



New Castle County, DE

Mass Appraisal of Real Property 2025 Reassessment

April 24, 2025



April 24th, 2025



New Castle County
c/o Denzil Hardman
87 Reads Way
New Castle, DE 19720

One Tyler Way
Moraine, Ohio 45439
P: 800.800.2581
F: 937.278.3711
www.tylertech.com

Re: Mass Appraisal Report: All Parcels in New Castle County

Dear Mr. Hardman:

As per the terms of the contract between New Castle County and Tyler Technologies, I am pleased to provide you with a Mass Appraisal Report of all Real Property throughout New Castle County, Delaware. The real estate has been appraised in its "as-is" condition as of July 1, 2024, the effective date of value, and subject to the extraordinary assumptions¹ further described in this report.

The universe consists of 214,788 active parcels that exist on New Castle County's property tax roll. The total parcel count is further stratified in this report by property classification.

The purpose of this mass appraisal is to estimate the market value of the fee simple interest of all parcels in New Castle County. The intended use of the report is for ad valorem tax purposes. The intended user is New Castle County – Office of Assessment.

Market Value Definition

There are several variations defining the concept of market value. In general, most of the variations describe the same concepts. The controlling definition of market value in Delaware is derived from *Seaford Associates, L.P. v. Bd. Of Assessment Review*, 539 A.2d 1045, 1048 (Del. 1988): "the price which would be agreed upon by a willing seller and willing buyer, under ordinary circumstances, neither party being under any compulsion to buy or sell." That said, a more comprehensive and widely adopted definition of market value (employed for financing appraisals as well as many other appraisal purposes) is as follows: the most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

- Buyer and seller are typically motivated;
- Both parties are well informed or well advised, and acting in what they consider their own best interests;
- A reasonable time is allowed for exposure in the open market;
- Payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and

¹ **Extraordinary Assumption.** An assignment-specific assumption as of the effective date regarding uncertain information used in an analysis which, if found to be false, could alter the appraiser's opinions or conclusions. Source: USPAP, 2024 ed.

- The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.²

The requirement to establish fair market value for ad valorem assessed values can be found in Section 9 Del. C. § 8306(a) of the Delaware Code: "All property subject to assessment shall be assessed at its fair market value as of the date of the most recent reassessment base year in the county."

Based on the physical, exterior inspection of all active tax parcels throughout New Castle County and the investigation and analysis undertaken for all active parcels, it is my opinion that the aggregate market value of the fee simple interest for all real property in New Castle County, in their "as-is" condition, as of July 1, 2024, subject to the employed extraordinary assumption, is as follows:

One Hundred Twenty Billion Sixty Million Two Hundred Fifty-Two Thousand One Hundred Eighty-Nine
Dollars
(\$120,060,252,189)

This Mass Appraisal assignment is intended to conform to the following requirements:

- **Uniform Standards of Professional Appraisal Practice (USPAP, Standards 5 & 6)**
- **International Association of Assessing Officer's Standards of Professional Appraisal Practice & Ethics (IAAO)**
- **Applicable state appraisal regulations**

Tyler Technologies Inc. is not responsible for unauthorized use of this report.

I trust you will find this report satisfactory to the intended use, and on behalf of Tyle, I thank you for the opportunity to be of service in this regard.

Sincerely,



Michael G. McFarlane
DE Certified Assessor
License #: X6-0010047

² Interagency Appraisal and Evaluation Guidelines, Federal Register / Vol. 75, No. 237, p. 77472 (December 10, 2010).

Table of Contents

Executive Summary	1
Scope of Work	5
Extent to Which Properties are Identified	6
Extent to Which Properties Were Inspected	6
Type and Extent of Data Research.....	6
Type and Extent of Analysis Applied.....	7
Highest and Best Use Analysis	7
Valuation Methodology	8
Approaches to Value and Appropriate Units of Comparison.....	8
Property Rights Appraised.....	10
Universe of Parcels Analysis	11
Regional Market Analysis	12
Area and Neighborhood Analysis	13
New Castle County Zoning Map	14
Establishing a New Geolocational Identifier	15
Market Conditions Analysis	17
Residential	17
Non-residential.....	17
Multi-Family	19
Retail	20
Office	22
Industrial	25
Valuation Specification	27
Cost Approach	27
Market Approach	28
Income Approach	29
Appraisal Performance	33
Sales Ratio Study	33
Appraisal Level	33
Appraisal Uniformity.....	33
Stratification	33
Measures of Uniformity	34

Model Performance	35
Residential Parcels.....	36
Commercial and Industrial Parcels	53
Certification.....	55

Executive Summary

Tyler Technologies, Inc. (“Tyler”) contracted with New Castle County (“the County”) to conduct a comprehensive reassessment of all parcels in July 2021. The last County reassessment was conducted in 1983. Given the size of the County’s real estate portfolio and the time needed to conduct a physical, exterior inspection of all improved parcels, the effective date of valuation was July 1, 2024, and the values are to be effective for the 2025 fiscal year in New Castle County.

Field inspections began in September of 2021 and were completed in the Spring of 2024. The cutoff date for Tyler to complete inspections and valuation for newly created parcels and associated new construction was May of 2024. Following the initial inspections, post-inspection review for select parcels occurred between the spring of 2024 and August 2024. In addition to the physical field inspection of improved parcels, Tyler also utilized the County’s aerial imagery to augment the physical inspection of improved parcels and to conduct inspections of unimproved parcels and parcels where a physical inspection was not possible (due to owner/resident refusal or limited accessibility); this approach is consistent with International Association of Assessing Officers’ guidelines on non-physical inspections.

The data analysis and valuation phase began concurrent with the field inspection phase of the reassessment. For the market/sales approach, verified, settled transactions were compiled and vetted and heavily relied upon for residential, single-family dwellings. For the cost approach, cost and depreciation tables were calibrated based on empirical nationwide cost publications, adjusted for local market conditions, and were relied upon for residential, commercial, and industrial parcels, where appropriate. For the income approach, rental rates and expense ratios were calibrated based on empirical third-party sources that only considered market evidence from New Castle County and were relied upon for commercial and industrial parcels, where appropriate. Irrespective of what approach to value that was ultimately relied upon to establish the market value of all parcels as of the effective date, all market-derived information was predicated on the effective date of valuation.

Valuation models were produced in Tyler’s Enterprise Assessment CAMA system after the data was gathered and analyzed. Valuation models for all three approaches to value were specified, then calibrated to ensure that the models produced assessments that were reflective of market value as of the effective date for all property classifications and uses within each property classification.

In the fall of 2024, tentative valuation notices were sent to all taxpayers to inform them of the assessed values developed by Tyler. Taxpayers had the opportunity to participate in the reassessment process through an informal value review hearing between the taxpayers and Tyler representatives. This informal value review process enables the taxpayers to contest the tentative assessment prior to the property tax roll being certified by New Castle County. Tyler held approximately 11,500 informal value hearings. Additionally, Tyler revised the tentative assessed values through our internal final value review protocol. In total, approximately 25,000 parcels received an assessment revision after the production of the tentative assessments.

Tyler submitted the reassessed values to New Castle County in February 2025 to be effective for fiscal year 2025.

Assumptions, Limiting Conditions, and Contingencies

- This Mass Appraisal Report is to be considered as a whole and not in part. No part shall be used in conjunction with any other appraisal.
- This appraisal report was prepared for New Castle County ad valorem taxation purposes, only.
- Tyler assumes no responsibility for matters that are of a legal nature, nor is any opinion on the title rendered. Good and marketable title is assumed.
- Property management was assumed to be competent (where applicable) and the ownership to be in responsible hands. It was also assumed that there were no hidden or unapparent conditions of the properties, subsoil, or structures, which would render a specific parcel's opinion of value more or less valuable. Tyler assumed no responsibility for such conditions or for engineering, which might be required to discover such factors at the property level.
- No soil analysis or geological studies were ordered or made in conjunction with this report, nor were any water, oil, gas, coal, or other subsurface mineral and use rights or conditions especially investigated.
- The properties have been appraised as though free of liens, restrictions, and encumbrances.
- The undersigned has not had any past, present, nor contemplated future interest in the real estate that is the subject of this appraisal report; and neither the employment to make this appraisal, nor the compensation for it, was contingent upon the appraised value of the subject properties.
- Neither Tyler nor the undersigned has a personal interest or bias in favor of or against either the County or the property owners.
- To the best of Tyler's knowledge and belief, the statement of facts contained in this appraisal report, upon which the analysis, opinions, and conclusion expressed herein were based, were true and correct. Information, estimates, and opinions furnished to Tyler, and contained in this report, were obtained from sources considered reliable and believed to be true and correct. However, no responsibility for accuracy for such items can be assumed. No warranty or representation is made as to the accuracy thereof, and the same is submitted subject to errors, omissions, change of price, rental, or other conditions, etc.
- This appraisal report sets forth all the limiting conditions (imposed by the contractual terms of the assignment or by me affecting the analysis, opinions, and conclusions) contained in this appraisal report.
- It is assumed that the interior of all improvements for all properties that are the subject of this report are in a condition consistent with the observed condition of the exterior during our physical inspection, unless interior access was provided (limited applicability). In most instances, interior access was not provided, so the extraordinary assumption described above was employed.
- Square footage calculations are approximate.
- Although a physical, exterior inspection was performed for all improved properties, Tyler staff are not experts in the field of building inspections and/or engineering. An expert in the field of engineering/hazards detection should be consulted if an analysis of safety and structural integrity is desired.
- Unless stated in this appraisal report to the contrary, the value estimates were of "real estate, only" and excluded personal property, machinery and equipment, business value and other non-realty items.

- Tyler takes no responsibility for events, conditions, or circumstances affecting the properties' market value which take place subsequent to either the date of value contained in this report or the date of the field inspection, whichever occurs first.
- The estimated value is based upon an evaluation of the general level of the economy of the area as of the effective date of value, and neither takes into account nor makes provisions for the effect of any unforeseen changes of local or general economic conditions. The estimated value is based upon estimates and assumptions which are inherently subject to uncertainty and variation, depending upon evolving events.
- This appraisal report is made for valuation purposes, only. It is not intended nor construed to be an engineering report. Tyler makes no representation, nor warranty, as to the condition, quality, or capabilities of the improvements, materials, or workmanship.
- The existence of potentially hazardous material used in the construction or maintenance of the properties, such as the presence of a urea formaldehyde foam insulation, and/or the existence of toxic waste, which may or may not be present on the property, has not been considered. Tyler is not qualified to detect such substances. An expert in this field should be retained if deemed appropriate.
- The existence of underground storage tanks and their contents, which may or may not be present on the property, has not been considered. The appraiser is not qualified to detect such substances. An expert in this field should be retained if deemed appropriate.
- No environmental impact study has been provided, ordered, or made. The appraised properties are assumed to be in compliance with all applicable regulations unless otherwise noted in this report.
- In some instances, measurements were obtained from plot plans or surveys furnished by the client or from public records. No responsibility is assumed for the accuracy of any maps or sketches used in conjunction with this assignment.
- It is assumed for all properties that the utilization of the land and/or improvements are within the boundaries of the real estate appraised. It is also assumed there is no encroachment or trespass unless otherwise noted within this report.
- Full compliance with applicable federal, state, and local regulations and laws is assumed, as well as compliance with all applicable zoning, use, and occupancy regulations and restrictions specific to the authority of New Castle County; and that all licenses, permits, certificates, franchises and so forth can be freely renewed and/or transferred to purchaser.
- The Americans with Disabilities Act ("ADA") became effective January 26, 1992. Tyler has not asked to make, and did not make a specific compliance survey and analysis of the properties to determine whether they are in conformity with the various, detailed requirements of the ADA. It is possible that a compliance survey of the properties, together with a detailed analysis of the requirements of the ADA, could reveal that the properties are not in compliance with one or more of the requirements of the Act. Any such non-compliance could have a negative effect upon the associated property's value. Since we have no direct evidence relating to this issue, we did not consider possible non-compliance with the requirements of the ADA in estimating the value of all properties that are the subject of this report.
- This assignment is meant to conform with the International Association of Assessing Officer's Standards of Professional Appraisal Practice & Ethics.
- This appraisal assignment is intended to be made in conformity with the Uniform Standards of Professional Appraisal Practice.
- I have no present or prospective interest in the properties that are the subject of this report, and no personal interest with respect to the parties involved.

- I have performed no services, as an appraiser or in any other capacity, regarding the properties that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
- I have no bias with respect to the properties that is the subject of this report or to the parties involved with this assignment.
- My engagement in this assignment was not contingent upon developing or reporting predetermined results.
- My compensation for completing this assignment is not contingent upon the developing or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
- Disclosure of this appraisal report is governed by the Uniform Standards of Professional Appraisal Practice. Thus, except as hereinafter stated, the party for whom this appraisal report was prepared may distribute copies of this appraisal report, in its entirety, to such third parties as may be selected by the party for whom this appraisal report was prepared. Neither all nor any part of this appraisal report shall be disseminated to the general public using advertising media, public relations media, news media, sales media, or any other media for public communication without the prior, written consent of the signatories of this appraisal report.

Intended Use

This mass appraisal assignment is intended for ad valorem tax purposes to establish the market value of all parcels in New Castle County as of the effective date of valuation, July 1, 2024.

Intended User

The intended user of this mass appraisal assignment is New Castle County. There are no other intended users of this assignment.

Extraordinary Assumption

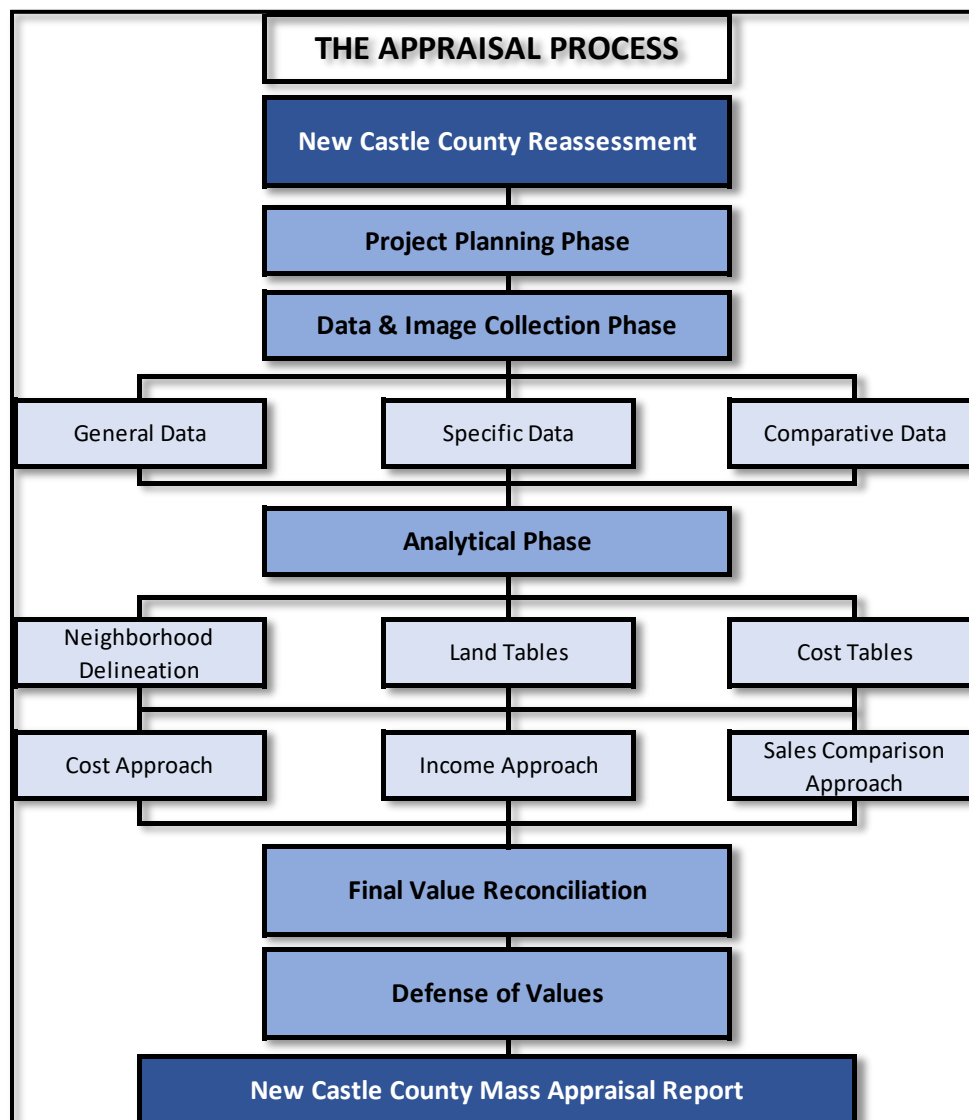
An extraordinary assumption was employed for this report and underlying assignment. An extraordinary assumption is defined as: an assignment-specific assumption as of the effective date of valuation regarding uncertain information used in an analysis which, if found to be false, could alter the appraiser's opinions or conclusions. Uncertain information might include physical, legal, or economic characteristics of the subject property(ies), or conditions external to the property(ies), such as market conditions or trends, or about the integrity of data used in analysis.³ There were two extraordinary assumptions employed to complete this appraisal assignment. The primary extraordinary assumption was that the interior condition and quality of any improvement is consistent with the observed condition and quality at the time of a physical exterior inspection or during a desktop-based, aerial inspection of the exterior. This extraordinary assumption was necessary due to assignment-specific conditions limiting the contractual Scope of Work to not include full interior inspections of all improved parcels. The second extraordinary assumption employed was that all properties were appraised based upon their fee simple, unencumbered interests. Both extraordinary assumptions are common for ad valorem purposes and are generally considered to be typical for mass appraisals of this nature.

³ Appraisal Institute. *The Dictionary of Real Estate Appraisal*, 7th Ed. Chicago: Appraisal Institute, 2022

Scope of Work

The scope of work for this mass appraisal was to assess all parcels in New Castle County, DE at their market value as of the effective date of value, July 1, 2024. The intention of this reassessment is to develop an opinion of value for ad valorem purposes that has a relationship to the market value of one-to-one as of the effective date of value. The scope involves 214,788 parcels across all property classes and uses. The scope of work for this assignment is meant to comply with the Uniform Standards of Professional Appraisal Practice; specifically, Standards Rule 5. This report describing the scope of work for this assignment for reporting purposes is meant to comply with Standards Rule 6. This report incorporates practical explanations of the data, reasoning, and analysis that were used to develop an opinion of value for all parcels in New Castle County.

An important component of the scope of work is an understanding of the appraisal process. The appraisal process is illustrating in the following diagram:



Extent to Which Properties are Identified

The properties throughout New Castle County were identified through various sources such as:

- Postal Address
- Situs Address
- Office of Assessment Records
- GIS-based information from New Castle County's Department of Land Use

Extent to Which Properties Were Inspected

- All improved parcels were physically inspected by a member of Tyler.
- In some instances, a physical inspection was refused by the owner/occupant or accessibility for a complete exterior inspection was not possible (locked gates/fences in the most common form). Such circumstances are notated as such in our CAMA system. In cases where a complete exterior inspection was not possible, a desktop inspection utilizing contemporary aerial imagery technology was conducted to complete the inspection of the exterior, as needed.
- Agricultural parcels were inspected via desktop inspection utilizing contemporary aerial imagery technology due to biohazard sensitivities during the reassessment and at the direction of the client.
- All unimproved parcels were inspected via desktop inspection utilizing contemporary aerial imagery technology. In cases where accessibility was restricted, a desktop inspection utilizing contemporary aerial imagery technology was conducted.

Type and Extent of Data Research

- General market conditions and trends by property classification
- Neighborhood and land use trends
- Real estate data for settled transactions, empirical cost publications, income, and expense information from published sources and from property-specific Income and Expense questionnaires
- Exposure & marketing time study
- Zoning requirement and compliance (assumed current use is permitted)

Type and Extent of Analysis Applied

Tyler analyzed the properties and market data gathered through appropriate, relevant, and accepted market-driven methods and procedures. Tyler employed the appropriate and relevant approaches to value, correlating and reconciling the results into an estimate of market value, as demonstrated within this appraisal report.

Highest and Best Use Analysis

The concept of highest and best use is pivotal to the accurate appraisal of all real property. All valuations were performed after the appropriate highest and best use was determined.

Highest and best use is defined as:

The reasonably probable use of property that results in the highest value. The four criteria that the highest and best use must meet are legal permissibility, physical possibility, financial feasibility, and maximum productivity.

The use of an asset that maximizes its potential and that is possible, legally permissible, and financially feasible. The highest and best use may be for continuation of an asset's existing use or for some alternative use. This is determined by the use that a market participant would have in mind for the asset when formulating the price that it would be willing to bid.⁴

This definition applies specifically to the highest and best use of land. In cases where a site has existing improvements on it, the highest and best use may very well be determined to be different from the existing use. The existing use will continue, however, unless and until land value in its highest and best use less demolition/removal costs exceeds the total value of the property in its existing use. For the determination of land values, all parcels were appraised "as-if" vacant.

⁴ Appraisal Institute, "The Appraisal of Real Estate," 15th ed. (Chicago: Appraisal Institute, 2020).

Valuation Methodology

Valuation Approaches

Market Approach: With this method, the property's value is estimated by examining the comparables: recently sold properties that are similar in size and features that are located within a close geographic proximity to the property being valued. The market approach is typically applied to residential properties.

Income Approach: With this method, the income and expense stream of a property is examined from an investor's point of view. The goal is to achieve a market value by estimating what an informed investor would pay for the income stream associated with a particular piece of real estate. The income approach is typically applied to commercial properties, including apartments, office buildings, industrial buildings, and retail buildings.

Cost Approach: With this method, the probable selling price is calculated by estimating how much it would cost to provide a replacement building of similar condition, quality, and utility. Local construction costs are analyzed along with land sales to develop what is called the "replacement cost" method. This method is based on the premise that if land value is added to what it would cost to replace the building new – less an allowance for physical, functional, and economic depreciations – a rational estimate of the market value can be obtained. The cost approach is computed for all types of property. The cost approach is calibrated to the local market using local sales.

Approaches to Value and Appropriate Units of Comparison

There are three accepted approaches or methods to arrive at value as described in the previous section of this report.

For this assignment as identified in the executive summary and scope of work sections, mass appraisal models were calibrated to predict market value using all approaches to value and are applicable to all property classifications.

Residential

For residential properties, property characteristics that were collected and analyzed include:

- Lot Size
- Topographical Influences
- Site Specific Influences
- Building Style/Design
- Building Quality/Grade
- Building Condition
- Year Built
- Building Square Footage
- Total Livable Area
- # of Dwelling Units
- Number of Total Rooms
- Number of Bedrooms
- Number of Bathrooms
- Total Fixtures
- Foundation
- Basement Type & Area
- Fuel Type
- Central or Unit A/C
- Attached Additions
- Detached Improvements
- Miscellaneous Features
- Percent Complete

New Castle County's residential properties were analyzed with the following units of comparison:

- Price per Square Foot of Total Living Area
- Price per Square Foot (or Acre) of Land

Non-Residential

For non-residential properties, property characteristics that were collected and analyzed include:

- Lot Size
- Topographical Influences
- Site Specific Influences
- Property Use (for each space, if multiple)
- Building Style/Design
- Building Quality/Grade
- Building Condition
- Year Built
- Gross Leasable Area
- Net Leasable Area
- # of Dwelling Units (where applicable)
- Foundation
- Fuel Type
- Central or Unit A/C
- Attached Additions
- Detached Improvements
- Miscellaneous Features
- Percent Complete

Commercial and Industrial

Unlike residential properties, the appraisal of commercial and industrial properties requires utilizing multiple units of comparison to arrive at an accurate value estimate. Units of comparison are those variables or characteristics that investors use in making decisions in purchasing commercial and industrial properties. Units of comparison enable appraisers to distill value to a specific rate such as rent/square foot so that comparison may be made with properties that are somewhat dissimilar (notably, size).

New Castle County's commercial and industrial properties were analyzed with the following units of comparison:

- Price per Square Foot (or Acre of Land)
- Price per Square Foot (of Building)
- Price per Apartment Unit
- Price per Parking Space
- Price per Hotel Room
- Price per Nursing Bed

Using different units of comparison is not intended to produce higher or lower values, just more valid and reliable values. In general, rate/square foot and rate/unit were the most common units of comparison utilized in New Castle County.

Property Rights Appraised

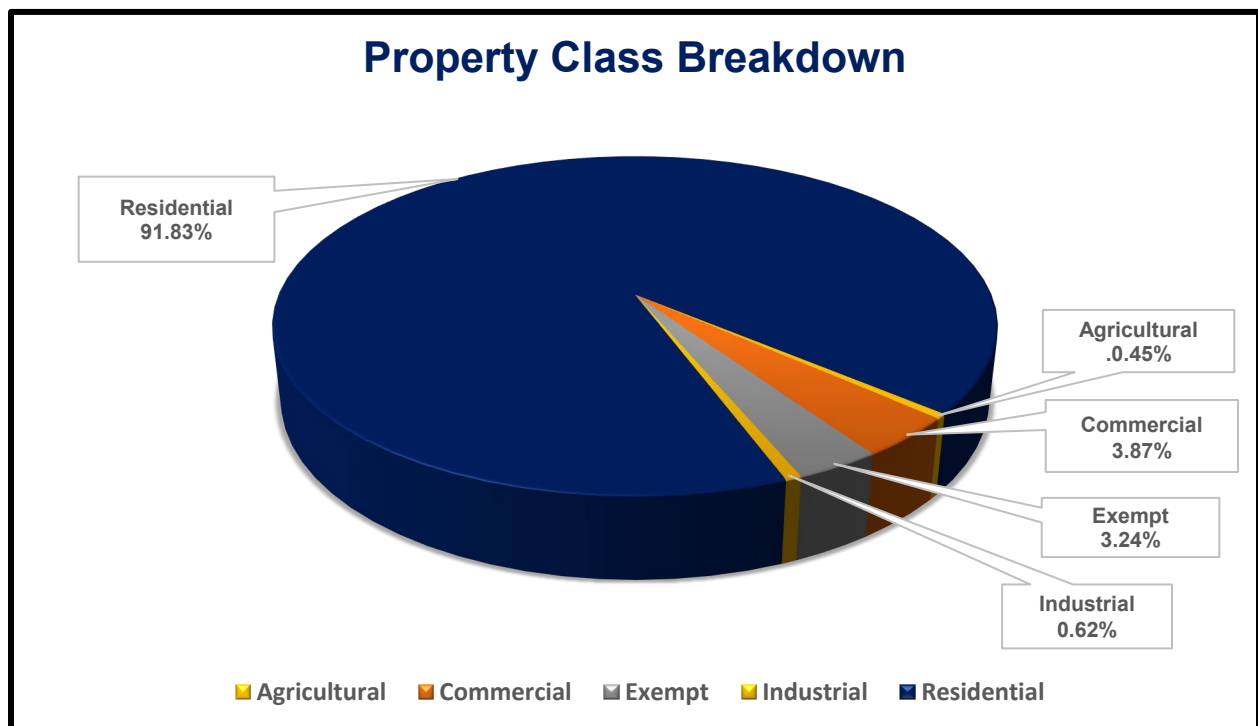
All parcels in New Castle County were appraised based on their fee simple, unencumbered interest. However, there are occasions where the fee simple rights have been divided. Examples may include an easement right to construct a cell tower or billboard, or leased fee interests. In most cases when each division fully reflects market rates, the summation of all the rights equals fee simple value.

Leased fee interests exist when the tenant has a below or above market rent. Appraisal of any property subject to a lease condition produces a leased fee appraisal. When lease rent is equal to market rent, then leased fee interest equals fee simple interest. Great care was taken to identify whether a property had below or above market leases causing a leased fee value. All properties were appraised with market rent and expenses thus producing a fee simple rather than a leased fee appraisal. Exceptions are limited to split assessment and multiple interest parcels that the New Castle County assessment department identifies with more than one (1) parcel identification number (PARID) to identify a single parcel of real property. In this situation, the sum of all values represented on multiple PARIDs is equal to fee simple value.

Universe of Parcels Analysis

In total, as of the effective date of valuation, there were 214,788 parcels active on the New Castle County property tax roll. The following table represents the breakdown of all parcels specific to the mass appraisal, broken down by property class. Tyler produced an opinion of market value for all parcels listed below irrespective of their status of taxation – i.e., those parcels that enjoy a tax exemption of any form or are enrolled in any special tax program.

Property Class	Count
Agricultural	962
Commercial	8,304
Exempt	6,952
Industrial	1,336
Residential	197,233
Total	214,787



Regional Market Analysis

New Castle County, located in northern Delaware, is the state's most populous and economically developed region. Covering approximately 494 square miles - with 426 square miles of land and 68 square miles of water - it accounts for nearly 60% of Delaware's total population. As of July 2023, the County's population was estimated at 578,592. The county seat and largest city is Wilmington, which serves as a central hub for commerce, culture, and transportation. New Castle County is part of the Philadelphia-Camden-Wilmington metropolitan area, which boasts a population exceeding six (6) million.

The County boasts a diverse economy with major employers spanning various industries. Notably, the financial sector is prominent, with institutions like JPMorgan Chase and Bank of America having significant operations in the area. The healthcare industry is also substantial, with facilities such as ChristianaCare providing extensive services. Additionally, the University of Delaware in Newark contributes to both education and employment. The county's economic vitality is further supported by its strategic location along the I-95 corridor, facilitating commerce and connectivity.

Residents of New Castle County enjoy a high quality of life, characterized by a blend of urban and suburban living. The area offers a range of cultural and recreational amenities, including the Delaware Museum of Art, The Grand Opera House, and numerous parks and trails. Educational attainment is relatively high, with 39.2% of residents holding a bachelor's degree or higher. The median household income stands at \$89,901, and the median home value is \$329,800, reflecting a stable and prosperous community. With its rich history, economic opportunities, and vibrant cultural scene, New Castle County presents an attractive environment for both residents and businesses.

As noted above, Wilmington, Delaware, is the state's largest city and serves as the county seat of New Castle County. Situated at the confluence of the Christina and Brandywine Rivers, it encompasses approximately 17.2 square miles, with about 10.9 square miles of land and 6.3 square miles of water. As of the 2020 census, Wilmington had a population of 70,898.

Wilmington's economy is diverse, with significant contributions from sectors such as finance, healthcare, education, and manufacturing. Major employers include the State of Delaware, ChristianaCare, the University of Delaware, Amazon, Nemours Children's Health, DuPont, and AstraZeneca. The city has a strong presence in the financial technology (FinTech) industry and benefits from its proximity to major urban centers like Philadelphia, Washington, D.C., and New York City, providing access to a vast labor pool and numerous educational institutions.

Wilmington offers excellent walkability, public transportation, and cultural diversity, with a median age of 36.3 years. The median household income is \$49,354, and the poverty rate stands at 19.4%. Wilmington's strategic location, economic opportunities, and cultural amenities contribute to its appeal as a place to live and work.

Area and Neighborhood Analysis

In geographical stratification, lines are drawn along city boundaries, rivers and other natural barriers, major streets, and the like to reflect major differences in location. Separate models are then specified for each such area.⁵ In the case of New Castle County, there were seven (7) zones established based on practical market knowledge and confirmed through rigorous geo-statistical testing.

Geographic stratification is appropriate whenever the value of various property attributes varies significantly among areas and is particularly effective when housing types and styles are relatively uniform within areas (economic principle of conformity).⁶ Stratification usually involves two layers. First are market areas (also known as economic or model areas – i.e., the seven zones). Second are subareas or neighborhoods, which serve as variables in modeling and are also used in land valuation and comparable sales selection.⁷

For residential properties, there were a total of 383 unique locational variables used in the valuation process. For non-residential properties, the identical seven zones were utilized and isolated by major property classifications, but without a second level designation for subareas; rather, adjustments for exact location factors were determined based upon a parcel's site-specific location and influence i.e., central business district, major arterial, secondary arterial, neighborhood arterial, where appropriate.

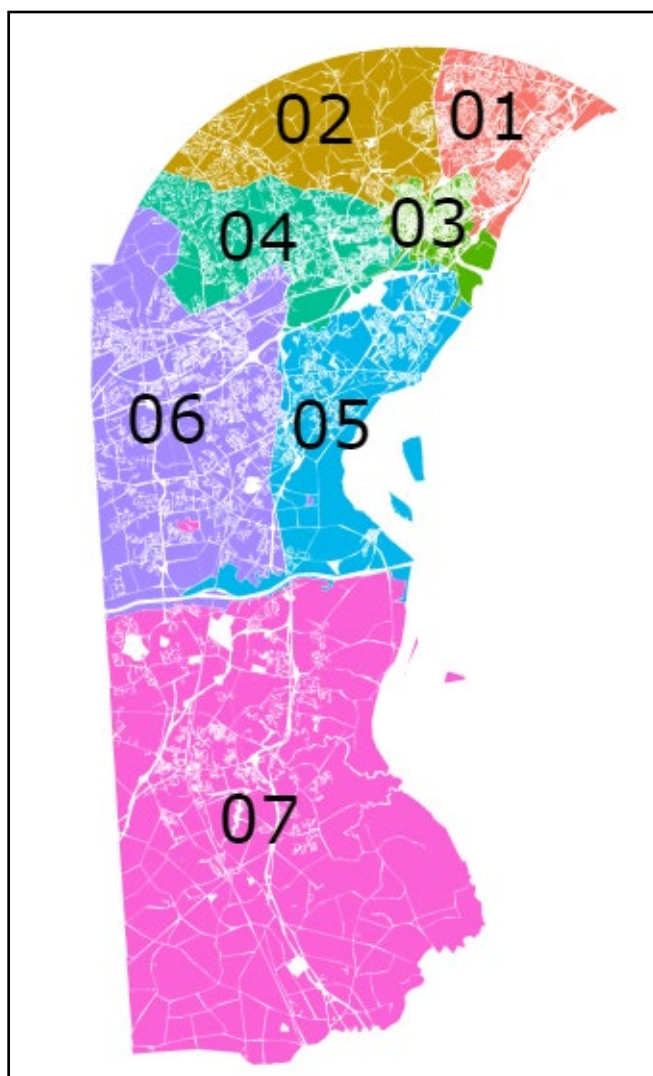
⁵ Gloudemans, Robert J. *Mass Appraisal of Real Property*. Chicago: International Association of Assessing Officers, 1999, 119

⁶ See id.

⁷ See id.

New Castle County Zoning Map

The following map shows the breakdown of New Castle County consisting of seven (7) total zones:



Zone	Areas
1	Brandywine, Claymont
2	Centerville, Greenville, Hockessin
3	City of Wilmington
4	Elsmere, Newport, Pike Creek
5	Delaware City, New Castle, Red Lion
6	Newark, Glasgow, Bear
7	South of the Canal

Establishing a New Geolocational Identifier

A significant component of this mass appraisal was to update the geolocational identifier for all parcels. The need to institute a new geolocational identifier was due to the outdated nature of the previous identifier. The legacy schema was predicated on geolocational identifiers based on “hundreds,” that were originally established in the late 17th century. A “hundred” is an old Saxon land division term for a parcel of land that is smaller than a county or shire yet larger than a tithing. The origin of this term is a bit dubious; essentially, it is a tract of land large enough to provide a hundred men to serve in the King’s wars.

First, it is necessary to understand the accepted definitions of a Market Area and Neighborhood.

A Market Area is defined as:

The geographic region from which a majority of demand comes and in which the majority of competition is located. Depending on the market, a market area may be further subdivided into components such as primary, secondary, and tertiary market areas, or the competitive market area may be distinguished from the general market area.⁸

A Neighborhood is defined as:

1. *A group of complimentary land uses; a congruous grouping of inhabitants, buildings, or business enterprises.... See also market area*
2. *A developed residential superpad within a master planned community usually having a distinguishing name and entrance*
3. *A geographic area around a property that influences that property, i.e., its environment⁹*

For residential parcels, geographic stratification is appropriate when:

- The value of property attributes varies significantly among areas
- Each area is large enough to provide adequate sales
- Particularly effective when housing types and styles are relatively uniform
- Separate models are developed for each market area (economic or model areas)
- Subareas or neighborhoods can serve as variables in the models
- Neighborhoods can also be used in land valuation and selection of comparable sales¹⁰

⁸ Appraisal Institute. *The Dictionary of Real Estate Appraisal*, 7th Ed. Chicago: Appraisal Institute, 2022.

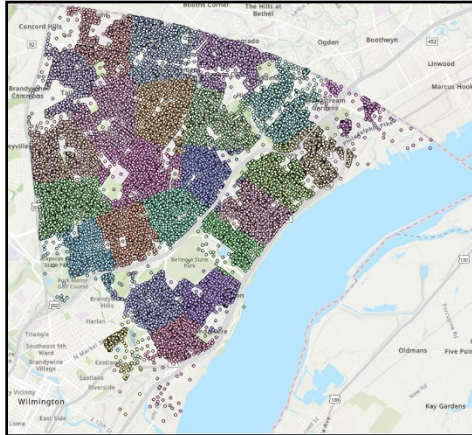
⁹ See id.

¹⁰ *Standard on Mass Appraisal of Real Property*. Kansas City: International Association of Assessing Officers, 2019, 6.

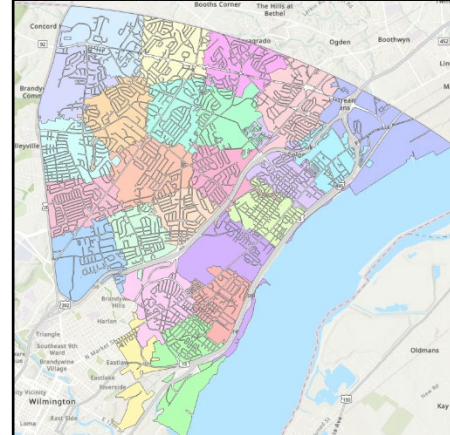
The statistical technique used to conduct neighborhood delineation employed for this mass appraisal assignment was K-means clustering. K-means clustering is a machine learning algorithm used to group similar parcels into clusters. The intent of K-means clustering is to minimize the sum of squared distances between parcels and their respective cluster centroids, resulting in clusters where parcels within the same cluster share similarities relative to parcels in other clusters.

The visualizations below show the initial clustering and the eventual polygon boundaries established.

Initial Cluster Zone 1

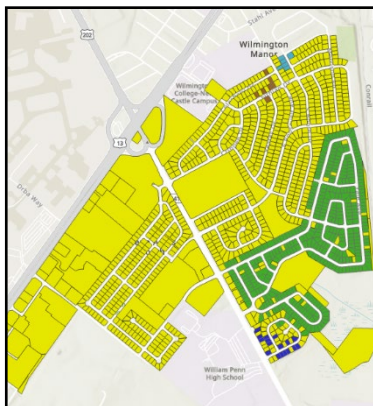


Polygon Boundaries Zone 1

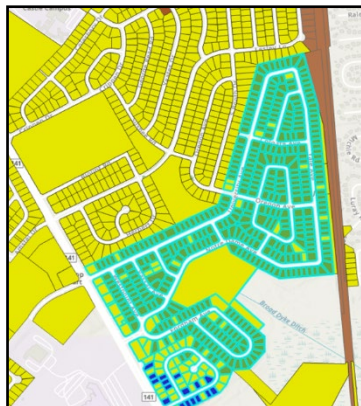


An important aspect to neighborhood delineation is to rely on the appraiser's judgement and local market knowledge. To that end, the final step in the neighborhood delineation process is to manually confirm or edit the polygons produced from the K-means clustering analysis. A visual example can be found below:

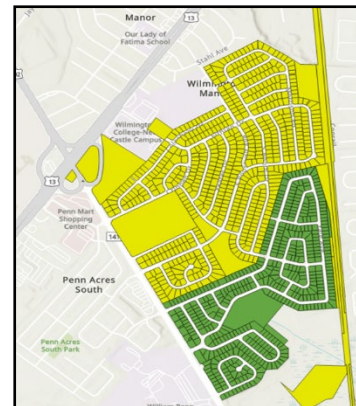
Pre-manual Cluster



Cluster Relying on Judgement



Final NBHD Polygon



Market Conditions Analysis

The market conditions analysis for New Castle County requires isolating the performance of different property classifications to isolate and correctly understand the different market dynamics and how they affect the market value as of the effective date of valuation, respectively.

Residential

The preponderant majority of properties are categorized as residential (see the parcel breakdown in the *Universe of Parcels Analysis* of this report).

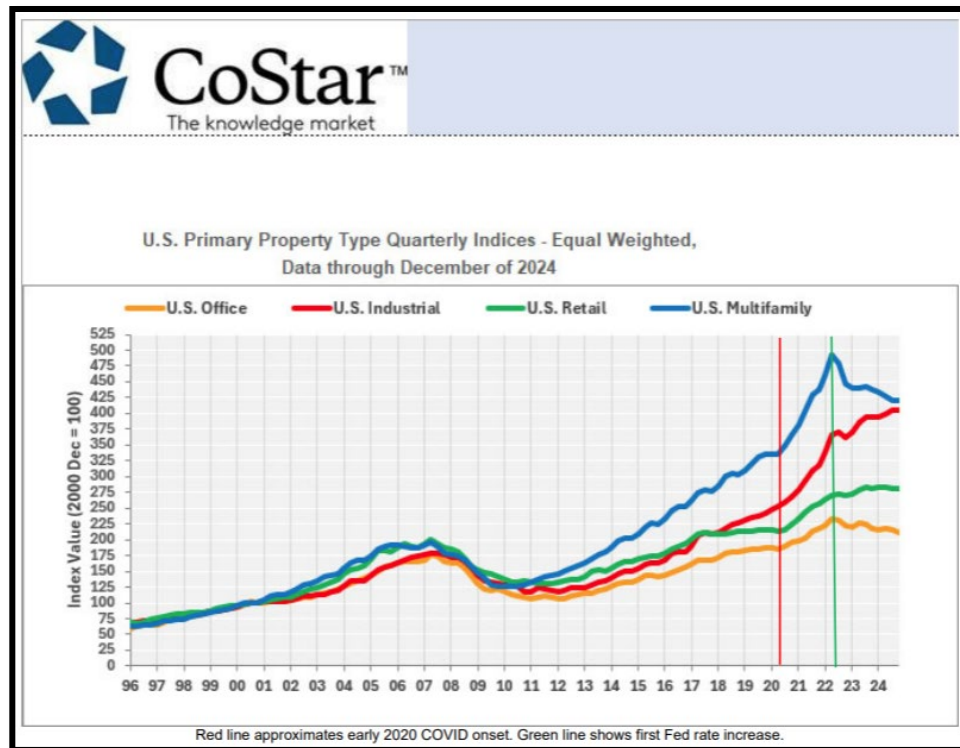
The market conditions for residential properties throughout New Castle County are considered to be positive, with an upward, compounding influence on value throughout the study period. The table below from Bright MLS shows key metrics based upon closed, settle sales of residential properties:

New Castle County - Residential Market Statistics								
Time Period	2021 - Q3	YoY Δ	2022 - Q3	YoY Δ	2023 - Q3	YoY Δ	2024 - Q3	YoY Δ
Median Sales Price	\$ 299,500	11.00%	\$ 340,000	13.50%	\$ 350,000	2.90%	\$ 369,900	5.70%
Average Sales Price	\$ 333,446	14.70%	\$ 375,396	12.40%	\$ 390,605	4.10%	\$ 407,461	4.30%
List-Sale Ratio	101.10%	2.10%	100.80%	-3.00%	101.70%	0.90%	100.10%	-1.60%
Homes for Sale	748	-38.30%	874	-8.60%	763	-12.70%	773	-1.70%
Closed Sales	2,405	11.30%	1,934	-20.40%	1,497	-22.60%	1,521	1.60%
Months Supply	1.1	-45.00%	1.4	0.00%	1.7	21.40%	1.7	0.00%

As the table above clearly indicates, the residential market in New Castle County exhibited signs of continued growth from Q32021 through Q32024 indicating an appreciating market for residential properties. Double-digit appreciation year-over-year was observed in 2021 and 2022 and was reduced to single-digit appreciation in 2023 and 2024 due to the increased cost of debt (US 30-Year Fixed Rate Mortgage Average). However, both the median and average sales prices continued to rise due to the continued lack of housing stock supply available. The market responded to both supply and demand dynamics, which resulted in the continued appreciation of the residential properties over the entire study period and continued after the effective date of valuation. Thus, the market conditions for residential properties were considered to be positive, with continued upward pressure on price points.

Non-residential

Calendar year 2024 can be viewed as adverse for the Philadelphia metro market in that, after four years of disruptive economic and commercial real estate events, in 2024 market sentiments were generally neutral looking forward, as opposed to anticipating a return to steady commercial real estate ("CRE") appreciation. The first half of 2024 saw more moderate adverse outlooks for some but not all property types. For the second half of 2024 forward, virtually all property types have been viewed as neutral in terms of the market's forward-looking expectations (thus the adverse characterization since moderate appreciation would be considered long-term normal). The long-term perspective looking forward indicates an emerging view of more stabilized and improving valuation trends well into 2025 is apparent, tempered by continuing interest rate uncertainty.



The overall market conditions for non-residential properties throughout New Castle County is generally considered to be stable, with slight downward pressure on price points across most property types throughout Tyler's period of study. Naturally, it's important to look at each major property type within the broader commercial portfolio to understand the market influences specific to each category.

For the office market, vacancies are beginning to stabilize, moving closer to the historical average, but asking rents are below the Philadelphia metro market averages for all classes of office assets and the activity in the market was modest, at best. For the retail market, vacancies and asking rents are in line with historical averages, but asking rents are below the Philadelphia metro market averages for most retail assets and activity in the market is low. For the industrial market, vacancies are below the historical norms and asking rents have been appreciating close to inflationary levels indicating a generally stable market with modest appreciation on certain, modern, industrial assets. Asking rents are below the Philadelphia metro market averages for most industrial assets. For the multi-family market, vacancies dipped to historically low levels and have since increased to a level more in line with historical averages, while asking rents which remain relatively affordable, have been appreciating close to inflationary levels indicating a generally stable market.

The next sub-sections of this report are an overview of the CRE markets broken down by property type and general location derived from CoStar's market analysis as of Q2024.¹¹ No notable market changes were perceived from Q22024 to Q32024. Actual rents and model control variables for rent and expenses might be divergent from the information presented below due to receipt of actual income and expense information provided by the property owners, or may have been adjusted by the Tyler non-residential assessors predicated on appraiser judgement and expertise.

¹¹ CoStar Group, Market statistics from CoStar Group, accessed April 29, 2024, www.costar.com.

Multi-Family

Upper New Castle County

This submarket has experienced a slow and steady pipeline of development in the past decade, averaging 580 units under construction annually. New apartment developments have been concentrated in and around Wilmington, Delaware's most populous city, with over 70,000 residents and 40,000 employees, and Newark, a small city of over 31,000 residents. Upper New Castle County's apartment market has proven resilient in recent years, hitting a remarkably compressed vacancy of 2.5% in early 2021. In late 2023, the vacancy rate ticked up with recent multifamily deliveries but remained rather compressed overall at 5.3%. Asking rents rose 2.6% year-over-year as of the second quarter of 2024, on par with the Philadelphia metro's 2.4% pace. Restrained levels of multifamily construction and relatively affordable rents have worked in this submarket's favor, contributing to submarket's low vacancy and growing rents.

Southern New Castle County

The Southern New Castle County multifamily submarket has a vacancy rate of 5.8%. This vacancy rate is 1.0% higher than it was this time last year. There have been 100 units of negative absorption and no net deliveries in the past year. Rents have increased 3.8% in the past 12 months and are currently around \$1,730/month. Nothing is under construction in the Southern New Castle County multifamily submarket. In the past year, one sale has taken place for approximately \$31.7 million. Vacancy is 4.8% in 4 and 5 star buildings, and 9 units have been absorbed in this asset class over the past year. Within 3 star buildings, vacancy is 6.1% and there have been 120 units of negative absorption. Currently, 1.2% of 1 and 2 star space is vacant, and 7 units have been absorbed in this space type over the past 12 months. Rents are around \$1,850/month in 4 and 5 star buildings, \$1,730/month in 3 star buildings, and \$1,090/month in 1 and 2 star buildings. Year-over-year rent growth was 7.7% in 4 and 5 star buildings, 3.0% in 3 Star buildings, and 2.8% in 1 & 2 Star buildings. The current vacancy is higher than its trailing three-year average of 4.1%. The three-year average of this submarket is lower than the Philadelphia market three year average, which is 5.4%. The submarket is approximately 90 units larger than it was three years ago, which is solely the result of construction as there has not been any demolition. Rents have increased 22.1% over the past three years, higher than the 14.3% trailing three-year average of the Philadelphia market as a whole. There have been 4 sales over the past three years, amounting to \$124 million in volume and 860 units of inventory.

CATEGORY	UPPER NEW CASTLE COUNTY	SOUTHERN NEW CASTLE COUNTY
Studio Rent	\$1,235	\$990
1-Bedroom Rent	\$1,395	\$1,435
2-Bedroom Rent	\$1,585	\$1,695
3-Bedroom Rent	\$1,920	\$2,180
Rent per SF (Monthly)	\$1.76	\$1.58
Vacancy %	5.3%	5.8%
Cap Rate	6.8%	6.4%
Value/Unit (1 & 2 Star)	\$115,357	\$118,931
Value/Unit (3 Star)	\$134,272	\$154,559
Value/Unit (4 & 5 Star)	\$207,365	\$188,572
Value/Unit (Overall)	\$138,273	\$158,651

Retail

North New Castle County

The North New Castle County retail submarket has a vacancy rate of 4.9%. This vacancy rate is 1.6% lower than it was this time last year. There has been 150,000 SF of positive absorption and 50,000 SF of net deliveries. Rents have decreased 0.1% in the past 12 months and are currently around \$24.00/SF. Nothing is under construction in the North New Castle County retail submarket. In the past year, there have been 9 sales, which traded for approximately \$9.5 million in volume. Vacancy is 4.0% in general retail buildings, and there has been 13,000 SF of negative absorption in this asset class over the past year. Vacancy is 1.7% in malls, and 52,000 SF has been absorbed in this asset class over the past year. Vacancy is 23.4% in power centers, and absorption has been flat in this asset class over the past year. No vacancies were reported in strip centers, and 630 SF has been absorbed in this asset class over the

past year. Vacancy is 5.0% in neighborhood centers, and 63,000 SF has been absorbed in this asset class over the past year. Rents are around \$23.00/SF in general retail buildings, \$27.00/SF in malls, 15.90/SF in power centers, \$22.00/SF in strip centers, and \$25.00/SF in neighborhood centers. Rent growth was 0.2% in general retail buildings, -2.6% in malls, 4.1% in power centers, 2.1% in strip centers, and 1.1% in neighborhood centers. The current vacancy rate is lower than its trailing three-year average of 8.2%, and higher than the Philadelphia market trailing three-year average of 4.5%. Rents have increased 4.8% over the past three years, higher than the Philadelphia market average of 4.1%. There have been 30 sales over the past three years, amounting to \$22.2 million in volume and 490,000 SF of inventory.

South New Castle County

The South New Castle County retail submarket has a vacancy rate of 6.3%. This vacancy rate is 0.5% higher than it was this time last year. There has been 76,000 SF of negative absorption and 15,000 SF of net deliveries. Rents have increased 1.8% in the past 12 months and are currently around \$24.00/SF. Roughly 310,000 SF is under construction in the South New Castle County retail submarket. In the past year, there have been 24 sales, which have traded for approximately \$5.4 million in volume and 140,000 SF in stock. Vacancy is 3.9% in general retail buildings, and there has been 88,000 SF of negative absorption in this asset class over the past year. No vacancies were reported in malls, and absorption has been flat in this asset class over the past year. Vacancy is 6.5% in power centers, and there has been 65,000 SF of negative absorption in this asset class over the past year. Vacancy is 3.3% in strip centers, and there has been 1,100 SF of negative absorption in this asset class over the past year. Vacancy is 9.1% in neighborhood centers, and 79,000 SF has been absorbed in this asset class over the past year. Vacancy is 6.2% in other retail buildings, and absorption has been flat in this asset class over the past year. Rents are around \$21.00/SF in general retail buildings, \$67/SF in malls, \$24.00/SF in power centers, \$20.00/SF in strip centers, \$21.00/SF in neighborhood centers, and \$19.70/SF in other retail buildings. Rent growth was 1.6% in general retail buildings, 0.2% in malls, 1.6% in power centers, 3.0% in strip centers, 2.8% in neighborhood centers, and 3.8% in other retail buildings. The current vacancy rate is higher than its trailing three-year average of 6.0%, which in turn is higher than the trailing three-year average for the Philadelphia market as a whole, which is 4.5%. Rents have increased 7.7% over the past three years, higher than the Philadelphia market average of 4.1%. There have been 112 sales over the past three years, amounting to \$178 million in volume and 1.2 million SF of inventory.

West New Castle County

The West New Castle County retail submarket has a vacancy rate of 7.3%. This vacancy rate is 1.8% higher than it was this time last year. There has been 89,000 SF of negative absorption and no net deliveries. Rents have increased 0.9% in the past 12 months and are currently around \$23.00/SF. Nothing is under construction in the West New Castle County retail submarket. In the past year, there have been 6 sales, which traded for approximately \$9.1 million in volume. Vacancy is 5.9% in general retail buildings, and there has been 74,000 SF of negative absorption in this asset class over the past year. Vacancy is 10.2% in power centers, and absorption has been flat in this asset class over the past year. Vacancy is 7.2% in neighborhood centers, and there has been 21,000 SF of negative absorption in this asset class over the past year. The current vacancy rate is higher than its trailing three-year average of 5.8%, which in turn, is higher than the trailing three-year average for the Philadelphia market as a whole, which is 4.5%. Rents have increased 7.1% over the past three years, higher than the Philadelphia market average of 4.1%. There have been 32 sales over the past three years, amounting to \$60.6 million in volume and 340,000 SF of inventory.

Wilmington Central Business District

The Wilmington Central Business District ("CBD") retail submarket has a vacancy rate of 2.7%. This vacancy rate is 0.7% higher than it was this time last year. There has been 29,000 SF of negative absorption and no net deliveries. Rents have decreased 0.3% in the past 12 months and are currently around \$18.90/SF. Nothing is under construction in the Wilmington CBD retail submarket. In the past year, there have been 20 sales, which have traded for approximately \$33.8 million in volume and 210,000 SF in stock. Vacancy is 1.4% in general retail buildings, and 3,200 SF has been absorbed in this asset class over the past year. Vacancy is 11.9% in strip centers, and there has been 14,000 SF of negative absorption in this asset class over the past year. Vacancy is 9.5% in neighborhood centers, and there has been 18,000 SF of negative absorption in this asset class over the past year. The current vacancy rate is higher than its trailing three-year average of 2.3%. However, this figure is lower than the Philadelphia market trailing three-year average of 4.5%. Rents have increased 5.8% over the past three years, higher than the Philadelphia market average of 4.1%. There have been 71 sales over the past three years, amounting to \$88.9 million in volume and 630,000 SF of inventory.

CATEGORY	NORTH NEW CASTLE COUNTY	WEST NEW CASTLE COUNTY	WILMINGTON CBD	SOUTH NEW CASTLE COUNTY
Rent/SF (General)	\$22.62	\$20.05	\$19.09	\$20.73
Rent/SF (Strip)	\$22.12	\$26.57	\$19.55	\$20.27
Rent/SF (NBD Center)	\$25.44	\$25.71	\$16.94	\$20.96
Rent/SF (Mall)	\$27.04	\$22.85	No Data	\$67.06
Vacancy % (General)	4.0%	5.9%	1.4%	3.9%
Vacancy % (Strip)	0.0%	13.1%	11.9%	3.3%
Vacancy % (NBD Center)	5.0%	7.2%	9.5%	9.1%
Vacancy % (Mall)	1.7%	7.3%	No Data	0.0%
Cap Rate (General)	6.6%	6.5%	6.7%	6.5%
Cap Rate (Strip)	6.3%	6.4%	6.3%	6.6%
Cap Rate (NBD Center)	6.4%	6.4%	6.8%	6.4%
Cap Rate (Mall)	6.2%	No Data	No Data	6.1%
Value/SF (General)	\$261	\$244	\$198	\$241
Value/SF (Strip)	\$271	\$248	\$238	\$232
Value/SF (NBD Center)	\$214	\$226	\$207	\$221
Value/SF (Mall)	\$244	No Data	No Data	\$265
Value/SF (Overall)	\$240	\$232	\$201	\$234

Office

North New Castle County

The North New Castle County office submarket has a vacancy rate of 7.0%. This vacancy rate is 0.3% lower than it was this time last year. There was 410,000 SF of positive absorption and 410,000 SF of net deliveries. Rents have increased by 0.2% in the past 12 months and are currently around \$25.00/SF. Roughly 100,000 SF is under construction in the North New Castle County office submarket. In the past year, there have been 8 sales, which traded for approximately \$2.8 million in volume. Vacancy is 12.6% in 4 and 5 star buildings, and 390,000 SF has been absorbed in this asset class over the past year. In 3 star buildings, 4.0% of space is vacant, and 820 SF has been absorbed over the past year. Currently, 6.6% of 1 and 2 star space is vacant, and 18,000 SF has been absorbed in this space type over the past 12 months. The current vacancy rate is higher than its trailing three-year average of 6.9%. However, this figure is lower than the 10.2% trailing three-year average of the Philadelphia market as a whole. The submarket is approximately 410,000 SF larger than it was three years ago, and is the result of roughly 780,000 SF of construction and roughly 370,000 SF of demolition. Rents have increased by 3.4% over the past three years, higher than the Philadelphia market average of 2.9%. There have been 31 sales over the past three years, amounting to \$6.5 million in volume and 93,000 SF of inventory.

South New Castle County

The South New Castle County office submarket has a vacancy rate of 8.9%. This vacancy rate is 0.5% higher than it was this time last year. There was 31,000 SF of negative absorption and 31,000 SF of net deliveries. Rents have increased by 0.3% in the past 12 months and are currently around \$24.00/SF. Nothing is under construction in the South New Castle County office submarket. In the past year, there have been 11 sales, which have traded for approximately \$9.1 million in volume and 150,000 SF in stock. Vacancy is 2.2% in 4 and 5 star buildings, and 24,000 SF has been absorbed in this asset class over the last year. In 3 star buildings, 10.2% of space is vacant, and 120,000 SF has been absorbed over the past year. Around 13.7% of 1 and 2 star space is vacant, and there has been 170,000 SF of negative absorption over the past year. Of the 11 sales in the past year, none were of 4 and 5 star buildings, 8 were of 3 Star buildings, and 3 were of 1 and 2 star buildings. The current vacancy rate is higher than its trailing three-year average of 8.1%. However, this figure is lower than the 10.2% trailing three-year average of the Philadelphia market as a whole. The submarket is approximately 140,000 SF larger than it was three years ago, which is solely the result of construction as there have been no demolitions. Rents have increased by 4.0% over the past three years, higher than the Philadelphia market average of 2.9%. There have been 49 sales over the past three years, amounting to \$38.7 million in volume and 540,000 SF of inventory.

West New Castle County

The West New Castle County office submarket has a vacancy rate of 4.5%. This vacancy rate is 1.3% higher than it was this time last year. There was 61,000 SF of negative absorption and no net deliveries. Rents have increased by 0.3% in the past 12 months and are currently around \$25.00/SF. Roughly 110,000 SF is under construction in the West New Castle County office submarket. In the past year, there have been 5 sales. Vacancy is 4.9% in 4 and 5 star buildings, and there has been 24,000 SF of negative absorption in this asset class over the past year. Within 3 star buildings, vacancy is 5.1% and there has been 23,000 SF of negative absorption. Around 3.1% of 1 and 2 star space is vacant, and there has been 14,000 SF of negative absorption over the past year. The current vacancy rate is higher than its trailing three-year average of 3.6%. However, this figure is lower than the 10.2% trailing three-year average of the Philadelphia market as a whole. The submarket is the same size as it was three years ago as nothing has been built or demolished in this period. Rents have increased by 4.0% over the past three years, higher than the Philadelphia market average of 2.9%. There have been 29 sales over the past three years, amounting to \$51.3 million in volume and 660,000 SF of inventory.

Wilmington Central Business District

Delaware's business-friendly laws, tax benefits, strategic location, and efficient government services due to its smaller size have attracted significant employers to the Wilmington CBD over the past decades. The Wilmington CBD became a major hub for credit card processing operations in the 1980s after the Supreme Court allowed credit card companies to export interest rates from their home states throughout the United States. Financial giants like Chase Bank, Capital One, and Citigroup remain some of downtown Wilmington's largest office occupiers. However, the outsourcing of credit card processing jobs, bank mergers, and changing consumer banking habits have caused many of these local operations to reduce their staff over time. In 2019, Bank of America vacated two former buildings, Bracebridge I and III, to consolidate its local operations. Wilmington's vacancy rate has not fully recovered from that negative 500,000-SF move-out on the local office market. Subsequently, vacancy has averaged 14.0% over the past five years. In 2024Q2, vacancy remains elevated at 13.7%. Nearly 45 leases have been signed in the past 12 months, and a meagre four were larger than 10,000 SF. In October 2023, an undisclosed tenant leased a fully built-out, 16,200-SF space at 1000 N West St. on a five-year lease. This became the largest lease of the year. Back in August 2023, law firm Cooch and Taylor leased 15,900 SF in the same office building. These leases supported a positive net absorption of 350,000 SF as of 2024Q2, helping shrink vacancy by -1.0% year over year. Nevertheless, at a 15.0% availability rate, inventory remains high with 2.2 million SF of office space listed on the market for lease. Subsequently, the number of options on the market has diluted landlords' ability to increase rents. Annual rent growth clocked in at 0.0% in 2024Q2, significantly trailing the 1.9% average of the past decade. Moreover, concessions, including free rent or higher tenant allowances, have become generous—further cutting into effective rent growth. Market rents now average \$27.00/SF, with 4 and 5 star spaces commanding closer to \$31.00/SF.

CATEGORY	NORTH NEW CASTLE COUNTY	WEST NEW CASTLE COUNTY	WILMINGTON CBD	SOUTH NEW CASTLE COUNTY
Rent/SF (1/2 Star)	\$21.74	\$20.79	\$19.59	\$19.84
Rent/SF (3 Star)	\$22.11	\$24.29	\$24.71	\$22.88
Rent/SF (4/5 Star)	\$31.87	\$30.42	\$30.85	\$28.75
Vacancy % (1/2 Star)	6.6%	3.1%	2.4%	13.7%
Vacancy % (3 Star)	4.0%	5.1%	12.8%	10.2%
Vacancy % (4/5 Star)	12.6%	4.9%	18.1%	2.2%
Cap Rate (1/2 Star)	10.8%	11.3%	11.0%	11.3%
Cap Rate (3 Star)	10.8%	11.1%	10.5%	11.2%
Cap Rate (4/5 Star)	10.2%	10.8%	9.4%	10.8%
Value/SF (1/2 Star)	\$124	\$113	\$106	\$111
Value/SF (3 Star)	\$122	\$134	\$119	\$119
Value/SF (4/5 Star)	\$172	\$147	\$168	\$137
Value/SF (Overall)	\$138	\$132	\$141	\$121

Industrial

New Castle County

New Castle County has been among the most compressed industrial submarkets across the Philadelphia metro, averaging 3.5% vacancy in the past five years. This is due in part to its infill nature in conjunction with the county's highly desirable proximity to I-95 as well as the Route 301 corridor. However, the nearly 1.8 million SF of industrial development completions in the last 12 months have caused vacancy to spike by 2.7% year over year. Nearly 75 leases totaling 670,000 SF in net absorption in the last 12 months have buffered the vacancy rate from climbing further. Notably, in November 2023, Cigna leased 200,800 SF at First State Logistics Park in Newark. The 4 star, 294,000-SF building was on the market for 23 months before a significant portion was leased. Another 93,500-SF space remains available for lease with an asking rent of \$10.50/SF NNN. More recently, in April 2024, PODS leased an entire 129,000-SF warehouse at 50 Harbor View Drive in New Castle. The new tenant has recently put 65,000-SF sublet space on the market with an asking rent of \$9.75/SF NNN. The 3 star warehouse was recently delivered in January 2024. On the horizon, the 770,000 SF currently underway is another expansion of the inventory, which is scheduled to expand by 1.9%. This is a continuation of new development in the submarket, which has already seen 4.7 million SF delivered over the past three years, representing an impressive inventory expansion of 13.5%. Given that the submarket has historically absorbed over 1 million SF annually, this new inventory is necessary and manageable. Due to its small geography and diminishing options for improvable land, New Castle County's runway to develop major industrial buildings and parks in this submarket is confined. These physical constraints will only add more pressure to increase rents over the long-term horizon. With such sparse inventory left to lease, rent growth over the past five years averaged an impressive 9.6%. However, lingering macroeconomic headwinds have caused rent growth to decelerate to 6.1% over the past 12 months. Despite the slowdown, rent growth remains well ahead of inflation. Industrial rents in New Castle County run for about \$11.00/SF, which is on pace with the metro average. A similar pattern holds for logistics rents, which at \$10.60/SF, are in line with the metro average, as well. Over a longer horizon, industrial rent growth in both the New Castle County submarket and the Philadelphia metro has been nothing short of sensational. In the past five years, rents in this submarket have cumulatively risen by a remarkable 57.3%.

Wilmington

Wilmington's strategic location is pivotal in driving demand for industrial spaces. Positioned along major transportation corridors, including I-95 and I-295, this submarket provides convenient access to major markets along the east coast. Proximity to major cities such as Philadelphia and Baltimore enhances its appeal as a logistics and distribution hub. Moreover, the Port of Wilmington, a deep-water port on the Delaware River, further enhances the city's connectivity. Delaware is known for its business-friendly environment, and Wilmington is no exception. The state's absence of a state sales tax and favorable corporate tax structures make it an attractive location for companies looking to establish or expand their operations in the Philadelphia metro area. Wilmington's industrial stock, with only 16.5 million SF, is on the smaller side when compared to neighboring submarkets. Subsequently, large move-ins or move-outs can have considerable consequences on the submarket averages. Notably, General Motors' closure of its 3.2 million-SF assembly plant (801 Boxwood Road) in 2009 led Wilmington's vacancy rate to surge from sub-5% to 25% for over a decade until the former plant was demolished in 2020.

The plant was replaced with a 3.8 million-SF distribution center (1025 Boxwood Road) that was fully leased to Amazon when it was delivered in 2021. Since then, Wilmington's vacancy rate has become one of the lowest across the Philadelphia region, averaging only 3.2% in the past three years. In 2024Q2, vacancy remains tight at 3.5%. The latest annual absorption rate totaled 25,000 SF as of 2024Q2. With such a low vacancy rate, few spaces are available to be leased. Only six existing industrial spaces larger than 100,000 SF are available for lease in the first quarter. Moreover, only 880,000 SF of new inventory is underway, which will further restrain new supply in an already compressed landlord's market. Despite mega-leases that have captured headlines in recent years, leases generally skew on the smaller size. In 2023, 80% of the 27 leases signed have been below 10,000 SF. The largest lease occurred in 23Q3, when an undisclosed tenant leased a 2 star, 52,000-SF manufacturing building (913 S Heald Street) at a starting rate of \$16/SF NNN. With limited options for tenants, rent growth continues to be robust, increasing by 5.1% over the past 12 months and easily exceeding the 6.7% average annual change over the past decade. Industrial rents in Wilmington, on average, run for \$10.10/SF, which is moderately below the metro average of \$11.20/SF. A similar trend holds for logistics space, which at \$9.60/SF, rents for less than the \$10.40/SF metro average for this industrial property subtype. Wilmington's comparatively affordable rents and state and local tax benefits that lower operational expenses have been the submarket's greatest advantages over nearby submarkets.

CATEGORY	NEW CASTLE COUNTY	WILMINGTON
Rent/SF (Ind/WH)	\$10.63	\$9.60
Rent/SF (Flex)	\$12.42	\$12.28
Vacancy % (Ind/WH)	5.9%	1.6%
Vacancy % (Flex)	5.4%	7.5%
Cap Rate (Overall)	7.3%	7.0%
Value/SF (Ind/WH)	\$96	\$105
Value/SF (Flex)	\$121	\$112

Valuation Specification

The following section describes the model specification and description thereof related to each approach to value.

Cost Approach

The cost approach is based on the idea that the value of an existing property is the value of the land plus the replacement cost of the improvements less depreciation.

The cost model can be expressed as:

$$MV = LV + BV$$

Where LV (land value) is expressed as:

$$LV = P_L \times LSize$$

Where BV (building value) is expressed as:

$$BV = P_B \times BSIZE$$

Further, BV also includes the consideration of depreciation of the improvement, taking the form:

$$BV = [(P_B \times BSIZE) - \text{Depreciation \%}]$$

Market Approach

Multiple Regression Analysis

In mass appraisal applications of the sales comparison approach, adjustments for physical and location factors are derived from an analysis of all sales in an area, and the model estimates values directly:

$$MV_S = b_0 + b_1X_1 + b_2X_2 + \dots b_nX_n$$

Where:

B_0 is a constant dollar amount

X_1, X_2, \dots, X_n are physical and location characteristics

b_1, b_2, \dots, b_n are coefficients or multipliers

The calibration of multiple regression models is an essential part of the overall market valuation process. First, the model provides an estimate of market value for each residential property. Second, and just as important, the model provides a mechanism by which a sale property can be adjusted to obtain an estimate of value of the subject property. Multiple Regression Analysis (MRA) is used to establish a relationship between selling price and observable property characteristics.

Multiple Regression Analysis is a statistical technique for estimating unknown data from known and available data. In mass appraisal, the unknown data are market values. The known and available data are sales prices and property characteristics.¹² MRA models calibrated for New Castle County were additive model structures. The objective of MRA, as applied to mass appraisal, is to model the relationship between property characteristics and value, so that the latter can be estimated from the former.¹³

¹² Gloudemans, Robert J. *Mass Appraisal of Real Property*. Chicago: International Association of Assessing Officers, 1999, 165.

¹³ See id.

Income Approach

The income approach provides an estimate of value based upon the capitalized value of the income received via rents less appropriate expenses. The income approach is based on the economic principle that current value is determined by the present worth of anticipated future benefits to be derived through income production by an asset over the remainder of its economic life. The income approach uses capitalization as a technique to convert the anticipated future benefits of the ownership of property into an estimate of present value.

The Income Approach Basics:

- Estimate the Potential Gross Income (PGI);
- Deduct for Vacancy and Collection Loss (V&C);
- Add miscellaneous income to calculate the Effective Gross Income (EGI);
- Determine Operating Expenses – expressed as a \$ amount (OPEX) or as a % (OER);
- Deduct operating expenses from the effective gross income to determine Net Operating Income before discount, recapture, and taxes (NOI);
- Select the proper capitalization rate (OAR);
- Determine the appropriate capitalization method to be used; and
- Capitalize the net operating income into an indication of property value.

Modern capitalization methods are usually segmented via two distinct methods, direct and yield. Direct capitalization is a method used to convert an estimate of a single year's income expectancy into an indication of value in one direct step, either by dividing the net income estimate by an appropriate capitalization rate or by multiplying the income estimate by an appropriate factor. Direct capitalization employs capitalization rates and multipliers extracted or developed from market data. Only one year's income is used. Yield and value changes are implied, but not explicitly identified. Yield capitalization is a method used to convert future benefits into present value by (1) discounting each future benefit at an appropriate yield rate, or (2) developing an overall rate that explicitly reflects the investment's income pattern, holding period, value change, and yield rate.

The direct capitalization procedure is typically preferred for the application of the income approach for ad valorem taxation and will be solely relied upon for the purposes of this assignment. Yield capitalization (Discounted Cash Flow analysis) is typically not considered for purposes of ad valorem purposes due to the numerous inputs required for DCF are very property specific and thus direct capitalization is more appropriate absent the availability of such detailed info needed for DCF.

Direct capitalization estimates value by converting the property's current year typical (or stabilized) annual income into value; essentially representing the yield of an investment over a one-year time horizon. The capitalization rate is indicative of the investment's intrinsic, un-leveraged rate of return. It does, however, have its limitations; for example, it does not account for future fluctuations during the investment's anticipated holding period – i.e., changing market dynamics, changes in rent and variables expenses, depreciation to the asset, etc.

The generic formula to express the method of direct capitalization is:

$$\text{Value} = \text{Income} / \text{Rate, or Value} = \text{Income} \times \text{Factor}$$

The applicable model formula used in direct capitalization specific to mass appraisal in New Castle County can be expressed as:

$$MV = [((EGI * (1-OER)) / OAR]$$

Where:

EGI describes the Effective Gross Income, defined as the *PGI* (Potential Gross Income) less *V & C* (Vacancy & Collection Loss)

and

OER describes the Overall Expense Ratio

and

OAR describes the Overall Capitalization Rate

Components of Direct Capitalization Method in the Income Approach:

Rental income from real estate is received in accordance with the lease. Leases are usually referred to as net or gross, although many variations exist. A net lease is typically utilized for a single-tenant structure, whereas the tenant pays all taxes, insurance, and operating expenses. In a gross lease, the landlord pays all operating expenses. Additionally, the term of a lease may affect property value. For example, long-term leases with fixed rents may increase or decrease the value of property. Apartment properties are typically operated under a gross lease scenario, with lease terms of one year or less.

Potential Gross Income (PGI)

Potential gross income (PGI) is the income that would be collected if the property were fully occupied at market rent. Market rent is the rate prevailing in the market for comparable properties and is used in calculating market value by the income approach.

The first step in determining the subject property's earning potential is by performing an analysis of the market rental expectations.

When apartment properties are being valued by the income capitalization approach, rental rates are divided into units of comparison as indicated by the market. The estimate of market rent is expressed in terms of square feet of net rentable area. Converting the rental rate to a price per net rentable area makes it easier to compare and adjust properties that compete in the same market in the same manner as transaction prices are adjusted in the sales comparison approach. The elements of comparison account for the reasons, justifications, or rationale for the amount of rent paid to a comparable unit. Similar units from each of the comparable properties have been compared to the subject units and adjustments were considered for dissimilar features.

Vacancy and Collection Loss

A vacancy and collection allowance accounts for the losses expected from vacancies and bad debts and are subtracted from potential gross income. These losses are calculated at the expected rate of typical management in any given market. Almost all income producing properties experience intermittent or sustained periods of vacancy and collection loss.

Miscellaneous / Ancillary Income

Income producing properties occasionally earn additional income from sources other than the rental of units/space. Miscellaneous income takes into consideration deposits, application fees, pet deposits, late payments, forfeiture, laundry income, garages, vending machines, etc.

Effective Gross Income (EGI)

Effective gross income is the amount of income remaining after establishing the potential gross income, subtracting vacancy and collection loss allowances, and then adding any reimbursements and/or miscellaneous income.

Operating Expenses (OER / OPEX)

Operating expenses are those considered necessary to support the operations of the real property and are deducted from the effective gross income, resulting in the net operating income (NOI) of the asset.

Operating expenses may be divided into two categories, fixed and variable. Fixed expenses generally do not vary with occupancy and are expenses that prudent management will pay for whether the property is occupied or not – i.e., property taxes and insurance. Alternatively, variable expenses are directly related to the occupancy rate; generally, these expenses vary with the level of occupancy, or the extent of services provided. Operating expenses are typically sub-categorized, making distinctions between administrative, management, utilities, repairs and maintenance, taxes, etc. Some expenses are disallowable in the application of the income approach for real estate valuation. Examples include but are not limited to: debt service, income taxes, capital improvements, and personal or business expenses of the owner. Additionally, depreciation is not treated as an expense because a provision for recapture (the recapture rate) is included in the capitalization rate.

Capitalization

Income capitalization utilizes a capitalization rate to convert a stream of future income into a single present value. It considers the quantity and quality of future income, when the income is to be received, and the duration of the income stream. This step divides the net operating income by an overall rate of return, or capitalization rate, which is affected by factors such as: risk, operating expense ratios, land-to-improvement ratios, and remaining economic life.

Appraisal Performance

Sales Ratio Study

A ratio study compares appraised values to market values. In a ratio study, market values are usually represented by sales prices.¹⁴ In the case of New Castle County, MRA models for the market/sales approach (applied only to residential properties) were developed utilizing 8,890 settled transactions based on a sales study period from January 1, 2021 through July 1, 2024. Confirmed, settled transactions were time adjusted to the effective date of value to adjust for market fluctuations within the sales study period. Sales that occurred during the sales study period that were not considered arms-length transactions were not used in the analysis.

The ratios used in a ratio study are formed by dividing the assessed values estimated for tax purposes by sale prices.¹⁵ Ratio studies measure two primary aspects of mass appraisal accuracy: level and uniformity.

Ratio studies can serve several purposes. The primary use in New Castle County is to evaluate mass appraisal performance relative to the first reassessment since 1983.

Appraisal Level

Appraisal level refers to the overall, or typical, ratio at which properties are appraised. In the case of New Castle County, the appraisal level is intended to be one-to-one for the reassessment. In mass appraisal, appraised values cannot be expected to equal independent indicators of market value (sale prices), but high and low ratios should balance, so that the typical ratio is near 100 percent.¹⁶

Appraisal Uniformity

Appraisal uniformity relates to the fair and equitable treatment of individual properties. Uniformity requires, first, that the properties be appraised equitably within groups or categories (use, neighborhoods, etc.) and, second, that each group be appraised at the same level or percentage of market value. That is, appraisal uniformity requires equity within groups and between groups.

Stratification

In ratio studies, stratification is the sorting of parcels into relatively homogeneous groups based on use, physical characteristics, or location. Stratification permits analysis of mass appraisal performance within and between property groups.¹⁷

¹⁴ Gloudemans, Robert J. *Mass Appraisal of Real Property*. Chicago: International Association of Assessing Officers, 1999, 217.

¹⁵ Gloudemans, Robert J. *Mass Appraisal of Real Property*. Chicago: International Association of Assessing Officers, 1999, 218.

¹⁶ See id..

¹⁷ Gloudemans, Robert J. *Mass Appraisal of Real Property*. Chicago: International Association of Assessing Officers, 1999, 223.

Measures of Uniformity

Coefficient of Dispersion

The coefficient of dispersion (COD) is the most used measure of appraisal uniformity. It is built on the average deviation, which measures the average absolute difference of the ratios from the median. Low CODs (15.0 or less) tend to be associated with good appraisal uniformity. CODs of less than 5.0 are very rare except in cases of extremely homogeneous property groups.¹⁸

Price-related Differential

A special aspect of appraisal uniformity relates to equality in the appraisal of low- and high-value properties. Appraisals are considered regressive if high-value properties are under-appraised relative to low-value properties and progressive if high-value properties are relatively over-appraised.¹⁹ From a practical perspective based upon the unique property characteristics of high-value properties and in conjunction with a more likely occurrence of unattributable “buyer preference” (in statistics, the error term, “ ϵ ”) in model development, PRD’s slightly above one is a reality in most jurisdictions.

In practice, PRDs have a slight upward bias. Also, PRDs may be distorted by extreme ratios. As a general rule, PRDs should range between 0.98 and 1.03 (the fact that this range is centered slightly above 1.00 allows for the natural upward bias in the PRD).²⁰

Coefficient of Price-related Bias

The coefficient of price-related bias (PRB) is an index of vertical equity that quantifies the relationship between assessment-sales ratios (ASR) and the value in percentage terms. The PRB has several technical advantages, including being less sensitive to outliers than the PRD, and also quantifies the statistical significance of observed relationships.²¹

¹⁸ Gloudemans, Robert J. *Mass Appraisal of Real Property*. Chicago: International Association of Assessing Officers, 1999, 237.

¹⁹ Gloudemans, Robert J. *Mass Appraisal of Real Property*. Chicago: International Association of Assessing Officers, 1999, 239.

²⁰ Gloudemans, Robert J. *Mass Appraisal of Real Property*. Chicago: International Association of Assessing Officers, 1999, 240.

²¹ *Standard on Ratio Studies*. Kansas City: International Association of Assessing Officers, 2013, 56.

Model Performance

Ratio study statistics is the primary method to judge the performance of a mass appraisal. They provide concise, formal measures of appraisal performance.²²

The appraised values resulting from the reassessment conform to the following Standards for Ratio Studies - 2013 established by the International Association of Assessing Officers (IAAO) and the Uniform Standards of Professional Appraisal Practice (USPAP 5 & 6) as well as generally accepted standards within the mass appraisal industry.

IAAO Standards for Ratio Studies

Property Type	Median Value Level	COD	PRD	PRB
Single-family residential, including condos, in newer or more homogeneous areas	90% to 100%	5 to 10	.98 to 1.03	-.10 to .10
Single family residential in older or more heterogeneous areas	90% to 100%	5 to 15	.98 to 1.03	-.10 to .10
Other residential – rural, seasonal, recreational, manufactured housing, 2 – 4 unit family housing	90% to 100%	5 to 20	.98 to 1.03	-.10 to .10
Income-producing properties in larger areas represented by large samples	90% to 100%	5 to 15	.98 to 1.03	-.10 to .10
Income producing properties in smaller areas represented by smaller samples	90% to 100%	5 to 20	.98 to 1.03	-.10 to .10
Vacant land	90% to 100%	5 to 20	.98 to 1.03	-.10 to .10
All Properties	90% to 100%	5 to 15	.98 to 1.03	-.10 to .10

Median: A measure of central tendency. The value of the middle item in an uneven number of items arranged or arrayed according to size; the arithmetic average of two central items in an even number of items similarly arranged.

COD: The Coefficient of Dispersion (COD) is the average deviation of a group of numbers from the median expressed as a percentage of the median. In ratio studies, the average percentage deviation from the median ratio.

PRD: The Price-Related Differential (PRD) is the mean divided by the weighted mean. The statistic has a slight bias upward. Price-related differentials above 1.03 tend to indicate assessment regressivity; price-related differentials below 0.98 tend to indicate assessment progressivity.

PRB: Price-Related Bias (PRB) is an index of price-related bias obtained by regressing percentage deviations from the median ratio on percentage changes in a value proxy, which is obtained by giving equal weight to assessments and sales prices so as to minimize measurement biases.

²² Gloudemans, Robert J. *Mass Appraisal of Real Property*. Chicago: International Association of Assessing Officers, 1999, 227.

Residential Parcels

There were eight (8) residential models specified and calibrated across seven (7) residential zones. The additional model is due to the nature of needing to bifurcate Zone 3 which represents the City of Wilmington. This bifurcation was necessary due to the heterogeneity of the residential housing stock in the City of Wilmington across all neighborhoods due to variations in the housing stock's size and quality ratings.

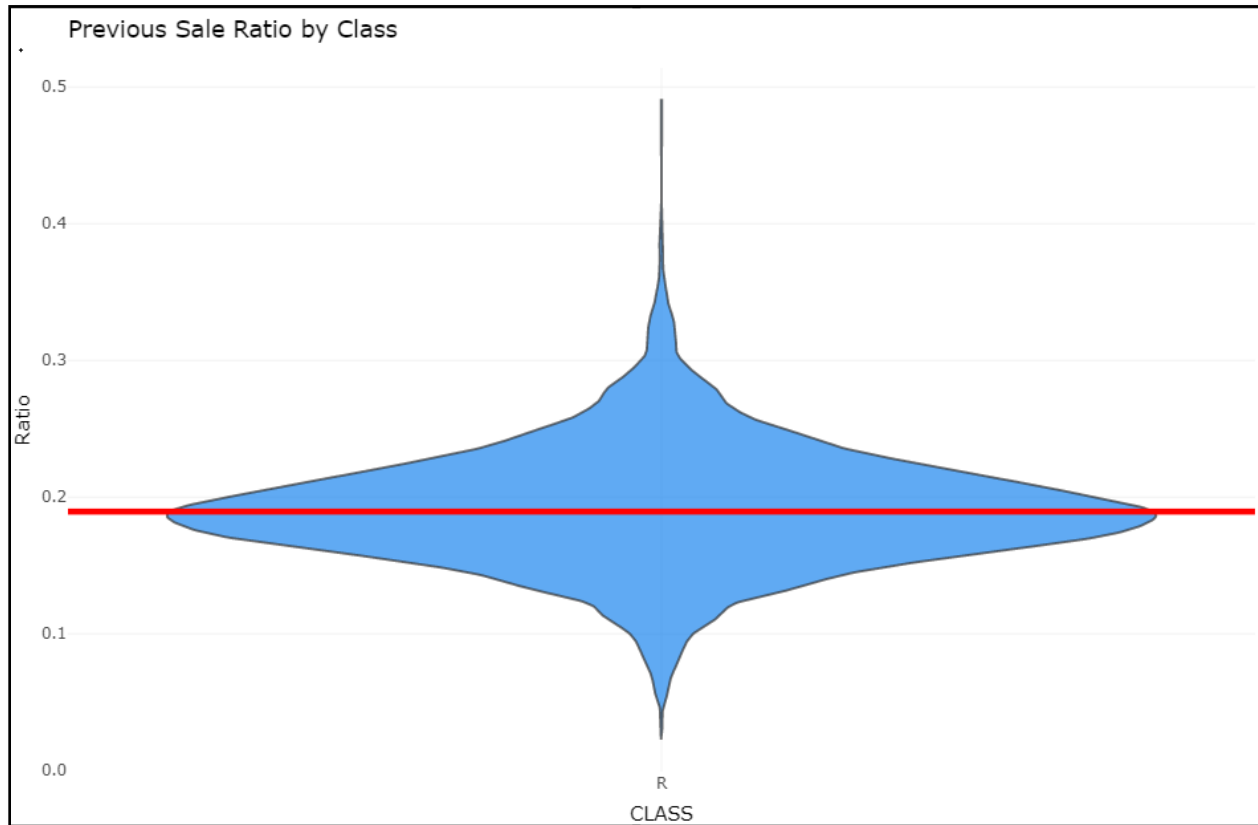
The model performance for the eight (8) residential models is summarized below and is in line with IAAO's standards with minimal exception.

MODEL	Count	Median	Mean	Wtd. Mean	COD	Wtd. COD	PRD	PRB
1	1,231	0.96	0.98	0.96	9.7	9.3	1.02	-0.09
2	450	0.99	1	0.98	12.38	12.33	1.02	-0.04
3	1,078	0.99	1.05	0.98	22.68	19.74	1.07	-0.22
4	1,521	0.95	0.97	0.95	10.2	9.92	1.01	-0.05
5	1,024	0.93	0.96	0.93	11.89	11.1	1.02	-0.14
6	2,162	0.97	0.98	0.96	9.74	9.31	1.01	-0.08
7	1,189	0.98	0.98	0.97	8.39	8.42	1.01	-0.04
8	235	1.08	1.1	1.08	13.11	13	1.02	-0.02
Combined	8,890	0.97	0.99	0.97	11.88	10.68	1.02	-0.05

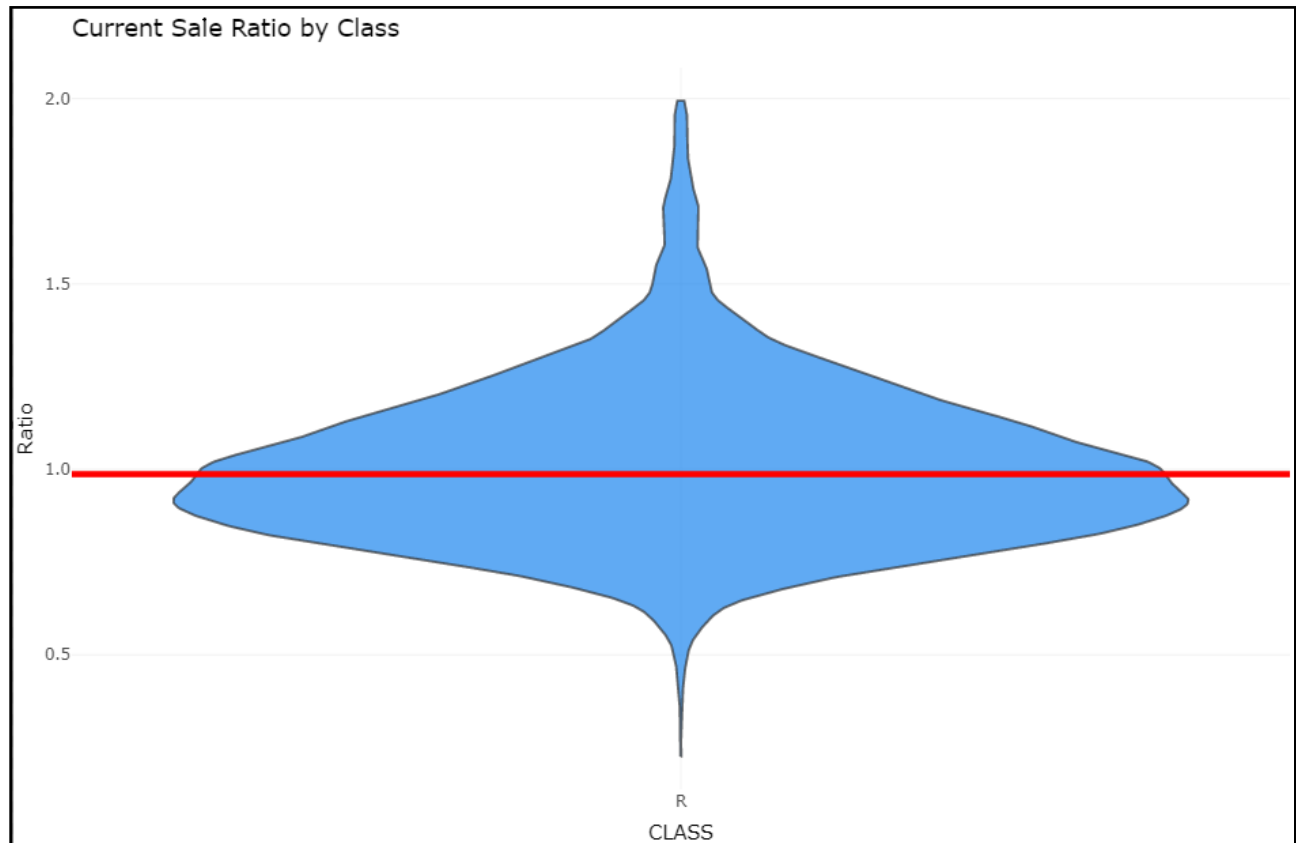
The aggregate model performance is congruent with IAAO's standards. However, the performance of models for Zones three (3) and eight (8) have CODs slightly above the acceptable limits. For Zone 3, the COD of 22.68 is above the acceptable upper threshold of 15.0, being 22.68. Several iterations of the Zone 3 model were conducted with little to no improvement to the COD. Additionally, the PRB of -0.22 is elevated relative to the other models. The practical explanation for this is likely attributable to: a) verified transactions for sold properties from the sales study in this area typically superior compared to the universe of unsold parcels – i.e. the sales are not normally distributed relative to the universe (condition is superior for sold parcels) and b) the interior condition of the housing stock is a major driver of value and was not reasonably ascertained during an exterior inspection of the parcels in Zone 3.

The two visualizations presented that follow describe the sale ratio for Residential parcels. The first graph shows the assessment to sale ratio of parcels prior to the reassessment. The median ratio indicates an assessment to sale ratio of just below 20%. The second graph shows the assessment to sale ratio of parcels relative to the reassessment. The median ratio indicates an assessment to sale ratio near 100%.

Previous Ratio



Reassessment Ratio



The table below represents the performance of each residential neighborhood in New Castle County. The information shows the total parcel counts, the total number of sales utilized in the market approach-based analysis and the associated ratio statistics. In cases where there is no information for a particular neighborhood due to a singular sale or no sales, residential parcels in those areas are grouped together with nearby, similar neighborhoods where an adequate number of sales exist to develop an opinion of market value.

Neighborhood Level Ratios

NBHD	Parcel Count	Sale Count	Median	Mean	Wtd. Mean	COD	PRD	PRB
01R01010	668	46	0.83	0.84	1.26	14.66	0.67	0.51
01R01011	49	0						0.00
01R01012	28	2	0.76	0.76	1.38	5.45	0.55	0.29
01R01020	356	26	0.84	0.88	1.20	11.32	0.73	0.53
01R01021	71	2	0.86	0.86	1.20	9.68	0.72	2.87
01R01022	154	10	0.91	0.89	1.16	6.29	0.77	0.65
01R01030	882	49	0.89	0.93	1.15	15.90	0.81	0.67
01R01031	113	5	1.18	1.18	0.89	8.82	1.33	-0.51
01R01040	364	11	0.88	0.89	1.17	14.82	0.76	0.80
01R01041	67	5	0.79	0.79	1.32	3.06	0.60	1.11
01R01042	77	4	0.80	0.80	1.31	5.74	0.61	0.04
01R01043	67	4	0.75	0.75	1.39	4.16	0.54	1.11
01R01050	167	4	1.03	1.07	0.98	6.97	1.09	0.60
01R01060	557	27	0.91	0.94	1.10	11.03	0.85	1.22
01R01061	231	14	0.83	0.87	1.20	11.51	0.72	0.11
01R01062	394	6	0.76	0.78	1.34	7.68	0.58	0.50
01R01070	689	31	0.87	0.91	1.15	12.53	0.79	0.58
01R01071	188	10	0.84	0.91	1.12	15.72	0.81	1.12
01R01072	80	6	0.97	0.96	1.09	6.00	0.88	0.55
01R01080	310	20	0.84	0.86	1.22	10.96	0.71	0.59

01R01081	119	3	1.03	0.96	1.10	7.45	0.88	0.30
01R01082	135	1	0.59	0.59	1.77	0.00	0.33	
01R01083	151	11	0.87	0.88	1.19	8.01	0.74	0.54
01R01084	168	12	0.86	0.86	1.21	6.09	0.71	0.63
01R02010	839	48	0.84	0.86	1.22	9.43	0.71	0.65
01R02011	247	11	1.02	1.03	1.02	4.61	1.01	0.74
01R02012	127	6	0.80	0.85	1.25	14.96	0.68	-0.07
01R02020	676	34	0.93	0.97	1.08	13.06	0.90	0.07
01R02021	475	28	1.09	1.08	0.97	4.62	1.11	0.23
01R02030	704	22	0.84	0.92	1.17	15.71	0.79	0.60
01R02031	214	12	0.88	0.86	1.23	9.61	0.70	0.08
01R02032	97	7	0.80	0.84	1.26	10.40	0.67	0.13
01R02040	325	8	1.12	1.13	0.92	6.13	1.23	1.13
01R02050	495	21	0.82	0.84	1.24	11.00	0.68	0.83
01R02051	52	6	0.93	0.90	1.17	7.73	0.77	0.67
01R02052	376	27	0.82	0.85	1.24	11.34	0.69	0.20
01R02060	1,263	62	0.89	0.89	1.17	11.30	0.76	0.68
01R02070	1,483	76	0.88	0.90	1.16	12.44	0.78	0.35
01R02071	104	5	0.96	0.98	1.06	9.95	0.93	-0.50
01R02080	1,003	67	0.90	0.90	1.16	9.43	0.78	0.65
01R02081	59	2	1.13	1.13	0.93	9.06	1.22	-3.23
01R02082	174	8	0.95	0.94	1.12	8.62	0.84	0.35
01R02083	329	16	0.86	0.88	1.19	8.52	0.74	0.30
01R03010	688	34	0.87	0.86	1.21	8.68	0.71	0.80
01R03011	324	20	0.83	0.85	1.24	12.14	0.68	0.24
01R03013	149	4	0.88	0.91	1.15	9.19	0.79	0.32
01R03014	35	1	0.97	0.97	1.07	0.00	0.90	
01R03020	667	23	0.86	0.86	1.22	10.03	0.70	0.35

01R03021	142	8	0.85	0.84	1.26	8.48	0.67	0.03
01R03030	726	36	0.79	0.81	1.29	9.52	0.63	0.64
01R03031	128	8	0.86	0.84	1.24	5.85	0.68	0.54
01R03032	110	6	0.88	0.90	1.16	9.56	0.78	-0.80
01R03033	27	4	0.91	0.90	1.15	2.66	0.78	0.90
01R03034	25	1	0.84	0.84	1.24	0.00	0.68	
01R03035	52	6	0.93	0.98	1.06	13.28	0.92	1.67
01R03040	924	39	0.77	0.79	1.32	10.59	0.60	0.69
01R03041	275	22	0.89	0.89	1.19	12.09	0.75	0.50
01R03042	39	5	0.95	0.95	1.10	1.46	0.86	0.95
01R03043	91	6	0.87	0.86	1.23	6.39	0.70	0.58
01R03050	1,050	57	0.79	0.81	1.29	12.37	0.63	0.52
01R03051	157	10	0.87	0.89	1.19	10.48	0.75	0.50
01R03052	29	0						0.00
01R03060	732	31	0.96	0.93	1.15	11.07	0.81	0.53
01R03061	102	3	1.00	1.00	1.04	7.01	0.95	0.82
01R03070	683	37	0.83	0.85	1.24	13.88	0.68	0.60
01R03071	218	12	0.83	0.86	1.21	6.53	0.71	0.87
01R03072	67	2	0.81	0.81	1.27	0.46	0.64	0.89
01R03080	1,510	105	0.78	0.80	1.30	10.78	0.62	0.59
01R03081	45	2	0.80	0.79	1.31	0.76	0.61	0.66
01R03082	83	3	0.93	0.94	1.10	6.47	0.86	1.19
02C00000	244	1			1.83			
02E00000	490	0						0.00
02I00000	10	0						0.00
02R01010	140	8	0.95	0.95	1.11	8.42	0.86	1.02
02R01020	340	30	0.99	1.00	1.04	12.20	0.96	0.83
02R01030	347	27	0.89	0.93	1.14	14.39	0.82	0.92

02R01040	433	29	0.85	0.86	1.20	13.95	0.72	1.00
02R01041	133	3	0.78	0.83	1.29	17.57	0.65	0.19
02R01050	216	12	0.88	0.90	1.11	9.70	0.81	0.47
02R01060	380	17	0.82	0.94	0.99	24.19	0.96	2.09
02R01070	388	19	0.87	0.90	1.19	22.64	0.76	0.54
02R01080	170	4	0.99	1.00	1.04	12.84	0.96	0.73
02R02010	700	37	0.94	0.97	1.06	12.10	0.92	0.83
02R02011	279	7	0.82	0.85	1.22	8.75	0.70	0.44
02R02020	591	27	0.89	0.94	1.11	14.63	0.84	0.52
02R02021	89	4	1.00	0.99	1.04	7.72	0.96	-0.07
02R02030	587	25	0.91	0.93	1.12	10.01	0.83	0.74
02R02031	37	2	0.95	0.95	1.08	4.52	0.88	-1.37
02R02040	260	9	0.97	0.99	1.09	8.39	0.91	1.10
02R02050	860	19	0.95	0.93	1.10	9.87	0.85	0.54
02R02060	416	15	0.93	0.93	1.10	10.13	0.84	0.83
02R02061	44	3	1.19	1.28	0.80	8.13	1.60	-1.47
02R02070	560	33	0.87	0.88	1.17	10.76	0.76	0.67
02R02071	92	5	1.06	1.02	1.01	4.33	1.01	0.53
02R02072	72	4	0.94	1.02	1.03	13.27	0.99	0.33
02R02080	469	21	0.96	0.97	1.08	10.86	0.90	0.90
02R02081	69	0						0.00
02R02082	48	2	0.98	0.98	1.05	5.63	0.94	0.44
02R03010	102	6	1.00	0.85	1.51	14.78	0.57	0.31
02R03020	392	29	0.82	0.86	1.21	13.32	0.71	0.29
02R03030	490	29	0.86	0.84	1.22	14.33	0.69	0.47
02R03031	76	4	0.73	0.74	1.38	10.47	0.54	0.74
02R03032	94	8	0.72	0.73	1.43	11.60	0.51	0.46
02R03040	270	21	0.95	0.94	1.12	21.52	0.83	0.49

02R03060	44	0						0.00
02R03080	215	14	0.97	0.97	1.11	9.16	0.87	0.80
03C00000	2,248	0						0.00
03E00000	1,580	5			0.56			0.33
03I00000	262	0						0.00
03R00010	1,408	96	0.70	0.71	1.33	13.00	0.53	0.42
03R00011	173	8	0.74	0.70	1.39	14.15	0.50	0.34
03R00012	681	57	0.65	0.66	1.43	15.93	0.46	0.56
03R00013	43	1	1.05	1.05	0.88	0.00	1.19	
03R01010	560	28	0.77	0.75	1.27	14.65	0.59	0.43
03R02010	1,130	81	0.98	1.14	1.00	25.03	1.15	0.12
03R02011	358	26	1.10	1.07	0.99	12.97	1.08	0.54
03R03010	1,210	70	1.18	1.28	0.85	21.69	1.51	0.31
03R04010	696	43	1.06	1.14	0.95	19.33	1.20	0.21
03R04011	917	56	1.04	1.12	0.96	19.40	1.16	0.26
03R05010	289	22	0.81	0.87	1.08	14.60	0.81	0.51
03R07010	4,092	281	1.14	1.24	0.92	27.01	1.34	0.48
03R07011	56	3	0.71	0.77	1.20	8.51	0.64	1.34
03R07012	30	0						0.00
03R07013	222	16	0.66	0.65	1.49	16.54	0.44	0.42
03R07014	83	11	0.80	0.81	1.19	17.15	0.69	0.54
03R08010	2,771	206	1.08	1.20	0.95	28.33	1.27	0.42
03R08011	452	17	1.11	1.20	0.89	14.35	1.35	0.15
03R09010	863	65	1.32	1.44	0.78	25.51	1.86	0.72
03R10010	570	27	1.39	1.43	0.85	23.92	1.69	0.72
03R11010	1,285	56	1.21	1.30	0.89	26.29	1.46	0.39
03R11011	182	8	1.25	1.32	0.84	19.18	1.58	0.36
03R12010	1,562	85	1.53	1.62	0.69	22.41	2.35	0.67

03R13010	796	43	1.43	1.49	0.74	20.89	2.02	0.52
03R13011	989	46	1.35	1.39	0.79	23.61	1.75	0.44
03R14010	307	12	1.47	1.55	0.68	17.88	2.28	0.71
03R15010	398	13	1.17	1.28	0.83	19.81	1.53	0.43
04C00000	995	1			0.36			
04E00000	713	1			0.35			
04I00000	253	0						0.00
04R01010	841	45	0.88	0.90	1.18	7.75	0.76	0.70
04R01011	204	5	1.02	1.06	0.99	7.06	1.07	0.82
04R01012	26	1	0.93	0.93	1.13	0.00	0.83	
04R01013	36	5	1.01	1.01	1.05	10.17	0.96	0.18
04R01014	115	3	0.96	0.97	1.10	8.68	0.89	0.31
04R01015	53	1	0.91	0.91	1.16	0.00	0.78	
04R01020	743	37	0.95	0.97	1.10	10.74	0.88	0.41
04R01021	200	9	1.12	1.10	0.95	6.17	1.15	0.98
04R01030	394	9	0.93	0.96	1.10	10.19	0.87	0.33
04R01031	54	0						0.00
04R01032	97	0						0.00
04R01033	255	14	1.03	1.04	1.01	4.95	1.03	1.23
04R01034	141	15	1.02	1.05	1.01	4.57	1.05	-0.04
04R01040	719	37	0.97	0.98	1.09	11.29	0.90	0.59
04R01041	335	22	1.11	1.10	0.97	11.59	1.14	0.39
04R01042	159	8	0.92	0.92	1.15	8.84	0.80	-0.23
04R01043	382	26	1.10	1.08	0.99	11.11	1.10	0.19
04R01044	71	1	1.16	1.16	0.91	0.00	1.27	
04R01045	198	6	0.91	0.92	1.13	8.23	0.81	0.13
04R01050	1,206	46	1.01	1.04	1.02	13.36	1.02	0.71
04R01051	30	3	1.02	1.01	1.04	1.74	0.97	1.11

04R01060	948	47	0.89	0.92	1.15	10.76	0.81	0.57
04R01061	63	6	1.08	1.04	1.02	11.16	1.02	-0.27
04R01062	128	9	1.05	1.07	0.99	5.35	1.08	0.50
04R01064	144	4	0.96	0.94	1.13	7.55	0.84	0.75
04R01065	50	2	0.95	0.95	1.11	2.50	0.85	0.01
04R01066	195	29	0.95	0.96	1.10	6.01	0.88	0.12
04R01067	197	13	1.01	1.07	0.99	11.08	1.08	-0.27
04R01070	1,545	108	1.03	1.03	1.05	10.75	0.98	0.66
04R01071	72	6	1.02	1.04	1.02	7.05	1.01	0.17
04R01080	536	30	0.98	0.99	1.10	12.09	0.90	0.74
04R02010	1,370	84	0.90	0.91	1.16	11.29	0.78	0.47
04R02011	123	5	0.92	0.91	1.15	3.80	0.80	0.82
04R02012	257	16	1.02	1.02	1.04	9.86	0.98	0.93
04R02020	516	30	0.92	0.91	1.17	9.21	0.78	0.21
04R02021	47	1	0.79	0.79	1.33	0.00	0.59	
04R02022	84	5	1.10	1.13	0.93	11.19	1.21	1.64
04R02030	534	33	0.98	1.00	1.07	10.60	0.93	0.65
04R02031	272	13	1.12	1.12	0.94	4.99	1.19	1.02
04R02032	151	10	0.90	0.97	1.10	13.18	0.88	0.23
04R02040	1,571	80	0.99	1.01	1.06	12.59	0.94	0.57
04R02050	277	9	0.87	0.91	1.16	7.23	0.79	0.46
04R02051	528	23	0.89	0.91	1.15	13.27	0.79	0.81
04R02052	227	15	0.86	0.90	1.18	12.49	0.76	0.75
04R02053	492	15	0.86	0.89	1.18	8.27	0.76	0.29
04R02060	1,487	92	0.97	0.99	1.07	12.42	0.93	0.65
04R02061	328	19	0.91	0.96	1.11	8.42	0.86	0.66
04R02070	388	24	1.00	1.00	1.06	12.43	0.94	0.83
04R02071	545	30	0.97	0.97	1.08	9.39	0.90	0.80

04R02080	985	47	1.01	1.02	1.04	11.03	0.98	0.81
04R02081	107	2	0.92	0.92	1.13	1.63	0.82	0.65
04R02082	163	8	0.87	0.90	1.16	9.44	0.78	0.80
04R02083	348	17	0.89	0.97	1.09	15.11	0.89	0.41
04R03010	1,268	66	0.96	0.96	1.10	10.74	0.87	0.77
04R03011	97	5	0.99	1.00	1.06	3.38	0.94	0.74
04R03012	27	1	1.16	1.16	0.91	0.00	1.28	
04R03020	851	43	0.92	0.92	1.16	10.94	0.80	0.30
04R03021	179	10	1.15	1.13	0.93	4.65	1.22	0.46
04R03030	432	26	0.94	0.93	1.15	9.66	0.80	0.57
04R03031	161	6	0.78	0.77	1.36	2.63	0.57	0.64
04R03032	129	0						0.00
04R03033	290	17	1.00	1.02	1.04	6.76	0.99	0.27
04R03040	912	39	0.87	0.90	1.19	10.34	0.75	0.39
04R03050	1,299	62	0.88	0.92	1.16	10.97	0.79	0.56
04R03051	91	4	0.90	0.90	1.18	11.39	0.76	0.42
04R03052	448	10	0.87	0.89	1.20	7.44	0.74	0.24
04R03060	612	36	0.94	0.94	1.13	12.32	0.83	0.59
04R03061	512	26	0.92	0.94	1.13	10.06	0.83	0.28
04R03062	233	10	0.80	0.79	1.34	7.57	0.59	-0.19
04R03070	1,052	54	0.86	0.89	1.21	12.76	0.74	0.83
04R03080	802	37	0.90	0.92	1.16	9.92	0.80	0.33
04R03081	118	0						0.00
05C00000	947	2			1.00			0.63
05E00000	721	3			1.23			0.00
05I00000	361	0						0.00
05R01010	64	3	2.06	2.06	0.52	0.00	3.93	
05R01011	49	3	1.18	1.23	0.87	5.22	1.41	1.88

05R01012	537	22	1.02	1.04	1.03	9.53	1.01	0.78
05R01013	192	11	0.96	0.99	1.10	7.40	0.90	0.23
05R01050	110	0						0.00
05R01070	434	16	1.00	1.04	1.03	10.50	1.01	0.79
05R02010	1,255	51	1.05	1.09	0.99	9.63	1.09	0.66
05R02011	305	14	1.33	1.26	0.89	11.39	1.42	0.21
05R02012	134	5	1.10	1.10	0.98	6.80	1.12	0.80
05R02013	255	13	0.94	0.95	1.14	6.89	0.83	0.34
05R02014	214	4	0.99	1.02	1.04	8.06	0.98	1.36
05R02020	1,047	48	1.02	1.02	1.07	9.37	0.96	0.49
05R02021	42	2	1.03	1.03	1.05	9.21	0.98	
05R02022	41	0						0.00
05R02023	176	13	1.25	1.25	0.86	2.47	1.45	0.74
05R02030	627	43	1.14	1.08	1.04	17.43	1.04	0.30
05R02031	195	6	1.10	1.08	1.01	10.11	1.07	0.34
05R02032	490	14	1.24	1.26	0.85	9.83	1.50	0.14
05R02033	188	8	1.35	1.34	0.80	3.78	1.68	-0.08
05R02040	464	1	0.97	0.97	1.11	0.00	0.87	
05R02041	202	4	0.99	0.97	1.11	9.20	0.87	-0.94
05R02060	671	35	0.99	1.00	1.10	11.36	0.91	0.67
05R02061	60	1	1.05	1.05	1.02	0.00	1.03	
05R02070	926	52	0.93	0.95	1.17	9.35	0.81	0.17
05R02071	228	19	1.19	1.21	0.89	7.12	1.35	0.48
05R02072	174	12	1.03	1.06	1.04	14.45	1.02	0.14
05R02073	177	0						0.00
05R02074	250	17	1.00	1.01	1.08	7.09	0.94	0.67
05R02080	1,089	47	1.00	1.02	1.07	6.60	0.96	0.83
05R02081	33	1	1.21	1.21	0.89	0.00	1.37	

05R02082	137	12	1.00	1.02	1.06	6.76	0.97	0.60
05R02083	47	5	1.08	1.13	0.94	10.81	1.21	-0.32
05R03010	526	23	1.00	1.01	1.07	10.57	0.94	0.59
05R03011	103	4	1.01	1.00	1.04	5.32	0.96	1.07
05R03012	216	0						0.00
05R03020	991	46	0.96	1.01	1.07	18.74	0.95	0.74
05R03030	1,556	98	0.94	0.97	1.12	12.71	0.86	0.32
05R03040	666	22	0.92	0.94	1.15	7.63	0.82	0.43
05R03041	473	25	0.93	1.00	1.10	14.97	0.92	0.26
05R03050	908	49	1.11	1.09	0.99	14.96	1.10	0.76
05R03060	2,957	168	0.95	0.97	1.12	11.92	0.87	0.55
05R03061	255	26	0.86	0.89	1.22	11.24	0.73	0.22
05R03062	138	9	1.13	1.14	0.95	6.24	1.19	0.01
05R03063	58	1	0.93	0.93	1.16	0.00	0.80	
05R03070	1,463	68	1.00	1.01	1.07	13.14	0.95	0.65
05R03080	933	62	0.98	0.97	1.21	18.21	0.80	0.44
06C00000	1,395	2			1.06			0.16
06E00000	1,505	1			0.79			
06I00000	322	1			0.93			
06R01010	2,027	116	1.07	1.07	0.99	11.45	1.08	0.62
06R01011	89	0						0.00
06R01012	223	13	0.91	0.93	1.12	10.66	0.83	0.48
06R01013	737	17	1.16	1.16	0.90	6.14	1.29	1.06
06R01020	1,408	84	0.93	0.93	1.13	12.31	0.82	0.29
06R01021	458	18	0.94	1.00	1.05	11.79	0.95	0.16
06R01030	2,446	142	1.13	1.13	0.94	9.23	1.20	0.46
06R01031	453	18	0.91	0.93	1.12	8.50	0.83	0.72
06R01032	104	6	0.92	0.94	1.10	5.79	0.86	0.16

06R01040	2,750	118	1.01	1.03	1.02	11.09	1.01	0.70
06R01050	1,345	68	0.86	0.87	1.20	8.88	0.73	0.49
06R01051	495	16	1.08	1.10	0.96	8.80	1.14	0.46
06R01060	1,149	55	0.89	0.92	1.13	10.13	0.81	1.01
06R01070	827	47	1.03	1.04	1.02	11.11	1.02	0.35
06R01071	554	21	1.04	1.05	1.00	8.42	1.05	0.85
06R01072	102	6	0.98	1.01	1.03	5.80	0.99	1.62
06R01073	808	40	1.13	1.12	0.95	7.86	1.19	0.84
06R01080	1,364	68	0.85	0.89	1.18	9.98	0.76	0.34
06R01081	211	11	1.01	1.02	1.02	3.88	1.00	0.78
06R01082	118	8	1.13	1.12	0.94	9.26	1.20	0.41
06R02010	1,458	55	1.02	1.01	1.04	9.16	0.97	0.80
06R02020	1,867	92	0.96	0.99	1.08	10.61	0.92	0.72
06R02030	1,449	52	0.99	1.00	1.07	9.67	0.93	0.87
06R02040	1,527	57	1.03	1.05	1.00	10.58	1.05	0.82
06R02041	83	1	1.15	1.15	0.90	0.00	1.28	
06R02042	149	10	1.03	1.03	1.02	7.43	1.01	0.59
06R02043	75	1	0.92	0.92	1.13	0.00	0.81	
06R02044	99	9	1.30	1.32	0.79	4.88	1.66	1.21
06R02050	1,796	74	1.01	1.07	1.00	15.97	1.07	0.53
06R02051	167	9	1.23	1.23	0.85	8.35	1.45	1.06
06R02060	1,943	115	1.01	1.05	1.01	10.68	1.05	0.83
06R02061	141	5	0.95	0.97	1.07	4.99	0.90	0.90
06R02070	1,753	75	1.17	1.18	0.89	10.79	1.32	0.81
06R02071	422	24	1.12	1.12	0.94	10.41	1.20	0.04
06R02072	648	41	1.18	1.17	0.90	8.43	1.29	0.22
06R02073	86	4	1.11	1.15	0.91	8.95	1.25	0.02
06R02080	1,612	87	1.03	1.05	1.00	8.87	1.05	0.72

06R02081	357	16	1.30	1.27	0.83	10.90	1.53	0.76
06R02082	205	1	1.05	1.05	0.99	0.00	1.06	
06R02083	105	5	1.07	1.01	1.02	9.13	0.99	1.86
06R03010	1,705	80	0.90	0.92	1.14	9.41	0.80	0.71
06R03011	377	19	1.05	1.06	0.98	10.13	1.08	0.79
06R03012	129	3	1.23	1.23	0.86	10.15	1.44	0.17
06R03020	253	10	1.08	1.06	1.07	6.56	0.99	1.34
06R03030	1,556	81	0.87	0.93	1.15	15.11	0.81	0.02
06R03031	157	5	0.91	0.94	1.11	5.83	0.85	0.63
06R03032	101	0						0.00
06R03040	938	62	0.87	0.89	1.19	12.50	0.75	0.42
06R03042	141	3	1.15	1.24	0.86	11.60	1.45	0.06
06R03050	938	61	0.92	0.93	1.14	10.90	0.81	0.80
06R03051	128	7	1.18	1.13	0.93	9.54	1.21	-0.24
06R03052	258	16	1.04	1.06	0.99	11.87	1.07	1.24
06R03060	2,744	108	0.90	0.93	1.15	13.29	0.81	0.65
06R03061	422	36	1.01	1.02	1.03	7.91	1.00	0.52
06R03062	327	12	0.83	0.86	1.22	8.44	0.71	0.36
06R03070	515	26	0.95	0.98	1.09	13.47	0.90	0.36
06R03071	577	35	0.87	0.88	1.18	7.55	0.75	0.29
06R03080	976	41	1.10	1.12	0.95	10.74	1.17	1.03
06R03081	162	11	0.99	0.97	1.08	9.78	0.90	0.76
06R03082	37	2	0.84	0.84	1.24	9.08	0.68	-6.10
06R03083	83	5	1.15	1.11	0.94	8.08	1.19	0.67
07C00000	749	0						0.00
07E00000	1,029	1			0.30			
07I00000	75	3			0.59			0.00
07R01010	784	27	1.01	1.03	1.01	8.70	1.02	1.03

07R01011	184	7	1.04	1.08	0.95	10.89	1.14	2.43
07R01012	142	9	0.99	1.02	1.01	5.28	1.01	0.67
07R01020	2,380	114	1.05	1.06	0.98	12.93	1.08	0.87
07R01030	286	19	1.12	1.15	0.89	11.28	1.29	1.49
07R01040	17	0						0.00
07R01041	518	43	1.15	1.17	0.88	8.28	1.32	0.22
07R01042	294	19	0.99	1.03	1.00	10.53	1.03	0.42
07R01044	521	42	1.17	1.17	0.88	5.88	1.33	1.25
07R01050	716	48	1.10	1.10	0.94	9.77	1.17	1.04
07R01051	1,032	69	1.10	1.07	0.98	7.46	1.09	0.75
07R01052	268	8	1.06	1.10	0.92	8.93	1.20	1.22
07R01060	633	46	1.03	1.05	0.98	8.83	1.07	1.06
07R01061	510	34	1.03	1.04	1.00	11.50	1.04	0.63
07R01062	472	22	1.16	1.18	0.88	9.90	1.34	0.89
07R01070	1,505	76	1.16	1.17	0.88	9.74	1.33	0.95
07R01080	665	26	1.00	1.02	1.03	9.75	0.99	0.79
07R01081	51	3	0.89	0.89	1.23	7.44	0.72	0.87
07R01082	169	0						0.00
07R02010	495	15	1.05	1.06	0.99	5.06	1.07	1.18
07R02020	600	12	1.20	1.18	0.84	8.17	1.41	1.12
07R02021	309	0						0.00
07R02030	596	11	1.07	1.08	1.03	8.57	1.05	1.08
07R02040	520	24	1.04	1.10	0.97	9.14	1.13	1.05
07R02041	255	12	1.14	1.15	0.90	5.03	1.28	0.54
07R02042	330	14	1.19	1.23	0.83	6.79	1.48	2.34
07R02043	233	0						0.00
07R02050	1,011	33	1.11	1.12	0.95	10.55	1.18	0.65
07R02051	609	47	1.17	1.21	0.86	11.70	1.40	0.65

07R02052	187	13	1.14	1.16	0.89	5.36	1.30	0.96
07R02053	81	8	1.32	1.27	0.80	14.47	1.59	1.97
07R02055	205	10	1.14	1.12	0.92	8.15	1.22	1.48
07R02060	547	15	1.11	1.12	0.92	8.17	1.21	1.03
07R02070	166	2	1.10	1.10	1.20	0.00	0.92	-10.63
07R02080	442	13	1.05	1.17	0.91	15.59	1.28	1.17
07R03010	1,044	34	1.05	1.05	1.00	7.22	1.05	0.85
07R03013	1,305	19	1.05	1.03	1.02	8.22	1.01	1.26
07R03020	136	7	1.14	1.08	0.94	8.21	1.16	1.16
07R03021	157	6	0.76	0.79	1.24	20.03	0.64	0.68
07R03030	827	28	1.07	1.05	0.99	8.69	1.06	0.96
07R03031	951	55	1.22	1.19	0.88	8.10	1.35	0.64
07R03032	302	23	1.19	1.18	0.87	6.78	1.35	1.09
07R03040	907	38	1.20	1.15	0.91	10.31	1.26	0.68
07R03041	1,516	58	1.13	1.15	0.91	9.82	1.26	0.49
07R03050	911	14	1.02	1.03	1.02	10.25	1.02	0.71
07R03051	60	3	1.01	1.10	0.88	16.23	1.24	2.09
07R03052	85	5	0.97	0.98	1.05	8.32	0.93	-0.56
07R03060	550	16	1.16	1.15	0.90	9.21	1.28	1.10
07R03061	146	3	1.06	1.05	0.98	9.26	1.07	0.32
07R03062	134	0						0.00
07R03070	1,176	40	1.03	1.03	1.00	7.53	1.03	0.71
07R03071	43	1	0.86	0.86	1.19	0.00	0.72	
07R03072	20	1	1.04	1.04	0.99	0.00	1.04	
07R03080	669	46	1.13	1.11	0.94	7.98	1.17	0.93
07R03081	931	13	1.11	1.06	0.98	7.43	1.08	0.44
07R03083	54	0						

Commercial and Industrial Parcels

Analyses of sales and the resulting ratio studies for commercial and industrial properties present a unique challenge due to limited sales activity in these classes, the associated lack of a representative sample of sales relative to the universe, and the relative frequency of tie-back and multiple parcel transfers. The latter group requires the summation of appraised value for all parcels included in the sale when calculating assessment to sale price ratio.

The IAAO suggests the following approaches to value by property class:

Type of Property	Valuation Methodology
Residential	Cost & Market
Commercial & Industrial properties, including Apartments	Cost & Income
Special purpose properties	Cost
Exempt properties	Cost

For this mass appraisal, the market/sales approach was not considered a reliable indicator of value; therefore, a market/sales approach to value was not developed or relied upon for non-residential properties. Sales were used as a cross-check of developed opinions of value for both the cost and income approach as a test of reasonableness; however, it should be understood that the lack of sales, and their associated lack of a representative sample relative to the universe of commercial and industrial parcels does not provide enough of a statistical confidence to make reasonable associations between settled transactional price points and assessed values. Currently, the assessment industry does not endorse an alternative means of analysis for non-residential properties to evaluate the performance of a reassessment, so the foregoing analysis represents measures of central tendency related to non-residential parcels.

The table below represents the measures of central tendency of each non-residential locale in New Castle County. The information shows the median value, mean value, minimum and maximum value, coefficient of dispersion and standard deviation. Large differences between the median and mean value are indicative of the properties in the locale exhibiting large value ranges. In instances where the minimum value shows zero or \$100 it is due to unique parcels that are either considered common area and thus are not valued or are parcels that are of nominal value due to their unique characteristics (parcels with limited economic or practical utility).

Commercial & Industrial Locale Measures of Central Tendency

Neighborhood	Median	Mean	Minimum	Maximum	COD	SD
01C00000	\$ 596,300	\$ 2,929,085	\$ -	\$ 64,481,800	4.32	\$ 6,190,385
01E00000	\$ 156,300	\$ 1,642,535	\$ -	\$ 49,240,000	10.12	\$ 4,889,235
01I00000	\$ 1,640,100	\$ 3,489,588	\$ 129,000	\$ 33,902,100	1.83	\$ 5,372,076
02C00000	\$ 620,500	\$ 3,528,938	\$ -	\$ 125,130,600	5.28	\$ 11,498,664
02E00000	\$ 291,650	\$ 4,318,288	\$ 100	\$ 292,440,800	14.54	\$ 17,823,388
02I00000	\$ 704,050	\$ 12,845,150	\$ 106,200	\$ 122,220,300	17.95	\$ 33,945,855
03C00000	\$ 374,500	\$ 1,614,980	\$ -	\$ 426,098,500	3.67	\$ 10,212,406
03E00000	\$ 279,300	\$ 1,767,757	\$ 100	\$ 246,112,700	5.69	\$ 8,651,331
03I00000	\$ 368,850	\$ 1,255,200	\$ 100	\$ 29,671,200	2.84	\$ 2,876,088
04C00000	\$ 540,800	\$ 2,128,746	\$ -	\$ 138,869,300	3.32	\$ 7,182,085
04E00000	\$ 130,250	\$ 2,216,059	\$ 100	\$ 207,191,500	16.75	\$ 10,762,769
04I00000	\$ 698,850	\$ 2,617,716	\$ 100	\$ 108,152,700	3.22	\$ 8,626,795
05C00000	\$ 450,400	\$ 2,254,794	\$ -	\$ 265,654,000	4.49	\$ 9,450,732
05E00000	\$ 220,100	\$ 2,993,379	\$ 100	\$ 273,929,100	13.19	\$ 15,128,399
05I00000	\$ 1,734,200	\$ 5,194,508	\$ -	\$ 123,072,800	2.66	\$ 11,897,834
06C00000	\$ 687,300	\$ 3,335,525	\$ -	\$ 134,270,400	4.34	\$ 8,723,668
06E00000	\$ 171,300	\$ 3,343,989	\$ -	\$ 1,106,930,200	19.28	\$ 30,749,014
06I00000	\$ 1,370,500	\$ 3,954,939	\$ -	\$ 89,746,000	2.50	\$ 8,226,465
07C00000	\$ 478,500	\$ 1,661,778	\$ -	\$ 54,118,000	3.00	\$ 4,389,936
07E00000	\$ 154,800	\$ 4,394,179	\$ 100	\$ 246,505,900	28.19	\$ 16,700,733
07I00000	\$ 476,400	\$ 3,923,067	\$ -	\$ 141,832,900	7.92	\$ 16,096,220

Certification

I hereby certify that, to the best of my knowledge and belief:

- The statements of fact contained in this report are true and correct.
- The reported analyses, opinions and conclusions were developed, and this report has been prepared, in conformity with the requirements of the International Association of Assessing Officer's Standards of Professional Appraisal Practice & Ethics.
- The following employees of Tyler assisted in the research and preparation of this report:
 - Richard Borst, PhD, Eric Coakley, Jonathan Clarke, Roger Kelley, Keyshia Minniefield.
- I have no present or prospective interest in the properties that is the subject of this report, and no personal interest with respect to the parties involved.
- I have performed no services, as an appraiser or in any other capacity, regarding the properties that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
- I have no bias with respect to the properties that is the subject of this report or to the parties involved with this assignment.
- My engagement in this assignment was not contingent upon developing or reporting predetermined results.
- My compensation for completing this assignment is not contingent upon the developing or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.




Michael G. McFarlane
DE Certified Assessor
License #: X6-0010047

Date: April 24, 2025

NOT TRANSFERABLE

STATE OF DELAWARE
DIVISION OF PROFESSIONAL REGULATIONCANNON BUILDING
861 SILVER LAKE BLVD., SUITE 203
DOVER, DELAWARE 19904-2467**PROFESSIONAL LICENSE**

PROFESSION:	Real Estate Appraisers
LICENSE TYPE:	Certified Assessor
LICENSE NUMBER:	X6-0010047
LICENSE STATUS:	Active
ISSUE DATE:	05/31/2022
EXPIRATION DATE:	10/31/2025
ISSUED TO:	Michael McFarlane
SIGNATURE:	

THIS CERTIFIES THAT THE PERSON NAMED IS HEREBY LICENSED TO
CONDUCT OR ENGAGE IN THE PROFESSION INDICATED ABOVE.
THIS DOCUMENT IS DULY ISSUED UNDER THE LAWS OF THE STATE OF DELAWARE