



2019

Office of Property Assessment

TAX YEAR 2020 RESIDENTIAL RATIO STUDY
MAY 2019

OVERVIEW

The Office of Property Assessment (OPA) is responsible for determining the value of all real property in Philadelphia and is dedicated to doing so in a fair, accurate, and understandable way. OPA's primary goal is, through ongoing assessments, to improve the quality and uniformity of all property values and to instill confidence in Philadelphia taxpayers regarding the fairness of the property tax system, as well as the competency and professionalism of the assessment office.

TAX YEAR 2020 ASSESSMENT

For tax year 2020, OPA assessed and valued more than 580,000 properties in the city using a trending valuation approach. Trending is a mass assessment valuation methodology where a factor is applied to a group of properties to reflect any changes – increases or decreases – in property values since the last revaluation. Properties are grouped by location, property type, and style (for example, single, twin, row home, or small multi-family within residential category). Market values are compared to sale prices to develop the market trend factor. For example, a 1.05 trend factor would indicate that property values in a particular group have increased by 5% since they were last valued. A 0.95 trend factor would indicate that property values in a group have decreased by 5% since they were last valued. A description of the [trending methodology](#) can be found on OPA's website.

As of March 31, 2019, this project resulted in 389,621 increases (67.2%), 81,124 decreases (14%), and 108,987 assessments that did not change from the prior year (18.8%). Citywide, this project resulted in a 5.0% increase in taxable value. For residential improved properties, the project resulted in a 3.9% increase in taxable value. Less than half a percent of residential properties had an increase of over 10%. It is important to note that the increase in taxable value may not directly correlate to an individual property owner's experience as there are a number of tax relief programs which can impact the amount of actual tax due on a property. More information regarding the various tax relief programs is available on the Department of Revenue's [website](#).

RATIO STUDY MEASURES

This ratio study report measures the quality of residential real property assessments within the City of Philadelphia. This report measures the results of the tax year 2020 reassessment against actual market conditions. For this trending reassessment, OPA examined all sale transactions that took place between July 1, 2017 and June 30, 2018 to determine trends for property assessments. OPA is required to certify these values to the Commonwealth of Pennsylvania by March 31, 2019.

OPA uses a ratio study to evaluate the level and uniformity of completed assessments in accordance with International Association of Assessing Officers standards and recommendations. The International Association of Assessing Officers (IAAO) is a professional organization of assessing officials that provides standards for assessment administration, educational programs, and research on assessment and tax policy issues. Additionally, the IAAO organization is a founding member of the Appraisal Foundation that developed the Uniform Standards of Professional Appraisal Practice (USPAP).

The IAAO's Standard on Ratio Studies was first published in September 1990 and was revised in April 2013. The IAAO standards are advisory in nature and provide guidance to those performing ratio studies in the mass appraisal field regarding design, statistics, performance measures and related issues in conducting ratio studies.

In accordance with these standards, OPA examines several metrics within the ratio study:

1. **Ratio of assessed value to sales price.** A ratio is the relationship between two numbers; in this case it is the relationship between the assessed value and sale price. The relationship between market value and sale price is commonly expressed as a percentage. This ratio measures how closely OPA market values compare to actual sales prices. Ratio studies that are run against the sales used in the model are part of the model calibration process. Ratio statistics that are run against projected or certified market values give us valuable information about assessment consistency and equity.

Ratios measure the overall level of assessment to selling prices of real estate, as indicated by the Market Value/Time Adjusted Sales Price (TASP) ratio. These may be the average of the assessed value/sale price ratios, the weighted average of the assessed value/sale price ratios or the median of the assessed value/sale price ratios. The average assessed value/sale price ratio is simply the average of all the ratios in the sample. The aggregate or “weighted” assessed value/sale price ratio is the result of dividing the total of the assessments by the total of the sale prices. The median assessed value/sale price ratio, which is the measure that OPA uses, is the midpoint ratio of all ratios after the ratios are arrayed from highest to lowest.

While the average, median, and weighted average measures of central tendency are all usually calculated, the median is the least affected by extreme ratios. Therefore, IAAO observes in its standards that the median is generally the preferred measure of central tendency for monitoring assessment performance. A median ratio of 1.00 indicates that the median assessment exactly matches the median sale price. The IAAO recommends a level of assessment ratio of between 0.90 to 1.10 across all types of properties and markets (90% to 110%). **OPA’s performance goal is to achieve a median ratio within a range between 0.95 to 1.02 (95% to 102%).**

2. **Coefficient of Dispersion (COD).** All properties should be measured at the same level of assessment. The COD measures uniformity of assessments and is the most commonly used measure of consistency across assessments. The COD is calculated by dividing the average absolute deviation by the median ratio. To calculate the average absolute deviation, subtract the median ratio from the individual ratios for each observation and add all the results, ignoring positive or negative signs, and then divide the sum by the number of ratios. The acceptable level for the coefficient of dispersion depends upon the type of properties being reviewed. In general, the lower the COD the more consistent and equitable the assessments. In a large city such as Philadelphia, which has a wide variety of housing stock, the IAAO recognizes that a COD of 15% is considered acceptable. Therefore, **OPA’s performance goal is to achieve a COD of 15% or less.**
3. **Price Related Differential (PRD).** The PRD measures equity in high versus low valued properties. The PRD tests to see if higher and lower valued properties are assessed at the same level. The PRD is calculated by dividing the mean ratio by the weighted mean ratio. A result close to 1.00 is better in that it indicates that high and low valued properties are valued at the same level of assessment. **OPA’s performance goal is to achieve a PRD between 0.98 and 1.03.** A PRD above 1.03 indicates an under-valuation of high-priced properties, while a PRD below 0.98 shows an under-valuation of low-priced properties.

Table 2 provides more detail around IAAO standards for the COD, median ratio, and PRD:

Table 2: IAAO Ratio Study Uniformity Standards Indicating Acceptable General Quality*

General Property Class	Jurisdiction Size/Profile/Market Activity	COD Range
Residential improved (single family dwellings, condominiums, manuf. housing, 2-4 family units)	Very large jurisdictions/densely populated/newer properties/active markets	5.0 to 10.0
	Large to mid-sized jurisdictions/older & newer properties/less active markets	5.0 to 15.0
	Rural or small jurisdictions/older properties/depressed market areas	5.0 to 20.0
Income-producing properties (commercial, industrial, apartments,)	Very large jurisdictions/densely populated/newer properties/active markets	5.0 to 15.0
	Large to mid-sized jurisdictions/older & newer properties/less active markets	5.0 to 20.0
	Rural or small jurisdictions/older properties/depressed market areas	5.0 to 25.0
Residential vacant land	Very large jurisdictions/rapid development/active markets	5.0 to 15.0
	Large to mid-sized jurisdictions/slower development/less active markets	5.0 to 20.0
	Rural or small jurisdictions/little development/depressed markets	5.0 to 25.0
Other (non-agricultural) vacant land	Very large jurisdictions/rapid development/active markets	5.0 to 20.0
	Large to mid-sized jurisdictions/slower development/less active markets	5.0 to 25.0
	Rural or small jurisdictions/little development/depressed markets	5.0 to 30.0

These types of property are provided for general guidance only and may not represent jurisdictional requirements.

**The COD performance recommendations are based upon representative and adequate sample sizes, with outliers trimmed and a 95% level of confidence.*

**Appraisal level recommendation for each type of property shown should be between 0.90 and 1.10.*

**PRD's for each type of property should be between 0.98 and 1.03 to demonstrate vertical equity. However, PRD standards are not absolute and may be less meaningful when samples are small or when wide variation in prices exist. In such cases, statistical tests of vertical equity hypotheses should be substituted.*

**Alternatively, assessing officials can rely on the PRB, which is less sensitive to atypical prices and ratios. PRB coefficients should generally fall between -.05 and .05. PRBs that are statistically significant and less than -0.10 or greater than 0.10 indicate unacceptable vertical inequities.*

**CODs lower than 5.0 may indicate sales chasing or non-representative samples.*

Source: *Standard on Ratio Studies; International Association of Assessing Officers; Kansas City, Mo; April 2013; p. 34*

The following sample table illustrates a sample computation of these statistics. The table is only for illustration and does not reflect results of an OPA assessment.

Rank	Parcel #	Appraised value	Sale price*	Ratio	Statistic	Result
1	9	\$87,200	\$138,720	0.629	Number (n)	17
2	10	\$38,240	\$59,700	0.641	Total appraised value	\$1,455,330
3	11	\$96,320	\$146,400	0.658	Total sale price	\$1,718,220
4	12	\$68,610	\$99,000	0.693	Average appraised value	\$85,608
5	13	\$32,960	\$47,400	0.695	Average sale price	\$101,072
6	14	\$50,560	\$70,500	0.717		
7	15	\$61,360	\$78,000	0.787	Mean ratio	0.827
8	16	\$47,360	\$60,000	0.789	Median ratio	0.820
9	17	\$56,580	\$69,000	0.820	Weighted mean ratio	0.847
10	18	\$47,040	\$55,500	0.848		
11	19	\$136,000	\$154,500	0.880	Coefficient of dispersion	14.5
12	20	\$98,000	\$109,500	0.895	Price-related differential	0.98
13	21	\$56,000	\$60,000	0.933	95% conf. int. median (two-tailed)	0.695 to 0.933
14	22	\$159,100	\$168,000	0.947		
15	23	\$128,000	\$124,500	1.028		
16	24	\$132,000	\$127,500	1.035		
17	25	\$160,000	\$150,000	1.067		

* No outlier trimming or adjusted sale price

Through these metrics, ratio studies provide several objective standards by which one can evaluate assessment performance and measure the effectiveness of revaluation projects. As a diagnostic tool, they are used to identify locations or property types that are over or under assessed, for which the market is changing, where there are issues with data quality, where uniformity needs improvement, or where sales data may not be representative of unsold properties.

However, it is also important to understand that there are inherent biases in all mass appraisal systems for both low and high value properties. At both the low and high ends of the range of values, there is more variance in price that is not attributable to the characteristics of the property as captured by the mass appraisal data files. In many cases, data for sales of low value properties is missing or incomplete. Many of these sales are not exposed to open markets or do not use real estate professionals that report details about the properties or transactions. The only data available for a specific property may be a deed and what can be seen from the exterior of the property. Properties at the very high end of the spectrum may have significant differences in interior finishes which may not be known to assessors but are reflected in sales transactions. Therefore, some degree of distortion is expected in the ratio statistics for both low and high value properties.

RATIO STUDY RESULTS – COMPARISON TO SALE PRICES

The following tables present the results of the tax year 2020 ratio study for residential properties. Areas shaded in dark green indicate where OPA is within IAAO recommended standards. Results are shaded in light green where results fall within IAAO standards but outside of OPA's standards (where OPA has a narrower target range than the IAAO). For zones or styles with fewer than 9 sales, the statistics shown are not statistically meaningful due to the small sample size.

This study considers time adjusted sales price data for the period starting in January 2013 and ending in June of 2018, which is the valuation date for the tax year 2020 assessments. During a multi-year sales analysis period, market conditions may change. Through regression analysis, OPA builds a compound adjustment index for each assessment model that allows sales from earlier periods to be calibrated to the effective date of appraisal. By adjusting each sale for time, OPA is able to remove the time adjustment variables from the model and eliminate the need to "weight" sales based on the time that they occurred.

Only sales that have been validated as arm's-length transactions that are indicative of the values of other similar properties are used. Arm's-length means that a real estate transaction occurred in an open market arrived at through normal negotiations between an independent buyer and seller. Sales between related parties, to or from financial institutions or government agencies, sales to persons or organizations that typically do not engage in arms-length transactions, or sales with extreme ratios (which indicate abnormal transactions) are typically not used in this study. In addition, sales where the property changed in a significant way between the time of sale and the date of valuation are excluded. For example, if a property was sold in poor condition, but was subsequently rehabbed, and valued as rehabbed, the sale price no longer bears relationship to the market value of the property. Including these sales in a ratio study would distort the results.

For this study, OPA removed outliers using the common technique of removing the cases where the ratio of the 2020 estimate value to the time adjusted sale price fell within the top 2.5% and bottom 2.5% of all ratios.

Residential – Combined

Results for all residential properties across the city are presented in Table 3 below. There were more than 49,000 sales examined within this ratio study. Citywide, the median ratio is 93.6% for all residential properties. This means that residential properties have been valued at 93.6% of their respective sale prices. This result of 93.6% falls slightly below OPA’s targeted range of 95% to 102%, but within the IAAO range of 90% to 110%.

The citywide COD for residential properties is 11% which is within the IAAO accepted range (< 15%) for assessed values in a jurisdiction like Philadelphia.

The PRD was 1.015 which is also within the IAAO recommended range (0.98 to 1.03). A PRD of 1.015 means that there is no statistically meaningful bias between how low value and high value properties are assessed.

Table 3: Combined Residential Properties

All Residential Combined	Sales	Median Ratio	Mean Ratio	Weighted Mean Ratio	PRD	COD
Residential	49,777	93.6%	93.8%	92.4%	1.015	11.0%
IAAO Standard		90%-110%	90%-110%	90%-110%	0.98-1.03	< 15%
OPA Target		95%-102%	95%-102%	95%-102%	0.98-1.03	< 15%

Single Family Residences

Results for single family residences are summarized by geographic zone and major property type (singles/twins/rows). Results are based on more than 39,200 sales. Three sales had invalid zone codes and therefore were excluded from the zone section of Table 4.

The median ratio for single family residential properties across the city was 0.932 (93.2%), slightly below OPA’s target of 0.95 to 1.02 (95% to 102%), but within the IAAO’s range of 90% to 110%. This means that single family residential properties citywide have been valued at approximately 93.2% of their respective sale prices.

The City’s overall COD was 11%, which is within the IAAO accepted range (< 15%) for assessed values for a jurisdiction like Philadelphia. Moreover, 13 of the 14 broad zone CODs are also less than 15%, meaning assessments in those zones are generally uniform and have very similar ratios. Assessments across style categories also achieved CODs within the desired range.

The City’s overall PRD was 1.01, which is also within the IAAO accepted range (0.98 to 1.03). This means that there is no meaningful statistical bias between low value and high value property valuations across the city. On a zone basis, 12 of 14 zone PRDs also fell within the accepted range. Assessments across style categories also achieved PRDs within the desired range.

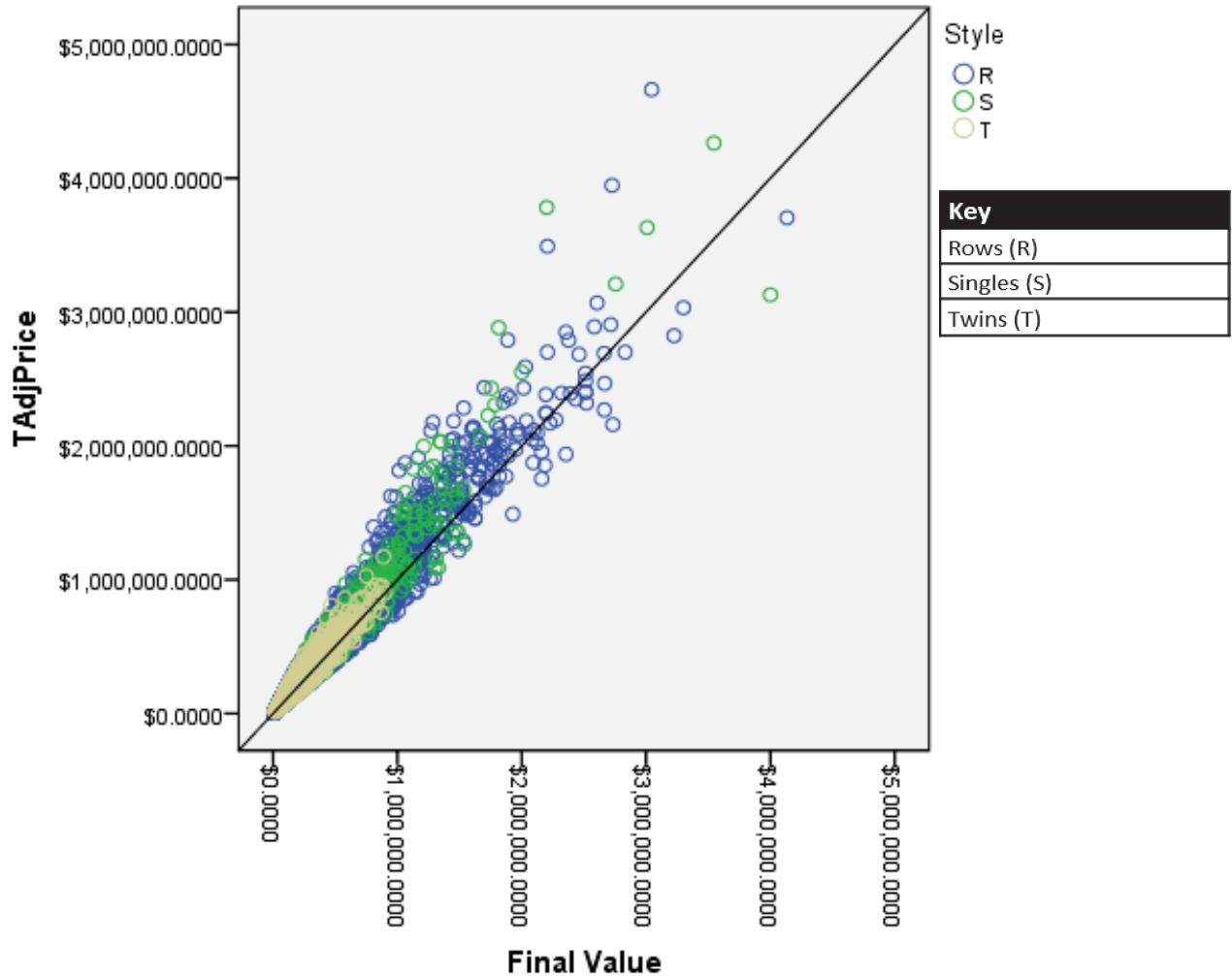
Table 4: Single Family Residences by Style and Zone

Single Family Residences by Style	Sales	Median Ratio	Mean Ratio	Weighted Mean Ratio	PRD	COD
Rows	28,688	92.5%	92.3%	91.8%	1.006	11.3%
Singles	3,109	93.1%	93.6%	91.2%	1.026	10.0%
Twins	7,460	95.7%	95.4%	94.2%	1.013	10.0%
Overall	39,257	93.2%	93.0%	92.1%	1.010	11.0%
IAAO Standard		90%-110%	90%-110%	90%-110%	0.98-1.03	< 15%
OPA Target		95%-102%	95%-102%	95%-102%	0.98-1.03	< 15%

Single Family Residences by Zone	Sales	Median Ratio	Mean Ratio	Weighted Mean Ratio	PRD	COD
A	2,679	89.8%	90.4%	88.4%	1.024	12.9%
B	937	91.2%	91.6%	88.6%	1.033	14.5%
C	4,919	96.5%	97.1%	96.0%	1.012	7.9%
D	2,579	100.5%	100.8%	99.8%	1.010	8.2%
E	4,192	92.2%	92.8%	91.7%	1.011	9.0%
F	3,604	91.3%	91.1%	90.4%	1.008	11.3%
G	1,298	87.0%	87.5%	93.8%	0.933	17.9%
H	1,208	91.6%	92.5%	91.5%	1.011	14.4%
J	4,155	95.6%	95.4%	94.2%	1.012	10.3%
K	3,976	86.5%	87.3%	86.8%	1.006	11.7%
L	995	95.8%	96.0%	95.2%	1.008	10.6%
M	3,978	87.2%	87.5%	86.7%	1.009	10.6%
N	2,412	97.1%	96.7%	95.9%	1.008	7.1%
P	2,322	95.7%	95.8%	93.6%	1.024	10.5%
Overall	39,254	93.2%	93.0%	92.1%	1.010	11.0%
IAAO Standard		90%-110%	90%-110%	90%-110%	0.98-1.03	< 15%
OPA Target		95%-102%	95%-102%	95%-102%	0.98-1.03	< 15%

The following scatter diagram illustrates how closely market values match time adjusted sales prices (TASP). Each point represents the intersection of TASP and assessed value. The line indicates where TASP and Assessed Value are equal.

Visual Comparison of 2020 Single Family Residences Market Values to Time Adjusted Sale Prices by Property Style



Multi-Family Residences

Results for small multi-family residences (2 to 4 units) are summarized by property type (built as or converted duplexes/triplexes/quadruplexes) and by major geographic areas of the city. Results are based on more than 3,800 sales. Three sales had invalid zone codes and were not included in the zone section of Table 5.

Across multi-family residences citywide, assessments fall within industry standards. The measures of central tendency indicate that properties have been valued for tax year 2020 at approximately 101.6% of their respective sale prices, which falls within the OPA targeted range of 0.95 to 1.02 (95% to 102%).

Table 5: Multi-Family Residences by Style and Zone

Multi-Family Residences by Style	Sales	Median Ratio	Mean Ratio	Weighted Mean Ratio	PRD	COD
Converted Duplex (MN)	1,183	101.2%	101.9%	98.2%	1.037	16.4%
Built as Duplex (MO)	1,327	103.4%	103.8%	102.2%	1.015	10.7%
Converted Triplex (MP)	773	98.9%	100.9%	97.9%	1.030	16.9%
Built as Triplex (MQ)	172	99.4%	99.2%	96.5%	1.029	12.3%
Converted Quadplex (MR)	176	95.8%	96.4%	94.2%	1.023	17.5%
Built as Quadplex (MS)	60	101.2%	99.8%	97.2%	1.027	13.3%
Ranchplex (MT)	177	107.1%	106.8%	105.7%	1.011	8.4%
Overall	3,868	101.6%	102.2%	99.2%	1.030	14.1%
IAAO Standard		90%-110%	90%-110%	90%-110%	0.98-1.03	< 15%
OPA Target		95%-102%	95%-102%	95%-102%	0.98-1.03	< 15%

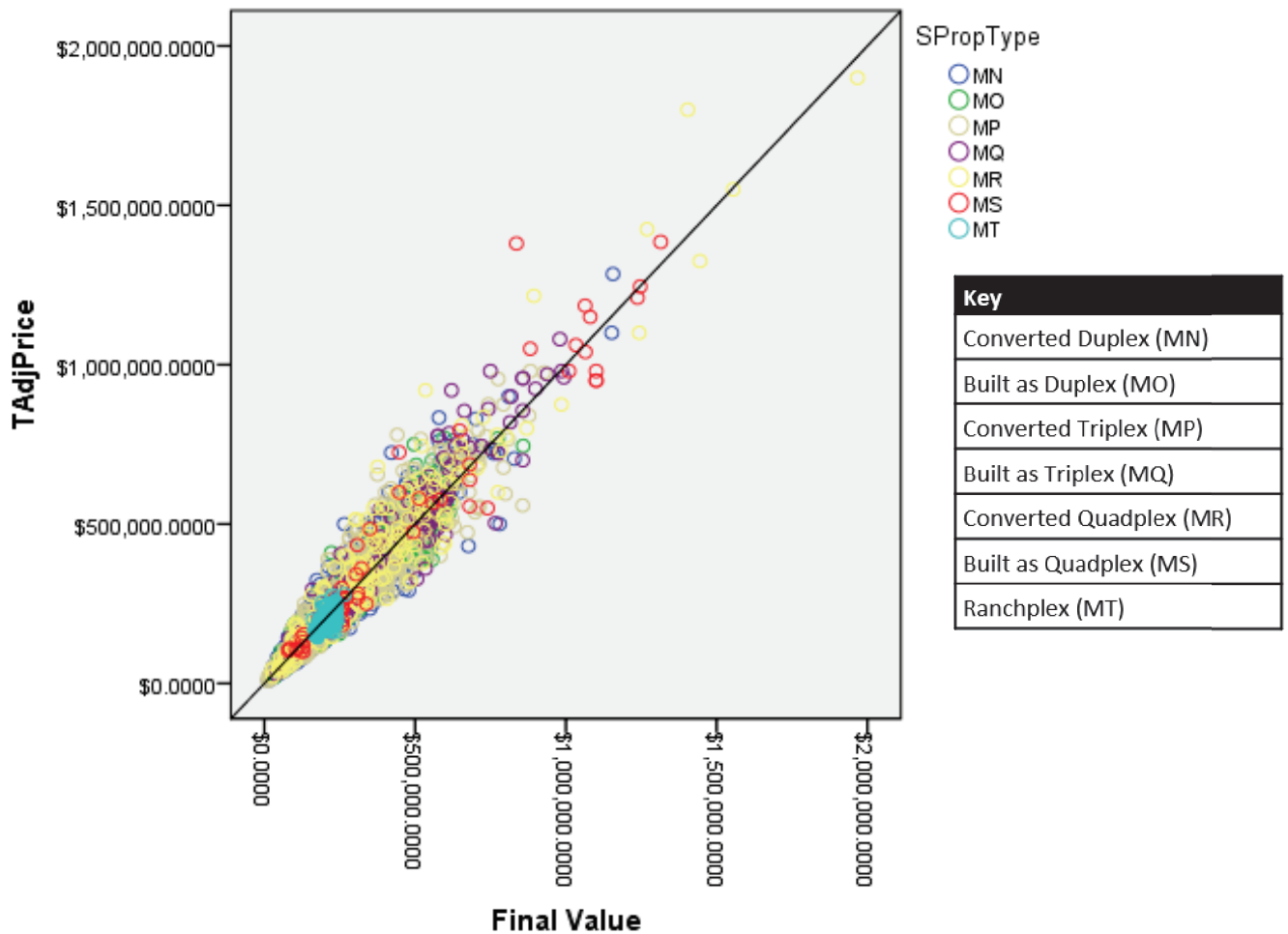
Multi-Family Residences by Zone	Sales	Median Ratio	Mean Ratio	Weighted Mean Ratio	PRD	COD
A	601	95.5%	98.6%	94.4%	1.045	17.9%
B	86	95.1%	96.5%	90.3%	1.068	19.7%
C	502	103.6%	104.0%	102.9%	1.010	8.1%
D	353	106.7%	107.7%	105.9%	1.017	10.2%
E	445	102.6%	103.4%	101.4%	1.019	11.4%
F	108	103.1%	105.0%	101.1%	1.038	19.7%
G	144	89.2%	91.9%	90.1%	1.020	16.8%
H	393	101.4%	103.1%	101.0%	1.020	14.9%
J	280	98.7%	100.5%	97.2%	1.034	14.9%
K	183	93.5%	95.2%	91.9%	1.035	16.1%
L	155	106.6%	105.2%	102.6%	1.026	13.3%
M	300	102.6%	103.1%	100.3%	1.027	14.8%
N	145	110.9%	109.8%	107.4%	1.023	11.9%
P	170	101.1%	101.3%	99.3%	1.020	12.4%
Overall	3,865	101.6%	102.2%	99.2%	1.030	14.1%
IAAO Standard		90%-110%	90%-110%	90%-110%	0.98-1.03	< 15%
OPA Target		95%-102%	95%-102%	95%-102%	0.98-1.03	< 15%

The COD for all multi-family properties was 14.1% and 9 of 16 zones also fell within the IAAO accepted range (< 15%). The CODs across property style types also primarily fall within industry standards.

The overall multi-family PRD of 1.03 indicates no statistically meaningful bias between low value and high value properties. This result falls within the IAAO recommended range of 0.98 to 1.03.

The following scatter diagram illustrates how closely market values match time adjusted sale prices (TASP). Each point represents the intersection of TASP and assessed value. The line indicates where TASP and Assessed Value are equal. This represents a desirable distribution for multi-family.

Visual Comparison of 2020 Multi-Family Market Values to Time Adjusted Sale Prices by Property Type



Condominiums

Results for condominiums are based on more than 6,500 sales. Properties with invalid style codes were excluded from the style section of Table 6 but are included in the appropriate zone if the geographic location is known.

The median ratio for condominiums across the city was 0.928 (92.8%), below OPA's target of 0.95 to 1.02 (95% to 102%) but within the broader IAAO range of 90% to 110%. This means that condominiums citywide have been valued at approximately 92.8% of their respective sale prices.

The citywide COD for condominiums was 8.9%, which is within the IAAO accepted range (< 15%) for uniformity for a jurisdiction like Philadelphia. The CODs across all styles and zones are also less than 15%, meaning these assessments are uniform and have very similar ratios.

The overall PRD for condominiums was 1.015, which is also within the IAAO accepted range (0.98 to 1.03). This means that there is no statistically meaningful bias between low value and high value property valuations across the city. Condominium PRDs also fell within the accepted range in all but one geographic zone. Assessments across style categories achieved PRDs within the desired range.

Table 6: Condominiums by Style and Zone

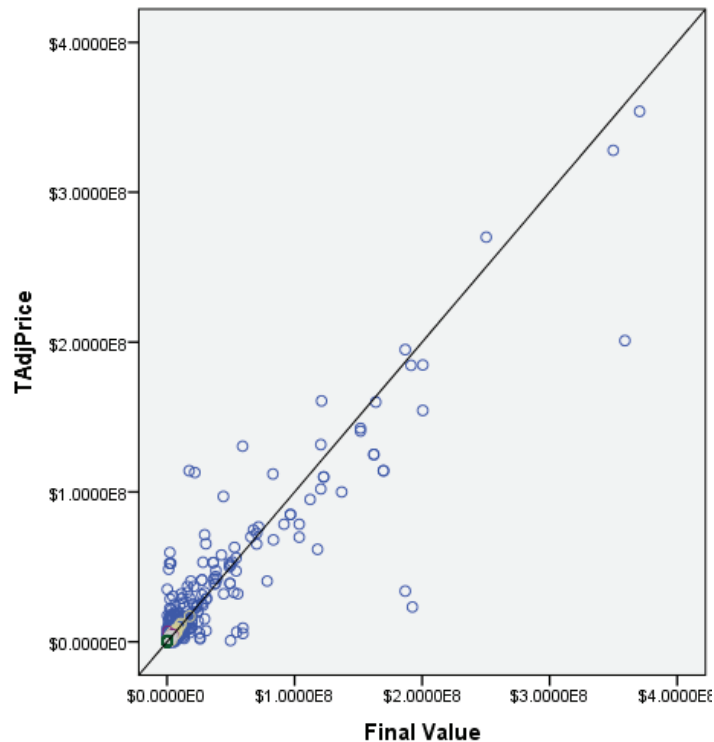
Condominiums by Style	Sales	Median Ratio	Mean Ratio	Weighted Mean Ratio	PRD	COD
High Rise Condo Building	2,570	93.6%	94.2%	93.0%	1.013	8.7%
Mid Rise Condo Building	817	90.9%	91.3%	90.2%	1.012	8.2%
Low Rise Condo Building	1,005	92.1%	93.1%	90.6%	1.028	9.4%
Townhouse Condo	952	92.2%	93.1%	91.1%	1.022	8.5%
Garden Condo Development	486	95.2%	96.5%	94.1%	1.026	10.2%
Conversion	697	92.3%	92.7%	91.4%	1.014	8.9%
Overall	6,527	92.8%	93.5%	92.1%	1.015	8.9%
IAAO Standard		90%-110%	90%-110%	90%-110%	0.98-1.03	< 15%
OPA Target		95%-102%	95%-102%	95%-102%	0.98-1.03	< 15%

Table 6 continued: Condominiums by Style and Zone

Condominiums by Zone	Sales	Median Ratio	Mean Ratio	Weighted Mean Ratio	PRD	COD
A	163	88.2%	91.3%	86.9%	1.050	13.2%
C	1,011	95.6%	96.8%	95.3%	1.016	9.5%
D	93	96.7%	98.4%	96.0%	1.024	8.5%
F	80	90.6%	89.9%	90.4%	0.994	7.5%
G	48	84.7%	87.6%	87.2%	1.005	9.7%
H	15	96.8%	97.3%	96.7%	1.005	6.0%
J	336	90.2%	90.9%	89.9%	1.011	8.9%
K	390	90.0%	91.3%	90.6%	1.008	7.8%
M	256	95.6%	96.6%	94.8%	1.018	7.3%
N	156	97.3%	97.0%	96.4%	1.006	8.2%
P	4,166	92.4%	92.9%	92.1%	1.008	8.5%
Overall	6,714	92.8%	93.5%	92.1%	1.015	8.9%
IAAO Standard		90%-110%	90%-110%	90%-110%	0.98-1.03	< 15%
OPA Target		95%-102%	95%-102%	95%-102%	0.98-1.03	< 15%

The following scatter diagram illustrates how market values match time adjusted sale prices (TASP). Each point represents the intersection of TASP and assessed value. The line indicates where TASP and Assessed Value are equal. This represents a desirable distribution for condominium values.

Visual Comparison of 2020 Condominium Market Values to Time Adjusted Sale Prices by Property Type

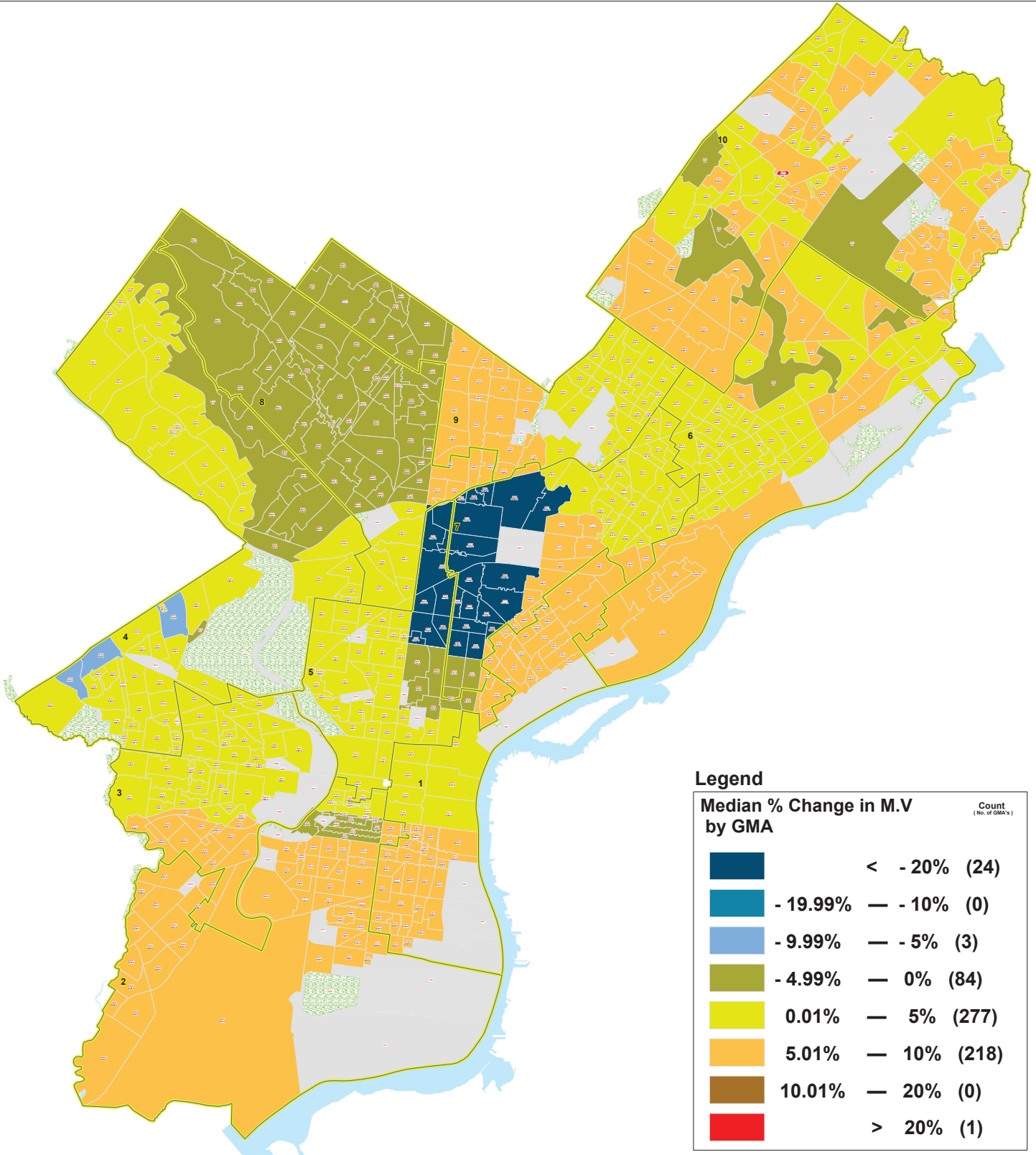


APPENDIX

The following pages contain several maps detailing the change in assessed value, the current median ratio, and the current COD by Geographic Market Areas (GMA) and Council Districts. Using the zoom function provides a more detailed view of the smaller geographic units.

**Median Assessed Value Change by GMA for Single-Family
Residential from Tax Year 2019 to Tax Year 2020**

Median Percentage Change in Market Value 2019 - 2020



Impact Study - Using 2020 Certified Values of Single Family Residences

OPA GIS UNIT
April, 2019

0 2,700 5,400 10,800 16,200 21,600
Feet

Legend

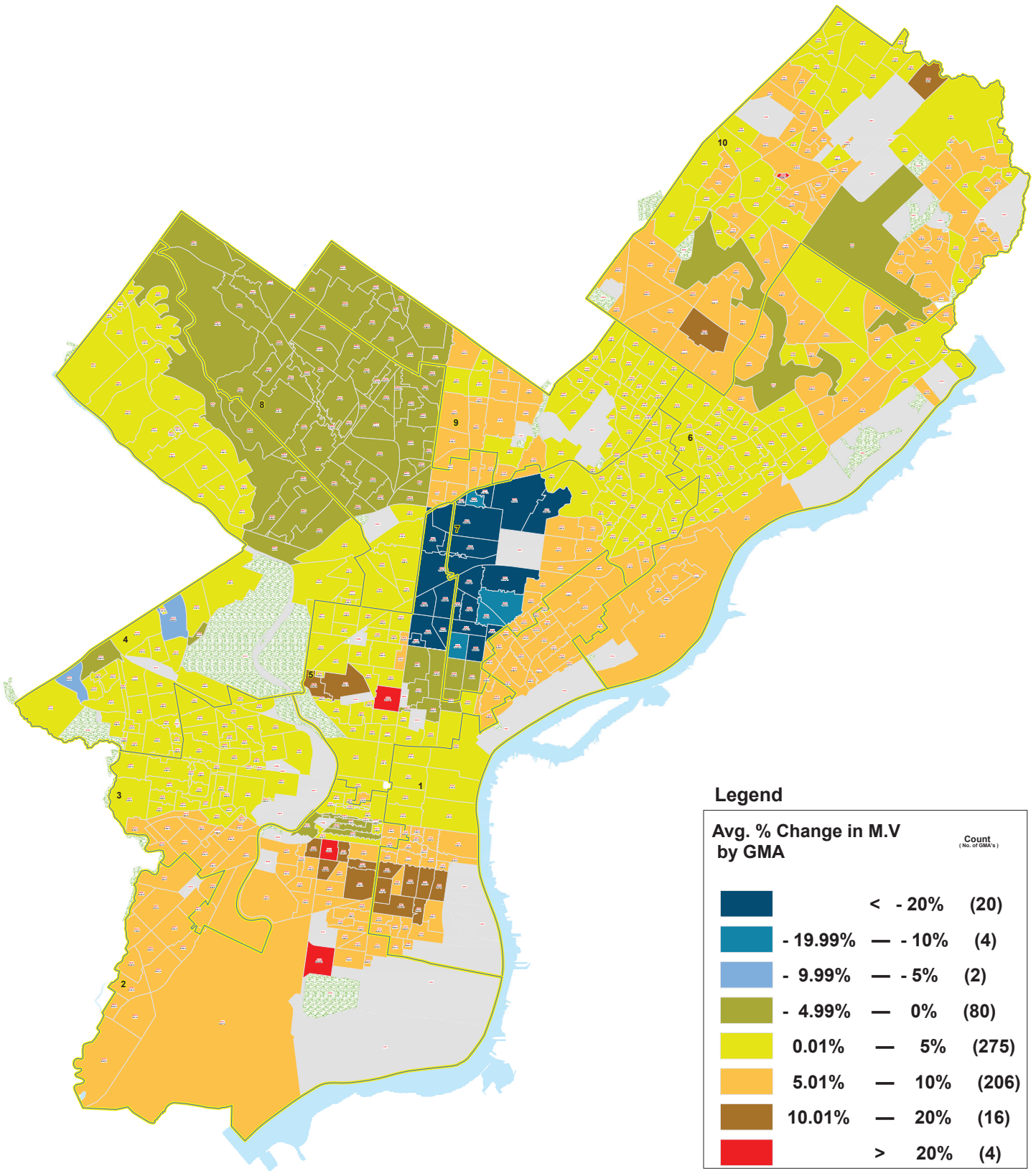
- Council District
- Fairmount Park
- Hydrology
- GMA with No Value

P.B.D



**Average Assessed Value Change by GMA for Single-Family
Residential from Tax Year 2019 to Tax Year 2020**

Average Percentage Change in Market Value 2019 - 2020



Impact Study - Using 2020 Certified Values of Single Family Residences

OPA GIS UNIT
April, 2019

0 2,700 5,400 10,800 16,200 21,600
Feet

Legend

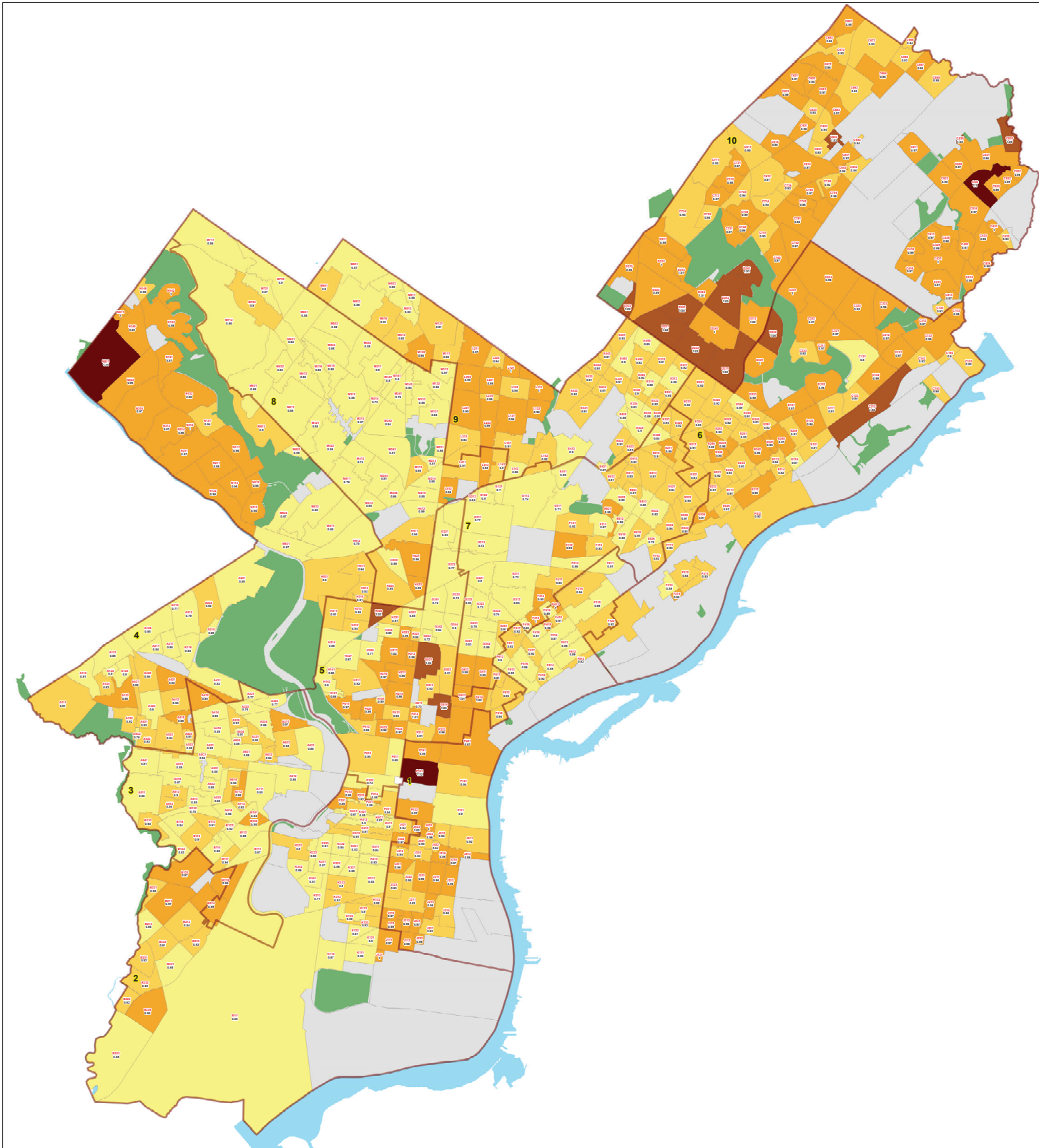
- Council District
- Fairmount Park
- Hydrology
- GMA with No Value

P.B.D



Median Ratio for Single-Family Residential in Tax Year 2020

Median Ratio by GMA - Single Family



Ratio Study - 2019 First Quarter Using 2020 Certified Values

OPA GIS UNIT
March, 2019

0 2,700 5,400 10,800 16,200 21,600 Feet

Legend

Median Ratio

- < 0.90
- 0.91 - 0.95
- 0.96 - 1.02
- 1.03 - 1.10
- > 1.10
- No S.F Accounts

Legend

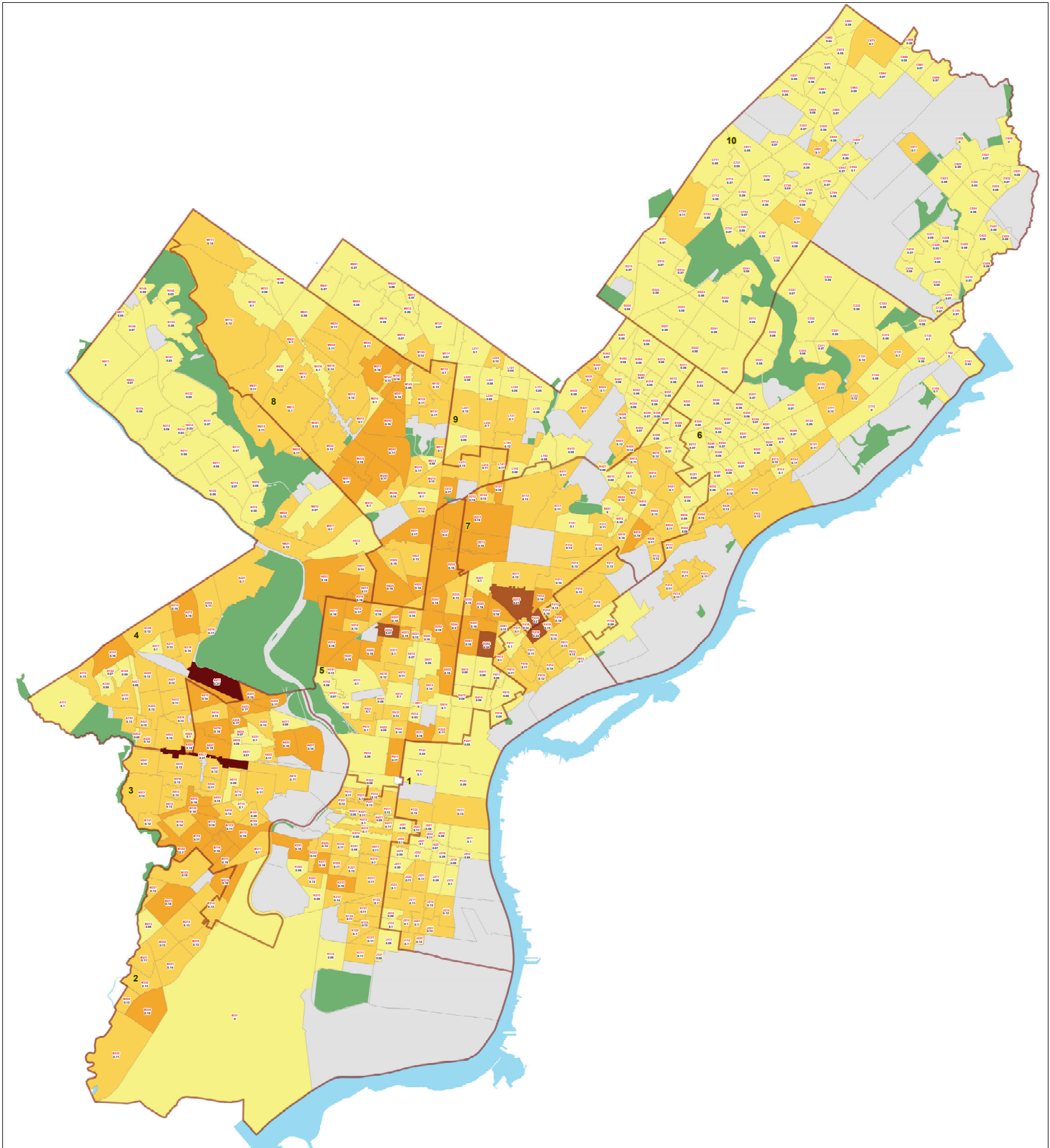
- Council District
- Fairmount Park
- Hydrology

RB/D



**Coefficient of Dispersion for Single-Family Residential in
Tax Year 2020**

Coefficient of Dispersion by GMA - Single Family



Document Path: X:\GIS Projects and Maps\Project_2019\Ratio Study Maps\2019CDD_2019_1010.mxd

RB.D

Ratio Study - 2019 First Quarter. Using 2020 Certified Values.

OPA GIS UNIT
March, 2019

0 2,700 5,400 10,800 16,200 21,600 Feet

Legend

C.O.D

- < 0.10
- 0.11 - 0.15
- 0.16 - 0.20
- 0.21 - 0.25
- > 0.25
- No S.F Accounts

Legend

- Council District
- Fairmount Park
- Hydrology

