2013
BROOMFIELD COUNTY PROPERTY ASSESSMENT STUDY

WILDROSE
APPRAISAL, INCORPORATED
Audit Division

WILDROSE
APPRAISAL, INCORPORATED
Audit Division
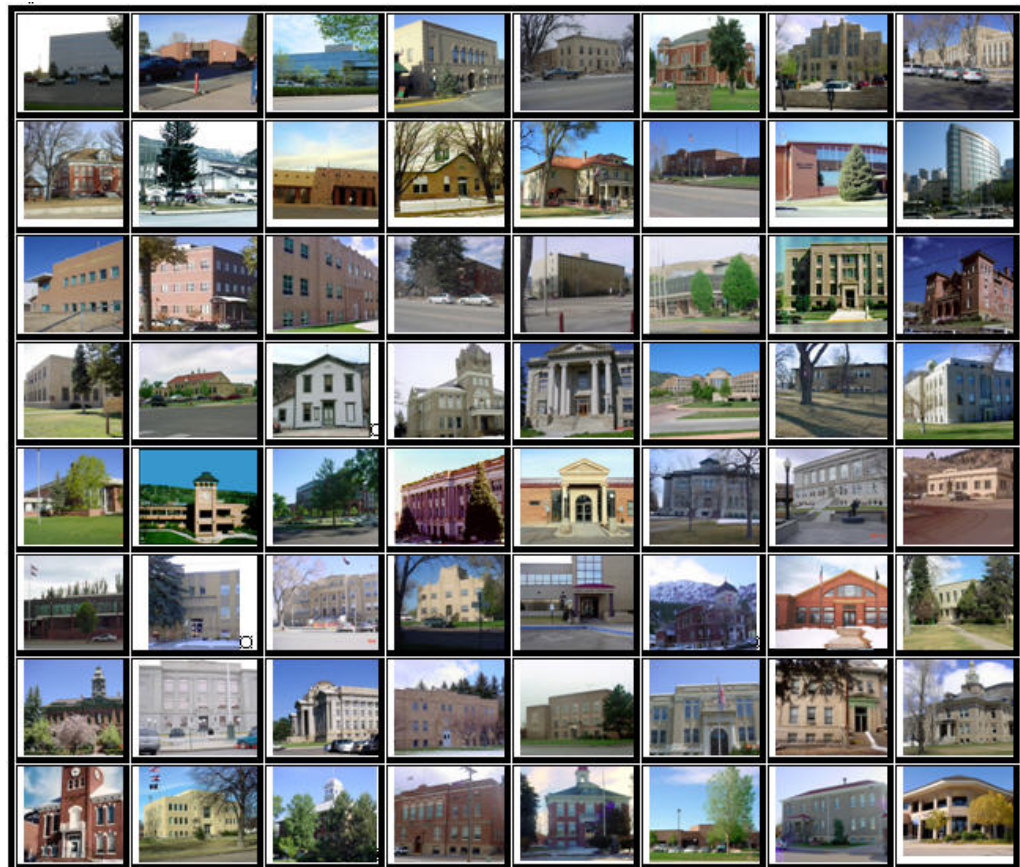
September 15, 2013

Mr. Mike Mauer
Director of Research
Colorado Legislative Council
Room 029, State Capitol Building
Denver, Colorado 80203

RE: Final Report for the 2013 Colorado Property Assessment Study

Dear Mr. Mauer:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2013 Colorado Property Assessment Study.

These reports are the result of two analyses: A procedural audit and a statistical audit.

The procedural audit examines all classes of property. It specifically looks at how the assessor develops economic areas, confirms and qualifies sales, develops time adjustments and performs periodic physical property inspections. The audit reviews the procedures for determining subdivision absorption and subdivision discounting. Valuation methodology is examined for residential properties and commercial properties. Procedures are reviewed for producing mines, oil and gas leaseholds and lands producing, producing coal mines, producing earth and stone products, severed mineral interests, and non-producing patented mining claims.

Statistical audits are performed on vacant land, residential properties, commercial/industrial properties and agricultural land. A statistical analysis is performed for personal property compliance on the eleven largest counties: Adams, Arapahoe, Boulder, Denver, Douglas, El Paso, Jefferson, Larimer, Mesa, Pueblo and Weld. The remaining counties receive a personal property procedural study.

Wildrose Appraisal Inc. — Audit Division appreciates the opportunity to be of service to the State of Colorado. Please contact us with any questions or concerns.

Harry J. Fuller
Project Manager
Wildrose Appraisal Inc. — Audit Division

TABLE OF CONTENTS

INTRODUCTION

The State Board of Equalization (SBOE) reviews assessments for conformance to the Constitution. The SBOE will order revaluations for counties whose valuations do not reflect the proper valuation period level of value.

The statutory basis for the audit is found in C.R.S. 39-1-104 (16)(a)(b) and (c).

The legislative council sets forth two criteria that are the focus of the audit group:

To determine whether each county assessor is applying correctly the constitutional and statutory provisions, compliance requirements of the State Board of Equalization, and the manuals published by the State Property Tax Administrator to arrive at the actual value of each class of property.

To determine if each assessor is applying correctly the provisions of law to the actual values when arriving at valuations for assessment of all locally valued properties subject to the property tax.

The property assessment audit conducts a two-part analysis: A procedural analysis and a statistical analysis.

The procedural analysis includes all classes of property and specifically looks at how the assessor develops economic areas, confirms and qualifies sales, and develops time adjustments. The audit also examines the procedures for adequately discovering, classifying and valuing agricultural outbuildings, discovering subdivision build-out and subdivision discounting procedures. Valuation methodology for vacant land, improved residential properties and commercial properties is examined. Procedures for producing mines, oil and gas leaseholds and lands producing, producing coal mines, producing earth and stone products, severed mineral interests and non-producing patented mining claims are also reviewed.

Statistical analysis is performed on vacant land, residential properties, commercial industrial properties, agricultural land, and personal property. The statistical study results are compared with State Board of Equalization compliance requirements and the manuals published by the State Property Tax Administrator.

Wildrose Audit has completed the Property Assessment Study for 2013 and is pleased to report its findings for Broomfield County in the following report.

REGIONAL/HISTORICAL SKETCH OF BROOMFIELD COUNTY

Regional Information

Broomfield County is located in the Front Range region of Colorado. The Colorado Front Range is a colloquial geographic term for the populated areas of the State that are just east of the foothills of the Front Range. It includes Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, El Paso, Jefferson, Larimer, Pueblo, and Weld counties.

Historical Information

Broomfield County has a population of approximately 55,889 people, according to the U.S. Census Bureau's 2010 census data. This represents a 46.031 percent change from the 2000 Census.

Broomfield was brought into the United States in 1803 as part of the Louisiana Purchase. The area was successively recognized as part of the Missouri Territory, Nebraska and Kansas until 1861 when the Colorado Territory was created. In 1876, the Broomfield area officially joined the union when Colorado became a state.

The municipality of Broomfield was incorporated in 1961 in the southeastern corner of Boulder County. It received its name from the broomcorn grown in the area. Over the next three decades, the city grew through annexations, many of which crossed the county line into four adjacent counties: Adams, Boulder, Jefferson, and Weld. In the 1990s, city leaders began to push for the creation of a separate county to avoid the inefficiencies of dealing with four separate court districts, four different county seats (each a considerable distance away), and four separate county sales tax bases. It also had longstanding political differences with Boulder County, which impelled it to separate. Broomfield reasoned that it could provide services more responsively under its own county government, and sought an amendment to the Colorado State Constitution to create a new county. The amendment passed in 1998, after which a three-year transition period followed. On November 15, 2001, Broomfield County became the 64th and the newest and smallest county of Colorado.

Broomfield has an extensive trail system that connects the various lakes and parks. A spectacular trail connects Stearns Lake and Josh's Pond on the west side of town. Broomfield also has a 9/11 memorial containing a piece of the steel beam from one of the towers.

Broomfield is home to many youth sports programs including, Broomfield Blitz Youth Football a non profit 501c organization dedicated to providing great exercise and athletic development. Broomfield also has a skate park with many different and varying features, such as bowls, a large half pipe and several "street" obstacles.

(www.ci.broomfield.co.us; www.wikipedia.org)

RATIO ANALYSIS

Methodology

All significant classes of properties were analyzed. Sales were collected for each property class over the appropriate sale period, which was typically defined as the 18-month period between January 2011 and June 2012. Counties with less than 30 sales typically extended the sale period back up to 5 years prior to June 30, 2012 in 6-month increments. If there were still fewer than 30 sales, supplemental appraisals were performed and treated as proxy sales. Residential sales for all counties using this method totaled at least 30 per county. For commercial sales, the total number analyzed was allowed, in some cases, to fall below 30. There were no sale quantity issues for counties requiring vacant land analysis or condominium analysis. Although it was required that we examine the median and coefficient of dispersion for all counties, we also calculated the weighted mean and price-related differential for each class of property. Counties were not passed or failed by these latter measures, but were counseled if there were anomalies noted during our analysis. Qualified sales were based on the qualification code used by each county, which were typically coded as either "Q" or "C." The ratio analysis included all sales. The data was trimmed for counties with obvious outliers using IAAO standards for data analysis. In every case, we examined the loss in data from trimming to ensure that only true outliers were excluded. Any county with a significant portion of sales excluded by this trimming method was examined further. No county was allowed to pass the audit if more than 5% of the sales were "lost" because of trimming. For the largest 11 counties, the residential ratio statistics were broken down by economic area as well.

Conclusions

For this final analysis report, the minimum acceptable statistical standards allowed by the State Board of Equalization are:

ALLOWABLE STANDARDS RATIO GRID		
Property Class	Unweighted Median Ratio	Coefficient of Dispersion
Commercial/Industrial	Between .95-1.05	Less than 20.99
Condominium	Between .95-1.05	Less than 15.99
Single Family	Between .95-1.05	Less than 15.99
Vacant Land	Between .95-1.05	Less than 20.99

The results for Broomfield County are:

Broomfield County Ratio Grid					
Property Class	**Number of Qualified Sales**	**Unweighted Median Ratio**	**Price Related Differential**	**Coefficient of Dispersion**	**Time Trend Analysis**
Commercial/Industrial	37	0.981	1.011	9.2	Compliant
Condominium	N/A	N/A	N/A	N/A	N/A
Single Family	1,917	0.989	1.020	6.8	Compliant
Vacant Land	N/A	N/A	N/A	N/A	N/A

After applying the above described methodologies, it is concluded from the sales ratios that Broomfield County is in compliance with SBOE, DPT, and Colorado State Statute valuation guidelines.

Recommendations

None

TIME TRENDING VERIFICATION

Methodology

While we recommend that counties use the inverted ratio regression analysis method to account for market (time) trending, some counties have used other IAAO-approved methods, such as the weighted monthly median approach. We are not auditing the methods used, but rather the results of the methods used. Given this range of methodologies used to account for market trending, we concluded that the best validation method was to examine the sale ratios for each class across the appropriate sale period. To be specific, if a county has considered and adjusted correctly for market trending, then the sale ratios should remain stable (i.e. flat) across the sale period. If a residual market trend is detected, then the county may or may not have addressed market trending adequately, and a further examination is warranted. This validation methodology also considers the number of sales and the length of the sale period. Counties with few sales across the sale period were carefully examined to determine if the statistical results were valid.

Conclusions

After verification and analysis, it has been determined that Broomfield County has complied with the statutory requirements to analyze the effects of time on value in their county. Broomfield County has also satisfactorily applied the results of their time trending analysis to arrive at the time adjusted sales price (TASP).

Recommendations

None

SOLD/UNSOLD ANALYSIS

Methodology

Broomfield County was tested for the equal treatment of sold and unsold properties to ensure that "sales chasing" has not occurred. The auditors employed a multi-step process to determine if sold and unsold properties were valued in a consistent manner.

All qualified residential and commercial class properties were examined using the unit value method, where the actual value per square foot was compared between sold and unsold properties. A class was considered qualified if it met the criteria for the ratio analysis. The median value per square foot for both groups was compared from an appraisal and statistical perspective. If no significant difference was indicated, then we concluded that no further testing was warranted and that the county was in compliance in terms of sold/unsold consistency.

If either residential or commercial differences were significant using the unit value method, or if data limitations made the comparison invalid, then the next step was to perform a ratio analysis comparing the 2012 and 2013 actual values for each qualified class of property. All qualified vacant land classes were tested using this method. The sale property ratios were arrayed using a range of 0.8 to 1.5, which theoretically excluded changes between years that were due to other unrelated changes in the property. These ratios were also stratified at the appropriate level of analysis. Once the percent change was determined for each appropriate class and sub-class, the next step was to select the unsold sample. This sample was at least 1% of the total population of unsold properties and excluded any sale properties. The unsold sample was filtered based on the attributes of the sold dataset to closely correlate both groups. The ratio analysis was then performed on the unsold properties and stratified. The median and mean ratio distribution was then compared between the sold and unsold group. A non-parametric test such as the Mann-Whitney test for differences between independent samples was undertaken to determine whether any observed differential was significant. If this test determined that the unsold properties were treated in a manner similar to the sold properties, it was concluded that no further testing was warranted and that the county was in compliance.

If a class or sub-class of property was determined to be significantly different by this method, the final step was to perform a multi-variate mass appraisal model that developed ratio statistics from the sold properties that were then applied to the unsold sample. This test compared the measures of central tendency and confidence intervals for the sold properties with the unsold property sample. If this comparison was also determined to be significantly different, then the conclusion was that the county had treated the unsold properties in a different manner than sold properties.

These tests were supported by both tabular and chart presentations, along with saved sold and unsold sample files.

| Sold/Unsold Results	
Property Class	**Results**
Commercial/Industrial	Compliant
Condominium	N/A
Single Family	Compliant
Vacant Land	N/A

Conclusions

After applying the above described methodologies, it is concluded that Broomfield County is reasonably treating its sold and unsold properties in the same manner.

Recommendations

None

AGRICULTURAL LAND STUDY

Acres By Subclass

Value By Subclass
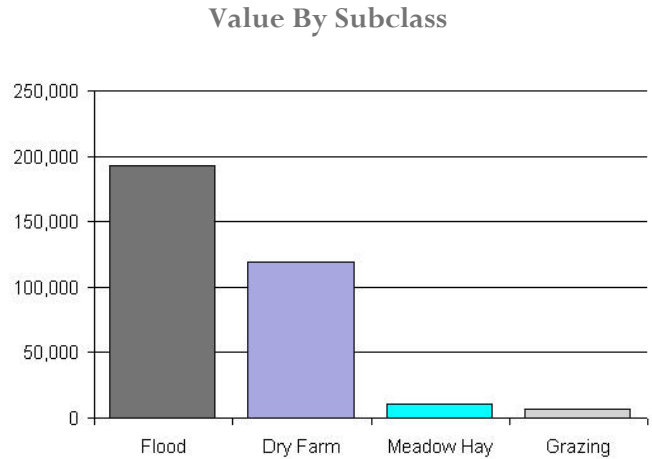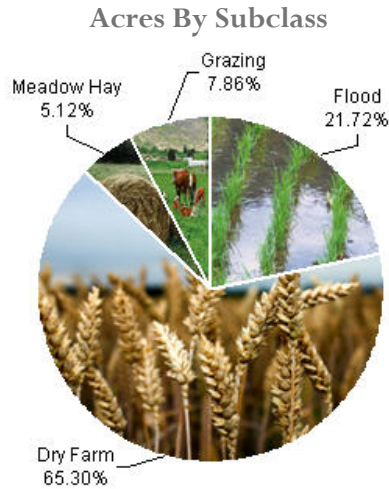
Agricultural Land

County records were reviewed to determine major land categories such as irrigated farm, dry farm, meadow hay, grazing and other lands. In addition, county records were reviewed in order to determine if: Aerial photographs are available and are being used; soil conservation guidelines have been used to classify lands based on productivity; crop rotations have been documented; typical commodities and yields have been determined; orchard lands have been properly classified and valued; expenses reflect a ten year average and are typical landlord expenses; grazing lands have been properly classified and valued; the number of acres in each class and subclass have been determined; the capitalization rate was properly applied. Also, documentation was required for the valuation methods used and any locally developed yields, carrying capacities, and expenses. Records were also checked to ensure that the commodity prices and expenses, furnished by the Property Tax Administrator (PTA), were applied properly.

(See Assessor Reference Library Volume 3 Chapter 5.)

Conclusions

An analysis of the agricultural land data indicates an acceptable appraisal of this property type. Directives, commodity prices and expenses provided by the PTA were properly applied. Expenses used by the county were allowable expenses and were in an acceptable range. Grazing lands carrying capacities were in an acceptable range. The data analyzed resulted in the following ratios:

Broomfield County Agricultural Land Ratio Grid						
Abstract Code	**Land Class**	**Number Of Acres**	**County Value Per Acre**	**County Assessed Total Value**	**WRA Total Value**	**Ratio**
4117	Flood	1,191	162.00	192,699	192,699	1.00
4127	Dry Farm	3,581	33.00	119,048	119,048	1.00
4137	Meadow Hay	281	39.00	10,910	10,910	1.00
4147	Grazing	431	16.00	6,995	6,995	1.00
Total/Avg		**5,484**	**60.00**	**329,652**	**329,652**	**1.00**

Recommendations

None

Agricultural Outbuildings

Methodology

Data was collected and reviewed to determine if the guidelines found in the Assessor's Reference Library (ARL) Volume 3, pages 5.74 through 5.77 were being followed.

Conclusions

Broomfield County has substantially complied with the procedures provided by the Division of Property Taxation for the valuation of agricultural outbuildings.

Recommendations

None

Agricultural Land Under Improvements

Methodology

Data was collected and reviewed to determine if the guidelines found in the Assessor's Reference Library (ARL) Volume 3, pages 5.19 and 5.20 were being followed.

Broomfield County utilized the following discovery method(s):

- Questionnaires
- Field inspections

Conclusions

Broomfield County has substantially complied with the procedures provided by the Division of Property Taxation for the valuation of land under residential improvements that may or may not be integral to an agricultural operation.

Recommendations

None

SALES VERIFICATION

According to Colorado Revised Statutes:

A representative body of sales is required when considering the market approach to appraisal.

(8) In any case in which sales prices of comparable properties within any class or subclass are utilized when considering the market approach to appraisal in the determination of actual value of any taxable property, the following limitations and conditions shall apply:

(a)(I) Use of the market approach shall require a representative body of sales, including sales by a lender or government, sufficient to set a pattern, and appraisals shall reflect due consideration of the degree of comparability of sales, including the extent of similarities and dissimilarities among properties that are compared for assessment purposes. In order to obtain a reasonable sample and to reduce sudden price changes or fluctuations, all sales shall be included in the sample that reasonably reflect a true or typical sales price during the period specified in section 39-1-104 (10.2). Sales of personal property exempt pursuant to the provisions of sections 39-3-102, 39-3-103, and 39-3-119 to 39-3-122 shall not be included in any such sample.

(b) Each such sale included in the sample shall be coded to indicate a typical, negotiated sale, as screened and verified by the assessor. (39-1-103, C.R.S.)

The assessor is required to use sales of real property only in the valuation process.

(8)(f) Such true and typical sales shall include only those sales which have been determined on an individual basis to reflect the selling price of the real property only or which have been adjusted on an individual basis to reflect the selling price of the real property only. (39-1-103, C.R.S.)

Part of the Property Assessment Study is the sales verification analysis. WRA has used the above-cited statutes as a guide in our study of the county's procedures and practices for verifying sales.

WRA reviewed the sales verification procedures in 2013 for Broomfield County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 46 sales listed as unqualified.

All of the sales in the unqualified sales sample had reasons that were clear and supportable.

For residential, commercial, and vacant land sales with considerations over $500, the contractor has examined and reported the ratio of qualified sales to total sales by class and performed the following analyses of unqualified sales:

> The contractor has examined the manner in which sales have been classified as qualified or unqualified, including a listing of each step in the sales verification process, any adjustment procedures, and the county official responsible for making the final decision on qualification.

> When less than 50 percent of sales are qualified in any of the three property classes (residential, commercial, and vacant land), the contractor analyzed the reasons for disqualifying sales in any subclass that constitutes at least 20 percent of the class, either by number of properties or by value, from the prior year. The contractor has

reviewed with the assessor any analysis indicating that sales data are inadequate, fail to reflect typical properties, or have been disqualified for insufficient cause. In addition, the contractor has reviewed the disqualified sales by assigned code. If there appears to be any inconsistency in the coding, the contractor has conducted further analysis to determine if the sales included in that code have been assigned appropriately.

If 50 percent or more of the sales are qualified, the contractor has reviewed a statistically significant sample of unqualified sales, excluding sales that were disqualified for obvious reasons.

The following subclasses were analyzed for Broomfield County:

- 2112 Merchandising
- 2120 Offices
- 2130 Special Purpose

Conclusions

Broomfield County appears to be doing an excellent job of verifying their sales. WRA agreed with the county's reason for disqualifying each of the sales selected in the sample. There are no recommendations or suggestions.

Recommendations

None

ECONOMIC AREA REVIEW AND EVALUATION

Methodology

Broomfield County has submitted a written narrative describing the economic areas that make up the county's market areas. Broomfield County has also submitted a map illustrating these areas. Each of these narratives have been read and analyzed for logic and appraisal sensibility. The maps were also compared to the narrative for consistency between the written description and the map.

Conclusions

After review and analysis, it has been determined that Broomfield County has adequately identified homogeneous economic areas comprised of smaller neighborhoods. Each economic area defined is equally subject to a set of economic forces that impact the value of the properties within that geographic area and this has been adequately addressed. Each economic area defined adequately delineates an area that will give "similar values for similar properties in similar areas."

Recommendations

None

Methodology

Assessors Reference Library (ARL) Volume 3, Chapter 6: Valuation of Natural Resources

STATUTORY REFERENCES

Section § 39-1-103, C.R.S., specifies that producing oil or gas leaseholds and lands are valued according to article 7 of title 39, C.R.S.

Actual value determined – when.

(2) The valuation for assessment of leaseholds and lands producing oil or gas shall be determined as provided in article 7 of this title.

§ 39-1-103, C.R.S.

Article 7 covers the listing, valuation, and assessment of producing oil and gas leaseholds and lands.

Valuation:

Valuation for assessment.

(1) Except as provided in subsection (2) of this section, on the basis of the information contained in such statement, the assessor shall value such oil and gas leaseholds and lands for assessment, as real property, at an amount equal to eighty-seven and one-half percent of:

(a) The selling price of the oil or gas sold there from during the preceding calendar year, after excluding the selling price of all oil or gas delivered to the United States government or any agency thereof, the state of Colorado or any agency thereof, or any political subdivision of the state as royalty during the preceding calendar year;

(b) The selling price of oil or gas sold in the same field area for oil or gas transported from the premises which is not sold during the preceding calendar year, after excluding the selling price of all oil or gas delivered to the United States government or any agency thereof, the state of Colorado or any agency thereof, or any political subdivision of the state as royalty during the preceding calendar year.

§ 39-7-102, C.R.S.

Conclusions

The county applied approved appraisal procedures in the valuation of oil and gas.

Recommendations

None

VACANT LAND

Subdivision Discounting

Subdivisions were reviewed in 2013 in Broomfield County. The review showed that subdivisions were discounted pursuant to the Colorado Revised Statutes in Article 39-1-103 (14). Discounting procedures were applied to all subdivisions where less than 80 percent of all sites were sold using the present worth method. The market approach was applied where 80 percent or more of the subdivision sites were sold. An absorption period was estimated for each subdivision that was discounted. An appropriate discount rate was developed using the summation method. Subdivision land with structures was appraised at full market value.

Conclusions

Broomfield County has implemented proper procedures to adequately estimate absorption periods, discount rates, and lot values for qualifying subdivisions.

Recommendations

None

POSSESSORY INTEREST PROPERTIES

Possessory Interest

Possessory interest property discovery and valuation is described in the Assessor's Reference Library (ARL) Volume 3 section 7 in accordance with the requirements of Chapter 39-1-103 (17)(a) (II) C.R.S. Possessory Interest is defined by the Property Tax Administrator's Publication ARL Volume 3, Chapter 7: A private property interest in government-owned property or the right to the occupancy and use of any benefit in government-owned property that has been granted under lease, permit, license, concession, contract, or other agreement.

Broomfield County has been reviewed for their procedures and adherence to guidelines when assessing and valuing commercial possessory interest properties. The county has also been queried as to their confidence that the possessory interest properties have been discovered and placed on the tax rolls.

Conclusions

Broomfield County has implemented a discovery process to place possessory interest properties on the roll. They have also correctly and consistently applied the correct procedures and valuation methods in the valuation of possessory interest properties.

Recommendations

None

PERSONAL PROPERTY AUDIT

Broomfield County was studied for its procedural compliance with the personal property assessment outlined in the Assessor's Reference Library (ARL) Volume 5, and in the State Board of Equalization (SBOE) requirements for the assessment of personal property. The SBOE requires that counties use ARL Volume 5, including current discovery, classification, documentation procedures, current economic lives table, cost factor tables, depreciation table, and level of value adjustment factor table.

The personal property audit standards narrative must be in place and current. A listing of businesses that have been audited by the assessor within the twelve-month period reflected in the plan is given to the auditor. The audited businesses must be in conformity with those described in the plan.

Aggregate ratio will be determined solely from the personal property accounts that have been physically inspected. The minimum assessment sample is one percent or ten schedules, whichever is greater, and the maximum assessment audit sample is 100 schedules.

For the counties having over 100,000 population, WRA selected a sample of all personal property schedules to determine whether the assessor is correctly applying the provisions of law and manuals of the Property Tax Administrator in arriving at the assessment levels of such property. This sample was selected from the personal property schedules audited by the assessor. In no event was the sample selected by the contractor less than 30 schedules. The counties to be included in this study are Adams, Arapahoe, Boulder, Denver, Douglas, El Paso, Jefferson, Larimer, Mesa, Pueblo, and Weld. All other counties received a procedural study.

Broomfield County is compliant with the guidelines set forth in ARL Volume 5 regarding discovery procedures, using the following methods to discover personal property accounts in the county:

- Public Record Documents
- Chamber of Commerce/Economic Development Contacts
- Local Telephone Directories, Newspapers or Other Local Publications
- Personal Observation, Physical Canvassing or Word of Mouth
- Questionnaires, Letters and/or Phone Calls to Buyer, Seller and/or Realtor

The county uses the Division of Property Taxation (DPT) recommended classification and documentation procedures. The DPT's recommended cost factor tables, depreciation tables and level of value adjustment factor tables are also used.

Broomfield County submitted their personal property written audit plan and was current for the 2013 valuation period. The number and listing of businesses audited was also submitted and was in conformance with the written audit plan. The following audit triggers were used by the county to select accounts to be audited:

- Accounts with obvious discrepancies
- New businesses filing for the first time
- Accounts with greater than 10% change
- Incomplete or inconsistent declarations
- Accounts with omitted property
- Businesses with no deletions or additions for 2 or more years

- Non-filing Accounts - Best Information Available
- Accounts protested with substantial disagreement

Conclusions

Broomfield County has employed adequate discovery, classification, documentation, valuation, and auditing procedures for their personal property assessment and is in compliance with SBOE requirements.

Recommendations

None

WILDROSE AUDITOR STAFF

Harry J. Fuller, *Audit Project Manager*

Suzanne Howard, *Audit Administrative Manager*

Steve Kane, *Audit Statistician*

Carl W. Ross, *Agricultural / Natural Resource Analyst*

J. Andrew Rodriguez, *Field Analyst*

A PPENDICES

STATISTICAL COMPLIANCE REPORT
FOR BROOMFIELD COUNTY
2013

I. OVERVIEW

Broomfield County is located in the Denver metropolitan area. The county has a total of 22,194 real property parcels, according to data submitted by the county assessor's office in 2013. The following provides a breakdown of property classes for this county:
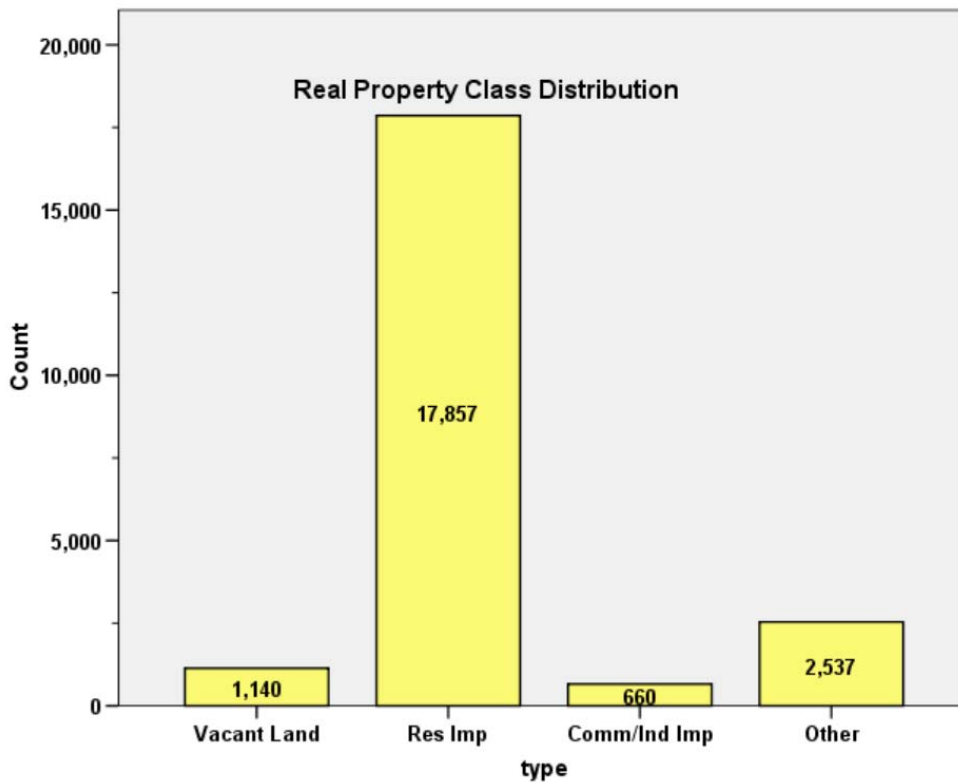
The vacant land class of properties was dominated by residential land. Residential lots (coded 100 and 200) accounted for 84.9% of all vacant land parcels.

For residential improved properties, single family properties accounted for 91.1% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial properties accounted for 3% of all such properties in this county.

II. DATA FILES

The following sales analyses were based on the requirements of the 2013 Colorado Property Assessment Study. The data included all 5 property record files as specified by the Auditor.

III. RESIDENTIAL SALES RESULTS

There were 1,917 qualified residential sales in the 24 month period prior to June 30, 2012. The sales ratio analysis was analyzed as follows:

Median	0.989
Price Related Differential	1.020
Coefficient of Dispersion	.068

The above ratio statistics were in compliance with the standards set forth by the Colorado State Board of Equalization (SBOE) for the overall residential sales. The following graphs describe further the sales ratio distribution for these properties:
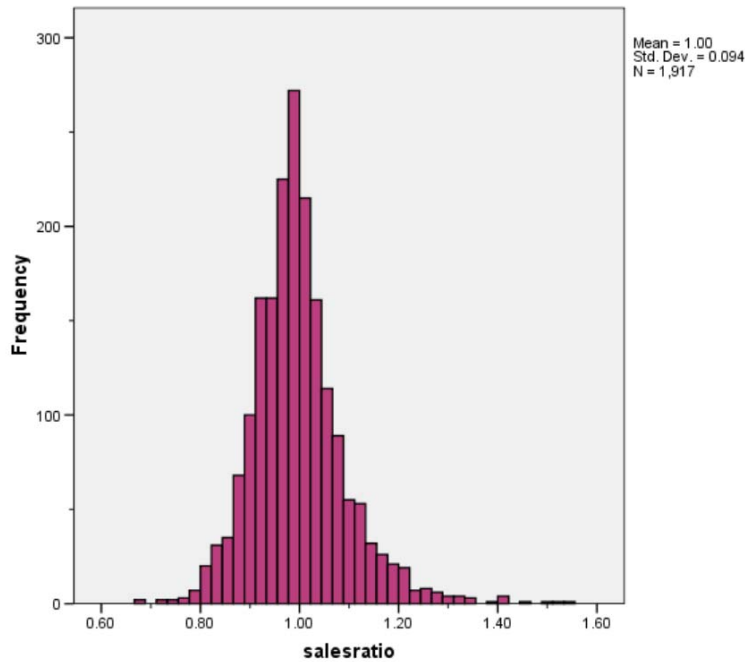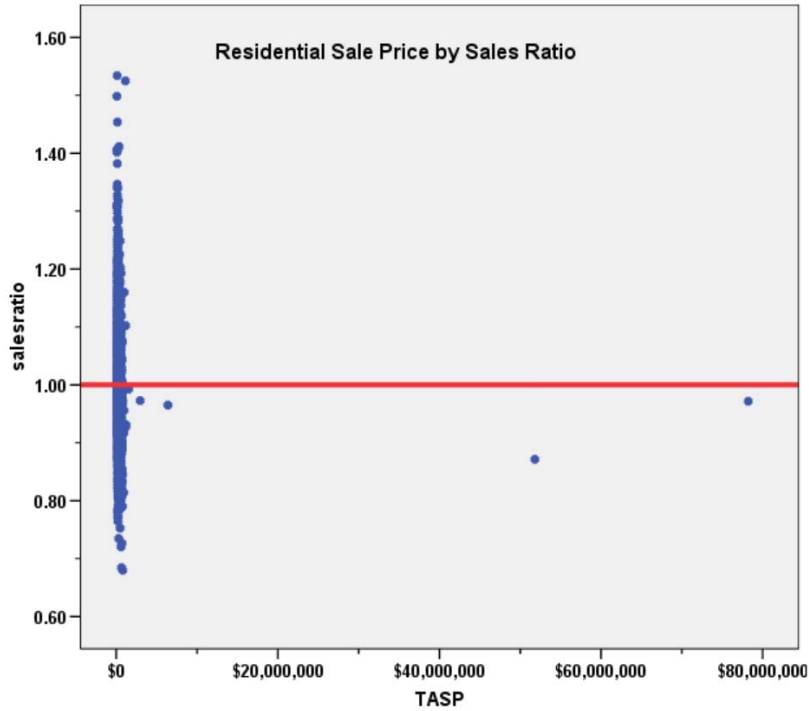
The above graphs indicate that the distribution of the residential sale ratios was within state mandated limits.

Residential Market Trend Analysis

We next analyzed the residential dataset using the 24-month sale period for any residual market trending, as follows:

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.993	.004		254.172	.000
	SalePeriod	.000	.000	.031	1.352	.176

a. Dependent Variable: salesratio
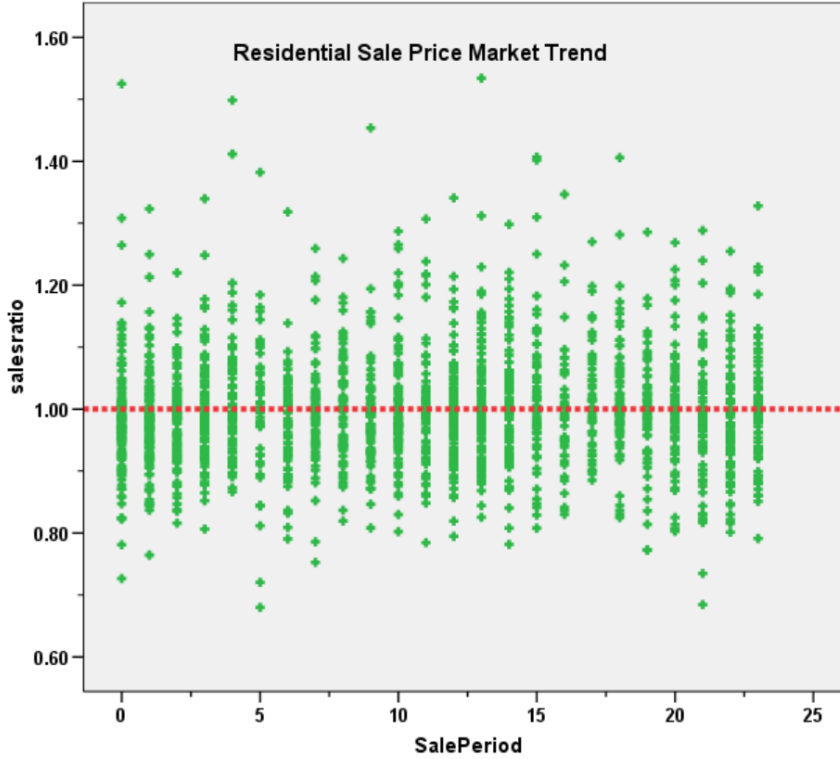
While there was a statistically significant trend, the magnitude of that trend was marginal. We therefore concluded that the assessor has adequately addressed market trending in the valuation of residential properties.

Sold/Unsold Analysis

In terms of the valuation consistency between sold and unsold residential properties, we compared the median actual value per square foot for 2013 between each group, as follows:

Group	N	Median	Mean
Unsold	15,740	$144	$148
Sold	1,874	$154	$159

The above results indicate that sold and unsold residential properties were valued in a consistent manner.

IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

There were 37 qualified commercial and industrial sales in the 48 month period prior to June 30, 2012. The sales ratio analysis was analyzed as follows:

Median	0.981
Price Related Differential	1.011
Coefficient of Dispersion	.092

The above tables indicate that the Broomfield County commercial/industrial sale ratios were in compliance with the SBOE standards. The following histogram and scatter plot describe the sales ratio distribution further:

Commercial Sale Price by Sales Ratio
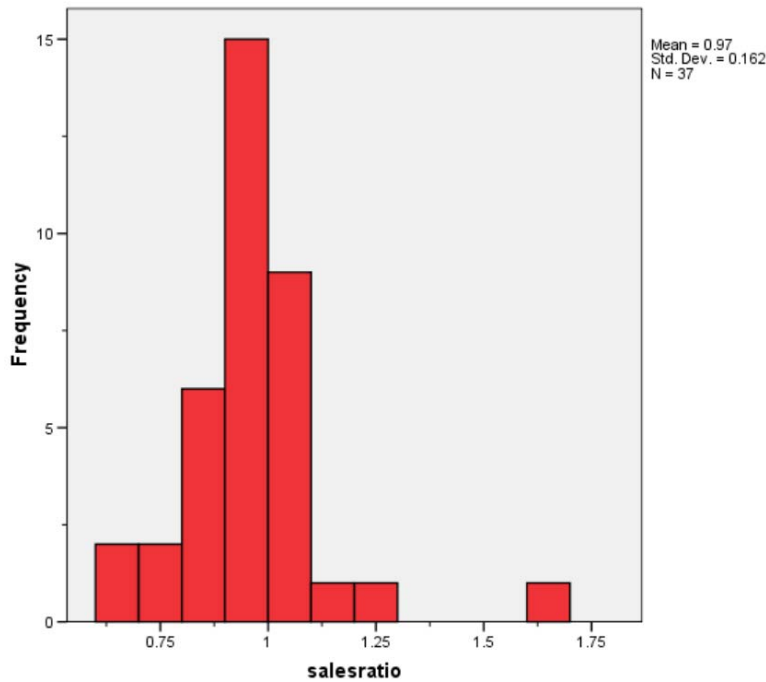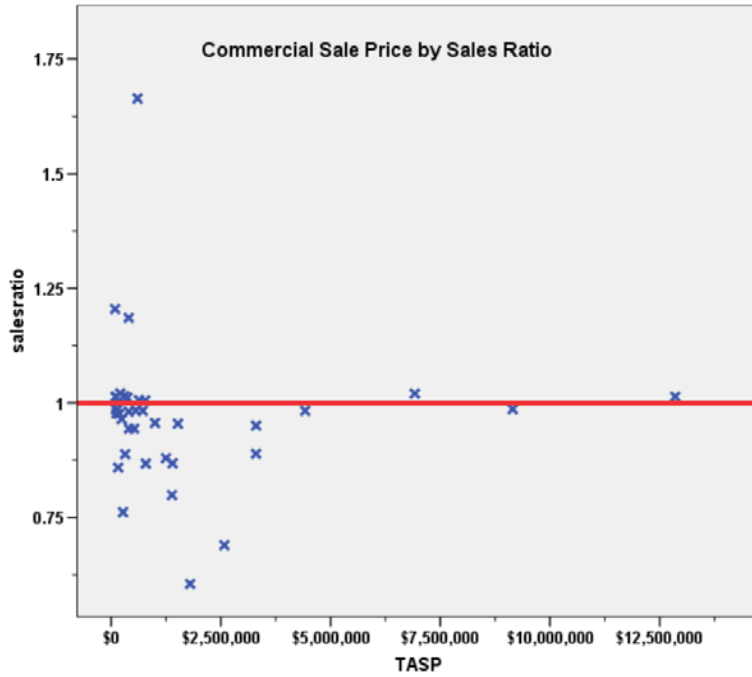
Commercial/Industrial Market Trend Analysis

The assessor did apply market trend adjustments to the commercial/industrial dataset. The 37 commercial/industrial sales were analyzed, examining the sale ratios across the 48 month sale period with the following results:

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.965	.055		17.632	.000
	SalePeriod	.000	.002	.012	.072	.943

a. Dependent Variable: salesratio
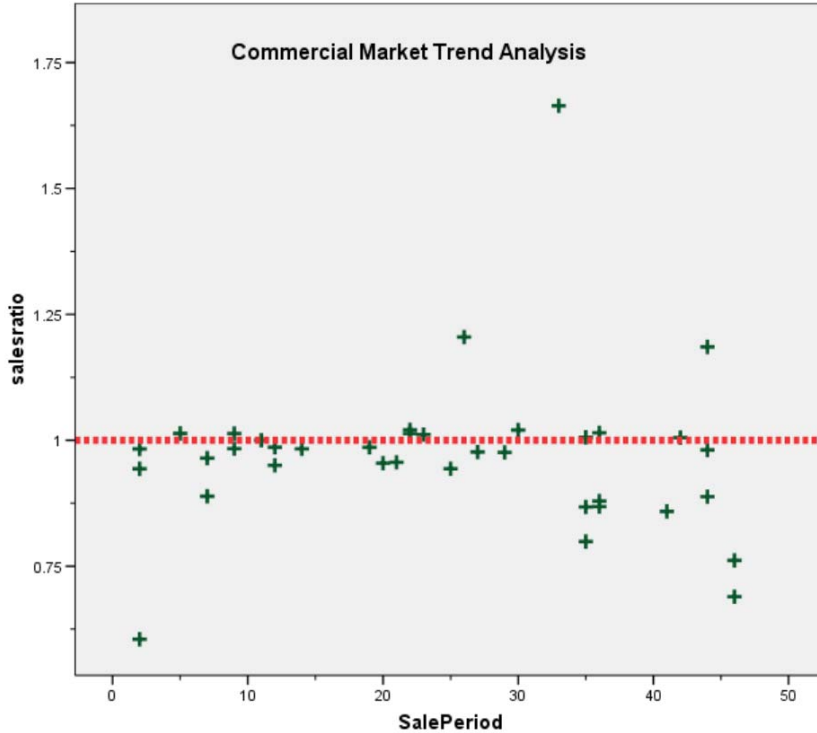
There was no residual market trending present in the commercial/industrial sale ratios. We concluded that the assessor has adequately considered market trending adjustments as part of the commercial/industrial valuation.

Sold/Unsold Analysis

We compared the median change in actual value between 2012 and 2013 base years for commercial/industrial properties to determine if sold and unsold properties were valued consistently, as follows:

Group	No. Props	Median Diff	Mean Diff
UNSOLD	597	1.01	1.11
SOLD	37	1.01	1.06

The above results indicated that sold and unsold commercial/industrial properties were valued consistently.

V. VACANT LAND SALE RESULTS

Based on the number of vacant land parcels (i.e. less than 1,200 parcels), we did not perform a vacant land compliance analysis for Broomfield County.

V. AGRICULTURAL IMPROVEMENTS ANALYSIS

Based on the parameters of the state audit analysis, this county was exempt from this analysis for 2013.

VI. CONCLUSIONS

Based on this 2013 audit statistical analysis, residential and commercial properties were found to be in compliance with state guidelines.

STATISTICAL ABSTRACT
Residential

Ratio Statistics for CURRTOT / TASP

Mean	95% Confidence Interval for Mean		Median	95% Confidence Interval for Median			Weighted Mean	95% Confidence Interval for Weighted Mean		Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			Mean Centered
.997	.993	1.001	.989	.986	.993	95.1%	.978	.963	.992	1.020	.068	9.4%

The confidence interval for the median is constructed without any distribution assumptions. The actual coverage level may be greater than the specified level. Other confidence intervals are constructed by assuming a Normal distribution for the ratios.

Commercial Land

Ratio Statistics for CURRTOT / TASP

Mean	95% Confidence Interval for Mean		Median	95% Confidence Interval for Median			Weighted Mean	95% Confidence Interval for Weighted Mean		Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			Mean Centered
.969	.915	1.023	.981	.950	1.000	95.3%	.958	.910	1.007	1.011	.092	16.7%

The confidence interval for the median is constructed without any distribution assumptions. The actual coverage level may be greater than the specified level. Other confidence intervals are constructed by assuming a Normal distribution for the ratios.

Residential Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	$50K to $100K	8	.4%
	$100K to $150K	90	4.7%
	$150K to $200K	278	14.5%
	$200K to $300K	628	32.8%
	$300K to $500K	679	35.4%
	$500K to $750K	212	11.1%
	$750K to $1,000K	13	.7%
	Over $1,000K	9	.5%
Overall		1917	100.0%
Excluded		0	
Total		1917	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
$50K to $100K	1.227	1.014	.137	15.9%
$100K to $150K	1.025	1.000	.101	14.3%
$150K to $200K	1.011	1.002	.080	10.4%
$200K to $300K	.987	.999	.063	8.5%
$300K to $500K	.991	1.001	.055	7.3%
$500K to $750K	.955	1.001	.066	8.6%
$750K to $1,000K	.918	.996	.096	13.0%
Over $1,000K	.972	1.094	.103	21.1%
Overall	.989	1.020	.068	9.5%

Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	0	5	.3%
	1212	1733	90.4%
	1215	1	.1%
	1230	178	9.3%
Overall		1917	100.0%
Excluded		0	
Total		1917	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	.972	1.018	.023	5.2%
1212	.989	1.010	.069	9.5%
1215	1.084	1.000	.000	.%
1230	.988	1.011	.060	9.6%
Overall	.989	1.020	.068	9.5%

Improvement Age

Case Processing Summary

		Count	Percent
AgeRec	.00	5	.3%
	50 to 75	74	3.9%
	25 to 50	342	17.8%
	5 to 25	864	45.1%
	5 or Newer	632	33.0%
Overall		1917	100.0%
Excluded		0	
Total		1917	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.00	.972	1.018	.023	5.2%
50 to 75	.982	1.014	.087	11.3%
25 to 50	.992	1.017	.094	12.9%
5 to 25	.989	1.006	.063	8.8%
5 or Newer	.989	1.007	.059	7.9%
Overall	.989	1.020	.068	9.5%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	.00	5	.3%
	LE 500 sf	38	2.0%
	500 to 1,000 sf	61	3.2%
	1,000 to 1,500 sf	391	20.4%
	1,500 to 2,000 sf	663	34.6%
	2,000 to 3,000 sf	554	28.9%
	3,000 sf or Higher	205	10.7%
Overall		1917	100.0%
Excluded		0	
Total		1917	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.00	.972	1.018	.023	5.2%
LE 500 sf	.985	1.006	.044	6.3%
500 to 1,000 sf	.997	1.025	.107	15.0%
1,000 to 1,500 sf	.982	1.011	.074	10.7%
1,500 to 2,000 sf	.993	1.011	.066	9.0%
2,000 to 3,000 sf	.991	1.011	.062	8.4%
3,000 sf or Higher	.993	1.004	.068	9.5%
Overall	.989	1.020	.068	9.5%

Improvement Quality

Case Processing Summary

		Count	Percent
QUALITY	2	44	2.3%
	3	841	44.0%
	4	975	51.0%
	5	49	2.6%
	6	3	.2%
Overall		1912	100.0%
Excluded		5	
Total		1917	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
2	.992	1.013	.081	12.3%
3	.990	1.010	.076	10.5%
4	.989	1.009	.060	8.3%
5	.988	1.005	.065	8.9%
6	1.160	1.019	.153	24.5%
Overall	.989	1.010	.068	9.5%

Improvement Condition

Case Processing Summary

		Count	Percent
CONDITION	2	51	2.7%
	3	861	45.0%
	4	1000	52.3%
Overall		1912	100.0%
Excluded		5	
Total		1917	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
2	1.009	1.023	.117	15.6%
3	.988	1.009	.075	10.4%
4	.990	1.007	.059	8.1%
Overall	.989	1.010	.068	9.5%

Commercial Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	$50K to $100K	1	2.7%
	$100K to $150K	5	13.5%
	$150K to $200K	2	5.4%
	$200K to $300K	4	10.8%
	$300K to $500K	5	13.5%
	$500K to $750K	5	13.5%
	$750K to $1,000K	3	8.1%
	Over $1,000K	12	32.4%
Overall		37	100.0%
Excluded		0	
Total		37	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation – Median Centered
$50K to $100K	1.205	1.000	.000	.%
$100K to $150K	1.000	1.000	.013	1.7%
$150K to $200K	.917	.995	.064	9.0%
$200K to $300K	.990	1.004	.078	13.6%
$300K to $500K	.981	.996	.074	11.7%
$500K to $750K	.983	1.001	.151	34.7%
$750K to $1,000K	.956	.999	.048	7.5%
Over $1,000K	.920	.935	.107	14.7%
Overall	.981	1.011	.092	16.6%

Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	2212	5	13.5%
	2220	8	21.6%
	2230	7	18.9%
	2235	1	2.7%
	2245	5	13.5%
	3215	2	5.4%
	3230	9	24.3%
Overall		37	100.0%
Excluded		0	
Total		37	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
2212	.950	1.046	.081	13.5%
2220	.985	1.063	.096	26.1%
2230	.955	.956	.074	9.3%
2235	.943	1.000	.000	.%
2245	.977	1.140	.073	14.9%
3215	.813	.870	.256	36.1%
3230	.986	1.041	.086	12.7%
Overall	.981	1.011	.092	16.6%

Improvement Age

Case Processing Summary

		Count	Percent
AgeRec	75 to 100	1	2.7%
	50 to 75	1	2.7%
	25 to 50	16	43.2%
	5 to 25	15	40.5%
	5 or Newer	4	10.8%
Overall		37	100.0%
Excluded		0	
Total		37	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
75 to 100	.976	1.000	.000	.%
50 to 75	1.021	1.000	.000	.%
25 to 50	.996	1.057	.085	15.0%
5 to 25	.955	.986	.115	21.8%
5 or Newer	.950	1.017	.040	6.0%
Overall	.981	1.011	.092	16.6%

Improvement Quality

Case Processing Summary

		Count	Percent
QUALITY	2	1	2.7%
	3	29	78.4%
	4	7	18.9%
Overall		37	100.0%
Excluded		0	
Total		37	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
2	1.011	1.000	.000	.%
3	.977	1.041	.080	12.9%
4	.983	1.043	.146	29.2%
Overall	.981	1.011	.092	16.6%

Improvement Condition

Case Processing Summary

		Count	Percent
CONDITION	1	14	37.8%
	3	20	54.1%
	4	3	8.1%
Overall		37	100.0%
Excluded		0	
Total		37	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1	.980	1.132	.082	13.0%
3	.979	1.018	.105	19.9%
4	.981	.962	.052	8.6%
Overall	.981	1.011	.092	16.6%