wal	EFP	OMP	EMP	2-Sty
SF:	OFP	Scrn-in	Kn-Wal	EFP	OMP	EMP	2-Sty
SF:	Wood deck		No Steps / No Rail				



Remodeled: NH | Sold Date: Mo. Day Yr. | Amount $ | Age: 15 | Adj. Age: 15 | CDU: Avg. | Grade: C

Fireplaces

Type:	#	# Stacks:	Sty Hght:
			1

Garage

Type	Cost Grp	SF	Area over Garage
Attached	1	600	Bonus Rm / Storage
Built-in			(On grade)
Basement garage		1-Car	2-Car 3-Car

Memo

Base Cost Computation

Sty	CG	% (if app.)	x Rate	x SF	= Sub-total
1/Main	1	100	95.72	900	$ 86,148

SFLA: 900 Total Base Cost:		$ 86,148
Basement	+	24,705
Heating/Central air	-	
Plumbing	+ 2 -	1,860
Attic	+	
Porches 25 EMP	+	3,690
	+	
Attach./Built-in garage	+	17,466
Sub-total		133,869
Grade C	x	1.00
Graded total		133,869
Other features		
Pt. Msy Trim	+	3,660
Fireplace	+	
Finished basement	+	
Schedule's RCN		137,529
C x D	x	1.06
NH x AP		
True replacement cost new		145,781
Eff. Age: 15 / Depr: 16%	REL x	0.84
Full Value		122,456

Summary of Other Improvements (Detached garage, deck, patio, driveway, storage shed, etc.)

Type	No.	Constr./CG	Size	Rate	Sub-total	Grade	Factor(s)	RCN	Age	CDU	REL	Full Value
Drive	1	Concrete	240	6.15	1,476	C	1.06	1,565	15	Avg.	0.84	1,315
Walk	1	Concrete	40	6.15	246	C	1.06	261	15	Avg.	0.84	219

Listed by:

Date:

Total full value other improvements: 1,534

Total full value all bldgs & improvements: 123,990

PRC-2 (R-05/23) (opposite PRC-1)

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

Exercise 4-2

PRC-2 for 04-01-406-002-0040

Occupancy

1 Vacant Lot	2 Dwelling	3 Other	4 Mobile Home	5 A.	6 Summer Home	7 Row House	8 Post Frm.	9 Log e

Style/No. stories: 2-sty Unit type:

Exterior Wall Construction

Stud Frame | Concrete Block | Solid Stone

Exterior Wall Cover Material

	LL	1	2	3	½
Wood (Cost Grps 1, 2, 3)		X	X		
Vinyl (Cost Grp 1)					
Metal (Cost Grps 1, 2)					
Fiber/Comp. (Cost Grps 1, 2)					
Resin (Cost Grp 3)					
EIFS (Cost Grps 3, 6)					
Stucco (Cost Grps 3, 6)					
Paint on CC Blk (Cost Grp 3)					
Brick Veneer (Cost Grps 4, 7)					
Stone Veneer (Cost Grps 5, 8)					
Limestone Blks (Cost Grp 9)					
6-10" Logs (Log Hm Sch)					
12" Logs (Log Hm Sch)					
Other					

Partial Masonry Trim

SF: Quality: Brk. [1] Stone [2] Art. [3]

Roof

Shingle - asphalt/composite/wood	X
Slate/tile	
Metal/Other	
Solar Panel	

Attic

1 None | 2 Unfinished | 3 Part fin. | 4 Full fin. % finished

Basement

1 Full | 3 Crawl | 4 Slab

Area without bsmt. 1,100 SF

Heating / AC

1 None | 2 Central Heat | 3 Air Cond. | 4 Other

Other (descr.)

Plumbing

Standard (5)	1
Additional Bathroom (3)	
Additional Half bath (2)	
Additional Sink/Fixture (1)	

Living Accommodations

Total Rooms	Bedrooms	Family Room
8	4	

Interior Finish

Finished Basement / Lower Level	Living area	SF:
	Recreation	SF:
Half Upper Sty Finished Living Area		SF:

Porches / Wood Deck

SF: 50	OFP	Scrn-in	Kn-Wal	EFP	OMP	EMP	2-Sty
SF:	OFP	Scrn-in	Kn-Wal	EFP	OMP	EMP	2-Sty
SF:	OFP	Scrn-in	Kn-Wal	EFP	OMP	EMP	2-Sty
SF:	Wood deck		No Steps / No Rail				

Memo

Remodeled Sold Date: Mo. Day Yr. Age: 65 Adj. Age: 78

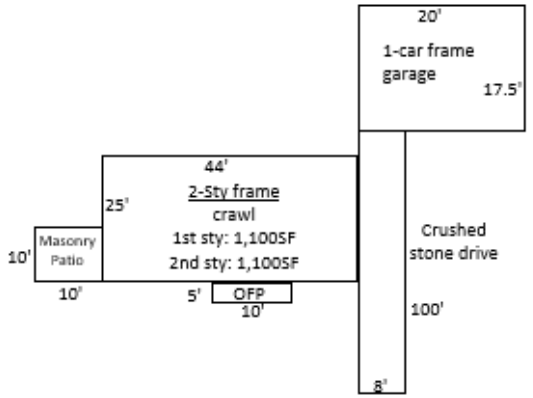
NH Amount $ CDU: Poor Grade: D

Fireplaces

Type:	#	# Stacks:	Sty Hght:

Garage

Type	Cost Grp	SF	Area over Garage
Attached			Bonus Rm / Storage
Built-in			(On grade)
Basement garage		1-Car 2-Car 3-Car	



Base Cost Computation

Sty	CG	% (if app.)	x Rate	x SF	= Sub-total
1/Main	2	100	92.33	1,100	$ 101,563
2	2	100	59.53	1,100	65,483

SFLA: 2,200 Total Base Cost		$ 167,046
Basement	+	8,404
Heating/Central air	-	
Plumbing	+ -	
Attic	+	
Porches	+	2,296
	+	
Attach./Built-in garage	+	
Sub-total		177,746
Grade D	x	0.82
Graded total		145,752
Other features		
Pt. Msy Trim	+	
Fireplace	+	
Finished basement	+	
Schedule's RCN		145,752
C x D	x	1.06
NH x AP		
True replacement cost new		154,437
Eff. Age: 78 / Depr: 61%	REL x	0.39
Full Value		60,254

Summary of Other Improvements (Detached garage, deck, patio, driveway, storage shed, etc.)

Type	No.	Constr./CG	Size	Rate	Sub-total	Grade	Factor(s)	RCN	Age	CDU	REL	Full Value
Drive	1	Crushed Stone	800	1.17	936	D	1.06	814	65	Poor	0.39	317
Masonry Patio (1 Riser)	1	Concrete	100	17.74	1,774	D	1.06	1,542	65	Poor	0.39	601
Detached 1-car garage	1	Cost Group 2	350	40.97	14340	D	1.06	12464	65	Poor	0.39	4,861

Listed by: **Total full value other improvements** 5,779

Date: **Total full value all bldgs & improvements** 66,033

PRC-2 (R-11/19) (supersedes PRC-1)

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

Exercise 4-3

PRC-2 for 03-33-333-009-0040

Occupancy

1 Vacant Lot	2 Dwelling	3 Other	4 Mobile Home	5 A.	6 Summer Home	7 Row House	8 Post Frm.	9 Log e
	(2)							

Style/No. stories: **1 1/2-sty** Unit type:

Exterior Wall Construction

Stud Frame	(Concrete Block)	Solid Stone

Exterior Wall Cover Material

	LL	1	2	3	½
Wood (Cost Grps 1, 2, 3)					
Vinyl (Cost Grp 1)					
Metal (Cost Grps 1, 2)					
Fiber/Comp. (Cost Grps 1, 2)					
Resin (Cost Grp 3)					
EIFS (Cost Grps 3, 6)					
Stucco (Cost Grps 3, 6)					
Paint on CC Blk (Cost Grp 3)					
Brick Veneer (Cost Grps 4,(7))		X			X
Stone Veneer (Cost Grps 5, 8)					
Limestone Blks (Cost Grp 3)					
6-10" Logs (Log Hm Sch)					
12" Logs (Log Hm Sch)					
Other					

Partial Masonry Trim

SF: Quality: Brk.[1] Stone[2] Art.[3]

Roof

Shingle - (Asphalt)/Composite/wood	X
Slate/tile	
Metal/Other	
Solar Panel	

Attic

1 None	2 Unfinished	3 Part fin.	4 Full fin.
(1)			

% finished

Basement

1 Full	3 Crawl	4 Slab
(1)		

Area without bsmt. SF

Heating / AC

1 None	2 Central Heat	3 Air Cond.	4 Other
	(2)	(3)	

Other (descr.)

Plumbing

Standard (5)	1
Additional Bathroom (3)	1
Additional Half bath (2)	1
Additional Sink/Fixture (1)	

Living Accommodations

Total Rooms	Bedrooms	Family Room
6	3	

Interior Finish

Finished Basement / Lower Level	Living area	SF:
	Recreation	SF:
Half Upper Sty Finished Living Area		SF: 650

Porches / Wood Deck

SF: 125	OFP	Scrn-in	Kn-Wal	(EFP)	OMP	EMP	2-Sty
SF:	OFP	Scrn-in	Kn-Wal	EFP	OMP	EMP	2-Sty
SF:	OFP	Scrn-in	Kn-Wal	EFP	OMP	EMP	2-Sty

Wood deck — No Steps / No Rail

Remodeled — Sold Date: Mo. Day Yr. — Age: 56 — Adj. Age:

NH — Amount $ — CDU: Good — Grade: C

Fireplaces

Type:	#	# Stacks:	Sty Hght:

Garage

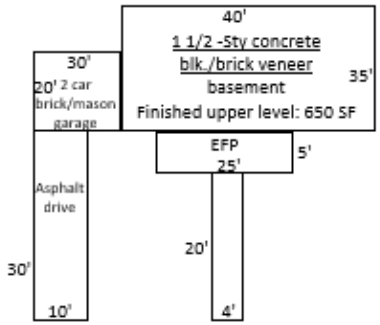
Type	Cost Grp	SF	Area over Garage
Attached	7	600	Bonus Rm / Storage
Built-in			(On grade)
Basement garage		1-Car 2-Car 3-Car	

Memo

Base Cost Computation

Sty	CG	x (if app.)	x Rate	x SF	= Sub-total
1/Main	7	100	102.37	1,400	$ 143,318
Up Half	7	100	23.80	1,400	33,320
1/2 Fin	7		46.30	650	30,095

SFLA: 2,050 Total Base Cost:		$ 206,733
Basement	+	34,230
Heating/Central air	-	
Plumbing	+ 5 -	4,650
Attic	+	
Porches	+	6,428
	+	
Attach./Built-in garage	+	26,610
Sub-total		278,651
Grade C	x	1.00
Graded total		278,651
Other features		
Pt. Msy Trim	+	
Fireplace	+	
Finished basement	+	
Schedule's RCN		278,651
C x D	x	1.06
NH x AP		
True replacement cost new		295,370
Eff. Age: 46 REL	x	
Depr: 45%		0.55
Full Value		162,454



Summary of Other Improvements (Detached garage, deck, patio, driveway, storage shed, etc.)

Type	No.	Constr./CG	Size	Rate	Sub-total	Grade	Factor(s)	RCN	Age	CDU	REL	Full Value
Drive	1	Asphalt	300	4.74	1,422	C	1.06	1,507	56	Good	0.55	829
Concrete Walk	1	Concrete	80	6.15	492	C	1.06	522	56	Good	0.55	287

Listed by:

Date:

Total full value other improvements 1,116

Total full value all bldgs & improvements 163,570

PRC-2 (R-11/19) (opposite PRC-1)

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

Exercise 4-4

Example of an examination PRC-2

Occupancy

1 Vacant Lot	2 Dwelling	3 Other	4 Mobile Home	5 A.	6 Summer Home	7 Row House	8 Post Frm.	9 Log e
	(2)							

Style/No. stories: 1-sty Unit type:

Exterior Wall Construction

Stud Frame	(Concrete Block)	Solid Stone

Exterior Wall Cover Material

	LL	1	2	3	½
Wood (Cost Grps 1, 2, 3)					
Vinyl (Cost Grp 1)					
Metal (Cost Grps 1, 2)					
Fiber/Comp. (Cost Grps 1, 2)					
Resin (Cost Grp 3)					
EIFS (Cost Grps 3, 6)					
Stucco (Cost Grps 3, 6)					
Paint on CC Blk (Cost Grp 3)					
Brick Veneer (Cost Grps 4, (7))		X			
Stone Veneer (Cost Grps 5, 8)					
Limestone Blks (Cost Grp 3)					
6-10" Logs (Log Hm Sch)					
12" Logs (Log Hm Sch)					
Other					

Partial Masonry Trim

SF: Quality: Brk.[1] Stone[2] Art.[3]

Roof

Shingle - (Asphalt/Composite/wood)	X
Slate/tile	
Metal/Other	
Solar Panel	

Attic

(1) None	2 Unfinished	3 Part fin.	4 Full fin.

% finished

Basement

(1) Full	3 Crawl	(4) Slab

Area without bsmt. 400 SF

Heating / AC

1 None	(2) Central Heat	(3) Air Cond.	4 Other

Other (descr.)

Plumbing

Standard (5)	1
Additional Bathroom (3)	1
Additional Half bath (2)	
Additional Sink/Fixture (1)	

Living Accommodations

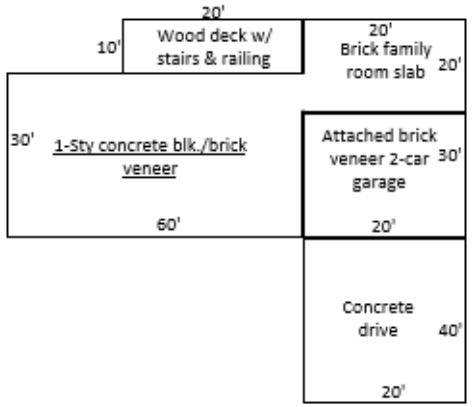
Total Rooms	Bedrooms	Family Room
7	3	1

Interior Finish

Finished Basement / Lower Level	Living area	SF:
	Recreation	SF:
Half Upper Sty Finished Living Area		SF:

Porches / Wood Deck

SF:	OFP	Scrn-in	Kn-Wal	EFP	OMP	EMP	2-Sty
SF:	OFP	Scrn-in	Kn-Wal	EFP	OMP	EMP	2-Sty
SF:	OFP	Scrn-in	Kn-Wal	EFP	OMP	EMP	2-Sty
SF: 200	(Wood deck)	No Steps / No Rail					



Remodeled: NH Sold Date: Mo. Day Yr. Amount $ Age: 5 Adj. Age: 5 CDU: Avg. Grade: B

Fireplaces

Type:	#	# Stacks:	Sty Hght:
Masonry	1	1	1

Garage

Type	Cost Grp	SF	Area over Garage
Attached	7	600	Bonus Rm / Storage
Built-in			(On grade)
Basement garage		1-Car 2-Car 3-Car	

Memo

Base Cost Computation

Sty	CG	x (if app.)	x Rate	x SF	= Sub-total
1/Main	7	100	90.37	2,200	$ 198,814

SFLA: 2,200	Total Base Cost	$ 198,814
Basement	+	41,436
Heating/Central air	-	
Plumbing (+) 3	-	2,790
Attic	+	
Porches	+	
	+	
Attach./Built-in garage	+	26,610
Sub-total		269,650
Grade B	x	1.22
Graded total		328,973
Other features		
Pt. Msy Trim	+	
Fireplace	+	5,500
Finished basement	+	
Schedule's RCN		334,473
C x D / NH x AP	x	1.06
True replacement cost new		354,541
Eff. Age: 5 / Depr: 6%	REL x	0.94
Full Value		333,269

Summary of Other Improvements (Detached garage, deck, patio, driveway, storage shed, etc.)

Type	No.	Constr./CG	Size	Rate	Sub-total	Grade	Factor(s)	RCN	Age	CDU	REL	Full Value
Drive	1	Concrete	800	6.15	4,920	B	1.06	6,363	5	Avg.	0.94	5,981
Wood deck	1		200	19.9	3,980	B	1.06	5,147	5	Avg.	0.94	4,838

Listed by: Date:

Total full value other improvements 10,819

Total full value all bldgs & improvements 344,088

PRC-2 (R-11/19) (opposite PRC-1)

Unit 4 Review Questions

1. **False** You need to make an adjustment if an improvement has 5 plumbing fixtures.

2. **True** A frame house of 1,000 square feet on a slab will not have an adjustment for a basement.

3. **True** All detached garages are calculated using the Summary of Other Improvements section on the PRC.

4. **False** The quality grade is used to determine a REL factor.

5. **False** 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 5 Review Questions

1. **False** All mobile/manufactured homes are assessed as real property with no bearing on where they are located.

2. **True** Only row houses up to 3 stories should utilize the schedules indicated as row house schedules.

3. **False** Apartment buildings of six or more units can be calculated on the PRC-2.

Exercise 6 - Together

	Sale Price	Months since sale	Foundation	Plumbing Fixtures	Bedrooms	Garage (# of stalls)	AC
Comp 1	$125,000	0	Basement	5	3	1	yes
Comp 2	$122,500	0	Slab	5	3	1	yes
Comp 3	$122,000	6	Basement	5	3	1	yes
Comp 4	$126,000	0	Basement	5	4	1	yes
Comp 5	$131,000	0	Basement	5	4	2	yes
Comp 6	$123,500	3	Slab	8	4	1	yes
Comp 7	$125,000	3	Basement	8	3	1	yes
Comp 8	$118,000	6	Slab	5	3	1	no

1. A home with a basement is worth $**2,500** more than a home with a slab foundation.

   Hint: Look at Comps 1 and 2. All other variables are equal, such as plumbing fixtures, garage stalls, etc.

2. A home that was sold 6 months ago is worth $**500** (per month) less than a sale that just occurred.

   Hint: Look at Comps 1 and 3.

3. Based on the above sales, each extra bedroom is worth $**1,000** more than a home with fewer bedrooms.

   Hint: Look at Comps 1 and 4.

4. A home with a higher number of garage stalls is worth $**5,000** (per stall) more than a sale with fewer.

   Hint: Look at Comps 4 and 5.

5. A home with additional plumbing fixtures is worth $**500** (per fixture) more than a home with the standard 5 fixtures.

   Hint: Comps 3 and 7 can be used to determine this value. Make sure to adjust for the months since sale difference prior to calculating fixtures difference.

6. A home with AC is worth $**1,500** more than a home without AC.

   Hint: Look at Comps 2 and 8. Make sure to adjust for the months since sale difference prior to calculating fixtures difference.

Exercise 6-1

	Sale Price	Months since sale	Foundation	Plumbing Fixtures	Bedrooms	Garage (# of stalls)	AC	Fireplaces	Location Description	Lot size
Comp 1	$125,000	0	Basement	5	4	1	yes	1	Corner	1 acre
Comp 2	$124,000	0	Basement	5	3	1	yes	1	Corner	1 acre
Comp 3	$122,000	6	Basement	5	4	1	yes	1	Corner	1 acre
Comp 4	$129,000	0	Basement	5	3	2	yes	1	Corner	1 acre
Comp 5	$130,000	0	Basement	5	4	1	yes	1	Interior	1 acre
Comp 6	$126,000	3	Slab	5	4	1	yes	1	Interior	1 acre
Comp 7	$119,800	9	Basement	8	3	1	yes	0	Corner	1 acre
Comp 8	$127,500	12	Slab	7	4	2	yes	1	Interior	1 acre
Comp 9	$129,500	12	Slab	7	4	2	yes	1	Interior	1.5 acre
Comp 10	$128,000	12	Slab	7	4	2	no	1	Interior	1.5 acre
Comp 11	$127,500	3	Slab	8	4	1	yes	1	Interior	1 acre
Comp 12	$121,000	9	Basement	8	3	1	yes	1	Corner	1 acre

1. Based on the above sales, each extra bedroom is worth $**1,000** more than a home with fewer bedrooms.

   Hint: By comparing Comp 1 and Comp 2, note that all other variables are equal, such as foundation, garage stalls, etc. The only variable is the number of rooms. Therefore, by comparing the sale price, we could arrive at a value of $1,000 for each bedroom.

2. A home that was sold 6 months ago is worth $**500** (per month) less than a sale that just occurred.

3. A home with a higher number of garage stalls is worth $**5,000** (per stall) more than a sale with fewer.

4. A home with an interior location is worth $**5,000** more than a corner location.

5. A home with a basement is worth $**2,500** more than a home with a slab foundation.

6. A home with additional plumbing fixtures is worth $**500** (per fixture) more than a home with the standard 5 fixtures.

7. A home with AC is worth $**1,500** more than a home without AC.

8. A home with at least 1 fireplace is worth $**1,200** (per fireplace) more than a home without a fireplace.

9. A home with extra lot acreage is worth $**2,000** (per additional half acre) more than a sale on a one-acre lot.

Exercise 6-2

	Subject Property	Comp 1 1306 Archer	Comp 2 814 Adams	Comp 3 1414 State	Comp 4 6607 Healey	Comp 5 1209 Monroe
Sale Price		$75,000	$63,000	$69,500	$62,800	$59,700
Number of months since sale	0	5 **+$2500**	4 **+$2000**	3 **+$1500**	5 **+$2500**	12 **+$6000**
Adjusted sale price		**$77,500**	**$65,000**	**$71,000**	**$65,300**	**$65,700**
Foundation	Slab	Basement **- $2,500**	Slab $0	Basement **- $2,500**	Basement **- $2,500**	Slab $0
Number of plumbing fixtures	5	5 $0	7 **-$1000**	8 **-$1500**	7 **-$1000**	5 $0
Number of bedrooms	4	3 **+$1000**	4 $0	4 $0	3 **+$1000**	3 **+$1000**
Garage (# of stalls)	1	1 $0	1 $0	2 **-$5000**	1 $0	1 $0
Central air conditioning	Yes	No **+$1500**	Yes $0	Yes $0	No **+$1500**	Yes $0
Number of fireplaces	1	1 $0	0 **+$1200**	2 **-$1200**	1 $0	0 **+$1200**
Location adjustment	Interior	Interior $0	Interior $0	Corner **+$5000**	Interior $0	Corner **+$5000**
Lot size adjustment	1 acre	1 acre $0	1 acre $0	1.5 acre **-$2000**	1.5 acre **-$2000**	1.5 acre **-$2000**
Net adjustment		**$0**	**$200**	**-$7,200**	**-$3,000**	**$5,200**
Total number of adjustments		**3**	**2**	**6**	**5**	**4**
Final adjusted sale price (adj. sale price + net adj.)		**$77,500**	**$65,200**	**$63,800**	**$62,300**	**$70,900**

Write the adjusted sales price and the number of adjustments for each sale.

	Final Adj. Sales Price	No. of Adj.
Comparable 1	**$77,500**	**3**
Comparable 2	**$65,200**	**2**
Comparable 3	**$63,800**	**6**
Comparable 4	**$62,300**	**5**
Comparable 5	**$70,900**	**4**

After making all of the necessary adjustments and calculations, study the grid to determine the sale 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?

Comparable 2

Unit 6 Review Questions

1. **True** When using the sales comparison, or market approach, one never adjusts the subject property.

2. **False** Make a minus adjustment to your comparable property if it is inferior to your subject property.

3. **False** 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.

4. **True** Three to five sales are recommended when using the sales comparison, or market approach, to value property.

5. **True** The property most comparable to the subject is the comparable with the least number of adjustments.

Unit 6 Review Problem

Use the Sales Comparison Approach to arrive at a value for the subject property.

The subject property contains:
4 bedrooms, 2 bathrooms, air conditioning, 2 car garage

The adjustments are:

$1,200 per bathroom fixture
$2,000 per bedroom variance
$6,000 per garage variance
Time adjustment of +$500
No A/C $5,000
Location adjustment is 5%

Address	Sale 1	Sale 2	Sale 3	Sale 4	Sale 5
Sale Price	$115,700	$103,800	$100,500	$113,600	$112,100
Number of months since sale ($500/mo)	2 **+$1,000**	12 **+$6,000**	4 **+$2,000**	3 **+$1,500**	6 **+$3,000**
Adjusted sale price	**$116,700**	**$109,800**	**$102,500**	**$115,100**	**$115,100**
Number of bathrooms	2 **$0**	1 ½ **+$1,200**	1 **+$3,600**	2 **$0**	1 ½ **+$1,200**
Number of bedrooms	4 **$0**	3 **+$2,000**	3 **+$2,000**	4 **$0**	4 **$0**
Garage (# of stalls)	1 **+$6,000**	1 **+$6,000**	2 **$0**	2 **$0**	1 **+$6,000**
Central air conditioning	Yes **$0**	Yes **$0**	No **+$5,000**	No **+$5,000**	Yes **$0**
Location adjustment	Inferior **+$5,835**	Comparable **$0**	Superior **-$5,125**	Comparable **$0**	Inferior **+$5,755**
Net adjustment	**$11,835**	**$9,200**	**$5,475**	**$5,000**	**$12,955**
Total number of adjustments	**2**	**3**	**4**	**1**	**3**
Final adjusted Sale Price **(Adj. sale price + net adj.)**	**$128,535**	**$119,000**	**$107,975**	**$120,100**	**$128,055**

The value the assessor would place on the property is: **$120,100**

The most comparable property is: **4**

Answer the following questions:

a. The adjustment for bedrooms for Sale #2 is: **+$2,000**
b. The time adjustment for Sale #5 is: **+$3,000**
c. The adjustment for bathroom fixtures for Sale #4 is: **No change**
d. The location adjustment for Sale #1 is: **+$5,835**
e. The adjustment for air conditioning for Sale #3 is: **+$5,000**
f. The final adjusted sale price for Sale #2 is: **$119,000**
g. The adjustment for garages for Sale #5 is: **+$6,000**

Exercise 7-1 (together)

Site	Sales Price	Sale Date	Size	Location	Physical Features
1	$25,000	Current	100 x 250	Interior	Level, trees
2	$26,500	Current	100 x 250	Corner	Level, trees
3	$24,000	Current	100 x 250	Interior	Rolling, trees
4	$22,500	1 Year Ago	100 x 250	Interior	Rolling, trees
5	$24,000	Current	100 x 250	Corner	Level, no trees

1. Based on the above sales, a site that sold today is worth $**1,500** more than a site that sold a year ago.

   Hint: By comparing Sites 3 and 4, note that all other variables are equal, such as rolling, with trees, and interior locations. The only variables are the dates of the sales. Therefore, by comparing the values, we could arrive at a value for time adjustment of $1,500.

2. A site that is on rolling terrain is worth $**1,000** less than a site on level terrain.

   Hint: Look at Sites 1 and 3.

3. A site that has trees is worth $**2,500** more than a site without trees.

   Hint: Remember that you want to look at sites whose features match except for the physical feature of trees.

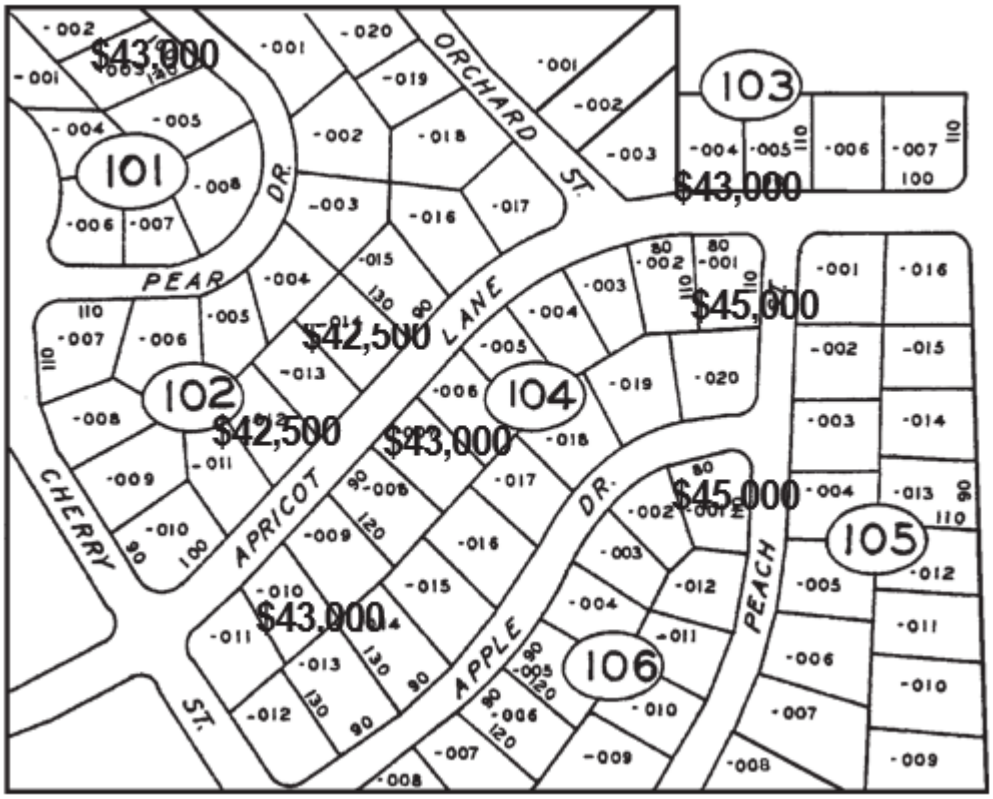
   Sites __**2**____ and __**5**____

4. A corner site is worth $**1,500** more than an interior site.

   Hint: Sites __**1**____ and __**2**____

Exercise 7-2 worksheet

Sales comparison or market approach



You are appraising lots in a subdivision that began development five years ago. All of the lots are level with mature trees. The area surrounding the subdivision is wooded and undeveloped. Based on the eight lots that have sold recently, what is the indicated value of the lots you are appraising?

Part 1: Recent Sales in the Subdivision

Write each sale price on the applicable parcel.

05-21-101-003	$43,000	05-21-104-007	$43,000
05-21-102-012	$42,500	05-21-104-001	$45,000
05-21-102-014	$42,500	05-21-104-010	$43,000
05-21-103-004	$43,000	05-21-106-001	$45,000

Part 2: Write the indicated value of these lots.

05-21-101-005	$**43,000**	05-21-105-001	$**45,000**
05-21-102-013	$**42,500**	05-21-105-007	$**43,000**
05-21-104-014	$**43,000**	05-21-106-010	$**43,000**

Exercise 7-3

Demonstration of adjustments from market analysis

In the previous exercise, it was noted that the lots were all level with mature trees, the areas surrounding the lots were wooded and undeveloped, and the sales were all recent. No adjustments were necessary to arrive at a value.

In this exercise, by using the sales comparison, or market approach, method, you will determine the value of adjustments that would be needed to adjust the comparables to the subject property.

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, sites 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 listed 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	$19,000	Current	75 x 200	Interior	Level, trees
2	$18,500	Current	75 x 200	Corner	Level, trees
3	$20,000	Current	75 x 200	Interior	Rolling, trees
4	$19,000	1 Year Ago	75 x 200	Interior	Rolling, trees
5	$18,000	Current	75 x 200	Interior	Level, no trees
6	$16,500	1 Year Ago	75 x 200	Corner	Level, no trees
7	$17,500	Current	75 x 200	Corner	Level, no trees

Step 1

Analyze the information shown to determine common and variable features. Note which lots have like sale dates, locations, and physical features, such as level, rolling, trees, no trees.

Step 2

Compare the values associated with the various features.

Step 3

Determine values for the adjustments.

1. Based on the above sales, a site that sold today is worth **$1,000** more than a site that sold a year ago.

   Hint: By comparing Sites 3 and 4, note that all other variables are equal, such as rolling, with trees, and interior locations. The only variables are the dates of the sales. Therefore, by comparing the values, we could arrive at a value for time adjustment of $1,000.

2. A site that is on rolling terrain is worth **$1,000** more than a site on level terrain.

   Hint: Look at Sites 1 and 3.

3. A site that has trees is worth **$1,000** more than a site without trees.

   Hint: Remember that you want to look at sites whose features match except for the physical feature of trees.

   Sites **1** and **5** & Sites **2** and **7**

4. An interior site is worth $**500** more than a corner site.

   Hint: Sites **1** and **2** & Sites **5** and **7**

After determining the appropriate values for the variables, you could then use this information to adjust any of the properties you needed to value.

Use the values established previously to make the necessary adjustments to the comparables listed below. Use the sales comparison, or market approach, method to arrive at a value for our subject property.

The subject property is a 75 x 200 foot lot. It is an interior lot with level terrain and nice trees.

Comparable 1 sold one year ago for $35,000. It is an interior lot with rolling terrain and nice trees.

Comparable 2 sold recently for $35,500. It is a corner lot with level terrain and nice trees.

Comparable 3 sold one year ago for $35,000. It is an interior lot with rolling terrain and no trees.

1. Write the adjusted value for Comparable 1. $**35,000**
   (35,000 + 1,000 - 1,000)

2. Write the adjusted value for Comparable 2. $**36,000**
   (35,500 + 500)

3. Write the adjusted value for Comparable 3. $**36,000**
   (35,000 + 1,000 - 1,000 + 1,000)

4. Based on the three sales provided, what is the value for the subject property?

   $**36,000**

Unit 7 Review Questions

1. When valuing residential land in rural areas, the **sales comparison** or **market** approach to value is the best method to use.

2. List three adjustments that may be necessary to determine a value when comparing property that has sold.

    a. **Time**
    b. **Size**
    c. **Physical features**

3. Does the location of a property on a corner affect the value?

    Sometimes