

Management Response to 2019 Property Assessment Audit

Overview

The Office of Property Assessment (OPA) works to continue to improve the quality of assessments each year. OPA welcomed the opportunity to receive feedback and recommendations from J.F. Ryan Associates, Inc. on both the quality of its 2019 assessments and its assessment activities.

This document will respond to the J.F. Ryan report, detail changes that OPA has made in response to a 2012 audit conducted by the International Association of Assessment Officers (IAAO), answer questions posed in the J.F. Ryan audit, and describe changes that OPA will make based on specific recommendations from an IAAO affiliated consultant with 40 years of experience and detailed knowledge of OPA's processes.

Response to the Ryan Report

While we agreed that it was important that an evaluation of OPA's process be conducted, we were disappointed that the Ryan report did not provide specific recommendations on ways OPA could improve its assessment process or address the audit's findings. The audit also inaccurately says that OPA has failed to implement most of the recommendations made in an initial audit in 2012 by industry experts from the International Association of Assessment Officers (IAAO). As we'll discuss, OPA has either implemented or begun to implement virtually all of those recommendations. This was a missed opportunity to help OPA focus its resources on areas that still need improvement.

We also had significant concerns about the audit methodology. In an effort to evaluate OPA's performance, the audit compares OPA's assessments to more recent, not yet fully validated, sales that will be used in future mass assessment valuations after they have been validated. The auditor himself states that the sales he examined did not appear to be fully validated, and after removing what he thought to be clear outliers, he proceeded to analyze the inadequately screened latest sales anyway. The conclusions about the accuracy of assessments all stem from this flawed methodology.

Recommendations for Improvements

Ensuring accurate assessments requires OPA to continually look for ways to improve and best reflect changes in the market. To do this, and to better understand tangible ways to address concerns raised by this audit, the City sought specific recommendations to improve its real property assessment process from Robert Gloudemans, one of its IAAO affiliated consultants. Mr. Gloudemans has 40-years of experience in the assessment industry, regularly consults with other major jurisdictions, and has consulted with OPA for the past 10 years. His report can be [found here](#). The OPA has committed to adopting the recommendations he made:

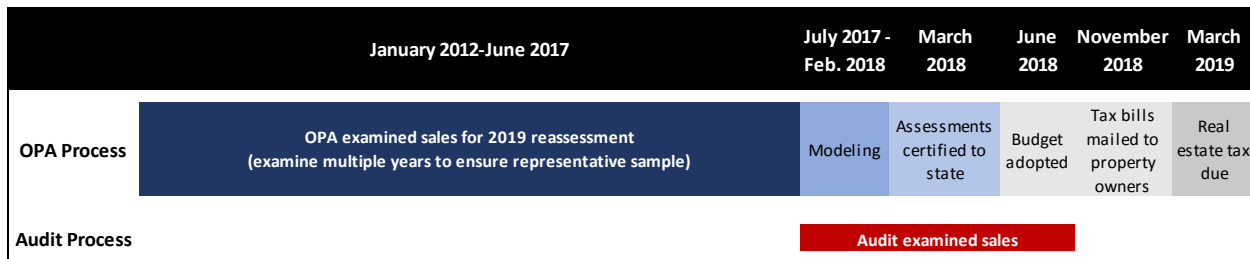
1. Establish a five-member sales validation team to validate both residential and non-residential properties.

2. Appoint a team to undertake a project focused on assignment of construction grades and condition codes for all residential properties.
3. Critically examine the reliability and consistency of commercial building grade and condition codes.
4. Maintain the flexibility provided by current valuation methods in the transition to the CAMA system.
5. Hire additional modelers with expertise in data analysis, property appraisal, statistical methods, Geographic Information Systems (GIS), and computer systems.
6. Designate a unit to be responsible for income data collection and screening and maintain that data in a standard format in a central repository such as the CAMA system.
7. Continue to refine spatial and proximity variables.
8. Routinely produce standardized ratio reports at the agency level at critical points in the valuation cycle and put appropriate reports on OPA's website.
9. Document and better explain the valuation process publicly.
10. Develop an action plan and accompanying timetable to implement the preceding recommendations.
11. Establish a Standards, Manuals and Guidelines Unit that is responsible for implementing the recommendations in the Gloude-mans report and that reports directly to the Chief Assessment Officer.
12. Temporarily change the mass assessment valuation calendar while the above recommendations and the City's new CAMA system are implemented. For tax year 2020, OPA would conduct a market trending valuation, appropriately trending existing tax year 2019 values by property type and geographic area in an effort to keep property values tied to the market while OPA implements the expert recommendations. OPA will resume annual mass assessment valuations when the above recommendations have been implemented.

Collectively, these changes will address the concerns raised by this audit and improve the quality of assessments.

RESPONSES TO J.F. RYAN AUDIT FINDINGS

METHODOLOGY CONCERNS: A sales ratio study compares assessments against validated sale prices to examine the quality of assessments. The J.F. Ryan report compared fiscal year 2018 sales (July 2017 to June 2018) to 2019 assessments which were based on sales from a prior, multi-year period (January 2012 to June 2017). The FY18 sales were too recent to be included in the tax year 2019 OPA reassessment and therefore had not been fully reviewed to remove non-arm's length transactions or correct data and category coding issues. However, the auditor treated the FY18 sales as though they represented valid, open market arm's length transactions of property and then those sales were used to draw conclusions about the quality of OPA's assessments. Using only the 1-year sample that was not fully validated yields an inaccurate picture.



The sales examined by the auditor will be part of a future mass assessment valuation after they have been validated. OPA believes that the audit results do not present an accurate picture of current practices and methodologies, but instead, are a clear indication that yearly measurements used to identify changing market conditions and define the scope of a reassessment project must continue to be part of OPA’s business process.

OPA shares the auditors concern about needing to continue to improve the quality of assessments and data each year. Our data, while not yet perfect, has consistently been within IAAO standards, proven to be accurate by the State Tax Equalization Board (STEB) and upon examination at formal appeal hearings and is continuing to improve each year. It is important to keep in mind that **OPA’s assessments will always lag the current market because of the March 31st certification date.** State law requires OPA to certify assessments to the state by March 31st each year for use in the upcoming tax year that begins on January 1st of the following year. While OPA examines the most recent sales possible, it also needs time to refine models and perform quality control processes before certifying. As a result, the City’s assessments will always lag the current market by 9 months plus the amount of time it takes to refine models and perform quality control processes. By analyzing a time period different from the one that OPA uses, the audit was guaranteed to get results that differed from OPA’s.

FINDING: Overall, property assessments in the City do not meet industry standards for accuracy.

While we take issue with the auditor’s methodology, we take his concerns seriously and look to external sources to help the City evaluate the quality of OPA’s assessments.

The State Tax Equalization Board (STEB), an independent state board, determined that the City’s 2017 Common Level Ratio (CLR) of assessed value to current market value was 98.7%. This means that OPA’s assessments virtually tracked the market value of sales validated by STEB, and its performance fell well within state required guidelines of coming within 15% of the stated common level ratio (100%).

The outcome of taxpayer appeals adjudicated by the Board of Revision of Taxes (BRT) also indicates the quality of OPA’s assessments. The value lost in appeals has decreased since the Actual Value Initiative (AVI) began in 2014. For tax year 2014, nearly 25,000 property owners filed appeals challenging their new assessments. Ultimately, the City lost 15% of the value appealed. In 2018, the City lost 8.8% to date of the appeals that have been resolved. *(For tax year 2019, approximately 8,500 appeals have been filed – equaling about 2% of the properties where assessments increased -- and the appeals process is just beginning.)*

Additionally, OPA uses IAAO recommended performance metrics like the Coefficient of Dispersion (COD) and Price Related Differential (PRD) to evaluate the quality and uniformity of completed assessment projects. As noted in the audit, a COD between .05 and .15 is considered ideal for large jurisdictions like Philadelphia with active markets. A PRD of .98 to 1.05 is considered ideal as a measure of vertical equity in assessments. OPA’s assessments have improved significantly since AVI and continue to match industry standards or fall within accepted ranges of tolerance:

	FY2013 (pre AVI)	FY2014	FY2015	FY2016	FY2017	FY2018
COD	.275	.139	.127	.145	.130	.098
PRD (single family)	.97	1.04	1.047	1.055	1.06	1.015

FINDING: Assessments on vacant land do not meet industry standards.

Since the auditor was working with preliminary 2020 data, he inadvertently included sales that were later invalidated or reclassified by OPA to draw conclusions about the assessment of vacant land. During the quality control process, OPA determined that between 25% and 40% of the transactions should not be included as vacant land because they were actually sales of a new structure, blanket transactions that reflect multiple parcels that would skew the data or for other similar reasons. OPA’s normal validation and quality control process is in place to screen for these types of issues early in an assessment project.

As noted earlier, the auditor decided to work with the most recent sales that had not yet been completely validated by OPA. Those properties had not yet been validated because they will be used for an upcoming valuation project – they were not sales used to determine values for 2019. Unfortunately, this methodology resulted in the auditor calculating a COD of 375.00 (or 37500%) and a PRD of 4.0. We agree that this result, if it were valid, would be very concerning.

Although OPA’s 2020 assessment project was still underway when the audit was completed, OPA replicated the auditor’s analysis to look into this assertion. OPA used the newly confirmed vacant land sales and trimmed only the extreme outliers – the top and bottom 10% - and reached a much different conclusion. OPA’s citywide metrics are much more in line with IAAO standards than the audit study presents, mainly because the audit was unfortunately examining sales that were not in fact non-residential land as the most recent sales data had not been fully validated.

Comparing Sales Ratio Statistics for Non-Residential Land

Study	Median	Mean	W/Mean	PRD	COD
J.F. Ryan Audit	0.28	1.16	0.29	4.01	374.98
OPA ratio study	0.928	1.152	0.828	1.391	0.478

Both the auditor and OPA’s citywide ratio study results for non-residential land are out of tolerance with IAAO recommendations, which highlights why it is important to look at location rather than citywide

summaries in a rapidly changing market like Philadelphia. Areas of the city are experiencing hyperactivity which reduces inventory and ultimately creates extreme upward pressure on price points for all developable land parcels. In other areas of the city, new construction may not be economically viable and/or minimal development activity is underway. If one looks at the citywide metrics alone, the metrics can be easily skewed by data from certain neighborhoods. Additionally, non-residential vacant land does not have a large number of sales for the year used by the auditor for large-scale base zonings (CMX4, CMX5, CA2, RM4). OPA models take care to ensure there are enough valid transactions to develop accurate models and values.

FINDING: Assessments on one to four family homes do not meet industry standards.

OPA's performance on IAAO metrics and external validation from STEB and the BRT indicate that the majority of OPA's assessments are accurate and within industry standards. The audit report also confirms this: "The conclusion overall to the study is that many properties are valued reasonably well, such as the condominium class as a whole and the total assessed value of a majority of the improved residential properties..." (p. 24).

As mentioned several times in this response, the auditor looked at later sales than were examined by OPA and data, that in part, had not yet been validated as OPA was in the early stages of the 2020 reassessment project when this audit began. We appreciate that the audit identifies broad areas for focus in future reassessment projects and validates that the majority of properties, including residential properties, have reasonable values.

FINDING: Assessments on commercial and industrial parcels do not meet industry standards.

The auditor oversimplified OPA's modeling of commercial industrial properties, asserting that OPA applied a blanket 3% trend on top of 2018 assessments. However, OPA modeled all properties to determine the proper value for 2019. A 3%-time trend was applied to the tax year 2018 value only if OPA determined the basis for the certified 2018 assessment was still appropriate for 2019 based on market conditions.

As stated several times in this response, we believe the methodology used by the auditor lead to inaccurate conclusions about the validity of OPA assessments for all classes, including commercial and industrial.

FINDING: Significant land value differences exist for otherwise similar parcels of property.

Again, we believe the methodology used by the auditor lead to inaccurate conclusions about the validity of OPA assessments, including land values. Because the auditor used sales not yet fully validated by OPA, and it was not in his scope to conduct a thorough validation of sales, he ended up inadvertently comparing values of unlike properties.

FINDING: The City's existing property assessment data is deficient in numerous areas.

Without providing specifics, the auditor concludes that data deficiencies are rampant because of the results from his ratio study. If the audit had provided specific examples of deficiencies, OPA could review those and take steps to address any specific deficiencies that were identified. OPA will continue, however,

to identify areas for improvement and to enhance the quality of its data and is working to implement recommendations from its consultant.

In Philadelphia, key drivers of value are location, building size, building type and quality, and condition. Since AVI, OPA has greatly improved its use of information in each of these areas. Specifically:

- OPA's use of location variables is much stronger than it was when OPA was created in 2010 and continues to improve (for example, substantial improvements have been made to neighborhood delineations and spatial variables).
- OPA is able to get data on building size and that data is reasonably accurate.
- Condition is important for modeling and OPA does not have comprehensive construction grade variable data, mainly because of the city's older housing stock. As the auditor noted, to improve condition data, homeowners would need to allow OPA evaluators access to their homes for the purpose of gathering new or confirming existing property data.
- As recommended by Robert Gloudemans, OPA would benefit from a dedicated project to assign grades and review and update those condition codes for all residential properties. While this work is currently performed by evaluators, a dedicated team may enable more consistent clean-up efforts. As a part of the CAMA project, there will be a data quality improvement effort to ensure that inconsistencies are being addressed as OPA migrates to the new system.

FINDING: OPA models require a high level of expertise and are not commonly employed in the mass appraisal industry or comparable jurisdictions.

OPA modeling staff is highly skilled and experienced. While the residential modeling methodologies used are state of the art, they are hardly unique to Philadelphia. They are described and taught in IAAO courses and publications. Other jurisdictions, ranging from Maricopa County, Arizona to Iceland use these same, effective modeling methods.

OPA will continue to develop additional modelers from within existing staff, recruit talent, and work with expert consultants to add more capacity.

FINDING: Documentation is missing for many procedures.

OPA disagrees in part with this finding. OPA has written detailed procedures that document the critical assessment processes, including the modeling process, the process for field inspections, the appeal management process, the sales validation process, the process for property type sorting and grouping, the (post-projection) market value review, the process for reviewing, changing, and maintaining Geographic Market Areas (GMAs, or locational boundaries), and the process for managing First Level Review appeal applications. While OPA disagrees with this finding, it does believe that there is room for improvement and OPA is working to update its pre-cepts which provide formalized instructions regarding the real estate valuation assessment process.

FINDING: There appears to be limited, if any post-valuation review of OPA’s performance.

This finding is wholly inaccurate. OPA routinely reviews modeling results during the assessment projects as well as post valuation outcomes. Sales ratio statistics are run by various property attributes and areas of preliminary deficiency (over or under valuation), and any issues are addressed before the models are put into production. The post project ratio study identifies areas and inventories that need improvement, and research and development to address deficiencies and improve performance is constantly ongoing. OPA publicly shares its performance metrics, the Coefficient of Dispersion and Price Related Differential, each year.

FINDING: Assessment standards, methods for property valuation, annual sales ratio studies, and supporting documentation for property assessments are not published on the City’s website.

We agree with the auditor that this is an area for improvement. OPA is updating the overview of its assessment methodology and will post this information on its website. We agree that the District of Columbia’s reference materials are a good model and aim to provide this level of information in the future.

Additionally, the CAMA system will have a public facing module that will give OPA the ability to put all of the information in a single place to provide additional access for the public and enhance engagement with property owners. Members of the public will have the ability to view updated property information and aerial photography, and property owners will be able to contact OPA and submit forms for exemptions, FLRs, and appeals online.

Prior to launch, training on public access features will be provided to other city agencies that regularly interface with constituents, such as City Council offices, for the purpose of providing constituent support and answering questions.

FINDING: As of mid-September, OPA had completed action on only 36% of requests for First Level Reviews (FLRs) filed in May of 2018. The deadline for processing reviews was October 1.

We agree that it is critical to review informal appeals both timely and accurately. For tax year 2019, OPA received 20,677 First Level Review applications. The auditor noted concern that the majority of FLRs had not been processed as OPA approached the October 1st filing deadline for formal BRT appeals. OPA continued to make progress during the fall months. At the close of 2018, 17,167 have been completed, 2,383 are pending decision authorizations by supervisors or administrators, and the remaining 1,127 still need inspection.

The October 1st deadline is the date that taxpayers must file appeals with the BRT. OPA encourages taxpayers who file a FLR to also file with the BRT if they have a concern. The BRT has permitted appeals filed after the first Monday of October deadline by taxpayers who received FLR decisions after said deadline to help ensure that no property owner is deprived of an opportunity to have an appeal heard on the merits.

To continue to improve, OPA will look into how a third-party consultant may be able to assist with the initial screening of FLRs.

FINDING: No timetable was offered for implementation of the Computer Assisted Mass Appraisal (CAMA) system.

This finding is inaccurate. A CAMA system implementation is currently underway with a scheduled go live in January of 2020. The CAMA system will include data validation rules and logic that provides automatic controls for data integrity. OPA plans to begin using the system in FY20 as the primary system (system of record) for the next mass assessment valuation.

FINDING: The most important recommendations from the 2012 audit have not been implemented.

OPA has made significant progress toward the 2012 IAAO recommendations. While the 2018 auditor was not charged with analyzing progress made against the 2012 audit findings, he inaccurately concluded that the most important recommendations from this previous audit had still not been implemented based primarily on the results of his ratio study. To provide more context, we analyzed our progress on implementing those recommendations and found that:

- **13** recommendations were fully implemented
- **2** recommendations were partially implemented
- **9** recommendations are in progress
 - Of the **9** recommendations that are in progress, **7** will be part of the implementation of a new CAMA system, going live in January 2020.
- By Q1 of 2020 we expect to have **20** recommendations fully implemented and the remaining four recommendations to either be partially implemented or in progress.

Recommendation #	Implementation Status
1	Implemented
2	Partially Implemented
3	Partially Implemented
4	In Progress as part of the CAMA Project
5	In Progress as part of the CAMA Project
6	Implemented
7	Implemented
8	Implemented
9	Implemented
10	Implemented
11	Implemented
12	In Progress, as part of the CAMA project
13	Partially Implemented. In Progress as part of the CAMA Project
14	Partially Implemented. In Progress as part of the CAMA Project
15	Implemented
16	Implemented
17	Partially Implemented. In Progress as part of the CAMA Project
18	Partial Implemented, In Progress
19	In Progress
20	Partially Implemented, In Progress as part of the CAMA Project
21	Implemented
22	Implemented

23	<i>Implemented</i>
24	<i>Implemented</i>

More detail on the 2012 findings and what OPA has done since the previous audit to address those findings is included in the appendix.

COMMITMENT TO FUTURE IMPROVEMENTS

OPA continually looks for ways to improve the accuracy of assessments. As noted above, as part of this effort and in response to general concerns raised in the J.F. Ryan audit, the City sought recommendations for improvements to OPA’s assessment process from Robert Gloudemans, one of its IAAO affiliated consultants. Mr. Gloudemans found that OPA has made huge improvements in its valuation process and that it has evolved from an archaic, cost-based system of outdated values to a highly automated process of annual valuation based on current market data. He did, however, also find that there was room for improvement and OPA plans to use his recommendations as a guide for its continuous improvement process. His full report can be [found here](#). The OPA has committed to adopting those recommendations:

1. **Establish a five-member sales validation team to validate both residential and non-residential properties.** Currently, evaluators and modelers review and validate sales. Creating a dedicated team whose only role is to validate sales will prioritize this work and allow for a more consistent review, both of which will improve the overall quality of OPA market data.
2. **Appoint a team to undertake a project focused on assignment of construction grades and condition codes for all residential properties.**
3. **Critically examine the reliability and consistency of commercial building grade and condition codes.** For recommendations #2 and #3, assigning and improving these variables will enhance the quality of OPA property characteristics data. Since Philadelphia has a large share of older housing stock, it is one of the few cities that does not have a variable for construction grade. OPA does have condition data, but this variable could be improved to better contribute to valuation models. As OPA is in the process of implementing a CAMA system, a team of OPA employees or an outside firm can determine the best course of action to translate these enhancements to the new system and incorporate a process to ensure the data is maintained regularly.
4. **Maintain the flexibility provided by current valuation methods in the transition to the CAMA system.** Since 2012, OPA has developed state of the art, market-based valuation models. Robert Gloudemans recommends that, when the City implements the new CAMA system, OPA should seek to maintain this level of customization rather than simply adopt an out-of-the-box model that may sacrifice accuracy for administrative ease.
5. **Hire additional modelers with expertise in data analysis, property appraisal, statistical methods, Geographic Information System (GIS), and computer systems.** OPA currently has a small but talented modeling team. Robert Gloudemans recommends that to build additional capacity, OPA should look to add additional dedicated modeling staff.
6. **Designate a unit to be responsible for income data collection and screening and maintain that data in a standard format in a central repository such as the CAMA system.** In the current legacy systems, income data is not kept in a centralized location. The CAMA system will provide a central repository so this information can be easily accessed and applied to valuation models, and

designated staff can maintain, standardize, and build upon this information to better inform models.

7. **Continue to refine spatial and proximity variables.** Enhancing the level and depth of existing spatial and proximity variables can help refine values to differentiate between otherwise similar parcels within a neighborhood.
8. **Routinely produce standardized ratio reports at the agency level at critical points in the valuation cycle.** While OPA's modeling team performs significant quality control analysis, including ratio studies, before finalizing any valuations, OPA management would benefit from the production of more frequent preliminary ratio studies and standardized reports at key points in the valuation process to measure accuracy and progress.
9. **Document and better explain the valuation process publicly.** OPA should provide and maintain better documentation on its website of the assessment process and results of the final ratio studies.
10. **Develop an action plan and accompanying timetable to implement the preceding recommendations.** In concert with the implementation of the new CAMA system, OPA should aim to implement the recommended process, data, and staffing changes over the next two years.
11. **Establish a Standards, Manuals and Guidelines Unit that is responsible for implementing the preceding recommendations and that reports directly to the Chief Assessment Officer.** Establishing a dedicated team will ensure standards and processes are well-documented and kept up to date for internal use and public viewing. This will free up capacity of existing key staff who are currently performing too many duties.
12. **Temporarily change the mass assessment valuation calendar while the above recommendations and the City's new CAMA system are implemented.** Temporarily changing the mass assessment valuation calendar would allow OPA to make the critical changes recommended by its consultant and finalize implementation of the new CAMA system. For tax year 2020, OPA would conduct a market trending valuation, appropriately trending existing tax year 2019 values by property type and geographic area in an effort to keep property values tied to the market while OPA implements the expert recommendations. OPA will resume annual mass assessment valuations when the above recommendations have been implemented.

SUMMARY

The City welcomed the opportunity to receive feedback on the quality of our 2019 assessments. But because the auditor relied on preliminary and not fully validated sales data from a different year from those assessments, he drew conclusions based on faulty assumptions. Coupled with the lack of any specific recommendations, the value of the audit toward improving the work of OPA is extremely limited.

The audit also inaccurately says that OPA has failed to implement most of the recommendations made in an initial audit in 2012 by industry experts from the International Association of Assessment Officers. OPA has fully implemented 13 recommendations, 9 are in progress and primarily tied to the launch of the CAMA system, and the remaining 2 are partially implemented. In short, the audit missed an important opportunity to help OPA focus its resources on areas that still need improvement.

While we were disappointed that we did not receive more actionable feedback, we still take the spirit of the auditor's concerns seriously. To obtain specific recommendations for improvement, OPA asked its outside consultant to provide an independent, formal evaluation. OPA has committed to implementing those recommendations to improve the reassessment process, including temporarily changing the mass assessment valuation cycle to allow OPA time to implement the recommended changes. OPA will continue to build staff capacity and work with nationally recognized consultants. The implementation of a CAMA system will further enhance OPA's capacity and ability to better serve property owners. We also acknowledge that OPA must provide more information to the public and is taking the necessary steps to do so. In the pages that follow, OPA has outlined its progress toward implementing the recommendations from the 2012 audit and responded to the formal questions posed in the audit.

We appreciate the opportunity to respond to the audit and will continue our efforts to improve the quality of assessments.

Progress toward 2012 IAAO Audit Findings

Recommendation 1

Continue the existing practice of regular staff meetings. As work progresses on updating all real property values for the 2013 tax year and as new or enhanced plans, standards, and procedures are implemented, more frequent meetings may be necessary to reinforce the importance of new plans, standards, and procedures. The CAO should actively participate on occasion in individual Division meetings, especially as new standards or procedures are being discussed and implemented.

The OPA should implement a time and task project plan such as Gantt charts that assign personnel, time frames, tasks, critical paths, and task dependencies in conjunction with OPA plans to appraise all real property at market value by the end of 2012. This is an important management tool that should be completed prior to the reappraisal project in order that an accurate measure can be made of the time and resources needed to complete a citywide revaluation, and to ensure that work, to that end, progresses on schedule.

OPA Response:

OPA holds meetings with senior staff, supervisors and all-staff on a regular basis to discuss standards, procedures and in-progress and planned work for the yearly revaluation projects. In addition, the CAO and deputy CAO attend divisional meetings as needed and attend all senior staff, supervisor and all staff meetings.

Each revaluation project since 2017 has been managed with governance from a dedicated project manager, utilizing management tools such as project plans, Gantt charts, timelines, with assigned owners for tasks in order to ensure that the revaluation project for each year remains on schedule. Since 2014, each year's values have been certified by the state mandated due date.

Status: Implemented

Recommendation 2

Place a high priority on developing detailed plans, standards, and procedures for all office tasks, both on-going assessment tasks and the major task of completing a revaluation by the end of 2012. These plans, standards, and rules include:

1. Adoption of a comprehensive written revaluation plan that meets IAAO and USPAP Standards. Adopt a specific action plan and schedule to meet its objectives in a timely manner. Define critical activities showing the completion dates, assigned responsibilities, and production standards for the collection of data and field-work. An adequate budget, included in this written plan, is crucial because it can overcome deficiencies with existing resources. This plan requires a detailed specification and schedule for all phases of a revaluation, including informal hearings to be held after initial values have been determined, but before the tax rolls and mailing of tax bills is finalized. Include a breakdown of major tasks, and the analysis and estimate of reasonable daily production goals. Include flow charts that clearly delineate the flow of work through the process, and the specific staff person(s) with the authority and responsibility for completing this work. Address and account for all non-personnel supply and equipment resources that are required together with a specific delivery schedule.
2. Establish office standards and procedures for both the Residential and the Commercial & Industrial Property Divisions. Presently each section within a division, and in some instances even to the level of each Evaluator, has unique work procedures including the data taken into the field, data collected in the field and the methods

and procedures for developing this data to arrive at an opinion of market value. It is essential to establish a uniform process for each property type including standardizing training of new personnel and to enable existing personnel to take on additional responsibilities when required.

Include standardized procedures for the processing of

- Building permits within Divisions and Sections
- Sales verification
- Informal value appeal reviews; and
- Formal value appeals with the BRT

OPA Response:

1. *OPA has a written comprehensive evaluation plan that includes timelines, dates and critical tasks for each revaluation project. In addition, a dedicated Project Manager oversees all the activities associated with each revaluation project. OPA has standards in place for data collection and field work, including check lists of critical data to collect during site visit. As a result of this recommendation, OPA has implemented informal reviews (First Level Reviews). The yearly volume of FLRs can vary widely. As a result, the time it takes to process all of the FLRs can fluctuate by year. To help address that variation in timing, OPA is considering outsourcing some of this effort. Having dedicated resources to assist with this effort will enable OPA to better manage a schedule for completing FLRs. (Partially Implemented)*
2. *OPA currently has a new hire curriculum and 7-week training program and associated training materials, standards and process documents available to all staff for the following processes. In addition, every employee, existing or new has received this training. Some of these trainings are provided yearly or, done anytime a process changes. (Implemented)*
 - *Field Inspections by division—in class and in field training*
 - *Evaluation and Data Entry of Characteristics by division*
 - *Exemption and Abatement processing*
 - *Demolition, Building Permit Review*
 - *Subdivisions & Consolidations*
 - *Administrative processes: Working Year and Certified Values*
 - *Market Value Reviews*
 - *Sales Validation*
 - *Revaluation project process and timelines*
 - *Hearing process, preparation of appeal answers*
 - *First Level Review*

Status: Partially Implemented

Recommendation 3

We recommend that an on-going Public Relations Program be formulated and begin operating immediately in particular, the revaluation public relations program commence immediately.

While OPA has a good system for tracking public information requests, the development of procedural manuals detailing how all staff (not just those in CSC) should communicate with the public are critical for an effective public relations program. Include information on the following subjects:

- Professional standards adopted (Implemented)
- Important dates and deadlines (Implemented)
- Rules for disclosure of different types of information and confidentiality of data (Implemented)
- Any established records retention policy (Implemented)
- Identification of who is authorized (and who is not) to communicate as an official spokesperson (Implemented)
- Guidelines for staff interactions with the public (Implemented)
- Guidelines and an authorization process for using intellectual property, logos, trademarks, and copyrights (Implemented)
- A privacy statement and policy for public comment mechanisms (Implemented)
- Code of conduct for online behavior (Implemented)
- Protocols and authorization for posting information to online media such as Web sites, social media sites, and community forums (Implemented)
- Identification of media outlets and communication services that staff are authorized to use (Implemented)
- Policy regarding appropriate online use of the assessing jurisdiction's name and identity (Implemented)
- Policy regarding endorsements and political statements (Implemented)
- Suggestions for responding to irate taxpayers (Implemented)
- Guidelines for assessment hearings and appeals (Implemented)
- Staff appearance and attire (Implemented)
- Identification badges, nameplates, and vehicle identification (Partially implemented)
- Telephone and e-mail etiquette (Implemented)
- Guidelines for the style and structure of letters and e-mail (Implemented)
- Methods for recording actions (Implemented)

OPA Response: *OPA has been attending community and public meetings beginning in 2012.*

OPA staff communications with the public is largely governed by city-wide policies such as the Internet Usage, Email Usage, Political Activity, and Social Media policies.

In addition, OPA provides training on communicating with members of the public that include topics such as staff appearance, communication etiquette, and training for hearings and appeals including mock-hearings.

All City employees are required to receive City ID badges. In addition, OPA staff can use parking placards during field work in places where paid parking is necessary. OPA has not implemented separate ID badges, nameplates or vehicle identification.

While the 2012 recommendations did not specifically include a discussion of making more assessment materials, similar to assessment documents prepared by Washington, D.C., available on OPA's website, we are working to enhance and expand upon existing public materials as described in the 2018 audit.

Status: Partially Implemented

Recommendation 4

Given the anticipated timeframe of the revaluation program the City is undertaking and the limited internal resources, consider supplementing existing information technology resources with features available in many commercially available CAMA Systems.

Among other advantages, contemporary CAMA systems provide the framework for discipline of data maintenance required for accurate record keeping and uniform valuations. The City already possesses much of the hardware and supporting software required for a CAMA System. While acquiring a CAMA System that has been time-tested by others and proven successful is often more cost effective, we have been advised based on the City's recent history in the procurement of a commercial CAMA system precludes this approach. Other advantages that a contemporary CAMA system will provide are stated throughout this report.

OPA Response: *A CAMA system implementation is currently underway with a scheduled go live in January of 2020. The CAMA system will include data validation rules and logic that provides automatic controls for data integrity. OPA plans to begin using the system in FY20 as the primary system (system of record) for tax year 2021 assessments. The CAMA system will include data validation rules and logic that provides automatic controls for data integrity.*

Status: In Progress

Recommendation 5

Establish a unique parcel numbering system consistent with guidelines in the IAAO Standard on Digital Cadastral Maps and Parcel Identifiers. Replace or supplement the existing account number with a location-based parcel identifier. Include this parcel identifier in the CAMA database for use as a search criterion. Assign new parcel numbers for property splits, combinations, or new sub-divisions in conjunction with or by GIS personnel and identify the old parcel number(s) for deletion.

Ensure that the CAMA system has clear specifications for incorporating a GIS interface.

Work with other City departments to obtain easy access to any restricted GIS layers than would enhance OPA's operations.

OPA Response: *The City of Philadelphia is currently working on a PIN (unique Parcel Identification Number) implementation. The PIN will be available in the CAMA system for use as a search criterion. The CAMA system will also have tools for location-based searching and will integrate with GIS tools. In the event of property splits, combinations or new subdivisions, a new PIN will be assigned to the resulting parcels and the old parcels will be deactivated. The expectation is that every parcel, taxable or exempt will be assigned a PIN number. PIN will be implemented in calendar year 2019.*

Status: In Progress

Recommendation 6

Identify office space needs for any additional staff. The office layout should be re-configured to make the enlarged office efficient for the tasks to be performed.

OPA Response: *The office has reconfigured cubicle and office space as staffing has increased and will continue to regularly review the needs for potential future configurations. In addition, OPA has built out 2 dedicated training rooms, a dedicated CAMA conference room and workspace, and a multi-purpose room, as demand required.*

Status: Implemented

Recommendation 7

Analyze and evaluate the adequacy of all of their computer hardware as well as their computer system itself in light of the significant increase in the number of personnel and the anticipated increased use of the system. New computers should be obtained to accommodate any new hires. In addition, the OPA should re-examine its Technical Support needs to ensure that sufficient support is available for the increases in both hardware and usage of the system.

OPA Response: *Since 2012, OPA has refreshed employee hardware and OS software at least twice. This is primarily a function of the City's Office of Innovation and Technology (OIT). OIT aims to refresh hardware every 5 years.*

Status: Implemented

Recommendation 8

Evaluate the need for any additional office equipment, such as copy machines and faxes, needed for the additional staffing. Concurrently, evaluate the status of existing equipment for continued use or replacement.

OPA Response: *Every year, needs for additional office equipment are assessed. In the last 5 years, OPA has added several copy machines and other needed office equipment for the additional staffing.*

Status: Implemented

Recommendation 9

Continue the formal training program for Evaluators with specific detail for all external and in-house training and associated tracking record for each employee. Ensure training will meet State Certification requirements

for Evaluators. Enhance the existing training program, set forth in Appendix D to ensure that all personnel will have the opportunity to attend training classes in a progressive education and professional development program. Include in the training program internal rules, standards, and procedures (both current and planned). Include formal outlines, Power Point presentations, and associated training material in a manner that allows for repeated use and ease of updating.

While many of the current staff have adequate experience and training, obtaining CPE certification will enhance public confidence in the assessment process. Therefore, we recommend all staff responsible for valuing property obtain their CPE as soon as possible.

OPA Response:

The OPA has been conducting the enhanced new hire training that includes internal rules, standards and procedures since 2012. Since then it has evolved into a 7-week curriculum. The curriculum includes resources such as outlines, presentations and other training material that is regularly updated with each new hire class. OPA has also added a training supervisor that coordinates the training program. There is tracking to confirm that each person completes the training program. Their participation is shared with their supervisors as part of the review of their probationary period. The City offers New Hire training, Assessor's Association of Pennsylvania (AAP) training, IAAO training and training on internal processes and procedures.

Evaluation staff hired or promoted into civil service positions since 2011 are required to participate in AAP training and have 2 years to get their Certified Pennsylvania Evaluator (CPE) certification. Five OPA Staff members have chosen to pursue IAAO certification as well.

Status: Implemented

Recommendation 10

Develop a comprehensive training program for new Evaluators in the mass appraisal process commencing with data collection.

Given the aggressive schedule for completing the revaluation, develop realistic personnel estimates for all major functions to ensure timely completion. The need for additional resources, both temporary and permanent, may become evident as a result of these activities.

OPA Response: The new hire training curriculum mentioned in the response to recommendation #9 includes this subject matter. As part of the tax year 2014 reassessment and every reassessment since, the City reevaluates needs for additional resources and hires as necessary. Since FY12, staffing levels have increased more than 45 percent from 134 to 195 filled positions. OPA has also created two Deputy Administrator roles, a Community Outreach Coordinator and a Reassessment Program Manager role. OPA also works with mass appraisal consultants and local real estate appraisal consultant firms. This additional staff and help from consultants has substantially enhanced OPA's ability to provide accurate assessments. The 195 filled positions, combined with budgeted vacant positions that OPA is working to fill, will bring OPA up to the IAAO staffing standards.

Status: Implemented

Recommendation 11

Review current job descriptions to ensure that the descriptions meet the mass appraisal requirements for an office that values property at market value.

***OPA Response:** OPA regularly reviews job specifications and descriptions to ensure that staff is meeting the needs of the department and works with the Office of Human Relations and the Civil Service Commission to make changes from the Civil Service Commission.*

Status: Implemented

Recommendation 12

Work closely with the Department of Licenses and Inspections to ensure that all building permits continue to be received on a timely basis. Implement an automated process directly linked to the L&I database so that OPA has real-time knowledge of permit activity.

***OPA Response:** OPA receives spreadsheets of permit data monthly. With the implementation of CAMA, we plan to implement a nightly refresh of building permits updated by L&I to the City's Data Warehouse.*

Status: In Progress

Recommendation 13

Adopt clear and precise procedures for all cadastral processes and make available to all personnel processing any flagged deeds. Include a timeline with specific deadlines to complete each process.

***OPA Response:** OPA has a dedicated unit to resolve all flagged deeds. The unit has clear and precise procedures for resolving flagged deeds that are placed "in suspense" and refers to the precepts that govern exemptions for correctly processing flagged deeds resulting in taxable to non-taxable status or vice versa. In addition, the unit does regular audits to ensure that deed information, and exemption information is accurate on a parcel. With a new CAMA system and the implementation of a PIN, the number of deeds in suspense will be reduced and updates from the Department of Records will be more automated resulting in less latency of data. This will improve the overall accuracy of cadastral maps and city GIS.*

Status: Partially Implemented, In Progress

Recommendation 14

Adopt an automated building permit tracking system including standardized procedures for all field work that addresses:

1. records/forms that are taken to the field
2. the data that is collected
3. the improvements and dimensions that must be measured
4. the digital images required
5. the process for capturing building sketches for each improvement

OPA Response: *OPA currently uses a standard field inspection form that lists the most important data elements to be collected, including improvement, dimensions and the ability to sketch. Currently, we have a semi-automated permit tracking system. Once we move to a new CAMA system, we will have an automated permit tracking system, as well as the ability to capture data and images in the field via a tablet mobile device.*

Status: Partially Implemented, In Progress

Recommendation 15

Create standardized procedures and written documentation for administering all abatement and exemption programs.

OPA Response: *The OPA maintains standardized procedures for administering abatement and nonprofit exemption programs. In addition, workflow documents for abatements and exemptions were created as part of the CAMA project. Process documents will be updated for administering abatement and exemption programs within the new CAMA system. Note that other exceptions such as Disabled Veterans, Homestead, and Long-time Owner Occupant Program (LOOP) are administered by other agencies and OPA facilitates the application of the exception onto the parcel record.*

Status: Implemented

Recommendation 16

In conjunction with the creation of standard procedures and policies, document work flow charts for all of its major processes.

OPA Response: *All major OPA processes are documented in workflow charts. Documented processes include: Site visit/Site recording, Sales Validation, Market Value Review, Abatement & Exception Management, Administrative/Adjustment processes, Mass Appraisal, Year-End Processes, Appeals, Subdivisions & Consolidations, Correspondence Processing.*

Status: Implemented

Recommendation 17

1. As noted above OPA should consider acquiring a CAMA system and immediately commence converting their existing data to this system.
2. A complete property characteristic specification manual should be developed which details each property characteristic. Examples of such specifications are as follows:
 - a. **Design (Style)**
 - i. Enter an appropriate architectural design (style) type descriptor that best describes the subject property. Valid descriptions include, but are not limited to, 'Colonial,' 'Rambler,' 'Georgian,' 'Farmhouse'. Do not use descriptors such as 'brick,' '2 stories,' 'average,' 'conventional,' or 'typical' as these are not architectural styles.
 - ii. **Reporting Format:** Design (Style) – Text
 - b. **Year Built**
 - iii. Indicate the year the subject property was built. If it is unknown or unavailable estimate the year the subject property was built.
 - iv. **Reporting Format:** Year Built – 4-digit number, yyyy

c. Quality of Construction

- v. Select one quality rating from the list below. Indicate the quality rating that best describes the overall quality of the property.
 - vi. **AAA:** Dwellings with this quality rating are usually unique structures that are individually designed by an architect for a specified user. Such residences typically are constructed from detailed architectural plans and specifications and feature an exceptionally high level of workmanship and exceptionally high-grade materials throughout the interior and exterior of the structure. The design features exceptionally high-quality exterior refinements and ornamentation, and exceptionally high-quality interior refinements. The workmanship, materials, and finishes throughout the dwelling are of exceptionally high quality.
 - vii. **AA:** Dwellings with this quality rating are often custom designed for construction on an individual property owner's site. However, dwellings in this quality grade are also found in high-quality tract developments featuring residences constructed from individual plans or from highly modified or upgraded plans. The design features detailed, high-quality exterior ornamentation, high-quality interior refinements, and detail. The workmanship, materials, and finishes throughout the dwelling are generally of high or very high quality.
 - viii. **A:** Dwellings with this quality rating are residences of higher quality built from individual or readily available designer plans in above-standard residential tract developments or on an individual property owner's site. The design includes significant exterior ornamentation and interiors that are well finished. The workmanship exceeds acceptable standards and many materials and finishes throughout the dwelling have been upgraded from "stock" standards.
 - ix. **B:** Dwellings with this quality rating meet or exceed the requirements of applicable building codes. Standard or modified standard building plans are utilized and the design includes adequate fenestration and some exterior ornamentation and interior refinements. Materials, workmanship, finish, and equipment are of stock or builder grade and may feature some upgrades.
 - x. **C:** Dwellings with this quality rating feature economy of construction (meets current building code) and basic functionality as main considerations. Such dwellings feature a plain design using readily available or basic floor plans featuring minimal fenestration and basic finishes with minimal exterior ornamentation and limited interior detail. These dwellings meet minimum building codes and are constructed with inexpensive, stock materials with limited refinements and upgrades.
 - xi. **D:** Dwellings with this quality rating are of basic quality and lower cost; typically, they do not meet current building code requirements. Some may not be suitable for year-round occupancy. Such dwellings are often built with simple plans or without plans, often utilizing the lowest quality building materials. Such dwellings are often built or expanded by persons who are professionally unskilled or possess only minimal construction skills. Electrical, plumbing, and other mechanical systems and equipment may be minimal or non-existent. Older dwellings may feature one or more substandard or non-conforming additions to the original structure.
 - xii. **Reporting Format:** Quality of Construction – select one value from the specified list
3. Conduct a complete on-site inspection of properties that have not had a full inspection in the past six years and enter all data into the CAMA system. The implementation of portable computer collection devices, integrated with the CAMA system, may increase production rates for residential properties and minimize the need for data entry upon completion of field work.
 4. Given that OPA's goal is to have proposed values ready for final value field review by November 2012, either increasing the number of residential appraisers and/or contracting with firms with personnel experienced in onsite data collection procedures will likely be necessary.
 5. Develop and implement an on-going plan for regular property inspections to continue to ensure that the information and data about the properties and valuation of properties is accurate. This will help to ensure that City of Philadelphia assessments are accurate, fair, and equitable.

OPA Response:

#1: The CAMA Project is in progress with a scheduled launch date of January 2020.

#2: Definitions for all data elements for design (style), quality of construction exist. OPA has a formal data governance reviewing body that is reviewing the structure of these data elements for additional changes as necessary for the CAMA system's data structure. OPA has data dictionaries and other definition documents that are regularly updated and refined.

#3: OPA had a comprehensive inspection plan that was part of the process prior to AVI implementation in 2014. Tracking the frequency of inspections will be easier with a new CAMA system.

#4: As previously mentioned, staffing was increased by more than 45 percent to meet the deadlines for AVI and subsequent reassessment projects.

#5: OPA reviews property information on an ongoing basis. With the implementation of a new CAMA system, we expect to implement a more formal and comprehensive plan.

Status: Partially Implemented, In Progress

Recommendation 18

1. Integrate the residential condominium valuation function with the residential appraisal division. The market forces influencing condominiums while unique remain are under the general influence of overall market forces that influence owner-occupied residential property.
2. Continue an annual program of collecting and verifying income and expense data using forms optimized for distinct property uses.
3. Incorporate valuation and requisite data requirements in OPA CAMA system.
4. Implement a periodic on-site inspection program to ensure that the all property characteristic data for all properties is verified.
5. Review and update non-residential Evaluator job descriptions to ensure qualifications require experience and education to meet State licensing requirements for Certified General Real Property Appraiser.
6. Implement a program, with appropriate funding, for external education from qualified real estate educational providers to ensure non-residential Evaluators meet the continuing education requirements for State licensed Certified General Appraiser.

OPA Response:

1. *Residential condominium valuation has been integrated within the residential appraisal division. (Implemented)*
2. *The initial program to collect income and expense data from the owner received minimal response. Today, we capture this information during the appeals process, general market information through consultants, and other research. (Partially Implemented)*
3. *OPA is in the process of incorporating valuation and requisite data requirements in the CAMA System as part of the CAMA project. (In Progress)*
4. *Periodic onsite inspections are part of the reassessment properties for commercial, industrial, apartments and condominium properties. (Implemented)*
5. *Evaluator job descriptions are uniform for all divisions. While that job description does not meet state licensing requirements for Certified General Real Property Appraiser, that level of certification is not required for the type of evaluation work that OPA is required to perform.*

All evaluators, however, have their Certified Pennsylvania Evaluator (CPE) certification, which is the appropriate certification for the work they perform (Not implemented)

6. *OPA offers ongoing training from the AAP and supports the efforts of employees who receive training through the IAAO. In addition, OPA has contracted for a State Licensed Certified General Appraiser to provide in house knowledge transfer. (Partially implemented)*

Status: Partially Implemented, In Progress

Recommendation 19

The OPA should regularly test for selective reappraisals to avoid sales chasing problems such as inequitable values among similar properties. Appendix D beginning on page 56 of the Ratio Standard includes sales chasing detection techniques. The OPA may find one or more of these techniques usable now and after the planned citywide reappraisal

***OPA Response:** The mass appraisal and analysis unit now tests analytics for comparing appraisal history and performance for sold versus unsold properties. We have designed diagnostic tools to report our findings.*

Status: In Progress

Recommendation 20

Incorporate “hard edits” into the computer system to prevent miscoding or omission of data. For example, do not permit entry of sales dates subsequent to the current date. Reject Style codes if they are not consistent with category codes. If an attempt is made to enter a non-complying code the computer system should reject its entry and instantly notify the operator. Another method is the incorporation of “drop down” entry fields that are populated from a table created by management that lists the sales qualification codes. This requires the person entering the record to select a code from the preset list and will not allow skipping of the information. Set reasonable time limits on entering important data such as sales qualification codes. For example, if more than a month passes from the date of sale and a qualification code is lacking, generate a red flag report requiring proper entry. Develop edit reports to identify records with missing variables. Correct omissions immediately.

***OPA Response:** OPA has coded some data validations into its existing systems, when possible. However, current system limitations prevent full implementation. OPA has a formal data governance reviewing body that works to manually manage any miscoding or change data definitions. The new CAMA system will have hard edits as standard components for fields such as dates, required fields, or drop-down menus. In addition, OPA will add additional “hard edits” based on business rules. The new CAMA system will also offer reporting capability that will enable OPA staff to generate reports of parcels with key data fields blank, such as sales qualification codes. Combined, these changes when fully implemented with CAMA, will reduce the likelihood of data errors occurring and improve staff’s ability to spot and address data errors.*

Status: Partially implemented, In Progress

Recommendation 21

Develop a comprehensive procedure to assure property sales qualification and data entry coding. Permit a maximum limit of three months to qualify each sale. Review parcels experiencing extreme ratios.

OPA Response: *We have standard procedures for sales validation, which include reviews of extreme ratios. In addition, a schedule exists for validating sales. With a new CAMA system, we will have the ability to better track the work of validating each sale and will be able to monitor and manage the flow of sales to validate within a shorter timeframe than currently.*

Status: Partially Implemented, In Progress

Recommendation 22

Develop a procedure to check outliers to determine the cause of large differences between price and value. Comprised in this review procedure is confirmation of public records, review of property characteristics, and confirmation of the terms of sale and field visits where necessary. If outliers persist, a review of the valuation model may also be needed.

OPA Response: *We have investigated causes of differences in price, projected values and final values for accounts that have sold since 2015. Most of the differences are because the properties have changed in a significant way between the time of sale and the date of valuation. Others are due to errors in the recorded data. This is a regular part of data scrubbing in the modeling process, and data correction reports are issued as part of every revaluation project.*

Status: Implemented

Recommendation 23

Given these results the problems are likely systemic. A thorough review of the sample sales may reveal some that are invalid and this likely will have an effect on the COD and PRD. However, the median ratio is less affected by extremes. Therefore, regardless if some of the sales are disqualified these data still indicate significant problems. We recommend comprehensive review of the valuation process. Confirm all factual data especially the property characteristics. Develop valuation models for each property type. Specify property characteristics carefully to reflect market-based supply and demand factors. Calibrate value coefficients using confirmed, arms-length sale prices.

OPA Response:

The valuation process is reviewed and improved with every project. Median Ratio, COD and PRD have consistently improved with each valuation project. Citywide COD in 2013 was 28%. After the last revaluation, it was less than 10%. Models are reviewed, improved and re-written every year. Sales are validated and revalidated with every project. Systemic review, analysis and modification of GMA and Locale Code attributes is part of every revaluation cycle.

Since 2012, OPA has captured characteristics at time of sale in the sales file instead of using current characteristics to sales that had transacted in previous years. Sales validation has been subject to constant review, and transactions are revalidated each year. Parcels that appear to have errors are identified and reported to the staff every year for correction.

OPA currently has models for all types of properties, with care to segregate properties that are driven by different attributes and time trends into different models. In addition, OPA calibrates value coefficients using confirmed, arms-length sales prices.

Status: Partially implemented, in progress

Recommendation 24

Incorporate a longer time period for informal appeals after preliminary change of assessment notices go out to allow adequate time to process appeals and adopt efficient procedures for the processing and approval of recommended settlements between Evaluators and taxpayers.

OPA Response:

Prior to AVI, there were no processes or deadlines for submitting and processing informal appeals.

Beginning with tax year 2014, the first level review process was instituted to manage informal appeals in a more efficient manner. Today, taxpayers have a minimum of 30 days from the date of their change of assessment notice to file for first level reviews. The timeframe to process the informal appeals can vary due to the volume of filings in any given year. CAMA will continue to improve the efficiency of processing the first level reviews. As mentioned in a previous response, OPA is considering outsourcing the initial filtering process to help reduce the time it takes to process FLRs.

Status: Implemented

Formal Responses to Questions Posed in the Report

In this section, we will provide answers to the questions posed in the report.

Does the City currently have the correct inventory of data to facilitate accurate and uniform values? If not, how will the department determine what is the optimal data definition?

The City, since the initial year of AVI, has undertaken substantial efforts to improve its property data. In addition to regular street-level data collection that takes place in conjunction with each year's reassessment project, and the accumulation of income data forwarded to OPA as a result of the appeals filed on commercial properties, OPA has gained access to improved resources such as Pictometry and Cyclomedia. Our data, while not yet perfect, has consistently been proven to be accurate by STEB and upon examination at appeal hearings and is continuing to improve each year.

Is there a process in place to periodically examine the adequacy of procedures? If not, Why?

Yes. With each annual cycle, procedures such as sales validation, data collection, market value review, the development of all sales and income-based mass appraisal models, the defining of neighborhood boundaries, project timeline development, the appeals process, and many others are examined.

Are procedural definitions in place for handling building permits and updating data files to keep current?

All pertinent information regarding building permits is forwarded to OPA from the Department of Licenses and Inspections on a bi-monthly basis. The permit information is distributed to each unit through the divisional supervisor, and further distributed to the account managers/evaluators, who are then required to note any changes mandated by the permitted action (new construction, renovation, demolition, etc.).

How must the process change to recognize the critical nature of sales validation to the entire reassessment process as well as integration to other tasks? Is the right person or persons in charge of determining actual procedures, procedural definition and adherence to procedures?

Sales validation has long been recognized as one of the most important components of the reassessment process. The OPA's residential and commercial deputy administrators are all Certified Pennsylvania Evaluators and IAAO (International Association of Assessing Officers) members. Working under the direction of the OPA's CAO and deputy CAO, they understand the critical nature of sales validation and take seriously their responsibility to assist in determining procedures, procedural definitions and adherence to procedures. The CAO and deputy administrators oversee the supervision and training of all field evaluators regarding proper sales validation. Ongoing and updated training is given to new and veteran evaluators, and progress on sales validation is closely monitored by all divisional supervisors.

Regarding OPA's modeling approach, OPA's valuation models were developed under the guidance of Mr. Gloude-mans. Our residential models are similar in form to those used in several jurisdictions in the US and Canada with a large, heterogeneous mix of properties. Our consultant has approved all sales and income models.

Is OPA confident that currently used analysis and valuation methodologies are the most appropriate, in terms of difficulty, timeliness, staff skills, and overall performance?

Yes. Since the inception of AVI in 2014, all City evaluators must be holders of the Certified Pennsylvania Evaluators license issued by the Commonwealth of Pennsylvania's State Board of Certified Real Estate Appraisers. Since 2011, evaluators are required by the City to acquire the license within two years of the evaluator's initial start date. Prior to taking the Board's exam, the evaluator must undergo a minimum of 90 hours of rigorous training and education on all methods of real property valuation, including site valuation, the sales comparison approach, the cost approach, and the income capitalization approach. Also, many of the OPA's current evaluators have been certified residential or general appraisers for years prior to being hired by the City.

OPA constantly seeks to improve its methodologies and development of its mass appraisal models is always conducted under the guidance of Mr. Gloudemans, who, as described above, is the nation's preeminent expert on the subject and a long time I.A.A.O. mass appraisal instructor. Mr. Gloudemans is under contract with OPA and assists with the development of all sales and income models, including the modification and quality-control of the actual modeling scripts. Additionally, OPA contracts with several local real estate appraisal consultant firms, including John Doyle Associates and A.R. Hughes to assist in the more complex valuation activities and defense of assessments at hearings.

Should an explicit effort be underway already to contemplate and recognize the wide-ranging impact such a new system will have on the entire assessment process? Is effort underway to integrate the new CAMA system and the City's data, beyond storage capability, as it affects current methods and procedures? Does the CAMA system support all of the department's activities and if not, how will the CAMA system integrate existing data and activities? Going forward, should the City implement valuation methodologies recommended by the CAMA contractor?

Regarding CAMA Business Process Improvement and Change Management

Since the beginning of the CAMA project, work has been done to assess the impact and manage the change required as a result of implementing a new CAMA system. In the RFP, the CAMA project was described as a "business process improvement project with a technology component", to highlight the relationship between implementing a new system and enabling necessary process improvements.

The CAMA project team has documented OPA process workflows, documented the desired future state process workflows and identified what gaps exist—technology, people or process. As part of the CAMA implementation, assessments are made as to which OPA processes need to change – when appropriate – to fit within industry standards and technical standards of the CAMA system.

Change management efforts and related programming are underway to aid staff during the transition from legacy system and processes to OPA processes enabled by a state of the art CAMA system.

Regarding CAMA Data Quality & Integrity

The project team undertook a data project called "CAMA Phase 0" in the time between contract conformance and the official start of the implementation project to consolidate the disparate data sources at OPA in to one Oracle data warehouse. This data warehouse will be used to cleanse data during the conversion process (starting next quarter).

As part of the CAMA implementation, the project team is working to determine if the structure of certain elements of property data should change to fit better within the standards of the CAMA system. In addition, there will be data validation and business rules within the CAMA system that will help minimize data errors and inconsistencies. As a result, an expected outcome would be a more efficient process for making improvements in the quality and integrity of the data.

Scope of CAMA functionality for OPA Processes

The CAMA system supports significant portions of all the department's activities. Should any activities not be supported by the system, the intention is that the CAMA system be the "system of record" for all OPA data, such that any "out of system" work would need to be imported into the CAMA system to capture the products of such activities. Fully documented business process improvements will be made to support this new policy.

The CAMA Implementation Project is due to go live January 2020. OPA plans to begin using the system in FY20 as the primary system (system of record) for use in the next mass assessment valuation .

Should the City redefine their processes to perform in an iterative manner? In other words, subsequent to value review, should there be a post valuation performance evaluation, in order to identify data problems, modeling inadequacies, procedural deficiencies, etc.? Lacking an iterative valuation strategy, where in the current processes, is any effort to identify and improve any or all aspects of the valuation process?

The assessment processes are currently performed in an iterative manner. As defined by the IAAO (*Property Assessment Valuation, Third edition*), "...The duties of the assessor can be classified as discovering, listing, and valuing all the taxable property in the jurisdiction, including the following:

- Locating and identifying all taxable property in the jurisdiction
- Making an inventory of all taxable property, including quantity, quality, and important characteristics
- Classifying each property and determining the extent to which it is taxable
- Estimating the market value of each taxable property
- Calculating the taxable value (sometimes a fraction of market value) of each property
- Notifying owners of the taxable value of their properties
- Defending value estimates and valuation methods during appeals
- Preparing and certifying the assessment roll of the entire jurisdiction."

The valuation strategy includes the development of industry-standard additive, multiplicative, and hybrid mass appraisal models, stringent market value review, and subsequent quality assurance testing of reviewed values.

Is it time for the City to comprehensively examine the staff organization and structure? Is it realistic to expect the City's human resource systems, now or in the foreseeable future, to be able to provide sufficient, competent personnel to comply with the requirement to annually assess all property uniformly at market value?

We are unclear on which expectation the City's human resource system is falling short regarding the providing of sufficient, competent personnel.

OPA continuously monitors its staffing needs as a part of the ongoing effort to improve the quality of assessments each year. During the budget process, OPA identifies areas of need and requests funding to fill additional positions, hire consultants, or procure resources needed to support the assessment process. OPA also works with the Office of Human Resources (OHR) to refine job descriptions, issue civil service exams, and recruit talent.

Since FY12, staffing levels have increased from 134 to 195 filled positions. OPA also works with mass appraisal consultants and local real estate appraisal consultant firms to supplement its abilities. While OPA has a talented staff, some areas would benefit from additional capacity. As noted in the report from Mr. Gloudemans, OPA will add additional modeling positions as well as establish a sales validation team and task additional staff with viewing and assigning construction grade and condition code variables.

Even without compliance with annual reassessment, does the City have any plan to comply with their administrative responsibilities to meet even basic time deadlines for completing the assessment roll and acting on FLR responsibilities.

The City flatly rejects the premise of this question. Effective for Tax Year 2014, the City has been required by state law to complete and certify the assessment roll by March 31st of each year for the following tax year. The City has always met that deadline.

The number of First Level Review (FLR) applications can vary from year to year, with as few as 4,000 filed for Tax Year 2016 and as many as 21,000 filed for Tax Year 2019. (For Tax Year 2014, the first Year of AVI, the City received over 50,000 FLRs.) The City cannot predict how many FLRs will be filed for any given year, should not rush through applications for the sake of expediency, and is obligated to carefully review and consider each application. Accordingly, there is no statutorily mandated deadline for completing all FLRs for any given year.

To address the concerns raised in this audit about the FLR process, OPA will examine whether having a third-party consultant assist with screening FLR applications may help expedite the process.