

Northeastern Regional Association of  
Assessing Officers

Mystic 2017 Conference

Wednesday, May 24, 2017

John Tuohy et al. v. Town of Groton et al.

Groton Long Point Class Action Lawsuit

### CLAIMS IN PLAINTIFFS' COMPLAINT

1. The Assessor excluded certain Groton Long Point property sales when calculating property values, e.g., estate sales, foreclosures, short sales, and sales followed by renovations, but did not exclude such sales when determining property values in other Groton neighborhoods.
2. When calculating residential building values in Groton Long Point, the Assessor used a manual override to apply a 1.35 adjustment factor to the residential building values Tyler determined.
3. Application of the 1.35 adjustment factor to the residential home increased the assessment on each of the Plaintiffs' properties *above the market value*.
4. The GLP property assessments were not the true and actual values as of the Assessment Date, but rather were *arbitrary, grossly excessive, disproportionate, and unlawful* in that they *failed to properly reflect the true market value* of said properties.
5. The assessments are *manifestly excessive* and could not have been arrived at except by *disregarding the provisions of the statutes* for determining the valuation of said properties.

### CLAIMS PLAINTIFFS ASSERTED AT TRIAL

1. Failure to re-inspect the GLP properties after determining assessment to sales ratio (ASR) based on a 1.2 factor was 88.31%
2. Illegal use of a 1.35 adjustment factor to the residential building component of the property

### ONCE GLP WAS DETERMINED TO BE AN OUTLIER, TOWN HAD DUTY TO RE-INSPECT ALL GLP PROPERTIES

1. Plaintiffs claimed OPM regulations required Defendants, after concluding that GLP's assessment to sales ratio ("ASR") was an outlier, to return to GLP, re-inspect the homes and find out why the GLP ASR was so low before implementing any value changes.
2. OPM property classes include three classifications: **Ex. A - § 12-62i-1(15)**
  - a. Residential

- b. Commercial, including apartments, industrial/public utility
  - c. Vacant land.
3. A single neighborhood is not a property class.
4. Plaintiffs admitted the OPM ratio testing standards apply to property classes, not neighborhoods. **Ex. B** - § 12-62i-3(b)-(c)
5. Plaintiffs agreed the performance factor analysis is performed when the town submits its values for all property classes, not when analyzing the individual neighborhoods.
6. Plaintiffs admitted the *deficiency* referenced in the OPM regulation relates to the analysis for property classes, not individual neighborhoods. **Ex. B** - § 12-62i-3(c)
7. Town had not yet developed the final numbers for the residential property class thereafter to be tested under the OPM certification process when concluding the GLP ASR with the 1.2 adjustment factor was too low. **Ex. B**: § 12-62i-3(c)
8. Town need not re-inspect the properties before concluding what represented the correct adjustment factor and GLP ASR
  - a. Inspections had already been performed
  - b. Tyler had collected and confirmed all relevant data
  - c. *Chamber of Commerce of Greater Waterbury v. City of Waterbury*, 184 Conn. 333
    - i. City inspected 300 of 2800 commercial properties
    - ii. Based on the inspection of 300, City raised the value of all commercial properties, including the other 2500 properties not inspected, by 28%
  - d. Tyler and the Town were very familiar with every GLP property.

**GLP ASR IRRELEVANT IF TOWN PASSED OPM RATIO  
STANDARDS TEST**

1. As long as the town wide residential property class passed the OPM ratio testing standard method, a particular neighborhood ASR is meaningless **Ex. B** - § 12-62i-3(b)
2. An ASR of even 70% for GLP is okay if the town wide residential property class passed the OPM ratio testing method standards.
3. Doesn't matter if the other 12 Groton neighborhoods have ASRs ranging from 92% to 96%.
4. Doesn't matter that GLP property owners with a 70% ASR would incur a smaller % tax burden versus non-GLP property owners with ASR values between 92 and 96%

**MASS APPRAISAL**

1. Mass appraisal is the process of valuing a universe of properties as of a given date using standard methodology employing common data and allowing for statistical testing. **Ex. A** - § 12-62i-1(10)
2. "Methodology that is acceptable shall include but is not limited to *automated valuation models* ... and other generally accepted techniques." **Ex. A** - § 12-62i-1(10)
3. The OPM regulation dealing with minimum standards for computer assisted mass appraisal provides that with respect to residential property the valuation module shall have the capacity to allow for the acceptance, rejection or *adjustment of table or formula derived values*. **Ex. C** - §12-62f-4(a)(2)
4. Objective of the mass appraisal process is to estimate the fair market value of all real estate as of a common date; it cannot determine with certainty the fair market value of any particular property. **Ex. D** - OPM Report Regarding Revaluation Policies and Procedures, p.2.
5. Tyler used the mass appraisal process as defined in the OPM regulations to calculate property values within a range of numbers that approximated fair market value based on valid market sales.

6. Sales prices provide the most objective estimates of market value. **Ex. E**, IAAO Standards on Ratio Studies, §2.1, p. 7.

### **PURPOSE OF REVALUATION**

1. Section 12-62 of the Connecticut General Statutes (CGS) embodies the state's revaluation law. **Ex. D**, OPM Report Regarding Revaluation Policies and Procedures, p.3.
2. Revaluation means to establish the present true and actual value of all real property in a town as of a specific assessment date; "true and actual value" is synonymous with fair market value. **Ex. F**, C.G.S. § 12-62(a)(5), **Ex. A**, OPM regs., § 12-62i-1(19), **Ex. G** - C.G.S. § 12-63(a).
3. The assessor's paramount duty during a revaluation is to determine the true and actual value of all real property in the town for assessment purposes. **Ex. E** - IAAO Standards on Ratio Studies, § 2.1, p. 7; **Ex. D** - OPM Report Regarding Revaluation Policies and Procedures, p. 2.
4. Approximating true and actual value for all homes throughout the town is critical because the purpose of the revaluation is two-fold: determine fair market value per) and provide equity. **Ex. D** - OPM Report Regarding Revaluation Policies and Procedures, p. 34, **Ex. F** - C.G.S. §12-62(a)(5)
5. Equity means to equalize the tax burden throughout the town. **Ex. D** - OPM Report Regarding Revaluation Policies and Procedures, p. 34.

### **TYLER AND ITS CAMA SYSTEM WERE STATE CERTIFIED TO PERFORM REVALUATION**

1. The State of Connecticut certified Tyler and its staff as a revaluation company for the 2011 revaluation.
2. The State of Connecticut also certified Defendants' CAMA system for use in the 2011 Groton revaluation, which system included the variable *location/neighborhood adjustment factor*.
3. The CAMA system is an automated valuation model process. **Ex. A**, OPM regs., § 12-62i-1(10)
  - a. Stores critical date, including the physical characteristics, of the town properties

- b. Capacity to calculate sales/assessment ratios by neighborhood. **Ex. C**, OPM regs., § 12-62f-4(d)

### **THE ADJUSTMENT FACTOR AND ASRs**

1. A systematic evaluation of estimated market values using ratio studies often reveals patterns of over- and under- valuation that can be compensated for by applying adjustment coefficients. **Ex. H**, IAAO Fundamentals of Mass Appraisal, p. 177.
2. Depending on the circumstances, the adjustment coefficients could be applied to the sum of the land and building value estimates, the land value estimates, or the building value estimates. **Ex. H**, IAAO Fundamentals of Mass Appraisal, p. 177.
3. Tyler used a mass appraisal/ cost approach (replacement cost new less depreciation for improvements) procedure to establish residential values. **Ex. C**, OPM regs., § 12-62f-4(a)(2), **Ex. H**, IAAO Fundamentals of Mass Appraisal, p. 177.
4. After Tyler updated and inputted all relevant data in the CAMA system, it calculated the sales ratios for each neighborhood.
5. Ratio studies are a primary mass appraisal testing procedure and the assessor's most important performance analysis tool. **Ex. E**, IAAO Standard on Ratio Studies, § 2.4, p. 8.
6. Such studies assist assessors in providing fair and equitable assessments. **Ex. E**, IAAO Standard on Ratio Studies, § 2.4, p. 8.
7. ASR is the assessment to sales ratio, i.e., the CAMA generated assessed value (100%) compared to the actual valid sale value. **Ex. A**, OPM regs., § 12-62i-1(17); **Ex. D**, OPM Report Regarding Revaluation Policies and Procedures, p. 19.
8. The ideal level of assessment, i.e., ASR, is 100%, meaning the CAMA derived property value based on the mass appraisal process equals fair market value based on the sales set. **Ex. E**, IAAO Standard on Ratio Studies, §9.1, p. 17, **Ex. H**, IAAO Fundamentals of Mass Appraisal, p. 243
9. Town relied on 18 valid GLP sales to determine GLP ASR, initially adding the 1.2 adjustment factor to the dwelling.

10. Town used a 1.2 adjustment factor for GLP dwellings as that was the final GLP adjustment factor used in the 2006 revaluation.
11. The 1.2 adjustment factor applied only to the home, not outbuildings.
12. GLP has certain amenities unique to its neighborhood, not found in the other Groton neighborhoods, including private beaches, recreational areas, docks with many slips, casino and universally restricted on-street parking.
13. The value of the GLP amenities is a component of the sale price; it is part of the total property value.
14. Standard mass appraisal procedure permits use of an adjustment factor to achieve fair and equitable values for appraised properties. **Ex. C**, OPM regs., § 12-62f-4(a)(2), **Ex. H**, IAAO Fundamentals of Mass Appraisal, p. 177.
15. Groton chose to adjust the building value to approximate more closely fair market value for the entire improved parcel because the land value was solid, based on three really good vacant lot sales.
16. One sale was a *water view*; one was an *interior water view*; and one was an *interior with no water view*.
17. IAAO standards for ASR calculation recommend that the ASR should be plus or minus 10% around market value, i.e., between 90 and 110% of market value (100%). **Ex H** - IAAO Fundamentals of Mass Appraisal, p. 243, **Ex. E**, IAAO Standard on Ratio Studies, § 9.1, p. 17.

<b>Neighborhood</b>	<b>Median Assessment to Sales Ratio</b>
Center Groton	<u><b>91.80</b></u>
City of Groton	<u><b>92.99</b></u>
City of Groton – Eastern	<u><b>96.43</b></u>
Poquonock Bridge	<u><b>96.28</b></u>

Neighborhood	Median Assessment to Sales Ratio
Mystic	<u>94.10</u>
Mystic Village	<u>94.37</u>
Noank	<u>95.08</u>
Noank Village	<u>94.69</u>
Old Mystic	<u>96.46</u>
Old Mystic River Road	<u>95.14</u>
<b>Groton Long Point</b>	<u>92.03</u> (with 1.35 adjustment factor applied to the dwelling only) <u>88.31</u> (with 1.2 adjustment factor applied to dwelling only) <u>85.00</u> (with 1.0 factor, i.e., no factor applied to the dwelling)
Pleasant Valley	<u>95.73</u>
Mumford Cove	<u>94.78</u>

18. Defendants concluded a GLP ASR of 88.31 was too low relative to:
- a. Fair market value based on the 18 valid GLP sales (*level of assessment*) and
  - b. ASRs for the twelve other neighborhoods (*uniformity of assessment*).  
**Ex. H**, IAAO Fundamentals of Mass Appraisal, p. 243.
19. The 88.31 GLP ASR using the 1.2 adjustment factor was outside the + or – 10% range recommended by IAAO, a range Tyler adhered to when conducting mass appraisals. **Ex. H**, IAAO Fundamentals of Mass Appraisal, p. 243.



20. After concluding that the ASR resulting from using the 1.2 adjustment factor was too low based on the GLP sales and relative to the ASRs for the other 12 Groton neighborhoods, Tyler calculated various potential GLP ASRs based on multiple adjustment factors. **Ex. H**, IAAO Fundamentals of Mass Appraisal, p. 243.
21. Town ultimately selected an adjustment factor of 1.35 to the dwelling component of the building value to achieve a median GLP ASR of 92.03%.
22. The median GLP ASR of 92.03% is within the ASR range for the other 12 Groton neighborhoods, it's the 2<sup>nd</sup> lowest ASR
  - a. Achieves greater assessment uniformity among the 13 neighborhoods
  - b. Complies with the IAAO ASR guidelines
  - c. Approximates more closely fair market value based on the GLP sales set
23. The OPM regulation concerning market analysis and valuation mandates that all parcels shall be stratified according to property class *and neighborhood*. **Ex. I**, OPM regs., § 12-62i-4(a)(3)(F)(i-ii)
24. Tyler relied on this OPM mandate to justify calculating ASRs for all 13 Groton neighborhoods.
25. Neighborhood means a geographic area of complimentary real property parcels that share similar locational and market value characteristics and may be defined by natural, manmade or political boundaries. **Ex. A** – OPM regs., § 12-62i-1(13), p. 4.
26. Groton is a shoreline town with at least four neighborhoods on the water.
27. Each neighborhood is unique:
  - a. some with interior cookie cutter homes
  - b. some with subdivisions including homes in the \$150,000 - \$200,000 range
  - c. some exclusive shoreline neighborhoods with waterfront locations, improved lots valued as high as 3+ million

28. Because of the variety of neighborhoods in Groton, it is important to stratify the sales set to each neighborhood versus town wide. **Ex. E** - IAAO Standard on Ratio Studies, § 3.3, p. 9.
29. OPM ratio testing standards apply to property classes, but uniformity within strata, i.e., neighborhoods, is still important. **Ex. H** – IAAO Fundamental of Mass Appraisal, p. 198.

### **OPM REVALUATION CERTIFICATION PROCESS**

1. OPM offers two methods to achieve certification. **Ex. J**, OPM regs., § 12-62i-2
  - a. Ratio testing method standard
  - b. Procedural testing method standard
2. Town need certify under only one of the two methods. **Ex. J**, OPM regs., § 12-62i-2
3. Groton chose to certify under the ratio testing method standard. **Ex. B**, OPM regs., § 12-62i-3(b)(1)-(5)
4. The ratio testing method certification process included five performance measures for the various property classes. **Ex. B**, OPM regs., § 12-62i-3(b)(1)-(5)
5. The Town passed the ratio testing method standards the first time it applied the five performance measures to its property class values, experiencing no deficiencies requiring further analysis.

### **TOWN'S LEGAL RESPONSE TO PLAINTIFFS' 12-119 CLAIM**

1. To prevail on their § 12-119 claim, Plaintiffs must prove Town's assessment was:
  - a. manifestly excessive ***and***
  - b. ... could not have been arrived at except by disregarding the provisions of the statutes for determining the valuation of the property.... *E. Ingraham Co. v. Bristol*, 146 Conn. 403, 409, 151

A.2d 700, cert. denied, 361 U.S. 929, 80 S.Ct. 367, 4 L.Ed.2d 352 (1959)....

- c. [The plaintiff] must [set forth] allegations beyond the mere claim that the assessor overvalued the property.
- d. [The] plaintiff ... must satisfy the trier that [a] far more exacting test has been met:
  - i. either there was misfeasance or nonfeasance by the taxing authorities, or
  - ii. the assessment was arbitrary or so excessive or discriminatory as in itself to show a disregard of duty on their part. *Mead v. Greenwich*, 131 Conn. 273, 275, 38 A.2d 795 (1944).
- e. Only if the plaintiff is able to meet this exacting test by establishing that the action of the assessors would result in ***illegality*** can the plaintiff prevail in an action under § 12-119.
- f. The ***focus*** of § 12-119 is whether the assessment is illegal. *Cohn v. Hartford*, 130 Conn. 699, 703, 37 A.2d 237 (1944); *Redding Life Care, LLC v. Town of Redding*, 308 Conn. 87, 105- 106 (2013)
- g. ‘While an insufficiency of data or the selection of an inappropriate method of appraisal could serve as the basis for not crediting the appraisal report that resulted, it could not, absent evidence of misfeasance or malfeasance, serve as the basis for an application for relief from a wrongful assessment under § 12-119. *Second Stone Ridge Cooperative Corp. v. Bridgeport*, 220 Conn. 335, 341-43, 597 A.2d 326 (1991).
- h. ***Misfeasance*** is a default in not doing a lawful act in a proper manner-omitting to do it as it should be done.
- i. ***Malfeasance*** is the doing of an act wholly wrongful and unlawful. Bouvier's Law Dict., in verba.

- j. The term misfeasance is often carelessly used to describe a malfeasance....” Coite v. Lynes, 33 Conn. 109 (1865).
  - k. The Redding court’s focus on whether the assessment resulted from illegal conduct allows one to conclude confidently that the plaintiff must show the assessor committed malfeasance, i.e., the doing of an act wholly wrongful and unlawful. Redding Life Care, supra, 308 Conn. at 106.
  - l. When reviewing a § 12-119, a court must determine whether the taxpayer has proven that the assessment was the result of illegal conduct. Redding Life Care, LLC v. Town of Redding, 308 Conn. 87, 105-106.
2. Plaintiffs’ complaint that there was inadequate substantiation to support application of the 1.35 adjustment factor resembles the type of evidence, i.e., insufficiency of data and the selection of an inappropriate method of appraisal, the Redding court concluded did not trigger a C.G.S. § 12-119 violation without a showing of illegality. Redding, supra, 308 Conn. at 105- 106
  3. The law contemplates that wide discretion should be accorded to assessors, and unless their action is discriminatory or so unreasonable that property is substantially overvalued and thus injustice and illegality result, their opinion and judgment should control in the determination of value for taxation purposes. Federated Department Stores, Inc. v. Board of Tax Review, 162 Conn. 77, 86, 291 A.2d 715 (1971), quoting Burritt Mutual Savings Bank v. New Britain, 146 Conn. 669, 675, 154 A.2d 608 (1959), Uniroyal, Inc. v. Board of Tax Review, 182 Conn. 619, 633-34 n.8 438 A.2d 782 (1981).
  4. Tyler and the Town were eminently qualified to perform the 2011 revaluation.
  5. Tyler and the Town adhered to Connecticut Statutes, OPM regulations and IAAO standards when performing the 2011 revaluation.
  6. Application of the 1.35 adjustment factor was sanctioned by Connecticut Statutes, OPM regulations and IAAO standards

7. Town applied the 1.35 adjustment factor to achieve as closely as reasonably possible fair market value for the GLP properties, uniformity with the 12 other Groton neighborhoods and equalization of the tax burden amongst all property owners.
8. Plaintiffs presented no credible proof of value and no proof whatsoever of illegality

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§ 12-62i-1. Definitions.

**Connecticut Administrative Code**

**Title 12. Taxation**

**62i. Performance-Based Revaluation Testing Standards and Certification of Revaluations Performed by Towns**

*Current through February 3, 2017*

**§ 12-62i-1. Definitions**

As used in section 12-62i-1 to section 12-62i-8, inclusive, of the Regulations of Connecticut State Agencies:

- (1) "Aggregate mean ratio" means the ratio of the sum of the assessments to the sum of the sales prices;
- (2) "Apartment property" means an improved parcel of land devoted to use as a domicile of five or more dwelling units including co-operative ownership by the tenants. Apartment property includes the lot or land that is occupied by an apartment building and other improvements to or on the land;
- (3) "Assessor" means the assessor or board of assessors of any Connecticut town;
- (4) "Cadastral map" means a map drawn to scale displaying for each parcel of real property within a town, dimensions, survey lines, ownership boundaries and a unique identifier;
- (5) "Coefficient of dispersion" means the average absolute deviation of assessment/sales ratios from the median assessment/sales ratio, expressed as a percentage of the median;
- (6) "Commercial property" means an improved parcel of land used for the sale of goods or services including, but not limited to dining establishments, motor vehicle services, warehouse and distribution facilities, retail services, banks, office buildings, multi-purpose buildings that house more than one occupation, commercial condominiums for retail or wholesale use, non-residential living accommodations, recreation facilities, entertainment facilities, hotels, and motels. Commercial property includes the lot or land on which the building(s) is situated and accessory improvements located on a commercial lot such as paving and storage buildings;
- (7) "Company" means a revaluation company as defined in section 12-2c of the Connecticut General Statutes;
- (8) "Industrial property" means an improved parcel of land used for the production or fabrication of durable and non-durable man-made goods from raw materials or

compounded parts including but not limited to manufacturing and processing facilities, industrial condominiums, and mining and quarrying operations. Industrial property includes the lot or land on which the building(s) is situated and accessory improvements located on an industrial lot such as paving, storage buildings and tanks.

- (9) "Market sale" means a sale for the most probable price in cash, terms equivalent to cash, or in other precisely revealed terms, for which the real property will sell in a competitive and open market under all conditions requisite to a fair sale with the buyer and seller each acting prudently, knowledgeably, and assuming the price is not affected by undue stimulus. It includes the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:
- (A) the buyer and seller are typically motivated,
  - (B) both parties are well informed or well advised, and acting in what they consider their best interest,
  - (C) a reasonable time is allowed for exposure in the open market,
  - (D) payment is made in United States' currency or in terms of financial arrangements comparable thereto, and
  - (E) the price represents the normal consideration for the real property sold which is unaffected by special or creative financing or sales concessions granted by anyone associated with the sale;
- (10) "Mass appraisal" means the process of valuing a universe of properties as of a given date using standard methodology, employing common data, and allowing for statistical testing. Methodology that is acceptable shall include, but is not limited to, automated valuation models, adaptive estimation procedure, multiple regression analysis, statistical analysis and other generally accepted techniques;
- (11) "Mean ratio" means the arithmetic average of the ratios;
- (12) "Median ratio" means the value of the middle ratio in an uneven number of ratios arranged or arrayed according to size or the arithmetic average of the two central ratios in an even number of ratios similarly arranged;
- (13) "Neighborhood" means a geographic area of complementary real property parcels that share similar locational and market value characteristics, and may be defined by natural, man-made, or political boundaries;
- (14) "Price related differential" means the ratio of the mean ratio to the aggregate mean;
- (15) "Property class" means any one of the following three major classifications of real property:

- (A) residential;
  - (B) commercial including apartments, industrial and public utility; and
  - (C) vacant land;
- (16) "Public utility" means an improved parcel of land used to provide services to the general public that are typically provided by a public service company as defined in section 16-1 of the Connecticut General Statutes. Public utility property includes the lot or land on which the building(s) is situated and accessory improvements located on the public utility lot such as paving, storage buildings and tanks;
- (17) "Ratio" means the property's assessed valuation divided by the property's sales price;
- (18) "Residential property" means an improved parcel of land devoted to human habitation for use as a domicile of less than five dwelling units. Property used for human habitation includes but is not limited to year round residences, rural residences, condominiums, estates, seasonal residences, and individually owned mobile manufactured homes. Residential property includes the lot or land on which the dwelling is situated, and accessory buildings(s) located on the parcel such as garages, sheds, pools and tennis courts;
- (19) "Revaluation" means the mass appraisal of property to determine the true and actual value of all real property in a town for assessment purposes in accordance with section 12-62 of the Connecticut General Statutes;
- (20) "Sales time period" means the twelve-month period beginning twelve months before the assessment date which is the effective date of a revaluation, provided if the total number of market sales occurring in said period is less than thirty the time period prior to said assessment date shall be extended in three-month increments until the number of market sales having taken place is equal to or greater than thirty, but shall not be extended more than thirty months prior to said assessment date;
- (21) "Secretary" means the Secretary of the Office of Policy and Management, or his designee;
- (22) "Sold" means properties that were transferred during the sales time period, provided such transfers were market sales;
- (23) "Unsold" means properties that were not transferred during the sales time period or were not market sales;
- (24) "Unsold property test" means the ratio of (A) the ratio of the market value of sold properties, to (B) the ratio of the market value of unsold properties where the ratio of the market value of sold properties is the total market value of all sold properties after revaluation to the total market value of all sold properties before revaluation, and the ratio of the market value of unsold properties is the total market value of all unsold properties



after revaluation to the total market value of all unsold properties before revaluation;

- (25) "Vacant Land" means land that is not developed or land lacking in essential appurtenant improvements above and below water, that are required in order for the land to serve a useful purpose. It is land that may be an approved subdivision but is not presently being physically improved or sold as lots.

**Cite as Conn. Agencies Regs. § 12-62i-1**

**History.** Adopted effective January 30, 2001

§ 12-62i-3. Ratio testing standards.

## **Connecticut Administrative Code**

### **Title 12. Taxation**

#### **62i. Performance-Based Revaluation Testing Standards and Certification of Revaluations Performed by Towns**

*Current through February 3, 2017*

#### **§ 12-62i-3. Ratio testing standards**

##### **(a) Compiling Market Value Data**

- (1) A file of all real property sales transactions for the sales time period used shall be established. For each such transaction the following information shall be included in the file: parcel identification number, property location, United States Census Bureau census tract number, date of sale, sales price, property assessment as of the date of the sale, property class, and any other salient property characteristics as of the date of the sale. The sales price of the property and its condition as of the date of the sale should be verified, if possible, with the buyer or seller.
- (2) If the sale property is not considered a market sale as delineated in subdivision (9) of section 12-62i-1 of the Regulations of Connecticut State Agencies, the file shall contain the reason for such determination.
- (3) The file may reflect an adjustment to the property sales price. The reason(s) for the adjustment shall be documented. Reasons for such an adjustment may include, but are not be limited to:
  - (A) The fact that personal property is included in the transaction;
  - (B) The existence of a lease that does not represent market rent, as defined in section 12-63b of the Connecticut General Statutes; and
  - (C) The effects of price changes reflected in the real estate market between the date of sale and the assessment date that is the effective date of a revaluation.

##### **(b) Prior to finalizing a revaluation, the assessor shall conduct the following tests regarding the assessments derived from such revaluation. The assessments resulting from the revaluation shall be deemed sufficient, provided the following criteria are met:**

- (1) the overall level of assessment for all property classes shall be within plus or minus ten percent of the required seventy percent assessment ratio, as measured by the

overall median ratio, and

- (2) the level of assessment for each property class with fifteen or more market sales shall be within plus or minus five percent of the median overall level of assessment for each property class, and
  - (3) the coefficient of dispersion for each property class with fifteen or more market sales shall be equal to or less than fifteen percent for all property, equal to or less than fifteen percent for residential property, equal to or less than twenty percent for commercial property, and equal to or less than twenty percent for vacant land, and
  - (4) the price related differential for all properties and for each property class for which there are fifteen or more market sales shall be within 0.98 and 1.03, and
  - (5) the unsold property test result shall be between 0.95 and 1.05.
- (c) In the event that the criteria described in subdivision (1), (2), (3), (4) or (5) of subsection (b) of this section are not met, the assessor shall, prior to the implementation of the revaluation, further analyze and refine the data elements or methods used in the revaluation. The assessor shall revalue the parcels of real property for which a deficiency in either the level of assessment or the uniformity of assessments has been identified.

**Cite as Conn. Agencies Regs. § 12-62i-3**

**History.** Adopted effective January 30, 2001

§ 12-62f-4. Valuation module.

## Connecticut Administrative Code

### Title 12. Taxation

#### 62f. Minimum Standards for Computer Assisted Mass Appraisal

*Current through February 3, 2017*

#### **§ 12-62f-4. Valuation module**

- (a) The valuation module shall provide for the determination of the value of all real property based upon accepted appraisal methodology, using a table- or formula-driven system. At a minimum, the valuation module shall have the ability to perform the tasks described in this subsection and shall also allow for the editing of the data fields described in this section.
- (1) With respect to land, the valuation module shall have the capacity to compute value based upon one or more of the following: Square feet; acreage; standard lot size; frontage/depth; and/or unit. In addition, said module shall allow for the editing of land values based upon market-derived adjustment factors, using at least two of the following: Unit value; fractional acreage; and front foot adjusted for depth.
  - (2) With respect to residential property, the valuation module shall have the capacity to: Compute replacement cost new, less depreciation; provide user-modifiable tables or formulas for various types of buildings; provide user-modifiable depreciation tables for age and condition variables; compute the value of each yard improvement (e.g., swimming pool, tennis court, detached garage, and shed); allow for the acceptance, rejection or adjustment of table- or formula-derived values; allow for on-line sketch input; provide for the automatic computation of total square footage; provide for the automatic computation of gross living area; and provide for the computation of other area measurement(s) as defined by the user. In addition, the valuation module shall have the capacity to allow user-modifiable selection criteria to identify up to three properties that are most comparable to the property for which a value is being determined.
  - (3) With respect to apartment, commercial and industrial properties, the valuation module shall have the capacity to: Compute replacement cost new, less depreciation; provide user-modifiable tables or formulas for various types of structures or buildings; provide user-modifiable depreciation tables for age and condition variables; compute the value of each yard improvement (e.g., paving, and fencing); allow for the acceptance, rejection or adjustment of table- or formula-derived values; and provide for the automatic computation of total square footage.

In addition, said module shall have the capacity to compute the value of property using the income approach, by use of the direct capitalization method.

- (b) The valuation module shall also have the capacity to: Print a property record card with the appropriate fields listed in the data management module; allow flexibility of design of the data printed on a property record card, based on the discretion of assessor; provide for the random printing of cards; provide for the printing of sketches showing dimensions; ensure the closure of such sketches; and provide for the creation of multi-page property record cards for a parcel.
- (c) The valuation module shall include a general report writer capable of printing to screen and hard copy, and/or providing the data listed in the data management module to a magnetic diskette. In addition, such application shall have the capacity to produce reports for statistical and comparable sales analysis based upon predefined and user-defined criteria.
- (d) The valuation module shall have the capacity to calculate, print reports and output to standard analytical software programs the following measurements and sales/assessment ratios by property type and neighborhood: Sales prices; assessments; the mean sales/assessment ratio; the median sales/assessment ratio; the coefficient of dispersion; the standard deviation; the coefficient of variation; and the price-related differential.

**Cite as Conn. Agencies Regs. § 12-62f-4**

**History.** Effective July 26, 1996

**STATE OF CONNECTICUT**  
**REPORT REGARDING**  
**REVALUATION**  
**POLICIES AND PROCEDURES**



**MARC S. RYAN, SECRETARY**  
**OFFICE OF POLICY AND MANAGEMENT**

**DECEMBER 27, 2004**

Exhibit D

## Revaluation – An Overview

The State of Connecticut has long required towns to revalue all real estate on a periodic basis – a policy embraced not only by our state, but by nearly every taxing jurisdiction in the nation.

According to the *Dictionary of Real Estate Appraisal (Third Edition)* published by the Appraisal Institute, revaluation is the “mass appraisal of all property within an assessment jurisdiction to equalize assessed values.” The objective of a mass appraisal process is to estimate the fair market value of all real estate (a term that is synonymous with the term real property) as of a common date.

Under Connecticut law, the assessment of each parcel of real property represents 70% of its fair market value as of the date of a revaluation. Unless there is physical change to a property (e.g., the construction of an improvement or a structure’s demolition), its assessment remains unchanged until the next revaluation, when the property’s fair market value is determined again.

*Black’s Law Dictionary (Fifth Edition)* defines fair market value as:

“The amount at which property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or sell and both having reasonable knowledge of the relevant facts. By fair market value is meant the price in cash, or its equivalent, that the property would have brought at the time of taking, considering its highest and most profitable use, if then offered for sale in the open market, in competition with other similar properties at or near the location of the property taken, with reasonable time allowed to find a purchaser.”

Demand for property and the available supply are arguably the primary factors influencing the real estate market. Reaction to supply and demand considerations and to other economic, social and legal factors determines the prices that people pay for real estate.

Potential purchasers of different types of real property (e.g., residential, commercial or industrial) react to different market influences. For example, the reputation of a local school system could play a more important part in determining the choice of a community in which a family with young children chooses to reside than it would for a manufacturer, to whom the availability of skilled labor and access to transportation may be more important.

As a result, changes in the fair market values of real estate of different property classes do not occur at the same rate and inequities in assessment levels develop over time. Additionally, fair market values of real estate in the same property class may change at a different rate than other property in that class (e.g., residential waterfront property and residential property not located on the waterfront).

A revaluation eliminates these inequities in assessment levels and equalizes the tax burden among property owners.

## History of Recent Changes to Connecticut's Revaluation Statute

Section 12-62 of the Connecticut General Statutes (CGS) embodies the state's revaluation law. For most of the last century, Connecticut assessors had to revalue real property once every ten years.

As early as 1930, Connecticut law required assessors to "view all of the real estate in their respective municipalities..." when they conducted a revaluation. This wording remained unchanged for almost six decades.

Public Act 89-251 amended CGS §12-62 by adding the words "by physical observation" after the word "view", and Public Act 97-254 changed the word "observation" to "inspection" in this statute. There is little in the legislative record concerning these changes in terminology. Additionally, there is little in recent case law that addresses "view" or "view by physical inspection."<sup>1</sup>

*Black's Law Dictionary (Fifth Edition)* defines inspection as follows:

"To examine; scrutinize; investigate; look into; check over; or view for the purpose of ascertaining the quality, authenticity or conditions of an item, product, document, residence, business, etc."

The word "statistical" first appeared in CGS §12-62 by virtue of the amendment contained in Public Act 89-251, the provisions of which allowed assessors to conduct a revaluation by use of a statistical method of adjusting values within five years of a revaluation that included viewing real estate by physical observation. Additionally, this legislation created a program of property tax credits and surcharges that a town with a residential property effective tax rate of 1.5% or more following revaluation, could choose to implement. A town that does so has to revalue all real estate by use of a statistical adjustment of assessed values, not later than five years after the program's implementation. (See page 24 for information concerning this program.)

The amendment in Public Act 89-251 also required the Office of Policy and Management to adopt regulations concerning methods of performing such statistical value adjustments. *Acceptable Methods for Conducting a Statistical Revaluation* became effective June 21, 1990 (i.e., §12-62-1 to 12-62-4, inclusive, of the Regulations of Connecticut State Agencies) in compliance with this requirement.<sup>2</sup>

Members of the assessment community and others began to characterize revaluations as "statistical" or "physical", even though no statutory definition of these terms exists. Also, as the *Handbook for Connecticut Assessors* published by the Connecticut Association of Assessing Officers (the educational and professional organization for the state's assessors) states:

"It should be noted that while assessors and others continue to refer to revaluations as 'physical' or 'statistical' in nature, neither term is



increase notice. Assessors mail these notices on or after the assessment date and on or before the tenth day following that on which the grand list is signed.

Although not required by law, assessors also generally provide an "informal appeal" process before signing the grand list in a revaluation year. The term "informal appeal" distinguishes an appeal that a taxpayer makes during a meeting with a person who is not a member of a Board of Assessment Appeals, from an appeal made to that board.

In a revaluation year, property owners receive notice that that they may schedule a meeting to discuss a valuation with which they disagree. During informal appeals, taxpayers are able to correct any factual errors concerning their properties and often obtain information about the revaluation process.

A taxpayer who is dissatisfied with the outcome of an informal appeal can request a hearing with the members of a Board of Assessment Appeals, pursuant to CGS §12-111, as amended by Section 3 of Public Act 03-269.

If dissatisfied by the decision a Board of Assessment Appeals renders, a taxpayer may file an appeal with the Superior Court for the district in which the taxpayer's property is located, pursuant to CGS §12-117a.

## **Measuring Assessment Levels**

For each property that sells under conditions that make the transaction a fair market sale, the relationship between the property's assessment and its selling price is the measure of the property's current level of assessment. This relationship – the assessment divided by the selling price – is the property's sales/assessment ratio.

A home that sold for \$170,000 in September of 2001 could easily have a fair market value of \$255,000 today. If the town in which the home is located implemented a revaluation on October 1, 2001, the assessment of this residential property is approximately \$119,000. As a result, the current level of assessment for this home is 46.7%, rather than the 70% assessment level effective in the revaluation year.

Similarly, a commercial property that sold for \$185,000 in September of 2001 may have a current fair market value of \$222,000. Based on the same revaluation implementation date, its assessment is \$129,500 – 58.3% of the property's current value.

By looking at the total of sales/assessment ratios for all property of a similar type, one can determine, in a general way, the current level of assessment for different property classes. The difference between the current level of assessment for each property class and the 70% assessment level effective in a revaluation year is an indication of market trends that have occurred since property values were last equalized.

## Summary of Findings

- Revaluation is a necessary local governmental function that exists to equalize real property assessments and resultant property tax burdens.
- The longer the period of time between revaluations, the greater is the potential of exacerbating shifts in the property tax burden among property classes. For this reason, the trend in taxing jurisdictions across the nation has been to reduce the time period between revaluations.
- Given the recent real estate market in Connecticut, even a relatively brief period of time between revaluations can lead to dramatic transfers of property tax burdens among property classes. This occurred recently in many towns due to the disparate rate by which residential property values increased, as compared to rate of valuation increase for other property classes.
- Complaints about property tax increases (especially those voiced by residential property owners) rather than the policies and regulations governing revaluation, appear to be the impetus for legislation enacted in 2003 and 2004.
- An unintended effect of recently enacted legislation may be an increase in municipal costs in years to come, based on the fact that there will be greater demand for the services of certified revaluation companies in certain years, and a lesser demand in others.
- Such legislation may also result in an intensification of property tax burden shifts when towns that opted to defer revaluation ultimately equalize real property assessments.
- Property inspections are a means of collecting data. For every revaluation that occurs, some property inspections take place.
- Requiring inspections of all real property for a specific revaluation (rather than allowing them to occur over time) is a disincentive to more frequent revaluations.
- More frequent revaluations should be encouraged. Equalizing the real property tax base more often to eliminate assessment level inequities can mitigate the impact of property tax burdens shifts between real property classes, or among taxpayers within a property class.

# Standard on Ratio Studies



Approved April 2013

## **INTERNATIONAL ASSOCIATION OF ASSESSING OFFICERS**

The assessment standards set forth herein represent a consensus in the assessing profession and have been adopted by the Executive Board of the International Association of Assessing Officers. The objective of these standards is to provide a systematic means by which concerned assessing officers can improve and standardize the operation of their offices. The standards presented here are advisory in nature and the use of or compliance with such standards is purely voluntary. If any portion of these standards is found to be in conflict with the Uniform Standards of Professional Appraisal Practice (USPAP) or state laws, USPAP and state laws shall govern.

## Exhibit E

## *Standard on Ratio Studies*

### Part 1. Guidance for Local Jurisdictions

This standard comprises two major parts. Part 1 focuses on the needs of local assessors. Part 2 presents guidelines for oversight agencies that use ratio studies for equalization and appraisal performance monitoring. The Definitions section explains the terms used in this standard. The appendixes present many technical issues in greater detail. More information on many topics addressed in this standard can be found in Property Appraisal and Assessment Administration (IAAO 1990, chapter 20) and in Gloude-mans (1999, chapter 5).

#### 1. Scope

This part of the standard provides recommendations on the design, preparation, interpretation, and use of ratio studies for the real property quality assurance operations of an assessor's office. Quality assurance/control measures include data integrity review, assessment level and uniformity analysis, and computer-assisted mass appraisal (CAMA) system performance testing, among others.

Assessors may have the opportunity to utilize ratio study information at a greater depth than oversight agencies. These internal studies can help improve appraisal methods or identify areas within the jurisdiction that need attention. External ratio studies conducted by oversight agencies (Part 2) focus more upon testing the assessor's past performance in a few broad property categories.

#### 2. Overview

For local jurisdictions, *ratio study* is used as a generic term for sales-based studies designed to evaluate appraisal performance. The term is used in preference to the term *assessment ratio study* because use of assessments can mask the true level of appraisal and confuse the measurement of appraisal uniformity when the legal assessment level is other than 100 percent of fair market value.

#### 2.1 The Concepts of Market Value and Appraisal Accuracy

Market value is the major focus of most mass appraisal assignments. The major responsibility of assessing officers is estimating the market value of properties based on legal requirements or accepted appraisal definitions. The viability of the property tax depends largely on the accuracy of such value estimates. The accuracy of appraisals made for assessment purposes is therefore of concern, not only to assessors but also to taxing authorities, property taxpayers, and elected representatives. Appraisal accuracy refers to the degree to which properties are appraised at

market value, as defined by professional standards (see *Glossary for Property Appraisal and Assessment* [IAAO 1997]) and legal requirements. While a single sale may provide an indication of the market value of the property in question, it cannot form the basis for a ratio study, which provides information about the market values of groups of properties. Dividing the appraised value by the sale price forms the ratios. The ratio can be multiplied by 100 and expressed as a percentage.

Market value is a concept in economic theory and cannot be observed directly. However, market values can be represented in ratio studies by sales prices (market prices) that have been confirmed, screened, and adjusted as necessary (see Appendix A, "Sales Validation Guidelines"). Sales prices provide the most objective estimates of market values and under normal circumstances should provide good indicators of market value.

#### 2.2 Aspects of Appraisal Performance

There are two major aspects of appraisal accuracy: level and uniformity. Appraisal level refers to the overall ratio of appraised values to market values. Level measurements provide information about the degree to which goals or certain legal requirements are met. Uniformity refers to the degree to which properties are appraised at equal percentages of market value.

#### 2.3 Uses of Ratio Studies

Key uses of ratio studies are as follows:

- measurement and evaluation of the level and uniformity of mass appraisal models
- internal quality assurance and identification of appraisal priorities
- determination of whether administrative or statutory standards have been met
- determination of time trends
- adjustment of appraised values between reappraisals

Assessors, appeal boards, taxpayers, and taxing authorities can use ratio studies to evaluate the fairness of funding distributions, the merits of class action claims, or the degree of discrimination (see Appendix G). However, ratio study statistics cannot be used to judge the level of appraisal of an *individual* parcel. Such statistics can be used to adjust assessed values on appealed properties to the common level.

## 2.4 Applicability

Local jurisdictions should use ratio studies as a primary mass appraisal testing procedure and their most important performance analysis tool. The ratio study can assist such jurisdictions in providing fair and equitable assessment of all property. Ratio studies provide a means for testing and evaluating mass appraisal valuation models to ensure that value estimates meet attainable standards of accuracy; see *Uniform Standards of Professional Appraisal Practice (USPAP) Standard Rule 6-6* (Appraisal Foundation 2010-2011). Ratio study reports are typically included as part of the written documentation used to communicate results of a mass appraisal and to comply with *Standard Rule 6-7(b)*. Ratio studies also play an important role in judging whether constitutional uniformity requirements are met. Compliance with state or provincial performance standards should be verified by the local jurisdiction before value notices are sent to property owners.

## 3. Steps in Ratio Studies

Ratio studies generally involve the seven basic steps listed below.

1. define the purpose, scope and objectives
2. design
3. stratification
4. collection and preparation of market data
5. matching of appraisal and market data
6. statistical analysis
7. evaluation and use of results

### 3.1 Definition of the Purpose, Scope, and Objectives

The first step in any ratio study is to determine and state clearly the reasons for the study. This crucial step of identifying the purpose of the study determines the specific goals, scope, content, depth, and required flexibility.

### 3.2 Design

In the design of the study the assessor must consider the quantity of sale data and the resources available for conducting the ratio study. Although absolute accuracy cannot be ensured, all reasonable, cost-effective steps should be taken to maximize reliability.

The assessor should identify the following factors:

- the groups or classes of properties to be included in the study
- important legal, physical, and economic characteristics of the properties selected for study
- the quantity and quality of data available

- the values being tested and sales period being used
- available resources, such as the number and expertise of staff, computer hardware and software applications, and additional limiting conditions

### 3.2.1 Level of Sophistication and Detail

A basic design principle is to keep the study as simple as possible while consistent with its purpose. Ratio studies are not all alike and should be tailored to an intended use.

Data analysis has been made easier through computerization. Although every study does not require the same level of statistical detail, each ratio study should include measures of appraisal level, appraisal uniformity, and statistical reliability. Graphs, charts, or other pictorial representations can be useful tools for showing distributions and patterns in the data. There is no model ratio study design that can serve all jurisdictions or all situations equally well. Informed, reasoned judgment and common sense are required in the design of ratio studies.

### 3.2.2 Sampling

A ratio study is a form of applied statistics, because the analyst draws conclusions about the appraisal of the population (the entire jurisdiction) of properties based only on those that have sold during a given time period. The sales ratios constitute the sample that will be used to draw conclusions or inferences about the population.

To determine the accuracy of appraisals with absolute certainty, it would be necessary for all properties in the population to have been sold in arm's-length, open-market transfers near the appraisal date. Since this is not possible, ratio studies must use samples and draw inferences or conclusions about the population from these samples.

The number of parcels in the population (the jurisdiction or stratum) is not an important determinant of a statistically valid and reliable sample.

#### 3.2.2.1 Limitations of Sale Samples

Users of sales ratio studies should be aware of the following cautions associated with use of sale samples:

- Depending on the circumstances, sales prices can provide either useful or poor indications of market values. Sales must be screened to eliminate those that don't meet the requirements of arm's-length, open-market sales (see *Standard on Verification and Adjustment of Sales* [IAAO 2010]).
- Sales are not "randomly selected" from the population, in the strict technical sense (see section 4.5, Sample Representativeness).
- Value-related characteristics of a sale sample may not represent all the value-related characteristics of the population.

- Adjustments to sale prices may be difficult to support or may be subjective.

### 3.2.2.2 Data Accuracy and Integrity

The findings of a ratio study can only be as accurate as the data used in the study. Personnel involved in collecting, screening, and adjusting sales data or making appraisals should be familiar with real estate conveyance practices in their region. They also should be proficient in the principles and practices of real estate appraisal and understand local market conditions.

Accuracy and integrity of data entered into or transferred through computer systems must be ensured. Design of computer programs should make it easy to verify data accuracy. Query tools should be accessible to users, so that data can be verified easily. Methods for checking the accuracy of assigned strata (such as school district, city, neighborhood, and category) as well as of assessed or appraised value, sale price, parcel identifier, and other fields must be established to reduce these and other nonsampling errors.

## 3.3 Stratification

Stratification divides all the properties within the scope of the study into two or more groups or strata. Stratification facilitates a more complete and detailed picture of appraisal performance and can enhance sample representativeness.

Each type of property subject to a distinct level of assessment could constitute a stratum. Other property groups, such as neighborhoods and age and size ranges, could constitute additional strata.

When the purpose of the study is to evaluate appraisal quality, flexibility in stratification is essential. The general goal is to identify areas in which the assessment levels are too low or lack uniformity and property groups for which additional reappraisal work may be required. In such cases, it also is highly desirable to stratify on the basis of more than one characteristic simultaneously.

Stratification can help identify differences in level of appraisal between property groups. In large jurisdictions, stratification by geographic areas is generally more appropriate for residential properties, while stratification of commercial properties by either geographic area or property subtypes (e.g., office, retail, and warehouse/industrial) can be more effective.

## 3.4 Collection and Preparation of Market Data

The reliability of a ratio study depends in part on how well the sales used in the study reflect market values. The underlying principle for review of sales data is to optimize the sample size, but at the same time to exclude sales that provide invalid indicators of market value. A ratio study

sample with fewer than five sales tends to have exceptionally poor reliability and is not very useful.

## 3.5 Matching of Appraisal and Market Data

The physical and legal characteristics of each property used in the ratio study must be the same as when sold. This implies two essential steps. First, the appraiser must ascertain whether the property descriptions match. If a parcel is split between the appraisal date and the sale date, a sale of any of its parts should not be used in the ratio study.

Second, the appraiser must ascertain whether the property rights transferred, the permitted use, and the physical characteristics of the property on the date of assessment are the same as those on the date of sale. If the physical characteristics of the property have changed since the last appraisal, adjustments may be necessary before including the property in a ratio study. Properties with significant differences in these factors should be excluded from the ratio study.

When statutory constraints are imposed on appraisal methods, the resulting assessment may be less than market value. In such cases a sales ratio study may not provide useful performance information. Constraints typically apply to land that qualifies for agricultural use value, subsidized housing, mineral land, and timberland.

Sales may include property of a type other than the type for which the ratio study analysis is intended. However, sales including more than minimal values of secondary categories are unlikely to be representative, even with adjustment.

For example, a property that is predominantly commercial may include residential components. This sale can be included as representative of the commercial category. In this case, the numerator in the ratio calculation would be the total appraised value including the value of both the commercial and residential components.

In a second example, for a ratio study of vacant land, the numerator in the ratio should reflect only the appraised value of the land. The sale price should be adjusted for the contributory value of the improvements or the sample should be excluded from further analysis.

## 3.6 Statistical Analysis

After sales have been screened and matched against assessed values, ratios computed, and outliers identified and removed if appropriate, measures of appraisal level, uniformity, and reliability for the entire jurisdiction and each group or stratum should be computed. The sample also could undergo exploratory data analysis to reveal patterns or features of the data (Hoaglin, Mosteller, and Tukey 1983).

- date and tax year of the appraisals being evaluated
- number of parcels in each stratum
- number of sales
- number of sales trimmed from the study
- measures of central tendency (appraisal level)
- measures of uniformity (variability) and price-related biases
- confidence interval (measures of reliability) about the measures of central tendency
- summary of adjustments made to sales prices

In addition, there should be a description of the steps taken to ensure that sold and unsold properties were valued and described consistently. If the sold and unsold properties were not treated identically, the documentation should characterize the differences discovered between them.

### 8.3 Analyses and Conclusions

An objective statement of the results of the ratio study should be prepared. If the study is one in a series, a comparison of the results with those of previous studies can be helpful.

### 8.4 Documentation

Ratio study procedures should be documented thoroughly. This documentation should take three forms. First, a general guideline should explain the design of the study. This guideline should be updated whenever procedures are changed. Second, all software applications should be documented so that the program logic can be reviewed and modified as needed. Third, a user's manual should explain how to execute the study or run the software.

### 8.5 Training and Education

The effectiveness of ratio studies can be improved through education and training. Assessment supervisors should conduct seminars or workshops for the appraisal staff to explain how to interpret reports, how ratio studies can be used to improve appraisal performance, and how the results will be used in-house.

### 9. Ratio Study Standards

Each local jurisdiction should have ratio study performance standards. Local standards should be consistent with state or provincial standards. The standards summarized in table 1-3 are suggested for jurisdictions in which current market value is the legal basis for assessment. In general, when these standards or other local standards are not met, reappraisal or other corrective measures should be taken.

All standards recommended in this section are predicated on the assumption that steps have been taken to maximize representativeness and validity in the underlying ratio study.

#### 9.1 Level of Appraisal

In analyzing appraisal level, ratio studies attempt to measure statistically how close appraisals are to market value (or to a required statutory constraint that can be expressed as a percentage of market value) on an overall basis. While the theoretically desired level of appraisal is 1.00, an appraisal level between 0.90 and 1.10 is considered acceptable for any class of property. However, each class of property must be within 5 percent of the overall level of appraisal of the jurisdiction (see Section 9.2.1 in this part). Both criteria must be met. By themselves, the calculated measures of central tendency provide only an indication, not proof, of whether the level meets the appropriate goal. Confidence intervals and statistical tests should be used

**Table 1-3.** Ratio Study Uniformity Standards indicating acceptable general quality\*

Type of property—General	Type of property—Specific	COD Range**
Single-family residential (including residential condominiums)	Newer or more homogeneous areas	5.0 to 10.0
Single-family residential	Older or more heterogeneous areas	5.0 to 15.0
Other residential	Rural, seasonal, recreational, manufactured housing, 2-4 unit family housing	5.0 to 20.0
Income-producing properties	Larger areas represented by large samples	5.0 to 15.0
Income-producing properties	Smaller areas represented by smaller samples	5.0 to 20.0
Vacant land		5.0 to 25.0
Other real and personal property		Varies with local conditions

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

*\* Appraisal level for each type of property shown should be between 0.90 and 1.10, unless stricter local standards are required.*

*PRD's for each type of property should be between 0.98 and 1.03 to demonstrate vertical equity.*

*PRD standards are not absolute and may be less meaningful when samples are small or when wide variation in prices exist. In such cases, statistical tests of vertical equity hypotheses should be substituted (see table 1-2).*

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

§ 12-62. Revaluation of real property. Regulations. Treatment of certain Indian lands.

## Connecticut Statutes

### Title 12. TAXATION

#### Chapter 203. PROPERTY TAX ASSESSMENT

*Current through the 2016 Regular and First Special Sessions*

#### **§ 12-62. Revaluation of real property. Regulations. Treatment of certain Indian lands**

- 
- (a) As used in this chapter:
- (1) "Assessor" means the person responsible for establishing property assessments for purposes of a town's grand list and includes a board of assessors;
  - (2) "Field review" means the process by which an assessor, a member of an assessor's staff or person designated by an assessor examines each parcel of real property in its neighborhood setting, compares observable attributes to those listed on such parcel's corresponding property record, makes any necessary corrections based on such observation and verifies that such parcel's attributes are accounted for in the valuation being developed for a revaluation;
  - (3) "Full inspection" or "fully inspect" means to measure or verify the exterior dimensions of a building or structure and to enter and examine the interior of such building or structure in order to observe and record or verify the characteristics and conditions thereof, provided permission to enter such interior is granted by the property owner or an adult occupant;
  - (4) "Real property" means all the property described in section 12-64 ;
  - (5) "Revaluation" or "revalue" means to establish the present true and actual value of all real property in a town as of a specific assessment date;
  - (6) "Secretary" means the Secretary of the Office of Policy and Management, or said secretary's designee; and
  - (7) "Town" means any town, consolidated town and city or consolidated town and borough.
- (b) (1) Commencing October 1, 2006, each town shall implement a revaluation not later than the first day of October that follows, by five years, the October first assessment date on which the town's previous revaluation became effective, provided, a town that opted to defer a revaluation, pursuant to section 12-62f, shall



implement a revaluation not later than the first day of October that follows, by five years, the October first assessment date on which the town's deferred revaluation became effective. The town shall use assessments derived from each such revaluation for the purpose of levying property taxes for the assessment year in which such revaluation is effective and for each assessment year that follows until the ensuing revaluation becomes effective.

- (2) When conducting a revaluation, an assessor shall use generally accepted mass appraisal methods which may include, but need not be limited to, the market sales comparison approach to value, the cost approach to value and the income approach to value. Prior to the completion of each revaluation, the assessor shall conduct a field review. Except in a town that has a single assessor, the members of the board of assessors shall approve, by majority vote, all valuations established for a revaluation.
  - (3) An assessor, member of an assessor's staff or person designated by an assessor may, at any time, fully inspect any parcel of improved real property in order to ascertain or verify the accuracy of data listed on the assessor's property record for such parcel. Except as provided in subdivision (4) of this subsection, the assessor shall fully inspect each such parcel once in every ten assessment years, provided, if the full inspection of any such parcel occurred in an assessment year preceding that commencing October 1, 1996, the assessor shall fully inspect such parcel not later than the first day of October of 2009, and shall thereafter fully inspect such parcel in accordance with this section. Nothing in this subsection shall require the assessor to fully inspect all of a town's improved real property parcels in the same assessment year and in no case shall an assessor be required to fully inspect any such parcel more than once during every ten assessment years.
  - (4) An assessor may, at any time during the period in which a full inspection of each improved parcel of real property is required, send a questionnaire to the owner of such parcel to (A) obtain information concerning the property's acquisition, and (B) obtain verification of the accuracy of data listed on the assessor's property record for such parcel. An assessor shall develop and institute a quality assurance program with respect to responses received to such questionnaires. If satisfied with the results of said program concerning such questionnaires, the assessor may fully inspect only those parcels of improved real property for which satisfactory verification of data listed on the assessor's property record has not been obtained and is otherwise unavailable. The full inspection requirement in subdivision (3) of this subsection shall not apply to any parcel of improved real property for which the assessor obtains satisfactory verification of data listed on the assessor's property record.
- (c) The following shall be available for public inspection in the assessor's office, in the manner

provided for access to public records in subsection (a) of section 1-210, not later than the date written notices of real property valuations are mailed in accordance with subsection (f) of this section:

- (1) Any criteria, guidelines, price schedules or statement of procedures used in such revaluation by the assessor or by any revaluation company that the assessor designates to perform mass appraisal or field review functions, all of which shall continue to be available for public inspection until the town's next revaluation becomes effective; and
  - (2) a compilation of all real property sales in each neighborhood for the twelve months preceding the date on which each revaluation is effective, the selling prices of which are representative of the fair market values of the properties sold, which compilation shall continue to be available for public inspection for a period of not less than twelve months immediately following a revaluation's effective date. If the assessor changes any property valuation as determined by the revaluation company, the assessor shall document, in writing, the reason for such change and shall append such written explanation to the property card for the real estate parcel whose revaluation was changed. Nothing in this subsection shall be construed to permit the assessor to post a plan or drawing of a dwelling unit of a residential property's interior on the Internet or to otherwise publish such plan or drawing.
- (d)
- (1) The chief executive officer of a town shall notify the Secretary of the Office of Policy and Management that the town is effecting a revaluation by sending a written notice to the secretary not later than thirty days after the date on which such town's assessor signs a grand list that reflects assessments of real property derived from a revaluation. Any town that fails to effect a revaluation for the assessment date required by this section shall be subject to a penalty effective for the fiscal year commencing on the first day of July following such assessment date, and continuing for each successive fiscal year in which the town fails to levy taxes on the basis of such revaluation, provided the secretary shall not impose such penalty with respect to any assessment year in which the provisions of subsection (b) of section 12-117 are applicable. Such penalty shall be the forfeit of the amount otherwise allocable to such town pursuant to section 7-536, and the loss of fifty per cent of the amount of the grant that is payable to such town pursuant to sections 3-55i, 3-55j and 3-55k. Upon imposing said penalty, the secretary shall notify the chief executive officer of the amount of the town's forfeiture for said fiscal year and that the secretary's certification to the State Comptroller for the payments of such grant in said year shall reflect the required reduction.
  - (2) The secretary may waive such penalty if, in the secretary's opinion, there appears to be reasonable cause for the town not having implemented a revaluation for the

required assessment date, provided the chief executive officer of the town submits a written request for such waiver. Reasonable cause shall include:

- (A) An extraordinary circumstance or an act of God,
- (B) the failure on the part of any revaluation company to complete its contractual duties in a time and manner allowing for the implementation of such revaluation, and provided the town imposed the sanctions for such failure provided in a contract executed with said company,
- (C) the assessor's death or incapacitation during the conduct of a revaluation, which results in a delay of its implementation, or
- (D) an order by the superior court for the judicial district in which the town is located postponing such revaluation, or the potential for such an order with respect to a proceeding brought before said court. The chief executive officer shall submit such written request to the secretary not earlier than thirty business days after the date on which the assessor signs a grand list that does not reflect real property assessments based on values established for such required revaluation, and not later than thirty days preceding the July first commencement date of the fiscal year in which said penalty is applicable. Such request shall include the reason for the failure of the town to comply with the provisions of subsection (b) of this section. The chief executive officer of such town shall promptly provide any additional information regarding such failure that the secretary may require. Not later than sixty days after receiving such request and any such additional information, the secretary shall notify the chief executive officer of the secretary's decision to grant or deny the waiver requested, provided the secretary may delay a decision regarding a waiver related to a potential court order until not later than sixty days after the date such court renders the decision. The secretary shall not grant a penalty waiver under the provisions of this subsection with respect to consecutive years unless the General Assembly approves such action.

- (e) When conducting a revaluation, an assessor may designate a revaluation company certified in accordance with section 12-2b to perform property data collection, analysis of such data and any mass appraisal valuation or field review functions, pursuant to a method or methods the assessor approves, and may require such company to prepare and mail the valuation notices required by subsection (f) of this section, provided nothing in this subsection shall relieve any assessor of any other requirement relating to such revaluation imposed by any provisions of the general statutes, any public or special act, the provisions of any municipal charter that are not inconsistent with the requirements of this section, or any regulations adopted pursuant to subsection (g) of this section.

- (f) Not earlier than the assessment date that is the effective date of a revaluation and not later than the tenth calendar day immediately following the date on which the grand list for said assessment date is signed, the assessor shall mail a written notice to the last-known address of the owner of each parcel of real property that was revalued. Such notice shall include the valuation of such parcel as of said assessment date and the valuation of such parcel in the last-preceding assessment year, and shall provide information describing the property owner's rights to appeal the valuation established for said assessment date, including the manner in which an appeal may be filed with the board of assessment appeals.
- (g) The secretary shall adopt regulations, in accordance with the provisions of chapter 54, which an assessor shall use when conducting a revaluation. Such regulations shall include (1) provisions governing the management of the revaluation process, including, but not limited to, the method of compiling and maintaining property records, documenting the assessment year during which a full inspection of each parcel of improved real property occurs, and the method of determining real property sales data in support of the mass appraisal process, and (2) provisions establishing criteria for measuring the level and uniformity of assessments generated from a revaluation, provided such criteria shall be applicable to different classes of real property with respect to which a sufficient number of property sales exist. Certification of compliance with not less than one of said regulatory provisions shall be required for each revaluation and the assessor shall, not later than the date on which the grand list reflecting assessments of real property derived from a revaluation is signed, certify to the secretary and the chief executive officer, in writing, that the revaluation was conducted in accordance with said regulatory requirement. Any town effecting a revaluation with respect to which an assessor is unable to certify such compliance shall be subject to the penalty provided in subsection (d) of this section. In the event the assessor designates a revaluation company to perform mass appraisal valuation or field review functions with respect to a revaluation, the assessor and the employee of said company responsible for such function or functions shall jointly sign such certification. The assessor shall retain a copy of such certification and any data in support thereof in the assessor's office. The provisions of subsection (c) of this section concerning the public inspection of criteria, guidelines, price schedules or statement of procedures used in a revaluation shall be applicable to such certification and supporting data.
- (h) This section shall require the revaluation of real property (1) designated within the 1983 Settlement boundary and taken into trust by the federal government for the Mashantucket Pequot Tribal Nation before June 8, 1999, or (2) taken into trust by the federal government for the Mohegan Tribe of Indians of Connecticut.

Cite as Conn. Gen. Stat. § 12-62

Source:

§ 12-63. Rule of valuation. Optional depreciation schedules. Depreciation rules for machinery and equipment. Sec. . Rule of valuation. Optional depreciation schedules. Depreciation rules for machinery and equipment.

## **Connecticut Statutes**

### **Title 12. TAXATION**

#### **Chapter 203. PROPERTY TAX ASSESSMENT**

*Current through the 2016 Regular and First Special Sessions*

#### **§ 12-63. Rule of valuation. Optional depreciation schedules. Depreciation rules for machinery and equipment. Sec. . Rule of valuation. Optional depreciation schedules. Depreciation rules for machinery and equipment**

- (a) The present true and actual value of land classified as farm land pursuant to section 12-107c, as forest land pursuant to section 12-107d, as open space land pursuant to section 12-107e, or as maritime heritage land pursuant to section 12-107g shall be based upon its current use without regard to neighborhood land use of a more intensive nature, provided in no event shall the present true and actual value of open space land be less than it would be if such open space land comprised a part of a tract or tracts of land classified as farm land pursuant to section 12-107c. The present true and actual value of all other property shall be deemed by all assessors and boards of assessment appeals to be the fair market value thereof and not its value at a forced or auction sale.
- (b) (1) For the purposes of this subsection,
- (A) "electronic data processing equipment" means computers, printers, peripheral computer equipment, bundled software and any computer-based equipment acting as a computer, as defined in Section 168 of the Internal Revenue Code of 1986, or any subsequent corresponding internal revenue code of the United States, as from time to time amended;
  - (B) "leased personal property" means tangible personal property which is the subject of a written or oral lease or loan on the assessment date, or any such property which has been so leased or loaned by the then current owner of such property for three or more of the twelve months preceding such assessment date; and
  - (C) "original selling price" means the price at which tangible personal property is most frequently sold in the year that it was manufactured.
- (2) Any municipality may, by ordinance, adopt the provisions of this subsection to be

# Fundamentals of Mass Appraisal

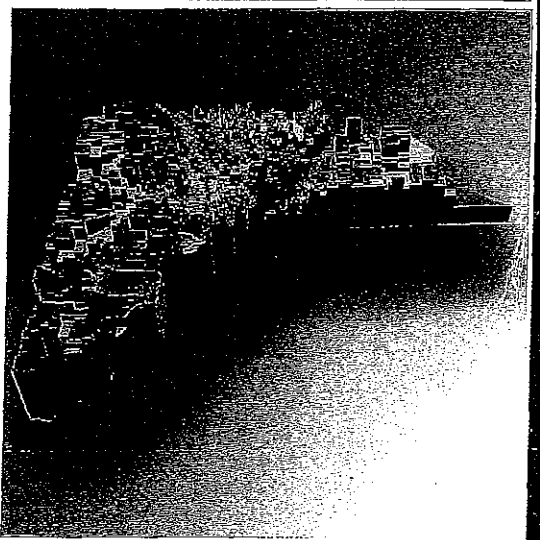
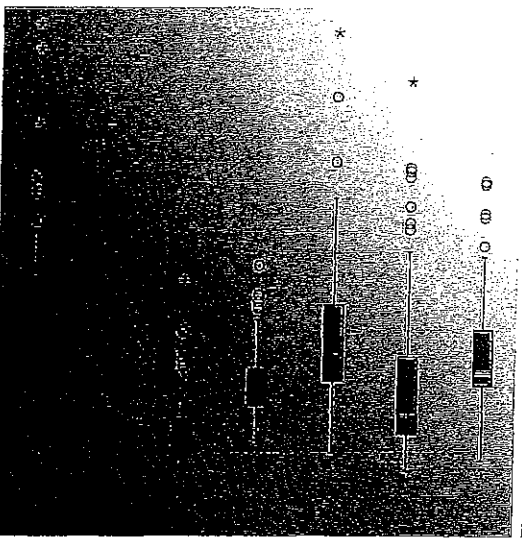
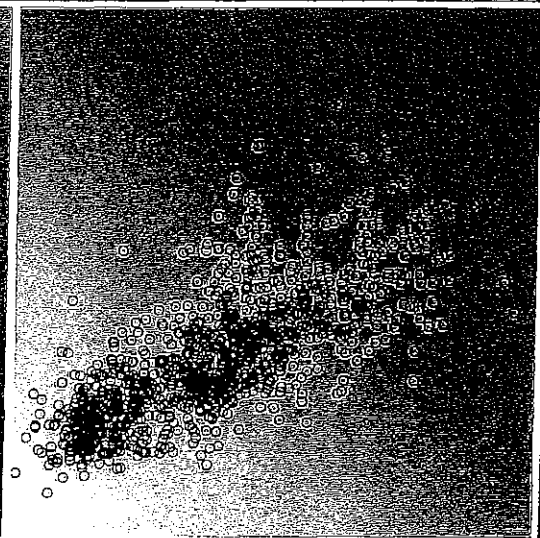
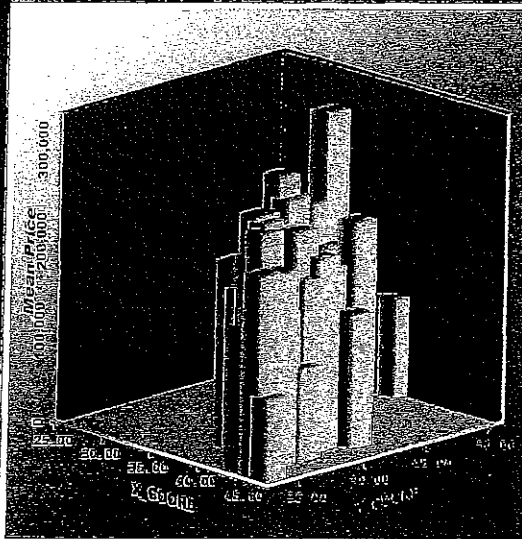


Exhibit H



INTERNATIONAL ASSOCIATION  
OF ASSESSORS

DEFENDANTS  
EXHIBIT  
*609*  
HHD X07 CV 12-6050023S

TOWN OF GROTON  
ASSESSOR'S OFFICE  
45 FORT HILL ROAD  
GROTON, CT 06340-4394

# Foreword

On behalf of the International Association of Assessing Officers, I am honored to present *Fundamentals of Mass Appraisal*, which is intended to replace its predecessor, *Mass Appraisal of Real Property*. This new book has been substantially restructured and rewritten to reflect current educational needs and to support the revised IAAO mass appraisal curriculum.

IAAO is the international leader in the mass appraisal and ad valorem taxation community. Our members have been valuing property of all types for almost 77 years by using proven valuation techniques that are taught and promulgated by IAAO. Our professional association has a rich history of developing educational materials, valuation techniques, and professional standards for the mass appraisal community. IAAO maintains three pillars of knowledge in ad valorem taxation—property valuation, property tax administration, and property tax policy.

*Fundamentals of Mass Appraisal* expands the IAAO collection of core knowledge. The textbook is intended to provide a basic understanding and overview of the many factors that shape mass appraisal theory and practice. This text also provides a foundation for further investigation and learning on mass appraisal issues.

IAAO is grateful to the authors, Robert Gloudemans and Richard Almy, for sharing their extensive knowledge and perspectives in this area.

*Bruce Woodzell*  
IAAO President, 2011

open market. As might be appreciated, the cost approach requires the appraiser to consider explicitly things that market participants would consider only implicitly if at all. However, the cost approach enjoys the position of being the default valuation approach, because it was the first mass appraisal approach to be developed and because data on replacement costs are inexpensively available from specialist publishers. Land and building values developed in the cost approach can be useful in estimating land and building residuals and in separating total value estimates developed by the sales comparison or income approaches into land and building portions.

The cost approach has its roots in the labor theory of value developed by Adam Smith, David Ricardo, and Karl Marx—that is, the value of a thing derives from the cost to produce it. In real estate appraisal, the cost approach is based on the principle that, aside from time considerations, a buyer will pay no more for a property than the cost of acquiring a comparable site and constructing a building of like utility (the principle of substitution). For example, if the subject property were a building with high ceilings and many windows placed to provide cross-ventilation in hot weather, it might be replaced with a low-ceilinged, air-conditioned building. Thus, the appraisal task is to estimate the cost of a new but functionally equivalent building, not an exact replica. This is called *replacement cost new* (RCN). If the hypothetical new improvement being costed is a replica of the actual improvement, an estimate of *reproduction cost* is made. Since existing property records usually describe actual structures, not hypothetical substitute structures, replacement cost estimates reflect current construction materials and costs but may not reflect modern differences in design. The cost approach is sometimes called the summation, engineering, or brick-and-mortar approach.

At its most basic, the cost model takes the form:

$$MV = LV + BV, \quad (11)$$

where

$MV$  = market value

$LV$  = land value

$BV$  = building value.

$BV$  is RCN minus depreciation (D) or replacement cost new less depreciation (RCNLD). In theory, the process could end here. However, a systematic evaluation of estimated  $MVs$  using ratio studies often reveals patterns of over- and under-valuation that can be compensated for by applying adjustment coefficients. Depending on the circumstances, the adjustment coefficients could be applied to the sum of the land and building value estimates, the land value estimates, the building value estimates, or a combination of all the possibilities, including the RCNs and the Ds. A general formula for expressing these possibilities is



For example, if a property is valued at \$189,000 and sold for \$200,000, the sales ratio is

$$R = A \div S = 189,000 \div 200,000 = 0.945.$$

Gross assessed values (values before partial exemptions are subtracted) may be substituted for appraised values in ratio studies. Using gross, rather than net, assessed values avoids complications caused by exemptions. If the property in the above example were required by law to be assessed at 50 percent of market value, the *assessed* value of the property would be \$94,500 (50 percent of \$189,000), and the assessment ratio would be 0.4725, or 47.25 percent (\$94,500 divided by \$200,000).

Using assessments rather than appraised values causes confusion and should generally be avoided if the legal assessment level is other than 100 percent (as in the above example), particularly if the law calls for different assessment ratios among classes of property. In this chapter, unless otherwise specified, ratios are based on *appraised* rather than *assessed* values. Also, market values are represented by sale prices, unless independent appraisals (or other indicators of market value) are specifically indicated.

## What Do Ratio Studies Measure?

Ratio studies measure two primary aspects of mass appraisal accuracy: level of valuation and uniformity of values. *Appraisal level* refers to the overall, or typical, ratio at which properties are appraised relative to market value. In mass appraisal, appraised values should not be expected always to equal independent indicators of market value (sale prices or independent appraisals), but high and low ratios should balance, so that the typical ratio is near 100 percent.

*Appraisal uniformity* relates to the extent to which appraisal procedures produce logical and consistent results across individual properties. Uniformity requires, first, that properties be appraised equitably within groups or categories (use classes, neighborhoods, and so forth); that is, how close are the individual ratios to the typical ratio (appraisal level)? Second, each group of properties should be appraised at approximately the same level or percentage of market value. In sum, appraisal uniformity requires equity *within* groups and *between* groups. Measures of appraisal level and uniformity are treated later in this chapter.

Uniformity *within* a property group (or stratum) is gauged by measuring the magnitude of the differences between each ratio and the average or middle ratio. Table 5-1 illustrates why this measurement is important. In group 1, the greatest difference among ratios is 0.20 (1.10 to 0.90), but in group 2 it is 1.20 (1.60 to

The IAAO *Standard on Ratio Studies* (2010c) recommends the following standards for jurisdictions in which *current* market value is the legal basis of assessment. Individual jurisdictions may adopt tighter or alternative standards appropriate for their situation.

### **Appraisal Level**

While the desired level of appraisal is 100 percent of market value, IAAO standards for measuring the level of appraisal allow a 10 percent variation. Based on the assumption that the law mandates appraisal at market value (before application of assessment ratios), this implies that the overall appraisal level should be between 0.90 and 1.10. The analyst can conclude that this standard has *not* been met when a 95 percent confidence interval (or other specified interval) about a chosen measure of central tendency fails to bracket either 0.90 or 1.10, or when a statistical test shows that the analyst can conclude with 95 percent confidence that the level of appraisal is not in this range.

The *window* of 10 percent about the market value standard provides a reasonable range in which measures of central tendency should fall in ad valorem mass appraisal. As long as this range is upheld and assessors are vigilant in reappraising property based on market value standards, property owners can use their appraisal as a reasonable indication of their property's true worth. Strict enforcement of a 100 percent standard is neither cost-effective nor practical. Such a policy could force assessors to make trivial annual adjustments in appraisals and encourage the loathsome and inequitable practice of sales chasing to achieve compliance. If strictly followed, such a policy would also force virtually half of properties to be appraised above market value, which tends to breed protracted and costly appeals and exacerbate inequities. The IAAO standard provides a reasonable, constructive, and cost-effective basis for ensuring that appraisals approximate market values. Of course, assessment officials can choose to enforce a more rigorous standard, such as 0.95 to 1.05, but a strict 100 percent standard is not recommended.

### **Appraisal Uniformity**

As has been discussed, the three facets of appraisal uniformity are uniformity among strata, uniformity within a stratum, and value-related bias (regressivity and progressivity).

#### **Uniformity among Strata**

Each major stratum should be appraised within 5 percent of the overall level of appraisal for the jurisdiction. Thus, if the overall level is 0.900, each property class and area should be appraised between 0.855 and 0.945:

§ 12-62i-4. Procedural testing standards.

**Connecticut Administrative Code**

**Title 12. Taxation**

**62i. Performance-Based Revaluation Testing Standards and Certification of Revaluations Performed by Towns**

*Current through February 3, 2017*

**§ 12-62i-4. Procedural testing standards**

(a) Prior to finalizing a revaluation, the assessor and the company, if any, employed by the town, shall conduct the following procedures during the revaluation program:

(1) Management

A written revaluation project plan shall be developed prior to the commencement of the revaluation and updated as necessary during the course thereof. The project plan shall include, but is not limited to, a list of project activities, person(s) responsible for each activity and the time frame of each activity. Periodic reports on the progress of the revaluation project plan shall be completed by the assessor and shall be filed in the assessor's office. Each such report shall chronicle the work completed and the work remaining for each activity.

(2) Property Inventory

(A) The cadastral maps shall be up to date.

(B) Each real estate parcel shall have a property record file, which should be computerized. Each property record file shall contain the following data, as applicable:

(i) parcel size

(ii) current land use

(iii) zoning classification of parcel

(iv) site characteristics that contribute to the value of the land

(v) neighborhood code

(vi) building size

(vii) construction quality or grade classification

)

- (viii year built  
)
- (ix) condition of the building(s)
- (x) significant building characteristics, such as number of stories, height, construction type, and wall type
- (xi) other characteristics that contribute to the value of the building
- (xii other structures or improvements that may exist on the parcel, such  
) as a swimming pool, fencing, garage, or shed.

(C) Each land or building characteristic having a qualitative attribute shall have an alphanumeric code.

(D) A property inspection system shall be maintained.

(E) A building permit monitoring system shall be maintained.

(F) A quality assurance program consisting of:

- (i) a data collection manual that explains how to measure structures and how to select the most appropriate property characteristics of those available;
- (ii) a data review program to ensure all essential property characteristics are entered into the property record file;
- (iii) an audit trail for either manual systems or computer systems that tracks changes in property records, who made the change, when the change was made and the value previous to each change.

(3) Compiling Market Value Data

(A) A file of all real property sales transactions for the sales time period used shall be established. For each such transaction the following information shall be included in the file: parcel identification number, property location, United States Census Bureau census tract number, date of sale, sales price, property assessment as of the date of the sale, property class, and any other salient property characteristics as of the date of the sale. The sales price of the property and its condition as of the date of the sale should be verified, if possible, with the buyer or seller.

(B) If the sale property is not considered a market sale as delineated in subdivision (9) of section 12-62i-1 of the Regulations of Connecticut State

Agencies, the file shall contain the reason for such determination.

- (C) The file may reflect an adjustment to the property sales price. The reason(s) for the adjustment shall be documented. Reason(s) for such an adjustment shall include, but are not be limited to:
  - (i) The fact that personal property is included in the transaction;
  - (ii) The existence of a lease that does not represent market rent, as defined in section 12-63b of the Connecticut General Statutes; and
  - (iii) The effects of price changes reflected in the real estate market between the date of sale and the assessment date that is the effective date of a revaluation.
  
- (D) A file of income and expense statements submitted in accordance with section 12-63c of the Connecticut General Statutes for the two-year period prior to the assessment date that is the effective date of a revaluation shall be maintained.
  
- (E) If the cost approach to valuation is utilized for the revaluation, all building cost schedules, which shall reflect local construction costs as of the effective date of the revaluation, shall be maintained in the assessor's office.
  
- (F) **Market Analysis and Valuation**
  - (i) All parcels shall be stratified according to property class and neighborhood.
  - (ii) Market sales analysis for market value trends and price level changes during the sales time period shall be conducted.
  - (iii) If the cost approach method of valuation is utilized, market sales data should be used to develop schedules of depreciation.
  - (iv) Criteria for the identification of comparable properties shall be established, documented and used.
  - (v) For each parcel of property, more than one acceptable appraisal methodology should be used, if possible, to determine its market value. For each vacant land parcel, the direct sales comparison appraisal methodology should be used for revaluation purposes.
  - (vi) Neighborhoods should be delineated on maps that display unit values for land valuation or are indexed to land value tables.

- (vii For each residential property, the direct sales comparison appraisal ) methodology should be used for revaluation purposes. The cost approach may be used if, in the judgement of the assessor, insufficient comparable market sales data exist for valuation purposes.
  - (viii For each commercial or special use property, the income and/or ) direct sales comparison appraisal methodology should be used for valuation purposes. The cost approach may be used if, in the judgement of the assessor, insufficient comparable market sales or income data exist for revaluation purposes.
- (b) A review of all real property values derived from the revaluation program shall be conducted. The process by which the review was conducted shall be put in writing and all changes in valuations effected during the review shall be documented.
  - (c) Documentation of the methodology used in the revaluation process shall be in writing and available for public inspection.
  - (d) Any departure from the requirements set forth in subsections (a) to (c) of this section shall be reasonable and the reasons shall be documented in writing and available for public inspection.

**Cite as Conn. Agencies Regs. § 12-62i-4**

**History.** Adopted effective January 30, 2001

§ 12-62i-2. General provisions.

**Connecticut Administrative Code**

**Title 12. Taxation**

**62i. Performance-Based Revaluation Testing Standards and Certification of Revaluations Performed by Towns**

*Current through February 3, 2017*

**§ 12-62i-2. General provisions**

Performance-based revaluation standards shall consist of two acceptable methods as set forth in section 12-62i-3 and 12-62i-4 of the Regulations of Connecticut State Agencies. The assessor shall utilize one of the methods so described.

**Cite as Conn. Agencies Regs. § 12-62i-2**

**History.** Adopted effective January 30, 2001