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August 30, 2024

Mr. Paul Schulte
Gasconade County Assessor
119 E. First Street, Rm. 23
Hermann, MO 65041

Dear Mr. Schulte:

Enclosed you will find copies of the Final Residential *Traditional Sales Study* report. The results are not within the acceptable parameters for 2023. We will follow up with you to discuss the reports in more detail.

As you will recall, our office had emailed you the *OrigAssdValues_SoldProperties.xls* spreadsheet to review the Tentative Ratio Report information for any errors or omission of data. This Final *Traditional Sales Study* report reflects any changes identified by your review of the tentative sales ratio data.

If you have any questions or concerns regarding the final ratio, please contact me before September 6, 2024 at larry.jones@stc.mo.gov or 573-751-1726; otherwise, we will conclude your county's 2023 residential study.

Sincerely,

Larry W. Jones

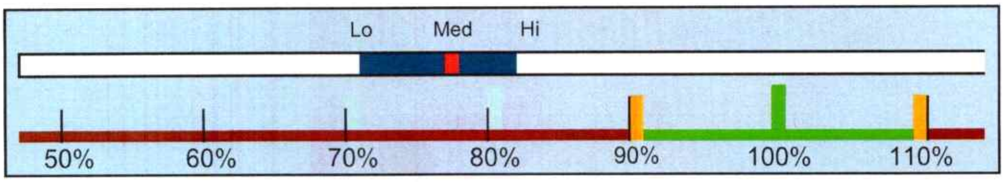
Larry Jones
Appraisal and Assessment Manager, Local Assistance

Cc: Dede Mitchell, Senior Appraisal and Assessment Representative
Kristen Solindas, Local Assistance Statistician

State Tax Commission of Missouri

Residential ◊ **(Final Sales Study)** ◊ 2023 Reassessment

Gasconade County



Decision Model Statistics	@19%	@100%
Time and Location Weighted Median Ratio……	**14.55%**	**76.56%**
95% Low Confidence Interval……………………..	13.48%	70.95%
95% High Confidence Interval…………………….	15.45%	81.31%
Time, Location Weighted Coefficient of Dispersion (COD)…		**24.44%**

Additional Statistics	@19%	@100%
Mean Ratio……………………………………………..	15.62%	82.22%
Weighted Mean Ratio…………………………………	13.52%	71.15%
Time, Location Weighted Price Related Differential (PRD)		115.56%

Sample Data	
Pre-Trim Sample Size…………………………………………	78
Low Trims………………………………………………………	0
High Trims………………………………………………………	0
Post-Trim Sample Size………………………………………..	78
Number of Assessments……………………………………...	6260

State Tax Commission of Missouri
421 East Dunklin Street
PO Box 146
Jefferson City, MO 65102-0146

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Two ratio study procedures are available for analysis:

1) Traditional Sales Study
A sales study that analyzes assessment levels based on sales stratified by land use, location, and characteristics of property.

The Decision Model Statistics listed on this page are overall weighted calculations based on the data submitted from the county and, except for Mean Ratio, are weighted by both time and location. Statistics found on the pages stratified for Land Use, Assessed Value, and Year Built are weighted only by time, not location.

2) Random Appraisals
For some jurisdictions, the availability of sales is scarce. In such scenarios, parcels will be randomly appraised. Every parcel will have an equal chance to be selected in the random appraisal study.

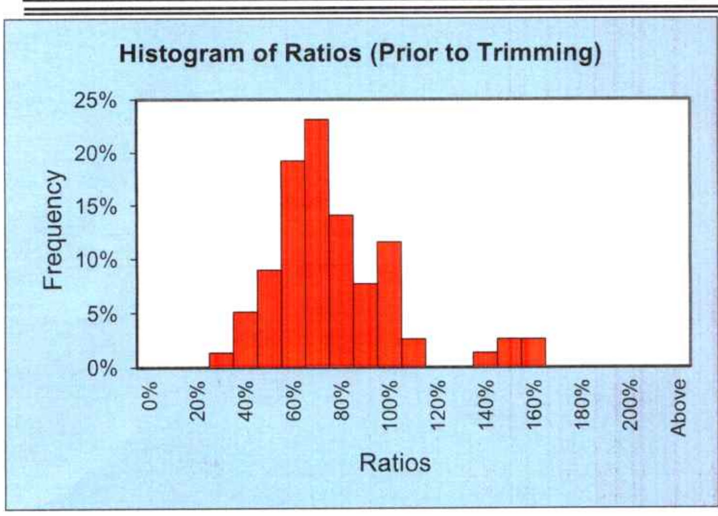
http://www.stc.mo.gov/

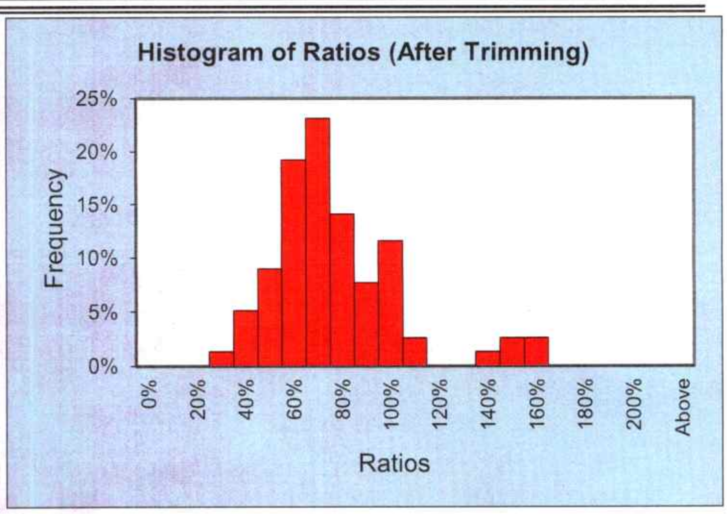
Overall Descriptive Statistics

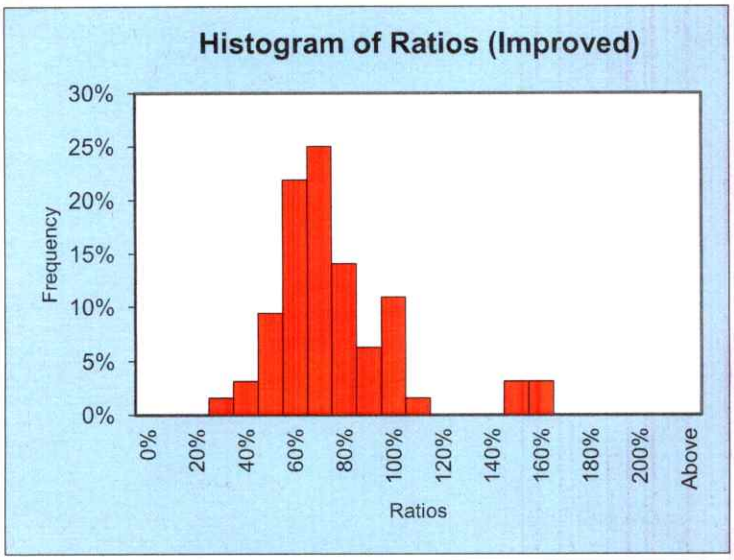
Page 2 statistics are weighted by time, not location

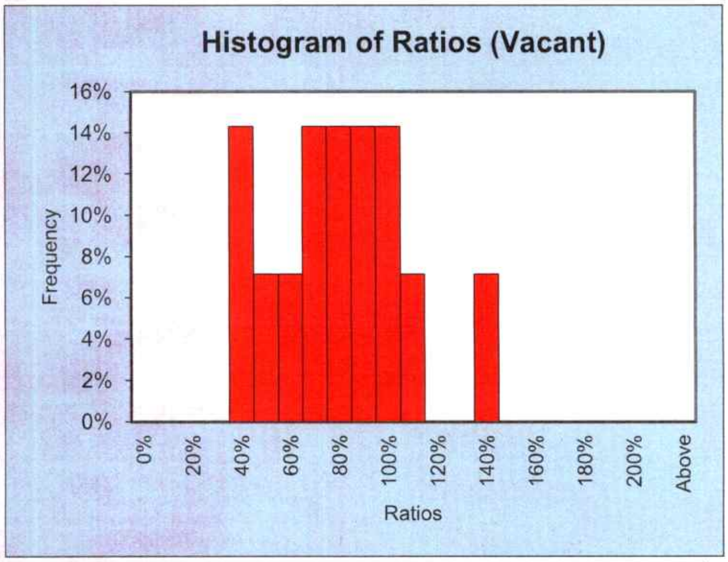
	Pre-Trim	Post-Trim	Description	Required
Sample Size	**78**	**78**	The number of sales from Jan. 2022 to Dec. 2023	Minimum 63
Median	**77.60%**	**77.60%**	The middle ratio when ratios are arranged in ascending order.	90%-110%
95% - Low Ratio	*71.43%*	*71.56%*	*The range where the population median most likely exists*	*Overlaps with 90%-110%*
95% - High Ratio	*82.63%*	*81.43%*		
Weighted Mean	**71.15%**	**71.15%**	An average in which ratios are weighted in proportion to their sold amounts.	90%-110%
95% - Low Ratio	*66.82%*	*66.82%*	*The range where the population weighted mean most likely exists*	*Overlaps with 90%-110%*
95% - High Ratio	*75.49%*	*75.49%*		
Mean	**82.24%**	**82.23%**	The arithmetic average of ratios	90%-110%
95% - Low Ratio	*76.23%*	*76.23%*	*The range where the population mean most likely exists*	*Overlaps with 90%-110%*
95% - High Ratio	*88.25%*	*88.25%*		
Coefficient of Dispersion	**24.12%**	**24.12%**	The average percent deviation from the median ratio	Less than 25%
Price Related Differential	115.58%	115.57%	A gauge of assessment uniformity for high and low valued properties	98%-103%

Following Section 5.2 and Appendix B of the IAAO Standard on Ratio Studies, the STC employs outlier trimming guidelines to detect extreme outliers that might otherwise skew statistical results. The STC uses a uniform trimming process that tends to remove as many high outliers as low outliers, thus keeping the median relatively stable.









Overall Descriptive Statistics

Page 3 statistics are weighted by time, not location

Post Trim	Improved	Vacant	Description	Required
Sample Size	**64**	**14**	The number of sales from Jan. 2022 to Dec. 2023	25 minimum
Median	**76.56%**	**86.84%**	The middle ratio when ratios are arranged in ascending order.	90%-110%
95% - Low Ratio	*71.08%*	*63.02%*	*The range where the population median most likely exists*	*Overlaps with 90%-110%*
95% - High Ratio	*80.37%*	*99.22%*		
Weighted Mean	**71.12%**	**72.73%**	An average in which ratios are weighted in proportion to their sold amounts.	90%-110%
95% - Low Ratio	*66.70%*	*48.63%*	*The range where the population weighted mean most likely exists*	*Overlaps with 90%-110%*
95% - High Ratio	*75.55%*	*96.83%*		
Mean	**81.62%**	**85.01%**	The arithmetic average of ratios	90%-110%
95% - Low Ratio	*74.98%*	*69.02%*	*The range where the population mean most likely exists*	*Overlaps with 90%-110%*
95% - High Ratio	*88.27%*	*101.07%*		
Coefficient of Dispersion	**23.18%**	**24.98%**	The average percent deviation from the median ratio	Less than 25%
95% - Low Ratio	*18.18%*	*17.51%*	*The range where the population coefficient of dispersion most likely exists*	*95% Low Ratio less than 20%*
95% - High Ratio	*31.09%*	*46.03%*		
Price Related Differential	**114.76%**	**116.89%**	A gauge of assessment uniformity for high and low valued properties	98%-103%

Stratification by Assessed Value

2023 Reassessment

Sales from Jan. 2022 to Dec. 2023

Assessed Value	$190 - $7216	$7217 - $15856	$15857 - $52580
Sample Size	26	26	26
High Trims	0	0	0
Low Trims	0	0	0
Total Trimmed	0	0	0
Remaining	26	26	26
Population	2,721	1,510	1,872
Proportion	44.58%	24.74%	30.67%

Post Trim Statistics	$190 - $7216	$7217 - $15856	$15857 - $52580
Sample Size	**26**	**26**	**26**
Median	**86.71%**	**81.97%**	**67.89%**
Low 95% Conf Int	*75.90%*	*71.08%*	*63.23%*
High 95% Conf Int	*96.32%*	*86.37%*	*73.97%*
Mean	**89.39%**	**84.69%**	**72.63%**
Low 95% Conf Int	*76.68%*	*74.74%*	*64.20%*
High 95% Conf Int	*101.98%*	*94.94%*	*80.88%*
Weighted Mean	**76.27%**	**76.95%**	**68.27%**
Low 95% Conf Int	*56.00%*	*68.08%*	*63.02%*
High 95% Conf Int	*96.54%*	*85.81%*	*73.51%*
Coefficient of Dispersion	**25.74%**	**21.32%**	**18.20%**
Low 95% Conf Int	*18.07%*	*15.52%*	*11.15%*
High 95% Conf Int	*39.52%*	*34.18%*	*30.89%*
Price Related Differential	**117.20%**	**110.07%**	**106.40%**

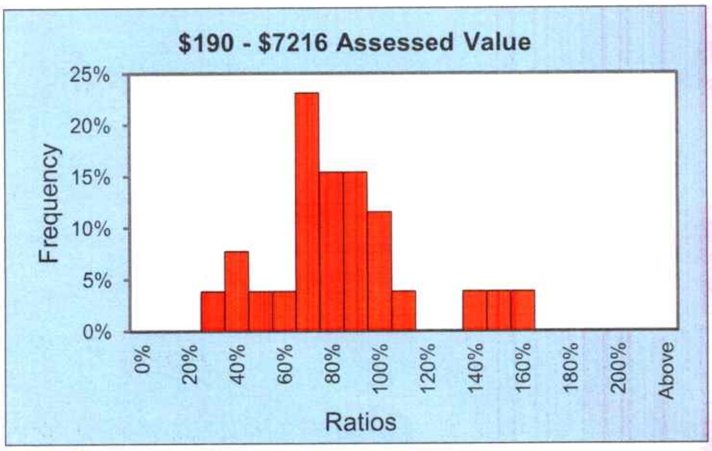
Statistical results for each stratum are provided for informational purposes only. The STC does not employ a sample size estimator for each individual stratum and cannot validate the individual stratum results with statistical certainty. The information is being provided in that it might assist the user in identifying areas for further study and analysis. Readers are cautioned to disregard statistics for individual strata with pre-trim sample sizes of 25 or less.

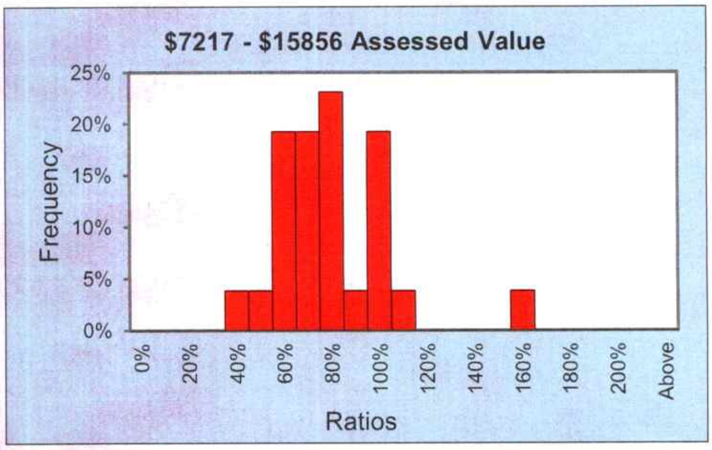
Sales Ratio Histograms by Stratum

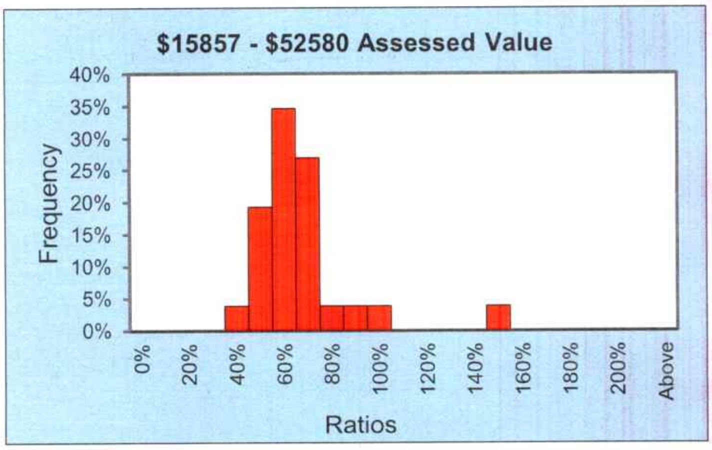
Section 3.3 of the IAAO Standard on Ratio Studies recommends stratification to facilitate a more complete and detailed picture of appraisal performance and to enhance sample representativeness.

The STC defaults to stratification into quartiles whenever there is sufficient information available. Depending on the available data, the STC may range from two to eight stratifications, however the STC will avoid over-stratification.

It should be noted that the lowest value stratification(s) may include vacant land which can skew those results.







Sales from Jan. 2022 to Dec. 2023

Year Built	1892-1962	1963-2009
Sample Size	32	32
High Trims	0	0
Low Trims	0	0
Total Trimmed	0	0
Remaining	32	32
Population	1,788	2,165
Proportion	45.23%	54.77%

Post Trim Statistics	1892-1962	1963-2009
Sample Size	**32**	**32**
Median	**82.06%**	**68.85%**
Low 95% Conf Int	*73.70%*	*66.00%*
High 95% Conf Int	*89.85%*	*78.43%*
Mean	**87.33%**	**69.42%**
Low 95% Conf Int	*76.36%*	*68.29%*
High 95% Conf Int	*98.22%*	*83.62%*
Weighted Mean	**74.53%**	**69.42%**
Low 95% Conf Int	*66.66%*	*63.93%*
High 95% Conf Int	*82.41%*	*74.90%*
Coefficient of Dispersion	**24.28%**	**#REF!**
Low 95% Conf Int	*17.11%*	*13.90%*
High 95% Conf Int	*38.60%*	*30.65%*
Price Related Differential	**117.16%**	**109.40%**

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Sales Ratio Histograms by Stratum

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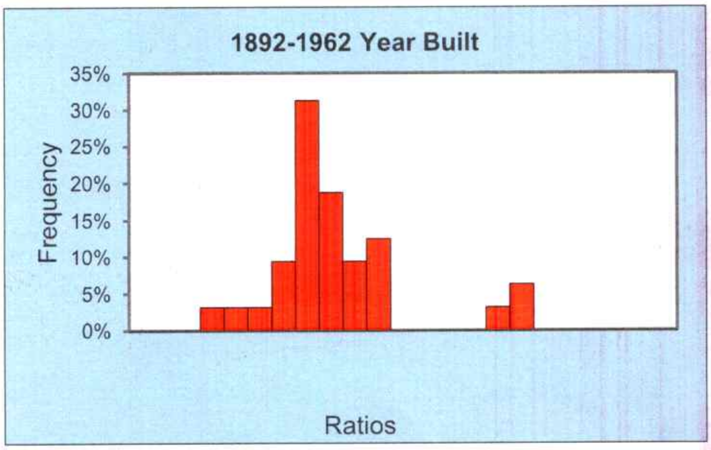

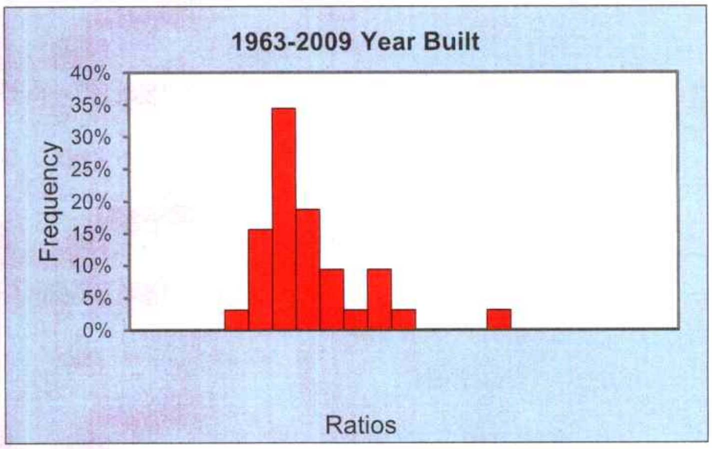

Stratification by School District

2023 Reassessment

Sales from Jan. 2022 to Dec. 2023

School District	R2G	All Others
Sample Size	45	33
High Trims	0	0
Low Trims	0	0
Total Trimmed	0	0
Remaining	45	33
Population	3,109	3,151
Proportion	49.66%	50.34%

Post Trim Statistics	R2G	All Others	Overall Weighted
Sample Size	**45**	**33**	**78**
Median	**77.52%**	**78.42%**	**76.56%**
Low 95% Conf Int	*70.07%*	*69.74%*	*70.95%*
High 95% Conf Int	*86.78%*	*82.09%*	*81.31%*
Mean	**83.82%**	**80.06%**	
Low 95% Conf Int	*65.92%*	*63.81%*	
High 95% Conf Int	*78.70%*	*75.54%*	
Weighted Mean	**72.31%**	**69.68%**	
Low 95% Conf Int	*75.06%*	*71.87%*	
High 95% Conf Int	*92.54%*	*88.34%*	
Coefficient of Dispersion	**27.18%**	**19.68%**	**24.44%**
Low 95% Conf Int	*20.40%*	*14.19%*	*19.56%*
High 95% Conf Int	*37.04%*	*31.17%*	*31.16%*
Price Related Differential	**115.91%**	**114.90%**	**115.56%**

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Sales Ratio Histograms by Stratum

Section 3.3 of the IAAO Standard on Ratio Studies recommends stratification to facilitate a more complete and detailed picture of appraisal performance and to enhance sample representativeness.

The default location variable is School District. County assessors can request a different variable other than School District prior to statistical analysis provided it would result in better representation of property characteristics and market tendencies.

When the overall descriptive statistics are out of compliance with STC requirements, weighted statistics are calculated using the proportions of the number of properties in the county amongst each school district strata. When the overall descriptive statistics are out of compliance, school districts with insufficient sales are combined. If the combined sales in locations with insufficient sales are equal to or greater than 25% of the residential population, then the Progressive Hybrid study is performed. If the combined sales in locations with insufficient sales are less than 25% of the residential population, then the Traditional Sales Study is performed, but with the results weighted by location.