Appraisal Methods

Basic information and procedures for setting up a mass appraisal program

OREGON DEPARTMENT OF REVENUE

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Foreword

Appraisal Methods for Real Property

This manual provides county assessors and their staffs with the basic information and procedures to set up and maintain a mass appraisal program for property tax purposes. A well-run appraisal program benefits and serves all those who pay property taxes in Oregon.

The International Association of Assessing Officers defines mass appraisal as:

". . . the systematic appraisal of groups of properties as of a given date using standardized procedures and statistical testing."

By following the guidelines in this manual, it is possible to achieve accurate, persuasive, and defendable appraisals to use as the basis for property tax assessment. The cost of estimating property value using other methods would be prohibitive and not in the best interest of the public.

This manual reflects laws and Department of Revenue policies that were current at the time of publication. In addition to other publications, we have utilized the following sources to produce this manual:

Property Assessment Valuation, Third Edition, IAAO, 2010

The Appraisal of Real Estate, 14th Edition, The Appraisal Institute, 2013

The Dictionary of Real Estate Appraisal, Sixth Edition, The Appraisal Institute, 2015

Note: Although this manual reflects laws and policies that were current as of the revision date, a substantial number of the forms and examples included in the manual haven't been updated since the time of the last major revision in 2003. Be assured this doesn't invalidate the manual as an effective training tool for appraisers in the assessment field.

Chapter 1

Introduction to the Property Tax System

Oregon's property tax system supplies revenue that funds services provided to citizens. In recent years, Oregon voters approved two significant property tax limitations, yet revenue generated by property tax is second only to personal income tax revenue. For the 2014–15 tax year, property taxes raised more than $5.7 billion for local governments.

This chapter summarizes the assessment program and tax collection process.

Legal basis for assessment

ORS 307.030 states:

- All real property within this state and all tangible personal property situated within this state, except as otherwise provided by law, shall be subject to assessment and taxation in equal and ratable proportion.
- Except as provided in ORS 308.505 to 308.681, intangible personal property isn't subject to assessment and taxation.

Oregon has an ad valorem taxation system. The taxation system is based on the value of property. The amount of property tax an owner of a property will pay is determined by:

- The taxable assessed value of the property;
- The total of the tax levies imposed by the taxing districts in which the property is located; and
- Constitutional tax limitations.

Imposition of tax

A taxing district collects property tax dollars by imposing a levy. Property tax levies are either rate-based or amount-based. Most taxing districts impose rate-based levies for at least some of their operating revenues. The rate for most districts is limited by an amendment to Oregon's constitution referred to as the permanent rate limit. Districts can levy a tax rate every year that is less than or equal to this limit without additional voter approval. Amount-based levies are usually bond levies or local option levies that have been approved by the voters of a taxing district for a fixed dollar amount per year. Bond and local option levies are in addition to the permanent rate levy. Local option levies can be either rate-based or amount-based. When a taxing district imposes an amount-based levy, the county assessor converts the amount levied into a tax rate by dividing the levy amount by the total assessed value in the district.

Role of the Department of Revenue

The Department of Revenue supervises the administration of the property tax system in Oregon. ORS 306.115 states:

"The department may do any act or give any order to any public officer or employee that the department deems necessary in the administration of the property tax laws so that all properties are taxed or are exempted from taxation according to the statutes and Constitutions of the State of Oregon and of the United States."

In partnership with the counties, we:

- Train and provide technical assistance for county staff;
- Write administrative rules and legislative concepts;
- Advise the counties regarding property tax issues;
- Review the assessors' certified ratio studies;
- Hold property tax supervisory and merits conferences; and
- Respond to questions from taxpayers.

We are responsible for appraising and maintaining the inventory of large industrial improvements valued at over $1 million. The inventory of state appraised industrial property is updated annually through the state's *Industrial Property Return*, 150-301-032. The property that must be reported on the return includes buildings and structures, yard improvements, machinery and equipment, and personal property.

The department is also responsible for appraising and developing the inventory of all centrally assessed property. Centrally assessed property includes utility property, railroads, and airlines.

Summary of the assessment program

The assessment program is the foundation of the property tax system in Oregon. Each county has an elected or appointed assessor who administers the program at the local level. The assessor has the responsibility to discover, list, and value both real and taxable personal property according to the following guidelines.

Assessment date

ORS 308.210(1) describes the "assessment date" and states in part:

The assessor shall maintain a full and complete record of the assessment of the taxable property for each year as of January 1, at 1:00 a.m.

Frequency of appraisal

From 1955 to 1996, the assessor was required by law to physically reappraise all property in the county every six years. This requirement was eliminated in 1997 for various reasons including budget constraints, accelerated appraisal techniques, and the successful application of computerized valuation programs. Current law requires that each parcel of real property be appraised using a method of appraisal approved by our administrative rule. See ORS 308.234.

Duties of assessor

The major duties of the county assessor are:

- Locate and identify each property.
- Inventory each property.
- Classify each property.
- Estimate the real market value (RMV) of each property.
- Calculate the taxable value of each property.
- Prepare and certify the assessment roll for the county.
- Calculate the tax due for each property.
- Respond to all property value appeals.

Locate and identify each property

To locate and identify property, the assessor needs an adequate mapping system that shows each parcel of land in the county.

After the assessor receives notice of the existence of new property, the assessor must describe the property to make an assessment. This is achieved through a parcel numbering system, referred to as cadastral mapping, in which each property is assigned its own identifier. (See Chapter 4 for more details.)

Inventory each property

Except for large industrial and utility property, the assessor is responsible for maintaining the inventory of land, buildings, and other improvements attached to the land throughout the county. Maintaining the inventory of real property requires an on-site inspection. During the inspection, the appraiser records the following information about the land and improvements:

- Size;
- Quality;
- Condition; and
- Other pertinent data.

The assessor updates the inventory through additional physical inspections whenever new construction is discovered.

The assessor's staff develops an inventory of taxable personal property from annual returns filed by the property owner or the person in possession of the property. The return filed with the assessor is called a *Confidential Personal Property Return,* 150-553-004. The assessor may choose to perform an on-site inspection of the property to confirm the inventory. For more information about how the assessor values personal property see: *Methods for Valuing Personal Property,* 150-303-450, and *Personal Property Valuation Guidelines,* 150-303-441.

The inventory of county appraised industrial property is updated through the county's *Real Property Return,* 150-301-031. The property that must be reported on the return includes buildings and structures, yard improvements, machinery and equipment, and land site development. Just as for personal property, the assessor may choose to perform an on-site inspection to confirm the inventory reported in the return.

Classify each property

Each property in the county must be classified according to its taxable status and property type. OAR 150-308-0310 contains the basic property class codes that the assessor must use to classify property. Correct classification ensures that property receives the correct annual adjustment or exemption from taxation.

In Oregon, the basic property classes are:

0. Miscellaneous	5. Farm
1. Residential	6. Forest
2. Commercial	7. Multi-family
3. Industrial	8. Recreation
4. Tract	9. Exempt

There are sub-classes to further identify property.

Estimate real market value (RMV)

Oregon law requires all real or personal property that isn't exempt from ad valorem taxation or subject to special assessment be valued at 100 percent of its RMV. RMV is defined in ORS 308.205:

(1) Real market value of all property, real and personal, means the amount in cash that could reasonably be expected to be paid by an informed buyer to an informed seller, each acting without compulsion in an arm's-length transaction occurring as of the assessment date for the tax year.

(2) Real market value in all cases shall be determined by methods and procedures in accordance with rules adopted by the Department of Revenue and in accordance with the following:

(a) The amount a typical seller would accept or the amount a typical buyer would offer that could reasonably be expected by a seller of property.

(b) An amount in cash shall be considered the equivalent of a financing method that is typical for a property.

(c) If the property has no immediate market value, its real market value is the amount of money that would justly compensate the owner for loss of the property.

(d) If the property is subject to governmental restriction as to use on the assessment date under applicable law or regulation, real market value shouldn't be based upon sales that reflect for the property a value that the property would have if the use of the property weren't subject to the restriction unless adjustments in value are made reflecting the effect of the restrictions.

The RMV of all taxable property in the state is updated annually through various methods of appraisal, the Assessor's Certified Ratio Study, and application of computerized trending or recalculation.

Calculate taxable value

The law defines taxable assessed value as the lesser of a property's maximum assessed value (MAV) or RMV. Assessed value (AV) is the value upon which taxes are based. MAV was created through an amendment to the constitution (Measure 50) passed by Oregon voters in 1997. MAV was defined for the 1997–98 tax year as the 1995 RMV reduced by 10 percent. For the years following 1997–98, MAV is equal to the greater of 103 percent of the prior year's assessed value or 100 percent of the prior year's MAV. See ORS 308.146.

The law allows MAV to be adjusted above three percent only for specific reasons that are referred to as "exceptions." Exceptions are discussed in Chapter 13 of this manual.

The assessor must keep additional values on the roll for specially assessed property.

Prepare the assessment roll

The product of the assessor's work is an annual assessment roll. The roll is the basis for the levy of taxes that will be collected annually. The roll contains information about each property including:

- The name of the owner;
- A description of the property by code area and account number;
- The property class;
- The number of acres;
- The RMV of the land;
- The RMV of the buildings;
- The taxable status of the property; and
- The total AV, MAV, and RMV of the property.

See ORS 308.215 for a complete listing.

Calculate the tax

Typically, the assessor calculates the taxes due against a property by multiplying the AV of the property by the tax rate of the taxing districts in which the property is located. However, if the amount of tax calculated by this method is higher than the Measure 5 constitutional limits allow, the taxes due against a property must be compressed. In such a situation, the tax is under "compression" and is calculated by multiplying the RMV of the property times the constitutional limits of $5 per $1,000 of RMV for the education category and $10 per $1,000 of RMV for the general government category.

The assessor knows if the tax for a property is under compression by applying the "M5 test." The M5 test checks the taxes to be billed against the $5 and $10 category limits. If the taxes are less than the limits, the taxes will be billed without compression. If the taxes to be billed are more than either the $5 limit or $10

limit, the taxes will be reduced until they fit under the limitation. The M5 test is applied to every taxable property in the county.

After the taxes are computed for each property tax account, the assessment roll is certified to the tax collector and becomes the tax roll. In some counties, the assessor may also be the tax collector.

Respond to property value appeals

The result of each assessment is a tax bill. If a property owner disagrees with the assessor's estimate of value, the owner may appeal the value to their local board of property tax appeals (BOPTA). The value of state–appraised industrial property must be appealed to the Magistrate Division of the Oregon Tax Court. Centrally assessed property is appealed to our director. An appeal of a penalty assessed for the late filing of a real, personal, or combined industrial property return must be filed with BOPTA even if the value of the property has to be appealed to the Magistrate Division.

The appeal process allows property owners the opportunity to ensure their property is valued correctly and in accordance with statutory provisions. If the taxpayer or the assessor disagrees with the board's decision, either one may appeal to the Oregon Tax Court.

The assessor may respond to appeals at each step in the appeal process. See Chapter 15 for a complete discussion of appeal procedures.

Role of the tax collector

The tax collector bills and collects all taxes and makes periodic remittances of collections to taxing districts. The tax collector mails tax statements to property owners on or before October 25 of each year. The statements contain the RMV and AV of the property and the taxes imposed for each taxing district. The statements also indicate any delinquent taxes from previous tax years.

Taxes are levied and become a lien on property on July 1. Tax payments are due November 15 of the same calendar year. Taxpayers may elect to pay their property taxes in three equal payments:

- First payment due November 15;
- Second payment due February 15; and
- Final payment due May 15.

The taxpayer receives a 3 percent discount if full payment is made by November 15 or a 2 percent discount if two-thirds is paid by November 15. For late payments, interest accrues at a rate of 1-1/3 percent per month.

If the property is real property, taxes become delinquent if not paid in full by May 15. Foreclosure proceedings begin if taxes are unpaid after three years. Foreclosure is the legal process a county uses to acquire title to property. After foreclosure, the property can be sold to satisfy the tax debt.

If the property is personal property, taxes are delinquent immediately after any required payment is missed. Counties are required to issue warrants for collection 30 days after delinquency and may seize the property for collection at any time after delinquency.

Chapter 2

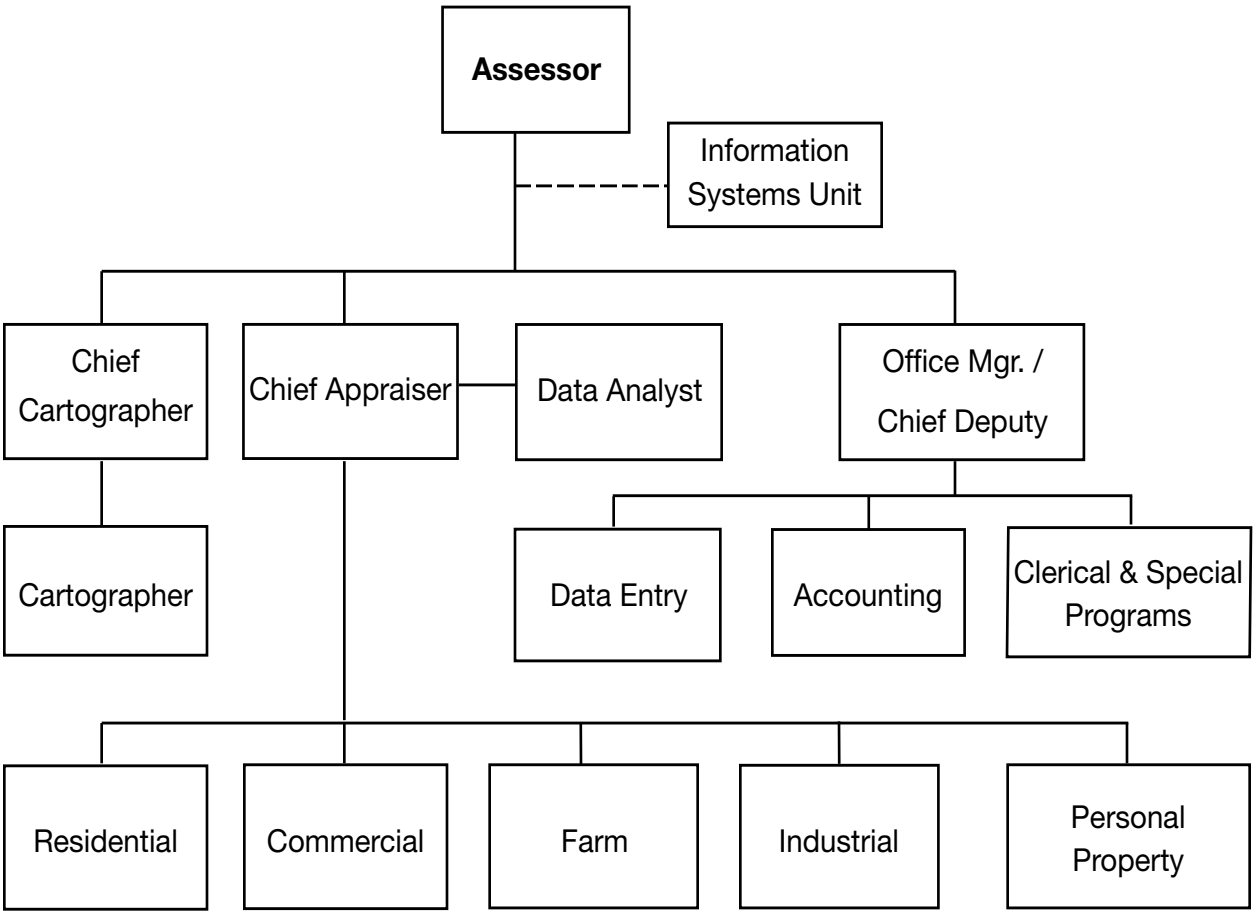
Organization and Administration

Organization

The organization of an assessor's office is determined by the type and volume of work that must be completed. The larger the staff, the greater the need for a formal organization plan. Small offices are organized less formally than large offices, but a division of responsibility still needs to be identified so the office runs smoothly.

The following chart outlines the organization generally found in an assessor's office. It can be modified to fit any county's requirements.

Assessor's office organization chart



To accomplish work objectives, the assessor establishes a line of authority. Each person should know his or her position description and supervisor. Each supervisor needs to know the employee(s) he or she supervises. No person should have more than one direct supervisor. This avoids conflicting instructions that could lower efficiency and morale. Responsibilities shouldn't be delegated to a supervisor without the accompanying authority to carry out the necessary duties.

Positions commonly found in an assessor's office and the duties of those positions are:

Assessor—Establishes the procedures and manages an organization that complies with the provisions of the law relating to the assessment of property. As administrator, the assessor is responsible for all work performed by the staff. The assessor needs to know the statutory requirements and steps involved in the assessment process. The assessor plans, organizes, coordinates, and directs all the office functions.

Chief deputy/Office manager—Supervises office functions; helps develop office policy and programs; establishes and maintains the records system; and acts for the assessor in the assessor's absence.

Office support—The amount and type of support needed varies with the size of the county. Common positions are file clerk, program support, and data entry clerk. Duties for these positions vary but most include assisting the public.

Chief appraiser—Establishes appraisal objectives and directs the appraisal program; plans and develops appraisal policy; coordinates the various appraisal sections; and develops the staff training program.

Chief cartographer—Supervises the maintenance of the cadastral mapping program.

Supervising appraiser—Supervises a staff of appraisers; supervises preappraisal set-up studies; appraises the larger and more complex properties; conducts field reviews of completed appraisals for quality, uniformity, and equity; and monitors appraisal progress to meet the established appraisal objectives.

Data analyst—Collects, confirms, and records market data of all types; develops the ratio study; maintains the sales database; and provides market analysis for the appraisal staff.

Field appraiser—Establishes the RMV of the majority of the properties in the county. The success of most other functions of the assessor's office depends on the quality and quantity of the field appraiser's work.

Information systems unit manager—Sometimes referred to as the information technology (IT) manager or data processing (DP) manager. Maintains, updates, and coordinates the computer programs and the assessment and taxation records through the use of a mainframe computer, local area network, and personal computer, or any combination of the three.

Administration

Assessment time line

The assessment year begins on January 1 and ends on December 31. The assessor must complete many tasks throughout the year according to a specified timeline. The following assessment calendar includes the most important deadlines that affect the assessor's workload. These dates are either required by statute or recommended by us.

January

1 Assessment date for most real and personal property (ORS 308.210).

1 Beginning of sales collection year (ORS 309.200).

31 Last day for nonprofit homes for the elderly to notify the assessor that veterans have been given property tax credit (ORS 307.385).

February

Board of Property Tax Appeals (BOPTA) convenes on or after the first Monday of month (ORS 309.026).

March

1 Assessor sends income questionnaire to owners of non-exclusive farm use (EFU) farmland (OAR 150-308-1050).

15 Last day to file personal property and/or industrial real or combined returns (ORS 308.290).

31 Last day for taxing district to file boundary description and map changes with us (ORS 308.225).

April

1 Filing deadline for most exemptions and special assessments.

10 Assessor sends written notice of late filing to veterans or the surviving spouse (ORS 307.260).

15 BOPTA must adjourn (ORS 309.026).

15 Last day owner of non-EFU farmland can file for farm use assessment of wasteland or land under farm use dwellings (ORS 308A.074 and ORS 308A.253).

15 Deadline for owner of non-EFU farmland to provide income information requested by the assessor (OAR 150-308-1050).

May

1 Last day certain veterans or the surviving spouse can file for exemption (must pay a late fee) (ORS 307.260).

1 CAFFA grant applications due to us (ORS 294.175).

June

1 Last day to file a personal property return with the assessor and receive a 5 percent penalty on the tax (ORS 308.296).

1 Deadline for county to file an amended CAFFA grant application that includes a revised estimate of expenditures.

15 We issue CAFFA certification letters to the county governing body. (ORS 294.175).

30 Last day (or 60 days after property destroyed or damaged) for owner to file application with county tax collector for proration of taxes for property destroyed or damaged by fire or act of God (ORS 308.425).

30 End of the tax/fiscal year (ORS 308.007).

30 Last day for BOPTA to issue amended orders (ORS 309.110).

30 Last day for five or more taxpayers owning in the aggregate 5 percent or more of total forestland in a land market area to appeal specially assessed forestland values (ORS 321.219).

30 Our industrial values due to county (OAR 150-306-0110).

July

1 Start of tax/fiscal year (ORS 308.007).

1 Last day to submit Assessor's Certified Ratio Study to us or request an extension in writing (OAR 150-309-0250).

1 Lien date for real and personal property (ORS 311.405).

1 Assessment date for damaged or destroyed property if application filed timely [ORS 308.146(6)].

1 Prepayment of taxes on subdivisions and condominiums (ORS 92.095 and ORS 100.110).

August

1 Last day to submit ratio study to us if extension has been granted [OAR 150-309-0250].

1 Last day, or 60 days after property destroyed or damaged, for owner to file application for July 1 reassessment without paying a late fee.

1 Last day for owners of land disqualified from special assessment as farm, forestland, or wildlife habitat to file for a different special assessment if disqualification occurs on or after January 1 and before July 1 (ORS 308A.724).

1 Last day for Servicemembers to file claim for Oregon Active Military exemption for tax year ending on previous June 30. (ORS 307.289)

1 Last day to file a personal property return with the assessor and receive a 25 percent penalty on the tax (ORS 308.296).

2 Penalty for failure to file personal property return becomes 50 percent of the tax (ORS 308.296).

14 Last day assessor mails notice of disqualification for "no longer in use" farm or forestland (ORS 308A.113; ORS 308A.116; ORS 321.822). Owner has 30 days from date of disqualification notice to file for a different special assessment (ORS 308A.724).

September

1 Last day for us to issue Assessor's Certified Ratio Study findings and recommendations to the assessor and the county governing body.

1 Last day for filing for tax deferral on farm use land in a disaster area (ORS 311.745).

25 Assessor's last day to change values on assessment roll except for allowed reductions (ORS 308.242).

25 Assessor certifies value or value estimate of joint taxing districts (ORS 310.110).

October

Assessor delivers roll and warrants to tax collector at such time as necessary to enable mailing of tax statements by October 25 (ORS 311.105 and ORS 311.115).

1 Assessor notifies us of new industrial accounts that should become state responsibility. (OAR 150-306-0100).

15 Assessor files ratio study with BOPTA clerk (ORS 309.200).

25 Last day to mail tax statements (ORS 311.250).

The day after tax statements are mailed, the county clerk begins to accept petitions for reduction in value (ORS 309.100).

November

1 Last day for assessor to submit appraisal plan to us if not submitted with ratio study (our policy).

4 Last day for assessor to submit a certified copy of roll summary (SAL Report) to us (ORS 309.330).

15 Property tax due (ORS 311.505).

30 Last day for assessor to mail notice of increase of current year values (ORS 311.208).

December

1 Enterprise zone report due from assessor to us (ORS 285B.695).

15 Last day to file application for designation as forestland due to any increase in assessment (ORS 321.358).

15 Last day to requalify non-EFU zoned farmland disqualified for lack of income. Late fee required (ORS 308A.089).

31 Last day to file for exemption with a late filing fee (ORS 307.112, ORS 307.162, ORS 307.166).

31 Last day to apply for open space land assessment (ORS 308A.306).

31 Last day to file for riparian land exemption (ORS 308A.356).

31 Last day to file appeals to BOPTA (ORS 309.100).

31 End of sales collection year (ORS 309.200).

31 Last day for assessor to reduce value (ORS 308.242).

31 Last day to apply to assessor for correction of maximum assessed value (MAV) based on error in square footage or exception added in error (ORS 311.234).

31 Last day to apply to have destroyed or damaged property redetermined as of July 1 with payment of a late fee.

31 Last day owner can apply to have the MAV of property reduced due to demolition or removal.

Planning the mass appraisal program

Supervisory office work

Review field and office procedures

When planning the appraisal program, analyze the policies and procedures of the current appraisal program by reviewing:

- Office procedures such as:
  - Removal of appraisal records and field maps from the office;
  - Computer access and data entry;
  - Completion of appraisal work and posting progress charts; and
  - Filling out work reports.
- Field procedures including:
  - Appraiser identification;
  - Purpose of appraisal;
  - Filling out appraisal records and forms;
  - Property inspection;
  - Confirmation of building measurements;
  - Property photos; and
  - Recording data on field maps.
- Policies regarding:
  - Closed gates;
  - Dogs and other protective animals;
  - Property hazards;
  - Property visits when only minors are present; and
  - General trespass.

This review ensures that current office and appraisal policies and procedures are adequate to meet statutory compliance and program needs.

Ratio analysis

A ratio study compares the RMV of property on the tax roll to current sales prices. The conclusions arrived at through the ratio study are used to adjust roll values to market value as of the assessment date. Ratio studies are also used to identify areas that may need reappraisal. The assessor is required to complete a ratio study each year. For an in-depth discussion on ratio analysis, see Chapter 7.

Reappraisal

Measure 50 eliminated regular reappraisal for many counties. Instead, most counties now conduct "hot-spot reappraisals." Hot spots are those areas that don't comply with current ratio standards, have changed dramatically since their last physical reappraisal, or in some other way indicate that reappraisal is needed. For example:

- Coefficients of dispersion (COD) indicate a lack of uniformity.
- Sales indicate an increase in the number of accounts that are not the same as appraised.
- Appeal activity for any given neighborhood increases significantly.
- The last physical appraisal is 10 or more years old.

Appraisal performance review

Review appraisals for acceptable quality levels. The quality of the appraisals can be measured through field review and ratio analysis.

Develop, monitor, and summarize performance measures of the appraisal program. Such measurements may include:

- Appraisal production per day and by each appraiser.
- Ratios and coefficients of dispersion for the appraisal area and for each appraiser.
- Number of appeals for the program and for each appraiser.

Determine workload

Next, determine the annual workload of the appraisal program. This analysis includes workload measures for activities such as reappraisal, appraisal maintenance, special assessments, appeals, miscellaneous time, and management and supervision. Establish geographic/physical areas with equal workloads so that each area will require approximately the same staff resources to appraise.

Consider the number of accounts and types of property in the county, distribution of each type, neighborhood boundaries, and relative difficulty of appraising the different property types.

Another factor is geographical distance. Allow for travel time to and from the appraisal areas and between properties within the area. Small tracts scattered throughout an area will require much more time per appraisal than an urban area with many similar properties located in a relatively small area.

To establish valuation areas, consider:

- Total county workload:
  - Total accounts; and
  - Number of accounts of each property type.
- Division of workload:
  - Property class;
  - Code areas; and
  - Market area boundaries.
- Time required for:
  - Appraisal set-up, analysis of market data, and development of value indicators;
  - Appraisal production;
    (Determine how long it takes to appraise one unit of each property type, then multiply by the number of each type of property.)
  - Supervisor's field review of appraisals;
  - Maintenance of appraisals due to new construction, segregation, damage and destruction, reviews, etc.;
  - Preparation and presentation of value data at various levels of the appeal process;

Establish dates throughout the coming year to periodically check the progress of the project to determine if work will be completed on schedule. This will allow for shifting of personnel as needed to complete the project on time.

After the supervisor gives the appraisal staff their assignments, the supervisor must monitor appraisal progress and keep a current work report. The report usually contains information on areas being appraised, date and time involved, miles traveled, type of property appraised, and the unit count of land and improvements. Without a current work report, it will be impossible to forecast and refine the timeline and number of personnel required. Work reports provide a means of assuring that the appraisals in an area will be completed within the allotted time. By tracking work reports, the supervisor can shift resources as needed to ensure timely completion of the appraisal area.

Estimate staff requirements

Apply the expected production to the project's workload to derive an estimate of time required. Convert the time required to the number of positions to determine staff needs.

For example: the project is the reappraisal of a hot-spot residential area. Based on information from prior work reports, determine the average time needed to appraise one unit of each property type. Then multiply the total number of units within each property type in the appraisal area by the average appraisal time required for one unit of that property type.

400 units, type 101 x 1.5 hours/unit = 600 hours, or 75 work days

The total time required for all property types (bare land, improved single family, duplex, triplex, and fourplex) will determine the time and staff necessary to complete the appraisal area.

Total time required for area = 1,575 work days

Time available to appraise area = 178 days

1,575 ÷ 178 = 9 appraisers required to appraise the area.

To estimate the staff required, consider miscellaneous time such as vacations, sick leave, training, and holidays.

The following worksheet can be used to determine:

- Staffing requirements for the year;
- Staff availability for reappraisal;
- If staffing is adequate;
- At what point additional staff may be required; or
- If part-time contract help is needed.

Appraisal staffing worksheet

Work activity	Total number of accounts	Required production	Estimated workdays
1. Maintenance			
New construction, remodels, etc.	_____	_____	_____
Segregations, lot line adjustments, etc.	_____	_____	_____
Other	_____	_____	_____
2. Reappraisal / Recalculation			
Appraisal set-up studies			
Residential	_____	_____	_____
Commercial / Industrial	_____	_____	_____
Rural	_____	_____	_____
Manufactured structure	_____	_____	_____
Field appraisal	_____	_____	_____
3. Farm and forest use	_____	_____	_____
4. Personal property	_____	_____	_____
5. Exemptions, deferrals, specially assessed	_____	_____	_____
6. Appeals			
BOPTA	_____	_____	_____
Magistrate Division—Tax Court	_____	_____	_____
Regular Division—Tax Court	_____	_____	_____
7. Appraisal review			
Residential	_____	_____	_____
Commercial / Industrial	_____	_____	_____
Other	_____	_____	_____
8. Miscellaneous days			
Taxpayer assistance			_____
Training and tech groups			_____
9. Administration			
Management and supervision			_____
Office / Clerical support			_____
Data analyst			_____
		Total days required	_____
10. Non-work days			
Holidays and vacation			_____
Sick leave and other leave			_____

Current staff _____ **x (260 days – Non-work days) = Available days** _____

If available days are equal to or greater than days required, then the proposed plan can be accomplished with current staff. If the available days are less than the days required, then either the plan or staffing will need to be altered.

Use a worksheet like the one below to estimate the total number of full time equivalent (FTE) positions needed to perform each separate task. To calculate the FTE, divide the total number of hours required to perform the task by the total number of hours available during the time allocated to complete the task.

The following is an example of clerical support for processing BOPTA petitions:

Duties	Unit of measurement	Volume per period	Estimated total
Petition	400 petitions	20 minutes each	133 hours
Misc. records	Miscellaneous	50 hours	50 hours
Total hours			183 hours

Method to calculate the full-time equivalent positions	
Total working hours per year 52 weeks x number days per week worked x number hours per day attendance	2,080
From total working hours per year, above, subtract the following:	
Holidays per year x number hours worked per day	96
Vacation (use average number hours taken per person for prior year)	80
Sick leave (use average number hours taken per person for prior year)	40
Hours available to work in a year	1,864

Total hours = 183 183 ÷ 1,864 = 0.10 (rounded) FTE

Hours available in a year = 1,864

Supervisory field work

It is important for supervising appraisers to conduct a field review of a representative sample of each appraiser's work. The review ensures that accurate inventory and uniformity of value is achieved, and that county policy is followed.

Appraisal office work

An appraisal is an opinion of value formed after considering many variables. In mass appraisal, variables are measured and standards are developed for application to individual properties. This method promotes sound RMV estimates and equality between properties.

One important requirement for achieving an accurate RMV is a current and complete data file. An effective program of data collection and recording will improve the quality and quantity of the appraisals and provide support for the final value conclusions.

The data file includes:

- Sales data records.
- Sales confirmation questionnaires.
- Sales data maps:
  - Sales entered on maps with color-coding;
  - Other appraisal data (land leases, listings, offerings, opinions, etc.) entered on map;
  - Boundary lines of market areas.

- Current construction cost data of structures and components.
- Income and expense information:
  - Income and expense questionnaires;
  - Gross income multiplier (GIM) studies;
  - Capitalization rate studies.
- Land data:
  - Rural soil maps, aerial photos, land production records, water rights, and climate and rainfall information;
  - Urban land–use maps, facilities, zoning and building restrictions;
  - Tabulations of confirmed sales of vacant parcels;
  - Tabulations of land rentals (urban and rural);
  - Tabulations of opinions of value, asking prices, etc.
- Building data:
  - Tabulations of confirmed sales of improved properties;
  - Tabulations of depreciation benchmark studies.

Valuation studies

Preappraisal set-up studies provide the basis for the mass appraisal program. These studies include:

Time trend—All data affected by inflationary or recessionary trends should be adjusted to the base appraisal date.

Land—Sales are analyzed to develop base unit values, market adjustments and benchmarks.

Quality class benchmarks—Properties are identified that are representative of each quality class. The properties don't have to be sold properties.

Local cost modifier (LCM) —Information from builders, sales of new homes, building supply houses, and government indexes are used to establish the LCM, which brings factor book costs in line with local market costs.

Depreciation—Sales, costs, and improvement residuals are analyzed to develop depreciation schedules and benchmarks for various types of improvements.

Income and expense data—Income property information is analyzed to establish economic rents and typical expenses.

Capitalization rates—Sales are analyzed to determine the overall rate applicable to income-producing properties. Recapture and tax rates are extracted from the sales.

Gross income multiplier (GIM) —Analyze the sale-to-income ratio to determine the GIMs to use on various properties.

Exception calculation

Exceptions are changes to property that allow adjustments to maximum assessed value. After a changed property has been identified and physically inspected, calculate the RMV of the change and update the account. Computing the exception value is a separate procedure. For more information see Chapter 13 on "Exceptions."

Appeals

Allocate appraisal and clerical staff time to respond to taxpayer inquiries and appeals. It is expected that any valuation program will produce a certain number of appeals. However, well-documented supporting data can reduce the time necessary to respond to the appeals.

Appraisers and clerical staff typically spend considerable time assisting taxpayers after the tax statements have been mailed. Diplomatic and helpful information at this stage of the taxpayer's inquiry into the accuracy of their value can greatly reduce the number of appeals.

Appraisal field work

Valuation studies

Each of the previously listed studies also requires field verification. For instance, improvement quality and special site characteristics can be accurately determined by field inspection. In some cases, a personal interview provides the most complete sales data and income and expense data.

Maintenance appraisal

This involves the annual appraisal of new property and changes to existing property after the January 1 assessment date.

Reappraisal

Once the preappraisal set-up studies are complete and base standards have been established, they are applied to each property separately, taking into consideration the individual characteristics each property may possess. By using this approach, the value indicators can be uniformly applied to a mass of properties by following accepted appraisal principles and procedures.

Properties are inspected and data from preappraisal set-up studies are applied through the three approaches to value to develop the final estimate of RMV for each property being appraised.

Appeals

In most counties, appeals of residential property will require a new appraisal, typically made using the market approach and supported by the cost approach. Income properties receive new appraisals using the most appropriate (income, market, cost) method.

Although more closely associated with office time, the appraiser must also be given adequate time for preparation and testimony at BOPTA hearings, Department of Revenue supervisory or hardship conferences, Magistrate hearings, and Regular Division Tax Court hearings.

Summary

Proper administration requires that the assessor maintain a sufficient number of skilled staff to conduct the necessary functions of the assessor's office. In addition to maintaining adequate staff, the assessor is required to maintain current procedures and ensure that staff maintains its competency through annual training. By using the proper administrative procedures and a good organizational structure, a legal and equitable assessment roll can be achieved.

Chapter 3

Records

Assessors have responsibility for locating, identifying, inventorying, and valuing all property in their counties. The assessor must be able to explain and defend each assessed value. It is essential to maintain accurate records that show the underlying factors and procedures used.

Office records used by assessors and their staffs include many documents, both in hard copy and computerized formats. Some of these records include:

- Property transaction records;
- Property description cards (taxlot cards);
- Journal vouchers for tracking account changes;
- Office or counter maps;
- Appraisal maps;
- Sales cards/sales printouts;
- Sales questionnaires;
- Ownership indexes;
- Appraisal inventory cards;
- Confidential real and personal property returns;
- Exemption files/special assessment files;
- Our appraised industrial and centrally assessed property files;
- Real property assessment roll;
- Personal property assessment roll; and
- Administrative records.

Examples and brief descriptions of some types of records used in an assessor's office begin on the following page.

Property transaction records

Property transaction records include deeds, contracts, and any other instrument that conveys an interest in real property. These instruments may be documents recorded in the clerk or recorder's office (in home–rule counties, the recorder's office) or they may be provided to the assessor's office by the taxpayer.

A property transaction document usually contains the name(s) of the grantor(s) and grantee(s), type of transaction, a description of property, consideration, encumbrances (such as easements, severed mineral rights, and taxes owed), date of transaction, and the name and address of the party who is to receive the tax statement. Following is an example of a deed.

Example of a deed

FORM No. 965 – WARRANTY DEED (Tenants by Entirety) – Statutory Form.

STEVENS-NESS LAW PUBLISHING CO., PORTLAND, OR 97204

NN

Grantor's Name and Address

Grantee's Name and Address

After recording, return to (Name, Address, Zip):

Until requested otherwise, send all tax statements to (Name, Address, Zip):

SPACE RESERVED FOR RECORDER'S USE

STATE OF OREGON, County of ..... } ss.

I certify that the within instrument was received for recording on ....., at ..... o'clock .....M., and recorded in book/reel/volume No. ..... on page ..... and/or as fee/file/instrument/microfilm/reception No. ....., Records of this County.

Witness my hand and seal of County affixed.

NAME TITLE

By ....., Deputy.

WARRANTY DEED (TENANTS BY ENTIRETY) – STATUTORY FORM

(INDIVIDUAL OR CORPORATE GRANTOR)

....., Grantor, conveys and warrants to ....., husband and wife, as tenants by the entirety, Grantees, the following described real property free of encumbrances, except as specifically set forth herein, situated in ..... County, Oregon, to-wit:

(IF SPACE INSUFFICIENT, CONTINUE DESCRIPTION ON REVERSE)

The property is free from all encumbrances except (if none, so state):

The true consideration for this conveyance is $..... (Here, comply with the requirements of ORS 93.030.)

Dated ....., if a corporate grantor, it has caused its name to be signed and its seal, if any, affixed by an officer or other person duly authorized to do so by order of its board of directors.

THIS INSTRUMENT WILL NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY APPROVED USES AND TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES AS DEFINED IN ORS 30.930.

STATE OF OREGON, County of .....) ss.

This instrument was acknowledged before me on .....,

by .....

This instrument was acknowledged before me on .....,

by .....

as .....

of .....

Notary Public for Oregon

My commission expires .....

SAMPLE

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Property description record

County assessors must set up and maintain a filing system that makes it easy to locate individual property accounts.

Property description records are commonly referred to as taxlot cards. Information on this record includes:

- Map number;
- Parcel number;
- Special interest numbers;
- Tax code area number;
- A tie to the parent account;
- Legal description;
- Any taxlots that have been cancelled and combined with another taxlot;
- Gross and net acres;
- Deed references (important for history research purposes);
- Geographic Information System (GIS) coordinates; and
- Exceptions for roads, segregations, and easements.

If taxlot cards are part of an automated system, they need to contain the same information as the manual taxlot card. Following are two examples of a taxlot card.

Example of taxlot card

03S	38E	9	B	C	503			1-1
Twp	Rge	Sec	1/4	1/16	Parcel	Type	Num	
Map Number					Number	Spec Int		Code
Taxlot Number								

Official Record of Descriptions of Real Property

Union County Assessor's Office

Formerly part of

Description and Record of Change	Acre Change	Doc Type	Date of Entry On This Card	Deed Record	Acres Remaining
Revised Desrciption Partition Plat 2014-0011 Parcel 1, 2 & 3		PP	8/11/2014	20142040T	0.82
Exc: Parcel 2 (03S38E09BC 525)	-0.14	PP	8/11/2014	20142040T	0.68
Exc: Parcel 3 (03S38E09BC 526)	-0.46	PP	8/11/2014	20142040T	0.22
LLA from 03S 38E 9BC Parcel 526 Also: (FTLPO) BAAP on the W ROW li of Twenty-First Street, sd pt being the NE cor of Par 3 of PP 20140011T. Th N89°36'18"W 201.26' alg the N li of sd Par 3, to the NW cor of sd Parcel 3, Th S0°19'20"W 88.58'alg the W li of sd Par 3; Th S89°31'14"E 100.66' to the E li of sd Par 3; Th S0°19'01"W 28.64' alg said E li of sd Par 3 to the SW cor of Par 1 of sd PP; Th S89°31'14"E 100.65' alg the S li of sd Par 1 to the E li of sd Par 1, Th N0°18'16"E 117.52' alg sd W ROW li to the POB.	0.25	SWD	1/21/2016	20152194	0.47

Example of taxlot card

03S	38E	9	B	C	526			5-3
Twp	Rge	Sec	1/4	1/16	Parcel Number	Type	Num	Code
Map Number						Spec Int		
Taxlot Number								

Official Record of Descriptions of Real Property

Union County Assessor's Office

Formerly part of 03S38E09BC 503

Description and Record of Change	Acre Change	Doc Type	Date of Entry On This Card	Deed Record	Acres Remaining
Partition Plat 2014-0011 Parcel 3		PP	8/11/2014	20142040T	0.46
LLA to 03S38E09BC Parcel 503 Exc: (FTLPO) BAAP on the W ROW li of Twenty-First Street, sd pt being the NE cor of Par 3 of PP 20140011T. Th N89°36'18"W 201.26' alg the N li of sd Par 3, to the NW cor of sd Parcel 3, Th S0°19'20"W 88.58'alg the W li of sd Par 3; Th S89°31'14"E 100.66' to the E li of sd Par 3; Th S0°19'01"W 28.64' alg said E li of sd Par 3 to the SW cor of Par 1 of sd PP; Th S89°31'14"E 100.65' alg the S li of sd Par 1 to the E li of sd Par 1, Th N0°18'16"E 117.52' alg sd W ROW li to the POB.	-0.25	SWD	1/21/2016	20152194	0.21

Journal vouchers

A journal voucher assures that the various steps necessary in assessment and taxation have been completed. The journal voucher form can either be hard copy or computerized. If the voucher is computer-generated, all information is entered directly into the system, thus eliminating the need for a hard copy. A journal voucher system that uses sequential numbering and is filed numerically makes it easy to locate vouchers. Include all information needed to update the assessment roll:

- Grantor;
- Grantee;
- Affected taxlot(s);
- New account number;
- Deleted accounts;
- Computer reference number;
- Old and new acreage;
- Reason for change;
- Deed reference, including type of deed and date of deed; and
- Check–off list associated with office flow to assure all required functions have been completed.

Following is an example of a journal voucher.

ASSESSOR'S JOURNAL VOUCHER

Union County

Assessment Years Affected

☐ Check when completed and ready to file

Reference # 5493
Maintenance ID # 4932

PRESENT ACCOUNT	Code 1-1	NEW ACCOUNT	Code 1-1
Account No	Name of Owner	Account No	Name of Owner
03S 38E 9BC 526	Hunt, L Wavel & Judy A	03S 38E 9BC 503	Pfaff, Wade E & Stephanie C
LLA to parcel 503 of 0.25 acres.		LLA from parcel 526 of 0.25 acres.	

Class	PRESENT RECORD Acres	PRESENT RECORD Value	NEW RECORD Acres	NEW RECORD Value
Land	0.46		0.21	
Improv				
Exemp				
TOTAL				

Class	NEW ACCOUNT Acres	NEW ACCOUNT Value	CHANGES TO ROLL Acres	CHANGES TO ROLL Val Inc	CHANGES TO ROLL Val Decl
Land	0.47				
Improv					
Exemp					
TOTAL					

Reason for Change	✓	Changes Needed	✓	Completed (initial)
1. Name Change		1. Counter Map		
2. Acreage Change		2. Map Tracing	✓	SH
3. Value Change		3. Taxlot Card	✓	SH
4. Segregation		4. Fly Sheet		
5. Consolidation		5. Appraisal Map		
6. Code Change		6. Soil Class Map		
7. Omitted Property		7. Index Card Filed		
8. Double Assessment		8. Sales Data Card		
9. Clerical Error		9. Appraisal Envelope (Value)		
10. Cancelled		10. Copy to Appraisal Section		
11. Examination Change		11. Copy to Collector		
12. Per Prop Value Change		12. New Forms		
13. Per Prop New Account		13. New Tax Roll and Statement to Collector		
14. R/W		14. Assessment Roll		
15. New Map		15. Computer		
16. Non-Contiguous Parcel		16. Detail		
17. Lot Line Adjustment	✓	17.		
18. Subdivision/Partition Plat		18.		
19. Other		19.		

PERSONAL PROPERTY Class	Present Value	Revised Value	Change to Roll Inc -(Decl)
1. Other Mach and Equip			
2. Furn Equip in Coml Use			
TOTAL			

TAX COLLECTOR'S OFFICE

Collector's JV No

Tax Roll Corrected

Statement Corrected

Remarks
MID# 4932
CS 036-2015

INSTRUMENT RECORD

No. 20152194 Date 7/10/2015

Type SWD

Sale Price $225,000.00

Prepared By Sally Hood Date 1/21/2016

Confirmed ☐ Telephone ☑ Mail/Email ☐ Counter

150-303-034 (Revised 1-2014) County Form, Oregon Department of Revenue

Sales data records

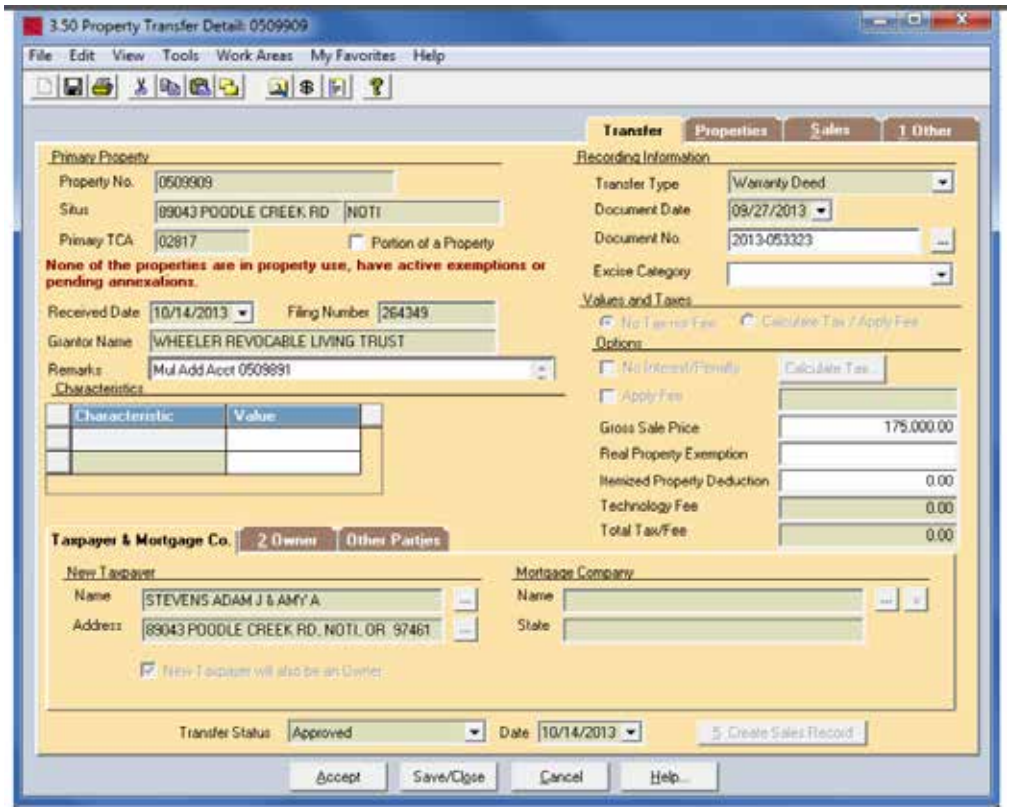
Use sales data records to analyze market data for appraisals (ORS 308.232 and ORS 308.233), to measure results against appraisal standards (ORS 308.234 and OAR 150-308-0380), and for the annual sales ratio study (ORS 309.200 and OAR 150-309-0250). Sales information is taken from recorded instruments, such as deeds and contracts, and documentation like Multiple Listing Service data. This process is known as sales take-off.

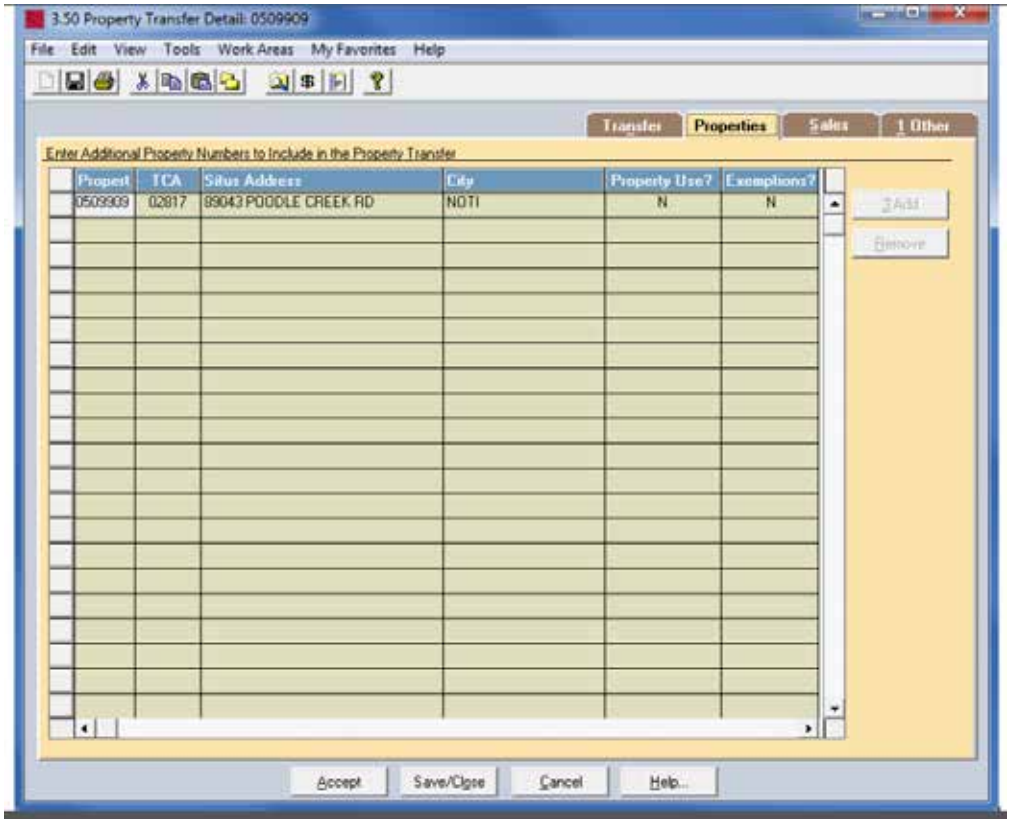
The office of the clerk or recorder and the cartography section of the assessor's office identify the properties that have transferred or conveyed whole or partial ownership. In several counties, our cartography section performs the mapping duties under contract with the county.

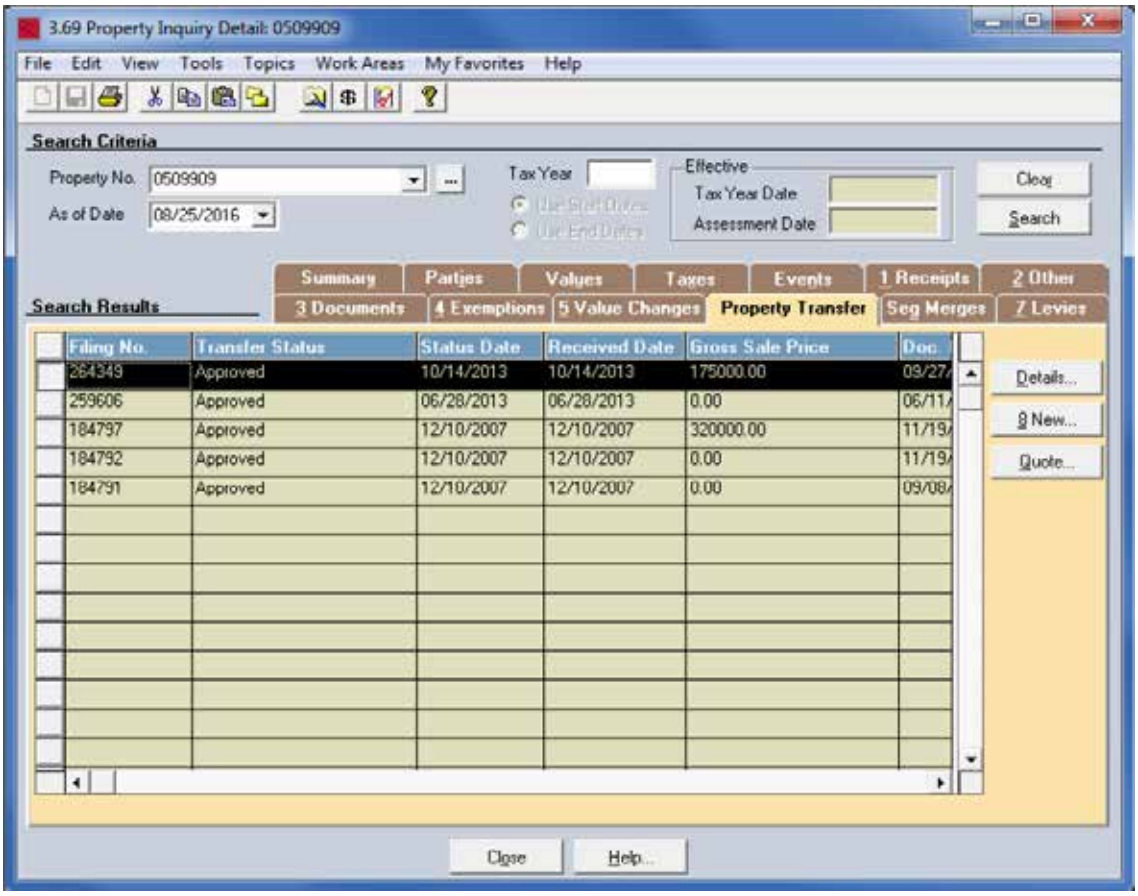
Written procedures with specific timelines can be developed to show the process of sales information moving quickly from the clerk's office through the cartography section and on to the data analyst. The data analyst needs to ensure that the sales collection, confirmation, and qualification process is current.

Following are examples of computerized sales data records.

Examples of property transfer screens






3.69 Property Inquiry Detail: 0509909
File Edit View Tools Topics Work Areas My Favorites Help
Search Criteria
Property No. 0509909
As of Date 08/25/2016
Tax Year
Effective
Tax Year Date
Assessment Date
Clear
Search
Summary Parties Values Taxes Events 1 Receipts 2 Other
Search Results
3 Documents 4 Exemptions 5 Value Changes Property Transfer Seg Merges 7 Levies
Filing No. Transfer Status Status Date Received Date Gross Sale Price Doc.
264349 Approved 10/14/2013 10/14/2013 175000.00 09/27/
259606 Approved 06/28/2013 06/28/2013 0.00 06/11/
184797 Approved 12/10/2007 12/10/2007 320000.00 11/19/
184792 Approved 12/10/2007 12/10/2007 0.00 11/19/
184791 Approved 12/10/2007 12/10/2007 0.00 09/08/
Details...
New...
Quote...
Close
Help...

Chapter 4

Oregon Cadastral Map System

Purpose

The primary purpose of the Oregon Cadastral Map System is to discover, identify, and inventory all real property within the state of Oregon.

A joint effort of several counties and what was then the State Tax Commission first began to develop standards for the Oregon Cadastral Map System in 1952. The state standards continue to evolve to keep pace with new laws and new technology.

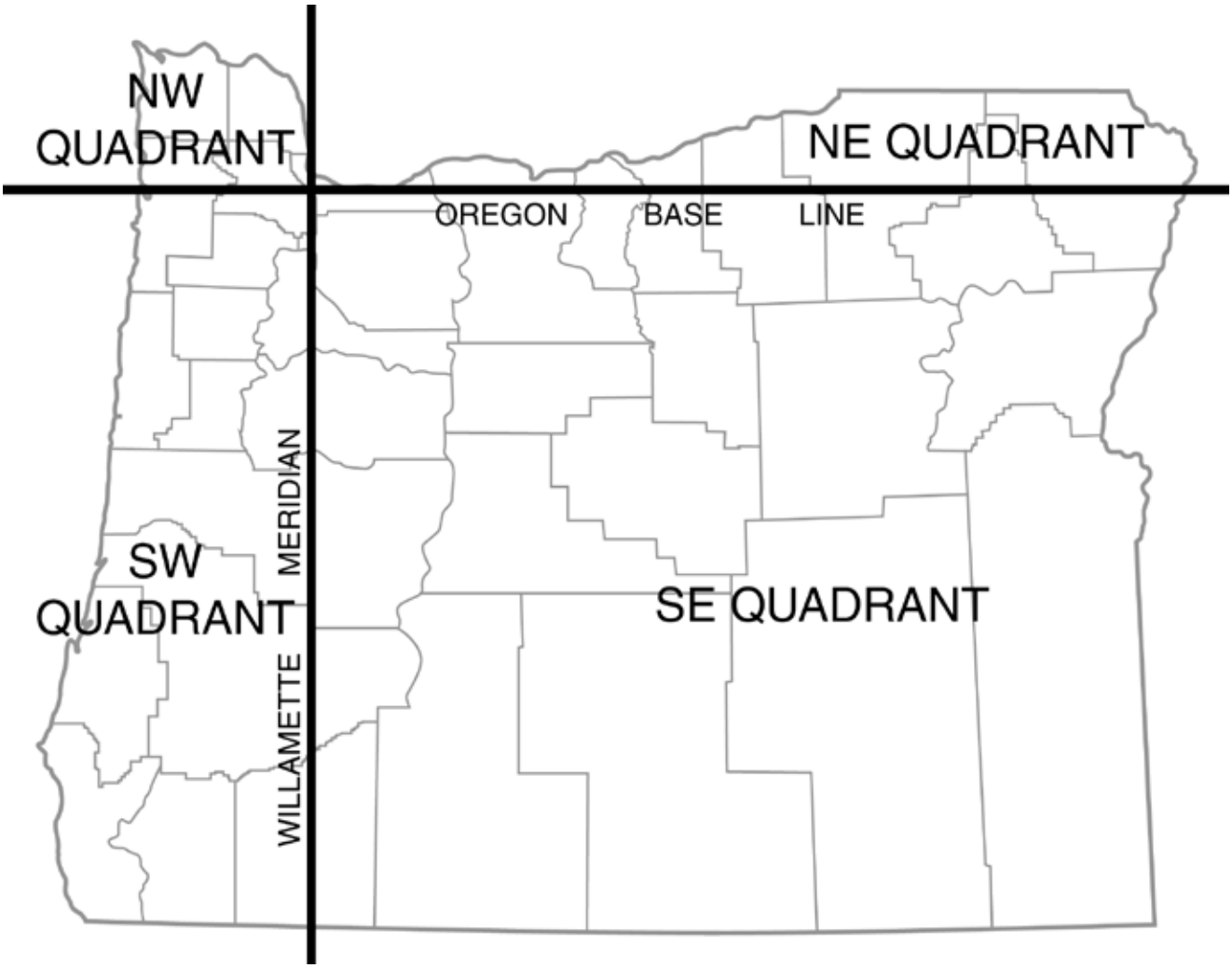
New technology in recent years includes the Computer Assisted Mapping System (CAMS) and Geographic Information Systems (GIS). These systems link appraisal records to the corresponding parcel on the map.

The Oregon Map Project (ORMAP) is the latest mapping concept. Its ongoing purpose is to develop a statewide property tax parcel base map that is digital and continually maintained. ORMAP will support a variety of GIS applications and has improved the administration of the property tax system.

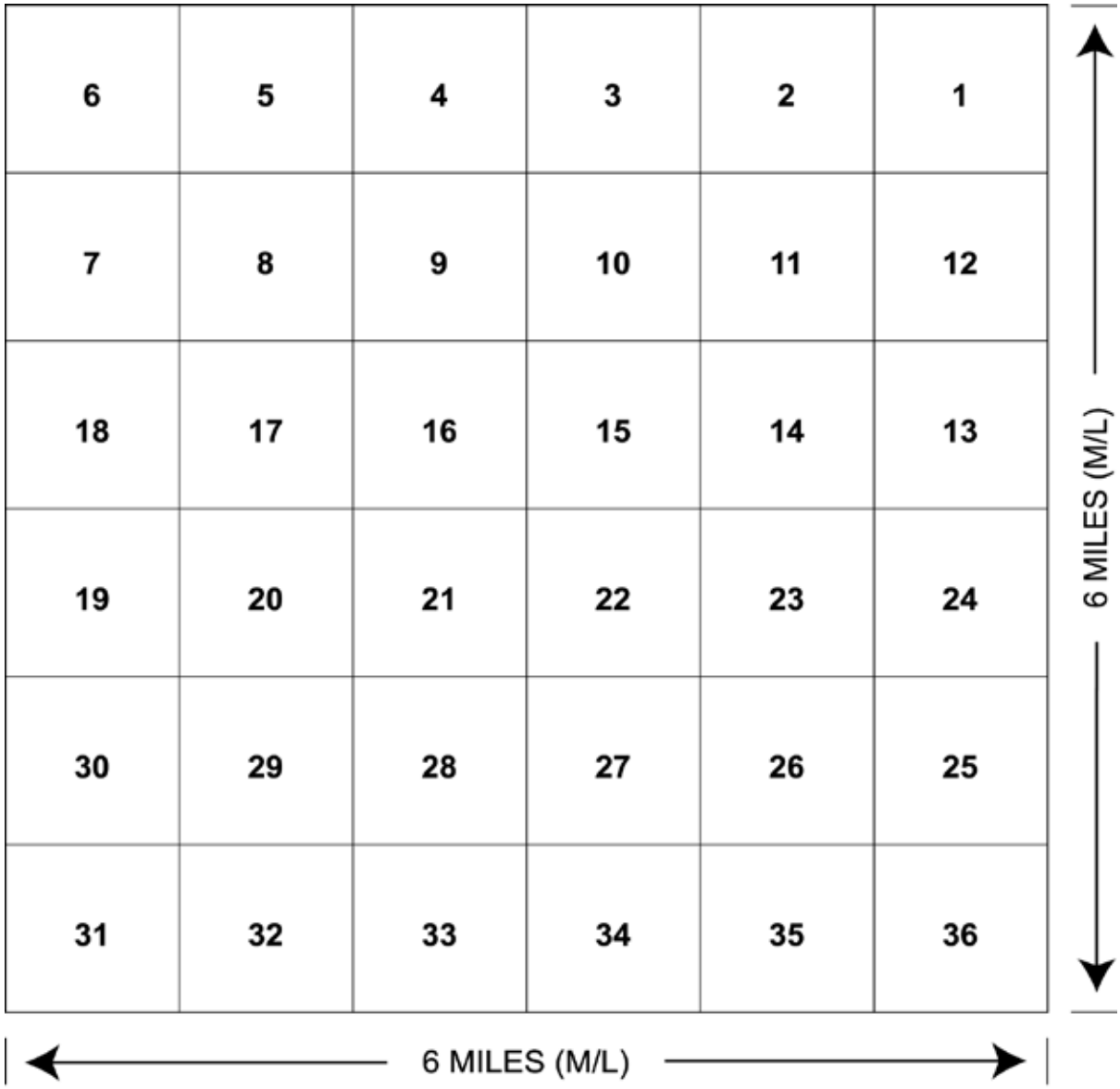
The Oregon Cadastral Map System is based on the U.S. Rectangular Survey System (USRSS). The national system uses township, range, and section references. Oregon is divided into four quadrants of the USRSS. Townships are divided into two north and south quadrants. Townships lying north of the Oregon Base Line are North Townships and those lying south of the base line are South Townships. Ranges are also divided into two east and west quadrants. West Ranges are west of the Willamette Meridian and East Ranges are east of that meridian.

On the next page is a map showing the Willamette Meridian and Oregon Base Line.

Map of base line and meridian



Township map

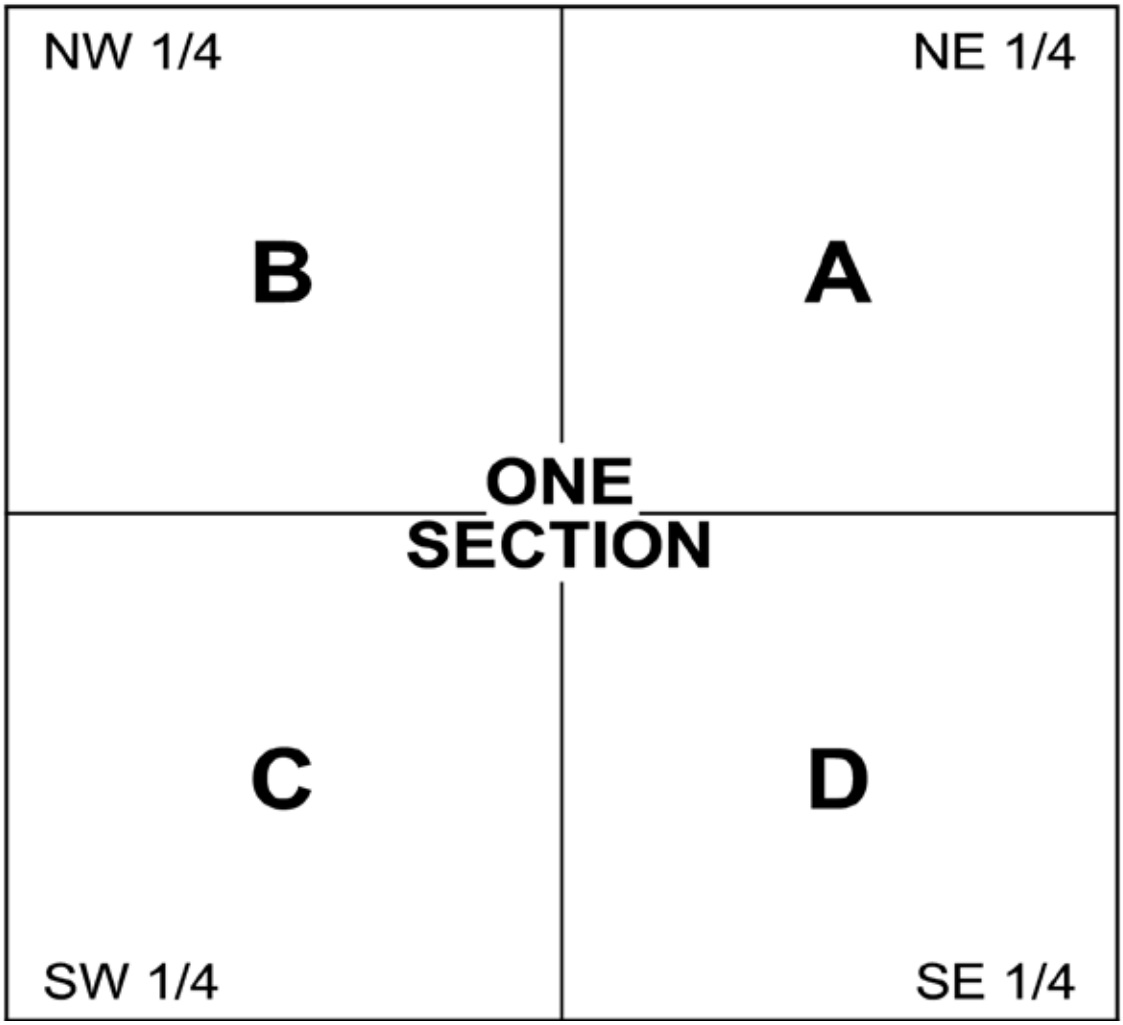


ONE TOWNSHIP

(Subdivided into Sections)

Townships are approximately six miles square and are divided into 36 sections. Each section is approximately one mile square and contains approximately 640 acres.

SECTION MAP WITH ¼ SECTION BREAKDOWNS

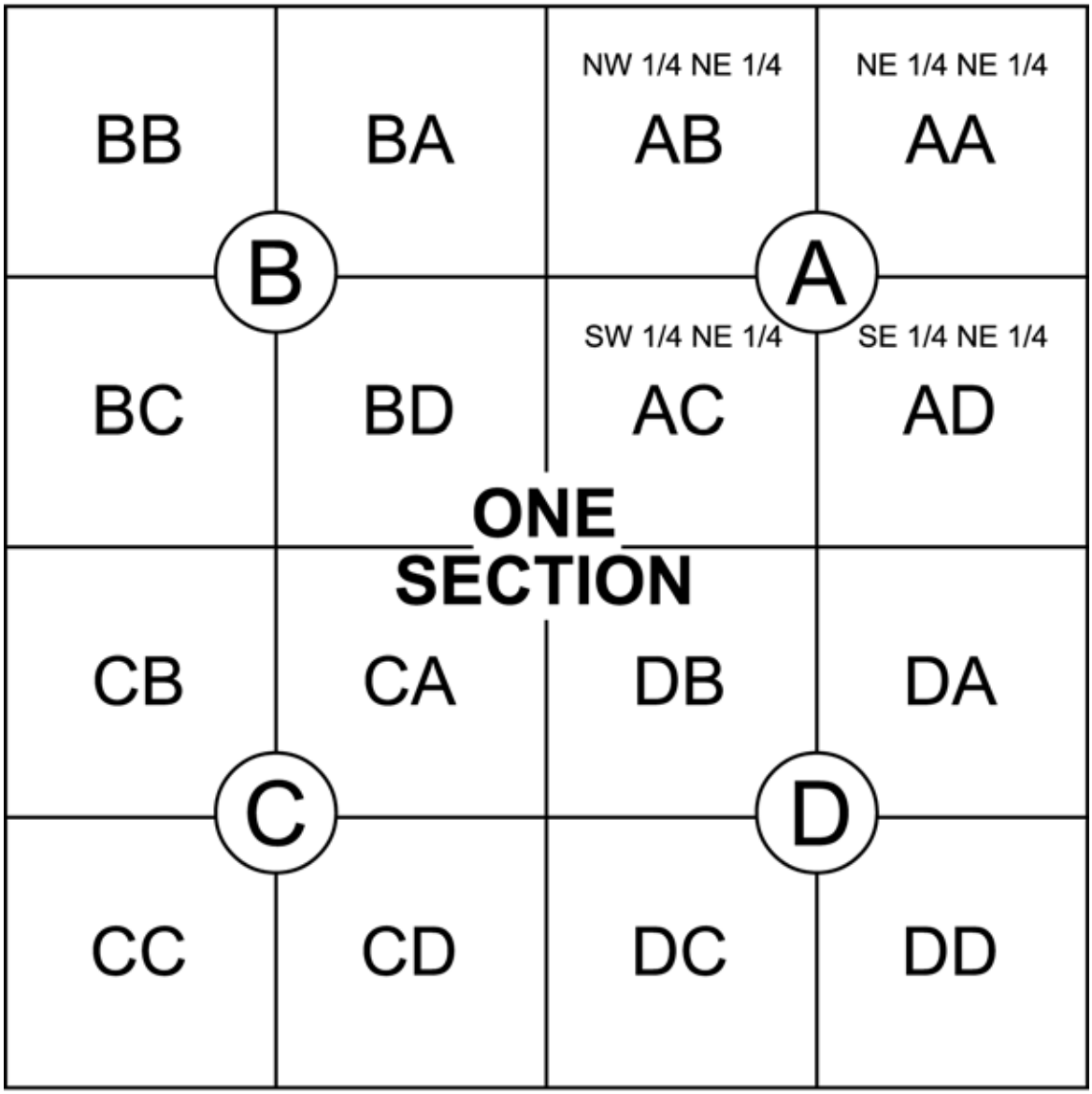


Sections are divided into four one-quarter sections, each approximately one-half mile square and containing approximately 160 acres. Quarter sections are labeled according to their location within the section:

NE 1/4 = A NW 1/4 = B

SW 1/4 = C SE 1/4 = D

SECTION MAP WITH ALL BREAKDOWNS



NUMBER DESIGNATIONS OF 1/4 SECTIONS (CIRCLED)
AND 1/4 1/4 SECTIONS OF A SECTION

Each quarter section is divided into fourths, or quarter-quarter sections. Each quarter-quarter section is approximately one-quarter mile square and contains approximately 40 acres. The quarter-quarter sections are labeled according to location within the quarter section:

NE 1/4 NE 1/4 = AA NW 1/4 NE 1/4 = AB

SW 1/4 NE 1/4 = AC SE 1/4 NE 1/4 = AD

In some counties, computers are not able to integrate alpha characters with numeric characters. In these counties, the maps use a numeric designation instead of the more common letter designation. Sections are divided in the same manner. Numbered designations are assigned in the following manner:

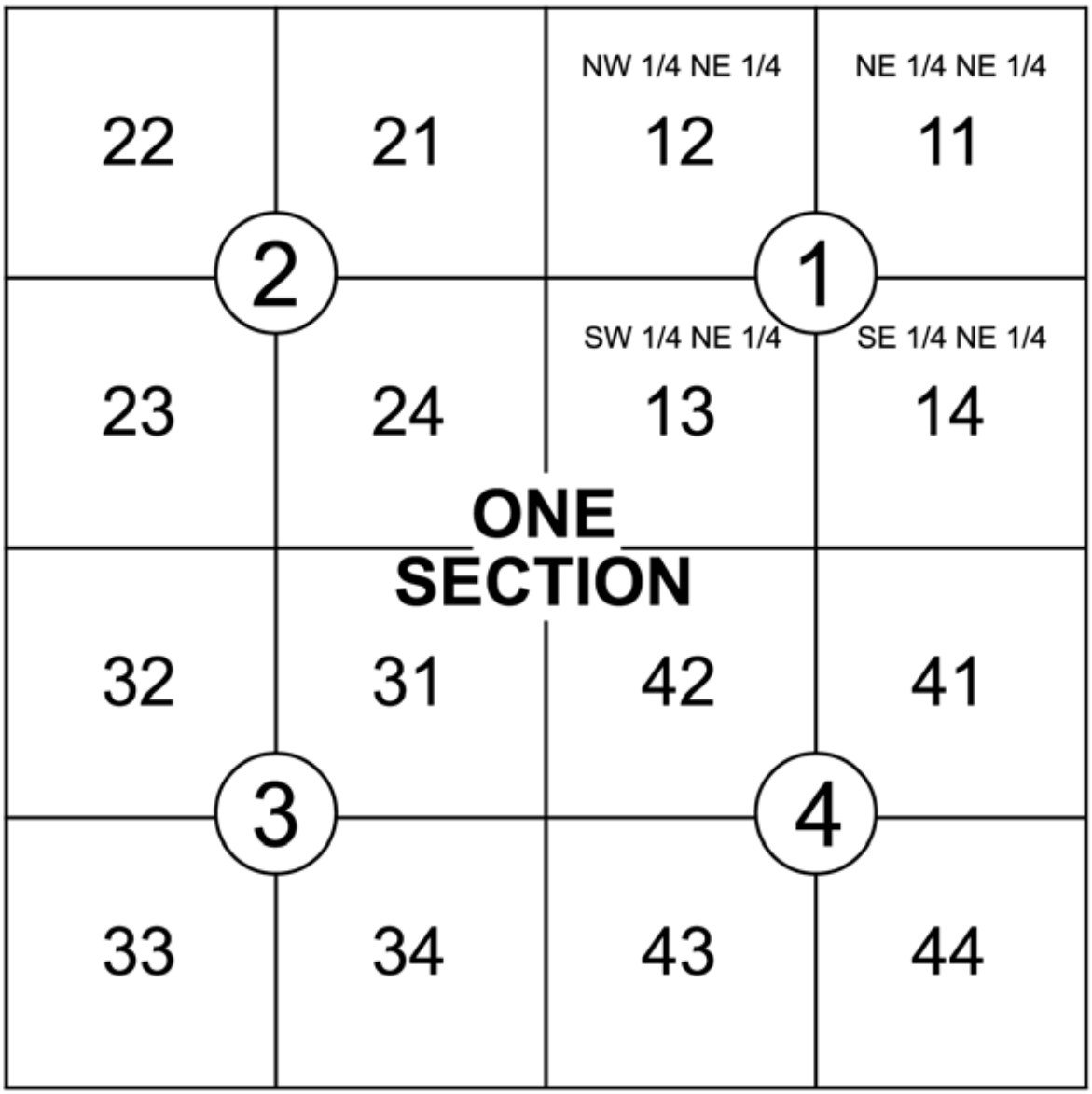
Quarter sections

NE 1/4 = 1	NW 1/4 = 2
SW 1/4 = 3	SE 1/4 = 4

Quarter-quarter sections

NE 1/4 NE 1/4 = 11	NW 1/4 NE 1/4 = 12
SW 1/4 NE 1/4 = 13	SE 1/4 NE 1/4 = 14

SECTION MAP USING NUMBER BREAKDOWN



NUMBER DESIGNATIONS OF 1/4 SECTIONS (CIRCLED)
AND 1/4 1/4 SECTIONS OF A SECTION

Standard map number

The Oregon Cadastral Map System contains four standard scale maps:

1 inch =	2,000 feet	Township map
1 inch =	400 feet	Section map
1 inch =	200 feet	Quarter section map
1 inch =	100 feet	Quarter-Quarter section map

A map's scale is determined by the number of parcels in the map area, the amount of detailed information that has to be shown, and an estimate of how much development is expected in the area. Cadastral maps developed for assessment and taxation are an appraisal tool. They must be constructed at a scale large enough to show any and all information the appraiser will need when in the field.

The standard cadastral map number is based on the national USRSS system—township, range, and section. The map number is derived from the map scale. The following examples show map numbers and their relationship with the scale of the map. We will use Township 11 South, Range 5 West, Section 36.

Map scale	Map number				
	Township	Range	Section	Quarter	Quarter-Quarter
1" = 2,000'	11	5			
1" = 400'	11	5	36		
1" = 200'	11	5	36	A	
1" = 100'	11	5	36	A	B

The Oregon Cadastral Map System also employs special scale maps. These maps are used to show detail that can't be shown on a standard cadastral map. Some of the uses of special scale maps are:

1" = 800'	Mining claims (Detail map)
1" = 20' through 1" = 50'	Condominiums (Supplemental map)
1" = 20' through 1" = 50'	Planned communities (Detail map)

This general explanation of map numbers doesn't address unique cases such as half townships, three-quarter ranges, or oversized sections. For explanation of these, see Volume 1, "Concepts and Standards," of the *Oregon Cadastral Map System*.

Standard taxlot number

The standard taxlot number in the Oregon Cadastral Map System is a combination of:

- Map number;
- Parcel number or unit ownership number;
- Special interest number, if applicable; and
- Code number.

The unique property identification number used in the Oregon Cadastral Map System is called a parcel number. The parcel number is referred to as a "two–zero" number. The numbers are assigned in numerical order by hundreds. They begin with 100 and proceed in order, such as: 100, 200, 300, 400.

The two–zero number provides an orderly expansion of the parcel number for future segregation: 101, 102, 103, 104, up through 198. It also provides a direct link from the segregation back to the parent account (or the account it was created from). The 199 number is reserved for omitted property.

A parcel, as defined for assessment and taxation, is a contiguous area of land that is described in a single description by a closed traverse. The definition of parcel also provides for describing it as one of a number of lots, blocks, sections, or tracts in a subdivision or section that is separately owned and that

can be separately conveyed. When a parcel number is canceled, it can't be reused. If parcel numbers are reused, the previous history is destroyed and research becomes almost impossible.

Code number

The code number used in the standard taxlot number represents a unique combination of taxing districts that levy, or could levy, a tax on a particular parcel of property. This unique combination of taxing district levies determines the cost per thousand dollars of assessed value. A taxlot may lie in more than one tax code, called a split code.

Special interest number

Special interest numbers alert the map user that a particular parcel has something unusual about it. The special interest number always contains a letter designation followed by a number. The special interest designations are:

A Improvements only.

F Air space only—above a given elevation.

M Mineral rights—assessed and taxed only if actively being mined as of the assessment date.

S Subsurface ownership.

U Undivided interests.

The number following the special interest letter refers to the number of special interests on a particular parcel. For example, if you have an airport with a parcel number of 100, and four separately owned hangars built on the airport property, you would assign improvement-only numbers to the hangars. The map would show the following numbers:

100

100 A01

100 A02

100 A03

100 A04

A complete taxlot number containing a special interest number is shown as:

2N 4 23AA 100A01 7-02

Township	Range	Section	1/4	1/4	Parcel	Special interest	Code no.
2N	4	23	A	A	100	A01	7–02

Note that any parcel with an undivided interest will contain a minimum of two special interest numbers; such as 100 U01, 100 U02.

A typical cadastral map available for appraisal purposes looks like:

Condominiums

Condominiums are assigned a unique parcel number. This number alerts the appraiser to refer to the condominium's recorded plat for the specification of each unit, the dedication and declaration, and the restrictive covenants that apply to individual condominiums. The parcel numbering for a condominium begins with 90000.

All condominiums have general common elements owned by all unit owners. General common elements are not assessed directly. However, they are assigned a value and that value is divided proportionately among the interest of the unit owners.

An important part of the general common elements is the common area—the land and improvements that are apart from the unit itself (swimming pool, lawns, recreation rooms, etc.). Although the common areas are not assessed separately, they must be assigned a taxlot number. That number is composed of the map number and the four-zero base number of the condominium, called the common area number.

Example: 27 13 36AB 90000

If there is more than one condominium complex on a map, the common area numbers would be:

Examples:	**27**	**13**	**36AB**	**80000**	**(2nd condominium)**
	27	**13**	**36AB**	**70000**	**(3rd condominium)**

Unit numbers are assigned to each unit. Each unit in the first condominium on a map would be numbered consecutively beginning with 90001. If there were 15 units in this condominium, the numbers would be 90001 through 90015.

In addition to general common elements, many condominiums have limited common elements. Items limited to unit ownership—such as patios, decks, moorage slip, and aircraft hangers—are limited common elements.

Planned communities

A planned community is a subdivision that includes a common area and a homeowners' association that is responsible for the maintenance and operation of the common area. Owners of individual lots, by virtue of their ownership, automatically are members of the homeowners' association.

Each lot in a planned community has a separate parcel number. Each lot must be separately taxed and assessed. The common properties are taxlotted separately, but under ORS 94.728, are not assessed separately. The exception is when the declarant alone is liable for payment of taxes on any portion of the common property of a planned community in which the declarant has reserved the right to develop the property into additional lots.

Chapter 5

Fundamental Appraisal Concepts

Appraising isn't an exact science. There are no known tables, formulas, or mathematical calculations that will yield an indisputable estimate of market value. The appraiser must base an opinion of value upon the ever-changing relationship between human desires and a commodity. Fundamental appraisal methods enable the appraiser to arrive at an estimate of value that is logical and supportable. Familiarity with fundamental appraisal theory helps the appraiser understand the importance of factors affecting buyers and sellers.

The final product of any appraisal is an estimate of value. There are many definitions of value and types of value. Oregon Revised Statutes, ORS 308.232 and ORS 308.205, provide that the final product of an assessment appraisal is RMV, or market value. For the definition of RMV refer to the glossary at the end of this manual.

Appraisal principles

These basic appraisal principles should be considered when valuing property:

Anticipation—Value is the present worth of all the anticipated future benefits to be derived from a property.

Assemblage—The combining of two or more parcels into one ownership or use.

Balance—Maximum value or profit is achieved or sustained when the agents of production, or the surrounding land uses, are complementary and in a state of equilibrium. For example, a residential lot needs complementary land uses like schools, parks, grocery stores, and medical facilities to protect or maximize its value. Complementary land uses are just as important to commercial property. The principle of balance also applies to the relationship between land and building.

Change—The principle of change deals with the transitional nature of property. Today's property conditions evolved from yesterday and are the basis for forecast of tomorrow's conditions. Real property, whether an entire neighborhood or a single property, is constantly changing, at times imperceptibly, from one condition or stage to another. Stages of change within a neighborhood include the development or growth stage, static or stability stage, disintegration or decline stage, and revitalization stage. The principle of change is the law of cause and effect in the market. Change is reflected in the market as appreciation or depreciation in property value.

Competition. Competition is created by the potential for profit that attracts new sellers and buyers to a market. Competition among sellers may lead to an oversupply that reduces prices and profits. Competition among buyers may lead to shortages that increase prices and profits to sellers. Applied to property, competition means an excess of one type of facility will decrease the value of all such facilities.

Conformity—Value is created, strengthened, or sustained when reasonable homogeneity or similarity exists. This doesn't mean monotonous uniformity, but relates to the social and economic forces that create a complementary mix. Pressure for property to conform may be exerted through zoning or through deed restrictions on architectural design or size. Conformity works with the principle of progression and regression. It is also tied to under-improvement and over-improvement concepts.

Consistent use—The principle of consistent use states that the entire property must be valued with a single use. It is improper to value a property on the basis of one use for the land and another use for the improvements. This principle is especially important to remember when valuing a property in transition from one use to another.

Contribution—The principle of contribution states that the value of a component of property depends upon its contribution to the whole. In other words, the cost of the component doesn't necessarily equal the value that the component adds to the property. For example, installing a gold faucet in a low quality house won't add as much value to the property as the cost incurred.

Externalities—Externalities are influences from outside the property that affect the value. An appraiser shouldn't assume externalities exist. Market analysis is necessary to determine whether external conditions are affecting the property's value. Externalities may refer to the use or physical attributes of properties located near the subject property or to the economic conditions that affect the market in which the subject property competes. For example, construction of a sewage treatment plant near the subject property may have a negative impact on value.

Increasing and decreasing returns—Increasing the amount of agents in production produces a greater net return to the property up to a point (point of diminishing returns). Once the point of diminishing returns is reached, successive investment increments will decrease their net benefit to the property. This principle helps the appraiser compare alternative use patterns and intensities of use to establish the highest and best use of the property.

Plottage—An increment of value that results when two or more sites are assembled under a single ownership to produce greater utility.

Progression—The concept that the value of an inferior property is enhanced by proximity to a superior property.

Regression—The concept that the value of a superior property is adversely affected by its association with an inferior property.

Substitution—A property's value is typically based on the value of an equally desirable substitute property. People tend to pay no more for a property than they would pay to acquire substitute property of equivalent utility, assuming there are no costly delays. The principle also recognizes that the substitute property with the lowest price will attract the greatest demand and widest distribution in the market. The principle of substitution is fundamental to all approaches to value. The cost approach is influenced by this principle, in that a purchaser may acquire a similar site and construct a building of like utility. The sales comparison approach relates by substituting one property for a comparable property. The income approach specifically relates to the option of substituting one income stream for another. Income-producing properties can be substituted for different investments as they relate to risk and return.

Supply and demand—The utility of real property creates demand, which is desire for possession. Demand is effective when supported by purchasing power. Value increases if supply of real property is reduced by demand, resulting in scarcity. The value of property depends upon the demand for that type of property and varies directly, but not necessarily proportionally, to the supply available within the limits of the available purchasing power.

Surplus productivity—The net income that remains after the cost of capital, labor, and management has been paid.

Highest and best use

Highest and best use is the basic premise of RMV. Highest and best use analysis is an integral part of the appraisal process. It is based on the accepted economic assumption that people involved in the real estate market want to receive the maximum benefit of either the land or the improved property, whichever produces the greatest overall investment return.

> **Highest and best use defined:** The reasonably probable use of property that results in the highest value as of the date of the appraisal.

To reconcile a property's highest and best use, the appraiser must answer these four questions in order to determine whether a use is reasonably probable:

- **Physically possible**—suited to the size, shape, and terrain of the parcel?
- **Legally permissible**—conforming to zoning, building codes, private restrictions, environmental regulations, and other governmental controls?
- **Financially feasible**—resulting in a positive net return to the property?
- **Maximally productive**—producing the highest rate of return or highest value for the property?

The proposed use that answers all of these questions positively is the subject property's highest and best use.

Land value is always based on the land's highest and best use as though vacant, even if the site is improved. This long-accepted rule of basic real estate economic theory is based on the principle of surplus productivity and is related to the principles of balance, contribution, and increasing and decreasing returns.

The purpose of determining the highest and best use of the land as though vacant is to evaluate the land's potential uses and select the single use that is the most competitive and profitable. This use is the foundation for the RMV opinion. The highest and best use of land as though vacant must be established when a separate land value is required, and when comparable vacant land sales must be found.

The principle of consistent use states that a property, both land and improvements, must be valued with the same highest and best use. It is improper to value a property on the basis of one use for the land and another use for the improvements. This principle is of special importance when valuing properties in transition. Land is always valued as if it were vacant and available to be put to its highest and best use.

Land **has** value while improvements contribute to value. The value that existing improvements contribute to the whole property is determined by subtracting the value of the land, as if vacant, from the value of the total property. If the improvements don't contribute economically to the total property value, they should be renovated, expanded, or demolished.

Restated, improvements contribute value only when the income returned by the property, either from rent or sale, exceeds what the land alone is worth. If the property is improved, but doesn't return a value greater than the land value as though vacant, then the principle of highest and best use assumes that land will be made available for its most economically beneficial use.

These basic concepts of the economic principle of highest and best use are the basis for the opinion of RMV.

When property owners consider the economic feasibility of remodeling or enlarging existing improvements, they evaluate the costs that will be incurred by deducting the net costs associated with the change from the anticipated RMV of the "new" property. When demolition is considered, the "new" site value is the RMV of the land as though vacant, less the net cost of creating the vacant and available site.

When a developed property isn't improved to its highest and best use and the deficiency isn't attributed to physical deterioration or an adverse external factor, the deficiency must be some form of functional obsolescence. A misplaced improvement or an outdated building design are examples. Any related loss in property value is always attributed to the improvements because the land value is based on its highest and best use as though vacant.

When appraising legal nonconforming uses, the site may be developed to either a higher or lower use than allowed by current zoning. Land value must always be based on the legal use as if vacant and available to be put to its highest and best use. Any bonus value due to a higher nonconforming use shouldn't be attributed to the land. It is value contributed by the improvements. The contributory value of the improvement is determined by subtracting the land value at its highest and best use (as though vacant) from the total property value. The residual is the contributory value of the improvements.

There are other special considerations such as surplus and excess land, interim, multiple, special purpose, and speculative uses that will occur during highest and best use evaluations. For a complete discussion of these special situations see a generally accepted authoritative reference source such as the current edition of the Appraisal Institute's, *The Appraisal of Real Estate.*

Summary

The economic principle of highest and best use is the real estate market participant's basis for anticipating the benefits of real property ownership and the appraiser's basis for valuing that ownership right.

- Highest and best use is the reasonably probable use of property that results in the highest value as of the date of the appraisal. A potential use that is physically possible, legally permissible, financially feasible, and maximally productive is the highest and best use.
- Land is always valued as vacant and available to be put to its highest and best use.
- If property improvements don't contribute value to the property they should be renovated, expanded, demolished, or a combination of these alternatives.
- It is improper to value a property on the basis of one use for the land and another use for the improvements.

Examples of highest and best use analysis follow.

Example 1—Multiple full size lots

Site	One taxlot comprised of two 60 by 100 foot platted interior lots. A two-lane, paved and curbed street; sidewalk; and sewer and water system serve the site.
Improvements	None.
Location	Homogeneous subdivision of similar residential properties, approximately 95 percent built up.
Zoning	Residential medium density. Minimum lot size: 6,000 square feet.
Trends	Slow and steady increase due to desirable location. Remaining vacant lots are being purchased and improved with comparable houses.
Comparable data	Remaining interior 6,000 square foot lots are supporting selling prices of $35,000.

Exercise: Estimate the value of the land using highest and best use procedures.

The subject consists of one taxlot. However, under current zoning and the way the subdivision is platted, two buildable lots exist. Therefore, highest and best use would recognize two separate buildable lots.

The taxlot should be valued as two buildable lots at $35,000 × 2 = $70,000.

Example 2—Multiple undersize lots

Site	One taxlot comprised of three 30 by 100 foot platted interior lots. A two-lane, paved and curbed street; sidewalk; and sewer and water serve the site.
Improvements	None.
Location	Homogeneous subdivision of similar residential properties, approximately 95 percent built up.
Zoning	Residential medium density. Minimum lot size: 6,000 square feet.
Trends	Slow and steady increase due to desirable location. Remaining vacant lots are being purchased and improved with comparable houses.
Comparable data	Minimum-sized, buildable interior lots are supporting selling prices of $35,000. Oversized interior lots are selling for $10,000 more.

Exercise: Estimate the value of the land using highest and best use procedures.

The subject consists of one taxlot. Under current zoning and the way the subdivision is platted, only one buildable lot exists. Therefore, highest and best use would recognize one oversized building lot.

The taxlot should be valued as one oversized building lot at $45,000 ($35,000 + $10,000).

Example 3—Zoning

Site	One taxlot comprised of one 50 by 100 foot platted interior lot. The site is served with a two-lane, paved and curbed street; sidewalk; and sewer and water system.
Improvements	None.
Location	Street of older single-family residential properties, approximately 95 percent built up. Rear property lines abut strip commercial zoned and improved properties.
Zoning	Residential medium density. Minimum lot size: 5,000 square feet.
Trends	This side of the street has begun the transition to commercial use. Some strip commercial properties have obtained special use permits and have expanded their commercial use to those properties.
Comparable data	Minimum-sized residential interior lots are supporting selling prices of $32,000. Vacant lots with special use permits support sales prices of $45,000.

Exercise: Estimate the value of the land using highest and best use procedures.

Highest and best use is based upon legal use. In this instance, zoning limits probable uses to residential, so the subject must be valued as vacant residential.

For the subject, a value of $32,000 is warranted.

Example 4—Residence not built to highest and best use

Site	Two 50 by 120 foot platted lots located in a homogeneous residential subdivision. The lots are level. A two-lane, curbed street; sidewalk; and underground utilities serve the subdivision.
Improvements	The single-family, class 4 quality dwelling was built in 1968. It contains 1,400 square feet on a single level. It has 1 ½ baths, three bedrooms, living room, kitchen, utility room, and an attached double garage. Comparable homes in the area have a RMV of $125,000 to $130,000. The dwelling straddles the lot line between Lot 1 and Lot 2.
Zoning	Single-family residential, medium density with a minimum lot size of 6000 square feet required. Setback is: front at 20 feet, sides at 5 feet, and back at 20 feet.
Trends	Middle-class, detached, single-family houses predominate in the homogeneous neighborhood. The area is generally developed with only an occasional vacant lot. Houses show pride in ownership.
Comparable data	The market supports a value for each lot, as though vacant, of $35,000. The on-site development (OSD) is determined to be average and contributes to the value of the site at $5,000.

Exercise: Estimate the value of the property using highest and best use procedures.

Vacant land value

Lot 1 (50 × 120)	$35,000
Lot 2 (50 × 120)	35,000
OSD	+ 5,000
	$75,000

Dwelling

Value of property	$127,500
Less land value	– 75,000
Indicated value of improvements	$52,500

The value of the land is estimated, as though vacant, for its highest and best use as two separate buildable lots. Land is said to have value and the improvements contribute to the value of the property.

The contribution of the improvements is estimated by subtracting the value of the land from the overall value of the property. The overall value of the property was determined by direct comparison to comparable sales. Land values are not penalized so long as the existing structures have economic value.

The property, as improved, isn't developed to its highest and best use due to the misplacement of the improvements. The misplacement of the improvements creates incurable functional obsolescence. Obsolescence is always attributed to the improvements, not the land.

Example 5—Residence built to highest and best use with excess land

Site	Two 50 by 120 foot platted lots located in a homogeneous residential subdivision. The lots are level. A two-lane, curbed street; sidewalk; and underground utilities serve the subdivision.
Improvements	The single-family, class 4 quality dwelling was built in 1968. It contains 1,400 square feet on a single level. It has 1 ½ baths, three bedrooms, living room, kitchen, utility room, and an attached double garage. The improvements are all located on Lot 1. Lot 2 is currently vacant except for landscaping.
Zoning	Single-family residential, medium density with minimum lot size of 6,000 square feet required. Set back on the front is 20 feet, the sides at 5 feet, and the back at 20 feet.
Trends	Middle-class detached single-family houses predominate in the homogeneous neighborhood. The area is generally developed with only an occasional vacant lot. Houses show pride in ownership.
Comparable data	The market supports a value for each lot, as though vacant, of $35,000. The on-site development (OSD) is determined to be average and contributes to the value of a developed lot at $5,000. Comparable houses on single lots in this area have a market value of $125,000 to $130,000.

Exercise: Estimate the value of the property using highest and best use procedures.

Vacant land value

Lot 1 (50 × 120)	$35,000
OSD	+ 5,000
	$40,000
Lot 2 (50 × 120)	$35,000
(Excess land—highest and best use as a building site)	

Dwelling

Value of property (Lot 1)	$127,500
Less land value	– 40,000
Indicated value of improvements	$87,500
Value of property (Lot 1)	+ 40,000
Value of property (Lot 2)	+ 35,000
Total property value	$162,500

The value of the land is estimated, as though vacant, for its highest and best use as two separate buildable lots.

Lot 1 is improved to its highest and best use as a single-family dwelling. Comparable sales are used to determine the total value of Lot 1 and the improvements sited upon it.

Lot 2 is considered excess land that isn't needed to accommodate the primary highest and best use located on Lot 1. The appraiser appropriately identified Lot 2 as excess land and indicated its unit value separately.

Example 6—Misplaced residential improvement

Site	The five-acre rural residential site is approximately 1,000 feet deep with 218 feet of frontage adjacent to a paved county road. It's served by public utilities that include electricity and phone. Water is provided by a well. A septic system provides sanitation. The site has a view of the valley to the north from the north portion of the parcel.
Improvements	The site is improved with a 20-year-old, class 5, residential structure. The house contains approximately 2,000 square feet, which includes three bedrooms, two baths, a living room, dining room, kitchen, utility, and family room. There is also an attached double garage of approximately 600 square feet. The house is in average-plus condition for its age. The house is at the south end of the parcel adjacent to the county road and hasn't taken advantage of the view.
Location	A rural location outside of a community of 40,000. The area is slowly changing from commercial farming to rural residential.
Zoning	Rural residential with minimum lot size of five acres. Conditional uses include golf courses, schools, and churches.
Trends	Rural land values steadily increase as upper middle class families continue to purchase small acreage for serenity, view, pasture for horses, etc.
Comparable data	The market supports a value for 5 acre view sites, if vacant, of $90,000. The contributory value for on-site development (OSD) is estimated to be an additional $15,000. Comparable improved properties, where the improvements have taken advantage of the view, are selling for $250,000 to $275,000. Comparable properties with misplaced improvements are selling for $220,000 to $240,000.

Exercise: Estimate the extent of incurable functional obsolescence in the improvement that has resulted from placing it away from the available view.

Land value

5.0 acres with view	$90,000
OSD	+ 15,000
	$105,000
Subject value by direct comparison to sale properties not taking advantage of view	$235,000
Value of improved land	– 105,000
Contributory value of improvements not taking advantage of view	$130,000
Value of like properties using view by direct comparison	$265,000
Value of improved land	– 105,000
Contributory value of improvements using view	$160,000
Less contributory value of improvements not taking advantage of view	– 130,000
Incurable functional obsolescence due to misplacement of improvements	$ 30,000

The subject property hasn't been improved to its highest and best use because the improvements have been misplaced away from the available view. Misplacement of a dwelling is a form of incurable functional obsolescence that remains with the improvements for the duration of their useful lives. In all cases, land value is estimated as though vacant and available for development to its highest and best use. In this case, the land value is established as if to take full advantage of the available view.

The overall value of the property is determined by direct comparison with sales of like properties having misplaced improvements. The contributory value of the misplaced improvements is estimated by subtracting the value of the improved view site from the property's overall value. The extent of depreciation in the dwelling from functional obsolescence is found by direct comparison with the value of comparable dwellings situated to take advantage of the view, as shown above.

Again, any loss in value due to the misplacement of the improvements is always attributed to the improvements, never to the land.

Example 7—Residence in transitional area

Site	100 by 100 foot inside level lot. A two-lane, curbed street; sidewalk; and sewer and water system serve the site.
Improvements	Residence built in 1920 contains 870 square feet on the first floor and 770 square feet on the second floor with one bath, three bedrooms, and a detached single garage. Front yard setback is 20 feet. A comparable house in a residential location has a market value of $135,000.
Location	Commercial location on major arterial in a community of 50,000. Arterial serves middle-class residential area.
Zoning	Commercial/service. Zoning permits commercial retail, commercial office, fast foods, auto repair, etc. Conditional uses include selected light industrial. Front setback on new construction is 5 feet.
Trends	Commercial land values are increasing and are supported by average quality development. Some houses with good structural characteristics have been renovated and converted to office use. Traffic count and location support additional development of fast food restaurants, convenience grocery stores, offices, and repair shops.
Comparable data	The market supports a value for the site, as though vacant, of $50,000. If renovated, the house would rent as commercial office, travel agency, insurance agency, or real estate sales for $675 per month; operating cost, including management, is 20 percent after vacancy. Vacancy is projected at 10 percent. The market supports a 10 percent overall rate for this quality property. Conversion cost is estimated at $6,500. If the structures are razed, net razing cost is estimated at $4,000.

Exercise: Estimate the value of the property using highest and best use procedures.

Dwelling razed

Vacant land value (market)	$50,000
Razing cost	– 4,000
Net site value	$46,000

Dwelling renovated

Gross income	$8,100
Less vacancy (10%)	– 810
Effective gross income	$7,290
Less operating expenses (20%)	– 1,458
Net operating income	$5,832
Capitalized at 10%	$58,320
Less cost of renovation	– 6,500
Present improved property value	$51,820
Less vacant land value (market)	– 50,000
Value of improvements	$1,820

The value of the land is estimated as though vacant, for its highest and best use as commercial land. Because the improvements don't contribute to the highest and best use of the land as though vacant, the value of the site is estimated by subtracting the cost of razing the improvements from the estimated value of the land. Although the value of the renovated property slightly exceeds the net value of the site as though vacant, the renovated dwelling would have obvious functional obsolescence, and the improvement value would be marginal. Land values are not penalized so long as the existing buildings have economic value. The recent increases in land value suggest demolition and rebuilding as the better use. Furthermore, by examining the land-to-building ratio, the marginal nature of the renovated buildings becomes evident.

Example 8—Residence located in a commercial zone as an interim use

Site	50 by 100 foot inside level lot. Two-lane, curbed street; sidewalk; and sewer and water system serve the site. All other utilities are overhead.
Improvements	Residence built in 1940 contains 1,100 square feet on the first floor and an unfinished concrete basement of the same size. The house has three bedrooms, one bath, living room, and kitchen/dining rooms. There is also a detached single garage. Front yard set back is 20 feet. Occasionally, several adjacent properties are purchased to create a large enough parcel to utilize commercially. The existing houses are razed and the land is redeveloped with a commercial structure. These sales indicate a commercial land value of $8 per square foot.
Zoning	The area is zoned service-commercial. The zoning permits a variety of commercial businesses such as fast food restaurants, offices, convenience grocery stores, auto repair, etc. Front set back on new commercial construction is 5 feet.
Trends	The area is a mix of older residential construction and commercial establishments. Existing houses are still being purchased for affordable housing. When an investor can assemble enough of these properties, the houses are razed and new commercial structures, such as fast food restaurants, convenience grocery stores, or insurance offices are built.
Comparable data	The market supports a value for the site, as though vacant, of $40,000. If renovated, a comparable house would rent as a commercial office (real estate, insurance, etc.) for $1,200 per month, with operating cost of 20 percent after vacancy. The cost of renovation would be $15,000. Vacancy is projected at 10 percent. If the house were to be used as a single-family rental, it would rent for $750 per month with vacancy projected at 5 percent and expenses at 20 percent after vacancy. The market for purchase as a single-family owned residence is fairly strong with comparables indicating a value range of $105,000 to $110,000.

Exercise: Estimate the value of the property using highest and best use procedures.

Land value

Vacant land value (market)	$ 40,000
Razing cost	– 4,000
Net site value	$36,000

Dwelling renovated (office)

Gross income	$14,400	
Less vacancy (10%)	– 1,440	
Effective gross income	$12,960	
Less operating expenses (20%)	– 2,592	
Net operating income	$10,368	
Capitalized at 10%		$103,680
Less cost of renovation		– 15,000
Present improved property value		$88,680
Less land value		– 40,000
Value of improvements		$ 48,680

Dwelling as a single-family rental

Gross income	$ 9,000
Less vacancy (5%)	– 450
Effective gross income	$ 8,550
Less operating expenses (20%)	– 1,710
Net operating income	$ 6,840
Capitalized at 10%	$ 68,400
Present improved property value	$ 68,400
Less land value	– 40,000
Value of improvements	$ 28,400

Dwelling as a single-family residence

Value of property from comparable sales	$107,500
Less land value	– 40,000
Value of improvements	$ 67,500

The value of the land is estimated, as though vacant, for its highest and best use as commercial land. This is its highest legal use. Various situations must be examined to determine the highest and best use of the property as improved. As the transition continues from residential to commercial, supply and demand will force the land value upward. At some point, the value of the land as though vacant will force redevelopment of the subject property from an interim use to its highest legal use.

Four situations were examined to determine the reasonable and probable use that supports the highest present value of vacant land or improved property as of the date of the appraisal. Analysis of these situations indicates the market for commercially zoned property in this area isn't sufficient to warrant redevelopment. Furthermore, there is adequate competition to retain the residence as an interim use.

Example 9—Legal nonconforming use

Site	A rectangular site with 200 feet of frontage on a main arterial street serving an upper middle-class neighborhood. The lot is 200 feet deep. The site is level and served with all necessary public utilities. It contains 40,000 sq. ft.
Improvements	Formerly a single-family dwelling built in 1930. The wood frame structure contains approximately 1,400 square feet. The structure is being utilized as a neighborhood convenience grocery store and has been in this use since 1950. Overall, the structure is in above-average condition.
Location	The property is located in a developing single-family neighborhood where average to above-average quality houses are being built. The neighborhood is on the edge of a community of 50,000, located outside of a major metropolitan area. It is located adjacent to a secondary state highway that serves a popular outdoor recreation area.
Zoning	The zoning is low density single-family. Primary use is for above average single-family dwellings with conditional use allowances for schools, churches, and open space. The commercial use predates the current zoning and is a nonconforming use. If the use is discontinued for 18 months, or if fire or other natural causes damage the building by over 50 percent, the commercial use can't be reestablished. Alterations are permitted only if the altered property has no greater adverse impact on the community than it currently presents.
History	The current business has annual sales of $225,000 from about 1,000 square feet of sales space. The remainder of the structure is used for storage and a bathroom. Personal property, which is old but in good usable condition, is estimated at $4,000. With increasing development in the area, sales have been steady with some increase.
Comparable data	Analysis of comparable unimproved residential land sales supports a value of $40,000 or $1 per square foot. Similarly improved properties without nonconforming use history reflect a contributory improvement value of approximately $45 per square foot. Analysis of comparable "Mom and Pop" convenience stores indicates the value range of $90 to $105 per square foot, including personal property and land. The comparable sales indicate that these types of properties are typically being purchased on the basis of 60 percent of gross annual sales.

Exercise: Estimate the value of the property using highest and best use procedures.

Overall value

1,400 sq. ft. at $90 per sq. ft. overall	$126,000
1,400 sq. ft. at $105 per sq. ft. overall	$147,000
$225,000 annual sales × 60%	$135,000

Allocation

Overall value (annual sales)	$135,000
Land (40,000 sq. ft. at $1 per)	40,000
Fixtures	+ 4,000
Improvements (1,400 sq. ft. at $45 per)	+ 63,000
	$107,000
Residual Bonus Value (nonconforming use)	**$ 28,000**

($135,000 - $107,000)

—or—

Overall value (annual sales)	$135,000
Land (40,000 sq. ft. at $1.00)	40,000
Fixtures	+ 4,000
	$44,000
Residual to improvements	**$ 91,000**

($135,000 - $44,000)
$91,000 = $65 per sq. ft. (1,400 sq. ft.)

Comparable residences are valued at $45 per square foot. Therefore, the legal nonconforming use bonus to the residence is $20 per square foot.

A legal nonconforming use is a use that was lawfully established and maintained, but no longer conforms to the use regulations of the zone in which it is located. The zoning change may create either an under-improvement or over-improvement. A nonconforming over-improved property results when zoning changes reduce the legal permitted use. The legal nonconforming use may also create a bonus value that is always attributed to the existing improvements.

If vacant, the subject land has a highest and best use as a residential site. This is the land's highest legal use. Comparable residences are valued at $45 per square foot. Therefore, the nonconforming use bonus to the structure is $20 per square foot. This bonus value is reflected in the value of the improvements because it is dependent upon the continuation of the current nonconforming use. If the use is discontinued, the bonus value ceases to exist.

Chapter 6

The Three Approaches to Value

The appraiser considers three approaches to develop indications of value. These are:

- Cost approach;
- Sales comparison (market) approach; and
- Income approach.

All three approaches are used to arrive at an indication of value. The three indications of value are then reconciled into one final conclusion of market value.

The fundamentals of these approaches are simple, but the application is often complex. The appraiser must:

- Understand the basics involved in each approach;
- Have the ability to recognize pertinent data; and
- The skill to select the proper method and apply it to the specific problem involved.

County valuation systems use a combination of the cost and sales comparison approaches to arrive at RMV. This combined process is called the market-related cost approach and is primarily used when valuing residential property.

The valuation process

The valuation process is a step-by-step approach that leads the appraiser to a defendable and supportable value conclusion.

The valuation process involves:

- Identification of the property to be appraised;
- Data collection;
  - — General data,
    - Social,
    - Economic,
    - Governmental, and
    - Environmental.
  - — Specific data,
    - Sales verification, and
    - Property characteristics.
- Data analysis, and highest and best use conclusion;
- Estimating value by the three approaches;
- Reconciliation of the three approaches to value;
- Final estimate of value.

All elements of the appraisal process are involved in any appraisal that estimates market value.

Cost approach to value

The cost approach can be used to appraise all types of improved property. It is the most reliable approach for valuing unique properties. The cost approach provides a value indication that is the sum of the estimated land value, plus the depreciated cost of the building and other improvements.

The total cost of constructing a new building today frequently sets the upper limit of value, assuming the building is the highest and best use for the land. The cost approach produces a reliable indication of market value when a sound building replacement or reproduction cost estimate is coupled with appropriate accrued depreciation estimates.

The principle of substitution is the basis for the cost approach to value. A person will pay no more for a building than the cost of constructing an equally desirable substitute, assuming no unusual delay. The phrase "equally desirable substitute" means the substitute need not be an exact duplicate, but contains similar utility and amenities as the existing structure. This provides the rationale for developing the replacement cost of the subject building rather than the reproduction cost.

Replacement cost is the cost of constructing, using current construction methods and materials, a substitute structure equal to the existing structure in quality and utility.

Replacement cost is generally used for mass appraisal purposes. It provides expediency and a reliable indication of the cost for most structures. The replacement cost method is the cornerstone of residential mass appraisal.

The replacement cost includes, but isn't limited to, direct and indirect costs and entrepreneurial profit.

Reproduction cost is the cost of constructing, as closely as possible, an exact replica of the existing structure.

Direct costs are expenditures for labor, utilities, equipment, the materials used to construct the improvement, and the contractor's profit and overhead.

Indirect costs are expenditures for items other than labor and materials such as financing, interest on construction loans, taxes and insurance during construction, marketing, sales and lease-up costs, plans, and specifications.

Entrepreneurial profit is a market-derived figure that represents the amount an entrepreneur expects to receive in compensation for his or her risk and expertise associated with development. This is the difference between the total cost of development of the property and its market value after completion.

Methods of cost estimating

Cost estimating uses three methods:

- Comparative (unit of area or volume);
- Quantity survey;
- Unit-in-place.

Of the three, the comparative or unit of area method, which uses the square foot area as a base, is the most efficient method for the mass appraisal system. The other two methods of estimating are used primarily to produce an estimate of the reproduction cost of a building.

Comparative method

The comparative method assumes there are numerous similar buildings that can be grouped by design, type, and quality of construction. By developing average unit costs from known construction costs of new buildings in each group, replacement cost factors can be developed that will apply to the buildings in that group or class. These cost factors can be found in our *Cost Factors for Residential Buildings,* 150-303-419; *Cost Factors for Farm Buildings,* 150-303-417; and other cost-estimating publications.

Quantity survey

Contractors use the quantity survey method. It includes the complete cost itemization of labor, materials, overhead, and profit necessary to the construction of a building. Because of the large amount of detail work and time involved, appraisers seldom use this method.

Unit-in-place

The unit-in-place method is a modification of the quantity survey method. Cost of labor, materials, overhead, and profit are combined into a unit cost for each portion of the building. Cost per square foot for roofs and walls, and linear foot costs of foundation walls are examples of the unit-in-place method. This method helps the appraiser compute the cost of a building when the comparative method isn't practical.

Cost approach process

To develop an indication of value by the cost approach, first value the land as if vacant. Land value is determined by comparing sales of similar vacant land in the area where the subject is located. For land valuation procedures, see Chapter 8, "Mass Appraisal of Land."

The second step is to determine the cost of on-site development (OSD). OSD includes excavation, grading, backfill, gravel drives, and water and sewage disposal systems.

The third step is to estimate replacement or reproduction cost new of the improvements.

The fourth step is to deduct the total accrued depreciation from all causes to arrive at the present value for the improvements. This is called the depreciated replacement or reproduction cost (DRC). Finally, add the land value to the depreciated cost of the improvement for a total indicated value using the cost approach.

Accrued depreciation

Accrued depreciation is the difference between the cost new (replacement or reproduction) and the present value of an improvement. It measures the total loss in value from all causes that have occurred as of the date of appraisal.

Depreciation is divided into three categories:

- Physical deterioration;
- Functional obsolescence; and
- External obsolescence.

Physical deterioration and functional obsolescence can be curable or incurable. External obsolescence is generally considered incurable.

Physical deterioration

Physical deterioration is the wear and tear or breaking down of the physical structure. It may include decay, dry rot, damage by the elements, or vandalism. Physical deterioration is categorized as curable or incurable.

In analyzing physical deterioration, the appraiser must distinguish among the following:

- **Deferred maintenance.** These are curable items in need of immediate repair and can be either short- or long-lived.
- **Short-lived items.** These are items that can be replaced later. Short-lived items include roofing, paint, floor covering, water heater, etc.
- **Long-lived items.** These are items expected to last for the remaining economic life of the building. Long-lived items include framing, wiring, plumbing, etc.

Curable physical deterioration

Physical deterioration is measured by the cost to cure the problem. Physical deterioration is curable if the cost to repair or replace the item is equal to or less than the value added to the property by its replacement. This may include items such as a leaky roof, a broken window, or any item needing repair or replacement as of the appraisal date.

Incurable physical deterioration

Physical deterioration is incurable if the cost to repair or replace the item is greater than the value added by the repair or replacement. Incurable physical deterioration includes all basic structural or long-lived items, as well as short-lived items that are still serviceable.

Functional obsolescence

This is the loss in value due to superadequacy or deficiency within the property.

Superadequacy describes a component or system that exceeds market requirements and adds less value than the cost of the component. Examples of superadequacy include:

- Over-sized heating system;
- Excess plumbing features;
- Over-sized structural supports (rafters, studs); and
- Any other items in excess of reasonable requirements.

Deficiency or **inadequacy** describes a component or system that is substandard or lacking. Examples include:

- Components smaller than normally expected;
- Poor design (lack of closet space, ceilings too high or too low, poor room arrangement); and
- An architectural style that isn't compatible with other buildings in the area.

Some functional obsolescence may be found in older structures as construction methods, materials, and market preferences change. Obsolescence can result from poor planning or design.

As in physical deterioration, functional obsolescence is either curable or incurable, depending on whether the cost to cure is economically justified as of the appraisal date.

Curable functional obsolescence

Functional obsolescence is considered curable when the increase in value gained by correcting the problem exceeds the cost to cure it.

Curable functional obsolescence, usually a deficiency, is measured by the excess cost to cure. To determine the excess cost to cure, compare the difference in cost between adding the item to an existing structure or installing the item as part of a new structure, as of the appraisal date.

The excess cost to cure usually reflects the additional labor costs for installing the item in an existing structure. The difference is the loss in value.

Example: A residential dwelling has only one bath in a market where two baths are expected. If the cost of building a second bath in the original structure would have been $8,000 and the cost of adding the bath in new construction would be $5,000, the excess cost to cure is $3,000. ($8,000 – $5,000 = $3,000).

Incurable functional obsolescence

Functional obsolescence is considered incurable when it is possible and reasonable to cure an item but there is no economic advantage in doing so. Incurable functional obsolescence is a condition that decreases the utility of the property and isn't economically feasible to cure as of the appraisal date. For this reason, most superadequacies are considered incurable.

Incurable functional obsolescence is seen in poor room arrangement or a design feature that can't be corrected without excessive cost. Estimate the loss in value from these causes by the loss in rent or by comparing to a sold property that suffers from similar conditions.

Example: A duplex unit without a garage rents for $100 per month less than a similar duplex unit with a garage. There isn't enough land to add a garage. The capitalization rate is 12 percent.

$100 × 2 units = $200

$200 × 12 months = $2,400 rent loss per year

$2,400 capitalized at 12% = $20,000.

The amount to deduct from the building value for incurable functional obsolescence is $20,000.

External obsolescence

This is a loss in value resulting from conditions outside the property. There are many causes of external obsolescence such as:

- Deterioration of a neighborhood due to social changes;
- Oversupply of housing;
- Changing traffic patterns;
- High unemployment;
- Proximity of dwelling to sewage treatment plant; and
- Any other condition outside the property that causes a loss in value.

External obsolescence can be temporary or permanent but is always considered incurable. External obsolescence is measured by capitalizing the rental loss or comparing the subject to sales of comparable properties without the obsolescence.

External obsolescence can be allocated between land and improvements by using a land-to-building ratio derived through market area analysis.

Example: A single-family residence is located in a neighborhood in transition to commercial use. The marketability for this house has been adversely affected. Similar houses rent for $850 per month. The subject property will rent for no more than $700 per month. Market analysis indicates unaffected properties typically sell for 120 times the monthly rent. This figure is called a gross rent multiplier (GRM).

Monthly rent of unaffected property	$ 850
Monthly rent of affected property	− 700
Estimated monthly rent loss	$ 150
GRM 120 × $150 (rent loss)	$18,000
Ratio of land-to-building (Land = 20%, building = 80%)	1:4
Rent loss $18,000 × 80%	$14,400

Economic obsolescence to the building is calculated at $14,400.

Sales comparison (market) approach

In the sales comparison or market approach, value is estimated by comparing the subject property to similar properties that have sold. The sales comparison approach often produces the most reliable evidence of RMV because sales are based on the actions of buyers and sellers in the marketplace. This approach assumes the typical buyer will compare sales and asking prices to make the best possible purchase. Like the cost approach, the sales comparison approach is based on the principle of substitution. This principle presumes that a prudent buyer will pay no more for a property than the purchase price of a similar and equally desirable property.

Sales data

Proper collection and analysis of sales data, along with selection of appropriate units of comparison, is critical to applying the sales comparison approach. Sales data must be adjusted based on market conditions, then applied to the subject of the appraisal.

Gather sales from recorded instruments and analyze them to confirm the conditions of sale and the validity of the sales price. Don't use a sale that isn't representative of the market.

Verify sales by personal contact or letter to ensure the most reliable sales. Verification may reveal whether the sale involved personal property, an exchange, atypical financing, or unusual motivation on the part of the buyer or seller. When possible, sales should be physically inspected to determine the condition of the property at the time of sale.

Market transactions

Gather the following information about a sale to help determine if the transaction can be used in the sales study:

- **Date of transfer:**
  When sufficient sales data exist, use only the most recent sales for comparison purposes. In the absence of sufficient recent sales, older sales may be used as value indicators if they are correctly adjusted for time.
- **Type of conveyance:**
  The type of conveyance and the rights conveyed indicate the reliability of the sales information. Property transfers conveyed through instruments such as quitclaim deeds, bargain and sale deeds, and sheriff's deeds may bear little relationship to market value.
- **Condition of sale:**
  Transfers between relatives or business partners, foreclosures, estate sales, governmental transactions, and transfers that involve undue compulsion may indicate the sale doesn't represent RMV.
- **Consideration:**
  A sale involving an exchange, personal property, or an assumption of a mortgage must be investigated to determine whether the consideration truly reflects RMV.
- **Property characteristics and inventory:**
  Confirm and verify the property's inventory and condition at the time of sale. The property may have changed after the sale and the differences must be noted.

Units and elements of comparison

Units of comparison are the components a property may be divided into for purposes of comparing one property to another. Converting the sale price to a price per unit makes it easier to compare and adjust properties that compete in the same market. To determine the appropriate unit(s) of comparison, note the typical unit recognized by the market for a particular property type. Sales analysis and direct sales confirmation is used to accomplish this. Some units most commonly encountered are:

- Square footage;
- Front footage;
- Number of apartment/motel units;
- Number of bedrooms/baths;
- Number of acres; and
- Customer capacity.

Analyze and adjust sold properties to ensure the unit value derived from the sale truly reflects land and/or buildings only.

Income multipliers and capitalization rates are not adjusted in the sales comparison analysis since rents and sale prices tend to move in relative tandem. The appraiser should, however, analyze the variances in income among the sale properties.

Elements of comparison are the characteristics of properties and transactions that cause the prices of real estate to vary. Elements of comparison include:

- Location;
- Date of sale;
- Design, age, and quality of construction;
- Improvement size;
- Amenities (special-purpose rooms, swimming pools, garages, and parking);
- Condition (maintenance, remodeling, and additions);
- Land size;
- Site amenities (view, waterfront, golf course, etc.);
- Personal property items (furnishings, equipment, and inventory); and
- Business considerations (operating expenses, income, lease provisions, management, government restrictions, business licenses, and intangibles).

The price per unit is the dependent variable (what is being estimated) in the following example.

Example

The subject and sale properties are two-story, frame constructed motels with similar unit size, furnishings, and exteriors. Properties are located on arterial streets with similar traffic patterns and land values. Furnishings and equipment are included in the sale.

Sales information

Features	Subject	Sale 1	Sale 2
Sale price		$1,475,700	$1,714,500
No. of units	45	40	45
Unit size (average)	288 sq. ft.	263 sq. ft.	295 sq. ft.
Quality	Average	Average	Average
Furnishings and equipment (estimated value per unit)	$2,000	$1,980	$2,050
Estimated land value	**$252,500**	**$220,500**	**$ 252,000**

Unit of comparison extraction

Sale price	$1,475,700	$1,714,500
Less land value	– 220,500	– 252,000
Less furnishings	– 79,200	– 92,250
Improvement value	$1,176,000	$1,370,250
Per unit value	**$29,400**	**$30,450**

Application to subject

Two sales support a per unit value of $30,000.

Improvements ($30,000 x 45 units) $1,350,000

Plus furnishings and equipment ($2,000 x 45 units)	$ 90,000
Plus land value	+ 252,500
Total subject value:	**$1,692,500**

Sales comparison

After you determine that the sales are valid, compare the sold properties to the subject property. Comparisons can be made on a total property basis (one total property to another) or by any unit(s) common to the type of property involved. Differences in elements of comparison are reflected in the adjustment process.

Select sufficient comparable sales to determine the subject's market value. Sold properties that require excessive adjustments may yield an unreliable value.

Follow these five steps in the comparison process:

1. Research and select sales of comparable properties.
2. Document and confirm sales data.
3. Select relevant units of comparison.
4. Compare sale properties to the subject and make appropriate adjustments.
5. Reconcile value indications and estimate value of subject property.

Always adjust the comparable sales to make them equivalent to the subject property. If the comparable is superior to the subject, apply a minus adjustment to the comparable. If the comparable property is inferior to the subject, apply a plus adjustment to the comparable property.

Sales comparison grid

Sales comparison grids are useful tools for analyzing the differences between the subject property and comparable properties.

Analyze the sales comparison adjustments to select the best indication of value for the subject. This analysis includes a review of each comparable property and the amount of adjustment needed to make the sale property comparable to the subject property. Comparable properties needing the least adjustments are the most like the subject property and are usually given the most weight in the value selection.

The Uniform Residential Appraisal Report (URAR) format illustrates plus (added) and minus (subtracted) adjustments. This type of grid may be altered to fit any type of property.

Uniform Residential Appraisal Report

File #

There are comparable properties currently offered for sale in the subject neighborhood ranging in price from $ to $

There are comparable sales in the subject neighborhood within the past twelve months ranging in sale price from $ to $

SALES COMPARISON APPROACH

FEATURE	SUBJECT	COMPARABLE SALE # 1		COMPARABLE SALE # 2		COMPARABLE SALE # 3	
Address							
Proximity to Subject							
Sale Price	$		$		$		$
Sale Price/Gross Liv. Area	$ sq. ft.	$ sq. ft.		$ sq. ft.		$ sq. ft.	
Data Source(s)							
Verification Source(s)							
VALUE ADJUSTMENTS	DESCRIPTION	DESCRIPTION	+(-) $ Adjustment	DESCRIPTION	+(-) $ Adjustment	DESCRIPTION	+(-) $ Adjustment
Sale or Financing Concessions							
Date of Sale/Time							
Location							
Leasehold/Fee Simple							
Site							
View							
Design (Style)							
Quality of Construction							
Actual Age							
Condition							
Above Grade Room Count	Total / Bdrms. / Baths	Total / Bdrms. / Baths		Total / Bdrms. / Baths		Total / Bdrms. / Baths	
Gross Living Area	sq. ft.	sq. ft.		sq. ft.		sq. ft.	
Basement & Finished Rooms Below Grade							
Functional Utility							
Heating/Cooling							
Energy Efficient Items							
Garage/Carport							
Porch/Patio/Deck							
Net Adjustment (Total)		☐ + ☐ -	$	☐ + ☐ -	$	☐ + ☐ -	$
Adjusted Sale Price of Comparables		Net Adj. % Gross Adj. %	$	Net Adj. % Gross Adj. %	$	Net Adj. % Gross Adj. %	$

I ☐ did ☐ did not research the sale or transfer history of the subject property and comparable sales. If not, explain

My research ☐ did ☐ did not reveal any prior sales or transfers of the subject property for the three years prior to the effective date of this appraisal.

Data source(s)

My research ☐ did ☐ did not reveal any prior sales or transfers of the comparable sales for the year prior to the date of sale of the comparable sale.

Data source(s)

Report the results of the research and analysis of the prior sale or transfer history of the subject property and comparable sales (report additional prior sales on page 3).

ITEM	SUBJECT	COMPARABLE SALE # 1	COMPARABLE SALE # 2	COMPARABLE SALE # 3
Date of Prior Sale/Transfer				
Price of Prior Sale/Transfer				
Data Source(s)				
Effective Date of Data Source(s)				

Analysis of prior sale or transfer history of the subject property and comparable sales

Summary of Sales Comparison Approach

Indicated Value by Sales Comparison Approach $

RECONCILIATION

Indicated Value by: Sales Comparison Approach $ **Cost Approach (if developed) $** **Income Approach (if developed) $**

This appraisal is made ☐ "as is", ☐ subject to completion per plans and specifications on the basis of a hypothetical condition that the improvements have been completed, ☐ subject to the following repairs or alterations on the basis of a hypothetical condition that the repairs or alterations have been completed, or ☐ subject to the following required inspection based on the extraordinary assumption that the condition or deficiency does not require alteration or repair:

Based on a complete visual inspection of the interior and exterior areas of the subject property, defined scope of work, statement of assumptions and limiting conditions, and appraiser's certification, my (our) opinion of the market value, as defined, of the real property that is the subject of this report is $, as of , which is the date of inspection and the effective date of this appraisal.

Gross income multipliers

Many people associate a gross income multiplier (GIM) and a gross rent multiplier (GRM) with the market approach to value. The use of GIMs is also part of the income approach to value because it is a capitalization technique. For this reason, GIMs are discussed in detail in the *Income Approach* section of this chapter.

Income approach

Income-producing properties are appraised using all three approaches to value. However, since income property is usually bought and sold on its ability to generate and maintain an income stream, it is typical to place more weight on the income approach.

One basic principle in estimating the value of income property is the anticipation of future benefits. The income approach, also called income capitalization, converts future benefits of property ownership into an indication of present worth (market value). Present worth, which is the result of capitalizing net income, is the amount a prudent investor would be willing to pay now for the right to receive the future income stream.

This section provides an overview of the steps used to develop and apply the income approach to value. It will examine various methods of capitalization and the selection of rates.

Steps in the income approach to value

The steps used to value property by the income approach are:

- Estimate potential gross income.
- Deduct vacancy and collection loss.
- Add miscellaneous income to arrive at effective gross income (EGI).
- Estimate expenses before discount, recapture, and taxes.
- Deduct expenses from EGI to determine the net operating income (NOI).
- Select the proper capitalization rate.
- Determine the appropriate capitalization procedure to be used.
- Capitalize the net income into an indication of present value.

The calculation for the capitalization process is:

Potential gross income/rent
– Vacancy and collection loss
+ Miscellaneous income

Effective gross income

Effective gross income
– Operating expenses
– Reserves for replacement

Net operating income (before discount, recapture, and taxes)

Net operating income
÷ Capitalization rate

Value

Step 1—Estimate potential gross income

To estimate gross income, forecast the income a typical investor expects to receive from the property from the present date forward. Past income may be a guide to the expected future income, but you must compare and analyze the income in relation to other indicators, such as rents of comparable properties and consideration of probable future trends.

Potential gross income is the market rent that would be collected if the property were fully occupied. In estimating potential gross income, appraisers distinguish between market rent (or economic rent) and contract rent.

Market rent is the prevailing rent received for comparable properties. Use market rent to calculate RMV by the income approach. Market rent should be the amount that would result from a lease negotiated on the open market between a willing lessor and a willing lessee, both knowledgeable and free of influence from outside sources.

Contract rent is the actual amount agreed to by a landlord and tenant. It may or may not be the same as market rent, depending on various factors. Contract rents should be analyzed to determine if the lease amount is typical for the type of property and if the lease agreement provides for any consideration other than the lease. Factors to consider include:

- The date the rent was negotiated;
- The presence of market rent escalator adjustments in the lease; and
- Any personal or business relationship between the lessor and lessee.

Contract rents should be compared to market rents of properties that are comparable to the subject.

Step 2—Deduct for vacancy and collection loss

Vacancy and collection loss is an allowance for reductions in potential income due to vacancies, tenant turnover, and nonpayment of rents. The losses expected from vacancies and collection loss are subtracted from potential gross income. Vacancy and collection loss should be allowed on all properties because even the most stable property will experience some loss of income over time.

Vacancy is the loss in potential income attributed to unoccupied periods. This occurs during periods of tenant turnover, building renovation and refurbishment, and sluggish economic conditions. It is expressed as a percentage of potential gross income. Vacancy rates will vary depending on the age, condition, and quality of the building as well as the location of the property. Vacancy allowance for older motels/hotels may be as high as 50–60 percent, while for newer, well-located, and well-managed office structures, it may be as low as 1 to 3 percent. As buildings age, vacancy rates generally increase because of physical deterioration and functional and external obsolescence.

Collection loss is the loss in potential income from nonpayment of rent. It is also expressed as a percentage of potential gross income. Collection loss is calculated by dividing the uncollected rent by the total rent billed.

Allowances for vacancy and collection loss are based on typical management because these rates can vary depending on management style. A well-managed property may experience lower than typical loss. A poorly managed property may experience higher than typical loss. Rates may change under new ownership and are not attributable to the property.

Step 3—Add miscellaneous income

Miscellaneous income may come from several sources such as parking, vending machines, and laundry services.

EGI is the amount remaining after allowances for vacancy and collection loss are subtracted from potential gross rent and miscellaneous income is added.

The following example shows how EGI is calculated:

Potential gross rent	$50,000
Less allowance for vacancy and collection loss (10%)	– 5,000
Plus miscellaneous income	+ 2,250
EGI	**$47,250**

Step 4—Estimate expenses before discount, recapture, and taxes

NOI is estimated by subtracting operating expenses and reserves for replacement from EGI.

Determine operating expenses and replacement reserves by reviewing the historical expenses for the property, usually for three or more years, and by estimating the expenses that the typical buyer will expect the property to incur in the future. NOI is useful for comparing one property to another.

It is important to consider lease terms when estimating expenses. Leases are usually referred to as **net** or **gross**, although many are not completely one or the other.

With a **net** lease, the tenant pays all taxes and operating expenses. The owner isn't involved with property operations. The terms triple-net lease and net-net-net lease are synonymous with the pure net lease.

In a **gross** lease, the landlord pays all taxes and operating expenses.

Operating expenses are the costs necessary to maintain the property so it can continue to produce rental income. Traditionally, a distinction has been made between fixed and variable operating expenses. Now, they are generally grouped together under the single heading of operating expenses.

The income and expense information you receive from a property owner is usually in a format prepared for purposes other than property taxation. Typically, it leaves out some appropriate expenses for estimating property value, such as reserves for replacement.

The information is likely to include some expenses that are not appropriate for appraisal purposes. Some expenses reported by the property owner are dealt with in other ways by the appraiser. To avoid duplication, exclude them from the operating statement.

Following are frequently reported expenses to exclude for appraisal purposes.

Property taxes are a legitimate property expense, however, for ad valorem tax purposes, property taxes shouldn't be included as an operating expense. Property tax impact as an expense is accounted for by adding an effective tax rate to the capitalization rate.

Depreciation is considered in the income approach by the recapture component of the capitalization rate.

Income taxes are not allowed in the income approach because the tax is based on the personal income of the individual and not on the income produced by the property.

Debt service is the amount of payment made toward principal and interest on the loan for the purchase of the property. It is an expense of the buyer, not of the real estate. Properties owned free and clear won't have debt service.

Capital improvements are long-lasting additions to the property that usually increase income, total value, or economic life but are not considered operating expenses. These may be items such as building additions or property renovations.

Operating expenses typically include:

- Insurance;
- Management;
- Salaries;
- Utilities;
- Supplies and materials;
- Repairs and maintenance; and
- Reserves for replacement.

Reserves for replacement are funds for replacing short-lived items that won't last for the remaining economic life of a building. Replacing these items usually requires spending large lump sums. A portion of the expected replacement cost can be set aside each year to stabilize expenses. An appraiser provides for the reserves for replacement even if an owner hasn't done so. Stabilizing income and expenses is necessary for a proper economic indication of the property. Three or more years of the property's stabilized income and expenses are standard for analysis. It is important to review the net income statement carefully to ensure the result reflects the property's potential income. Check the repairs and maintenance line items to make sure they don't duplicate reserves for replacement. Appeal disputes can occur due to misunderstanding of proper appraisal methodology.

Reserves for replacement items include:

- Roof and floor covering;
- HVAC system;
- Water heaters;
- Painting and decorating; and
- Kitchen appliances.

Note: Some items may be personal property for which an allowance may have already been made.

Calculate the annual monetary charges for any specific item by:

- Estimating the economic life of the item;
- Estimating the replacement cost new (RCN); and
- Dividing the RCN by the economic life.

To express the cost as a percentage, replace the RCN figure with 100 percent. Display either figure as:

RCN ÷ Economic life = $ per year

100 ÷ Economic life = Percentage per year

Step 5—Deduct expenses from effective gross income to determine net operating income

After estimating all operating expenses and appropriate reserves for replacements, reconstruct the income and expense statement. Subtract adjusted expenses from the EGI to derive NOI.

Example—Reconstruction of reported expenses

Property owner's expenses, as reported	
EGI	$47,250
Insurance	2,400
Taxes	9,000
Management	1,800
Utilities—tenant pays all	375
Debt service	13,000
Repairs and maintenance	2,250
Miscellaneous	750
Total property expenses	**– $29,575**
Net income	$17,675
Difference between reported and reconstructed expenses:	$21,360
Percentage difference:	**54.7%**

Appraiser's reconstructed expenses:	
EGI	$47,250
Operating expenses:	
Insurance	2,400
Taxes (in cap rate)	0
Management	1,800
Utilities—tenant pays all	375
Debt service (personal)	0
Repairs and maintenance	2,250
Miscellaneous	750
Reserves for replacement:	
Roof cover (prorated)	300
HVAC (prorated)	340
Total property expenses	**– $8,215**
Net income	$39,035

This illustrates how a NOI schedule prepared by a property owner, if accepted at face value by an appraiser, would distort NOI by 54.7 percent.

Step 6—Capitalization: Selecting the proper capitalization rate

Capitalization is the process of converting anticipated future income into an indication of present value. The **principle of anticipation** states that present value is determined by future benefits. Discounting is the process of adjusting the value of future dollars to present worth. The easiest method is to use annual income and annual rates for discounting future benefits. This is represented by the Income–Rate–Value **(IRV)** formula:

Value = Income ÷ Rate, or V = I ÷ R

Rate = Income ÷ Value, or R = I ÷ V

Income = Rate × Value, or I = R × V

The IRV formula is the general model used as the basis for all applications of the income approach. To use the model to estimate value, estimate the annual NOI expected for the property and the appropriate capitalization rate.

Capitalization rate

The capitalization rate converts NOI into an estimate of value. It reflects the relationship between income and value. The capitalization rate is made up of several components:

- Discount rate;
- Recapture rate; and
- Effective tax rate.

The capitalization rate used in real estate appraisal includes both a return **of** and a return **on** investment.

Return of the investment, called recapture, is recovery of invested capital.

Return on the investment, called the discount rate, is compensation to an investor for the risk, time value of money, nonliquidity, and other factors associated with investment. A prudent investor looks to the future income stream, as well as potential resale, to provide this return.

Discount rate is the required rate of return **on** investment necessary to attract investors. The discount rate contains an **interest rate**, which is a required rate of return on debt capital, and a **yield rate,** a required rate of return on equity.

The discount rate takes into account four aspects of investment: safety, risk, liquidity, and management cost.

- Safe rate—the rate available for long-term deposits and other low-risk investments.
- Risk rate—an adjustment for a property's perceived level of risk.
- Nonliquidity rate—a rate based on how readily assets can be converted to cash.
- Investment management rate—an adjustment for the level of investment management skill required.

The rates for risk, nonliquidity, and investment management are added to the safe rate to make up the discount rate.

The discount rate of properties purchased with a high expectation of value appreciation will sometimes be lower than the safe rate. Since investors expect to make a significant amount of money from resale of the property, it isn't necessary for the annual rent to be the source of all profit. Because a capitalization rate is nothing more than net annual rent expressed as a percentage of the total property value, a lower income level implies a lower capitalization rate. Conversely, a property expected to lose value over the term of ownership requires a higher level of annual income to deliver the desired level of profit to the investor. It is assumed the discount rate required by property investors includes provisions for any expected appreciation. Therefore, the interest rate applicable to any particular type of property will frequently be lower than commercial bank investment rates.

Recapture rate provides for the recovery of capital on an annual basis, also called the rate of return **of** investment. Land, treated as nondepreciating, isn't included in recapture rates. The return of investment in a property can be accomplished in one of two ways or a combination of both. One is a return of the investment through payment from the income stream. The other is a return of the investment (all or part) at the end of the term of ownership by resale of the property.

Effective tax rate is an allowance for property taxes included in the capitalization rate for ad valorem appraisal purposes when the typical lease is a **gross** lease. If the typical lease for the property is a **net** lease, the tenant pays the taxes so they are not a consideration. To use property taxes as an expense item assumes the value of the property is known, and thereby discredits the entire approach.

The rate used for taxes in the capitalization rate is expressed in decimal form. In Oregon, taxes are not directly related to RMV, therefore you must calculate an **effective** tax rate. Don't confuse the effective tax rate with the **actual** tax rate used to calculate taxes. To calculate an effective tax rate, divide the nominal tax rate known on the assessment date for the tax code area where the property is located by 1,000, then multiply that figure by the changed property ratio (CPR) for the subject's property class.

Example: To calculate a tax rate of $15 per $1,000 of assessed value:

15 ÷ 1,000 = 0.015 × 0.80 (CPR) = 0.012 effective tax rate

The CPR may vary by property class; thus the effective tax rate will also vary. When assessed value and RMV are equal, the tax rate and effective tax rate will be the same.

For a definition of CPR, refer to the glossary and Chapter 13. Also see OAR 150-308-0290.

Step 7—Capitalization: Determining the appropriate procedure

Once you have estimated annual NOI before discount, recapture, and taxes, you can use several methods and techniques to capitalize that income into an estimate of market value. Proper rate selection is necessary to correctly estimate value. Small variations in the capitalization rate will result in substantial differences in value estimates. For example:

$39,035 (NOI) ÷ 0.10 (capitalization rate) = $390,350

$39,035 (NOI) ÷ 0.11 (capitalization rate) = $354,864

One percentage point in the cap rate changed the value $35,486, or 10 percent.

Methods to capitalize income into an estimate of value include direct capitalization and the yield capitalization method. The yield capitalization method isn't discussed in this manual. In the direct capitalization method, both the land and building residual techniques are demonstrated.

Direct capitalization method

In this method, net income is capitalized into an indication of market value using an overall rate developed from the market with no prediction being made for the behavior of income or for the period of recapture. An overall rate is the annual NOI divided by the sale price. Capitalization of the income stream is accomplished by dividing the estimated income by the appropriate rate. You can also calculate it by multiplying the income by an income factor.

In the following example of direct capitalization using an overall rate, the income-expense ratios, remaining economic lives, and land-to-building ratios of the sale are comparable to those of the subject property. The sale property is located in the same tax code area as the subject and has the same effective tax rate**. Note:** If it weren't located in the same tax code area, adjustments can be made so the comparison is valid.

Overall rate development from sale property

Example (Values are rounded)

Sale price	$330,000
NOI before discount, recapture, and taxes	$36,300
Overall rate including taxes ($36,300 ÷ $330,000)	0.11

Subject property

Potential gross income	$ 50,000
Vacancy and collection loss (5%)	–2,500
Miscellaneous income	+1,500
EGI	$ 49,000
Less allowable expenses (30%)	–14,700
Net income before discount, recapture, taxes	$ 34,300

Indicated market value of the subject property

Net income before discount, recapture, and taxes		$ 34,300
Overall capitalization rate		0.110
Indicated property value	($34,300 ÷ 0.110)	$311,800

Selection of capitalization technique

There are three techniques for processing income into an indication of value:

- Building residual;
- Land residual; and
- Property residual.

To calculate a residual technique, satisfy the income requirements for the known portions of the property, then capitalize the remaining income into a value estimate for the unknown portion.

Which technique you use will depend on the information available and the conditions existing on the property.

Building residual technique

Use the building residual technique if you have sufficient information to develop an estimate of land value and the building is older, making cost and depreciation estimates difficult to support. To use the building residual technique, you must know:

- Net income;
- Land value;
- Proper discount rate;
- Proper recapture rate; and
- Effective tax rate.

Example (Values are rounded)

Net income before discount, recapture, and taxes	$30,700
Income to land	–7,350
Income attributable to building	$23,350
Capitalization rate:	
Discount rate	0.09
Recapture (33-year life) (1 ÷ 33)	0.03
Effective tax rate	0.015
Total	0.135
Building value ($23,350 ÷ 0.135)	$173,000
Plus land value ($7,350 ÷ 0.105)	+ 70,000
Property value	$243,000

Note: Remember, the capitalization rate for land doesn't include a recapture rate.

Land residual technique

Use the land residual technique when the building value is known and the land value is unknown. This technique may be used when the building is new and the land is improved to its highest and best use. Use the same information for the building residual technique as for the land residual technique, except replace the building value with the land value.

Example

Net income before discount, recapture, and taxes	$30,700
Building value	$173,000
Capitalization rate:	
Discount rate	0.09
Recapture (33-year life)	0.03
Effective tax rate	0.015
Total	0.135
Income attributable to building ($173,000 × 0.135)	– $ 23,350
Income attributable to land	7,350
Land value ($7,350 ÷ 0.105)	$ 70,000
Plus building value	+173,000
Property value	$243,000

Property residual technique

Use the property residual technique when neither land nor building value can be accurately estimated. This technique provides an estimate of total property value without allocation of land and improvement components. The process is similar to direct capitalization with an overall rate.

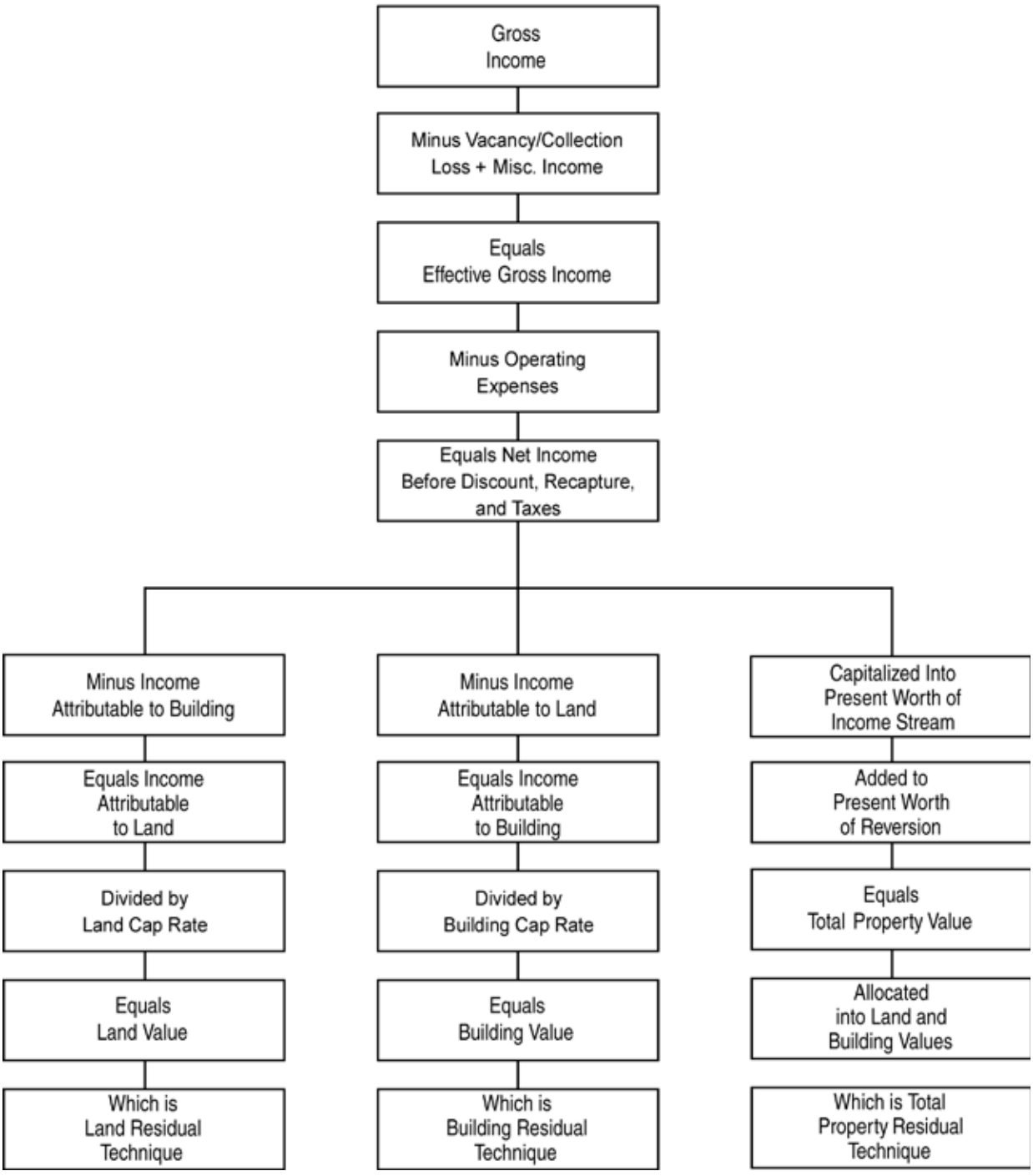
The major difference is that it attempts to measure the present worth of two sources of income, as compared to one income stream in direct capitalization. First, use a capitalization rate to value the annual rent expected during ownership. Second, estimate the value of the property at the end of the ownership period, called the reversion, then discount it back to its present worth. The reversion value is added to the present worth of the income stream for an indication of total property value.

Because of the difficulties associated with estimating a property's value at the end of ownership, this technique is seldom used.

For mass appraisal purposes, you will find that the techniques that most closely follow the thought processes of those who are active in the market will be the easiest techniques to explain and justify when discussing appraisals with property owners. If buyers in the market area make their investment decisions by following a process similar to the property residual technique, then the capitalization process should also reflect this process. No matter which capitalization procedure you select, the closer it reflects the thinking of buyers and sellers in the market area, the more persuasive the value conclusion will be.

The following chart shows how the value of property is estimated using various techniques of capitalization.

RESIDUAL TECHNIQUES



Gross income multipliers

A gross income multiplier (GIM) is a factor calculated by dividing the sale price of a property by its gross income. Gross income is normally defined as the annual income prior to any deduction for services or expenses. Using a GIM assumes that any differences between the subject and comparables are reflected in the rents of each property. If the sales used to extract a GIM from the market are valid and the properties are comparable, the resulting factor should produce a reliable indicator of value for the subject. Using a GIM to arrive at an estimate of value is one form of direct capitalization.

After extracting a GIM from the market, the gross income of the subject for a single period is multiplied by a factor to produce an estimate of value. The multiplying factor is called a gross rent multiplier (GRM) if the period is one month. It's called a GIM if the period is one year. Generally, monthly rents are used for single-family residences and annual incomes are used for other income-producing properties.

To properly develop a GIM study, use all available comparable sales. Properties from which a GIM is developed, and properties to which a GIM is applied, must be similar in effective age, quality of construction, and use. For example, it wouldn't be appropriate to apply a GIM to a 20-unit property that was developed from sales of 4–to 6–unit properties.

When developing a GIM, give careful consideration to:

Gross income-to-expense ratio—The gross income-to-value relationship may be different for similar properties depending on the expenses involved in producing the income. The gross income for an office building where rent includes heat, lights, water, and janitorial service will be substantially greater than the gross income from an identical building where these services are not furnished. If you develop a GIM from a sale in which these services are furnished and apply it to the income of a building that doesn't include the same services, you won't get an accurate indication of value.

Land-to-building ratio—A large land-to-building ratio may indicate that a sale property includes excess land. Such a sale may produce a higher than normal GIM.

Remaining economic life—A sale of a building with a short remaining economic life may produce a low GIM. Applying the low GIM to a building that has a longer life will indicate a value below market.

The following example of how to develop a gross income multiplier from a sold property includes an unusual amount of services. Typical service furnished for retail stores in the area is water only.

Retail store sales price:	$150,000
Rentable area:	10,000 sq. ft.
Gross income:	$22,500 ($2.25/sq. ft.)
Services furnished:	Heat, lights, water, janitorial
Comparable space rents for:	$ 2/sq. ft. with water only
Adjusted gross income:	$20,000
$150,000 ÷ $20,000 =	7.5 GIM

Convert gross income into an indication of value using the GIM developed in the previous example:

Gross income attributable to subject	$ 21,450
Indicated GIM	7.5
Value indication (7.5 × $21,450)	$161,000 (rounded)

Summary

Always consider using the income approach to appraise income-producing properties. This approach is based on the principle of anticipation—that market value is equal to the present worth of anticipated future benefits of ownership. Income-producing property is purchased for the right to receive the future income stream of that property. You must evaluate this income stream in terms of quantity, quality, and duration, then convert it by means of an appropriate capitalization rate into an estimate of market value. Take care that the rent, expenses, and rates reflect those expected by the typical investor for the type of property being valued.

For a complete discussion of property appraisal, consult texts produced by the International Association of Assessing Officers and the Appraisal Institute.

Chapter 7

Statistics and Appraisal Standards

Mass appraisal is the systematic process used to value large quantities of properties as of a given date, using standard methodology. The process of valuing these properties must be uniform and the value level must be at 100 percent of RMV.

The principles and procedures used for mass appraisal are similar to those used for an individual appraisal. In mass appraisal, you work with a large volume of market data to develop value indicators. When applying these value indicators to appraise property, the process takes on the nature of direct comparison and produces accurate value estimates at a relatively low cost. Additionally, mass appraisal provides a means to establish and maintain valuation uniformity.

In Oregon, the three methods of mass valuation are:

- Physical reappraisal,
- Recalculation, and
- Ratio adjustment.

Physical reappraisal requires the use of benchmarks, market studies, and some level of inspection of the property to be appraised. (See Chapter 9, "Inspection level," pages 36 and 37.)

Recalculation requires market studies, developing adjustment tables, electronically stored property characteristics, and computer application of the adjustment tables to the property characteristics.

Ratio adjustment compares sale prices to RMV and applies an adjustment (if warranted) to bring the property to 100 percent of RMV. (See ORS 309.200 and ORS 308.232).

Uniformity and equity of real market value

One of the primary objectives of a mass appraisal program is to achieve uniform appraisals among properties of a similar type. This is accomplished by using proper valuation methods and procedures. However, since values can change rapidly within an area, it is often difficult to maintain equity and uniformity among all valuation areas or property classes. Annual sales ratio studies are a means to identify and measure the effects of market fluctuations.

Equity of RMV doesn't mean equal RMV. Equity of RMV is achieved through uniform valuation of properties within each property class in a market area or neighborhood. To ensure equity is maintained for all properties, the assessor must develop a program that identifies inequities and errors in the current assessment roll.

Reappraisal is the best method of correcting inequities, but it's not practical to reappraise each property every year. In areas with adequate sales, the most practical way to correct inequities in RMV are recalculation and ratio adjustment. Ratio studies work with traditional valuation and recalculation programs. Ratio studies can identify both the problem areas and the amount of adjustment required to correct inequities.

Physical reappraisal

Reappraisal typically refers to a three-step process used to value large groups of properties. The general steps are:

- Conducting preappraisal studies;
- Inspecting the properties; and
- Applying the preappraisal study results to the properties being appraised.

The reappraisal process is discussed in Chapters 8 through 11.

Recalculation

Recalculation is a hybrid of reappraisal and traditional trending. An existing valuation model is adjusted or a new one created based on current market analysis of property characteristics. Application of the modified model to the existing property characteristics results in a new estimate of RMV for each property in the specified market area. Recalculation relies on the inventory characteristics for a property as they appear on the assessment record without field verification of the characteristics of the unsold properties in the market study area.

Ratio study

The sales data used in a ratio study are collected from real estate transfer documents recorded in county clerks' offices and, for manufactured structures, from copies of registration forms filed with the state. In some counties, residential sales data is obtained from multiple listing services. Necessary property identification, and statistical and ratio information are collected on all sales in the county. This information includes property location, name and address of buyer and seller, county identification number for the property, sales date, sales price, property class, condition codes, and current roll RMV.

A sales confirmation program verifies conditions of the sales transactions. Each transaction is given a condition code that identifies the type of sale and indicates if it is usable for ratio study purposes or should be rejected. Condition codes are defined in the Department of Revenue's *Assessor's Certified Ratio Study Procedures Manual,* 150-303-437.

Sales listings are created from usable sales. Sales listings relate adjusted sale prices to the RMV as of the prior January 1. Ratio indications for each sale (RMV divided by sales price) are listed in ascending order from lowest to highest to form an array. Data can be sorted in various ways to assist in determining the RMV level and equity of valuation for property classes.

Indicated ratios are reviewed to determine if the overall value level for each market area needs adjustment. If the RMV needs adjustment, then the indicated amount of adjustment is applied to each property in that market area. In this way each property value can be adjusted to achieve 100 percent of RMV.

When sales data is limited, a study of two or more years of sales may be necessary.

When recalculation models are used in the revaluation of properties, the ratio study should include the "before" ratio analysis; the recalculated RMVs with a description of the recalculation process used by the county; and the "after" ratio analysis.

Appraisal ratio studies

When the number of sales is insufficient to accurately estimate the RMV level of a class of properties in a market area or neighborhood, appraisal ratio studies may be conducted to supplement the sales data. A qualified appraiser needs to make the appraisals. The appraiser should appraise a random selection of properties that represent the property class and the market area being studied. The appraiser's value estimate is then used in the appraisal ratio study in place of a sale price.

An appraisal ratio study is compiled and analyzed in the same manner as a sales ratio study. Types of data that can be used in appraisal ratio studies are: gross income multipliers, construction cost indexes, and real estate trends.

Data standards

Analysis of assessment records allows the appraiser to establish and maintain accurate values. To make informed decisions, adequate information must be available. At a minimum, the following information should be maintained in the county's computer database for access by appraisers.

- Unique identification number;
- Market, study, or adjustment area;
- Neighborhood;
- Sale price, date, deed type, etc.;
- Condition code;
- Map and taxlot;
- Zoning;
- Land class or type;
- Land size—square feet, front feet, acreage, etc.;
- Land features—view, topography, traffic, etc.;
- Land RMV;
- Improvement RMV;
- Total RMV;
- Property MAV;
- Property AV;
- Improvement type;
- Improvement quality class;
- Year built;
- Square footage of each floor or unit;
- Foundation;
- Exterior walls;
- Roof;
- Number of bedrooms;
- Number of baths or number of plumbing fixtures;
- Type of heating system;
- Other interior features;
- Effective age;
- Percent good;
- Date last inspected;
- Comments; and
- Appraiser's name or I.D.

For income properties, additional fields are required:

- Applied rates—capitalization rate, recapture rate, discount rate, overall rate;
- Income—gross income, net income; and
- Expenses applied.

In addition to the preceding fields, the assessment database should contain land value computations such as base unit land values and adjustments, and the improvement computations. You must be able to provide these for taxpayer inspection.

Statistics in mass appraisal

Much of the mass appraisal program is dependent on the statistical analysis of sold properties and their current roll RMV. In order to discuss this topic, it's necessary to have an understanding of statistical terms used in this section. The following terms are phrased so they closely resemble their use in mass appraisal.

Absolute deviation—In an array of sales ratios, it is the absolute value difference between a sample point and one of the measures of central tendency. For assessment purposes, the median ratio is the central tendency used to calculate the absolute deviation.

Array—The list of a set of numbers or observations in either ascending or descending order.

Average absolute deviation—The average of the absolute deviations in an array.

Bias—A bias occurs if the expected value of a statistic isn't equal to the population parameter being estimated. In assessment administration, valuation progressivity/regressivity are kinds of possible bias. Bias may also be caused when the sample only represents a small portion of the population. An example of bias is using sales of only lower-priced homes in a mixed area containing low-, medium-, and upper-value properties.

Central tendency—The tendency of most kinds of data to cluster around some type of central value, such as the *median or mean.*

Coefficient of dispersion (COD)—The ratio of the average absolute deviation to the median, converted to a percentage. The lower the percentage, the greater the uniformity. The COD is used as a measure of uniformity and to determine if the reliability and quality of the valuation data are deteriorating. Standards have been set around the COD that require an area to be reappraised once the data has been determined to be unreliable.

Frequency distribution—A tabulation of individual ratios, usually expressed in a graph format, determined by counting the ratios falling within uniform ratio spreads such as: 10, 20, or 30 percentage points.

Homogeneous—In assessment, used to describe a market area where the uses, property types, and quality classes are similar.

Heterogeneous—In assessment, used to describe an area or neighborhood in which the uses, and/or property types are diversified.

Market area—That geographic area or political jurisdiction within which alternative similar properties are effectively competitive with the subject property in the minds of probable potential purchasers. A group of properties that generally share important characteristics that influence value. Each market area should contain a sufficient number of accounts to ensure an adequate sales sample for analysis.

Mean—The total of the ratios in the array, divided by the number of ratios in the array. It is commonly referred to as the *average* of the sales ratios in the array.

Median—The exact middle ratio of an array. If the array contains an odd number of sales, it's the center of the array. If the array contains an even number of sales, it's the average of the two middle, or central, sales. It's a positional average and isn't affected by the size of extreme values.

Population—All of the properties of a given property type within a specified market area.

Price-related differential (PRD)—A measure of appraisal progressivity or regressivity. It is calculated by dividing the mean by the weighted mean. A PRD greater than 1.00 suggests that the high-valued properties in the array are under-appraised (regressive), thus pulling the weighted mean below the mean. A PRD less than 1.00 suggests that high-valued properties are relatively over-appraised (progressive), pulling the weighted mean above the mean.

Progressivity—Where high-valued properties are over-appraised relative to low-valued properties.

Regressivity—Where high-valued properties are under-appraised relative to low-valued properties.

Sales ratio—The RMV of a property divided by the sale price of the same property.

Sample—A set of observations selected from a population and used to make inferences about population values. In assessment, the sample consists of the properties that sell (in fair-market transactions) within a specific market area during a specific time period.

Uniformity—The degree to which a single member of a property group reflects a RMV level consistent within the market area and property class.

Weight—A percentage value that represents the relative importance of each element's contribution to the total.

Weighted mean—A measure of central tendency determined by dividing the sum total of the RMV by the sum of the RMVs in an array by the sum of the sale prices (or other indications of market value) for each property class in each market area or countywide.

Analysis of the ratio study

Computing measures of central tendency is the first step in analyzing ratio conclusions. Three measures of central tendency must be used to measure the relationship between the current roll RMV and the sales price of property. Valuation level refers to the relationship between the RMV on the roll and the sales price of property.

Additional statistical measures for RMV uniformity are needed to illustrate how widely the values may vary from each of the ratio indicators.

Ratio studies are an excellent tool for establishing priorities for equalization operations, appraisal quality control, and preliminary analysis of market fluctuations. Whether properties are under- or over-valued, the appropriate correction for the inequities can be determined with ratio studies. If applying a percentage adjustment is the most practical correction for a class of properties in a specific area, the ratio conclusion from the sales ratio study will show the adjustment percentage amount required.

To maintain equity, it may be necessary to apply different adjustments to the land than to the improvements. The land value and improvement value components of each property represents a percentage of the total RMV. A weighting computation process is used to determine the correct adjustment for each component.

Population testing

Population testing is a type of statistical analysis used to determine if a sample is representative. A sample that isn't representative of the population is biased. This may be due to a flaw in statistical technique, improper application of condition codes, inaccurate sample selection, or inconsistencies in the marketplace.

Although there are standard tests to determine if a sample is representative of the population, few work well in sales ratio analysis. To solve this problem, we have developed a test for sample bias that combines basic statistical and appraisal theory. The test is called *Percent of Similarity* or Degree of Similarity.

To conduct this test, the characteristics of the sales sample are compared to the characteristics of the entire neighborhood. If the characteristics are similar (at least 80 percent), the sample is useful for comparison. If the sample is less than 80 percent similar, it is biased and doesn't represent the population.

Example:

Market area sales sample				
Characteristic	Market area average	Sales sample average	Calculation	Percent similarity
Percent good	76%	72%	72 ÷ 76	95%
RMV	$121,000	$115,000	115,000 ÷ 121,000	95%
Quality class	3.99	4.20	3.99 ÷ 4.20	95%
Square footage	1,522	1,402	1,402 ÷ 1,522	92%

Sample similarity = 94.25%

Averages for particular characteristics are listed under **Market area average** and **Sales sample average**. For example, the average quality class in a market area is determined by dividing the total numeric value of classes by the number of properties in the area. Percent of similarity is determined by dividing sales sample averages by market area averages for each characteristic.

The sales sample shows that 94.5 percent is the average similarity for all characteristics. This proves the sample has a low degree of bias and is representative of the market area. If the percent of similarity is less than 80 percent, the sample isn't representative of the market area. If that were the case, the ratios developed from these sales should be given little weight. When the sample isn't representative of the population, the analyst should review or expand the sales collection area, sales collection period, and characteristics for additional analysis.

Time adjustment studies

Time adjustment studies are used when sale prices are increasing or decreasing over time. Study results will indicate the percentage adjustment required to bring sales prices to current value indications. When there are few current-year sales, prior year's sales are used to supplement the sales sample.

There are various methods of conducting a time adjustment study. The most accurate method is to use double sales. A double sale is the resale of the same property within a specific time period.

If double sales are limited, an analysis of nearly identical or similar properties can be made. This is referred to as matched pair analysis. An important part of this analysis is to confirm that the property hasn't changed significantly since the last appraisal. Significant changes to the property invalidate the sale for this type of analysis.

Another method of computing a time adjustment is to use ratio trends. Analysis of ratio trends can be used to determine the percentage adjustment needed to reflect current market conditions. Detailed procedures for developing and analyzing ratio studies are discussed in the *Assessor's Ratio Procedures Manual*, 150-303-437.

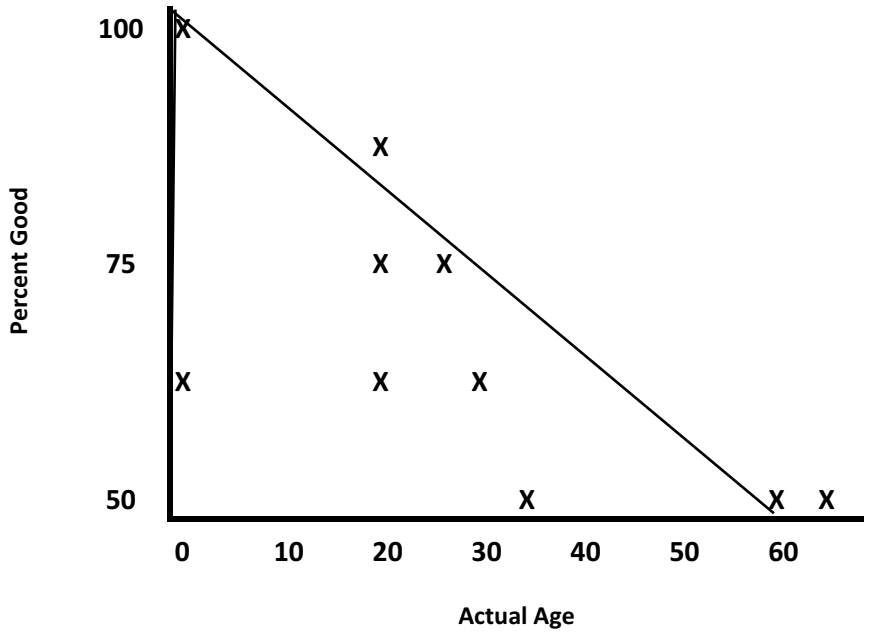
Graphs

Graphs are commonly used in statistical analysis to provide a visual reference of data. The most common graphs display changes in value over time, differences in unit value due to economies in scale, and depreciation of improvements or personal property.

A typical graph has one horizontal and one vertical axis. The horizontal axis, or base, is referred to as the "X" axis and the vertical is the "Y" axis. Time or size is typically displayed on the "X" axis and other factors such as percent good or sale price on the "Y" axis. On a depreciation graph, percent good is placed on the "Y" axis and actual age or effective age (noted in years) is placed on the "X" axis with the lowest age and percent good appearing at the point where "X" and "Y" intercept. The points plotted on the graph are referred to as observations. Drawing a line through the center of the observations indicates the trend.

In the graph shown, the percent good is decreasing over time.

Sample Depreciation Graph



Stratification studies

These studies look at different property characteristics in a sales sample to determine if a particular characteristic affects value. Sale ratios are stratified, or sorted, by a given characteristic. When ratios cluster around a characteristic, it may indicate the characteristic has an identifiable and measurable impact on value. If the characteristic is measurable, it can be adjusted to bring the affected properties to 100 percent of RMV.

An array containing class 3 and 4 dwellings may indicate a different conclusion than a study that looks at each dwelling class separately.

The following example looks at 35 sales from a ratio study area called ABC1. The sales in the left-hand column are arrayed in ascending ratio order, as found in a typical ratio study. The mean ratio from this sample is 94 (rounded). This indication shows that the values of the properties in the study area should be increased by 1.06 (100 ÷ 94) in order to be at 100 percent of RMV. The 1.06 adjustment is based on the assumption that all the properties are responding uniformly within market area ABC1. This isn't always the case.

The column to the right has stratified the sales into their various quality classes. The indication when stratified is somewhat different. The quality class 3 properties indicate a 94 ratio and the quality class 4 properties indicate a 92 ratio.

Market area ABC1 sales ratio review

Combined property

Sale no.	Quality class	Total RMV	Sale price	Sale ratio
1	142	$132,345	$170,000	78
2	131	113,750	129,500	88
3	141	207,435	233,000	89
4	131	173,290	194,000	89
5	142	298,015	330,244	90
6	131	131,115	146,324	90
7	132	153,645	170,000	90
8	132	158,720	176,995	90
9	131	196,925	213,390	92
10	131	131,905	142,662	92
11	132	177,830	194,242	92
12	141	183,810	198,000	93
13	141	167,235	180,180	93
14	141	225,720	240,500	94
15	142	233,604	248,390	94
16	132	163,680	174,840	94
17	131	138,690	147,330	94
18	131	136,930	144,340	95
19	132	146,275	153,400	95
20	141	152,865	160,500	95
21	132	170,905	178,961	95
22	131	125,915	130,750	96
23	131	126,485	131,208	96
24	132	157,045	163,840	96
25	131	135,425	141,000	96
26	131	133,735	138,810	96
27	131	169,945	175,393	97
28	131	117,780	120,873	97
29	132	145,165	149,725	97
30	131	175,870	182,000	97
31	141	158,035	161,825	98
32	141	146,575	149,900	98
33	131	162,890	167,000	98
34	131	126,460	127,100	99
35	131	173,290	172,311	101
		Combined mean		**94**

Stratified property

Sale no.	Quality class	Total RMV	Sale price	Sale ratio
2	131	$113,750	$129,500	88
4	131	173,290	194,000	89
6	131	131,115	146,324	90
9	131	196,925	213,390	92
10	131	131,905	142,662	92
17	131	138,690	147,330	94
18	131	136,930	144,340	95
22	131	125,915	130,750	96
23	131	126,485	131,208	96
25	131	135,425	141,000	96
26	131	133,735	138,810	96
27	131	169,945	175,393	97
28	131	117,780	120,873	97
30	131	175,870	182,000	97
33	131	162,890	167,000	98
34	131	126,460	127,100	99
35	131	173,290	172,311	101
7	132	153,645	170,000	90
8	132	158,720	176,995	90
11	132	177,830	194,242	92
16	132	163,680	174,840	94
19	132	146,275	153,400	95
21	132	170,905	178,961	95
24	132	157,045	163,840	96
29	132	145,165	149,725	97
			Class 3 mean	**94**
3	141	207,435	233,000	89
12	141	183,810	198,000	93
13	141	167,235	180,180	93
14	141	225,720	240,500	94
20	141	152,865	160,500	95
31	141	158,035	161,825	98
32	141	146,575	149,900	98
1	142	132,345	170,000	78
5	142	298,015	330,244	90
15	142	233,604	248,390	94
			Class 4 mean	**92**

After reviewing the stratified results in the example market area shown on the previous page, it would be appropriate to review several more areas of class 3 and class 4 properties. If the stratification in the majority of the market areas indicates that different adjustments by quality class are warranted, then there are several possible ways to achieve a 100 percent ratio.

In the following example, the summarized results of area ABC1 and six additional market areas are arrayed for comparison.

Summary of ratios stratified by quality class and market area

Area	Class 3 ratio	Class 4 ratio	Combined mean ratio
ABC1	94	92	94
E001	90	104	95
NWS3	99	92	94
B005	99	91	97
NWN6	102	94	98
OOO6	97	87	96
BOO1	98	95	96

In the example above, overall sales of class 3 dwellings produced ratios higher than sales of class 4 dwellings. This is statistical evidence that the market is reacting differently to these dwelling classes. Both the combined and stratified ratios can be used to adjust RMV to arrive at a valuation level of 100 percent. Stratified ratios may be used to make adjustments to improve equity and uniformity. This adjustment will decrease the COD while the combined adjustment will increase the COD.

Valuation standards

Valuation standards are used to measure the results of county valuation programs. The minimum standards and the statistical measurements used to evaluate results are:

Real market value (RMV)—Oregon Revised Statute 308.232 requires property to be appraised at 100 percent of its RMV. The ratio study is the primary tool used to test RMV. Ratios less than 100 percent indicate that the RMV is below market. If the ratio is greater than 100 percent, the RMV is above market. Adjustments to the RMVs on the roll are made as required to bring values to current market conditions.

Coefficient of dispersion (COD)—This is the average absolute deviation to the median, converted to a percentage of a selected ratio. It is used to determine the reliability and uniformity of the RMV. A low percentage indicates a high degree of uniformity. A high percentage indicates a low degree of uniformity and may indicate the data is no longer reliable. Oregon Administrative Rule (OAR) 150-308-0380 sets uniformity and equity standards for different classes of real property. The COD is calculated only from sales that are considered arm's-length transactions. Some fair market sales are not considered usable if any of the following changes have occurred since the last appraisal:

- A new subdivision or partition;
- A major lot line adjustment;
- A change to the existing footprint on an improved property;
- The addition of a second floor;
- The addition of a major outbuilding;
- A major renovation or remodeling;
- A new dwelling; or
- A new commercial or industrial structure.

The following COD standards are set out in OAR 150-308-0380

Type of property	Maximum COD
Vacant land (100 & 400)	20
Manufactured structures	25
Urban residential	
Homogeneous	10
Nonhomogeneous	15
Rural improved (101 & 401)	20
Apartments (701)	12
Income property	
Larger urban	15
Smaller rural	20

Price-related differential (PRD)—The PRD measures the equity between high- and low-valued residential properties within a given market area or neighborhood. The PRD is calculated by dividing the mean ratio by the weighted mean ratio. As the PRD exceeds 1.00, the higher valued properties are considered under appraised relative to the low-valued properties. As the PRD drops below 1.00, the high-valued properties are considered over-appraised compared to the low-valued properties.

The PRD should fall between 0.98 to 1.03 for residential property. Ratios within this range tend to display normal market disparity and don't display bias. Ratios outside of this range are evidence of bias in the sample and further verification is required.

Trimming—Trimming is the removal of sales from a sample because the sales are considered outliers or extreme ratios (those outside a predetermined range) and are not representative of the sample. The International Association of Assessing Officers' (IAAO) standards for trimming sales from an array requires that no more than five percent of the sales be trimmed and that half the trimmed sales come from each extreme. For example, if there are a total of 50 sales, 5 percent means only 2.5 sales may be eliminated. No more than one sale should be trimmed from each end of the array. All remaining sales must be left in the sample.

Not same as appraised (NSAA)—Voter approval of Measure 50 in 1997 eliminated the requirement for annual appraisal of one-sixth of the county, commonly referred to as reappraisal. Measure 50's passage also changed the appraisal priority to identification of all properties with significant changes that add or reduce RMV each year. Consequently, counties can no longer rely on locating and valuing any missed changes every six years. One method for locating changed properties is to look at the sales ratios and field review sales outside a selected ratio range. This works well for locating properties that have sold and changed—but if the assessor selectively reappraises sold properties, the COD won't be reliable as a test of uniformity for the population.

Reappraising sold properties will cause problems for the ratio study. According to the IAAO Standard on Ratio Studies, 2013:

> "As long as sold and unsold parcels are appraised in the same manner and the sample is otherwise representative, statistics calculated in a sales ratio study can be used to infer appraisal performance for unsold parcels.
>
> However, if parcels that sell are selectively reappraised based on their sale prices and if such parcels are in the ratio study, uniformity inferences won't be accurate (appraisals appear more uniform than they are). In this situation, measures of appraisal level also won't be supportable unless similar unsold parcels are appraised by a model that produces the same overall percentage of market value (appraisal level) as on the parcels that sold (see Appendix E, "Sales Chasing Detection Techniques").

Assessing officials must incorporate a quality control program; including checks and audits of the data, to ensure that sold and unsold parcels are appraised at the same level."

If sales are reappraised based on their selection from predetermined trim points, the COD will no longer be representative of the population. When this is the case, an additional study is needed to measure the reliability of the sample. A measure that gives an indication of reliability is referred to as the NSAA ratio. This ratio is calculated by dividing the number of NSAA sales by the total number of sales in the sample, which includes NSAA sales.

For example: under the 6-year reappraisal cycle, the NSAA ratio was 2 percent. Assuming no further reappraisal, the NSAA ratio increases to 6 percent in the first year. The new 6 percent ratio sets a baseline for the next year's study. If the ratio continues to increase annually, it is a strong indication the reliability of the data is deteriorating. Once the NSAA ratio reaches 15 percent, the area should be field reviewed to determine if reappraisal is necessary.

Chapter 8

Mass Appraisal of Land

In Oregon, the real market value of the land must be listed separately from all buildings, structures, improvements, and timber for ad valorem purposes [ORS 308.215(1)(e)]. This requires a separate land valuation. The exception to this rule is condominiums which are expressed as a single combined value. Land value results from various factors as listed in OAR 150-307-0010.

The valuation of land can be separated into three basic functions:

- Identification;
- Analysis; and
- Valuation.

This chapter deals primarily with the analysis and valuation of land. Identification is discussed in Chapter 4.

Highest and best use, anticipation, supply and demand, balance, substitution, assemblage, and plottage are principles of appraisal that affect land value. These are defined in Chapter 5.

OAR 150-308-0310 states that the assessment roll shall include the property classification code number for each individual parcel of locally assessed real property in the county. Property classification provides a standard method of organizing sales ratio and adjustment programs as required by ORS 309.200, to maintain assessment levels at 100 percent of RMV. Property classification isn't intended to accommodate market data that can be handled better by other categories such as building class or neighborhood.

Property classification is based on the highest and best use of the land. Unique properties requiring a separate adjustment can be handled within the miscellaneous classes.

Land valuation techniques

Allocation procedure

The allocation procedure may be considered when no current vacant land sales are available in the reappraisal area. However, use this method with caution as it is less reliable than direct sales comparison.

Under the allocation procedure, an estimate is made of the value that land contributes to the total property value. This land value can be estimated from the appraiser's knowledge of the market based upon:

- Previous years' land values;
- Analysis of new construction sites from similar neighborhoods; and
- Land-to-building ratios from similar neighborhoods.

Example

Your estimate of land values compared to total property values is 20 percent in a given residential neighborhood. The allocation is 4:1 or four parts improvement to one part land. For example, on an $80,000 improved property, the contributory land value would represent 20 percent, or one-fifth, of the total value. Thus, the estimated land value would be $80,000 × 0.20 = $16,000.

Extraction procedure

The extraction procedure uses the cost approach to subtract the improvement value from the total property value. Using this method, you would subtract the depreciated replacement cost of the improvements from the total property value to arrive at an indicated land value.

Example

Sales price of property	$80,000
Replacement cost new estimate	100,000
Less accrued depreciation	– 36,000
Estimated value of improvements	64,000
Indicated land value ($80,000 – $64,000)	**$16,000**

This procedure should be applied to a large enough sample of properties in the neighborhood to give a range of values. The extraction method is less reliable than the direct comparison approach and should be used with caution.

Land residual capitalization procedure

The main premise of the land residual capitalization procedure is that land will be valued at its highest and best use. The highest and best use may be the actual existing improvement or a hypothetical projected use.

With this procedure:

- The net income earned by the total property (land and improvements) is estimated from the market;
- The cost of the improvements is estimated;
- The income attributable to the improvement is calculated and deducted from the total net income;
- The remaining net income is attributed to the land; and
- The remaining net income is capitalized by the appropriate market rate for a value indication.

Example

Total net income for the property	$ 40,000
Improvement cost or value ($200,000) × 12% rate	− 24,000
Income attributable to land	$ 16,000
Value indication for land ($16,000 ÷ 0.10)	**$160,000**

Ground rent capitalization procedure

This procedure is particularly effective in a downtown core area where no vacant land sales can be found. If income from such properties can be established in the market, the present worth of future benefits of the property can be estimated. For example, if the net income from an area parking lot can be estimated, it can be capitalized into an estimate of value.

Example

Net income $10,000 ÷ 0.08 = $125,000 estimated land value.

The reliability of this procedure depends on the highest and best use estimate, market rent estimate, and the development of a correct capitalization rate for the subject property.

Sales comparison approach

The sales comparison approach is the focus of this chapter and begins with the preappraisal set-up discussion that follows.

Preappraisal set-up

For simplicity, this section will follow the step-by-step procedure for setting up the land portion of the residential mass appraisal program. The techniques used for preappraisal set-up and appraisal of commercial land are the same as those used for other urban land. There are seven steps in the preappraisal set-up for the mass appraisal of land:

1. Establish a base appraisal date;
2. Define neighborhood boundaries;
3. Gather and verify land sales data;
4. Establish base lot value;
5. Establish on-site development values;
6. Develop adjustments; and
7. Develop neighborhood land schedule.

Prior to reappraisal, post sales and any other pertinent information on the field maps.

Establish a base appraisal date

The base appraisal date provides a predetermined point in time at which all time adjustments can be aimed. All the sales used in the preappraisal set-up should be adjusted to the base appraisal date to reflect either inflationary or recessionary trends in the market. Time adjustments can be made by using either resale properties or a comparable sales analysis of similar properties.

The time adjustment studies should be conducted as close to the base appraisal date as possible. These adjustments are expressed as a percent-per-month increase or decrease. If resales are not available, the trends can be determined by the assessor's sales ratio study.

Sales occurring after the base appraisal date must be considered in the final ratio analysis conducted at the end of the appraisal program. Any changes in value levels as reflected by those sales are recognized by adjusting the completed appraisals to the January 1 assessment date.

Additionally, during the yearly maintenance program when new construction is picked up, always refer back to the base appraisal date and use the same base standards. Compensate for any changes in market value levels occurring after the original base appraisal date by applying subsequent yearly adjustments.

Neighborhood analysis

The appraisal staff needs to be familiar with the area to be reappraised. In becoming familiar with the reappraisal area, the distinctive neighborhoods within it must be defined. A neighborhood is a group of properties that share important characteristics and are often identified by a physical, geographic boundary (such as a street or river), or by a group of properties that react similarly to market influences.

A neighborhood can be further defined as a grouping of similar land uses that are influenced similarly by the four forces that affect property value. These forces are:

- Physical;
- Economic;
- Governmental; and
- Social.

The major physical factor affecting value is location. Others include topography, size and shape of a typical lot, appearance of a neighborhood, and availability of utilities.

Economic factors include the pattern of land use, employment of residents, average household income, and vacancy rates. Properties within a neighborhood generally suffer the same economic influences such as declining growth or stabilization.

Governmental factors include local land-use zoning, municipal services, and their costs.

Social factors include characteristics of residents (age, size of families, educational levels, income levels, etc.), population densities, and crime rate.

Neighborhoods should be labeled on reappraisal area maps, field records, and in the computer files using identifiers. The neighborhood identifier provides a basis for selective value adjustments indicated by the assessor's ratio study and assists in analysis for appraisal.

The identifier is used for:

- Comparison between similar neighborhoods; and
- A means of combining sales data by consolidating neighborhoods when necessary.

A neighborhood should contain a sufficient number of accounts so adequate sales samples may be gathered.

Studies are conducted and compiled by neighborhood to establish the basis for:

- Land values;
- Improvement values; and
- Market adjustments.

The supervising appraiser should oversee the development of neighborhood identifiers and appropriate neighborhood studies.

Collection, confirmation, and organization of sales data

Once the reappraisal area has been identified, the collection of sales data begins. Obtain a listing of property sales from the data analyst. Sales that have occurred during the previous 12 months usually are sufficient to provide the necessary data for appraisal analysis. In some areas, you might need to use sales from the previous two or three years, adjusted for time. The data analyst should be able to provide a list of properties that have sold and resold. Analyze these properties to obtain a time adjustment. Apply it to property sales to provide a uniform basis from which to adjust for different property characteristics.

All vacant land sales should be confirmed to determine whether the sale is an arm's-length transaction, and if all value considerations have been reported in the sales price. Verification should be made with one of the principals of the sale (the buyer or the seller) or the real estate agent. It is essential to know the condition of the property at the time of the sale. Collect rental information (if any) to develop gross monthly rent multipliers. Record sales on appraisal maps and analysis spreadsheets.

A field inspection of sold properties is mandatory to check amenities or potential adjustments to the land value. These include view, location, size, shape, access, topography, ocean, river, creek, and timber. Note all these items on the confirmation sheet for later analysis. These sales will be compared with the base unit to develop adjustment(s) through matched pair analysis.

Any farm crops, Christmas trees, and timber included in the sales price need to be valued and deducted from the sale for a bare land value indication.

To verify sales information:

- Confirm the sales price;
- Determine if the sale was an arm's-length transaction;
- Identify the date of sale or the date the price was agreed upon;
- Confirm the terms of the sale;
- Determine if the buyers and sellers are knowledgeable about the market;
- Ask the buyers if they knew of any problems with the property;
- Inquire if any additions or improvements were made to the property after the sale; and
- Inspect the property.

After all the sales data has been collected, organize the data into a usable format. Use a standard spreadsheet format to analyze the following for any effects on value: location, access, topography, size, view, and other characteristics. The Cycle 5 Land Sales spreadsheet shown on the following page is one way to organize data.

Cycle 5 Land Sales

SALE #	MAP & TAX LOT	SALE DATE	SALE PRICE	TIME TREND	TIME TRENDED SALE PRICE	LOT SIZE	VIEW	STREET COVER	LOCATION
1	5S 15E 24AA 2200	8-06-01	$31,250	1.11	$34,690	STANDARD	YES	PAVED	AVERAGE
2	5S 15E 24AA 5500	4-09-02	$29,500	1.03	$30,390	STANDARD	NO	PAVED	AVERAGE
3	5S 15E 24AA 5700	9-01-01	$25,500	1.10	$28,050	STANDARD	NO	PAVED	AVERAGE
4	5S 15E 24AA 7800	3-05-02	$33,900	1.04	$35,260	STANDARD	YES	PAVED	AVERAGE
5	5S 15E 24AA 15030	12-09-01	$32,600	1.07	$34,880	STANDARD	YES	PAVED	AVERAGE
6	5S 15E 24AB 2600	4-06-02	$27,250	1.03	$28,070	STANDARD	NO	GRAVEL	AVERAGE
7	5S 15E 24AB 6500	11-10-01	$32,800	1.08	$35,420	STANDARD	YES	PAVED	AVERAGE
8	5S 15E 24AB 6700	6-03-02	$30,000	1.01	$30,300	STANDARD	NO	PAVED	AVERAGE
9	5S 15E 24AB 10200	3-08-02	$31,750	1.04	$33,020	STANDARD	YES	GRAVEL	AVERAGE
10	5S 15E 24AD 1100	11-06-01	$27,750	1.08	$29,970	STANDARD	NO	PAVED	AVERAGE
11	5S 15E 24AD 2200	12-10-01	$26,000	1.07	$27,820	STANDARD	NO	GRAVEL	AVERAGE
12	5S 15E 24AD 6200	12-11-01	$30,700	1.07	$32,850	STANDARD	NO	PAVED	SUPERIOR
13	5S 15E 24AD 7700	3-01-02	$34,000	1.04	$35,360	STANDARD	YES	GRAVEL	SUPERIOR
14	5S 15E 24BA 100	5-05-02	$34,250	1.02	$34,940	STANDARD	YES	PAVED	AVERAGE
15	5S 15E 24BA 1200	8-07-01	$29,950	1.11	$33,240	STANDARD	YES	GRAVEL	AVERAGE
16	5S 15E 24BA 4300	5-10-02	$29,000	1.02	$29,580	STANDARD	NO	PAVED	AVERAGE
17	5S 16E 19BB 900	4-01-02	$27,000	1.03	$27,810	STANDARD	NO	GRAVEL	AVERAGE
18	5S 16E 19BC 1800	1-03-02	$28,750	1.06	$30,480	STANDARD	NO	GRAVEL	SUPERIOR
19	5S 16E 19BC 2900	11-13-01	$30,000	1.08	$32,400	STANDARD	NO	PAVED	SUPERIOR
20	5S 16E 19BC 3200	3-10-02	$36,250	1.04	$37,700	STANDARD	YES	PAVED	SUPERIOR

Units of comparison

Before any valuation technique is applied, consider the units of comparison that each employs. Units of comparison are units of value measurement that are recognized by the market. The following units of comparison are typically found in the market:

- **Front foot**—The market recognizes the front footage of a property as contributing to value. Front footage is often useful in valuing downtown commercial, oceanfront, lakefront, or deep water port industrial property.
- **Square foot**—Square footage is used for properties that sell for an average price per square foot. This method is generally used to value residential, commercial, and small industrial sites.
- **Acreage**—The market often measures the value of rural and farm properties, shopping centers, and large industrial sites on a per acre basis.
- **Site**—When the market doesn't recognize a significant difference in lot value when there is a difference in size, the unit of comparison becomes a per-site basis. Most residential lots are bought and sold in this manner.
- **Per unit or space**—Multi-family sites are often sold based on a potential per apartment unit basis. Verify the number of units allowed by zoning. Value the land by the highest number of units feasible. The number of existing units may not represent highest and best use. This same caution applies to storage units, manufactured home spaces, and moorage slips.

Establish base lot

Select a standard or typical parcel from the neighborhood to serve as the base lot. The base lot doesn't have to be a sale property, but should possess characteristics common to the majority of properties within the neighborhood. The preferred method of valuing the selected base lot is the sales comparison approach. This method uses sales of comparable properties that are analyzed, compared, and adjusted to the subject to provide an estimate of value. (This method is discussed in Chapter 6.)

For discussion purposes, the following base lot was chosen:

Map and taxlot	5S 15E 24AB 14900
Sale date	Not a sale property
Size	6,500 square feet
View	None
Street	Paved with sidewalks
Location	Average

From the Cycle 5 land sales spreadsheet you observe that sales numbers 2, 3, 8, 10, and 16 are almost identical to the base lot. Because these five sales are similar to the base lot, no adjustments are necessary.

The data analyst has established from repeat sales that the market in the subject's neighborhood is increasing at a rate of 1 percent per month. Now a per-site sales comparison grid can be developed to determine the base lot value.

Note: To help illustrate time trending mechanics, this step is included in the base lot grid (see below).

Base Lot Sales Grid

APPRAISER: _____ DATE: _____

SALE #	DESCRIPTION/LOCATION	SALE DATE	SALE PRICE	TREND	TIME TRENDED SALE PRICE
2	5S 15E 24AA 5500	4-09-02	$29,500	1.03	$30,390
3	5S 15E 24AA 5700	9-01-01	$25,500	1.10	$28,050
8	5S 15E 24AB 6700	6-03-02	$30,000	1.01	$30,300
10	5S 15E 24AD 1100	11-06-01	$27,750	1.08	$29,970
16	5S 15E 24BA 4300	5-10-02	$29,000	1.02	$29,580

Mean: $29, 658 Median: $29,970

Conclusion: Place more weight on the three most recent sales (2,8,16).

Conclude base lot value of $30,000. The mean and median support this conclusion.

On-site development (OSD)

The value of the OSD may be higher or lower than the total cost of its components and is determined by the contribution of the OSD to the total market value of the real property.

Cost and market data are gathered for all the components of OSD. Values for wells and septics can generally be developed by analyzing recent market information. Some counties have a separate line item for landscaping values and others merge it into the overall OSD value. Different ratings of fair, average, good, and excellent for OSD or landscaping should be benchmarked with a colored photograph and narrative description.

Two methods for estimating the value of OSD are the cost and sales comparison approaches.

Cost approach to OSD value

The cost approach uses actual costs for estimating OSD suitable to support an improvement. These costs are added to the value of the land to provide an estimate of value for the homesite.

This approach requires extensive cost data gathering. Contractors and property owners are contacted to provide actual costs of developing homesites. Major items of cost are:

Site preparation	Landscaping
Water supply	Permits and inspection
Sanitary waste disposal	Insurance
Utility services	Management and profit
Gravel driveways	

Costs involved in estimating OSD can be obtained from utility companies and the contractors working in the area who perform the various types of work involved. Keep a list of these contractors in a file so they can be contacted yearly to update the cost data.

All costs of developing a homesite must be included in the valuation study. Inaccurate estimates of homesite development value will result in an incorrect land value. These incorrect values will be carried forward and distort improvement value residuals for the benchmarks and create inaccurate conclusions on building depreciation.

Example: Summary of site development cost

Well:			
Well depth	100 feet		
Casing depth	50 feet		
Lining depth	50 feet		
Drilling cost per foot	$10.50		
Casing cost per foot	$8.00	Typical market price	$1,725
Lining cost per foot	$5.50		
Support system:	Submersible pump, pressure tank, pipe valves, and electricity		$1,800
Septic systems:			
Standard	$3,000–$4,500		
Sand filter	$9,500–$12,500	Typical market price	$3,500
All other	$2,500–$3,500		
Electricity:			
Standard 500 feet	Free		
More than 500 feet	$5.00 l/f		
Telephone:			
Standard 500 feet	Free		
More than 500 feet	$1.00 l/f		
Excavation:			
Dwelling			
Foundation, backfill, and finish grade		Typical market price	$1,750
Drive or roadway (standard 500 feet)			
Grading	$700–$950		
Base rock	$800–$1,050	Typical market price	$2,400
Finish rock	$600–$850		
		Indicated total (rounded)	**$11,200**

Landscaping: Typically, there is a schedule of landscaping costs for the appraisal staff to use that includes such items as lawn, plantings, bark mulch, and irrigation systems.

Sales comparison approach to OSD value

The sales comparison approach uses sales of improved properties to derive indications of OSD values. This analysis involves deducting the depreciated replacement cost of improvements from the sale price of the property to obtain a land residual. From this residual the base land value is subtracted. The result is the indicated OSD value extracted from the market.

Sale price	$ 175,000
Depreciated replacement cost of improvements	– $ 98,000
Residual to land	$ 77,000
Indicated site value from benchmarks	– $ 55,000
Residual on-site development value	$ 22,000

The sales comparison approach is the preferred method of developing OSD increments. When there is considerable new construction, the cost method of developing OSD value increments is also reliable. Using the available sales, typical OSD value increments can be developed which represent a range of quantity and quality, such as fair, average, good, and excellent.

Example of OSD rating definitions and value increments

Fair ($10,000): Fair OSD consists of excavation, backfill, finish grade, septic and water system, very limited road development or none, no landscaping.

Average ($14,000): Average OSD consists of excavation, backfill, finish grade, septic and water system, average road development, average landscaping.

Good ($18,000): Good OSD consists of excavation, backfill, finish grade, septic and water system, good road development, good landscaping (professionally designed with ornamental plants).

Excellent ($30,000): Excellent OSD consists of excavation, backfill, finish grade, septic and water system, good road development, extensive landscaping (professionally designed with ornamental plants, water features, and extensive use of stone and rock).

Base lot description

Once the base land unit value is determined, summarize the information into a usable format. Following is an example of a base lot description.

Example: Base lot description

Neighborhood:	Clapton Hts.
Base lot value:	$30,000
Lot size range:	3,800 ÷ 6000 square feet
Average size lot:	5,000 square feet
Typical improvement description:	Single-story cottage or two-story craftsman
Average improvement age:	50 to 60 years
Average improvement property value range:	$60,000 to $70,000
Topography:	Level
Shape:	Rectangular
View:	None
Zoning:	Single-family residential

Supporting market data:

Location	Sale date	Sale price	Area
Gordon Pl.	04/02	$30,000	5,000 sq. ft.
Windsor Hts.	07/01	31,000	5,000 sq. ft.
Lexington Hts.	08/01	30,000	5,000 sq. ft.
Terrace Pk.	01/02	30,500	5,000 sq. ft.

Developing adjustments

Since no two parcels of land are identical, it is likely that adjustments will have to be made when valuing other properties. Typical adjustments to land are size, view, location, shape, topography, and access. Always develop the most supportable adjustment first, the next most supportable second, etc.

Develop the adjustments through careful market analysis. One common method is matched pairs. Matched pair analysis requires that sales are similar in all but one characteristic. For example, two very similar lots in the same neighborhood sell—one with a view and one without a view. The dollar difference between these two sales is considered as one market indication for view. Since one sale doesn't make a market, it requires a succession of these matched pairs to validate a view adjustment.

An extension of the matched pair concept is to compare a sales grid to the base lot. For example, 10 sales from the Cycle 5 Land Sales spreadsheet differ from the base lot in only one aspect. Two sales differ due to location (12 and 19), three sales differ due to street type (6, 11, and 17), and five sales differ due to view (1, 4, 5, 7, and 14). In this case, due to the number of sales, view is the most supportable adjustment and should be determined first. Remember, always determine the most supportable adjustment first. The techniques outlined here apply to urban and rural land.

From the Cycle 5 Land Sales spreadsheet, the following view adjustment grid can be developed.

View Adjustment Grid

APPRAISER: _____ DATE: _____

SALE #	DESCRIPTION/LOCATION	SALE DATE	TIME TRENDED SALE PRICE	LESS BASE LOT VALUE	INDICATED LUMP SUM ADJUSTMENT
BASE LOT	5S 15E 24AB 14900			$30,000	
1	5S 15E 24AA 2200	8-06-01	$34,690	$30,000	$ 4,690
4	5S 15E 24AA 7800	3-05-02	$35,260	$30,000	$ 5,260
5	5S 15E 24AA 15030	12-09-01	$34,880	$30,000	$ 4,880
7	5S 15E 24AB 6500	11-10-01	$35,420	$30,000	$ 5,420
14	5S 15E 24BA 100	5-05-02	$34,940	$30,000	$ 4,940

Mean: $5,038 Median: $4,940

CONCLUSION: Considering all five sales, the mean and the median indicators, a view adjustment of $5,000 is concluded.

After a value for view has been developed, move on to the next adjustment. Three of the remaining 10 sales differ from the base lot by street cover. Two sales differ by street cover and view. Since a view adjustment has been established, the five sales (6, 9, 11, 15, and 17) can be used to determine if an adjustment for gravel street cover is warranted.

The following is a sales grid to determine the affect that gravel streets have on property values.

Gravel Street Adjustment Grid

APPRAISER: _____ DATE: _____

SALE #	DESCRIPTION/LOCATION	SALE DATE	TIME TRENDED SALE PRICE	VIEW ADJUST	ADJUSTED SALE PRICE	LESS BASE LOT VALUE	INDICATED ADJUSTMENT
BASE LOT	5S 15E 24AB 14900					$30,000	
6	5S 15E 24AB 2600	4-06-02	$28,070		$28,070	$30,000	$ 1,930
9	5S 15E 24AB 10200	3-08-02	$33,020	-$5,000	$28,020	$30,000	$ 1,980
11	5S 15E 24AD 2200	12-10-01	$27,820		$27,820	$30,000	$ 2,180
15	5S 15E 24BA 1200	8-07-01	$33,240	-$5,000	$28,240	$30,000	$ 1,760
17	5S 16E 19BB 900	4-01-02	$27,810		$27,810	$30,000	$ 2,190

Mean: $2,008 Median: $1,980

CONCLUSION: Placed more weight on the three most recent sales (# 6, 9, 17).
Conclude gravel street adjustment to be a negative $2,000.
The mean and median support this conclusion.

Adjustments have been developed for view and gravel street. Sales 12, 13, 18, 19, and 20 differ only in location. From these sales we can determine if an adjustment for superior location is warranted.

Superior Location Adjustment Grid

(Maps 5S 15E 24AD and 5S 16E 19BB)

APPRAISER: _____ DATE: _____

SALE #	DESCRIPTION/LOCATION	SALE DATE	TIME TRENDED SALE PRICE	VIEW ADJUST	GRAVEL STREET ADJUST	ADJUSTED SALE PRICE	LESS BASE LOT VALUE	INDICATED ADJUSTMENT
BASE LOT	5S 15E 24AB 14900						$30,000	
12	5S 15E 24AD 6200	12-11-01	$32,850			$32,850	$30,000	$ 2,850
13	5S 15E 24AD 7700	3-01-02	$35,360	- $5,000	+$2,000	$32,360	$30,000	$ 2,360
18	5S 16E 19BC 1800	1-03-02	$30,480		+$2,000	$32,480	$30,000	$ 2,480
19	5S 16E 19BC 2900	11-13-01	$32,400			$32,400	$30,000	$ 2,400
20	5S 16E 19BC 3200	3-10-02	$37,700	-$5,000		$32,700	$30,000	$ 2,700

Mean: $2,558 Median: $2,480

CONCLUSION: Placed equal weight on all sales.
Considered the mean and median.
Conclude an adjustment of $2,500 for superior location.

As you can see from the previous grids, successive adjustments can depend on established adjustments. Remember to document all adjustments and costs.

The previous examples used lump-sum dollar adjustments. You can develop or apply adjustments three ways:

1. Add and subtract dollar amounts; or
2. Add and subtract percentages; or
3. Multiply percentages.

Each method will have similar results assuming they are applied in the same manner in which they were developed.

Neighborhood land schedule

After all adjustments and costs have been developed, compile a neighborhood land schedule.

Example: Neighborhood 660—Neighborhood base land value: $30,000

Size

Size	Adjustment
3,800–4,299 SF	–$1,400
4,300–4,799 SF	–700
4,800–5,199 SF	Base
5,200–5,599 SF	+400
5,600–6,099 SF	+800
6,100–6,699 SF	+1,300
6,700–7,799 SF	+2,100
7,800–8,999 SF	+3,000
9,000–9,999 SF	+3,400

Adjustments

Type	Adjustment
Gravel street	–$2,000
OSD fair	+$2,000
OSD average	+4,000
OSD good	+6,000
Fair view	+3,000
Average view	+5,000
Good view	+7,000
Superior location	+2,500

Valuation of rural tract land

The techniques for appraising suburban and rural tract lands are similar to those used for appraising urban land. The appraisal of tract land can include suburban properties located adjacent or near city limits, residential tracts, farm properties, forest properties, and recreational properties. Generally, these lands are acreage parcels of varying size, located outside the incorporated municipal city limits.

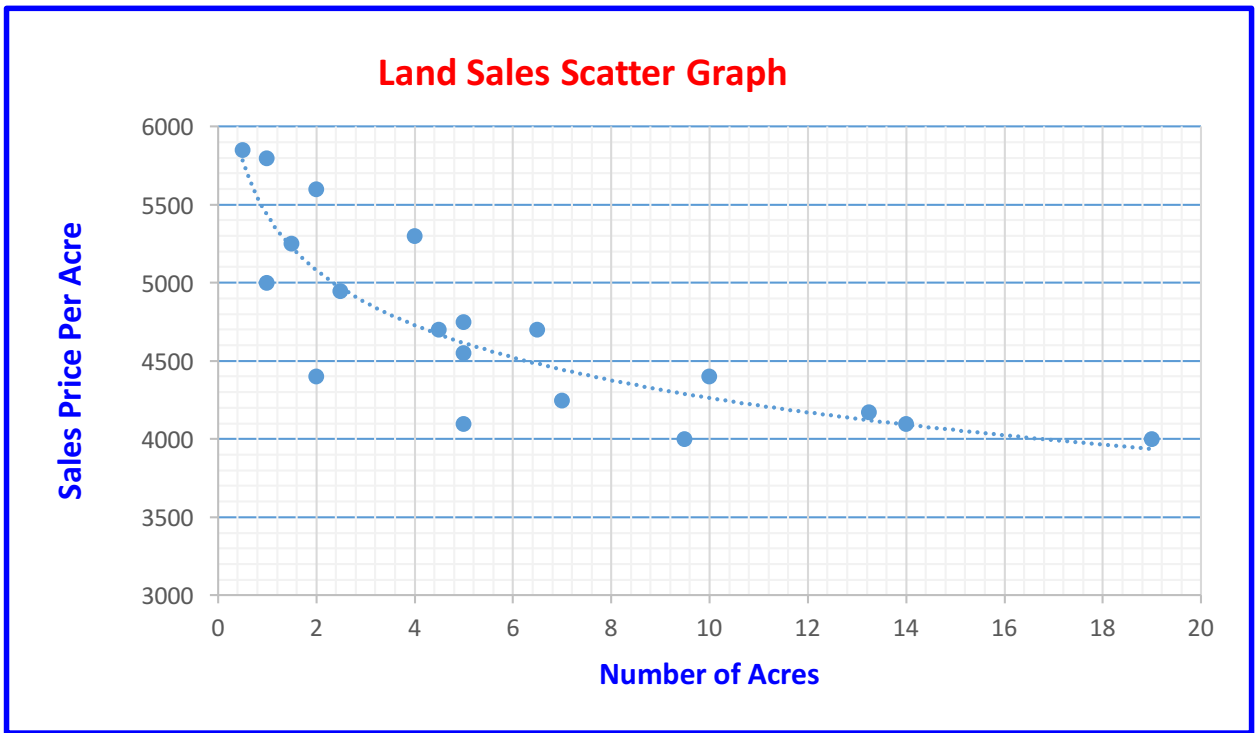
After field inspection and confirmation of the rural land sales, a spreadsheet analysis is necessary to develop a base land value. At this time, neighborhood or location adjustments should be identified. Rural land must be valued by the average price per acre based on the size of the parcel (OAR 150–308-0240). Adjustments to value shall be made to those acres having more or less utility. Accordingly, vacant rural land sales need to be analyzed on a per-acre basis.

Sales analysis and selection of base unit values are more complex because of motivations of the purchasers, changing land use planning controls, and variety of sizes and types of parcels.

Size adjustment

When all other amenities are equal, rural tract land parcels generally sell at a price per acre that varies depending on size. For example, a 3-acre parcel may sell for $14,900 or $4,967 per acre, while an adjoining 10-acre parcel may sell for $42,000 or $4,200 per acre.

Whatever valuation technique is used, resulting values should be plotted on a scatter graph and a land value curve developed. The graph will illustrate the variations in value per acre due to differences in parcel size. Regression analysis will provide a curve with greater accuracy.



Plot sales on the graph by price per acre of vacant land. If improved sales are used, value of all improvements, including OSD, must be extracted from the sale.

Draw a curve through the plotted points to represent the average price per acre based on the land size. Generally, the curve includes all rural land sizes found to be typical in the appraisal area.

An acreage schedule is developed from the scatter graph curve. Make sure uniformity and equity is present in the final acre values. Test the schedule for uniformity of values according to the size of the parcel. This analysis is used to spot any inequities or flaws in the proposed schedule.

Example: Rural Land Schedule

Acres	Price/Acre
1	5,400
2	5,100
3	4,900
4	4,750
5	4,650
6	4,550
7	4,450
8	4,400
9	4,350
10	4,300
11	4,250
12	4,150
13	4,100
14	4,100
15	4,050
16–20	4,000

Next, select a base unit value (base acre value) based on the typical parcel size in the area. Minimum lot size, as dictated by zoning, can be used as the base acre size.

Before developing the size modifier, establish the size range for rural tracts. Ranges may vary from area to area, depending on local conditions. As urban boundaries expand, land use characteristics range between those of urban and rural lands. Valuation impacts can be estimated by careful market analysis.

Once you have determined size ranges, compute size modifiers using the relationship between base acre value and values for each size above or below the base.

In the following example, the base acre value selected as typical is five:

Example: Size modifier

Value at X acres divided by base acre value = size modifier.		
Acre	**$ per acre**	**Size modifier**
1	$5,400 ÷ $4,650	1.16
2	$5,100 ÷ $4,650	1.10
5 (Base)	$4,650 ÷ $4,650	1.00
7	$4,450 ÷ $4,650	0.96
10	$4,300 ÷ $4,650	0.92
15	$4,050 ÷ $4,650	0.87
16–20	$4,000 ÷ $4,650	0.86

After developing the rural land schedule, select primary benchmarks. Appraise the sales used in the rural land study and apply the acreage values from the rural land schedule. Make a ratio comparison between the new appraised value and the sales price.

New appraised value ÷ Sale price = Ratio

These ratios will be the tools to select rural tract benchmarks. For example, you may select a range of ratios between 95 and 105 to be the best benchmarks. Those ratios falling outside this range should be kept as supplemental benchmark information. It is possible that these supplemental benchmarks can be used for atypical or unusual properties.

Write a narrative description of the amenities and characteristics found in the benchmark properties. The benchmark properties will serve as standards when appraising rural land.

The base value is for vacant land. Any improved parcel would have the value of OSD added as a lump sum.

If there are inadequate vacant rural land sales to develop a land schedule, use the sales of improved properties as a supplement. The improvement values and OSD are subtracted from the sale prices, resulting in residual land values. Analyze and plot the sales on a scatter graph according to the size of the parcels.

Other factors

Plotting sales on a graph will help identify other factors that may affect value such as view, location, access, zoning, and topography. For example, one sale property may be fairly typical with the exception of an excellent view. Another sale property may have a topography or access problem. The indicated price per acre differences for properties with special features or problems will be a guide to adjustments to use on properties with similar conditions.

Land values in areas of limited sales

In areas where there are too few land sales to develop reliable base units and adjustments through usual procedures, other methods must be considered. To be viable, any method for developing land values must use sufficient information to produce the same level of confidence that a potential buyer would require before making their own informed purchase decisions. Though limited sales create special challenges for an appraiser, several methods are available that can produce satisfactory results. The following discussion is a review of these procedures.

- **Expand the sample of sales by extending it historically.** Analyze those sales that would ordinarily be considered too old to be useful value indicators in a more active market. Sales used in the last reappraisal area, or even during the last reappraisal of the assigned area, should be evaluated for use in the current reappraisal. Regardless of whether the level of unit values turns out to be reliable, the level of adjustments assigned for variations from the base unit may still remain valid.
- **Review historic ratio studies from the area to provide additional support for examining older sales.** If few or no time adjustments have been warranted for the properties in the area for the past number of years, sales that occurred during this period may provide useful information about current land values. Additionally, any value trend adjustments that have been applied to the properties in the appraisal area will give you a general idea of the direction and magnitude of value changes.
- **Expand the sample of sales by extending geographically.** The same rationale that justifies a reexamination of older sales also justifies looking at neighboring communities and even into adjacent counties for sale information.

To support your study, other sources could provide information that affects the highest and best use analysis and the final value conclusion for the land appraised. Compare your study with the following information from other areas:

Rent levels;
Traffic counts;
    Vehicular counts and
    Pedestrian counts.
Area demographic studies;
Chamber of Commerce information; and
Area analyses found in current fee appraisals.

- **Review land sales that were rejected in the ratio studies.** Sales involving religious, charitable, or governmental agencies as grantor or grantee are routinely rejected for use in ratio studies. Frequently, such organizations' involvement in real estate sales lacks typical motivation, so the sale isn't considered a normal, arm's-length transaction. However, additional verification may reveal individual sales appropriate for consideration in developing land values. Sales between business associates, sales from financial institutions that gained title to the property through foreclosure, and sales with no dollar consideration stated on the deed could prove valuable with additional verification of their terms and conditions. Even though these sales may be considered tainted for use in a ratio study, they may still be helpful in developing land value conclusions.
- **Survey property value experts who are familiar with the reappraisal area.** These experts might include brokers, bankers, property managers, fee appraisers, and appraisers with other governmental agencies. Talk to owners and lessees about land values while making physical inspections. Don't be afraid to be inquisitive. You may find out about pending sales that are not yet public record. Maintain a current listing file with a brief analysis of their implied unit value, including differences in price due to amenities and location. Investigate rumors, sales that failed in escrow, and refused offers. Consider anything that will give you evidence of land value.

Developing and maintaining discussions with other area real estate experts draws from the collective wisdom of the entire community. This lends support to your final land value conclusions and brings others into an active role in their development. After you have completed your land study, review your conclusions with the experts who were contacted while developing the study. This lends additional support to your conclusions and offers a check on their reasonableness.

- **Use strip maps to plot the land sales and facts affecting value.** If you are appraising an area where sales activity has been sporadic, a strip map can be very helpful in displaying the big picture. Even when there have been no sales, a strip map can help you form reasonable judgments about the physical boundaries of various levels of land value. Mark the map with anything believed to affect property value within its boundaries. These might include:
  - Zone boundaries:
    Commercial,
    Industrial,
    High-density residential, or
    Low-density residential;
  - Traffic flow patterns:
    Major arterials,
    Feeder streets,
    Direction of traffic,
    Number of lanes,
    Location of street lights;
  - Patterns of land use:
    Core business area,
    Retail strip areas,
    Industrial uses,
    Residential (bedroom) areas,
    New development,
    Areas of stagnation or decline,
    Extent and type of utilities;
  - Listings:
    Bare land/improved;
  - Rent levels:
    Along a major street,
    Within the boundaries of various land uses,
    Compared with one block back;
  - Tentative boundaries for base land values.

On a map, note the various factors that affect land value. Reasonable boundaries for land value estimates frequently suggest themselves. After making tentative assignments for these and ensuring that they "feather out" in a reasonable way into the surrounding neighborhoods, field review your conclusions

and discuss them with other real estate professionals in the area. Reviewing value assignments this way provides corroboration and another check against overlooking important elements that affect value.

- **Find and analyze land leases.** Land leases can be converted into a unit of comparison by capitalizing the annual rent with an appropriate rate. Land leases are most frequently negotiated on a net lease basis, so that gross income is also net income. All that is needed to convert the rent into a land value indication is an appropriate overall land capitalization rate. Land is treated as a non-depreciating property, so no recapture increment is needed in the overall rate. Further, since the rent will likely be on a net basis, the lessee will likely also be paying the property taxes. Therefore, an appropriate overall rate to apply to the rent will be the same as the discount rate displayed by sold properties under comparable use. Ideally, these come directly from leased land that has sold. Since few such transactions are generally available for analysis, sales of improved properties can be used to provide a reasonable source of cap rates.

Example of a rented convenience store site:

Annual rent	$14,400 net (lessee pays taxes)
Land area	30,000 square feet
Effective tax rate	$15 per $1,000
From improved sale in comparable use:	
Overall cap rate	0.120
Building portion of value	75%
Remaining economic life	30 years

First, calculate the recapture rate (straight-line). Thirty years implies 1/30th of the building value is recaptured annually. Expressed as a decimal, 1/30th equals 0.0333. Since 75 percent of the property value is in the improvements, the weighted recapture rate in the overall rate is 0.0333 × 0.75, or, 0.0250. Now you can derive the land capitalization rate and convert the income into a land value estimate.

Overall cap rate	0.120
Less weighted recapture	– 0.025
Less effective tax rate	– 0.015
Land cap rate	0.080

Net land income divided by land cap rate equals value:

$14,400 ÷ 0.080 = $180,000

This implies a unit value of:

$180,000 ÷ 30,000 sq. ft. = $6.00 per sq. ft.

The analysis produces a value indicator of $6 per square foot for land in the area of the leased convenience store.

- **Use land residuals from improved sales.** Follow the procedure as outlined on page 3 of this chapter or in Chapter 6, "Income Approach."
- **Use the allocation method to estimate land value.** Follow the procedure as outlined on page 2 of this chapter.

Chapter 9

Mass Appraisal of Residential Properties

This chapter provides an overview of the residential mass appraisal technique called the market-related cost approach. The market-related cost approach is a blend of the cost and direct sales comparison approaches to value.

The same principles followed in an individual appraisal are used in mass appraising, although their application may differ slightly. Appraisals made on an individual basis generally involve direct comparison between sales and subject. In mass appraisal, a large volume of data, including sales, income, expenses and construction costs, is processed. This data is developed into base unit values for each property type within an appraisal area. When the base unit is applied to a specific property and appropriately adjusted, mass appraisal takes on the nature of direct comparison. The advantage of using a mass appraisal system is that it creates accurate value estimates quickly at relatively low cost. Furthermore, only a mass appraisal system can address the question of uniformity and equity in assessments.

The steps in this chapter discuss the valuation of single-family improvements. However, they apply to all property types.

Basic costing procedures

The basic costing procedure of the market-related cost approach is the same as the standard cost approach, and is a process of:

- Inspecting the property;
- Properly classifying the property; and
- Applying the appropriate cost factor.

Inspecting the property

Inspecting the property should include the following steps:

- **Review appraisal card.** Receive and review an improvement appraisal card to check the accuracy of the account number, map number, and the tax code. The address and physical location of the property must also be matched to the field map.
- **Interior inspection and inventory.** Interview the owner if possible for property information, history, and sales information. During the interior inspection, note room inventory, layout, functional utility, and quality of materials and construction, as well as any deferred maintenance. Always record these features on the appraisal card.
- **Exterior inspection and inventory.** During the inspection of the exterior, note the quality of materials and workmanship, basic design of the house, and any items relating to its physical condition.
- **Measure residential improvement and plot diagram.** Measure the residential improvement, all outbuildings, and yard improvements such as driveways and retaining walls. Plot these measurements on a permanent diagram card, keeping the outbuildings and yard improvements in proper relationship to the residential improvement on the permanent diagram card.
- **Balance measurements.** To avoid unnecessary return trips to the property, all measurements should be balanced on the diagram card to be sure the diagram will close. Recheck notations of construction features.

Classification

After the residential improvement has been inspected, determine the proper quality class of the improvement.

The basis for residential improvement classification in the market-related cost approach is the publication, *Cost Factors for Residential Buildings*, 150-303-419, and quality class benchmarks developed for your area. The cost factor book is divided into eight quality levels (classes) of construction. (Refer to this book for base specifications and descriptions of each class.)

The class of a residential improvement is determined by comparing its construction quality (materials and workmanship) with the base specifications found in the cost factor book. For example, the base specifications call for fair quality in a class 4 house, while a class 5 house is specified to be average quality.

However, not all houses fall distinctly within a class. A house with predominantly class 5 average quality materials and workmanship, yet with a number of class 4 fair quality features, would be a class 5 minus house. A house with predominantly class 4 fair quality features and a number of class 5 average quality features would be a class 4 plus. These features include such things as cabinets, carpeting, windows, plumbing fixtures, light fixtures, and exterior covering.

To help class the house and maintain uniformity with other staff appraisers, compare the subject to benchmarked homes in your classification benchmark books. (The development of the classification benchmark books is discussed later in this chapter.)

The following three pages, taken from the *2005 Cost Factors for Residential Buildings,* show the class features, base specifications, and the cost factor tables for a class 5 house.

Conventional

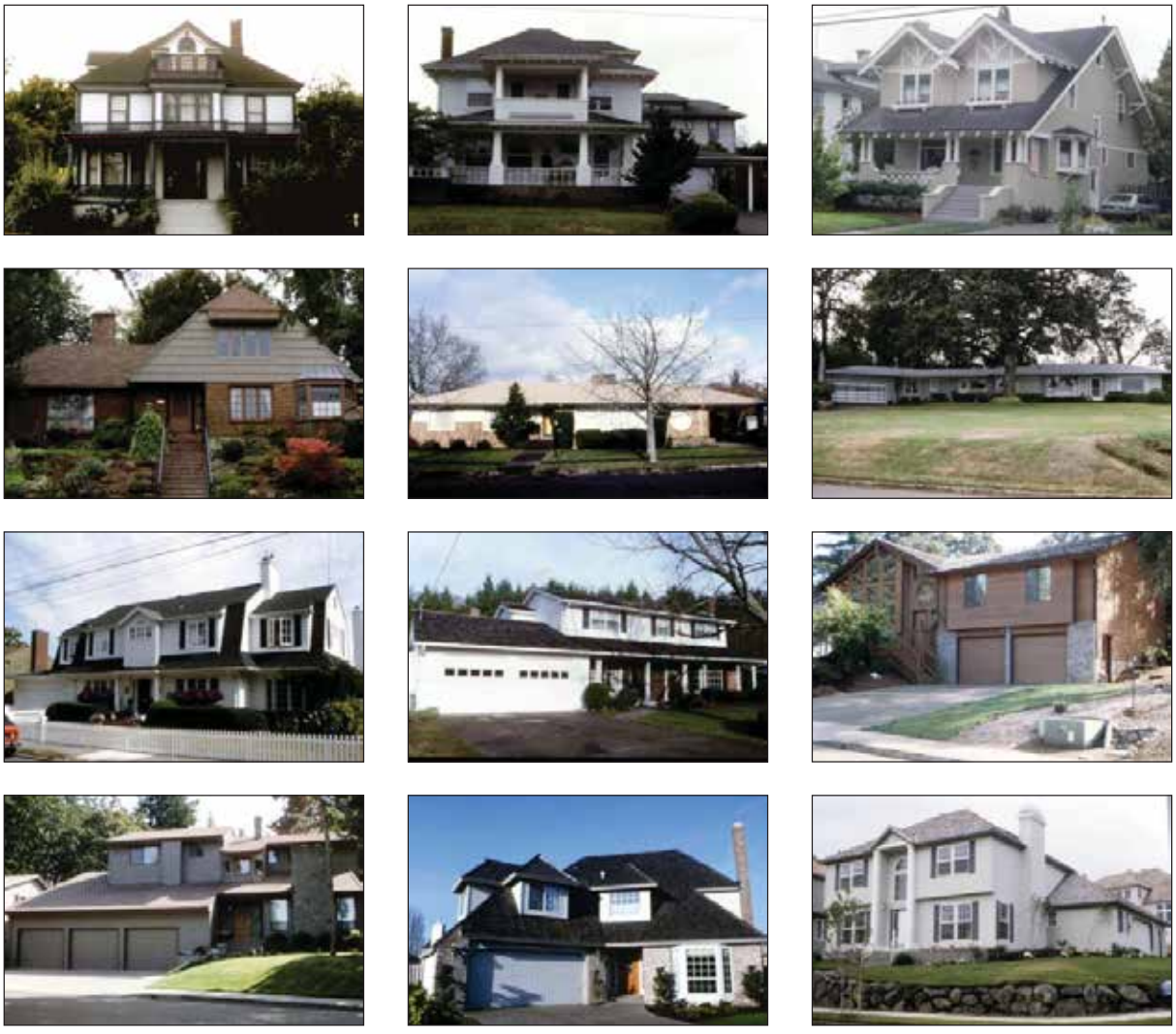
Class 5

Class features

Class 5 represents average quality homes built for speculation or on order by a volume builder. They reflect popular combinations of style, design, and functional utility with a convenient floor plan and are acceptable to a broad portion of the market.

These homes may have exterior ornamentation such as brick veneer, railings, or cornice trim. They have a larger, often multi-storied entry area with some type of outside window area to give a more expansive feeling. Typically, windows are large and numerous, and accent windows are common. Bathroom fixtures are average quality with entry-level designer faucets. Built-in appliances are average-quality and often include separate ovens and cook tops. Interior features may include some average quality hardwood paneling, or painted or stained wainscoting.

Class Illustrations



Conventional

Class 5 (cont.)

Item	Base specifications
Foundation	Crawl space excavation; spread footing; continuous concrete or masonry perimeter wall; interior piers; vent openings; access opening; backfill and grading.
Exterior wall	Stud frame construction; insulation; sheathing and average quality painted siding or equivalent construction; average quality exterior doors and windows; may have optional items such as masonry trim, windows boxes, shutters, etc.
Roof	Moderate to complex design; wood frame construction; ceiling joists; average quality solid or spread sheathing; light weight architectural composition shingle cover; ceiling insulation; gutters and downspouts; moderate attention to roof trim.
Floor	Wood frame construction with underpinning, subflooring and underlayment; average quality hardwood flooring and finish or carpet and padding; average quality resilient cover or tile in appropriate areas.
Partitions	Wood frame construction; average quality textured plaster or drywall with painted surfaces, wallpaper, veneer paneling or wainscoting; similar material for ceiling cover and interior cover of exterior wall; average quality doors, hardware and trim; painted or stained average quality softwood millwork.
Interior components	Cabinet quantity is proportionate to overall house size; cabinets of average quality plywood with hardwood veneer, stained or painted, or hardboard with painted finish; average quality laminate or tile countertops and backsplash; wardrobe, linen, and utility closets with shelving; average quality hardware; moderate width stairway of single or double angles with landings, hardwood rail with painted softwood spindles, and average quality carpet or hardwood tread cover.
Electrical	Entry service; multi-circuit panel; non metallic sheathed cable wiring; adequate number of convenience outlets; average quality light fixtures; range and dryer outlets; may have special appliance and equipment outlets.
Plumbing	Rough-in plumbing costs only.
Heating-Cooling	None in base specifications.
Exterior components	Average quality open front entry porch integrated with house design, adequate to cover entry area; concrete or wood steps and floor.

Conventional

Class 5 — Cost Factor Tables

One Story Base Factors

(Floor Area — Cost Per Sq. Ft.)

	800	900	1,000	1,100	1,200	1,300	1,400	1,500	1,600	1,700	1,800	1,900	2,000
0	128.13	120.64	114.65	109.74	105.65	102.20	99.23	96.66	94.42	92.43	90.67	89.09	87.67
10	127.30	119.98	114.11	109.30	105.28	101.88	98.96	96.43	94.21	92.25	90.50	88.94	87.54
20	126.49	119.34	113.59	108.87	104.92	101.57	98.69	96.19	94.00	92.06	90.34	88.80	87.41
30	125.69	118.71	113.07	108.44	104.56	101.26	98.42	95.96	93.80	91.88	90.18	88.65	87.27
40	124.92	118.09	112.57	108.02	104.20	100.96	98.16	95.73	93.59	91.70	90.02	88.51	87.14
50	124.16	117.48	112.08	107.61	103.86	100.66	97.90	95.50	93.39	91.53	89.86	88.36	87.01
60	123.43	116.89	111.59	107.20	103.51	100.37	97.65	95.28	93.20	91.35	89.70	88.22	86.89
70	122.71	116.31	111.12	106.81	103.18	100.08	97.40	95.06	93.00	91.18	89.55	88.08	86.76
80	122.00	115.75	110.65	106.42	102.84	99.79	97.15	94.84	92.81	91.01	89.39	87.94	86.64
90	121.31	115.19	110.19	106.03	102.52	99.51	96.90	94.63	92.62	90.84	89.24	87.81	86.51

	2,100	2,200	2,300	2,400	2,500	2,600	2,700	2,800	2,900	3,000
0	86.39	85.22	84.15	83.18	82.28	81.45	80.68	79.97	79.30	78.68
10	86.27	85.11	84.05	83.08	82.19	81.37	80.61	79.90	79.24	78.62
20	86.15	85.00	83.95	82.99	82.11	81.29	80.53	79.83	79.17	78.56
30	86.03	84.89	83.85	82.90	82.02	81.21	80.46	79.76	79.11	78.50
40	85.91	84.78	83.75	82.81	81.94	81.13	80.39	79.69	79.05	78.45
50	85.79	84.68	83.66	82.72	81.85	81.06	80.32	79.63	78.99	78.39
60	85.67	84.57	83.56	82.63	81.77	80.98	80.25	79.56	78.92	78.33
70	85.56	84.46	83.46	82.54	81.69	80.90	80.17	79.50	78.86	78.27
80	85.45	84.36	83.37	82.45	81.61	80.83	80.10	79.43	78.80	78.21
90	85.33	84.26	83.27	82.36	81.53	80.75	80.04	79.37	78.74	78.16

Second Floor Factors

(Floor Area — Cost Per Sq. Ft.)

	400	500	600	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500	1,600
0	88.74	81.14	76.07	72.45	69.74	67.62	65.93	64.55	63.40	62.43	61.59	60.87	60.23
10	87.81	80.54	75.65	72.14	69.50	67.44	65.78	64.43	63.30	62.34	61.51	60.80	60.17
20	86.93	79.97	75.25	71.85	69.27	67.26	65.64	64.31	63.19	62.25	61.44	60.73	60.12
30	86.09	79.42	74.86	71.56	69.05	67.08	65.49	64.18	63.09	62.16	61.36	60.67	60.06
40	85.28	78.89	74.49	71.28	68.83	66.90	65.35	64.07	62.99	62.08	61.29	60.60	60.00
50	84.52	78.37	74.12	71.00	68.62	66.73	65.21	63.95	62.89	61.99	61.22	60.54	59.94
60	83.78	77.88	73.77	70.74	68.41	66.57	65.07	63.84	62.80	61.91	61.14	60.48	59.89
70	83.08	77.40	73.42	70.48	68.21	66.40	64.94	63.72	62.70	61.83	61.07	60.41	59.83
80	82.41	76.94	73.09	70.22	68.01	66.24	64.81	63.61	62.61	61.75	61.00	60.35	59.78
90	81.76	76.50	72.76	69.98	67.81	66.09	64.68	63.51	62.52	61.67	60.93	60.29	59.73

	1,700	1,800	1,900	2,000
0	59.67	59.18	58.73	58.33
10	59.62	59.13	58.69	58.29
20	59.57	59.08	58.65	58.26
30	59.52	59.04	58.61	58.22
40	59.47	58.99	58.57	58.18

	1,700	1,800	1,900	2,000
50	59.42	58.95	58.53	58.15
60	59.37	58.90	58.49	58.11
70	59.32	58.86	58.45	58.07
80	59.27	58.82	58.41	58.04
90	59.22	58.77	58.37	58.00

Conventional

Class 5
Cost Factor Tables (cont.)

Basement Factors
(Floor Area — Cost Per Sq. Ft.)

	400	500	600	700	800	900	1,000	1,100	1,200	1,300	1,400
Unfinished	70.39	62.64	57.47	53.78	51.01	48.86	47.13	45.72	44.55	43.56	42.70
Low Cost	86.62	78.31	72.78	68.82	65.86	63.55	61.70	60.19	58.93	57.87	56.96
Finished	103.25	94.72	89.03	84.97	81.93	79.56	77.66	76.11	74.82	73.73	72.79

	1,500	1,600	1,700	1,800	1,900	2,000	2,100	2,200	2,300	2,400	2,500
Unfinished	41.97	41.32	40.75	40.24	39.79	39.38	39.01	38.68	38.37	38.09	37.83
Low Cost	56.16	55.47	54.86	54.32	53.83	53.40	53.00	52.64	52.31	52.01	51.73
Finished	71.98	71.27	70.64	70.08	69.59	69.14	68.73	68.36	68.02	67.72	67.43

Attic Factors
(Floor Area — Cost Per Sq. Ft.)

	200	300	400	500	600	700	800	900	1,000	1,100	1,200
Unfinished	72.47	54.79	45.95	40.64	37.10	34.58	32.68	31.21	30.03	29.07	28.26
Low Cost	87.47	69.34	60.27	54.83	51.20	48.61	46.67	45.16	43.95	42.96	42.14
Finished	102.18	84.14	75.12	69.71	66.10	63.52	61.59	60.09	58.88	57.90	57.08

Applying appropriate cost factors

Once the proper house classification has been established, the next step is to develop the replacement cost new. In the following example, a class 5 house is used.

Improvements description:

- The home being appraised is a two-level 2,812 square foot, class 5 house with attached double-car garage.
- The first floor is 1,602 square feet consisting of a living room, dining room, kitchen, breakfast nook, family room, half bath, utility room, and den.
- The second floor is 1,210 square feet consisting of three bedrooms and two baths.
- The garage is 484 square feet and partially covered by the second floor.
- Other improvements include a driveway, wood deck, and a lawn sprinkling system.

Following is an example of an appraisal documented on a paper card. Most counties have incorporated this documentation into their computer systems.

MAP NO. _____ **RESIDENTIAL APPRAISAL** ACCT. NO. _____

PHOTO NO. _____ CODE NO. _____ T. L. NO. _____

VALUE SUMMARY

DWELLING—DEPRECIATED REPLACEMENT COST $ 132670
GARAGE —DEPRECIATED REPLACEMENT COST $ 10470
OTHER IMPROVEMENTS D.R.C. $ 6830
TOTAL DEPRECIATED REPLACEMENT COST $ 149970
OVER/UNDER IMPROVEMENT _____ %
DISTRICT DEPRECIATION _____ %
TOTAL ECONOMIC ADJUSTMENT _____ % $ _____

RECORD OF LAST APPRAISAL ORS 308.234
APPR: ABC DATE 7-1-92 APPRAISED VALUE $ 149970
APPR: _____ DATE _____ APPRAISED VALUE $ _____
APPR: _____ DATE _____ APPRAISED VALUE $ _____

BUILT 19 89 COST $ _____ MO. RENTAL $ _____ SOLD 19 _____ AMOUNT $ _____ LIST PRICE $ _____
REMODELED 19 _____ COST $ _____ TERMS: W.D. CONT. TRADE DN. PMT. $ _____
INT. INSPECTED: (YES) NO (OWNER) TENANT OTHER

		SQ. FT. ITEMS +	SQ. FT. ITEMS —	LUMP SUMS +	LUMP SUMS —
CLASS R1 5 R2	CURVE A B C D E F				
STORIES 1 1½ (2)	BASE FACTOR $ 37.53				
	SHAPE FACTOR _____ %				
FOUNDATION	(CONC) BLK BRICK STONE FRAME WD BLK				
EXTERIOR	(DBL) SGL BOX SIDING: (BEVEL) LP RUSTIC VERT B&B SHAKE: WD ASB COMPO SHGL STUCCO (BRICK) (VEN) ← 4' HIGH, FRONT SOLID 1 1½ 2 STY STONE CONC BLK: PT FUR'D STUCCO				
ROOF	GAB (HIP) FLAT PITCH: LOW (AVG) STEEP SHINGLES: WD COMPO ALUM SHAKES: LT (MED) HVY BUILT-UP R. RFG BAR TILE EXP BM				
1ST FLOOR	(DBL) SGL FIR PLY WD (H. WD) CONC TILE (CARPET) RMS.: (LIV) (DIN) (FAM) (KIT) (UTIL) HALL ½ BATH BR (DEN)				
PARTITIONS	PLASTER (DRYWALL) COMPO CLD&PA TAG PLYWOOD TRIM: (FIR) (H.WD) PANELING:				
OTHER INTERIOR + CONST.	CLASS: 5 BUILT-INS: +440 FIR (H.WD) METAL CAB TOPS: (PLASTIC) LINO OAK JENN-AIR +525 G.D. +150 MICRO +660 APPLIANCES: ELECT GAS (OVEN) (RANGE) (DISHWASHER) +510 HOOD FAN QUAL: F (A) G.			2385	
LIGHTING	CLASS: 5 LOW VOLT INTERCOM				
PLUMBING +	CLASS: 5 — 4 LAVATORY +680 — 1 STALL SHOWER — 1 SINK — 2 FULL BATH; WATER ONLY — 3 TOILET +430 — 1 SHOWER DOOR — 1 SINK + 230 LAUNDRY FAC — 1 ½ BATH; 1 BATHTUB — 1 JET TUB +2500 — 1 WATER HEATER			3840	
HEATING +	CLASS: 5 FURNACE: (FA) GRAV FL W OIL (GAS) HARD FUEL HEAT PUMP ELEC.: W UNITS BASEBD GL FAN CABLE: CLG FL H.W.: BASEBD CONVEC RAD: FL CLG STOVE CHIMNEY TOTAL AREA HEATED 2812 SQ. FT. X $ 2.55 P.S.F.			7171	
FIREPLACE +	CLASS: 5 (1 STY) 2 STY SGL BKD STKD CIR NO. HEARTHS: (PLAIN) ELAB. 2 @ 2100			4200	
BASEMENT	(NONE) FULL ¾ ½ ¼ 'X ' UNFIN WALLS: CONC BLK FL: CONC WOOD CLASS: DAYLIGHT: FR ½ ⅓ ¼ CEIL: PLS DRYWALL COMPO PLYWD WALL CVR: FUR'D PLS DRYWALL COMP WD FLR CVR: ASPH TILE CORK LINO RMS: PLAY BR BATH LNDRY GAR NO. RMS: HEAT: SQ. FT. X $				
ATTIC OR UPPER STORIES +	CLASS: 5 NONE ¾ ½ ¼ 'X UNFIN (FIN) PLS (DRYWALL) COMP CLD&PA FLR: (DBL) SGL FIR H.WD ASPH TILE (VINYL) LINO (CARPET) SUBFLOOR ONLY RMS: 3 BR 2 BATH HALL NO. RMS: HEAT: ABOVE 1210 SQ. FT. X $ 26.28			31799	
SPECIAL	PORCH: WD FR CONC				
RATING: PHYS. COND. P F (A) G FUNC. UTIL. P F (A) G APPEARANCE P F (A) G	TOTALS +	37.53		49295	
	TOTALS —	0		0	

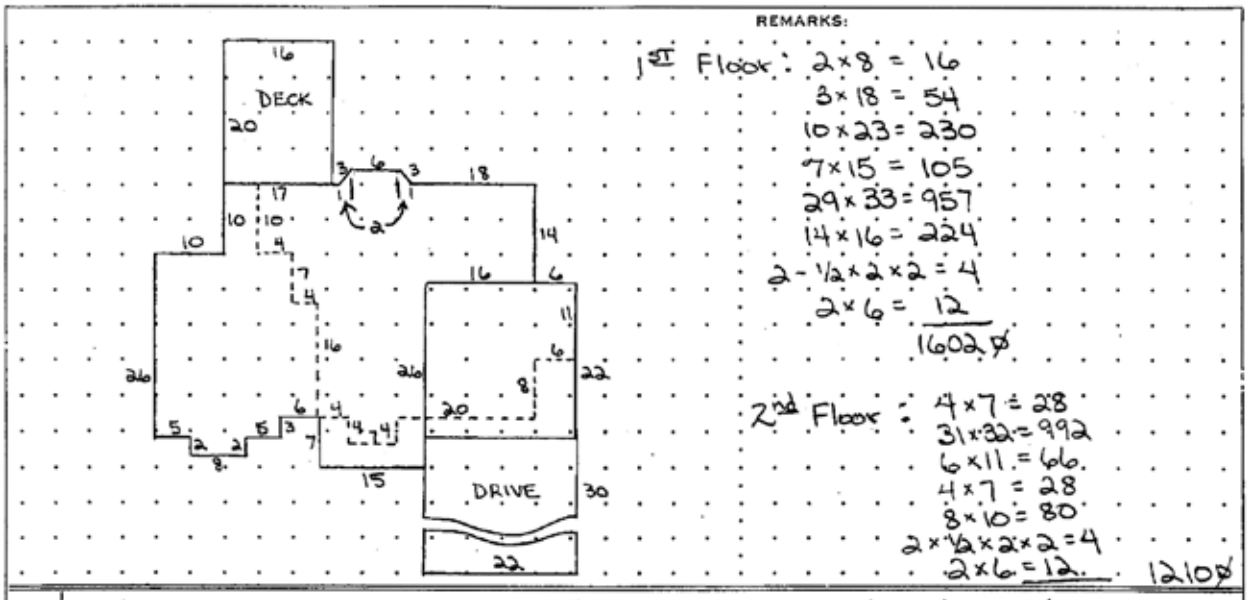
REMARKS:

SUMMARY OF DWELLING COMPUTATION

NET LUMP SUM ADJUSTMENT ..... $ 49295
DWELLING 1602 SQ. FT. X ___ R2 UNITS = _____ SQ. FT. X $ 37.53 PSF = $ 60123
TOTAL BASE COST ..... $ 109418
19 92 COST INDEX 125 % X QUALITY ADJ 100 % = 125 % MODIFIER X BASE COST = $ 136773
REPLACEMENT COST ..... $ _____
DEPRECIATION: 97 % PHYSICAL X 100 % FUNCTIONAL = 97 % GOOD
DEPRECIATED REPLACEMENT COST (TRANSFER TO VALUE SUMMARY) $ 132670

COUNTY FORM—303-003 (A & A-A-3) (11-71) ORE. DEPT. OF REV.

BUILDING DIAGRAM AND OUTBUILDINGS



NO.	TYPE / USE	DESCRIPTION: FOUND	FLOOR	ROOF	WALLS	MISC.	DIMENSIONS	AREA S.F. BASE ADJ BASE	REPL. COST LUMP SUM TOTAL	QUAL. INDEX % MDF.	REPL. COST	DEP. % PHYS % USE % GOOD %	DEPRECIATED REPLACEMENT COST
	GARAGE CLASS 5	C	C	SHAKE	LP	FIN+3.25	22 x 22	484	7996				
	ATT DET BSMT 1 3 3 2			MED		OPENERS	x	13.27	640	125			
	YR BUILT 80					2@320	x	16.52	8636		10795	97	10470
1 DRIVE			C				22 x 30	660				60	
							x			125		100	
		Badly Cracked					x	1.55	1023		1279	60	770
2 DECK		PIER	CEDAR				16 x 20	320	2048				
							x		380	125			
		RAIL - 46LF @ 8.25 =					x	6.40	2428		3035	90	2730
3 SPRINKLERS			5000 ø				x	5000	2250				
			AUTOMATIC CONTROL				x		500	1.25			
			EST +500				x	.45	2750		3438	97	3330
4							x						
							x						
							x						
5							x						
							x						
							x						
6							x						
							x						
							x						
7							x						
							x						
							x						
8							x						
							x						
							x						

TOTAL DEPRECIATED REPLACEMENT COST—OUTBUILDINGS AND OTHER IMPROVEMENTS (TRANSFER TO VALUE SUMMARY) $ 6830

For more detailed instruction on use of cost factors, refer to the General and Special Instructions sections of *Cost Factors for Residential Buildings.*

Preappraisal set-up

The foundation of the market-related cost approach is the preappraisal set-up. This section follows the step-by-step procedure to set up the residential mass appraisal program. The valuation of land has been discussed in Chapter 8, *Mass Appraisal of Land*.

The steps for preappraisal set-up (following established land base) are:

- Establish a base appraisal date;
- Define neighborhood boundaries;
- Gather improved sales data;
- Establish class benchmarks;
- Compute the local cost modifier (LCM);
- Develop depreciation benchmarks;
- Develop a depreciation schedule based on actual age;
- Develop adjustments to base depreciation schedule;
- Post information on the field maps.

Establish the base appraisal date

The main significance of the base appraisal date is that it provides a predetermined point in time to which all time adjustments can be aimed. For instance, all the sales used in the preappraisal set-up for the LCM and depreciation studies should be adjusted to the base appraisal date to reflect either inflationary or recessionary trends in the market.

Establish the neighborhood

A neighborhood is a group of properties that share important characteristics. A neighborhood is typically a distinct group of properties that is often identified by a geographic (physical) boundary, or a group of properties that reacts in a similar manner to market influences. Refer to Chapter 8 for more discussion on this topic.

Collect improved sales data

Once the reappraisal area has been identified, the collection of sales data begins. Since the collection of data for unimproved land and sites has been covered in Chapter 8, this chapter will focus on the collection of improved sales data. The improved sales collection should include single-family residences, duplexes, triplexes, fourplexes, and manufactured homes.

Improved sales for the reappraisal area are collected and verified. Verification should be made with one of the principals of the sale (the buyer or the seller) or the real estate agent.

Verification of information should include:

- Confirming the sales price.
- Determining if the sale was an arm's-length transaction.
- Identifying date of sale.
- Identifying the terms.
- Confirming whether buyers and sellers are knowledgeable about the market.
- Discovering if there are any problems with the sale or property.
- Determining if the sale is new construction. If so, obtain construction costs to use in the LCM study.
- Determining if there were any additions or improvements made to the property after the sale.
- Obtaining permission to inspect the property.

All verified sales should be inspected (interior and exterior), measured, and inventoried. All rental information should be collected to develop gross monthly rent multipliers.

Now that all the sales data has been collected, it is time to organize, develop, and integrate the data into the preappraisal set-up process.

Quality class benchmarks

A cost factor book, such as the *Cost Factors for Residential Buildings* published by the Oregon Department of Revenue, serves as the basis for the market-related cost approach to value. The beginning point for using a cost manual for the appraisal of large numbers of improvements is the establishment of base standards or benchmarks.

A benchmark is a reference point from which all other properties are measured.

Quality class benchmarks are established so appraisers can be consistent in estimating the quality level of construction of various improvements. These quality class benchmarks must correspond with the base standards described in the cost factor book being used.

Class benchmarks don't need to be sold properties or new construction. They are selected only for their ability to illustrate quality of construction. These properties must be inspected and an accurate description of the improvements made. Enough representative buildings for each type and quality class must be selected.

The benchmarks should be established using a standard format that includes exterior and interior color photos and a brief description of quality items. These forms are then combined into a notebook to be used by all appraisers assigned to the appraisal areas.

The supervising or lead appraiser should field review all quality class benchmarks to ensure uniformity is achieved.

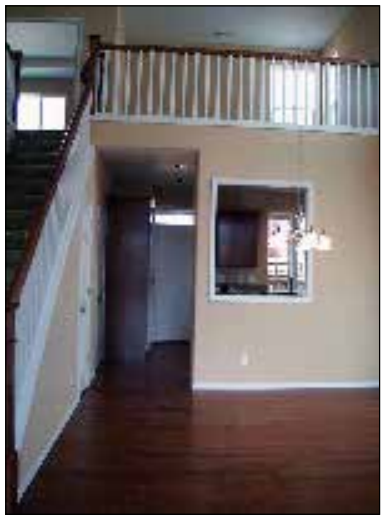
The class benchmarks must be developed before starting the LCM study.

Each appraiser should have a copy of the benchmarks available for review in the field.

Following is an example of a class 5 quality benchmark for a residential improvement:

Class 5

Typical class 5 interior features






Local cost modifier (LCM)

A LCM is a market-derived modifier. Since the *Cost Factors for Residential Buildings* is based on the Portland area as of a specified date, it is imperative that the data be modified to reflect the location and base appraisal date of your appraisal area. A properly developed LCM is important since it establishes the replacement cost level used to measure all depreciation. A LCM must be developed and documented for all factor books used in your reappraisal area, including backup sources such as *Marshall Valuation Services.*

You can obtain building construction costs from local contractors. Information such as labor and material costs help determine the cost modifier applied to cost factor books. Costs of minor improvements, such as decks, fences, swimming pools, and spas, can provide essential data for keeping appraisals accurate and uniform. It is important to maintain a list of contacts for such information so the data can be updated annually.

A local cost modifier will also need to be developed for farm buildings. Actual construction costs will be more readily obtainable for these buildings than sales of property where the costs can be abstracted. Again, make sure all items of cost are included, both direct and indirect. Refer to the general instruction pages of the *Cost Factors for Residential Buildings* for lists of these costs. These studies can be incorporated into the appraisal of new construction (red tags) for January 1 of each year.

To develop and document a LCM, follow these procedures:

1. Select a representative sample of recent sales of newly constructed improvements of the type and class in the current appraisal area. These sold properties should be typical of the current market, and not reflective of abnormal discounts, unusual financing, or other atypical influences. Older, pre-existing properties can't be used in the study.
2. Determine the sales price of the property.
3. Time adjust the sale to the base appraisal date.
4. Determine the improvement residual by subtracting the estimated current land value which must include an increment for the on-site development (OSD).
5. Subtract current market costs of minor improvements such as decks, drives, patios, and garden sheds from the improved sales price.
6. Develop a replacement cost new estimate for the improvement of each sale using the appropriate cost factor book.
7. Divide the improvement residual by the replacement cost new estimate.

The result is the local cost modifier for this sale.

Use a LCM worksheet to organize the sales data. A LCM worksheet should include:

- Account number;
- Property address;
- Improvement class;
- Improvement characteristics;
- Condition rating;
- Sale terms;
- Sale date;
- Time adjustment;
- Market land value;
- Improvement residual;
- Replacement Cost New (RCN) estimate;
- Sales price per square foot estimate;
- LCM indicator; and
- Color photograph.

The following page provides an example of a LCM worksheet.

Local Cost Modifier Worksheet

Acct # _____ Map # _____ LCM # _____

SITUS _____

Class _____
Yr Blt _____
1st Fl Sf _____
2nd Fl Sf _____
Attic _____
Unfin Bsmt _____
Fin Bsmt _____
Total Fin _____
Bedrooms _____
Baths _____
Blt In _____
Heat _____
F.P. _____
Garage _____
Carport _____
Other _____

LAND IMP. TOTAL % GOOD _____

VALUE: _____

Rating: Phy: P F A G E Funct: P F A G E Appear: P F A G E

Financing: Type _____ Int Rate _____ Dn Pymt _____ Yr Mrtg _____ Points _____

Verified _____ With Whom _____ Int Insp _____ Ind of Good Sale _____

Appr Zone _____ Prop Class _____ Zone _____

Land Sch _____ Size _____

Buyer/Seller Comments: _____

Remarks: _____

Appraiser _____ Date _____

Sales Date _____	$	_____
P.P. $ _____		
M.H. $ _____		
Other $ _____		
Total Reductions	$	_____
Adj Sales Price	$	_____
Adj for Time: Mult _____	$	_____
Land Value $ _____	$	_____
On Sites $ _____	$	_____
Total Land	$	_____
Building Residual	$	_____
÷	$	_____
Cost Factor Estimate At 100%	$	_____
SALE PRICE/S.F.	$	_____

= LCM

At the time you develop LCMs, most of the sales data collection of new construction should already be accomplished. When reviewing new construction, try to include interior and exterior photos to aid in classifying improvements. This practice will save having to reinspect and reverify them.

An adequate number of sales for a LCM study will vary from county to county and appraisal area to appraisal area. There should be enough sales information to determine a reasonable LCM conclusion. A countywide study for some property classifications may be necessary.

Now that the sales prices have been verified, develop a time trend to adjust all sales to the base appraisal date. The time adjustment studies should be conducted as close to the base appraisal date as possible. Time adjustments can be made using either resale properties or a sales analysis of similar properties. Changes in the price of similar properties over time are compared to determine a monthly rate of increase or decrease expressed as a percentage. If resales are not available, the trends can be determined by the assessor's sales ratio study.

Example

Sales information

Sale no. 1	Sale no. 2	Sale no. 3
1,500 sq. ft.	1,500 sq. ft.	1,500 sq. ft.
1 story	1 story	1 story
new traditional	new traditional	new traditional
builder XYZ	same builder	same builder
stock floor plan	same floor plan	same floor plan
DOS 1/15/01	DOS 7/20/01	DOS 4/10/02
SP $128,000	SP $135,000	SP $147,800

Analysis

The percent difference between Sale 1 and Sale 2 is 5.5 percent. The time difference is six months, or 0.91 percent per month.

The percent difference between Sale 2 and Sale 3 is 9.5 percent and the time difference is 9 months, or 1.05 percent per month.

The percent difference between Sale 1 and Sale 3 is 15.5 percent. The time difference is 15 months, or 1.03 percent per month.

It could be concluded that the sales time adjustment is stabilized at 1 percent per month. Sale prices should be time trended 1 percent per month from the time of sale to the base appraisal date.

The more sales used in such studies, the higher the degree of accuracy.

When deducting the land value from the sale, make sure the amount of landscaping included in the OSD represents only what was included in the sale. If additional improvement has been added after the sale, the improvement residual would be artificially low.

With all the LCM worksheets completed and the time trends applied, it is time to compute the LCM. There are two ways to compute it.

The first method divides the total adjusted improvement sales prices by the total improvement replacement cost to develop a weighted mean LCM indicator.

Building no.	Actual cost of new structure	Factor book cost estimate
1	$106,300	$ 95,500
2	53,000	53,500
3	80,500	71,900
4	216,100	203,600
5	37,700	35,500
6	166,000	162,600
Totals	$659,600	$622,600

$659,600 (Actual cost) ÷ $622,600 (Factor book cost estimates) = 1.06 Local cost modifier

The second and preferred method of analyzing the sales extends the information on a spreadsheet. Organize the spreadsheet to include:

- Account number of the sale;
- Adjusted sale price;
- Market land value;
- Sales price of improvements;
- Replacement cost new;
- Indicated LCM;
- Class;
- Square feet;
- Indicated cost per square foot of the improvements only; and
- LCM indicators/class.

Following is an example of a LCM spreadsheet.

Local Cost Modifier Study

CLASS:_____ AA:_____ APPRAISAL DATE:_____ MONTHLY TIME ADJUSTMENT:_____

SALE #	LOCATION	SALE PRICE	SALE DATE	TIME ADJ.	ADJ. SALE PRICE	SITE VALUE	LNDSC & OSD	BLDG CLASS	LESS MINOR IMPS	HOUSE VALUE	HOUSE SIZE	RCN	LCM
3	15 07 7BB 2200	58,380	10-02	1.06	61,880	12,000	2,500	3	1,500	45,880	1,008	43,000	1.07
6	15 07 7BB 2500	65,077	8-02	1.07	69,630	15,000	2,500	3	1,800	50,330	1,245	48,780	1.03
7	15 07 7BB 2800	63,877	5-02	1.10	70,265	14,000	2,500	3	1,750	52,015	1,165	49,670	1.05
8	15 07 7BC 800	64,335	12-02	1.05	67,552	14,500	2,500	3	1,650	48,902	1,109	45,650	1.07
								3		197,127		187,100	1.05
10	15 21 22AA 10900	78,000	6-02	1.09	85,020	16,000	3,500	4	2,100	63,420	1,545	56,610	1.12
5	15 21 22AB 1500	98,880	4-03	1.02	100,858	20,000	6,000	4	1,950	72,908	1,748	62,950	1.16
11	15 21 22AB 3500	104,250	2-03	1.03	107,377	16,000	4,500	4	2,000	84,877	1,600	72,039	1.18
13	15 21 22BA 2600	110,850	8-02	1.07	118,610	25,000	4,500	4	2,050	87,060	1,800	72,750	1.20
								4		308,265		264,349	1.17
1	15 23 08CA 600	155,000	2-03	1.03	159,650	30,000	8,000	5	2,000	119,650	2,000	84,110	1.42
17	15 23 08CA 2900	167,800	8-02	1.07	179,546	37,000	6,000	5	2,250	134,296	2,450	99,820	1.35
20	15 23 08CB 3600	161,870	10-02	1.06	171,603	35,000	6,000	5	2,300	128,303	2,416	102,480	1.25
21	15 23 08CB 11200	149,800	5-02	1.10	164,780	25,000	4,000	5	1,950	133,830	2,145	90,760	1.47
								5		516,079		377,170	1.37

This second method allows you to analyze an array of sales. You can select the mean or median of the study when there are extreme sales that could distort the weighted mean. The spreadsheet also allows you to sort and group the sales for more varied studies.

Individual modifiers for each improvement class may be necessary. For example, you may find that the modifier for new class 4 houses is 1.10 while the modifier for class 5 houses is 1.20.

If sales information is limited, there are alternatives to measuring market levels and developing modifiers.

Other important market information sources include:

- Local building costs;
- Material prices and labor rates;
- Price comparison of builders' model homes;
- Interviews with builders and realtors on cost trends; and
- Neighboring counties' LCM studies.

The information gathered should include a cross-section of the market, and a variety of builders and sources should be contacted. You can obtain useful information from contractors by providing them with models of houses and asking what it would cost to build them. Cross-checking between contractors and tracking changes from year to year provides support to your LCM conclusions.

The worksheets on the following two pages are examples for tracking building costs. The first page is used to record the sources and prices for the listed items. This page also concludes the typical price or wage rate for each item. The second page tracks concluded typical prices and wage rates over time. This gives you a basis to analyze trends in building costs.

Local cost modifier analysis—Trend comparison

Date: _____

	Year: _____	_____	_____	_____
	Costs	Costs / % Diff	Costs / % Diff	Costs / % Diff
Dimension lumber / MBF:				
Standard, (#2) and better, random length				
2 x 4	_____	_____	_____	_____
2 x 6	_____	_____	_____	_____
2 x 8	_____	_____	_____	_____
2 x 10	_____	_____	_____	_____
2 x 12	_____	_____	_____	_____
Utility grade				
2 x 4	_____	_____	_____	_____
Ready-mix concrete / Cu. yd.				
2500#, 5 sack mix	_____	_____	_____	_____
Sheathing				
7/16" waferwood	_____	_____	_____	_____
1/2" plywood	_____	_____	_____	_____
Siding, T-1-11 5/8"	_____	_____	_____	_____
Roofing / sq.				
Medium wt. composition				
Shingle	_____	_____	_____	_____
#1 Medium split wood shakes	_____	_____	_____	_____
Insulation, fiberglass				
3 1/2" R15	_____	_____	_____	_____
6" R21	_____	_____	_____	_____
Sheetrock gypsum board				
4 x 8 x 1/2"	_____	_____	_____	_____
4 x 8 x 5/8"	_____	_____	_____	_____
Carpet, installed	_____	_____	_____	_____
Medium nylon “high-low”	_____	_____	_____	_____
Nylon “cut pile”	_____	_____	_____	_____
Labor rates (union scale if it prevails)				
Carpenter	_____	_____	_____	_____
Electrician	_____	_____	_____	_____
Laborer	_____	_____	_____	_____
Painter	_____	_____	_____	_____
Plumber	_____	_____	_____	_____
Roofer	_____	_____	_____	_____
Concrete finisher	_____	_____	_____	_____

Depreciation benchmarks

The next step in the preappraisal set-up is to establish market depreciation modifiers for the reappraisal area (depreciation benchmarks and depreciation schedules).

Accrued depreciation is the difference between the replacement cost new and the present value of an improvement. It measures the loss of value from all sources that have occurred over the life of an improvement. Depreciation can be divided into three categories:

- Physical deterioration;
- Functional obsolescence; and
- External obsolescence (externalities).

Accrued depreciation: The loss of value from cost new to present value. Accrued depreciation includes loss in value from physical deterioration, functional, and external obsolescence.

Physical deterioration: The loss in value due to wear and tear and and aging of materials.

Functional obsolescence: the loss in value resulting from defects in design. It can also be caused by changes that, over time, have made some aspect of the structure (such as its materials or design) obsolete by current standards. An example of functional obsolescence is having to pass through one bedroom to access a second bedroom.

External obsolescence: A loss in value due to influences outside the property lines. An example of external obsolescence is an industrial plant located near a residential property.

When using the market-related cost approach, develop a market depreciation (remaining percent good) that doesn't separate these categories of depreciation. Extraordinary properties may require special analysis.

To accurately and uniformly measure market depreciation, you must develop depreciation benchmarks. These benchmarks should be established by neighborhood in an appraisal area. The supervising appraiser is responsible for conducting and documenting the study. Depreciation benchmarks should be documented by improvement type and by class.

Percent good

After classifying the house and estimating replacement cost new, estimate the remaining percent good. Percent good is the key to the market-related cost approach. The percent good ties the cost approach to the market by measuring the remaining percent good after all forms of depreciation have been determined.

To create a depreciation benchmark, follow these steps:

1. If necessary, adjust the sales price for such things as time, personal property, and additions after the sale.
2. Estimate the market land value using the developed land schedule for each property being studied.
3. Measure and compute replacement cost using locally modified cost factors. Note any functional or external obsolescence.
4. Subtract the market land value and OSD from the adjusted sales price to arrive at an indicated total improvement value.
5. Subtract the depreciated minor building values (driveways, patios, sheds, etc.) to find the house and attached garage value only.
6. Divide the residual house and garage value by the replacement cost new to arrive at the percent good indicated by the market.

Example of measuring percent good:

Adjusted sale price	$150,000
Land value (including OSD)	– 50,000
Total improvement residual	$100,000
Depreciated value of minor improvements	– 2,500
Residual house and garage	$ 97,500
RCN house and garage	$112,450
Percent good ($97,500 ÷ $112,450)	87%

The 87 percent good in this example represents the remaining percent good of the improvement after the market has accounted for physical depreciation and functional and external obsolescence.

To properly document benchmarks, a depreciation benchmark form is recommended. An example of a depreciation benchmark worksheet that contains the necessary information for depreciation benchmark use is on the following page.

Local cost modifier analysis—Source comparison

Date: _____

Data sources:	_____	_____	_____	Conclusions
Dimension lumber / MBF:				
Standard, (#2) and better, random length				
2 x 4	_____	_____	_____	_____
2 x 6	_____	_____	_____	_____
2 x 8	_____	_____	_____	_____
2 x 10	_____	_____	_____	_____
2 x 12	_____	_____	_____	_____
Utility grade				
2 x 4	_____	_____	_____	_____
Ready-mix concrete / Cu. yd.				
2500#, 5 sack mix	_____	_____	_____	_____
Sheathing				
7/16" waferwood	_____	_____	_____	_____
1/2" plywood	_____	_____	_____	_____
Siding, T-1-11 5/8"	_____	_____	_____	_____
Roofing / sq.				
Medium wt. composition	_____	_____	_____	_____
Shingle				
#1 medium split wood shakes	_____	_____	_____	_____
Insulation, fiberglass				
3 1/2" R15	_____	_____	_____	_____
6" R21	_____	_____	_____	_____
Sheetrock gypsum board				
4 x 8 x 1/2"	_____	_____	_____	_____
4 x 8 x 5/8"	_____	_____	_____	_____
Carpet, installed	_____	_____	_____	_____
Medium nylon “high-low”	_____	_____	_____	_____
Nylon “cut pile”	_____	_____	_____	_____
Labor rates (union scale if it prevails)				
Carpenter	_____	_____	_____	_____
Electrician	_____	_____	_____	_____
Laborer	_____	_____	_____	_____
Painter	_____	_____	_____	_____
Plumber	_____	_____	_____	_____
Roofer	_____	_____	_____	_____
Concrete finisher	_____	_____	_____	_____

Depreciation Benchmark Example

Benchmark No. _____ Confirmed ___ Yes ___ No Date _____
Account _____ Confirmed With _____
Address _____ Appraiser _____

IMPROVEMENT DESCRIPTION

House Class _____
G.F. Sq. Ft. Area _____ Year Built _____
Remodeled _____ Actual Age _____
Rooms: ___LIV ___DIN ___KIT ___FAM ___BDRM ___BATH ___UTIL
Upstairs: _____ S.F. Fin. ___BDRM ___BATH
Bsmt: _____ S.F. Fin. ___REC ___BDRM ___BATH ___UTIL
Bsmt: _____ S.F. Unfin. or Rough-In _____
Fireplaces _____ Sgl. Stacked Backed _____ Wood Stove
Garage Class _____ S.F. Size _____ B.I. ATT. DET.
Other Imprs.: _____

LAND DESCRIPTION

Lot or Acreage Size _____
Description _____
_____
_____
_____
Yard/Site Imprs. P F A G E

Remarks _____
_____
_____

Date of Sale _____ Sale Price $ _____
Trended to _____ @ _____ % Per Mo. x No. of Mo. _____ = Adj. Sale Price $_____

Rating for Actual Age

Physical	P	F	A	G	E
Functional	P	F	A	G	E
Appearance	P	F	A	G	E

Remarks _____
_____
_____

Land Value _____ + Site Imprs. _____ - $_____
Residual to Building Improvements = $_____
Depr. Value of Other Improvements - $_____
Residual Value Attributable to House = $_____
Replacement Cost of New House $_____
Indicated % Good From the Market $_____
Effective Age _____ Years = _____ % Depr. Per Year
Appraiser Observed % Good =

PHOTO

LAND RESIDUAL

Adj. Sale Price _____
Depr. Impr. Value - $ _____
Residual to Land = $ _____
On Site Dev. - $ _____
Bare Land Residual = _____

ON SITE DEV. RESIDUAL

Adj. Sale Price $ _____
Depr. Impr. Value - $ _____
Residual to Land = $ _____
Bare Land Value - $ _____
On Site Dev. Residual = _____

RMV AND FINAL RATIO

Land $ _____ OSD $ _____ Imps $ _____ Total $ _____
Ratio of RMV to Adjusted Sale Price _____
Remarks _____
_____
_____

Depreciation schedules

Once the depreciation benchmarks are completed, the indications of market value (percent good) must be combined into a depreciation schedule. To produce an accurate depreciation schedule, use only benchmarks of properties that are typical to the neighborhood. Sales of properties that exhibit a high degree of deferred maintenance, unusual functional obsolescence, that have been recently remodeled, or had a change of use shouldn't be included in this portion of the study.

There are two methods to develop depreciation schedules.

In the first method, tabulate the preliminary depreciation benchmarks to give a range for each class, type, and age (see Benchmark Summary example following the depreciation schedule). After the spreadsheet has been completed, choose the proper percent good for each actual age grouping. From this base information, a depreciation schedule for all actual ages can be developed.

The second and preferred method is developed by plotting the percent goods on a graph (see the following depreciation graph example). The vertical axis represents percent good and the horizontal axis represents actual age. After the typical sales are plotted on the graph, draw the depreciation curve to represent the centerline of the plotted sales.

From this graph, a depreciation schedule can be developed. An example of a depreciation schedule follows:

Depreciation schedule

Average condition

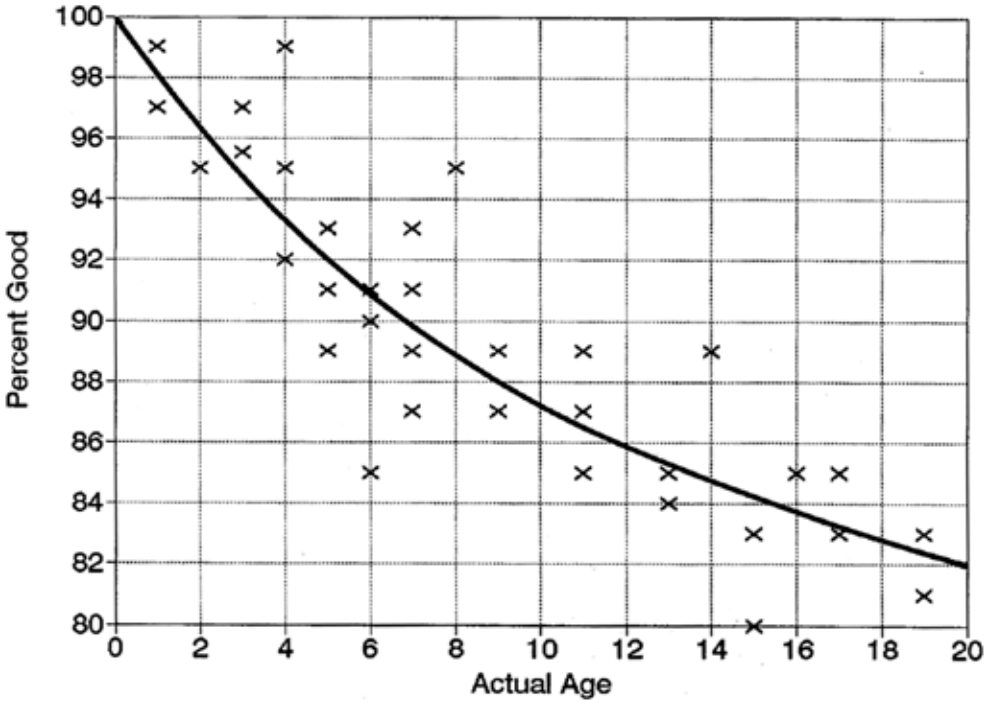
Actual year built	Chronological age	% Remaining good
2002	0	100
2001	1	98
2000	2	97
1999	3	95
1998	4	94
1997	5	92
1996	6	91
1995	7	89
1994	8	89
1993	9	88
1992	10	87
1991	11	86
1990	12	86
1989	13	85
1988	14	85
1987	15	84
1986	16	84
1985	17	83
1984	18	83
1983	19	82
1982	20	82

Benchmark Summary

Area _____ Date _____

BENCH MARK	CLASS	FLOORS	ADJ SALES PRICE	LOT VALUE	OTHER IMPS	HOUSE VALUE	RCN HOUSE	ACTUAL AGE	INDICATED % GOOD
19	4	2	115,000	22,000	6,500	86,500	90,104	2	96
6	4	2	94,550	21,500	5,000	68,050	70,155	2	97
16	4	1	96,800	22,000	4,850	69,950	70,657	2	99
22	4	1	105,250	20,000	3,500	81,750	86,968	4	94
18	4	1	87,900	19,500	3,800	64,600	70,989	5	91
3	4	2	79,500	18,750	4,500	56,250	61,141	5	92
20	4	1	92,600	16,500	4,450	71,650	77,880	5	92
5	4	1	75,000	16,800	4,600	53,600	60,910	8	88
17	4	1	78,000	19,200	5,000	53,800	59,778	8	90
2	4	1	84,000	20,000	2,400	61,600	71,628	10	86
21	4	1.5	68,000	16,000	3,400	48,600	55,862	10	87
8	4	1	72,000	16,000	4,400	51,600	59,310	10	87
4	4	1	80,000	18,800	8,400	52,800	59,326	10	89
10	4	1	78,000	14,800	1,800	61,400	71,395	11	86
11	4	1	70,000	14,400	4,320	51,280	62,434	12	83
12	4	1	72,400	14,800	0	57,600	67,765	12	85
7	4	2	67,280	13,000	1,720	53,560	62,279	12	86
1	4	1	79,600	16,800	4,400	58,400	66,364	12	88
9	4	1	68,800	16,000	2,000	50,800	60,476	15	84
13	4	1	74,000	16,000	2,500	55,500	66,071	15	84
14	4	1	67,000	12,000	2,000	53,000	64,634	18	82
15	4	1	66,000	12,000	0	54,000	64,286	18	84

Depreciation Graph



The next step is a quality control measure. Make an appraisal of the sales used in the depreciation study applying the indicated percent good from the new depreciation schedule. This will give a new appraised value that, when divided by the sales price, provides a ratio comparison between the new appraised value and the sales price.

New appraised value ÷ Sales price = Ratio

These ratios can be used to ensure schedules are performing properly.

Adjustments

Once the typical depreciation schedules are complete, the nontypical sales are plotted and compared to establish their relationship to the base schedule. When plotting the nontypical sales, differentiate these sales so they are easily recognized.

One such adjustment would be for houses with more or less than typical maintenance. This adjustment is referred to as effective age. Effective age is derived from how the market reacts to properties that are different from the typical house in the neighborhood.

The steps to develop an adjustment are:

1. Plot nontypical sales on a scatter graph.
2. Select a representative point from the nontypical sales.
3. Establish the relationship from the normal depreciation schedule to the selected representative point.

For example, a 30-year-old house has been recently remodeled and reconditioned. Our comparison of 30-year-old recently remodeled houses to the base depreciation schedule shows that these houses sell the same as 20-year-old houses. The actual age is still 30 years, but the effective age is 20 years. In other words, the condition of this property is like a 20-year-old house and is selling like a 20-year-old house. Effective age allows an appraiser to group remodeled and/or reconditioned homes into the proper age grouping.

Another adjustment to the base depreciation schedule might be location. For instance, in one area of a neighborhood, drug trafficking caused a severe decline in property values. The decline in values was so great that it caused market depreciation to fall far below normal levels. In this case, it is appropriate to develop an area or location adjustment. This allows the continued use of the neighborhood base depreciation schedule in the affected area. Develop the area or location adjustment by following the three steps described above.

Posting field maps

Some counties still post pertinent information on maps the appraisers and supervisors use in the field.

The information posted on the maps may include the location of the benchmarks, other sales, listings, zoning information, statistical building class, depreciation (percent good), and any other appraisal data deemed necessary.

This data helps establish equity and uniformity amongst properties in a market area. It also serves as an effective review tool. Some offices place an improvement symbol on each improved taxlot on the field map to show the location of the improvement on the site.

Other counties no longer post information on field maps but use GIS and aerial photos to access necessary information about the property they are appraising.

Reappraisal

Now that land values, land schedules, LCMs, class benchmarks, and depreciation benchmarks have been developed and the field maps are posted, the preappraisal set-up is complete. To begin the appraisal, you should be equipped with the following items:

- Neighborhood land schedule;
- Class benchmark book;
- Depreciation guide;
- Field map;
- Neighborhood map;
- Preloaded appraisal card or data entry card;
- Measuring tape;
- Identification or business cards;
- Camera and film;
- Clip board;
- Pencil and ruler.

Physically inspect each property. This should include an interior inspection when possible, and an exterior inspection that includes a walk around the structure.

Inspection levels

If a ratio analysis for a given market area results in a failure to meet statistical criteria as set forth by OAR 150-308-0380, then some level of re-valuation will be required to correct the deficiency.

Below are some of the reasons a market area may be falling outside the standards.

- Number of years since last reappraisal;
- Level of new construction;
- Local changes;
- Higher than normal appeal activity;
- Inconsistent or incorrect classification of buildings or land;
- Changes in the neighborhood such as deferring maintenance, gentrification, in-fill use or zoning;
- The need to redefine neighborhood boundaries and establish new benchmarks;
- Change in market preferences for factors such as house style/age, lot size, neighborhood characteristics, traffic patterns, etc;
- Changes in building costs because of changes in code requirements, new materials/designs, etc;
- Changes in market perception from positive or negative factors; and
- Composite index on RMV.

Correcting appraisal deficiencies when appraisal standards are not met generally requires some level of physical inspection of the property. Different levels of inspection will be required depending upon the reason(s) found for the deficiency. Following are generally accepted definitions for the various levels of inspections:

- **Level 1.** A full inspection is made with an attempt to make a full interior inspection.
- **Level 2.** An exterior inspection is made. No attempt at an interior inspection is made unless a major change to the property is detected.
- **Level 3.** A street inspection is conducted. (Drive-by inspection only, unless a major change to the property is detected.)
- **Level 4.** No on-site inspection is made. Market data is analyzed to determine changes in the market and the properties are adjusted to RMV. Values are modified by applying line adjustments or by recalculation of the basic tables developed from reappraisal studies. No attempt at an interior inspection is made unless a major change to the property is detected.

Quality control measures

After appraising a map group of property accounts, give all completed work to the supervisor. The supervisor conducts a field review of the appraisals to ensure that accuracy and uniformity is maintained within the map group, as well as among appraisers and all other map groups. At this point, the final responsibility for uniformity and equity rests with the supervisor.

The supervisor's field review should be conducted as soon as possible after receiving the completed appraisals. Adjustments or corrections can be made before the appraiser completes other map groups.

In conducting the field review, the supervisor must check appraisals in relation to the benchmarks and land and depreciation schedules should be developed for the neighborhood. This will require an occasional interior and exterior physical inspection to review accuracy of property data, improvement classification, percent good selection, and land base factors. If errors are found, more properties should be inspected. The errors should be documented and reviewed with the appraiser so that corrective action can be taken.

Chapter 10

Mass Appraisal of Income-Producing Properties

Whether valuing income-producing property or residential property, you can use similar information and methods for collecting and analyzing data into base standards (benchmarks and units of comparison). However, because income-producing property includes a variety of building designs and construction materials as well as differences in quality, the program you use must encompass these variations.

Information is needed to measure the income-producing potential of properties that are primarily bought and sold for that purpose. Income and expense information is compiled and analyzed into units typical for the property type. Gather data relating to economic rent, typical expense items for each category, overall expense ratios, and supportable capitalization rates for each kind of property appraised.

With proper planning, you can obtain most of the information necessary to establish base standards before field inspection and inventory of properties. If preappraisal data collection is insufficient, then supporting data will need to be collected and developed by the field appraisers in the course of making inspections.

The steps for conducting a mass appraisal program for income-producing property are:

- Establish a base appraisal date.
- Identify the reappraisal area.
- Mail requests for income and expense data three to four months before beginning the reappraisal.
- Collect neighborhood data (sales, zoning, utilities, neighborhood influences, etc.).
- Establish land values:
  —Base unit values; and
  —Adjustments to the base units.
- Establish quality class benchmarks.
- Conduct a local cost modifier study.
- Conduct a market depreciation study.
- Analyze income and expense data and complete benchmark worksheets to display findings.
- Develop capitalization rates:
  —Overall rates;
  —Tax rates;
  —Recapture rates; and
  —Discount rates.
- Develop market approach base standards.
- Field inspect properties.
- Compute the market-related cost approach value.
- Compute the income approach value.
- Compute the market approach value.
- Reconcile the three approaches to value.
- Conduct supervisory review.

Base appraisal date

Establish a base appraisal date before starting any appraisals. Using a base appraisal date ensures that properties are appraised under the same market conditions.

All land and improvement data used to establish base standards for the appraisal program must reflect values as of the base appraisal date. You can accomplish this by applying appropriate time adjustments to all value indicators. The data analyst can help you develop time adjustments by a process called “time trend analysis.” A time trend can be developed from the resale of property or from analyzing sale price trends of similar property over time.

Once the base standards are established as of the base appraisal date, don't use other adjustments or modifiers other than those developed as of the base date. To do otherwise will create a general lack of uniformity, causing lack of equity in RMV between individual properties within the defined appraisal area.

Sales occurring after the base appraisal date must be considered in the final ratio analysis conducted at the conclusion of the appraisal program. Adjusting the completed appraisals to the January 1 assessment date would recognize any change in value level reflected by those sales.

During the annual maintenance program (when new construction is appraised) always refer to the base appraisal date using the same base standards. Compensate for any change in market value levels after the original base appraisal date by applying subsequent annual adjustments. This will help ensure equity and uniformity in the appraisal program.

Identify the reappraisal area

After setting the base appraisal date, determine which properties are to be appraised. Areas that don't comply with current appraisal standards, areas that have changed dramatically, or any combination of indicators, may trigger a need for reappraisal (See Chapter 2 "Ratio Analysis.") Because income-producing properties normally have a different geographic distribution than residential properties, the reappraisal areas may not correspond with the residential reappraisal/recalculation areas.

Income and expense data

Before beginning reappraisal, start collecting information on income and operating expenses for all properties within the defined appraisal area.

To facilitate obtaining rental and expense information, mail the income and expense worksheets to owners of income-producing properties. Start this process several months before beginning the appraisal to allow enough time for the owners to return the completed worksheets. Here is a suggested procedure for mailing questionnaires:

- Obtain a complete computer printout listing the assessor's account number, property class, owner's name, and owner's mailing address. This listing should include the following property classes: 200, 201, 300, 301 (light industrial), 700, and 701.
- Review the list for completeness. Order two complete sets of stick-on mailing labels that include the owner's name, mailing address, and account number.
- Prepare and mail an income questionnaire to each property on your master listing. Include a letter of explanation (see example), a questionnaire with label attached, and a postage-paid, self-addressed return envelope.
- As the questionnaires are returned, mark off each on the master listing.
- After 30–45 days, send a second mailing (reminder) to those properties from which a questionnaire hasn't been received.

As the questionnaires are received, sort by the type of property, such as apartments, retail, office, and manufactured home parks.

On the next two pages are examples of an introductory letter and income and expense questionnaire.

Sample Introductory Letter

«Date»

«Owner_Name»
«Address_1»
«Address_2»
«Address_3»
«City_State_Zip»

Dear Property Owner:

Oregon law (ORS 308.232 requires the county assessor to value all real property at 100 percent of real market value (RMV). To accurately estimate RMV it is essential to understand the vacancy, income, and expenses typical of each property class. To reduce costs of the study, you have been randomly selected from among all owners of similar property to participate in this survey. Therefore, we would appreciate your taking the time to complete and return the enclosed data sheet regarding your property's operating income and expenses.

Please note that your responses will <u>not</u> be used to revalue your property directly. Instead, the survey results will be incorporated into a general model for valuing all properties of the same class. A three-year history is particularly helpful if the information is available. If more convenient, you may submit copies of your *Schedule E, Federal Form 1040* for the past two years while using the form to report budget expectations for the current year.

Even if this is an owner-occupied property, the expense information of operating the building is very helpful and will be included in our study.

Please return the enclosed form within 30 days. If you would like to discuss this request for information with us, please call our office at (*your phone number*). A commercial appraiser will be glad to assist you.

Sincerely,

«Your Name»
«Your Title»

Sample Income and Expense Questionnaire

«Owner Mailing Address»
«Owner City, State, Zipcode»

«Account Number» «Map and Tax Lot»
«Property Street Address» «Property City, State, Zipcode»

Occupancy, Income & Expenses By Calendar Year		2014	2015	Budgeted 2016	
Occupancy (average % of building during year)					
Tenant occupied		%	%	%	
Owner occupied		%	%	%	
Vacant		%	%	%	
Total		100 %	100 %	100 %	
Income					
Actual Rent Received		$	$	$	
Overages or Expense Recovery Received (CAM or Load Factor)		$	$	$	
Other Income		$	$	$	
Operating Expenses (do not include property taxes, mortgage)					**Expense Paid by..**
Management (salaries/commissions)		$	$	$	[ ] landlord [ ] tenant
Insurance, Building (fire, liability)		$	$	$	[ ] landlord [ ] tenant
Utilities, Services:	Electricity	$	$	$	[ ] landlord [ ] tenant
	Heat (gas, oil, etc.)	$	$	$	[ ] landlord [ ] tenant
	Water & Sewer	$	$	$	[ ] landlord [ ] tenant
	Garbage	$	$	$	[ ] landlord [ ] tenant
Janitorial		$	$	$	[ ] landlord [ ] tenant
Landscape & Grounds		$	$	$	[ ] landlord [ ] tenant
Repairs & Maintenance (actual expenditures)		$	$	$	[ ] landlord [ ] tenant
Reserves for Replacements (set aside but not spent during year)		$	$	$	[ ] landlord [ ] tenant
Wages		$	$	$	[ ] landlord [ ] tenant
Other Expenses (legal, accounting, brokers, advertising, etc.)		$	$	$	[ ] landlord [ ] tenant

Current Occupancy:

Lease	Square Footage	Monthly Rent	Lease Type	Type(s) of Space Included (check all that apply)
Owner				[ ] warehouse/shop/industrial [ ] office [ ] retail [ ] other
Tenant #1		$	[ ] NNN [ ] MG [ ] Other	[ ] warehouse/shop/industrial [ ] office [ ] retail [ ] other
Tenant #2		$	[ ] NNN [ ] MG [ ] Other	[ ] warehouse/shop/industrial [ ] office [ ] retail [ ] other
Tenant #3		$	[ ] NNN [ ] MG [ ] Other	[ ] warehouse/shop/industrial [ ] office [ ] retail [ ] other
Tenant #4		$	[ ] NNN [ ] MG [ ] Other	[ ] warehouse/shop/industrial [ ] office [ ] retail [ ] other
Tenant #5		$	[ ] NNN [ ] MG [ ] Other	[ ] warehouse/shop/industrial [ ] office [ ] retail [ ] other
Tenant #6		$	[ ] NNN [ ] MG [ ] Other	[ ] warehouse/shop/industrial [ ] office [ ] retail [ ] other
Tenant #7		$	[ ] NNN [ ] MG [ ] Other	[ ] warehouse/shop/industrial [ ] office [ ] retail [ ] other
Tenant #8		$	[ ] NNN [ ] MG [ ] Other	[ ] warehouse/shop/industrial [ ] office [ ] retail [ ] other
Other		$		[ ] warehouse/shop/industrial [ ] office [ ] retail [ ] other

PRINT NAME: DATE: PHONE:

Marion County Assessor □ 1115 Commercial St NE □ PO Box 14500 □ Salem, OR 97308-2511 □ www.co.marion.or.us

Collect neighborhood data

You will need to collect pertinent information at the beginning of the preappraisal setup. This includes information on each neighborhood and relevant area sales.

Request a list of current sales from the data analyst. Generally, the list should include sales that have occurred during the last three years. At the same time, obtain copies of all returned sales confirmation and income and expense questionnaires.

In addition to sales information, gather neighborhood data affecting the value of properties to be appraised.

A neighborhood is a group of properties that generally shares important characteristics. A neighborhood can be a distinct group of properties identified by a physical/geographic boundary or a group of properties that reacts in a similar manner to market influences.

Gather information that will help you understand the source of value changes in an area. These are best understood in terms of the four forces that affect value:

- Physical;
- Economic;
- Governmental; and
- Social.

Physical: The major physical factor affecting value is location. Other physical factors include topography, size and shape of a parcel, drainage, appearance of neighborhood, and availability of utilities.

Economic: Economic factors can be identified by such items as the pattern of land use, employment of residents, average household income, prevailing interest rates for borrowed money, and the availability of financing.

Governmental: Major governmental factors include local land use zoning, building codes and restrictions, and municipal services and their costs.

Social: Social factors affecting value closely follow the economic factors. They include characteristics of residents (age, size of families, educational levels, and income levels, etc.), population densities, and crime rate.

Although much of the above information, such as zoning, can be gathered from other governmental agencies, contact other real estate professionals, including fee appraisers, realtors, and property managers. Their insight may be useful.

After identifying the forces that cause any particular group of properties to function as a neighborhood, some counties document the boundaries of the neighborhoods on field maps. The maps may also include information about such things as zoning, topographic features, location of utilities, and street improvements.

Prepared field maps will help you apply uniform standards to properties influenced by like value forces. The maps will help the supervisory review of completed appraisals and will serve as an important aid in reconstructing the thought process that led to your value conclusions. These maps will also be useful when answering property owners' questions at the counter and when preparing testimony for appeals.

Many counties no longer post information on field maps but use GIS and aerial photos to access necessary information about the properties they are appraising.

Establish land values

After preliminary data gathering, establish the base land values and the adjustments to them. By establishing base standards (benchmarks) and market-derived adjustments, you can expect to achieve an acceptable level of uniformity in the mass appraisal program. For an in-depth discussion of developing base land values and market-derived adjustments, see Chapter 8, *"Mass Appraisal of Land."*

Once the land study is completed and the base land values are established, the base units of value should be noted on field maps. As always, you still must refer to land benchmarks for final land value determination.

In addition to setting base land values for bare land, you must also develop base land values for improved land, which includes a component for on-site development (OSD). The OSD component includes such items as sewer and water connections, landscaping, and other improvements to the land. The OSD component will generally be developed by one of two methods.

One approach is based on local contractor's cost for each item, which is used to develop separate values for each element. Alternatively, where the individual components of OSD are difficult to isolate, the land residual technique is used to develop an improved land value. This results in a land value that includes OSD as a component. No separate or additional charge for OSD is needed or appropriate when the land residual technique is used.

Establish quality class benchmarks

A cost factor book such as that published by the Marshall Valuation Service may serve as the basis for the market-related cost approach to value. When using cost factor manuals, be sure you understand what is, or isn't, included in the cost number. The beginning point for using cost manuals for the appraisal of large numbers of improvements is to establish base standards or benchmarks. For an overview of the market-related cost approach as used in this chapter, refer to Chapter 9, *"Mass Appraisal of Residential Properties."*

A benchmark is a reference point from which the value of other like properties is measured. To be consistent in determining the quality level of construction, establish quality class benchmarks for class, age, and type of structure.

Class benchmarks don't need to be sold properties or new construction. They are selected only for their ability to illustrate quality of construction. These properties must be inspected and an accurate description of the improvements made. Select enough representative samples of buildings for each type, quality class, and age to provide standards for achieving uniformity in classification among individual properties and individual appraisers.

Because of the variety of income-producing structures, you need a systematic method of establishing base standards. We recommend the use of Marshall Valuation Service.

Commercial cost manuals are divided into three basic categories: group, type, and class.

Group is the overall category for a building based on general use. Examples are apartments, motels, and restaurants.

Type is based on design characteristics within a group category. Examples of types found within the apartment group are low-rise, mid-rise and high-rise apartments.

Class is related to quality of construction.

Quality class benchmarks should be established using a standard format that includes exterior and interior color photos and a brief description of quality items. These worksheets are then combined into a notebook to be used by all appraisers assigned to the appraisal areas.

The supervising appraiser should field review all quality class benchmarks to ensure that uniformity is achieved.

Following is an example of a quality class benchmark worksheet.

Quality Class Benchmark

Benchmark # _____ Group _____ Type _____ Class _____

Account _____ Address _____

OUTSIDE PICTURE
3 x 5

INSIDE PICTURE
3 x 5

CONSTRUCTION DETAILS

Year Built _____
Foundation _____
Roof _____
Floor _____
Electrical _____
HVAC _____

Gross Floor Area _____
Ext Walls _____
Exterior _____
Ceiling _____
Plumbing _____
Other _____

Local cost modifier

Next, conduct a local cost modifier (LCM) study for use in the cost approach. Develop the LCMs from market data. Apply the LCMs to the cost factor book being used to reflect the current replacement cost new for the appraisal area as of the base appraisal date.

Conduct the LCM study according to the following guidelines:

- Select a representative sample of sales of newly constructed improvements of the type and class in the current appraisal area. These sold properties should be typical of the current market and shouldn't reflect abnormal discounts, unusual financing, or other atypical influences.
- Determine the sales price of the property. If necessary, time adjust the sale to the base appraisal date.
- Determine the improvement residual by subtracting estimated current land value and on-site development increment.
- Develop a replacement cost new estimate for the improvements in each sale.
- Within each building group, type, and class analyzed, total the improvement residual values and divide the result by the total of their replacement cost new.
- The result is a weighted LCM to apply to the cost factor book for that building group, type, and class. It will reflect current replacement cost new for the appraisal area as of the base appraisal date.

Because the commercial appraiser deals with a wide variety of building structures, individual modifiers would ideally be developed for each of the various groups, types, and classes of structures encountered. Since this is frequently not practical, we recommend you develop an overall LCM for the cost factor book. Do this by dividing the total of all improvement residuals by their total replacement costs new. Apply the generalized result to the remaining groups, types, and classes of structures for which there was insufficient data to develop a special modifier. Developing modifiers in this manner lends credibility to the completed market-related cost approach.

If adequate cost information for new construction isn't available, other methods of establishing current costs to build may be used. A composite of local direct costs (labor and materials) plus indirect costs (fees, construction financing, and developer's profit) can be developed and compared to the factor book data.

Another method involves the use of cost models that yield a reliable indication of current cost. Several models should be developed using the base standards as described in the cost factor book for several types of structures. Estimates to build these structures should then be gathered from local contractors in the area. Take care to ensure that both direct and indirect costs are included. Once these cost estimates are gathered, compare them against the replacement costs from the factor book.

Following is a suggested worksheet for gathering information on recently built structures or cost models.

Construction Costs—Field Notes

Construction Desription (Design and Use):

Group _____ Type _____ Class _____

Address _____
(Street Number and/or Location)

Property Owner _____ Phone _____

Address _____

Builder _____

Job Type _____

Person Interviewed _____ Phone _____

By _____ Date _____

Total Construction Cost $ _____ Date _____

(-) Site Preparation $ _____

(-) Other Exclusions $ _____

Net Cost to Principle Structure $ _____

(Attach photos here)

Structure Components

Item	Cost
Site preparation: Grading, excavation, fill, sewer & water, etc.	_____
Foundation: Footing, wall construction, excavation, backfill	_____
Exterior Walls: Frame, cover and wall construction, basement, parapet, openings	_____
Roof: Frame, cover and ceiling construction, overhang, vents gutters, insulation	_____
Floors: Frame, underpinning, ceiling and cover construction, mezzanines, balconies	_____
Partitions: Frame and cover construction, openings	_____
Interior Components: Cabinets, counters, stairs	_____
Electrical: Wiring and fixtures	_____
Plumbing: System and fixtures	_____
HVAC: Heating, cooling, and ventilation system	_____
Protective Finish: Exterior and interior	_____
Exterior Components: Loading dock, balcony, canopy, stairs, fire escapes	_____
Yard Improvements: Paving, curbs, walks, fencing, walls, lighting, drainage	_____
Miscellaneous: Financing, overhead and profit, appliances, equipment	_____
Total Cost	_____

Notes/Comments: _____

_____

_____

Whatever method is used for developing a LCM, the study must be well-documented and the information retained as part of the preappraisal set-up.

Market depreciation study

Depreciation benchmarks

The next step is to develop depreciation benchmarks.

Accrued depreciation is the difference between the replacement cost new and the present value of an improvement. It reflects the total loss in value that occurred as of the date of appraisal. Depreciation can be divided into three categories:

- Physical deterioration;
- Functional obsolescence; and
- Economic obsolescence (externalities).

In the market-related cost approach, the appraiser develops a market depreciation guide that reflects remaining percent good that combines all three categories of depreciation.

Develop benchmarks by neighborhood and type of structure. Sales used must be confirmed and inspected.

Use the following procedures to establish depreciation benchmarks.

- Time-adjust the sale to the base appraisal date.
- Subtract the estimated land value, including the on-site development (OSD) component, from the sales price to determine the improvement residual.
- Estimate the contributory value of any minor improvements (which generally have a much shorter life expectancy than the major improvement); subtract them from the total improvement residual. The remainder is a residual value for the depreciated major improvement.
- Divide the major improvement residual by the replacement cost new to indicate its remaining percent good.
- Select the representative depreciation benchmarks by type, class, and effective age.

Example:

Adjusted sale price	$ 150,000
Estimated land value	– 50,000
Estimated OSD value	– 10,000
Total improvement residual	$ 90,000
Estimated DRC of minor improvements	– 2,500
Major improvement residual	$ 87,500
Improvement cost new	$ 112,450

$87,500 ÷ $112,450 = 78% good (rounded)

Depreciation schedule

Once the depreciation benchmarks are completed, combine the indications of market value (remaining percent good) into a depreciation schedule by type and class covering the typical actual ages of properties in the neighborhood/appraisal area.

Develop this schedule by plotting the remaining percent good indications correlated with the actual age on a graph (See example in Chapter 9, *"The Mass Appraisal of Residential Properties"*). A depreciation schedule can then be developed from the graph.

With adequate sales, depreciation benchmarks can be used to develop a percent good guide for the properties being appraised. However, if sales of income-producing properties are limited, you may find it necessary to use published depreciation tables. If so, make every effort to adjust the tables to local conditions through sales analysis.

Due to many factors of obsolescence in income-producing properties (such as upper floor areas of limited use) take care that all accrued depreciation is considered. Loss in value due to obsolescence can be measured by market analysis of rent loss. An example of this process is given in Chapter 6, the *Cost Approach* section.

Following is an example of an income-producing property benchmark worksheet:

Depreciation Benchmark—Income Properties

Benchmark # _____ Group _____ Type _____ Class _____

Account _____ Address _____

Confirmed? _____ With _____ Appraiser _____ Date _____

Summary Data

Sale Date _____
Deed Reference _____
Sale Price _____
Year Built _____

Market Remaining Good _____
GIM _____ OAR _____

Sale Price
(Sq. Ft./Unit/Space) _____

Building/Land Ratio _____
Lot Coverage Ratio _____
Income/Expense Ratio _____

Gross Floor Area _____
Floor Area Breakdown _____
_____
_____
Foundation _____ Ext. Walls _____
Roof _____ Floor _____
Interior _____
Elec. _____ Plumbing _____
Heating/Cooling _____
Other _____
_____

LAND DESCRIPTION

Lot or Acreage Size _____

Description _____
_____
_____

Yard/Site Imprs. _____
Remarks: _____
_____
_____

MARKET DEPRECIATION

Date of Sale _____ Sale Price $ _____
Trended to _____ @ _____ Per Mo x No. of Mo. _____ = Adjust. Sale Price $ _____

RATING FOR ACTUAL AGE

Physical	P F A G E	
Functional	P F A G E	
Appearance	P F A G E	
Remarks _____		

Land Value _____ + Site Imprs. _____	- $ _____
Residual to Building Improvements	= $ _____
Depreciated Value of Minor Improvements	- $ _____
Major Improvement Residual	= $ _____
Replacement Cost New	$ _____
Indicated % Good from the Market	% _____

RMV AND FINAL RATIO

Land $ _____ OSD $ _____ IMPS $ _____ Total $ _____
Ratio of RMV to Adjusted Sale Price _____
Remarks: _____
_____
_____

Analyze income and expense data

Once income and expense data is gathered from area properties, analyze the information to establish economic rents and typical expenses. Apply these standards to the individual properties being appraised.

Following are sample analyses. First is a sample analysis of economic rent developed from information compiled from returned income questionnaires and from discussions with owners and occupants of properties during field inspections. The next example is a similar analysis conducted using the expense data gathered to estimate typical operating expenses.

Economic Rent Study—Spreadsheet

Group: Retail Store **Type: Commercial**

Appraisal Area _____
Neighborhood _____
Base Appraisal Date _____

Account # Address	Building Description	Bldg. Class	Year Built	Land Area	Bldg. Size	Rent per Month	Annual	Actual Rent Received	Vacancy & Credit Loss	Date of Lease	Lease Term	Remarks
7N 3E 23 CD 1750 4502 NE 42nd	1 Sty. Fr. Asb. Skk	4	1925	5000	1920	$365 0.19	$4,380	$4,167	5%	9-89	3 Yr	Average
7N 3E 23 CA 490 2633 NE 33rd	1 Sty. Fr. Stuc.	4	1925	12648	4864	$875 0.18	$10,500	$10,185	3%	1-90	5 Yr	Average Cond
7N 3E 23 CA 610 3346 NE Ferry St.	1 Sty. Conc.	5	1923	3800	3227	$742 0.23	$8,904	$8,904	0%	1-88	5 Yr	Good Cond
7N 3E 23 CD 550 4500 NE King Ave.	1 Sty. Fr. Bsmt. 1800 sq. ft. NU	4	1924	8800	7100	$1,065 0.15	$12,780	$12,141	5%	2-90	2 Yr	Bldg in Fair Cond
7N 3E 23 CB 290 2510 NE Wallace St.	1 Sty. Conc. & Comml.	4	1926	6526	6526	$1,109 0.17	$13,308	$13,042	2%	10-88	4 Yr	Average
7N 3E 23CC 1010 4701 NE Tegner Ct.	1 Sty. Conc. Blk.	5	1927	5000	5000	$1,250 0.25	$15,000	$14,400	4%	12-89	3 Yr	Good Cond New Remodel
					Mean	$0.195			3%			
					Median	$0.185			3.5%			

Conclusions:

Fair	$.15
Average	$.19
Good	$.25

Operating Expense Study—Spreadsheet

Group: Retail Store Type: Commercial

Appraisal Area _____
Neighborhood _____
Base Appraisal Date _____

Account # Address	Bldg Desc & Class	Cond	Actual Rent Received	Manager	%	Janitor	%	Supplies	%	Heat	%	Lights	%	Water	%	Garb	%	Insur	%	Maint	%	Resrv	%	Total Exp	Expense to Income Ratio
7N 3E 23 CD 1750 4502 NE 42nd	1 Sty Fr (4)	Avg.	$ 4,167	167	4	T		50	1	T		T		300	7	T		500	10	50	1	415	10	1482	35.6
7N 3E 23 CA 490 2633 NE 33rd	1 Sty Fr (4)	Avg.	$10,185	407	4	T		75	.7	T		T		509	5	T		1120	11	150	1	900	9	3161	31.0
7N 3E 23 CA 610 3346 NE Ferry St.	1 Sty Conc (5)	Good	$ 8,904	445	5	T		100	1	T		T		400	4	T		801	9	100	1	890	10	2736	30.7
7N 3E 23 CD 550 4500 NE King Ave.	1 Sty Fr (4)	Fair	$12,141	364	3	T		50	.4	T		T		485	4	T		1015	8	242	2	1850	15	4006	33.0
7N 3E 23 CB 290 2510 NE Wallace St.	1 Sty Conc (4)	Avg.	$13,042	522	4	T		100	.8	T		T		425	3	T		1300	10	390	3	1435	11	4172	32.0
7N 3E 2300 1010 4701 NE Tegner Ct.	1 Sty Conc Blk (4)	Good	$14,400	576	4	T		95	.7	T		T		450	3	T		1588	11	288	2	1856	13	4853	33.7
T = Tenant Pays			Mean		4				.8						4				10		1.7		11		32.7
			Median		4				.75						4				10		1.7		10.5		32.5

After analyzing income and expense information and establishing typical rents and expenses, apply benchmarks and base standards to the reappraisal area.

Following is an example of an income and expense benchmark worksheet:

Income & Expense Benchmark

Group _____ Type _____ Class _____

OUTSIDE PICTURE
3 × 5

Property Location

Account # _____
Address _____

Property Description

_____
_____
_____

Income & Expense Data

Rent $_____ sq. ft./unit/mo. × 12 mo. = $_____ × #_____ units = $_____

Rent $_____ sq. ft./unit/mo. × 12 mo. = $_____ × #_____ units = $_____

Rent $_____ sq. ft./unit/mo. × 12 mo. = $_____ × #_____ units = $_____

Rent $_____ sq. ft./unit/mo. × 12 mo. = $_____ × #_____ units = $_____

Total $ _____

Vacancy & Collection Loss (_____% of Gross) $_____

Effective Gross Income $ _____

Operating Expenses (_____% of EFI) $ _____

Reserves for Replacement (_____% of EFI) $ _____

Total Expense Ratio (% of EGI) _____%

Land to Building Ratio ____:_____

Develop capitalization rates and components

Various methods of developing capitalization rates are discussed in Chapter 6, the *Income Approach* section, and in standard texts such as those published by the International Association of Assessing Officers and the Appraisal Institute. In the following discussion, we will develop an overall rate for use in direct capitalization and will discuss various components of the rate used in the straight-line method.

Overall rate development

In developing an overall capitalization rate, make sure when extracting the rates that sale properties and appraised properties are comparable in their physical, functional, and economic characteristics.

- Property sales must be confirmed and must represent market value.
- If sufficient sales are available, group them according to property type and comparability so that a reasonable range of rates can be developed for each.
- Net income for the sale property must represent the same market (time period) as the time of sale.
- The income and expense ratios between sale comparables and appraised properties should be similar.
- Overall rates applied to improved properties must be selected from sales with similar land-to-building ratios as the properties appraised.
- Improvements of comparable sales must have a similar remaining economic life as the appraised properties.

Using the basic capitalization formula R = I ÷ V, where

R = rate, I = income (net), and V = value (sale price), an overall rate can be developed.

Example:

$25,000 (income) ÷ $175,000 (sales price) = 0.143 (rate)

Tax rate component

All counties in Oregon have many taxing districts, most with varying tax rates. An allowance for property taxes is included in the capitalization rate when the typical lease is a **gross** lease. If the typical lease is a **net** lease, the tenant pays the taxes and they are not a consideration. There are two ways to account for property taxes when developing an overall rate:

1. Exclude property taxes from expenses. If you exclude taxes from the expenses, dividing net income before discount, recapture, and taxes will produce an overall rate that includes a tax component. From this overall rate, the effective tax rate for the district can be subtracted, yielding the composite discount/recapture rate.

2. Include property taxes as an expense. The sold property may have been over or undervalued for assessment purposes, resulting in a sale price that varies widely from the RMV. As a result, the real estate taxes could be over or understated if based on RMV at the time of sale. A knowledgeable buyer will probably be aware of this. The taxes implied by the RMV will probably not reflect the best estimate of the buyer's expectations regarding their future property tax expense. Therefore, in developing the overall rate, calculate the taxes implied in the purchase price by multiplying the assessed value by the effective tax rate for that area. Subtract this amount along with the other expenses to derive a net income after taxes and before discount and recapture. The remaining net income after taxes (as implied by the sale price) will then yield a composite discount/recapture rate that accurately reflects the investors' expectations. In the example on the next page, this is displayed in columns 7, 8, and 9 of the *Overall Rate Analysis* spreadsheet. To develop an appropriate overall rate from the discount/recapture rate to appraise another comparable property, add the effective tax rate in the area of the property to be appraised to the composite rate.

Using sales of comparable properties, develop an overall rate as follows:

Overall Rate Analysis

015

GROUP: RETAIL STORE OVERALL RATE TYPE: COMMERCIAL CLASS: B

Sale No.	Sale Price (1)	Land Value (2)	Residual to Buildings (3)	Effective Gross Income (4)	Expenses (5)	Net Income (6)	Taxes (7)	Net Income After Tax (8)	Indicated Rate W/O Tax (9)	Expense Ratio (10)	Building Portion (11)
1.	$110,000	$46,000	$64,000	$21,500	$7,525	$13,975	$3,300	$10,675	.0970	35%	58%
2.	$175,000	$68,250	$106,750	$32,000	$10,500	$21,500	$4,900	$16,600	.0919	32%	61%
3.	$150,000	$63,000	$87,000	$26,087	$8,087	$18,000	$4,050	$13,950	.0930	31%	58%
4.	$136,000	$61,200	$74,800	$25,576	$8,440	$17,136	$4,080	$13,056	.0960	33%	55%
5.	$142,500	$57,000	$85,800	$26,406	$8,450	$17,956	$4,418	$13,538	.0950	32%	60%
6.	$138,750	$58,275	$80,475	$25,301	$8,096	$17,205	$4,024	$13,181	.0950	32%	58%
								Mean	.0952	32.5%	58.3%
								Median	.0950	32%	58%

The range of overall rates as developed from these sales is 0.0919-0.097.

Conclusions:

Overall Rate Without Taxes	.0950
Expense Ratio	32%
Land to Building Ratio	42:58

1. Confirmed and adjusted price of income-producing property.
2. Land value established.
3. Sales price minus land.
4. Actual if considered economic by buyer. If not, buyer opinion of rent expected at time of purchase. If owner's estimate is not available, economic rent is used.
5. Buyer's estimate of expenses expected. Does not include tax. If unavailable, appraiser's estimate based upon typical expense study.
6. Effective gross minus expenses = net income before tax.
7. Property taxes based on assessed value and effective tax rates at the time of sale.
8. Net income before tax minus taxes = net income after tax.
9. Net income after tax divided by selling price = overall rate without taxes.
10. Expenses (#5) divided by effective gross income (#4).
11. 100 divided by (building residual divided by sale price).

Recapture rate development

Recapture rates provide a means to recover the building value during its remaining economic life. In reality, the recapture rate has little relationship to the actual physical deterioration of a building. It measures the remaining period of time that a building would be expected to yield a profitable income.

The recapture rate applied to an improvement is based on an estimate of remaining economic life. Estimates of economic life can be derived from the period of time:

- Buildings of a particular type are used before being demolished;
- Buildings of a particular type are used before undergoing a major renovation;
- Buildings of a particular type are vacant for an extended period;
- Investors are willing to tie up their capital in a particular property; and,
- Lenders are willing to make mortgage loans for the type and age of the properties being appraised.

Example:

From the study of comparable income-producing properties and through discussions with lenders and investors, it is estimated the remaining economic life of the subject property is 25 years. Dividing the economic life into 1 yields the indicated annual recapture rate.

1 ÷ 25 years = 0.04 per year

This means that 4 percent of the improvement value will be recovered annually on a straight-line basis. It also suggests that investors will invest equity and a lender will loan money on this property for 25 years. Furthermore, from the analysis of comparable properties, 25 years seems to be the typical recapture period for capital invested in improvements of this quality and condition.

When sales are available, the market's estimation of economic life can be determined using the basic capitalization formula:

R = I ÷ V where R = Rate, I = Income, and V = Value.

Example:

Building age: 20 years	Sales price	$200,000
0.09 Discount rate	Land value	40,000
0.03 Effective tax rate	Building value	$160,000
Net annual income before discount, recapture, and taxes		$30,000
Deduct taxes	($200,000 × 0.03)	6,000
Deduct discount	($200,000 × 0.09)	18,000
Net income before recapture, after discount and taxes		$6,000
Indicated recapture rate:	$6,000 ÷ $160,000 = 0.0375	
Indicated remaining economic life	1 ÷ 0.0375 = 26.7 years = 27.0 years (rounded)	

By using the sales of several properties that have improvements of different ages, a range of remaining economic life indications can be developed. These ranges will help you estimate the remaining economic life of other buildings.

Discount rate

The discount rate is best developed using the market comparison method. This method uses the basic capitalization formula:

$$R = I \div V$$

A reliable indication of discount can be calculated by following this format. An example of a discount rate analysis is provided in the spreadsheet on the following page.

When analyzing the indications of discount rates, consider the quality of the investment. The rate obtained from the sale of a property with a long-term lease to a quality tenant will probably be smaller than a rate indicated by a property that had a month-to-month lease from a relatively unstable tenant.

Reconstructing an overall rate from its components

After completing the analysis to isolate each of the components of the overall rate (discount rate, recapture rate, and tax rate), the overall rate is easily reconstructed to accommodate the specific needs within the reappraisal area. First, select the discount rate that is best supported for the property to be appraised. Then, add the implied recapture rate to the discount rate based on your conclusion regarding the remaining economic life of the improvements. To complete the reconstruction, the appropriate effective tax rate is added to the composite discount and recapture rate. This is the overall rate to apply to the estimated net income of the property being appraised. Following is an example of a discount rate analysis worksheet.

Discount Rate Analysis

Sale Number	Sale Price (1)	Land Value (2)	Residual to Buildings (3)	Effective Gross Income (4)	Expenses Including Tax (5)	NOI Before Recapture Discount (6)	Recapture Charges to Building (7)	Net Income Before Discount (8)	Indicated Discount Rate (9)
1	50,000	15,000	35,000	6,000	750	5,250	875	4,375	.0875
2	45,000	15,000	30,000	7,650	2,100	5,550	990	4,560	.1013
3	110,000	46,000	64,000	21,500	9,000	12,500	1,280	11,220	.1020
4	87,500	21,000	66,500	16,000	6,100	9,900	1,330	8,570	.0979
5	23,500	8,500	15,000	7,500	3,980	3,520	750	2,770	.1179
6	30,000	10,000	20,000	5,250	1,625	3,625	660	2,965	.0988
7	50,000	12,500	37,500	8,970	1,500	7,470	1,500	5,970	.1194
8	72,100	20,000	52,100	9,300	2,115	7,185	1,040	6,145	.0852
9	175,000	50,000	125,000	32,000	10,500	21,500	4,125	17,375	.0993
10	300,000	115,000	185,000	41,500	6,000	35,500	3,700	31,800	.1060
11	25,000	25,000	----------	2,890	310	2,580	--------	2,580	.1032

Range	.0852–.1194
Mean	.1017
Median	.1013

Remarks and final opinion of Discount Rate (10): Sale #11 is vacant land. Equal weight applied to all verified sales resulting in a discount rate indication of .1015.

1. Confirmed and adjusted price of income-producing property.
2. Land value established in land appraisal.
3. Sale price minus land value.
4. Actual if considered economic by buyer. If not, buyer opinion of rent expected at the time of purchase. If owner estimate is unavailable, economic rent is used.
5. Buyer estimate of expenses including taxes, reserves for replacement, and charges for personal property, if any. If unavailable, appraiser estimate based upon typical expense data is used. The tax expense is based on the sale price (assumed to be at market) and the tax rate in effect in the area of the sale at the time it sold.
6. Net operating income before recapture and discount but after taxes.
7. The recapture rate times the building residual (3).
8. Net operating income before discount but after recapture and taxes.
9. Net income before discount divided by the sale price equals pure discount.
10. By analyzing the range of indicated discount rates by various statistical methods, the appraiser develops an opinion of the property rate to be used.

Develop market base standards for use in the market approach

Base standards are developed through analysis of information contained in the data file along with the information collected during field review and sale verification. Some examples of base standards include price per square foot (land), per apartment unit, per theater seat, per square foot of net rentable area, and per square foot of gross rentable area.

Gather as much comparable information as possible. From this, develop units of comparison. The units of comparison selected depend upon the type of property being appraised, the amount of information available, and the appraiser's opinion of the reliability of the data analyzed. Following is a list of units of comparison that may be extracted for use in mass appraisal of income-producing property:

Unit of comparison	**Unit extraction method**
Price per unit	Sales price ÷ number of units
Price per space	Sales price ÷ number of spaces
Price per room	Sales price ÷ number of rooms
Price per square foot of gross leasable area	Sales price ÷ gross leasable area
Price per square foot of net leasable area	Sales price ÷ net leasable area
Gross income multiplier	Sales price ÷ gross annual income

An important part of performing a market analysis is to identify the unit of comparison that buyers and sellers relate with in making their decisions to buy or sell property. In general, if the analysis results in a wide variation in unit values, this suggests that the unit to which the market responds hasn't yet been found. On the other hand, a narrow range in unit values between property sales suggests that the correct market unit has been found.

For example, consider an analysis of motel sales that are similarly located and in comparable condition. Suppose that one motel has an average unit size of 400 square feet, whereas the other has units of 320 square feet. You might display the sale information as follows:

	Motel no. 1	Motel no. 2
Sale price	$1,400,000	$1,792,000
Rentable units	40	50
Price per unit	$35,000	$35,840
Unit size	400 sq. ft.	320 sq. ft.
Price per sq. ft.	$87.50	$112.00

The motel with larger units has 40 rentable rooms and sells for $1.4 million. This is equal to $35,000 per room or $87.50 per rentable square foot. The motel with smaller rooms has 50 rentable units and sells for $1.792 million. This is equal to $35,840 per room or $112 per rentable square foot. The sale price per square foot varies by almost 25 percent. But the sale price per room differs by only $840, a difference of less than 3 percent. From this analysis, you may conclude that in this market, buyers and sellers are relating more to the price per rentable room than to the price per square foot of rentable area. Thus, when using the market approach, the unit of comparison selected for motels in this example is the price per rentable room.

With the use of any unit of measure come a variety of considerations. You must be aware of the elements that can affect the level of each unit value. Some of the more common factors that may require adjustment to the units of comparison are outlined below:

- Age;
- Condition;
- Quality;
- Average size of unit, space, or room;
- Number of baths;
- Appliances;
- Amenities (view, pool, etc.); and
- Location.

Price per square foot of gross leasable area:
This unit is easy to extract from comparables, but needs to be adjusted for all differences.

Price per square foot of net leasable area:
This basis of comparison tends to be more accurate than price per square foot of gross leasable area because it concentrates the value indication on the area used to generate income, or that part actually occupied by a tenant. The impact of areas not directly producing income, such as common areas, storage rooms and mechanical rooms, is minimized in this unit of comparison.

Gross income multiplier (GIM):

Previously mentioned units of comparison don't address the market rent of the units being compared. The rent received for income-producing properties normally reflects the amenities provided. A distinguishing feature of the GIM approach is its focus on gross income. In arriving at the GIM, take care to select comparables that are similar. They must have similar income and expense ratios, and similar land-to-building ratios. (See discussion on gross income multipliers in Chapter 6, the *Income Approach* section.)

Without strong market support, it is better to use the unadjusted GIMs from highly comparable properties than to try to adjust GIMs from sales to match the quality and marketability of somewhat noncomparable properties. This is because the GIM technique implies a direct relationship between gross income and value. An undesirable property will likely generate a low gross income, whereas a new and highly desirable property will be expected to generate a high gross income. Therefore, the two properties, though varying widely in desirability, might display the same GIM, reflecting a relationship of direct proportion between quality, income potential, and value.

The comparative units developed by sales analysis in preparation for the market approach should be tabulated so you can visually scan the various units of comparison and isolate the one most relevant for the property to be appraised. The following spreadsheet shows one way to tabulate the information. This example is for illustration and selects from among an indefinite number of possible columns you might choose to include.

Market data analysis worksheet

Market Data Analysis

Group: Office Bldg **Building Class: C** **Building Type: Average**

Acct No. #	Bldg. Description	Eff. Age	Condition	Adj S/Price	Bldg Sq Ft.	# of units	SP/unit	SP/sq ft
20021	2-story block	20	ave	$204,000	2800	4	$51,000	$72.86
200262	1-story brick	10	good	$220,000	2400	3	$73,333	$91.67
200301	1-story block	12	ave	$400,000	5400	6	$66,667	$74.07
200458	1-story brick	7	good	$386,000	4000	4	$96,500	$96.50
200135	2-story block	15	good	$285,000	3600	4	$71,250	$79.17
	Totals	**64**		**$1,495,000**	**18200**	**21**	**$358,750**	**$414.27**
	Ave age:**13yrs (rd)**							
	Ave Sales Price:**$299,000**							
	Ave Sq Ft: **3640**							
	Ave # of Units: **4 (rd)**							
	Ave SP/Unit:**$71,750**							
	Ave SP/Sq Ft:**$82.85**							

Comments: acct # 200135 remodeled last year

Field inspect properties to be appraised

Once you complete the local cost modifier and depreciation studies, the next step is to make the field inspections.

Field inspection of property is needed to obtain a complete and accurate inventory of property characteristics. Although an inside inspection of buildings is always preferred, it's not always possible.

In addition to the physical characteristics of property, some of the information you should gather includes:

- The amount of rent.
- Whether the rent is considered economic by owner and tenant.
- The date the rent was agreed upon.
- Length of lease and renewal options.
- Utilities or services, if any, paid by landlord.
- Ownership of fixtures or equipment.
- Whether the rent has been adjusted for improvements made by the tenant.
- Whether the rent includes a charge for personal property, if any, owned by landlord.
- Landlord expenses.
- Expected rental adjustments.

During physical inspection, confirm the accuracy of any existing appraisal records and note any factors that may affect the rentability of the property.

Following are the applications of the three approaches to value of a hypothetical concrete tilt-up warehouse:

Compute the market-related cost approach to value

Using a cost factor book, compare the subject structure to one having comparable quality and utility as described in the base specifications. If necessary, adjust the total base cost to bring it in line with the quality of the property being appraised. The costs are further modified by applying two market-derived adjustments:

- The LCM and
- Market depreciation.

When estimating market depreciation, compare the subject to depreciation benchmarks. See Chapter 9, "*Mass Appraisal of Residential Properties,*" for details of developing replacement cost new estimates.

An example of the procedure used is shown by the market-related cost estimate for a concrete warehouse.

COST APPROACH

GROUP Miscellaneous TYPE Conc. Whse CLASS 5 — BASE FACTOR 15.53 /SQ FT. — LUMP SUM ADJ. FACTORS + OR —

GROUND FLOOR AREA 32000 ☑ STORIES 1 GROSS FLOOR AREA ☑

UNITS AVE. SIZE ☑ UNITS IN COMPLEX = $ X % /UNIT

FACTOR BOOK 1985 — BASE ADJ. FACTORS + —

FOUNDATION	(CONC) BLK BRICK (REINF)			
FRAME	BEARING WALL (PILASTERS) COL & BEAMS: WD CONC STL			
EXTERIOR WALL	HGT 24' WD FR: SGL DBL COVER: CONC: POURED (TILT-UP) BLK BRICK: SOLID VEN OTHER: STUCCO MTL & GLASS MTL FR: BEAM & GIRDER TRUSS COVER			
ROOF	CONST: WD FR CONC (STL TRUSS) TYPE: FLAT SHED GAB COVER: (BUILT-UP) COMPO SHGL SHAKE MTL			
FLOOR	WD FR: SGL DBL CONC: (GRADE) ELEV. REINF. COVER: (NONE) LINO H. WD CARPET VINYL TILE			
PARTITIONS	CONST: WD FR MTL MASONRY COVER: DRYWALL PLAS PANEL CEILING: DRYWALL PLAS ACCOU. TILE SUS. SYSTEM None			
INTERIOR + COMPONENTS	APPLIANCES: RANGE DISHWASHER HOOD/FAN GD INTER-COM BUILT-INS: FIR H-WD ELEVATOR ESCALATOR (FIRE SPKR)	1.04		
ELECTRICAL	(FLUO) INCAN. SPEC. FEW (AVE) MANY			
PLUMBING +	(TOIL) (LAV) (URINAL) TUB SHWR KIT SINK SERV SINK DR FOUN (HTR) 160 170 420 325			1075
HEATING-COOLING +	HEAT: FA ELEC (SUSP) Gas HT WTR COOL: COMB. SYS UNIT COOLERS	.55		
BASEMENT	(NONE) FULL X WALLS: CONC FLR: CONC UNFIN: FIN: WALLS FLOOR CEIL USE: HEAT/COOL:			
UPPER STORIES	(NONE) FLOOR: WD FR CONC COVER: PARTITIONS: WD FR MTL COVER: USE: HEAT/COOL:			
EXT. COMP.	CANOPY DOCK			
MISC. ADDITIONS	Office - Average Interior			
	900 ♂ @ 15.00			13500
	4 Additional Overhead Doors - 14' x 14'			
	4 @ 2000			8000

BUILT 1980 COST $

REMOD. 19__ COST $

EFFECTIVE AGE 10 years

REMARKS:

APPRAISER: ABC DATE 7-1-93

SUMMARY OF BUILDING COMPUTATIONS

SUB-TOTALS	+	17.12		22575
	—	0		0
TOTALS				22575

BLDG. AREA 32000 SQ FT UNITS X 17.12 = $547840

TOTAL BASE COST $ 570415

19 92 LCM 115 % X QUAL 100 % = 115 % MODIFIER

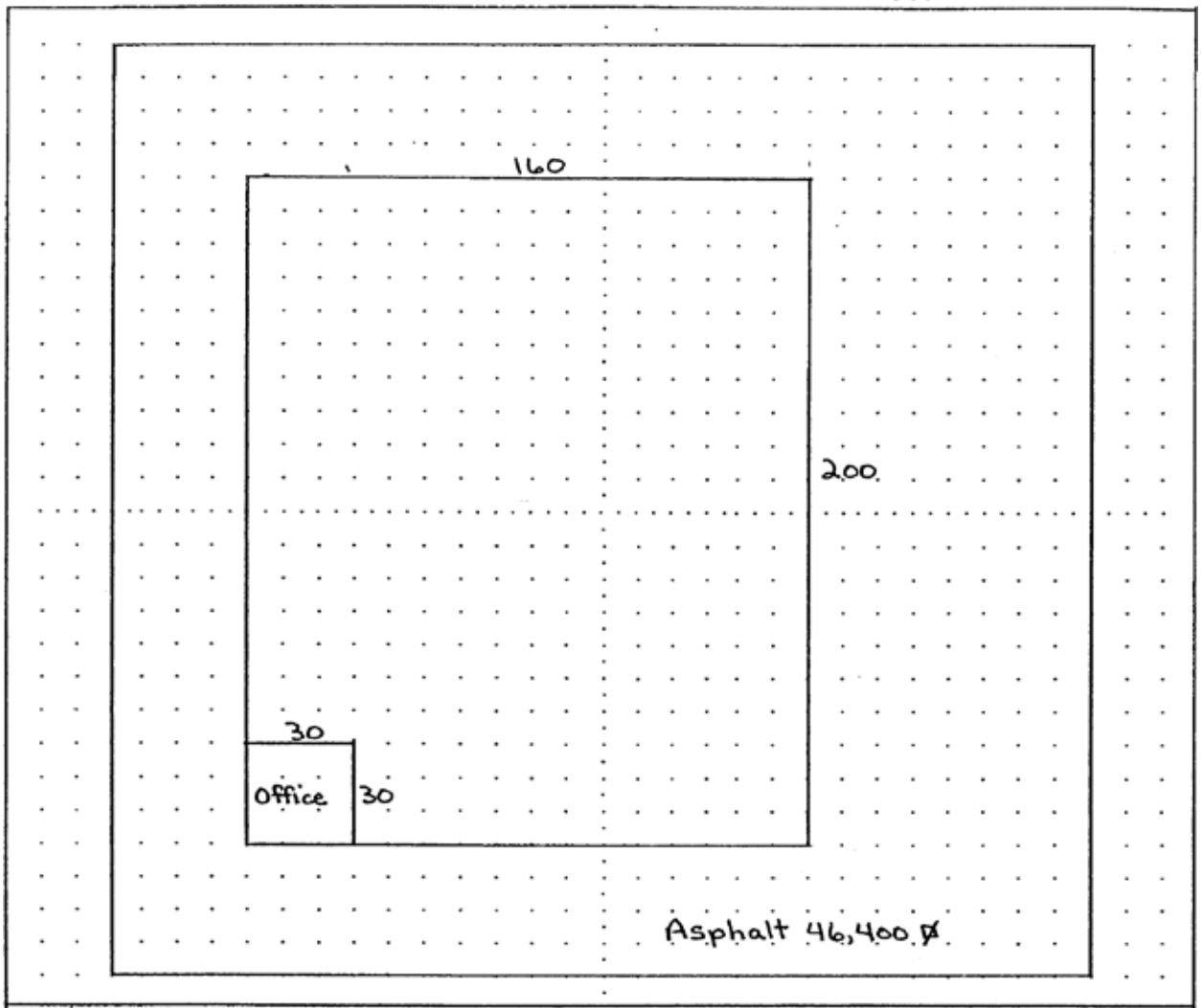
REPLACEMENT COST NEW $ 655975

DEPRECIATION 85 % PHY 100 % OBSOL 85 % GOOD

DEPRECIATED REPLACEMENT COST $ 557580

(TRANSFER TO SUMMARY)

BUILDING DIAGRAM-AREA COMPUTATION



YARD AND MISCELLANEOUS IMPROVEMENTS

ITEM	UNIT COST	NO. OR AREA	BASE COST	% QUAL	% INDEX	REPL. COST	% GOOD	DEPREC. REPL COST
Asphalt Paving	1.15	46400	53360		115	61364	80	49090
Utilities hookups & Systems development fees								11250
Landscaping								11000

TOTAL DEPRECIATED REPLACEMENT COST (TRANSFER TO SUMMARY) $ 71340

(Issued 7/94)

After completing the improvement card, the value of the land and OSD are added to the value of the improvements to complete the calculation of value.

Value indicated by the market-related cost approach:

Imps = $ 606,670
Land = $ 196,020
OSD = $ 22,250
Total = $ 824,940

Compute the income approach to value

In the income approach, the value of a property is a measure of its ability to provide a return on (discount), and a return of (recapture) the investment to the property owner. Through capitalization, the net income is used to determine the value of the property being appraised.

Using the income and expense study prepared for the area, examine and adjust the property's income and expense statement. It should reflect economic rent and typical expenses for the type of property being appraised.

After analyzing the income, select a method and technique of capitalization. See the *Income Approach* section of Chapter 6 for a discussion of methods and techniques of capitalization.

The net income after all allowable expenses is then capitalized using a rate that includes a component for discount, recapture, and effective taxes.

The following example illustrates the use of the income approach to value. In the course of making calculations, any rounding should reflect the same level of precision as the appraiser finds in the market.

Property data:

The property to appraise is a 32,000 square foot concrete tilt-up warehouse that includes a 900 square foot office. Actual monthly rent is $0.25 per square foot for the warehouse space and $1 per square foot for the office space. Landlord expenses are limited to management, insurance, maintenance, and taxes. Economic rent indicates that average quality warehouse space is currently renting for $0.30 per square foot. Comparable office space is currently $1 per square foot.

Estimate of potential gross income:

From the investigation and analysis of the economic rent data and base standards, it has been determined that the warehouse should rent for $0.30 per square foot, and the office space for $1 per square foot. The potential gross income is computed as follows:

Warehouse area	31,100 sq. ft. × $0.30 per mo. × 12 mos.	=	$ 111,960
Office space	900 sq. ft. × $1 per mo. × 12 mos.	=	+ 10,800
Total			$ 122,760

Vacancy and collection loss:

Based on the current level of occupancy reflected by the economic rent study, and assuming typical management and promotion, a reasonable allowance for vacancy and collection basis is 10 percent.

Effective Gross Income (EGI)

Potential Gross	$ 122,760
Less 10%	– 12,276
EGI	$ 110,484

Expenses:

Estimates of the expenses necessary for the operation of the warehouse, based on the comparison of the actual expenses incurred by the owner with the expense study and benchmarks, are:

Management:	5 percent of EGI ($110,480 x 0.05)	$ 5,520
Insurance:	According to the owner income and expense statement, the owner is currently paying $5,550 for a 3-year fire and liability policy. ($5,550 ÷ 3 = $1,850)	$1,850
Repairs and maintenance:		
	Based on a long-term average estimated at $0.02 per sq. ft. (32,000 sq. ft. × 0.02)	$ 640

Reserves for replacement:

Roofing:	Built-up 15 year life (32,000 sq. ft. × $1.15 sq. ft. × 1.15 LCM ÷ 15 yrs.)	$2,820
Heating:	20 year life (32,000 sq. ft. × $0.55 sq. ft. × 1.15 LCM ÷ 20 yrs.)	$1,010
Hot water heater:	10 year life ($325 × 1.15 LCM ÷ 10 yrs.)	$40

Capitalization rate and method:

A study of warehouse sales in the appraisal area, on which income and expense information was verified, indicates an overall rate excluding taxes in the range of 0.083 to 0.149. The average indication for the typical warehouse of the same effective age as the subject is 0.092. Typical expense ratios indicating 10–15 percent of effective gross income was normal. The land value portion was typically 25 percent of the total property value.

In comparing the subject property against the base standard, the subject is typical. Therefore, the 0.092 rate was selected. This rate is a composite rate that includes discount and recapture and was developed from sales using taxes as an expense. Since the property taxes haven't been included as a projected expense for the subject, the effective tax rate will be added to the capitalization rate.

Value estimate by the income approach:

Potential gross income

Warehouse area 31,100 sq. ft. × $0.30 × 12 =	$111,960	
Office space 900 sq. ft. × $1.00 × 12 =	10,800	
	$122,760	
Less vacancy and collection loss 10%	– 12,280	
Effective gross income	$110,480	
Less operating expenses:		
Management	$5,520	
Insurance	1,850	
Repairs and maintenance	640	
Reserves:		
Roof	2,820	
Heat	1,010	
Water heater	40	
	– 11,880	(11% rounded)
Net income before discount, recapture, and taxes	$ 98,600	
Overall capitalization rate		
Composite discount and recapture rate	0.0920	
Effective tax rate	0.0300	
Overall rate	0.1220	
Value indicated by income approach ($98,600 ÷ 0.1220)	$808,200	(rounded)
Less land	– 196,020	
Indicated improvement value	$612,180	

Compute the market approach to value

The base standards developed for the market approach indicate a wide range of sale prices per square foot, including land and buildings. Prices range from a low of $14.70 per square foot to a high of $34.95 per square foot. The recent sales of average concrete tilt-up warehouses indicate a narrower range of $23 to $27 per square foot. Considering all variables, $25 per square foot is selected as a reasonable unit of comparison including both land and buildings.

Value indicated by the market approach:

32,000 sq. ft. × $25 = $800,000

Reconciliation of the three approaches

Reconciliation is the final step in estimating value. It is the process of relating the data gathered, developing the three standard approaches to value, analyzing and weighing the strengths and weaknesses of each approach, and determining which approach is best supported.

Ultimately, the most relied on approach will be the most defendable and best supported approach. The other two approaches provide additional support.

Any of the approaches may be the best indicator of value. The type of property being appraised and the strength of the data usually determines the best approach. Each approach will probably produce a somewhat different estimate of value. Your choice of the best indicator should be supported in the

reconciliation. If the three approaches indicate large variations in value estimates, you should reexamine the appraisal.

Example of the reconciliation process for an income-producing property:

The three indications of value:

Market–related cost approach	$824,940
Income approach	$808,200
Market approach	$800,000

In this example, the three approaches indicate values within 3 percent of each other. It is still necessary to select one of the values as the best indicator.

Since the subject is an income-producing property and there is current market rental demand for warehouse space, the value indicated by the income approach provides the best estimate of market value. Good data from confirmed sales of comparable properties and the historic income and expenses of the subject further support the conclusion of this approach.

After consideration of all available data relevant to this appraisal, the conclusion of value for this property is $808,000.

Conduct supervisory review

As the appraisers complete their work, the supervising appraiser reviews a sampling of each appraiser's work product. The review appraiser uses the base standards to ensure that uniformity and equity is being achieved between comparable types of properties and between appraisers.

At the completion of the reappraisal program, the data analyst conducts a final sales ratio study. If the study indicates a change in value level since the base appraisal date, adjustments are applied to the completed appraisals to reflect the value as of the January 1 assessment date.

Summary

The most effective approach to the valuation of income-producing properties uses all three approaches to value. Since income property is generally purchased for its ability to provide both a return on (discount) and a return of (recapture) the investment to the buyer, you will generally place more weight on the income approach, assuming enough supportable data is available.

By applying sound judgment to all available data, you can develop base standards that can be used to estimate supportable value conclusions.

Chapter 11

Mass Appraisal of Farm and Ranch Properties

Mass appraisal of farm and ranch properties follows the same steps as appraisal of other types of property. The appraisal staff develops base unit values and applies these values, along with adjustments, to a large number of individual properties to establish accurate market value estimates.

Rural properties are bought for many reasons. Prices vary as reasons for buying change. Some of the reasons are:

- Income–producing capabilities from a farming operation.
- Income–producing capabilities and speculation.
- Speculation and development (dividing into smaller parcels and/or subdivisions).
- Amenities offered and supplemental income (smaller noneconomic units).

The procedures for mass appraisal of rural properties are:

- Classify the land as to soil capabilities and prepare soil classification maps;
- Establish value zones;
- Collect water rights information;
- Perform preappraisal set-up; and
- Reappraise area.

Land classification

Land classification is conducted in the field with the use of aerial photos. Compare the photo to the field conditions to discover any changes that may have occurred since the photo was taken, such as clearing, leveling, or irrigation. Determine characteristics such as soil depth and texture. Soil classification lines are drawn directly on the aerial photo. Examine the aerial photos to identify the land capabilities and uses. Obvious physical features such as cultivated land and rock outcroppings can be identified on the photograph. Document any changes on the aerial photo.

Transfer the land classification details from the aerial photos to the soil classification maps. In this way, ownership lines, land classes and acreage by land class for each ownership, as well as roads, ditches, and streams are on each map.

Land classes may vary somewhat from county to county. However, the following classing system is considered basic and will apply in most instances. For complete descriptions of land classes and subsymbols, refer to the Department of Revenue's, *Farm Use Manual,* 150-303-422.

The major classes are identified by roman numerals I through VIII.

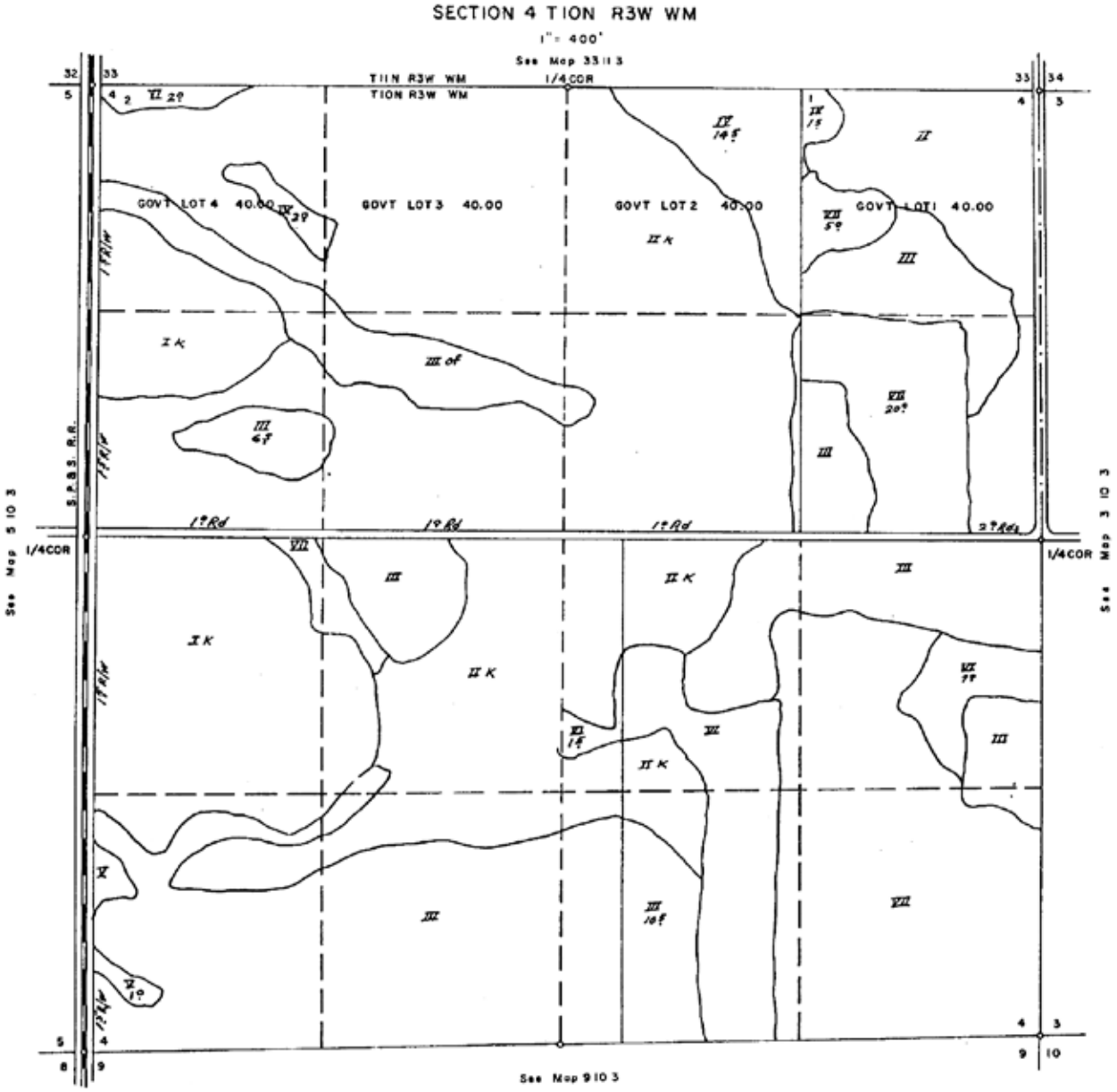
- Classes I through IV cover land that is, or could be, tilled. I is best and IV is least desirable. These categories are referred to as crop land.
- Classes V, VI, and VII cover land generally not tillable because of steep slopes, rocky soils, and other limiting factors.
- Class VIII is generally unusable land and is referred to as wasteland.

In addition to the eight major classes, nine subsymbols are available to further classify the land. These are used in conjunction with the major classes:

k	river bottom soils	f	nontillable land–suitable for clearing
b	bench land	cg	clearing
h	hill land	cd	cleared
of	overflow	rv	reverted
m	meadow		

To help determine land classes, obtain information and land capability from soil surveys made by the Soil Conservation Service (SCS). Also, in certain areas, the Bureau of Reclamation maps indicate irrigation potential, and Army Corps of Engineers maps indicate drainage and related qualities. Guides to other sources of information about land capabilities and classes are available from the county extension service. See the following soil classification map as an example.

Example of soil classification map



Value zones

Basic land class values are established on a per-acre basis for each class of land. It is often necessary to divide the county into value areas or zones. Geological or economic conditions might change the value for the same class of soil in different areas. Variables such as rainfall, frost zones, and distance to market centers can result in different values for the same class of land.

Water rights

Irrigation is an important addition to the land, provided the land can respond to the water. The same amount of water applied to two different types of soil can produce different benefits. This may result in different value levels of contribution from the water.

Water right priorities are based on the date the water right was established. The earlier the water right is established, the greater the right to benefit from available water.

When a water right is secured for a parcel of land through the application and approval process, that right is adjudicated to the land. The value of the water is generally reflected in the land value. The exception is where the water is applied to different parcels of land within the ownership in different years. In these cases, and in areas where water rights can be sold separately, the water may be valued separately from the land.

Water for irrigation can be obtained from several sources. Information regarding these sources or water rights in general is available from:

- Irrigation district offices;
- District Water Master; and
- Water Resources Department.

Valuation of water rights

The value of water rights can be determined by comparing sales of similar land where one sale has water rights and another doesn't. Also, in areas where water rights are sold separately from the land, the value of the water right will be found in sales of the water right only. The local water master or irrigation district should have record of sold rights.

In areas where the water rights are not sold separately, the value can be determined by capitalizing the added production from irrigation into an indication of value for the water.

Preappraisal set-up

The steps are the same as discussed in Chapter 9. This chapter will focus on those procedures unique to farm and ranch properties.

Collect and confirm sales data

Gather information concerning sales from sources such as deeds, realtors, and owners. Interview buyers and sellers to determine if sales are representative of the market. Verify the following sales information:

- Personal property involved;
- Building details;
- Acres of crop land and production;
- Need for crop deduction;
- Income and expense data;
- Participation in government programs; and
- Any other items relating to value.

Determine crop deduction

ORS 215.203, 307.315, 307.320, 307.325, and 321.267(3) define items grown on agriculture lands that are exempt from taxation. They include:

- Cultured Christmas trees;
- Deciduous trees;
- Shrubs;
- Plants or crops (annual or perennial);
- Hardwood timber;
- Nursery stock; and
- Agricultural products.

To make sure the value of the plants and crops are not included in the appraised value of the land, deduct the value of any deciduous trees, plants, and crops from sales before establishing base unit values.

For land in production (owner operator), deduct the value of any plants or crops included in a sale.

Consider:

The cost of the seed, shrub, nursery tree, or cutting;

- The cost of planting and establishing a crop;
- The risk involved;
    - — Establishing the stand (loss implies replanting),
    - — Continuing the stand (loss of an annual harvest); and
- The quality and quantity of the stand.

If you have enough sales of bare land to establish the base value, the statutory provisions will have been met. However, this probably won't occur except in areas that are primarily devoted to grain farming. In other areas, bare land sales may be only of sufficient quantity to provide a check on the value of the growing crop arrived at by the cost of establishing the stand.

You can get information about the cost of seed and planting costs from extension service offices, farmers, and others involved in agriculture.

For land not in production (bare) or leased land (no expenses to owner), no crop deduction is warranted.

Determine base unit values

To develop an indication of value for each soil type contained in a sold property, rate the soils by their relative productivity. The typical productivity for each land class can be determined using information published by the Soil Conservation Service, Extension Service, or can be obtained directly from farmers. The indicated productivity is converted into percentages by using the predominate soil type as 100 percent.

The value for the one-acre homesite is developed from comparable land sales. Use the average price per acre method explained in Chapter 8. The on–site development (OSD) value is then added to the one-acre value.

Example:

Sales price	$505,000	
House and garage	–75,000	
Out buildings	–45,000	
Machinery and equipment	–60,000	
Crop deduction	–2,500	(100 acres alfalfa @ $25.00/acre)
1–acre homesite	–6,000	(developed from comparison to rural land sales + OSD)
Class VII 9 acres	–1000	(allocated @ $100/acre)
Total	**–189,500**	
Residual to farmland	$315,500	
Class II	100 acres	
Class III	180 acres	
Class IV	80 acres	
Class VII	10 acres	
Total size	**370 acres**	

Typical production Class II land	= 6 ton	alfalfa/acre
Typical production Class III land	= 4 ton	alfalfa/acre
Typical production Class IV land	= 3.2 ton	alfalfa/acre

Class III	(4 ton)	= 100%	
	6 ton ÷ 4 ton	= 150%	for class II
	3.2 ton ÷ 4 ton	= 80%	for class IV
Class II	100 acres × 1.50	=150	
Class III	180 acres × 1.00	=180	
Class IV	80 acres × 0.80	= 64	
Total equivalent Class III acres		**394**	

$315,500 ÷ 394 = $801 indicated average value per acre

Class II	**Class III**	**Class IV**
$801	$801	$801
×1.50	×1.00	×0.80
$1,201 per acre	$801 per acre	$640 per acre

Class II	100 acres × $1,201 =	$120,100
Class III	180 acres × $ 801 =	$144,180
Class IV	80 acres × $ 640 =	$ 51,200
		$315,480 *(Doesn't equal $315,500 due to rounding)*

Income approach to establish base unit values

In areas where sales are insufficient to establish base values for different land classes, use the income approach to develop an estimate of value.

Collect information about cash rents, share rents, production, and expenses from farmers, extension service, rural property managers, and lending agencies. Analyze the available sales to determine the expected rate of return by investors in agricultural properties. Convert the average income for each land class to an indication of value.

Developing rate of return

Sale #1 ($17,000 down, balance @ 7%)	$169,000
Improvements	– 85,000
Personal property	– 17,000
1 acre homesite (+OSD)	– 6,000
	– $108,000
Net to farmland	$ 61,000

Acres	Class	Rent/acre	Exp/acre	Typical net Income/acre	Net Income
65.0	III	$41.75	$2.75	$39.00	$2,535
25.0	V	$18.75	$0.75	$18.00	$ 450
				Total net income to farmland	$2,985

$2,985 ÷ $61,000 = 4.9% overall rate (including taxes).

Each sale is analyzed as shown above. The indicated capitalization rates are tabulated into a final estimate of the applicable rate to be used.

Developing base unit values by the income approach

After typical income for each class of farmland is established, divide the net income by the rate to develop the value for that class.

Example:

Class II
Net income $59.00 per acre ÷ 4.9% = $1,204
Class II base value $1,200 (rounded)

Class III
Net income $39.00 per acre ÷ 4.9% = $ 796
Class III base value $ 800 (rounded)

Class IV
Net income $31.00 per acre ÷ 4.9% = $ 633
Class IV base value $ 630 (rounded)

Class V
Net income $18.00 per acre ÷ 4.9% = $ 367
Class V base value $ 370 (rounded)

The indicated rate of return developed from sales of farm properties will usually be much lower than rates found from sales of other properties. This is due, in part, to the amenities involved but is primarily due to anticipated appreciation of the land value.

Developing a base value schedule

Indicated values by land class from the sales and/or income approach are tabulated to develop the final base unit values as follows:

Sale	II	III	IV	V	VI	VII
1	$1,201		$633		$210	
2		$780			$170	$95
3		$815		$360		
4	$1,204			$385		$111
5			$655		$203	
6	$1,225	$796				$85
7			$600	$375		
8	$1,190					
9			$664			
10					$225	
Totals	$4,820	$2,391	$2,552	$1,120	$808	$291
Mean	$1,205	$797	$638	$373	$202	$97
Base value conclusion	$1,200	$800	$640	$370	$200	$100

Appraisal benchmarks

Benchmark farms are established to provide a standard for each class of land within each value zone in areas where sales are lacking. The properties selected are those that best represent the typical farm or ranch operation in the area.

A detailed appraisal is made of the benchmark properties on an individual basis using the sales comparison and income approaches.

Example:

Appraisal of Jones farm
Benchmark number three
Zone one

Summary of pertinent facts and conclusions:

1. **Market value conclusion** $160,000
   a. Indication by sales comparison $160,100
   b. Indication by income approach $159,510
2. **Purpose of the appraisal:** To establish a standard for uniform application of base unit values.
3. **Location:** The subject property lies just north of Lip Creek county road in the Round Hill district. Almost all farming is diversified and demand is high for properties in this area. Markets for all farm products are within 20 miles.
4. **Soils:** The tillable land of the subject is mostly Woodburn and Wapato soils. The classification is as follows:

99.5	acres	II
15.5	acres	III
29.5	acres	IV
11.0	acres	V
1.0	acres	VI
51.5	acres	VII
Total 208.0	**acres**	

5. **Sales comparison approach**

Class	Acres	Unit value from base schedule	Total value
II	99.5	$1,200	$119,400
III	15.5	800	12,400
IV	29.5	640	18,880
V	11.0	370	4,070
VI	1.0	200	200
VII	51.5	100	5,150
			$160,100

6. **Income approach**

Approximately 120 acres are used for rotation between row crops and oats. Typical rent for this type land is $60 per acre. The balance of the property is used for pasture. Estimated carrying capacity – 195 AUMs. (AUMs) Animal unit months. See glossary for definition.

Gross income	
120 acres @ $60/acre	$7,200
195 AUMS @ $5.50 per AUM	+1,072
Total income	**$8,272**
Expenses	
Management 3%	$248
Fence maintenance $1 per acre	+208
	$456
Net income ($8,272 - $456)	**$7,816**
Capitalization ($7,816 ÷ 4.9%)	**= $159,510**

Note: The capitalization rate is developed by comparison. Net income to farmland is divided by net sales price of farmland. ($7,816 ÷ $160,100 = 4.9%)

7. **Reconciliation and final estimate of value:** The value of the subject land indicated by sales comparison is $160,100. Indication of value by income of $159,510 supports the conclusion of value arrived at by comparison and the final estimate of value is set at $160,000.

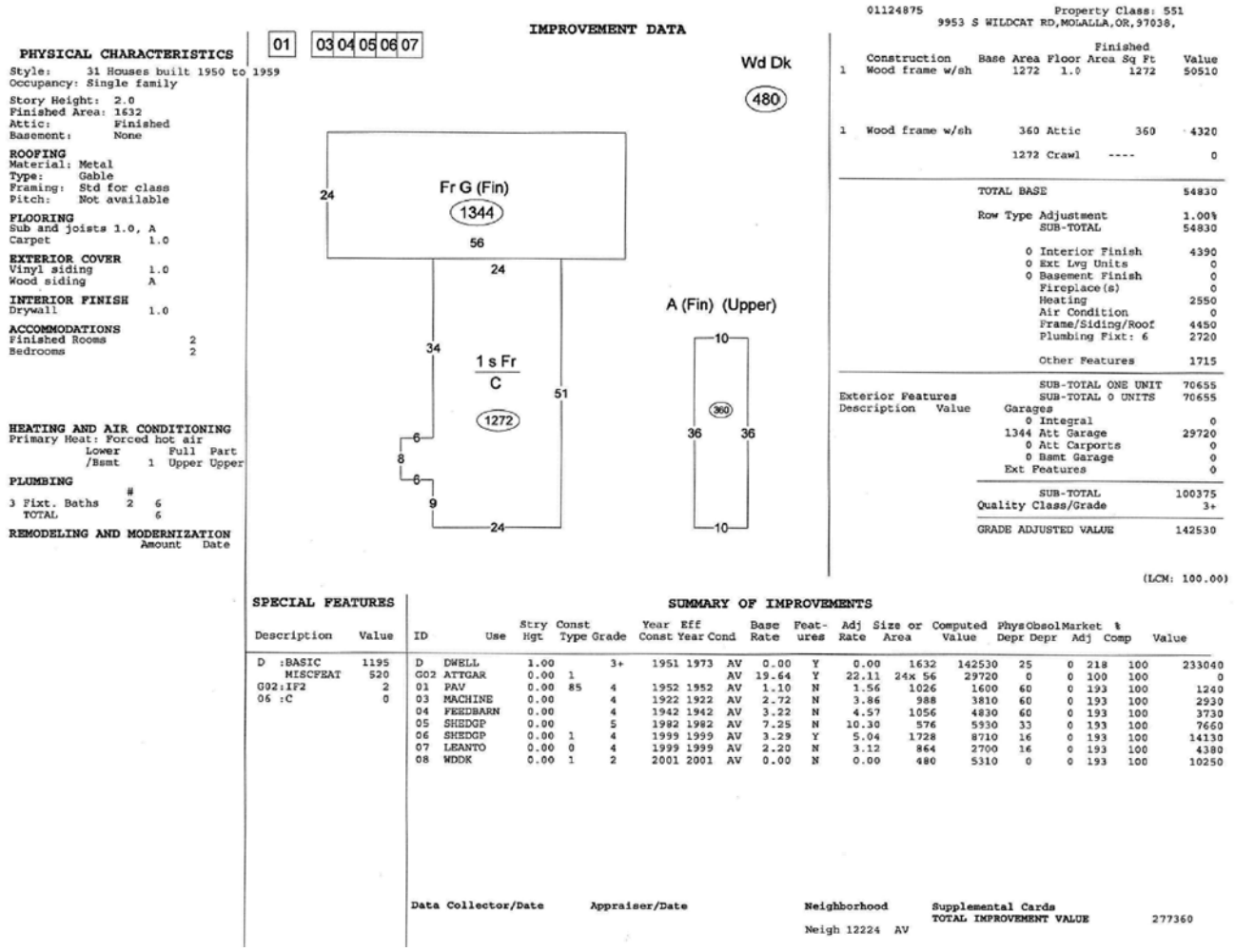
8. **Addenda**

   a. Area map showing location of subject and sales.
   b. Soil classification map of subject.
   c. Comparable sales and analysis chart.
   d. Capitalization rate analysis chart.
   e. Value schedule - Zone 1.

The benchmark appraisals are used for a comparative standard for the appraisal of properties in the area. You should use these for references to tie the schedules to the properties you will be appraising.

Valuation of rural buildings

The valuation of rural buildings is divided into two parts: dwellings and farm buildings. In each case, the beginning point is the development of the replacement cost by using the *Cost Factors for Residential Buildings* or the *Cost Factors for Farm Buildings.* An example of a building diagram card showing the location of farm buildings in relation to the residence follows:



01124875 Property Class: 551
9953 S WILDCAT RD,MOLALLA,OR,97038,

IMPROVEMENT DATA

PHYSICAL CHARACTERISTICS

Style: 31 Houses built 1950 to 1959
Occupancy: Single family
Story Height: 2.0
Finished Area: 1632
Attic: Finished
Basement: None

ROOFING
Material: Metal
Type: Gable
Framing: Std for class
Pitch: Not available

FLOORING
Sub and joists 1.0, A
Carpet 1.0

EXTERIOR COVER
Vinyl siding 1.0
Wood siding A

INTERIOR FINISH
Drywall 1.0

ACCOMMODATIONS
Finished Rooms 2
Bedrooms 2

HEATING AND AIR CONDITIONING
Primary Heat: Forced hot air
Lower /Bsmt 1 Full Upper Part Upper

PLUMBING
Fixt. Baths 2 6
TOTAL 6

REMODELING AND MODERNIZATION
Amount Date

01 | 03 04 05 06 07

Wd Dk
480

Fr G (Fin)
1344
24
56
24

1 s Fr
C
1272
34
51
6
8
6
9
24

A (Fin) (Upper)
10
360
36 36
10

	Construction	Base Area	Floor Area	Finished Sq Ft	Value
1	Wood frame w/sh	1272	1.0	1272	50510
1	Wood frame w/sh	360 Attic		360	4320
		1272 Crawl		----	0

TOTAL BASE 54830
Row Type Adjustment 1.00%
SUB-TOTAL 54830
0 Interior Finish 4390
0 Ext Lvg Units 0
0 Basement Finish 0
Fireplace(s) 0
Heating 2550
Air Condition 0
Frame/Siding/Roof 4450
Plumbing Fixt: 6 2720
Other Features 1715
SUB-TOTAL ONE UNIT 70655
SUB-TOTAL 0 UNITS 70655

Exterior Features
Description Value

Garages
0 Integral 0
1344 Att Garage 29720
0 Att Carports 0
0 Bsmt Garage 0
Ext Features 0
SUB-TOTAL 100375
Quality Class/Grade 3+
GRADE ADJUSTED VALUE 142530

(LCM: 100.00)

SPECIAL FEATURES

Description	Value
D :BASIC	1195
MISCFEAT	520
G02:IF2	2
06 :C	0

SUMMARY OF IMPROVEMENTS

ID	Use	Stry Hgt	Const Type	Grade	Year Const	Eff Year	Cond	Base Rate	Feat-ures	Adj Rate	Size or Area	Computed Value	Phys Depr	Obsol Depr	Market Adj	% Comp	Value
D	DWELL	1.00		3+	1951	1973	AV	0.00	Y	0.00	1632	142530	25	0	218	100	233040
G02	ATTGAR	0.00	1				AV	19.64	Y	22.11	24x 56	29720	0	0	100	100	0
01	PAV	0.00	85	4	1952	1952	AV	1.10	N	1.56	1026	1600	60	0	193	100	1240
03	MACHINE	0.00		4	1922	1922	AV	2.72	N	3.86	988	3810	60	0	193	100	2930
04	FEEDBARN	0.00		4	1942	1942	AV	3.22	N	4.57	1056	4830	60	0	193	100	3730
05	SHEDGP	0.00		5	1982	1982	AV	7.25	N	10.30	576	5930	33	0	193	100	7660
06	SHEDGP	0.00	1	4	1999	1999	AV	3.29	Y	5.04	1728	8710	16	0	193	100	14130
07	LEANTO	0.00	0	4	1999	1999	AV	2.20	N	3.12	864	2700	16	0	193	100	4380
08	WDDK	0.00	1	2	2001	2001	AV	0.00	N	0.00	480	5310	0	0	193	100	10250

Data Collector/Date Appraiser/Date Neighborhood
Neigh 12224 AV
Supplemental Cards
TOTAL IMPROVEMENT VALUE 277360

Dwellings

The residential buildings on farm properties are influenced by many of the same factors that determine value for single family dwellings. The best support for market indications and depreciation guides may be developed by using data gathered from sales of tract type properties in an area having similar amenities. Generally, the appraiser follows the same procedures used for improvements on rural tract properties, as discussed in Chapter 9.

Farm buildings

Review the farming operations in the area to establish building benchmarks that indicate the types and sizes of the buildings that constitute functional improvements.

With the typical types of farm buildings in mind, you can answer the following questions to develop a reasonable value estimate for farm buildings.

- In your judgment, what is the estimated physical condition?
- Does the building now, or could it, provide practical shelter for livestock, grain, feed, machinery, or supplies on the subject property?
- Does the building conform to the present farming systems of the area? If not, could it be economically altered to fit?
- Does all or part of the building contribute to the value of the farm?

- Is the building typical of the area?
- If the building were destroyed, would it be replaced by the same building today?
- Does the building add an aesthetic value that the market recognizes?

In most cases, answering these questions will help determine the amount of accrued depreciation that applies to a particular farm building. Farm buildings not used for their original purpose should be adjusted to reflect the present usefulness or aesthetic value, rather than the use intended by its original design.

Due to changing farming methods and/or crops, it is common to find farm buildings that are limited in use or completely unnecessary to the present farming operation. You must estimate the usefulness of the buildings. Often, buildings with little or no utility are given a value by appraisers merely because the building exists. However, your value estimate should reflect actual market value. If a particular building doesn't have value to purchasers it shouldn't be included in the appraisal as a value item. It's correct, however, to note the existence of the building on the appraisal card and state a reason for zero value (if the account is an improvement only account, the overall value can't be zero).

Example of percent useful:

The subject building is a 3,000 sq. ft. loft barn in good physical condition. However, due to changing farming practices it is now used as a machine and seed storage building. New construction in the area for the same use is typically a 2,000 sq. ft. utility building. The physical percent good of the subject is estimated at 75 percent. To find the percent useful, the cost new of the replacement building is divided by the cost new for the subject building. The costs new are estimated by using the cost factors contained in the Department of Revenue's *Cost Factors for Farm Buildings.*

1. **Calculating replacement cost new:**
   Class 5 utility building
   2000 sq. ft. × $6.70 = $13,400 (cost new)
   Class 5 loft barn
   3000 sq. ft. × $10.40 = $31,200 (cost new)

2. **Calculating the percent useful:**
   Utility building ÷ loft barn = percent useful
   $13,400 ÷ $31,200 = 43%
   Note: Physically, the loft barn appears to be approximately 75 percent good.

3. **Calculating the percent good:**
   75% physical × 43% useful = 32% good
   Depreciated replacement cost = $31,200 × 0.32 = $9,980 (rounded)

Other forms of functional obsolescence must be considered separately. The above technique doesn't measure obsolescence resulting from poor layout and design. Examples of these include low ceiling height, support posts set closely together, and other items that restrict use.

Another type of functional obsolescence is over-improvement caused by a super abundance of buildings. Each building may be typical of the building type needed for the present highest and best use of the land. Due to a surplus number of buildings, each building is assigned a portion of the obsolescence reflected in the total. For example, there are three hay storage barns on a property that needs only two. In such a case, each building suffers an equal amount of functional obsolescence. If one of the buildings is unfavorably located and is seldom used, most or all of the obsolescence would likely accrue to that building.

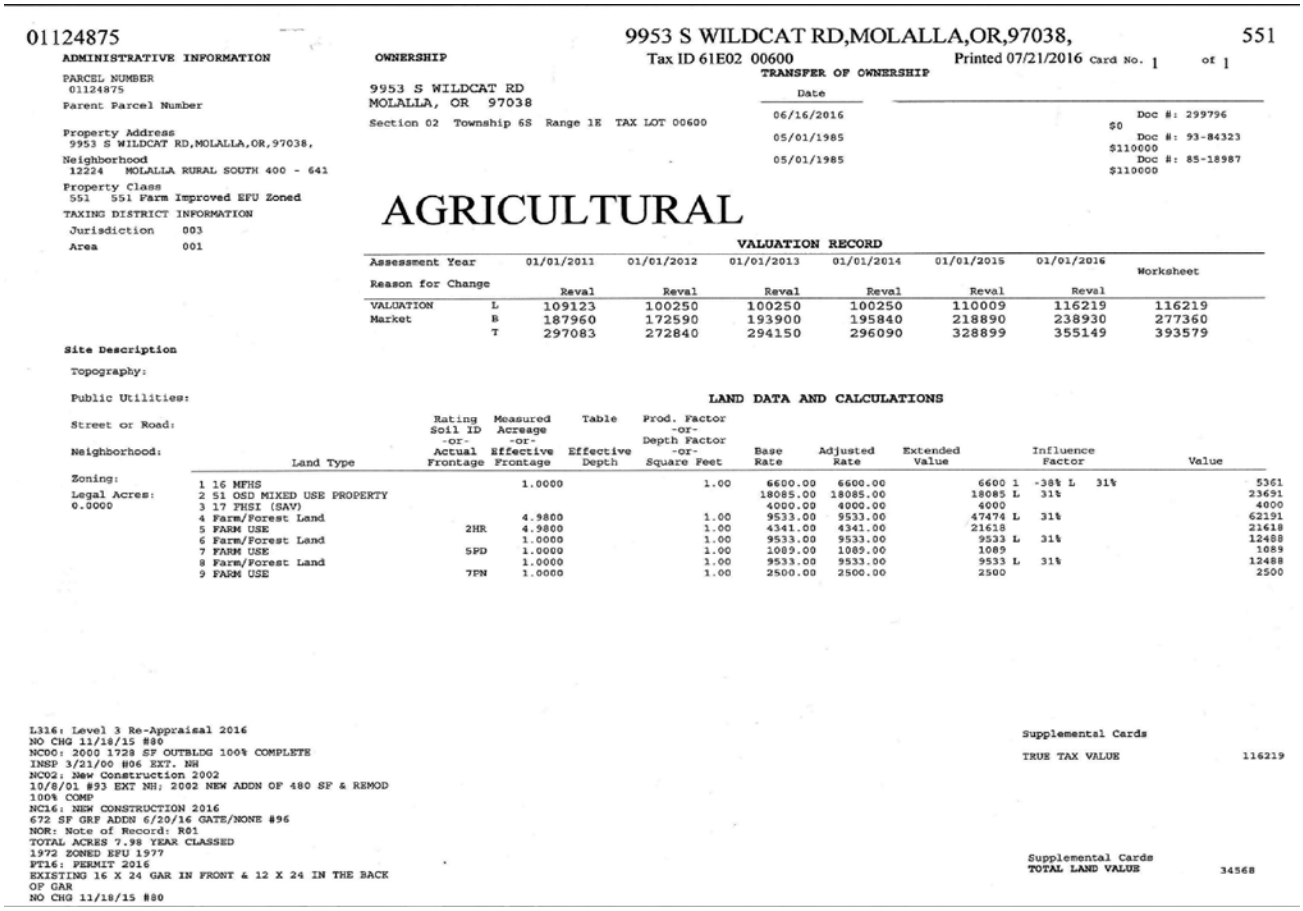
Reappraisal

Applying land values

Record the number of acres of each class, basic unit value per class, and site adjustments for each parcel on the land appraisal record. Check the property to determine if other adjustments that may influence value are needed. These adjustments include items such as location, access, size and shape of fields, frost pockets, homesite, access and flooding problems. These adjustments are not included in the basic classification and are applied as a plus or minus adjustment, based on market indications.

However, as the property becomes less of a farm enterprise, the land class may not provide a guide to the value. Recreational property values may be the same for all classes of land, or may even be higher for the less productive land classes.

The following is an example of an appraisal that includes several different land classes.



01124875 — 9953 S WILDCAT RD,MOLALLA,OR,97038, — 551

ADMINISTRATIVE INFORMATION

PARCEL NUMBER
01124875
Parent Parcel Number

Property Address
9953 S WILDCAT RD,MOLALLA,OR,97038,
Neighborhood
12224 MOLALLA RURAL SOUTH 400 - 641
Property Class
551 551 Farm Improved EFU Zoned
TAXING DISTRICT INFORMATION
Jurisdiction 003
Area 001

OWNERSHIP

9953 S WILDCAT RD
MOLALLA, OR 97038
Section 02 Township 6S Range 1E TAX LOT 00600

Tax ID 61E02 00600 Printed 07/21/2016 Card No. 1 of 1

TRANSFER OF OWNERSHIP

Date		
06/16/2016	$0	Doc #: 299796
05/01/1985	$110000	Doc #: 93-84323
05/01/1985	$110000	Doc #: 85-18987

AGRICULTURAL

VALUATION RECORD

Assessment Year		01/01/2011	01/01/2012	01/01/2013	01/01/2014	01/01/2015	01/01/2016	Worksheet
Reason for Change		Reval	Reval	Reval	Reval	Reval	Reval	
VALUATION	L	109123	100250	100250	100250	110009	116219	116219
Market	B	187960	172590	193900	195840	218890	238930	277360
	T	297083	272840	294150	296090	328899	355149	393579

Site Description
Topography:
Public Utilities:
Street or Road:
Neighborhood:
Zoning:
Legal Acres:
0.0000

LAND DATA AND CALCULATIONS

	Land Type	Rating Soil ID -or- Actual Frontage	Measured Acreage -or- Effective Frontage	Table Effective Depth	Prod. Factor -or- Depth Factor -or- Square Feet	Base Rate	Adjusted Rate	Extended Value	Influence Factor	Value
1	16 MFHS		1.0000		1.00	6600.00	6600.00	6600 1	-38% L 31%	5361
2	51 OSD MIXED USE PROPERTY					18085.00	18085.00	18085 L	31%	23691
3	17 FHSI (SAV)					4000.00	4000.00	4000		4000
4	Farm/Forest Land		4.9800		1.00	9533.00	9533.00	47474 L	31%	62191
5	FARM USE	2HR	4.9800		1.00	4341.00	4341.00	21618		21618
6	Farm/Forest Land		1.0000		1.00	9533.00	9533.00	9533 L	31%	12488
7	FARM USE	5PD	1.0000		1.00	1089.00	1089.00	1089		1089
8	Farm/Forest Land		1.0000		1.00	9533.00	9533.00	9533 L	31%	12488
9	FARM USE	7PN	1.0000		1.00	2500.00	2500.00	2500		2500

L316: Level 3 Re-Appraisal 2016
NO CHG 11/18/15 #80
NC00: 2000 1728 SF OUTBLDG 100% COMPLETE
INSP 3/21/00 #06 EXT. NH
NC02: New Construction 2002
10/8/01 #93 EXT NH; 2002 NEW ADDN OF 480 SF & REMOD
100% COMP
NC16: NEW CONSTRUCTION 2016
672 SF GRF ADDN 6/20/16 GATE/NONE #96
NOR: Note of Record: R01
TOTAL ACRES 7.98 YEAR CLASSED
1972 ZONED EFU 1977
PT16: PERMIT 2016
EXISTING 16 X 24 GAR IN FRONT & 12 X 24 IN THE BACK OF GAR
NO CHG 11/18/15 #80

Supplemental Cards
TRUE TAX VALUE 116219

Supplemental Cards
TOTAL LAND VALUE 34568

As you reappraise farm and ranch properties, frequently review the verified sales and developed benchmarks. These reviews will help you apply the base values uniformly and to make reasonable adjustments to properties that vary from the norm.

Chapter 12

Common Ownership Properties

Condominiums

The term condominium comes from Latin and generally means "common ownership." All condominiums have elements of common ownership set out in their declarations of creation or incorporation.

Condominium properties can be held in fee simple or leasehold ownership and are subject to unit ownership by declaration as defined in Chapter 100 of the Oregon Revised Statutes. The declaration must contain:

- A description of the land subject to unit ownership;
- A name and a description of the improvements subject to unit ownership;
- A description adequate to identify each unit of ownership;
- A description of all common elements;
- An allocation of undivided interest in the common elements and a description of the limited common elements;
- A method of determining liability;
- The voting rights allocated to each unit of ownership;
- A statement of use—residential or other;
- A statement describing the method of amending the declaration;
- A procedure describing voting requirements;
- A statement as to whether the association of unit owners has authority to grant leases, easements, rights of way, licenses and other similar interests and consent to vacation of roadways;
- A statement of the association's authority to conduct miscellaneous business; and
- A general description of the plan of development in the event the declarant proposes to annex additional property to the condominium.

Units and common elements

A unit is part of a property subject to individual ownership. A legal description unique to that individual property identifies it. The declaration usually designates the interior finish surfaces as belonging to the individual unit. All interior nonbearing walls, fixtures, doors, electrical fixtures, appliances, and plumbing fixtures are typically part of the unit.

Each unit also has an undivided interest in the common elements. The amount of this interest is set forth in the declaration and is typically part of the legal description of the unit.

The "common elements" belong to the condominium association as set forth in the declaration. Common elements typically include: each unit's foundation, bearing walls, exterior covering, roof, roof cover, base wiring, base plumbing, and decks.

Commonly owned items include: all recreational facilities, miscellaneous improvements, on-site development, and landscaping. Land, including that land under the units, is part of the common ownership.

Land that the developer reserves for future expansion isn't commonly owned.

Valuation

Each unit, including its undivided interest in the common elements, is valued as a single parcel of real property. This concept is the same for units in lease-fee ownership. For tax purposes, only a single "unit" RMV, including value attributable to the common elements, is calculated.

The value of the land and the commonly owned elements are almost impossible to accurately extract on a per-unit basis. This makes the cost approach unreliable (ORS 100.555).

The market approach is the preferred method of valuation for condominiums. You may assume that the sales price reflects any additional value contributed by the common elements.

Units within the same complex may not have the same amenities and each condominium complex will have different characteristics and amenities. To compare different units or complexes, conduct a matched-pairs analysis to extract the value contributed by different characteristics and amenities. Any of the following features or amenities may cause a difference in a unit's values:

- Parking facilities;
- End unit vs. interior units;
- Floor level—especially in high-rise buildings;
- Unit size and functionality;
- Number of bedrooms or baths;
- Traffic;
- Waterfront;
- View;
- Condition at time of sale; and
- Location.

The following examples of matched-pairs analysis demonstrate the primary way to extract adjustment factors for characteristic differences between units.

Example 1:

An average-quality complex built in 1985 is three stories and has no elevator. Unit 134 is an interior unit on the first floor and unit 321 is an interior unit on the third floor. Both are 1,300 square feet, have three bedrooms, two baths, and are in similar physical condition. Unit 321 sold in March for $75,000. Unit 134 sold in April for $80,000.

The $5,000 difference in price is attributed to the perceived locational advantage enjoyed by the unit on the first floor. Verify with one or more parties that climbing two flights of stairs to access a unit on the third floor is perceived as a disadvantage.

Example 2:

In the same complex, consider a third sale for comparison. Unit 118 is on the first floor, it is an interior unit with 1,575 square feet, has three bedrooms and two baths, and is in average condition. This unit sold in February for $85,000. When compared to Unit 134, size is the only difference. The $5,000 difference in price is attributed to size. This should be confirmed with one or more parties involved in the sale.

Verified market-related differences should be used to value each unit. List the indicated unit values in the preappraisal analysis in order to explain value differences to taxpayers and as a reference to improve valuation uniformity.

An example of a *Condominium Set-Up Summary* is on the following page. Some valuation systems allow direct placement of the indicated values on an account-by-account basis. Other systems may require cost modifier calculations to bring individual units into alignment with the market.

Example appraisal set-up summary:

Property: Green Wood Condominiums

Location: 111 Forest Road, Big City

Description: Built in 1979, the condominiums are of average quality construction. There are 80 units in four separate, two-story structures. Each unit has a single car, detached garage. The exterior has medium weight composition roofing and T-111 siding. There are three floor plans of varying size, number of bedrooms, and number of bathrooms. All units have a basic set of appliances and gas fireplaces.

Common elements:

- Swimming pool—20 × 40 feet
- Concrete decking—2,000 sq. ft.
- Asphalt paving—10,000 sq. ft.
- Landscaping—1.1 acres
- Total Land—6.75 acres

Base unit values: Base unit values assume average maintenance. Condition adjustments may be necessary for units displaying nontypical maintenance. These values are for the January 1 assessment date.

Three-bedroom, two-bath units

End Units	1,300 sq. ft.	$70,000
Interior Units	1,300 sq. ft.	$65,000
End Units	1,500 sq. ft.	$77,000
Interior Units	1,500 sq. ft.	$72,000

Two-bedroom, one-bath units

End Units	1,156 sq. ft.	$63,500
Interior Units	1,156 sq. ft.	$58,500

Timeshare estates

Timeshare estates are residential properties where fractional interests are bought and sold. Use of the property is restricted to specified periods or amounts of time. These properties can be a single-family dwelling, a lodge, individual hotel-type room(s), a full condominium-type complex, or a recreational vehicle park. The main difference distinguishing these properties from other residential property is the fractional interest ownership combined with the use restricted to a specified period of time (ORS 94.803-809).

Timeshares are to be valued and taxed as though each living unit is owned by a single taxpayer.

Valuation

Valuation of timeshare properties is controlled by ORS 94.809. This statute mandates in subsection (1) that "any nonreal property components of timeshares" be excluded from real market value (RMV) including tangible personal property, exchange rights, club memberships, vacation convenience services (such as hotel-type services), the management structure of the timeshare, and that portion of the legal, accounting, promotional and marketing costs in developing and selling the timeshares allocable to the nonreal property components. Subsection (2) states that RMV be "determined by taking the value of each individual living unit as if such living unit were owned by a single taxpayer" and adjusting that value by the amount attributable to the marketing of the timeshare property in increments of time. The statute includes a rebuttable presumption of a 20 percent increase in value for timeshare property over single ownership property.

The valuation of timeshare property is similar to that for a condominium. For the same reasons as stated in the section for *Valuation of Condominiums,* the market approach is the preferred method. One should derive from market transactions of condominium units a base value for each size, location, etc. of units within the complex. While this may pose a challenge if there are no sales of individual units with single ownership interests within the same complex, sales of similar units from complexes with similar amenities may need to be used. Once base values are determined, the base should be increased by 20 percent as provided in ORS 94.809(2). The party objecting to the 20 percent presumptive increase bears the burden of establishing an adjustment to account for any increase or decrease attributable to the fact that such timeshare property is marketed in increments of time.

Calculating timeshare estate RMV:

First value the unit as if it were an individually owned condominium. To that value, add a presumptive 20 percent. If there are recreational facilities not included as common area in the timeshare complex, they need to be valued separately from the living units.

Taxation of timeshare estates

All timeshare living units are listed as single accounts [ORS 94.808(2)] and the managing entity, acting as agent for the owners, is responsible for payment of the taxes.

The recreational facilities may not always be included in the declaration as common area owned by the unit owners. If they are not included in the common area, they are valued separately and assessed to the managing entity.

Planned communities

Planned communities are properties where, in addition to the ownership of an individual lot, the property owner automatically has an undivided interest in all of the commonly held property of the homeowners' association (ORS 94.550).

Planned communities must be residential in nature and are not timeshare estates or condominiums. They are communities of single ownership. Each lot has an individual legal description and taxlot number.

The most common planned communities are individually owned lots with single-family or attached dwellings.

The commonly held property of a planned community may include, but isn't limited to: land used as buffer strips, parks, community centers, and recreational facilities such as pools, tennis courts, and basketball courts.

Valuation

Each lot and accompanying improvements, if any, are valued separately. Commonly held land and improvements are not valued separately. Use either the market approach or the cost approach to determine value. See Chapter 6 for more detailed information on acceptable appraisal methodology.

If the cost approach is used, you must adjust it to reflect the sales prices for the planned community. This step is necessary because any contributory value of the commonly owned property is presumed to be included in the individual sale prices. The most common way to adjust cost is to apply a location modifier to the improvement value.

Establish land values by using the land sales until the time the community is fully developed. When the community is fully developed, use the land-to-building ratio to maintain proper land and building values.

Summary

Each type of commonly owned property described in this section has similarities either in ownership or in valuation requirements. The following chart provides a quick reference to compare the differences.

Common ownership differences

	Condos	Timeshares	Planned community
Value = 100 percent of RMV	Yes	Maybe	Yes
Value = 120 percent of single ownership sale	No	Presumptive	No
Separate common element value	No	Possible	No
Separate land value	No	No	Yes

Case law related to common ownership properties

Following are some tax court decisions that deal with the valuation of condominiums and timeshare estates.

Condominiums—*Seaside Investments LLC v. Clatsop County Assessor* (*Rivertide Suites*), TC No 4966 at 3 (Jan 28, 2013). In this decision, the Oregon Tax Court held that it is a "legal requirement" that "each individual unit in the condominium and not the aggregate of the units" be valued for assessment purposes. This decision is particularly relevant for condominium complexes that function as motels or hotels.

Jill Buckles v. Deschutes County Assessor, TC-MD 150133D (September 28, 2015) is a Magistrate decision that discusses how to value undivided interest ownership of condominiums.

The above two decisions are available on the tax court's website at http://courts.oregon.gov/tax.

Timeshare estates—Case law is very limited for timeshare valuation but *Sandpiper Timeshare v. Lincoln County*, TC-MD 981747 (December 13, 1999) gives some guidance. This decision is attached at the end of this chapter. Also *Worldmark, the Club and Residence Club at Seaside Owners Association v. Department of Revenue,* TC 4801 (July 26, 2010) includes a determination of whether personal property used in timeshare developments is taxable. This decision is available on the tax court's website.

Addendum

IN THE MAGISTRATE DIVISION

OF THE OREGON TAX COURT

Property Tax

SANDPIPER TIMESHARE, and LEONARD P. ERPELDING, *ET AL*,	)	
Plaintiffs,	)	No. 981747
v.	)	
LINCOLN COUNTY ASSESSOR,	)	
Defendant.	)	**AMENDED DECISION**

Plaintiffs' appeal involves the real market values (RMV) of twelve timeshare units in a complex located in Lincoln City for the 1997-98 tax year. The appeal is timely off Orders of the Lincoln County Board of Property Tax Appeals (board).

Appearing at trial for plaintiffs were Leonard Erpelding, the timeshare association manager, Ronald Rubin, President of the timeshare properties, and Frank Lasher, Consultant.[1] Defendant appeared through Charles Gross, an appraiser with the Lincoln County Assessor's Office.

STATEMENT OF FACTS

The subject property is a former motel that was expanded and converted to condominiums in the early 1980s. There are 18 units in the complex, six of which are wholly owned. The remaining twelve, which are the units under appeal, are divided into

[1] For purposes of ad valorem taxation, the managing entity is, by statute, the "taxpayer." ORS 94.808.

48 to 50 weeks of separate ownership and sold on a timeshare basis. Each timeshare owner has a 1/48th or 1/50th interest in a particular unit. The specific week per year that may be occupied is a right determined at the time of sale. Some owners have a fixed week each year while others have "floating" weeks.

Sandpiper maintains an affiliation with an organization called Resort Condominiums, Inc. (RCI). Some timeshare owners at Sandpiper maintain individual memberships with RCI for an annual fee of $84, which allows them to exchange their right to occupancy at the Sandpiper for another RCI affiliated resort. The exchange is based on a complicated preference system. An exchange fee of $118 (domestic) or $150 (international) is charged if an RCI member exercises the right of exchange in any given year.

The parties divide the units at issue into three classes, referred to as "6's", "7's", and "8's". The 6's are the smallest at 505 to 546 square feet. The 7's are 885 square feet and include a fireplace and a Jacuzzi. The 8's are 1,252 square feet and include a fireplace, a second bedroom and 6-person hot tubs.

The condominiums originally sold for $4,500 to $8,500 per timeshare interest (one week ownership interest per year), after physical upgrade and remodeling of the units. When originally marketed, a 43 percent sales commission was paid to Summers Realty, a professional marketing organization specializing in timeshare sales. The typical sales commission for real estate is six or seven percent. An average of 49 interests were sold in each condominium unit. There are 588 weeks owned by timeshare arrangement (12 condominiums x 49 weeks = 588).

Resale prices of timeshare weeks in the subject property between April

1995 and August 1997 ranged from a low of $1,300 to a high of $4,000. Of the 14 sales during that period, all but two sold for less than $3,000. (Ptfs' Attachment 3). The majority sold for between $2,000 and $2,500.

There are certain dues paid by timeshare owners to cover the costs of cleaning, hospitality and management. The annual cost per "owner" (based on fractional interests of 1/48th or 1/50th) is between roughly $250 to $375, depending on the size of the unit. (Ptfs' Written Narrative, dated Feb. 24, 1999, at 4). There is also an annual fee of $25. Plaintiffs contend these expenses are not related to the real property and stem from the unique timeshare mode of operation. Accordingly, plaintiffs assert that these costs should not be included in the RMV. The uncontroverted testimony was that in some cases timeshare owners have given away their property interest to avoid these annual costs and that some recipients of that unpurchased interest later relinquished title.

The pertinent assessment data is set out in the footnote below.[2] County

[2] Pertinent assessment data is as follows:

Unit #	Size	Co. ID	'97 RMV	'97 MAV
6's				
102	508	R285365	$101,440	$77,740
104	546	R290087	$109,030	$83,570
202	508	R299479	$101,440	$77,740
203	546	R301828	$109,030	$83,570
204	546	R304303	$109,030	$83,570
206	505	R308973	$100,840	$77,280
7's				
107	885	R313642	$135,930	$121,960
207	885	R318393	$147,250	$132,120
307	885	R323092	$152,920	$137,210
8's				
108	1,252	R315958	$208,330	$175,730

RMVs for the six timeshare units referred to as 6's range from $100,840 (unit 206) to $109,030 (units 104, 203, 204). The 7's have RMVs of $135,930, $147,250 and $152,920. The 8's are valued (RMV) at $208,330, $224,350 and $232,370. These values are said to include a 20 percent upward adjustment applied by the Assessor's Office pursuant to ORS 94.809 (below). Plaintiffs object to the increase over single ownership units, because the increase is referred to in the statute as a reputable presumption which plaintiffs believe is overcome by the evidence.

Plaintiffs request the following relief:

1. Removal of the 20 percent increase in value provided by statute;
2. Removal of the nonreal property components value; and
3. A further adjustment to reflect the alleged decrease in value attributable to the marketing of fractional interests in time increments.

COURT'S ANALYSIS

The parties agree that the applicable statute is ORS 94.809, which mandates in subsection (1) that "any nonreal property components of timeshares" be excluded from RMV and, in subsection (2), that RMV be "determined by taking the value of each individual living unit as if such living unit were owned by a single taxpayer" and adjusting that value by the amount attributable to the marketing of timeshares in increments of time. The statute includes a rebutable presumption of a 20 percent increase in value for timeshares. ORS 94.809(2). There are no reported cases

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208	1,252	R320700	$224,350	$189,250
308	1,252	R325467	$232,370	$196,010

addressing the statute. Nor have any administrative rules been promulgated.

The Assessor's Office valued the units based on comparable sales to determine a base value, and then increased the base value by 20 percent, as provided in ORS 94.809(2). No adjustments were made under subsection (1) of ORS 94.809 to remove any nonreal property components. Defendant contends such costs are not part of their value. Plaintiffs disagree, arguing that the Assessor has included nonreal components which must be removed.

At trial, defendant's approach to establishing the validity of the RMV on the rolls for 1997-98 was fairly straightforward and depicted in tables for the three size units involved. (Def's Ex 3, 4 & 5). Mr. Gross starts with a base value for each size unit, derived from market transactions of condominium units, including recent sales of units in the Sandpiper complex. All comparables are ocean front condominiums or motel units in Lincoln City with floating populations (as opposed to residential, one owner units). He makes slight adjustments within each class (6's, 7's and 8's) for time, size and "miscellaneous" features (beach access, parking, etc.). Adding to that the 20 percent statutory increase produces final indicated values which, he argues, support the values (RMV) on the tax rolls.

For their part, plaintiffs present a more complex approach to value, based on actual sales of units within the Sandpiper complex between 1995 and 1997, plus individual timeshare week sales. A weighted formula is applied to the timeshare sales. Plaintiffs assert that, collectively, the sales demonstrate that market values are well below the values set by the Assessor. Additionally, units offered for sale are introduced, presumably to demonstrate reduced interest and thus lower values because

of reduced asking prices. (Ptfs' Ex 4). As an overall indication of value, plaintiffs make adjustments to the Assessor's base value to remove the 20 percent statutory increase and then make further adjustments to account for other expenses allegedly not part of the realty.

20 Percent Increase

The first question is whether the 20 percent statutory increase is appropriate in this case, either wholly or in part. The relevant portion of the statute reads:

> "(2) The real market value of timeshare property, other than the recreational facilities, shall be determined by taking the value of each individual living unit as if such living unit were owned by a single taxpayer, without having been timeshared, and adjusting such value by an amount necessary to reflect any increase or decrease in such value attributable to the fact that such timeshare property is marketed in increments of time. There shall be a rebutable presumption that the value of such timeshare property is increased by 20 percent of its value under single ownership by virtue of being marketed in increments of time. If the managing entity or assessor contends that the adjustment due to such ability to market in increments of time is less than or greater than an increase of 20 percent of the single ownership value, then the burden of establishing such adjustment shall be upon the party so contending." ORS 94.809.

As can be seen from the quoted text above, the party objecting to the 20 percent presumptive increase bears the burden of establishing an adjustment thereto. *Id.* The adjustment is to account any "increase or decrease * * * attributable to the fact that such timeshare property is marketed in increments of time." *Id.* The statute presumes an increase in value over similar non-timeshare units of 20 percent.

In rebutting the presumption, plaintiffs relied primarily on resales of individual timeshare weeks within the Sandpiper. Defendant used sales of nearby ocean front condominium/motels with floating populations. A careful review of the evidence suggests the 20 percent presumptive increase is not appropriate for all units.

Looking first at plaintiffs' evidence, the formula used is based on individual timeshare resales, which are then weighted to recognize differing values for different time periods. (Ptfs' Exs 1, 2 & 3). Mr. Gross acknowledges that resale prices of timeshares are "notoriously low." The evidence bears this out with regard to the Sandpiper. While original purchases in the 1980s were between $4,500 and $8,500 per timeshare week, resales in the mid-90s are between $1,200 and $4,000. (Ptfs' Attachment 3 and Ex 1). A crude examination of the sales data reveals initial purchases were at least twice their resale price ten or more years later. According to plaintiffs, lower resale prices are typical for timeshares because only one week is generally for sale, which makes these listings unattractive to Realtors, who are paid a small percentage of the selling price (6 or 7 %).

The court finds some merit in that explanation. An additional factor, and one perhaps more to the point, is that initial sales of timeshares typically involve high pressure sales techniques because volume sales are needed to get the operation up and running and multiple sales are necessary (49 here) to "sell" each unit. Edgar B. Madsen, *Timeshare Tax Assessment: Price Versus Market Value*, The Appraisal Journal 3 (January 1999). The article explains that timeshares are expensive to operate, involve greater risk initially and to keep viable, and in general have a value equal to a similarly equipped individually owned condominium. *Id.* This may explain

why the statute provides for removal of nonrealty components in determining value. However, the ultimate goal in the context of this valuation appeal is to establish market value, as required by ORS 308.205.

Looking again at plaintiffs' evidence, there are problems with their methodology. Principal among them is that sales were limited and extrapolations produce widely disparate conclusions that cannot be adequately reconciled. For example, adjusted annual timeshare values from actual sales show values for the 6's ranging from $76,000 to $114,000 in 1995 and an indicated 1997 value (unit 204) of only $50,000. (Ptfs' Ex 2, at 3). Moreover, unit 204 had an indicated value of $100,000 in 1996 and only $50,000 a year later. *Id.* Similarly, unit 308 dropped, by plaintiffs' estimation, from $156,000 in 1995 to $99,000 in 1997. The explanation lies in part with the fact that while intuitively some time periods (summer) are more popular for tourists and thus should have higher sales prices, actual sales did not follow that pattern. This appears to have confounded plaintiffs' weighting. Plaintiffs did not argue, and the court does not believe, that the market declined drastically between 1995 and 1997. Rather, the difference in units sold confounded plaintiffs' extrapolations.

Plaintiffs' own evidence seems to support defendant's RMVs for the 6's. Plaintiffs determine a range of between $100,000 and $114,000 in 1996 (Ptfs' Ex 3, at 3) and defendant's 1997 roll values for these units are between $101,000 and $109,000 (rounded). Sales of wholly-owned units within the Sandpiper also support the county's roll values for the 6's. One unit sold in June 1996 for $100,000 and another in August 1997 for $130,000. (Ptfs' Ex 1, at 2). As explained above, at least one commentator found wholly-owned units have values similar to timeshare units. Madsen, The

Appraisal Journal at 3. Therefore, the 20 percent statutory increase provided by ORS 94.809(2) is appropriate for the "6's". That is, there is no basis for reducing RMV roll values for these units.

The "7's" tell a similar story. Indicated values, derived from sales deemed comparable by Mr. Gross, generally exceed the RMV on the rolls. (Def's Ex 4). Plaintiffs had little information on this category, because few "7" timeshare sales occurred (all in 1997). Plaintiffs' indicated value is $85,000, which is at least $15,000 below the value of the lesser quality 6's as established by their own data. This may be explained by the fact that the middle category within this size unit ("Blue" = near-peak) sold for more than the better period ("Red"). (Ptfs' Ex 1, at 1). Whatever the explanation, the court finds plaintiffs' evidence in this instance unpersuasive. Defendant's evidence suggests market value is equal to (Unit 107) or above (Units 207 & 307) RMV on the rolls. (Def's Ex 4). Accordingly, the 20 percent increase, said to be a part of current roll values, is appropriate for the 7's as well. No adjustment in RMV is warranted.

A different conclusion is drawn with respect to the 8's, based on the county's own data, in that indicated market values are considerably below current roll values.[3] This evidence argues against application of the statutory increase for the 8's. The court finds defendant's market evidence supports values of $170,000 for unit 108, $190,000 for unit 208 and $210,000 for unit 308. The court is mindful of the fact that

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[3] Unit 108 has a roll value of $208,330 compared to an indicated market value, without the 20 percent increase, of $169,680. Unit 208 has an indicated value of $189,650 compared to a roll value of $224,350. Unit 308 has an indicated value of $209,613 and a roll value of $232,370. (Def's Ex 5).

plaintiffs dispute the higher value determinations for second and third floor units but they have not supported their objection with persuasive evidence.

Having established that the 20 percent increase is unsupported by the evidence with regard to the upper end units (8's), but appropriately applied to the other units, the court turns to plaintiffs' second concern.

Removing Nonrealty Components

Plaintiffs propose an elaborate formula for adjusting the county's RMV to remove "nonrealty" components. For its part, defendant responds that these components are not part of their roll values.

A review of the pertinent portion of the statute is in order. ORS 94.809 provides in part:

> "(1) The real market value of timeshare property shall not include any nonreal property components of timeshares, which nonreal property components include, without limitation, tangible personal property, exchange rights, club memberships, vacation convenience services such as hotel-type services and the management structure of the timeshare plan, and that portion of the legal, accounting, promotion and marketing costs in developing and selling the timeshares allocable to the nonreal property components. The real market value of timeshare property shall not be based upon the aggregate sales prices of timeshares, if such sales prices include nonreal property components."

The statute clearly proscribes inclusion of nonrealty components in establishing value, but the county's evidence suggests that in most cases the RMV on the roll is below market. If that is true, nonrealty components are not a part of RMV and it would be improper to deduct them from the roll value.

There are several readily discernable problems with plaintiffs' six step formula. Principal among them is the subtraction of exchange costs borne by an

individual timeshare owner who desires to swap his one week occupancy at the Sandpiper for another location. These costs are not a necessary part of timeshare ownership but instead are voluntarily assumed. There are two such fees, the $84 annual fee, paid to join the organization, and the actual exchange fee, which only becomes due if the owner chooses to swap locations. Again, both are voluntary and not a necessary cost of timeshare ownership. Moreover, these costs are paid by the individual owners, not the timeshare organization. It could easily be argued that value would be higher without these additional, ongoing expenses.

Another, more fundamental problem with plaintiffs' proposed methodology is that certain expenses are deducted from the county's RMV roll value and it is not clear they are included by the county.

Plaintiffs suggest the court mechanically remove annual fees and dues and exchange costs. The annual dues and fees (excluding the exchange fees discussed above) amount to between $272 and $402 per "owner", depending on the unit. Plaintiffs assert that these dues and fees, which are paid by timeshare owners to cover the costs of room cleaning, hospitality services, and management expense, are unique to timeshare operations as compared to owner-occupied condominiums. The court would agree. However, while the statute certainly precludes the inclusion of nonreal property components, the question is whether they have in fact been included. The evidence is unclear, but suggests they are not part of the current roll values. The market values demonstrated in defendant's report tend to support current roll values, except for the "8's", as explained above. Plaintiffs' values are unreliable. Accordingly, no further adjustments are warranted.

DECISION 11

Time Increment Marketing Adjustment

Turning to the final issue raised, plaintiffs contend that an adjustment is necessary to account for the fact that timeshares are marketed in time increments. This contention is presumably based on the language in subsection (2) of the statute. The court does not agree that such an adjustment is warranted.

The language in subsection (2) provides for an adjustment to RMV "to reflect any increase or decrease in such value attributable to the fact that such timeshare property is marketed in increments of time." ORS 94.809(2). This language, however, is part of the 20 percent presumption discussed above, which the court has concluded is appropriate for all but the upper end units (108, 208 & 308). It does not open the door to a separate adjustment.

The statute begins by establishing that "[t]he real market value of timeshare property * * * shall be determined by taking the value of each individual living unit as if such living unit were owned by a single taxpayer, without having been timeshared, and adjusting such value by an amount necessary to reflect any increase or decrease in such value attributable to the fact that such timeshare property is marketed in increments of time." ORS 94.809(2). It then provides for a rebutable presumption "that the value of such timeshare property is increased by 20 percent of its value under single ownership by virtue of being marketed in increments of time." *Id* (emphasis added). This factor has already been addressed.

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/ / /

CONCLUSION

Plaintiffs have asked for a reduction in the RMV of certain timeshare condominium units on three grounds. They rely on ORS 94.809 for relief. The court has carefully reviewed the evidence and the law and concludes some relief is appropriate based on an adjustment to the statutory increase found in subsection (2), which exists as a presumption that may be rebutted either by the owner or the Assessor. Specifically, the RMV of the upper end units, referred to by the parties as "8's", is reduced as set out below. The RMV of the other units under appeal is not changed.

IT IS THE DECISION OF THE COURT that, for tax year 1997-98, the value was as follows:

- the RMV of unit 108 was $170,000;

- the RMV of unit 208 was $190,000;

- the RMV of unit 308 was $210,000.

The RMVs of the remaining units are unchanged. Assessed values shall be adjusted accordingly.

Dated this 13th day of December, 1999.

Dan Robinson

DAN ROBINSON
MAGISTRATE

* Amended as to the real market value for Unit 308.

IF YOU WANT TO APPEAL THIS DECISION, FILE A COMPLAINT IN THE REGULAR DIVISION OF THE OREGON TAX COURT, 1241 STATE STREET, FOURTH FLOOR, SALEM, OR 97310. YOUR COMPLAINT MUST BE SUBMITTED WITHIN 60 DAYS AFTER THE DATE OF THE DECISION OR THIS DECISION BECOMES FINAL AND CANNOT BE CHANGED.

MAGISTRATE DIVISION
OREGON TAX COURT

Presiding Magistrate: Scot A. Sideras
Court Administrator: Paul J. Pickerell

Magistrates: Jeff Mattson
Dan Robinson
Jill Tanner
Coyreen Weidner

December 13, 1999

Leonard P. Erpelding, Et Al
C/O Ronald G. Rubel
850 Promontory Pl. SE
Salem, OR 97302-1760

Lincoln County Assessor
Charles Gross
255 West Olive, Rm. 207
Newport, OR 97365-3864

Re: Amended Decision
Sandpiper Timeshare, Leonard P. Erpelding, et al v. Lincoln County Assessor
Case Number 981747

Dear Sirs:

The enclosed Amended Decision is issued in response to a call from Mr. Gross regarding a clerical error on the last page of the original Decision, issued November 29, 1999.

As can be seen from the language in the bottom paragraph of page 9, the court found the RMV of Unit 308 to be $210,000. However, page 13 erroneously indicated the RMV was $170,000. The Amended Decision corrects the RMV of Unit 308 on page 13 to $210,000.

The mistake has been corrected pursuant to Magistrate Division Rule (MDR) 17, which provides in part: "[t]he court may correct clerical mistakes or omissions at any time on its own motion. Within a reasonable time, any party may seek to correct a mistake * * *."

Sincerely,

Dan Robinson
Magistrate, Oregon Tax Court

1241 State Street, Robertson Building, 3rd Floor, Salem, Oregon 97310 (503) 986-5650 Fax: (503) 986-4507 TTY: (503) 986-5651

Chapter 13

Maximum Assessed and Assessed Value

Maximum assessed value

The assessor is required to calculate a maximum assessed value (MAV) for each property in the county in addition to maintaining real market value (RMV). MAV is defined as:

The greater of 103 percent of the prior year's assessed value or 100 percent of the prior year's MAV.

This definition applies only to property or the portion of a property that hasn't been modified by certain changes during the previous assessment year.

Changed property and exceptions

Certain changes to property allow MAV to be increased above the 3 percent statutory limit. These changes are referred to as "exceptions." An exception is defined as any change to property, not including general ongoing maintenance and repair.

The types of exceptions that allow the MAV of an account to be increased above 3 percent are:

- The property is new property or new improvements to property.
- The property is partitioned or subdivided.
- The property is rezoned and used consistently with rezoning.
- The property is first taken into account as omitted property.
- The property becomes disqualified from exemption, partial exemption or special assessment.
- The lot lines of the property are adjusted. In this case, the total MAV for all the affected lots can't be increased above the total original MAV of all the affected lots.

Changes to property that are under a specified dollar amount may be considered minor construction and may not change the MAV of property. Minor construction is discussed on the next page.

An increase in the value of property due to a cyclical reappraisal or to annual market trending can't be added to MAV.

Changed property ratio (CPR)

The changed property ratio is used to calculate the MAV of an exception. The assessor calculates the CPR by dividing the average MAV of all unchanged properties in the county and in the same property class by the average RMV of all unchanged properties in the county in the same property class. The county may combine property classes to calculate a CPR if there isn't enough unchanged property in a class to arrive at an accurate ratio. See OAR 150-308-0170.

The RMV of the exception is then multiplied by the CPR to calculate the MAV for the exception. The purpose of multiplying the RMV of the exception by the CPR is to bring the MAV of new (changed) property to the same general assessment level as unchanged property.

For centrally assessed properties, the CPR is calculated statewide.

MAV calculation for exceptions

Following are the two methods used to calculate MAV for property changed by an exception.

- MAV for a new property tax account that is 100 percent exception value:
  RMV of exception × CPR = MAV.
- MAV for a property tax account that already existed but that has been changed by a qualified exception:
  MAV of existing property (greater of 103% of prior year AV or 100% of prior year MAV) + RMV of exception × CPR = current year MAV for account.

Minor construction

Minor construction is an improvement to either land or buildings that has an RMV of $10,000 or less in any single assessment year, or an accumulation of $25,000 or less for five assessment years. Minor construction can't be added to the assessment roll unless one of the thresholds has been exceeded. If the $25,000 threshold is exceeded, the value of the construction is multiplied by the current year CPR and added to any already existing MAV.

The assessor is required to track minor construction from year to year to determine if the $25,000 threshold has been exceeded or if five years have passed since the minor construction occurred. This tracking system is referred to as the "minor construction pool."

The five-year period is a "rolling" period. If the $25,000 threshold isn't exceeded during the five year period, the value of minor construction that took place in year one drops out of the pool in year six, and can't be added to MAV. Once the $25,000 threshold is exceeded, the five-year period starts anew. Market trends are not applied to minor construction in the years after the values have been added to the pool.

Although MAV can't be increased for minor construction, RMV is always adjusted to reflect new value added to the property.

General ongoing maintenance and repair

ORS 308.149 specifies that MAV can't be adjusted due to changes in the value of property resulting from general ongoing maintenance and repair. This premise applies regardless of the value added to the property as a result of the repairs.

General ongoing maintenance and repair is defined in part as the repair or replacement of existing materials due to normal wear and tear or deterioration.

General ongoing maintenance and repair:

- Preserves the condition of existing improvements without significantly changing design or materials;
- Doesn't create new structures, additions to existing real property improvements, or replacement of real or personal property machinery and equipment; and
- Doesn't affect a sufficient portion of the improvements to qualify as new construction, reconstruction, major addition, remodeling, renovation, or rehabilitation.

Typical examples of ongoing maintenance and repair may include reroofing, painting, or replacing floor or wall covering.

If property is repaired using materials superior to the material being replaced, the difference in value between the item being replaced and the superior product can be added to MAV.

Netting new property and retirements

When new improvements are added to property, some existing property is often removed. If improvements are removed during the same assessment year that new property is added, the RMV of the new property is netted against the RMV of the retirements before adjusting MAV.

To determine whether property exceeds the minor construction threshold, the RMV of the new property is tested against the threshold prior to making any deductions for retirements. The net value of additions and retirements can't go below zero. If property is removed in the assessment year prior to the addition of new property, no adjustment to MAV is made for the retirement.

Assessed value

Assessed value (AV) is the value used to calculate the tax on property.

AV is defined by statute as:

The lesser of real market value or maximum assessed value.

Changed property analysis matrix

The following pages contain a list of different types of changes to property and the method of treatment in use for each type at the time this manual was published.

For more detailed information about calculating MAV, see our publication, *Maximum Assessed Value Manual,* 150-303-438.

Changed property analysis matrix

Sub-category: Structures

Description of change	Changed property category	Allows change of MAV?	Allows change of RMV?	ORS and OAR reference
Any new construction/major addition totaling more than $10,000 in one year or $25,000 over five years.	Exception	Yes	Yes	ORS 308.149 & 308.153 OAR 150-308-0160
Reconstruction of existing property.	Exception	Yes	Yes	ORS 308.149 & 308.153 OAR 150-308-0130
Remodeling of existing property.	Exception	Yes	Yes	ORS 308.149 & 308.153 OAR 150-308-0130
Renovation of existing property.	Exception	Yes	Yes	ORS 308.149 & 308.153 OAR 150-308-0130
Rehabilitation of existing property.	Exception	Yes	Yes	ORS 308.149 & 308.153 OAR 150-308-0130
Restoration of existing property.	Exception	Yes	Yes	ORS 308.149 & 308.153 OAR 150-308-0130
Property that was an integral part of property on the roll, but wasn't included in the assessment for a prior tax year, added as new property.	Exception	Yes	Yes	ORS 308.153(3)
General ongoing maintenance and repair of any value.	RMV change	No	Yes	ORS 308.149(6) OAR 150-308-0130
Minor construction totaling less than $10,001 in one year, or less than $25,001 over five years.	RMV change	No	Yes	ORS 308.149(5) & (6) OAR 150-308-0160
Improvement physically moved to different location. (Unless subject to ORS 308.162.)	Exception	Yes	Yes	ORS 308.149(6)
Value of structure moved from one account to another. Structure not physically moved.	MAV balance	Balance	Balance	ORS 308.162
Error in square footage calculation corrected by review or reappraisal. No structural change.	RMV change	No	Yes	
Error in square footage indicated by taxpayer application. Allows for reduction only.	Exception	Yes	No	ORS 311.234 OAR 150-311-0240
Floor levels reclassified after base year.	RMV change	No	Yes	
Inventory record corrected upon review or reappraisal after base year unless omitted property.	RMV change	No	Yes	
Loss in value of property if destroyed or damaged due to a fire or act of God. Allows for reduction only.	Exception	Yes	Yes	ORS 308.146(5) OAR 150-308-0110
Building removed/demolished, not by fire or act of God. Allows for reduction only.	Exception	Yes	Yes	ORS 308.146(8)

Sub-category: Land

Description of change	Changed property category	Allows change of MAV?	Allows change of RMV?	ORS and OAR reference
Improvements to land, either on-site or off-site greater than $10,000 in one year or $25,000 within five years. (ORS 307.010.)	Exception	Yes	Yes	ORS 308.153 & 307.010 OAR 150-307-0010
Event on property or on contiguous property triggers change in value attributed to existing physical characteristic of land.	RMV change	No	Yes	
Combination of two or more accounts.	MAV balance	Balance	Yes	ORS 308.162
Previously existing landscaping revalued.	RMV change	No	Yes	
Property is rezoned and use doesn't change.	RMV change	No	Yes	ORS 308.156(2)
Property is rezoned and use is consistent with new zoning.	Exception	Yes	Yes	ORS 308.156(2) OAR 150-308-0200
Lot lines of property are adjusted.	Exception	Yes limit	Yes	ORS 308.159 OAR 150-308-0230
Property is subdivided or partitioned under Chapter 92. (Not subject to ORS 308.162.)	Exception	Yes	Yes	ORS 308.156(1) OAR 150-308-0190
Property is subdivided or partitioned only by deed division or court order. (Not subject to ORS 308.162.)	Exception	Yes	Yes	ORS 308.156(1) OAR 150-308-0190
Property is divided on existing lot lines established by prior Chapter 92 subdivision or partition process.	MAV balance	Balance	Yes	ORS 308.162
Portion of property valued as a unit or part of total is sold.	RMV change	No	Yes	

Sub-category: Personal property / MS / M & E

Description of change	Changed property category	Allows change of MAV?	Allows change of RMV?	ORS and OAR reference
Siting/installation of MS or floating structure.	Exception	Yes	Yes	ORS 308.149(5)
Rehabilitation of MS or floating structure.	Exception	Yes	Yes	ORS 308.149(5)
MS transferred from one roll to another, but not physically moved.	MAV balance	Balance	Yes	ORS 308.162
MS physically moved to different location.	Exception	Yes	Yes	ORS 308.149(5)
Change of classification of M & E from real to personal or personal to real.	MAV balance	Balance	Yes	ORS 308.162
New account is created for new personal property.	Exception	Yes	Yes	ORS 308.153
Personal property physically moved from one account to another, unless subject to ORS 308.162.	Exception	Yes	Yes	ORS 308.153
Personal property value transferred from one account to another, but not physically moved.	MAV balance	Balance	Yes	ORS 308.162
M & E transferred from one account to another, but not physically moved.	MAV balance	Balance	Yes	ORS 308.162

Sub-category: Code area changes

Description of change	Changed property category	Allows change of MAV?	Allows change of RMV?	ORS and OAR reference
Code area changes for any reason.	Not a change	NA	NA	
Property physically moved to different code area.	Exception	Yes	Yes	ORS 308.149(5)

Sub-category: Exemptions and special assessments

(MV = market value MAV; SA = specially assessed MSAV)

Description of change	Changed property category	Allows change of MAV?	Allows change of RMV?	ORS and OAR reference
Property changed from exempt or partially exempt to taxable.	Exception	Yes—MV	Yes*	ORS 308.156(4) OAR 150-308-0220
Property disqualified from special assessment.	Exception	Yes—MV	Yes*	ORS 308.156(4) OAR 150-308-0220
Property changed from one special assessment, exemption, or partial exemption to another special assessment, exemption, or partial exemption.	MSAV change	Yes—MV Yes—SA	Yes	ORS 308.156(4) & 308A.724
Error in classification of specially assessed land corrected after base year. Land isn't changed or improved.	MAV / MSAV change	No—MV Yes—SA	Yes	OAR 150-308-1090
Classification of specially assessed land is changed due to improvements to the land and land is revalued.	Exception	Yes—MV Yes—SA	Yes	
Newly qualified property changed from market to specially assessed.	NA	No—MV Yes—SA	No	

Sub-category: Miscellaneous

Description of change	Changed property category	Allows change of MAV?	Allows change of RMV?	ORS and OAR reference
Property class change. Not rezoned.	RMV change	No	Yes	OAR 150-308-0100
Property contaminated. RMV reduced to reflect contamination.	RMV change	No	Yes	OAR 150-308-0270
Correction of contamination. If RMV was reduced to reflect contamination, then RMV and MAV adjusted as clean-up occurs.	Exception	Yes	Yes	OAR 150-308-0270
Market area changed (neighborhood, value area).	RMV change	No	Yes	

Every property in Oregon is required to have a RMV that reflects 100 percent of the current market value. When a property is disqualified, the assessor may correct RMV that is used to establish the exception value.

Sub-category: Corrections

(MV = market value MAV; SA = specially assessed MSAV)

Description of change	Changed property category	Allows change of MAV?	Allows change of RMV?	ORS and OAR reference
Omitted property added to roll.	Exception	Yes	Yes	ORS 308.156(3) OAR 150-308-0210
Correction of clerical error or error or omission of another kind.	Exception*	Yes	Yes	ORS 308.156(3)
Settlement of appeal affects value for base year and changes MAV.	NA	Changes base MAV	Yes	
Appeal reduces total value of property after base year, unless a MAV change is included in order/decision.	RMV change	No	Yes	
Appeal reduces total value of property. Property includes an exception added after base year. Use best information to arrive at value attributable to the exception.	Exception	Yes	Yes	

* Only if the clerical error affected MAV, and the year the error actually occurred is within the time frame spanning the current certified roll and five prior rolls.

Chapter 14

Other Assessment Programs

Exemptions and farm use special assessment

In Oregon, certain properties may qualify for various exemptions or special assessments. The terms *exempt* and *specially assessed* are not interchangeable.

A property tax account may have an exemption or a partial exemption. Property is subject to an exemption when the property, or a specific portion of the property, is 100 percent exempt. An example of exempt property is a ten story commercial office building with a charitable entity that applies and receives an exemption for the space they lease on the third floor. The space exempted for the charitable entity is 100 percent exempt.

Exempt property is appraised and valued in the same manner as all other property in Oregon except that MAV doesn't have to be calculated for any exempt portion of an account. Property tax isn't calculated, billed, and collected for any exempt portion but the portion that isn't exempt is taxed in the same manner and at the same rate as all other taxable property.

Property is subject to a partial exemption when the property, or a specific portion of the property, is less than 100 percent exempt. An example is a vertical housing project. Vertical housing is a program for multiuse projects with commercial space on the first floor and residential space above. Under the vertical housing program, a project receives a partial exemption of 20 percent per certified equalized floor of residential housing, to a maximum of 80 percent. If the project has 6 floors of housing, the entire project, except land, is 80 percent exempt, including commercial space. Land may also receive a partial exemption to the extent that the housing is for low income residents.

The maximum assessed value for a partially exempt property in the first year of the partial exemption is calculated by multiplying the RMV of the portion of the property subject to the partial exemption, taking the exemption percentage into account, by the CPR. That is then added to the CPR of any portion of the property not subject to partial exemption. The MAV must be recalculated in the same manner if the percentage of the exemption changes from year to year.

Specially assessed property isn't exempt. Specially assessed property is subject to property tax in the same manner and at the same rate as all other taxable property. The difference is that the value used to calculate the property tax isn't based on the property's RMV. Instead, the process for valuing the property follows a method prescribed by law and the tax is calculated on a special value.

Exemptions

For nearly 150 years, Oregon law has allowed some properties to be exempt from property tax. The most common property tax exemptions are for government–owned property and that owned by qualifying charitable, fraternal, or religious organizations.

Two conditions must be met to qualify for tax-exempt status. The organization must qualify, and the property must qualify by being actively occupied and used in a way that furthers the stated purpose of the organization.

Any portion of a property that isn't used by the qualified organization for a qualifying purpose isn't exempt and is subject to the same assessment and taxation as all other taxable property.

Claiming a property tax exemption

Property tax exemptions are not automatic. An organization or other taxpayer must file an application to claim the exemption. If the taxpayer doesn't file the application by the deadline, the taxpayer may request that we make a recommendation to the assessor to accept the application if they can prove there was good and sufficient cause for the late filing. Good and sufficient cause is defined in OAR 150-307-0500. For some exemptions, the law allows filing an application late upon payment of a fee. On the application, the organization must identify all real and personal property for which the organization is requesting an exemption. For detailed information about the exemption application process, refer to our *Exemption Manual*, 150-303-462. The manual can be obtained by contacting the Finance, Taxation, and Exemptions Team at 503-945-8293.

Farm use special assessments

In 1953, Oregon's Legislature mandated a reappraisal of all farm properties statewide. Following the farm reappraisal program, the 1961 Legislature created farm use special assessment laws because the property taxes on farmland, as compared to the income from it, were considered excessive, especially in areas with urban influence.

From the start of the special assessment program, farm use or farm deferral laws have referred to deferring the property tax liability. The laws provide definitions, potential tax liability calculations, application deadlines, permitted uses, gross income and qualification requirements, disqualification procedures, and specially assessed valuation methods.

Valuation

Farm use value is determined using an income method. Using this approach, the assessor must determine the net income per acre for farmland and the capitalization rate. The net income is the typical gross annual return or farmland rent, minus typical expenses. The capitalization rate is the five–year average Farm Credit Services mortgage rate, plus the effective tax rate. When the net income per acre is divided by the capitalization rate, the result is the farm use value per acre of farmland.

Qualification

Farmland eligible for specially assessed values and property tax deferral must be used primarily to make a profit in farming. Some qualifying uses are:

- Raising and harvesting products for human or animal use;
- Growing hybrid hardwood, cottonwood, or cultured Christmas trees;
- Cultivating aquatic species;
- Stabling or training equines; and
- Other agricultural and horticultural related activities.

Land beneath farm–related buildings and dwellings used in conjunction with the farming operation may also receive the specially assessed valuation. Some examples of qualifying uses include a farm–related home site and any on–site developments to the home site.

Disqualification

Farmland receiving farm use special assessment is disqualified when it is no longer used as farmland or when the land's use has changed and is incompatible with returning it to farm use. Farmland will also be disqualified when a zone change removes the land from an exclusive farm use (EFU) zone. In this situation, the owner may apply for another special assessment such as Non–EFU farmland, forestland, or wildlife habitat.

When farmland is disqualified from farm use special assessment, it is assessed at either the lesser of its RMV or MAV.

Additional tax on disqualified farmland

The additional tax calculation takes into consideration the taxes actually charged to the land and the number of years the land received the farm use special assessment. To calculate the additional tax, find the difference between the actual taxes paid under special assessment and the taxes that would have been paid had the land not received the farm use special assessment. The maximum number of years subject to additional tax is 10 years for farmland in an EFU zone outside an urban growth boundary. Farmland in an EFU zone inside an urban growth boundary and farmland located in a non-EFU zone has a maximum number of 5 years subject to additional tax. Refer to our *Farm Use Manual*, 150-303-422, for specific and detailed information.

Other special assessments

There are numerous other special assessment programs in Oregon. For information regarding these programs refer to the most recently published law book or call our staff for assistance.

Chapter 15

Property Tax Appeals

Appeals summary

In Oregon, various forums hear property tax appeals. This chapter begins with an overview of each forum. A more detailed discussion of each level of the appeal process begins on page 4.

Board of Property Tax Appeals (BOPTA)

The local BOPTA is generally the first step in the formal appeal procedure. If taxpayers disagree with the value shown on their tax statement, they can file a petition with the board. The board then schedules a hearing to determine whether the taxpayers' evidence supports a value reduction. The board also has the authority to waive or reduce penalties assessed for late filing of real and personal property returns. Decisions of the board regarding the value of property may be appealed to the Magistrate Division. Decisions regarding the waiver of late filing penalties are final and can't be appealed.

Tax Court

The Oregon Tax Court has jurisdiction for all tax appeals under state laws, including personal income tax, property tax, corporate excise tax, timber tax, local budget law, and property tax limitations. The court has two divisions, the Magistrate Division and the Regular Division.

Appeals to the Tax Court normally start in the Magistrate Division. The court may resolve an appeal by trial or mediation. Decisions of the Magistrate Division may be appealed to the Regular Division of the court. The Regular Division consists of a single judge who hears all of the appeals.

Owners of industrial property appraised by the Department of Revenue must file an appeal of the value of the property directly with the Tax Court instead of with BOPTA. Appeals of penalties assessed for the late filing of a return associated with industrial property appraised by us must be filed with BOPTA. The tax court doesn't hear appeals of late filing penalties unless the penalty is assessed for omitted property.

Supreme Court

An order from the Regular Division of the Tax Court may be appealed to the Oregon Supreme Court.The Supreme Court relies on the record made in Tax Court and doesn't accept additional evidence. Attorneys for both the appellant and the respondent provide the court with written briefs and may present short oral arguments.

Department of Revenue

The Department of Revenue has limited authority to consider certain types of property tax petitions. These include requests for supervisory review, requests for review under the hardship statute, request for waiver of the enterprise zone filing deadline requirement, and other miscellaneous requests as specifically authorized by statute.

Appeals matrix

The following page contains a chart describing various types of appeals, where and when to file the appeal, and the statutory authority for the process.

OREGON DEPARTMENT OF REVENUE

Appeals Matrix

Issue	Where	When	Statute
Appeals			
BOPTA decision	Magistrate	Within 30 days	ORS 305.280
Magistrate decision	Regular Division	Within 60 days	ORS 305.501
Regular Division judgment	Supreme Court	Within 30 days	ORS 19.255
Department of Revenue decision	Magistrate	Within 90 days	ORS 305.280
Timely value appeals			
Value on tax statement	BOPTA	By December 31	ORS 309.100
Industrial—Appraised by Department of Revenue	Magistrate	By December 31	ORS 305.403; ORS 309.100
Industrial—Appraised by County Assessor	BOPTA	By December 31	ORS 305.403; ORS 309.100
Omitted property; error correction	Magistrate	Within 90 days	ORS 311.223
Current year increase; notice mailed prior to Dec 1	BOPTA	By December 31	ORS 311.208
Centrally assessed property	Dept. of Revenue	June 15	ORS 308.584
Timely non-value appeals			
Late filing penalty—real; personal	BOPTA	By December 31	ORS 308.295(5); ORS 308.296(6)
Late filing penalty—real; personal	Assessor	No deadline	ORS 308.295(7); ORS 308.296(8)
Late Filing penalty—omitted	Magistrate	Within 90 days	ORS 311.223
BOPTA penalty decision	None		
Exemptions—denial or disqualification	Magistrate	Within 90 days	ORS 305.275; ORS 305.280
Exemptions—late filed application (Hardship)	Dept. of Revenue	December 15	ORS 307.475
Special assessments—denial or disqualification	Magistrate	Within 90 days	ORS 308A.718; ORS 305.280
Special assessments—late filed application (Hardship)	Department of Revenue	December 15	ORS 307.475
Proration of tax, July 1 value determination—late filed application (Hardship)	Department of Revenue	December 15	ORS 307.475
Other action of assessor or tax collector	Magistrate	Within 90 days	ORS 305.275; ORS 305.280
Senior citizen deferral—denial or disqualification	Magistrate	Within 90 days	ORS 311.668
Enterprise zone—failure or refusal to authorize	Magistrate	Within 90 days	ORS 285C.140(9)
Enterprise zone—waiver of authorization requirement	Department of Revenue		ORS 285C.140(12)
Appeals—not timely filed			
Good and sufficient cause; 20 percent error for residential	Magistrate	Current and two prior years	ORS 305.288
Agreement to facts; extraordinary circumstance; assessor reduction; stipulation	Dept. of Revenue	Current and two prior years	ORS 306.115
Pendency of prior appeal	Dept. of Revenue	Dec. 15 or 6 months	ORS 305.285

Appeals to the Board of Property Tax Appeals

The county board of property tax appeals (BOPTA) is an impartial three-member panel empowered to decide matters within its jurisdiction. The county governing body appoints potential board members to pools from which the county clerk selects the members who will sit on the board. The pools must be appointed by October 15 of each tax year. A county can have as many boards as necessary to complete work within the period allowed by law. Each board consists of one member of the county governing body and two nonoffice-holding residents of the county. A nonoffice-holding county resident may be selected to serve in place of the member of the governing body. All board members must receive training approved by the Department of Revenue before serving on the board. The county clerk serves as the clerk of the board and is responsible for scheduling hearings, keeping the record of board meetings, and mailing orders.

When and where to file petitions

Petitions can be filed during the period following the date tax statements are mailed through December 31 of the tax year being appealed. If December 31 falls on a weekend or holiday, the filing deadline is extended to the next business day. Petitions are filed with the county clerk (or the equivalent position in home rule counties). Petitions postmarked the day of the filing deadline are considered timely filed.

Who can file a petition with BOPTA

The owner, an owner, or a person who holds an interest in the property that obligates the person to pay taxes imposed on the property may petition the board for relief. Certain people are also allowed to sign the petition for one of those persons listed above, if they provide a properly signed authorization. These people are: a relative (as defined by OAR 150-309-0110; a real estate broker licensed in Oregon; an appraiser certified, licensed, or registered in Oregon; a person duly qualified to practice as a certified public accountant or public accountant in Oregon; and the lessee of the property. Any person holding a general power of attorney from the owner of property can also sign the petition and represent an owner at BoPTA. Attorneys licensed in Oregon, legal guardians and conservators, executors of the estate of a deceased person, trustees in bankruptcy proceedings, and employees regularly employed in the tax matters of a business may sign the petition and are not required to provide authorization.

Requirements of a petition

ORS 309.100 and OAR 150-309-0090 list the information that must be included in a petition to the board. If this information isn't provided or isn't accurate, the petition is considered defective. The petitioner has 20 days from the date the clerk mails or delivers a notice of defective petition, or until the last day for filing a petition with the board, whichever is later, to correct the defect.

The board session

The board may hold its first meeting on or after the first Monday in February, but no later than the date necessary for the board to complete its work by April 15, the date the board must adjourn.

Jurisdiction of the board

ORS 309.026 limits the board of property tax appeals to acting on the following:

- Real market value (RMV);
- Specially assessed value (SAV);
- Maximum assessed value (MAV);
- Assessed value (AV);
- Corrections to value made under ORS 311.208. This consists of property added to the roll by the assessor after the roll has been certified but prior to December 1 of the tax year; and

- The penalty imposed by the assessor under ORS 308.295 or ORS 308.296 for the late filing of a Combined Industrial Property Return, a Real Property Return, or a Confidential Personal Property Return. The board may waive all or a portion of the penalty. The board's decision is final and can't be appealed to the court.

If there is an exception on the roll for the current year, the board should consider the value of the exception and make any appropriate changes to MAV and AV that result from a change in RMV.

When BOPTA receives a petition requesting a reduction in total RMV that doesn't specify a reduction in value of one or more components of a property tax account or accounts that constitute a unit of property as defined in ORS 310.160(1), the board may increase or decrease any or all components, provided the net result sustains or reduces the total RMV, SAV, MAV, or AV of the property in the property tax account or unit of property.

When BOPTA receives a petition requesting a reduction in the RMV of one or more components of a property tax account or accounts that constitute a unit of property and no change to other component(s), or the petition is silent as to the requested value of the other components, at the request of the Assessor's Office, the board may act on any or all components of the tax account or unit of property,

For more information on the jurisdiction of the board, refer to the most recent version of the *Board of Property Tax Appeals Manual*, 150-303-484.

Hearings

Petitioners must receive at least five days' written notice of the time and place to appear to present evidence to the board. If the petitioner chooses not to attend the hearing, the board will make a decision based on the written material submitted prior to the hearing.

Boards allow each party to the appeal a specific amount of time to present evidence. The time allowed may vary depending on the type of property involved. Hearings are informal, but most counties use a set procedure, such as *Robert's Rules of Order*. Board meetings and hearings (except those in which the assessor will discuss confidential property returns) are public meetings and all discussion should be audible to everyone attending. The law allows the board to keep its record in an audio or written format. Most counties keep both an audio and written record of the hearings.

Decisions

Board decision-making procedures vary from county to county. Some boards make the decision at the hearing while the petitioner is present. Other boards keep the record open and make the decision later. If a board does the latter, the chairperson must tell the petitioner when the board will meet to make the decision.

The board must issue an order for every petition filed. The board can sign the order at the hearing and give it to the petitioner in person or sign the order later and mail it to the petitioner. The order must:

- Contain the assessor's original values and the values ordered by the board.
- Be mailed within five days of being signed by the board.

A copy of the order must be delivered to the assessor and the tax collector on the same day it is mailed to the petitioner.

The board can issue amended orders to correct errors in its original orders. The clerk or one board member can issue orders to correct clerical errors in orders if the full board authorizes this procedure. The chairperson must reconvene the board to correct errors of jurisdiction. Errors of jurisdiction occur when the board incorrectly applies its authority under ORS 309.026. The board can issue amended orders through June 30.

Decisions of the board regarding the waiver of late filing penalties are final and can't be appealed. All other board orders can be appealed by either the petitioner or the assessor to the Magistrate Division within 30 days of the date the order is mailed.

The role of the appraiser

The level of assessor representation at BOPTA hearings varies from county to county. Some assessors select one person to represent the county at all hearings. Other counties may have one person handle all the residential appeals and a commercial appraiser handle all the commercial appeals. Some counties have the appraiser who physically appraised the property appear at each hearing. Some assessors may choose not to send any representative to the hearings; however, the department doesn't recommend such a procedure.

No matter how many appraisers actually appear at the hearings, the assessor or chief appraiser should select one person to act as the primary liaison with the clerk's office. The clerk should deliver copies of the petitions to this person and notify this person of the hearing schedule and agenda. The appointed liaison should then assign the appeals to the appropriate person, notify them of the hearing time, and discuss the county's policy about the level of preparation and the time spent for each appeal.

Upon receiving an assignment to represent the county in an appeal, the appraiser or other person should:

- Review the petition and evidence provided by the taxpayer.
- Depending upon county policy, review the value of the property under appeal. Some counties may not review the property value if the petitioner doesn't provide any valid evidence. Other counties may have a policy to review the value of all properties under appeal regardless of the evidence submitted by the taxpayer. The amount of time the assessor's representative spends preparing for a hearing generally depends on the type of evidence submitted by the petitioner. If the appellant has submitted potentially convincing evidence of a value different from the roll value, the assessor's representative should examine it carefully. The assessor's representative may decide to agree with the petitioner's evidence of value or rebut it.
- Prepare a recommendation to the board to sustain or reduce the property value. This may be presented in person at the hearing or in the form of a written recommendation. Generally, it should address all values on the roll pertinent to the property including RMV, RMV of the exception, SAV, MAV, MSAV, and AV.
- Attend the hearing; listen to the petitioner's testimony; respond to the board's questions; make a recommendation to the board.

Although BOPTA hearings are informal, the assessor's representative should only speak when the board asks, and should always act in a professional and objective manner.

Appeals to the Tax Court—Magistrate Division

If the taxpayer or the assessor disagree with a BOPTA decision, either party may appeal to the Magistrate Division. The appeal must be made within 30 days of the date the order is mailed. Taxpayers may also appeal other actions of the assessor or tax collector to the court, including:

- Denial of exemptions and special assessments;
- Disqualification from exemptions and special assessments;
- Omitted property assessments; and
- Denial of discount and imposition of interest.

If the taxpayer chooses to file an appeal, it must be filed within 90 days of the date the action becomes known to the taxpayer. Department of Revenue decisions can also be appealed by the taxpayer or assessor up to 90 days after the decision is mailed. Most appeals to the Magistrate Division are authorized by ORS 305.275 and 305.280. Appeals of omitted property assessments are made under ORS 311.223(4).

ORS 305.288 allows limited appeals for the current year, and either or both of the two prior years, when the appellant fails to file a timely complaint. The court can consider this type of appeal if the magistrate determines:

- There is good and sufficient cause for the failure to appeal timely; or
- The property is residential and the appellant asserts an error in RMV of at least 20 percent.

For the court to hear an appeal, the taxpayer must be aggrieved and affected by the assessment or other action. A taxpayer is aggrieved if a tax consequence exists. The taxpayer must be the property owner or a person who holds an interest in the property that obligates payment of taxes. This type of interest includes a "contract, lease, or other intervening instrumentality."

Magistrate procedure

To initiate an appeal, the taxpayer or assessor must complete a complaint form and submit it to the court with a filing fee, which is currently $252. The person filing a complaint is called the plaintiff and the person responding to the complaint is called the defendant. The complaint must explain how the plaintiff is aggrieved and describe the relief requested. If the assessor files the appeal, a copy of the complaint must be served by certified mail on the affected taxpayer and an affidavit must be filed with the court attesting to the service. If the taxpayer files the appeal, the court mails a copy of the complaint to the assessor and the Department of Revenue. For Department of Revenue-appraised property, the complaint is mailed to the department, unless the county is also named as the defendant. The assessor or the department must respond to the complaint within 30 days. The response must include a brief answer to the issues raised in the complaint.

Case management

After the complaint and response are received, the Magistrate Division schedules a case management conference. These are usually held by telephone. At the conference, the issues before the court are identified and decisions are made about how to proceed with the appeal. Mediation or a trial may be scheduled or the magistrate may consider motions or stipulations. Stipulations are written agreements signed by both parties. Sometimes the appeal can be resolved at the case management conference and mediation or a trial isn't necessary.

Motions

Motions request certain actions from the court. Either party to the complaint can make a motion. Motions must be made in writing, except they may be made orally during case management conferences or trials. The person making the motion must state the reason and legal basis for the motion and the relief requested. One type of motion frequently made by defendants is a *Motion to Dismiss.* For example, if a taxpayer appeals directly to Tax Court without first appealing to BOPTA, the assessor can make a *Motion to Dismiss* because the plaintiff didn't follow the correct appeal procedure. In this circumstance, the *Motion to Dismiss* must be filed as the initial response to the complaint, in place of the normal answer. Another frequently used motion is a *Motion for Summary Judgment.* This type of motion may be applicable when facts are undisputed and a decision can be made without holding a trial.

Motions require written responses unless one of the parties asks the court to allow oral arguments on the motion. A response to a *Motion for Summary Judgment* must be filed within 20 days from the date a copy of the motion was served on the responding party. Responses to all other motions must be filed within 10 days from the date of service. After receipt of the motion, the court will issue an order granting or denying the motion. Orders on motions can't be appealed until the court's final decision in the case is issued.

Mediation

The goal of mediation is to settle the appeal without going to trial. A magistrate acts as mediator. Either party may request mediation or the court may order mediation. During mediation, each party will be asked to present its view of the issues. The magistrate may ask questions or identify strengths and weaknesses in each position. Both parties are expected to participate in mediation. Failure to do so could result in court sanctions. A trial will be set if mediation doesn't resolve the appeal. The magistrate who acted as mediator can't be assigned to hold the trial unless both parties waive this requirement in writing. Generally, the parties meet with the mediator in person, rather than by phone conference.

Trial

A trial is a formal proceeding where both parties present testimony and evidence in a courtroom or, at the court's discretion, by telephone. The trial and participants are subject to the direction and authority of the magistrate. All participants should treat each other with respect and courtesy. The magistrate is to be addressed as "Your Honor," "Magistrate," or "Judge." If the trial is held in a courtroom, everyone should stand when the magistrate enters or leaves. Testimony is given under oath. The court doesn't record the trial. If either party wants to record the proceeding, the magistrate must first receive notice.

Evidence must be exchanged so the court and other parties receive it no later than 10 days before the trial date. Timely exchange of evidence is very important. The court may exclude any evidence that isn't exchanged by the deadline. Evidence includes reports, documents, records, returns, photographs, calculations, field notes, or other written materials presented to the court. Each report or other document is a separate exhibit. Prior to exchange, the exhibits must be marked and numbered according to the guidelines prescribed by the court. Each page must be numbered. The plaintiff's exhibits are marked *numerically* and have the case number marked on the label. A defendant's exhibits are marked *alphabetically.* Occasionally, another person may intervene in the appeal and provide support to either the plaintiff or the defendant. If so, the intervenor's exhibits are marked numerically with a capital "I" in front of the number.

A trial normally begins with opening statements from the plaintiff and the defendant. The plaintiff's witnesses testify first and are subject to cross-examination and redirect. Defendant's witnesses follow, and when their testimony is completed, the plaintiff may call rebuttal witnesses. The trial concludes with closing statements by both sides.

Decision and judgment

Final decisions of the court are in writing. Either party may appeal the decision to the Regular Division of the Tax Court within 60 days. If there is no appeal during the 60-day period, the magistrate will enter a judgment consistent with the final decision. The judgment may not be appealed.

If either party wants to seek costs and disbursements, they must file the request with the court within 14 days after the entry of a decision or 10 days after the date of service of a plaintiff's motion to dismiss or withdraw. For more information about seeking costs and disbursements, see Tax Court Rule, Magistrate Division (TCR-MD) 16.

Role of the county appraiser

The first step in processing an appeal is to respond to the complaint within 30 days of the court's notification. An appraiser, supervisor, or county legal counsel can prepare the response. The response should identify areas of agreement or disagreement. The response can also be used to make requests of the court. The complaint should be reviewed carefully to determine if it was filed timely or contains other defects. If there are problems with the appeal, it is appropriate to inform the court. Generally, the court won't address legal issues unless they are raised by one of the parties in a motion.

If the complaint is unclear about the taxpayer's concerns or the relief requested, these issues should be clarified during the initial case management conference or by contacting the taxpayer or representative directly. Sometimes an appeal can be resolved amicably if the county appraiser learns more about the property, or the taxpayer receives more information about assessment methods and procedures.

Being well-prepared is the key to successful resolution of an appeal. The time spent in preparation depends on the complexity of the issues and the property type. At the case management level, the appraiser should be prepared to discuss procedures and identify any concerns about the appeal. In complex cases, legal counsel may represent the county. If the appeal is set for mediation, the appraiser should be well-versed about the issues and have an understanding of areas where compromise may be possible.

Preparing for trial can be time-consuming. It may be necessary to prepare a complete appraisal report when the case involves the valuation of a large commercial property. A report may not be necessary for cases involving residential properties or limited issues. Complete all written evidence in time to meet the exchange requirements of the court.

Give thought to the appraiser's direct testimony as well as the questions and responses that may occur in cross-examination. The county appraiser should present the county's evidence clearly and completely, respond to questions from the taxpayer, and ask relevant questions to clarify or expose weaknesses in the taxpayer's evidence. If an attorney represents the taxpayer or county, the attorney will ask the questions and the appraiser is limited to giving testimony. Present testimony in a manner that is neither defensive nor argumentative.

Take the following steps when preparing to represent the county in an appeal:

- Review the complaint for timeliness or other defects.
- Respond to the complaint within 30 days.
- Make motions if appropriate and respond timely to motions from the other party.
- Identify issues and prepare evidence.
- Mail evidence so that the court and other party receive it 10 days before the trial.
- Be punctual for all court proceedings, and be courteous and respectful to all participants.
- Give clear and complete testimony.

Appeals to the Tax Court—Regular division

Magistrate decisions may be appealed to the Regular division of the Tax Court by filing a complaint and paying a $252 fee. Procedures are more formal than those followed by the Magistrate Division. Attorneys usually represent both sides and there is no mediation procedure. Dates for discovery, evidence exchange, and trial are scheduled during case management conferences. Discovery allows both parties to request documents and information prior to the evidence exchange deadline. When either party wants additional information, the request should be made in writing within the time period scheduled for discovery. The court may also grant the litigants the right to depose (question) witnesses prior to the trial. Depositions are used to obtain additional evidence to support a position or to find weaknesses in the opposing party's position. During a deposition, witnesses are under oath and testimony is recorded.

Petitions to the Department of Revenue

The Department of Revenue has limited authority to consider property tax petitions. The types of petitions the department can consider are described below.

Supervisory authority review

The majority of petitions received by the department are filed under ORS 306.115, the statute that gives the department supervisory authority over the property tax system in Oregon. ORS 306.115(3) states:

"The department may order a change or correction applicable to a separate assessment of property to the assessment or tax roll **for the current tax year and for either of the two tax years immediately preceding the current tax year** if for the year to which the change or correction is applicable the department discovers reason to correct the roll which, in its discretion, it deems necessary to conform the roll to applicable law without regard to any failure to exercise a right of appeal."

This statute gives the department the discretion to determine the circumstances under which it will order changes to the assessment or tax roll. OAR 150-306-0050 identifies certain standards that must be satisfied before the department will exercise its supervisory power. These standards are:

- The assessor or taxpayer has no remaining statutory right of appeal; and
- The parties to the petition agree to facts that indicate it is likely that an error exists on the roll. The parties must agree to facts about the property. The department determines if the facts indicate the existence of an error; or
- One of the following extraordinary circumstances exists:
  - *Taxation of nonexistent property or property outside the taxing jurisdiction.*
  - *Taxation of property that is exempt as a matter of law without application.* For example, if school district property was inadvertently taxed.
  - *Taxpayer's computational or clerical errors on a personal property return.* This applies only to clerical errors and calculation errors—not to other reporting errors.
  - *A bona fide purchaser had no notice of a real property roll correction.* This may apply if a buyer was unaware of a tax liability because it wasn't recorded on the tax roll at the time of purchase.
  - A clerical or jurisdictional error in a BOPTA order.
  - An increase in maximum assessed value above the 3 percent limitation during the years for which the department has supervisory jurisdiction where there has been no change to the property that qualifies as an exception under ORS 308.146(3), and there is no dispute involving valuation judgment, the identification of activity as general ongoing maintenance and repair, or an account modification under 308.162.
  - *A question of fact is of interest to the department.* The department may take jurisdiction when an issue affects many properties statewide.

The department may also correct the roll, regardless of whether the taxpayer has a remaining statutory right of appeal, when:

a. The assessor requests a reduction in value; or
b. The taxpayer and the assessor stipulate to an assessment change.

Hardship petitions

Many different types of exemptions and special assessments require filing applications with the assessor. If the taxpayer fails to apply by the statutory deadline, the assessor can't approve the application even though the property qualifies for the program. In this circumstance, ORS 307-0500 allows the taxpayer to request that the department make a recommendation to the assessor for approval of the application. In order for the department to recommend approval, there must be good and sufficient cause (a hardship) that resulted in the failure to apply timely. Circumstances of good and sufficient cause described in OAR 150-307-0500 include:

- An illness, absence or disability which significantly affects a taxpayer's ability to apply timely.
- Delayed receipt of necessary documentation, such as a veteran's disability certification.
- Reliance on misinformation from county or department personnel.
- Active duty military service during the tax year for which the exemption was filed.

The department may hold a conference to determine if good and sufficient cause exists. When good and sufficient cause exists, the department will recommend that the assessor accept the application as timely filed. The assessor must then decide whether to approve the recommendation. If it is approved, the roll is corrected and a refund is issued if the taxes have been paid.

There is a time limit on hardship petitions. The request to the department must be made no later than December 15 of the year in which the application should have been filed. For example, a petition concerning an exemption application that was due on April 1, 2016, must be made by December 15, 2016, or the department won't be able to consider the request.

Miscellaneous petitions

ORS 305.285 allows for petitions to the department for subsequent tax years while a decision for a prior year is pending. For example, a taxpayer timely appeals a property value for the 2011–12 tax year to BOPTA. The taxpayer appeals the board's decision to the Magistrate Division of the Tax Court. The Magistrate Division issues a decision and the taxpayer appeals the decision to the Regular Division of the Tax Court. The Regular Division issues a decision in July 2014. The taxpayer is satisfied with this decision. The taxpayer didn't file appeals with BOPTA for the 2012–13 or 2013–14 tax years. The taxpayer may ask the department to correct the 2012–13 and 2013–14 tax rolls, even though those tax years weren't previously appealed. A petition under ORS 305.285 must be filed by December 15 of the year that final determination of the original appeal is made, or within six months of the final determination, whichever is later. Petitions are rare under this statute because ORS 309.115 provides the benefit of the prior adjudication to the subsequent years.

The department can also receive petitions filed under ORS 285C.140(12). This statute provides for businesses that are seeking an enterprise-zone exemption to request a waiver of the authorization filing deadline requirement. The department may waive the authorization filing deadline requirement for good and sufficient cause.

Department procedure

The first step is to complete a petition and send it to us. A petition contains the petitioner's name, address and phone number, property location, account number, a description of the issue, and the relief requested. Our form isn't required as long as the petition is in writing and contains all the information listed above. The petitioner or an authorized representative as defined in ORS 305.230 must sign the petition. The requirements of a petition are further identified in OAR 150-306-0060.

When we receive a petition, it assigns a case number and reviews the petition to determine if more information is needed. Requests for additional information may be made to the taxpayer or county. The department sends a copy of the petition to the other party. An untimely or incomplete petition may be dismissed.

Conferences

The department holds two types of conferences: supervisory and merits. The conferences are usually held by telephone. About one to two months before the conference, the department will send written notice to both parties informing them of the date and time. The taxpayer may appear at the conference or be represented by an authorized representative. A county appraiser usually represents the assessor. Either party may have other witnesses at the conference. The conferences are recorded and testimony is given under oath. The department's conference officer has full control of the conduct of the conference.

Supervisory conferences

If a determination can't be made from the written information submitted, the department will hold supervisory conferences to help the conference officer determine if the petitioner has met any of the standards identified in OAR 150-306-0050. If the conference officer determines that one or more standards have been met, the department will schedule the case for a merits conference. If no standards are satisfied, the department will deny the petition in writing.

Merits conferences

The department holds merits conferences to examine the substantive issues raised a petition. Both parties have an opportunity to present evidence and ask questions. In valuation cases, both parties may present appraisals or market data to support their opinions of value. In a hardship petition, the taxpayer should present evidence of good and sufficient cause for the late application. Certain petitions may involve legal arguments or interpretation of statutes.

When making a decision about the petitions, our conference officer must determine which side has presented the preponderance of the evidence. The side that presents the most persuasive evidence will prevail. Besides reviewing the testimony and written evidence, the department may also consider prior court rulings in making its decision.

A written Conference Decision informs both parties of the department's findings. Sometimes a petition is withdrawn or resolved by stipulation before a decision is issued.

Role of the county employee

The amount of time and expertise required to prepare for a conference varies with the type of appeal and the complexity of the issues. An appraiser will typically handle valuation issues. The person who works with exemptions may be assigned the hardship petitions. The tax collector may deal with interest and discount issues.

The person assigned to the case should first clarify the issues raised in the petition. It may be helpful to talk to the taxpayer or representative, or visit the property. In anticipation of a supervisory conference, the appraiser should prepare to comment on the applicability of the supervisory standards. For a hardship petition, the county employee should review the file and be ready to discuss circumstances related to the taxpayer's late-filed application.

For petitions involving value disputes, the assessor's representative may need to submit an appraisal report or other written evidence of the value of the property. All valuation evidence must be mailed or emailed to us and other parties 10 days before the conference, or be received by us and other parties at least five days before the conference. The conference officer must exclude evidence not exchanged by the due date.

Our conferences are informal. Appropriate conduct is important and each participant is expected to be courteous. The county representative and the taxpayer should be available by telephone at the scheduled time. The conferences are conducted as an informal conversation. None of the procedural rules of the Tax Court apply.

The county employee's responsibility is to present the county's evidence clearly, to ask relevant questions designed to clarify or expose weaknesses in the taxpayer's testimony, and to respond to questions from the taxpayer. Sometimes, a taxpayer asks questions about the assessment and taxation process that are not directly related to the petition. Being prepared and helpful in answering these questions can often result in a better relationship with the taxpayer. Occasionally, the conference record may be left open to receive additional evidence requested by the conference officer. It is important to provide information and make responses according to the timelines established during the conference.

Centrally assessed property appeals

We value and assess certain electric, communication, gas, railroad, airline, and pipeline property. The department sends proposed values to the companies in May of each year. No later than June 15, a company may request a conference with our director to review the value. A conference is scheduled with the director or deputy director and a decision is issued by August 1. A taxpayer that disagrees with the decision may appeal to the Tax Court. See ORS 308.584.

Chapter 16

Glossary

Abstract of title. A summary of all conveyances (such as deeds or wills), and legal proceedings that give the names of the parties, the description of the land, and the agreements. It is arranged to show the continuity of ownership for a specific piece of property.

Account number. A unique number assigned to each property by the assessor's office to identify, update, or delete assessment and tax roll records.

Adjudicated value. The value ordered by the Board of Property Tax Appeals, the Department of Revenue, or the Oregon Tax Court. Adjudicated Value becomes the property's RMV for the five assessment years following the year for which the order is entered and can only be changed during that period under certain conditions provided by statute. (See ORS 309.115)

Adjustment area. A group of properties whose RMV is adjusted by a given percentage or lump sum as a result of a ratio study. This group of properties is usually synonymous with a market area, maintenance area, study area, etc.

Adjusted sales price. The sales price that results from adjustments made to the stated sales price to account for effect of time, personal property, financing, etc.

Administrative rules. The interpretation of Oregon Revised Statutes issued by a state agency such as the Department of Revenue.

Ad valorem. Literally translated, it means "according to the value." For property taxes, a tax based upon the value of the item being taxed.

After-ratio study. A sales ratio study designed to test whether or not a county's annual valuation program is producing RMVs that meet the requirements of bringing all properties to 100 percent of RMV. The after-ratio study compares current year RMVs to current year sales.

Agent. A person buying on contract. A fee owner must be kept on record until the property is paid for or a warranty deed is recorded. A person who has been given authority to act for another.

Animal unit months (AUMs). An indicator of the amount of forage consumed in a grazing area. Calculated by multiplying the number of animal units by the number of months of grazing.

Appraisal date. For mass appraisal, this is a predetermined point in time to which all appraisals are made. All sales used in a preappraisal set-up are adjusted to this date. Adjusting to this date reflects inflationary or deflationary trends in the market. This date usually differs from the assessment date or the inspection date.

Appraisal ratio. The percentage relationship (ratio) between a property's current year roll RMV and its newly appraised RMV.

Appraisal ratio study. A statistical compilation of appraisal ratios for a representative group of properties in a county. These properties are randomly selected by property class to produce an indication of the ratio of the current year RMV for a taxable property in that particular class within a specific appraisal or market area. Generally used in areas of limited or no sales data.

Appraiser. A person registered by the state of Oregon (ORS 308.010) to establish property values and other information needed for ad valorem assessment and taxation.

Arithmetic mean. A measure of central tendency also called the average or mean. The mean is the total of all the ratios or values in an array divided by the number of ratios or values in an array.

Arm's-length transaction. A transaction freely arrived at in an open market, unaffected by abnormal pressure or by the absence of normal competitive negotiations.

Assessed value (AV). The lesser of the property's maximum assessed value (MAV) or RMV. For specially assessed property, the lesser of RMV or MAV for any market portion, plus the lesser of the specially assessed value (SAV) or maximum specially assessed value (MSAV) for each individual soil class, qualified home site, and on-site development. Taxes are imposed and calculated on the AV.

Assessment date. The date applied for setting RMV of property: January 1 at 1:00 a.m.

Assessment program. The entire process used by the assessor to administer the property tax system.

Assessment roll. A certified listing prepared by the assessor of the current-year values for all taxable property. It may become the tax roll in the fall, or the assessor can create a separate tax roll.

Assessment year. January 1 through December 31.

Assessor. The elected or appointed official who performs the assessor's duties as defined by state statutes.

AUMs (Animal Unit Months). An indicator of the amount of forage consumed in a grazing area. Calculated by multiplying the number of animal units by the number of months of grazing.

Average maximum assessed value (AMAV). The value determined by dividing the total maximum assessed value (MAV) of all unchanged property in the same area and property class by the total number of unchanged properties in the same area and property class.

Average real market value (ARMV). The value determined by dividing the total RMV of all unchanged property in the same area and property class by the total number of unchanged properties in the same area and property class.

Average tax rate. An average rate computed for an area by dividing the taxes imposed in that area by the AV of taxable property.

Board of Property Tax Appeals (BOPTA). A county board that hears taxpayer appeals of property assessment.

Bona fide purchase. The purchase of property by an individual in good faith, without knowledge or notice of any potential title defects.

Building class. The construction quality classification of the principal structure on the property.

Centrally assessed property. Property assessed by the Oregon Department of Revenue. See ORS 308.515.

Central tendency. The tendency of most kinds of data to cluster around some type or central values, such as a median or mean.

Certified assessment roll. The RMVs for the year just prior to the current roll in preparation. See Assessment Roll.

Changed property ratio (CPR). The ratio determined by dividing the average maximum assessed value (AMAV) by the average real market value (ARMV) for the same area and property class of unchanged property.

Computer assisted appraisal program (CAAP). Any use of a computer to calculate or develop real property values or to store any property characteristics. The entire process used by an assessor to value property using computer-assisted valuations or computerized valuation methods.

Consideration. The amount of money and/or other valuable goods or services upon which a buyer and a seller agree to transfer property.

County assessment function funding assistance account (CAFFAA). A fund that is established (ORS Chapter 294) to give quarterly grants to counties that provide resources to achieve compliance, if the county's planned estimate of expenditures for assessment and taxation are determined adequate.

Effective gross income (EGI). The anticipated income from all operations of the real property after an allowance is made for vacancy and collection losses.

Equity. The degree to which assessment bears a consistent relationship to RMV. Equity of assessment means property groups are valued at the same level of assessment, for example 100 percent of RMV. Equity is closely related to uniformity. See also Horizontal Inequity and Vertical Inequity.

Exception. Changes to property that allow MAV to increase by more than 3 percent. An exception doesn't include changes due to general ongoing maintenance and repair.

Exception value. The increase in RMV added to the roll as a result of new property and improvements, rezoning, subdivisions and partitions, omitted property, or cancellation of special assessments or exemptions as described in ORS 308.153 and ORS 308.156(5).

Farmland additional tax. The amount of tax and penalty when farmland changes use and becomes ineligible for farm use special assessment.

Farmland special assessment. An assessment program that reduces taxes for land currently in farm use. (ORS 308A.056)

Forestland additional tax. The amount of tax and penalty when forestland becomes ineligible for forestland special assessment.

Forestland special assessment. An assessment program that reduces taxes for forestland owners who manage their property for the primary purpose of growing and harvesting timber. Under this program there are two types of forestlands, "highest and best use" and "designated."

General ongoing maintenance and repair. The repair or replacement of existing materials due to normal wear/tear/deterioration. Examples may include re-roofing, painting, and replacement of floor or wall covering. It preserves the condition of existing improvements without significantly changing design or materials, achieves an average useful life that is typical of the type and quality so the property continues to perform and function efficiently, and doesn't create additions or new structures. The MAV of property can't be increased due to general ongoing maintenance and repair.

Governing body. The county court, board of commissioners, city council, school board, board of trustees, board of directors, or other managing board of a local government body.

Grantee. The legal party, to whom property is transferred by deed or other instrument.

Grantor. The legal party, who transfers property by deed or grants property rights through any other instrument.

Heterogeneous. A term used to describe a market area where the uses, property types, and quality classes are dissimilar. Also called non-homogeneous.

Highest and best use. The reasonably probable use of property that results in the highest value as of the date of the appraisal. The highest and best use will be physically possible, legally permissible, financially feasible, and maximally productive.

Home site. The land surrounding a dwelling and containing amenities necessary for support of the dwelling.

Homogeneous. A term used to describe a market area where the uses, property types, and quality classes are similar.

Horizontal inequity. The differences in the levels of appraisal of groups of properties, based on criteria other than value. For example, properties in one market area may have a higher level of assessment than similar properties in another market area. See Vertical Inequity.

Improvement. Any dwelling, building, manufactured structure, or physical addition to the land.

Index. A number, usually expressed as a percentage, used to measure change such as a construction cost index. Indexes are developed to identify the amount of change to be made when applying adjustments.

Instrument. In real estate, a formal legal document such as a deed, contract, mortgage, lien, lease, will, etc.

Land card. A paper card that contains all the information pertaining to the land characteristic of each account. The land card has been replaced by computer systems in many counties.

Land contract. A real estate installment purchase agreement that permits the buyer to use, occupy, and enjoy land without a deed being given by the seller (no title has been passed) until all or a specified part of the sales price has been paid. Subsequently evidenced by a valid recorded deed. Also referred to as Land Sale Contract or Contract for Sale.

Legal description. A description of property that contains the township, range, section, subsection and parcel number, lot and block of a subdivision, metes and bounds, distance, etc.

Legal opinion. An authorized official, such as the Oregon attorney general or city attorney's statement of the law.

Lien. A charge placed against personal or real property to satisfy a debt. For example:

- An amount requested by a taxing district for collection of unpaid assessments.
- The amount of additional tax due after disqualification from special assessment.
- An amount held against a real property for delinquent personal property assessments.

Lien date. July 1 for all real and personal property.

Locally appraised. Real and personal property appraised by the county assessor's staff.

Lot line adjustment. Any addition to the square footage of land for a real property tax account. Always includes a corresponding subtraction of square footage from the land of a contiguous real property tax account.

Major addition. An addition that has a RMV greater than $10,000 and adds square footage to an existing structure.

Manufactured home. A structure built off-site and designed to be moved on the public highways that has sleeping, cooking, and plumbing facilities and is intended for human occupancy and used for residential purposes.

Market area. A group of properties that generally share important characteristics that influence value. A market area may be defined by physical/geographical or abstract boundaries, or in the case of commercial property, according to use. A market area can include multiple neighborhoods. Each market area should contain a sufficient number of accounts to ensure an adequate sales sample for analysis.

Market price. The amount actually paid, or to be paid, for a property in a particular transaction. Differs from market value in that it is an accomplished or historic fact, whereas market value is and remains an estimate until proven. Market price involves no assumption of prudent conduct by the parties, or absence of undue stimulus, or of any other condition that is basic to the fair or open market value concept.

Mass appraisal. A method of appraising a large number of properties at one time by adopting standard techniques. The method gives due consideration to the valuation process so that uniformity and equity of values can be achieved between all properties.

Maximum assessed value (MAV). A term defined by Measure 50, which was approved by Oregon voters in 1997. The maximum (limit) of a property's assessed value (AV). MAV is the greater of 103 percent of the property's AV from the prior year or 100 percent of the property's MAV from the prior year. MAV may be increased or recalculated under certain circumstances to reflect changes to the property (exceptions).

Maximum specially assessed value (MSAV). The maximum (limit) of a property's specially assessed value (SAV). For the 1997–98 tax year, maximum specially assessed value (MSAV) was the 1995–96 SAV less 10 percent. MSAV may be increased or recalculated under certain circumstances to reflect changes to the property. For tax years after 1997–98, MSAV increased by 3 percent per year.

Mean. The result of adding all the values of an array and dividing by the number of values.

Measure 50. Approved by Oregon voters in 1997, this measure defined the 1997 MAV as the 1995–96 RMV less 10 percent. For tax years after 1997–98, MAV is the greater of 103 percent of the property's AV from the prior year or 100 percent of the property's MAV from the prior year. AV is equal to the lesser of RMV or MAV.

Measure 5. The constitutional tax rate limitations passed by voters in November 1990, which can be found at Article XI, Section 11b of the Oregon Constitution. Measure 5 limited school taxes to $15 per $1,000 of assessed value and nonschool taxes to $10 per $1,000 of assessed value, starting in 1991–92. The school limit fell by $2.50 per $1,000 each year until it reached $5 per $1,000 in 1995–96. The nonschool limit remains at $10 per $1,000. Levies to pay bond principal and interest for capital construction projects are outside the limitation. The Measure 5 rate limits still apply under the provisions of Measure 50, passed in 1997, but apply to RMV only.

Median. A measure of central tendency calculated by determining the exact middle ratio in an array. The value of the middle item where an odd number of items are arrayed according to size, or the arithmetic average of the two central items, if there is a even number of items. It is a positional average and isn't affected by the size of extreme values.

Minor construction. An improvement to real property that results in an addition to RMV but doesnt qualify as an addition to MAV due to a value threshold. The value threshold is an RMV of more than $10,000 in any one assessment year or more than $25,000 for all cumulative additions made over five assessment years.

Mode. A ratio that occurs most frequently in a ratio array.

Modernization. A type of renovation that replaces worn or outdated elements with their current counterparts.

Neighborhood. A group of complementary land uses where properties are homogeneous.

Net additions. The net RMV of the new property or new improvements less the RMV of retired property, but not less than zero.

Net assessed value. The value used to calculate district tax rates for dollar levies. It is total taxable assessed value, plus nonprofit housing value and state fish and wildlife value, minus urban renewal excess value used.

New construction. Any new structure, building, addition, or improvement to the land, including site development.

Non-homogeneous. A term used to describe a market area where the uses, property types, and quality classes are dissimilar. Also called heterogeneous.

Net operating income (NOI). The actual or anticipated income that remains after all operating expenses are deducted from effective gross income, but before mortgage debt service and book depreciation are deducted.

Omitted property. Property discovered and added to the roll after the roll is certified to the tax collector.

Oregon administrative rules (OAR). The interpretation of Oregon Revised Statutes issued by a state agency such as the Department of Revenue.

Oregon revised statutes (ORS). The laws of the state of Oregon, as the Legislature amends, changes, and deletes. The numbers after ORS indicate the chapter and section of the law.

Outlier. An observation that has an unusual value that varies widely from a measure of central tendency. Some outliers occur naturally, others may be due to data error.

Parameter. Descriptive characteristics of a population as a whole. For instance, it could be the average square footage, the average RMV, or the average percent good in the marketplace.

Personal property. All property that isn't classified as real estate. Includes items that are moveable and are not permanently affixed to or a part of the real estate.

Plat map. A map showing the division of land into lots or parcels.

Population. All the properties in an appraisal area, market area, or study area.

Property class. A three-digit code number, maintained on a continuing basis, for each individual parcel of locally assessed real property in a county. The classification assigned will be determined by the property's highest and best use except when specially assessed. The class associated with the property may or may not be its current use. OAR 150-308-0310 lists the property class codes approved by the Department of Revenue.

Ratio. Relational value in number or degree between two similar things. The relative size of two quantities expressed as the quotient of one divided by the other.

Ratio study. The assessor's certified ratio study required by ORS 309.200 and filed with the clerk of the Board of Property Tax Appeals by October 15 each year. The contents must comply with OAR 150-309-0240 and the current Assessor's Ratio Procedures Manual. This study estimates the percentage relationship between the total prior year's RMV of taxable property on the prior assessment roll and the total current RMV of the same properties in each property class countywide, by month and quarter, and by sale date.

Real market value (RMV). The amount in cash that could reasonably be expected to be paid by an informed buyer to an informed seller, each acting without compulsion in an arm's length transaction, occurring as of the assessment date for the tax year, as established by law. If the property has no immediate market value, its RMV is the amount of money that would justly compensate the owner for loss of the property. If the property is subject to governmental restriction as used on the assessment date, RMV should be adjusted to reflect the effect of the restrictions.

Real property. Physical land, including any improvements attached to the land.

Recalculation. An automated valuation processing method where traditional mass-appraisal set-up techniques are utilized and applied. These techniques and market-based value components are implemented using tabled, computer-aided formats replicating RMV levels for applicable classes of real property.

Reconstruction. To rebuild or replace an existing structure with one of comparable utility.

Red tag. A flagging method for new construction and accounts that will be reviewed by appraisers each year.

Rehabilitation. To restore to a former condition without changing the basic plan, form, or style of a structure.

Relative index. An index that calculates the percentage a property class contributes to the countywide ratio.

Remodeling. A type of renovation that changes the basic plan, form, or style of the property.

Renovation. To modernize, remodel, or restore older structures or historic buildings.

Restoration. To return a property to its original appearance and condition.

Rural. Pertaining to the area outside the relatively larger and moderate-sized cities and surrounding population concentrations.

Sales analysis. A method of analyzing RMV levels by measuring sales prices against prior year's RMVs.

Sales array. A grouping of sales listed in ascending order according to the size of the ratio.

Sales list. A listing of all sales used to prepare the ratio study

Sale price. The actual selling price of a property. See Market price.

Sales ratio. The relationship between RMV from the certified assessment roll and the selling price for a particular property. This can be expressed as a percent or decimal. The common practice is to express the ratio as a whole number.

Sales ratio study. A statistical compilation of sales ratios designed to produce an indication of the RMV ratio for each property class within each appraisal, market, or study area countywide.

State appraised industrial property. Industrial property that had an RMV for improvements of more than one million dollars for the preceding year and whose appraisal responsibility hasn't been delegated by the department to the county. (See ORS 306.126, OAR 150-306-0100)

Statistical class (stat class). A three-digit classification code of structural improvements (not to be confused with property classification). This code identifies characteristics of the structure, such as type, stories, building class, etc.

Study area. Typically, a group of properties identified during the sales ratio process when an analysis of the sales indicate a separate market is developing due to unique characteristics setting these properties apart from the rest of the area.

Tax year. The fiscal year from July 1 through June 30.

Trend. A series of related changes, such as real estate price trends, time trends, market trends, etc.

Urban. Pertaining to the area inside a city and surrounding population concentration.

Valuation. A universal term used to encompass all methods of valuing property from the traditional physical reappraisal to alternative methods (recalculation, etc.).

Valuation area. An area in a county generally composed of one or more school districts, a city or political subdivision, or any other logical division established by the county assessor for the purpose of conducting an orderly valuation of taxable properties.

Valuation date. The roll year when the last property valuation was made.

Vertical inequity. Differences in the levels of appraisal of properties related to the value ranges of the properties. That is, properties of higher value levels have assessment levels that differ from properties of lower value. See Horizontal Inequity.

Weight. The percentage of value that represents the relative importance of each element's contribution to the total.

Weighted mean. A measure of central tendency determined by dividing the sum total of the RMVs in an array by the sum total of the sale prices (or other indications of market value) for each property class in each market area or county-wide.

Chapter 17

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