MECKLENBURG COUNTY
ASSESSOR'S OFFICE

UNIFORM SCHEDULE OF VALUES, STANDARDS AND RULES
2019

CERTIFICATE OF EXCELLENCE IN ASSESSMENT ADMINISTRATION

LIVE WORK RECREATE

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Bidencope & Associates-Commercial Data Study

Chapter 1
Introduction to Property Assessment

1 Purpose of Real Property Assessment

The primary purpose of real property assessment is to arrive at a fair and just valuation (market value) of all real property, to be used in deriving property taxes that are as equitable as possible given the resources available to the assessor (i.e., time, staff, and money).

The Machinery Act of North Carolina defines "market value" as follows:

> *The price estimated in terms of money at which the property would change hands between a willing and financially able buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of all the uses to which the property is adapted and for which it is capable of being used.*
>
> *Uniform Appraisal Standards, NC G.S. 105.283*

In order to accomplish this goal and ensure that valuations are just and equitable, the County Assessor must have a deep understanding of the mass appraisal methods and techniques that have been developed based on solid appraisal principles. He or she is responsible for developing and maintaining a standardized system for collecting and analyzing data, and must have the knowledge and judgment necessary to adapt this standardized system to the local market. As with any other type of appraising, the realities of the local market and state and local laws must always be taken into account.

The three basic approaches that may be used to arrive at a fair market value are summarized as follows:

1. **Cost approach**. This approach finds a property's value by developing an estimate of the land value and the depreciated cost of any improvements. The principle of substitution—which assumes that a property's value is equal to the cost of acquiring another property of equal utility (assuming that no cost delay is encountered)—provides the theoretical basis for this approach.
2. **Market approach**. This approach, also known as the **sales comparison approach**, makes use of prior sales data from the local market. In order to use this approach, the sales chosen for comparison must be analyzed in order to determine that the conditions of fair market value have been satisfied.
3. **Income approach**. The two most common applications of this approach in mass appraising are in the development of the **capitalized net income** and the **gross rent multiplier**.

Regardless of which of these three methods is chosen for a particular property or group of properties, careful consideration must be given to the following points:

- The relevancy of the approach applied to the property under consideration
- The inherent strengths and weaknesses of the approach used
- The amount and reliability of the data collected
- The effect of the local market on the data collected

Finally, it must be remembered that the true test of a mass appraisal system rests upon whether the resultant valuations are accepted by the assessor, the taxpayers, and administrative review bodies such as the Department of Revenue and the courts.

The purpose of the material contained within this manual is to provide the user with the knowledge and data needed to apply standard procedures to the mass appraisal of property. In certain cases, the procedures described are manually implemented and controlled; other times, widely-available sophisticated data processing and appraisal systems—such as Assess Pro—should be used to assure that standard methods are employed.

The standardization of data and operations within real property assessment is crucial to achieving the overall goals of the appraisal system.

2 Statutory Requirements

The following collection of statutory requirements come from the *Machinery Act of North Carolina*, and provide guidelines for the county on what to value, the timeline to follow, and how to value for equalization.

2.1 Standards for Appraisal and Assessment

2.1.1 § 105-283. Uniform Appraisal Standards

All property, real and personal, shall as far as practicable be appraised or valued at its true value in money. When used in this Subchapter, the words "true value" shall be interpreted as meaning market value, that is, the price estimated in terms of money at which the property would change hands between a willing and financially able buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of all the uses to which the property is adapted and for which it is capable of being used. For the purposes of this section, the acquisition of an interest in land by an entity having the power of eminent domain with respect to the interest acquired shall not be considered competent evidence of the true value in money of comparable land. (1939, c. 310, s. 500; 1953, c. 970, s. 5; 1955, c. 1100, s. 2; 1959, c. 682; 1967, c. 892, s. 7; 1969, c. 945, s. 1; 1971, c. 806, s. 1; 1973, c. 695, s. 11; 1977, 2nd Sess., c. 1297.)

2.1.2 § 105-284. Uniform Assessment Standard

(a) Except as otherwise provided in this section, all property, real and personal, shall be assessed for taxation at its true value or use value as determined under G.S. 105-283 or G.S. 105-277.6, and taxes levied by all counties and municipalities shall be levied uniformly on assessments determined in accordance with this section.

(b) The assessed value of public service company system property subject to appraisal by the Department of Revenue under G.S. 105-335(b)(1) shall be determined by applying to the allocation of such value to each county a percentage to be established by the Department of Revenue. The percentage to be applied shall be either:

(1) The median ratio established in sales assessment ratio studies of real property conducted by the Department of Revenue in the county in the year the county conducts a reappraisal of real property and in the fourth and seventh years thereafter; or

(2) A weighted average percentage based on the median ratio for real property established by the Department of Revenue as provided in subdivision (1) and a one hundred percent (100%) ratio for personal property. No percentage shall be applied in a year in which the median ratio for real property is ninety percent (90%) or greater.

If the median ratio for real property in any county is below ninety percent (90%) and if the county assessor has provided information satisfactory to the Department of Revenue that the county follows accepted guidelines and practices in the assessment of business personal property, the weighted average percentage shall be applied to public service company property. In calculating the weighted average percentage, the Department shall use the assessed value figures for real and personal property reported by the county to the Local Government Commission for the preceding year. In any county which fails to demonstrate that it follows accepted guidelines and practices, the percentage to be applied shall be the median ratio for real property. The percentage established in a year in which a sales assessment ratio study is conducted shall continue to be applied until another study is conducted by the Department of Revenue.

(c) Notice of the median ratio and the percentage to be applied for each county shall be given by the Department of Revenue to the chairman of the board of commissioners not later than April 15 of the year for which it is to be effective. Notice shall also be given at the same time to the public service companies whose property values are subject to adjustment under this section. Either the county or an affected public service company may challenge the real property ratio or the percentage established by the Department of Revenue by giving notice of exception within 30 days after the mailing of the Department's notice. Upon receipt of such notice of exception, the Department shall arrange a conference with the challenging party or parties to review the matter. Following the conference, the Department shall notify the challenging party or parties of its final

determination in the matter. Either party may appeal the Department's determination to the Property Tax Commission by giving notice of appeal within 30 days after the mailing of the Department's decision. (1939, c. 310, s. 500; 1953, c. 970, s. 5; 1955, c. 1100, s. 2; 1959, c. 682; 1967, c. 892, s. 7; 1969, c. 945, s. 1; 1971, c. 806, s. 1; 1973, c. 695, s. 12; 1985, c. 601, s. 1; 1987 (Reg. Sess., 1988), c. 1052, s. 1.)

(d) Property that is in a development financing district and that is subject to an agreement entered into pursuant to G.S. 159-108 shall be assessed at its true value or at the minimum value set out in the agreement, whichever is greater. (1939, c. 310, s. 500; 1953, c. 970, s. 5; 1955, c. 1100, s. 2; 1959, c. 682; 1967, c. 892, s. 7; 1969, c. 945, s. 1; 1971, c. 806, s. 1; 1973, c. 695, s. 12; 1985, c. 601, s. 1; 1987 (Reg. Sess., 1988), c. 1052, s. 1; 2003-403, s. 20.)

2.1.3 § 105-286. Time for General Reappraisal of Real Property

(a) Octennial Plan. Unless the date shall be advanced as provided in subdivision (a)(2), below, each county of the State, as of January 1 of the year prescribed in the schedule set out in subdivision (a)(1), below, and every eighth year thereafter, shall reappraise all real property in accordance with the provisions of G.S. 105-283 and 105-317.M

(1) Schedule of Initial Reappraisals.

- Division One--1972: Avery, Camden, Cherokee, Cleveland, Cumberland, Guilford, Harnett, Haywood, Lee, Montgomery, Northampton, and Robeson.
- Division Two--1973: Caldwell, Carteret, Columbus, Currituck, Davidson, Gaston, Greene, Hyde, Lenoir, Madison, Orange, Pamlico, Pitt, Richmond, Swain, Transylvania, and Washington.
- Division Three--1974: Ashe, Buncombe, Chowan, Franklin, Henderson, Hoke, Jones, Pasquotank, Rowan, and Stokes.
- Division Four--1975: Alleghany, Bladen, Brunswick, Cabarrus, Catawba, Dare, Halifax, Macon, New Hanover, Surry, Tyrrell, and Yadkin.
- Division Five--1976: Bertie, Caswell, Forsyth, Iredell, Jackson, Lincoln, Onslow, Person, Perquimans, Rutherford, Union, Vance, Wake, Wilson, and Yancey.
- Division Six--1977: Alamance, Durham, Edgecombe, Gates, Martin, Mitchell, Nash, Polk, Randolph, Stanly, Warren, and Wilkes.
- Division Seven--1978: Alexander, Anson, Beaufort, Clay, Craven, Davie, Duplin, and Granville.
- Division Eight--1979: Burke, Chatham, Graham, Hertford, Johnston, McDowell, Mecklenburg, Moore, Pender, Rockingham, Sampson, Scotland, Watauga, and Wayne.

(2) Advancing Scheduled Octennial Reappraisal. Any county desiring to conduct a reappraisal of real property earlier than required by this subsection (a) may do so upon adoption by the board of county commissioners of a resolution so providing. A copy of any such resolution shall be forwarded promptly to the

Department of Revenue. If the scheduled date for reappraisal for any county is advanced as provided herein, real property in that county shall thereafter be reappraised every eighth year following the advanced date unless, in accordance with the provisions of this subdivision (a)(2), an earlier date shall be adopted by resolution of the board of county commissioners, in which event a new schedule of octennial reappraisals shall thereby be established for that county.

(b) Fourth-Year Horizontal Adjustments. As of January 1, of the fourth year following a reappraisal of real property conducted under the provisions of subsection (a), above, each county shall review the appraised values of all real property and determine whether changes should be made to bring those values into line with then current true value. If it is determined that the appraised value of all real property or of defined types or categories of real property require such adjustment; the assessor shall revise the values accordingly by horizontal adjustments rather than by actual appraisal of individual properties: That is, by uniform application of percentages of increase or reduction to the appraised values of properties within defined types or categories or within defined geographic areas of the county.

(c) Value to Be Assigned Real Property When Not Subject to Appraisal. In years in which real property within a county is not subject to appraisal or reappraisal under subsections (a) or (b), above, or under G.S. 105-287, it shall be listed at the value assigned when last appraised under this section or under G.S. 105-287. (1939, c. 310, s. 300;1941, c. 282, ss. 1, 11/2; 1943, c. 634, s. 1; 1945, c. 5; 1947, c. 50; 1949, c. 109; 1951, c. 847; 1953, c. 395; 1955, c.1273; 1957, c. 1453, s. 1; 1959, c. 704, s. 1; 1971, c. 806, s. 1; 1973, c. 476, s. 193; 1987, c. 45, s. 1.)

2.2 Administration of Real and Personal Property Appraisal

This next standard deals with valuing each parcel individually, while considering the true value and use of the property. It also guides the county on the timeline and steps for when revaluations are conducted and the documentation required for this to occur.

2.2.1 § 105-317. Appraisal of real property; adoption of schedules, standards, and rules.

(a) Whenever any real property is appraised it shall be the duty of the persons making appraisals:

(1) In determining the true value of land, to consider as to each tract, parcel, or lot separately listed at least its advantages and disadvantages as to location; zoning; quality of soil; waterpower; water privileges; dedication as a nature preserve; conservation or preservation agreements; mineral, quarry, or other valuable deposits; fertility; adaptability for agricultural, timber-producing, commercial, industrial, or other uses; past income; probable future income;

and any other factors that may affect its value except growing crops of a seasonal or annual nature.

(2) In determining the true value of a building or other improvement, to consider at least its location; type of construction; age; replacement cost; cost; adaptability for residence, commercial, industrial, or other uses; past income; probable future income; and any other factors that may affect its value.

(3) To appraise partially completed buildings in accordance with the degree of completion on January 1.

(b) In preparation for each revaluation of real property required by G.S. 105-286, it shall be the duty of the assessor to see that:

(1) Uniform schedules of values, standards, and rules to be used in appraising real property at its true value and at its present-use value are prepared and are sufficiently detailed to enable those making appraisals to adhere to them in appraising real property.

(2) Repealed by Session Laws 1981, c. 678, s. 1.

(3) A separate property record be prepared for each tract, parcel, lot, or group of contiguous lots, which record shall show the information required for compliance with the provisions of G.S. 105-309 insofar as they deal with real property, as well as that required by this section. (The purpose of this subdivision is to require that individual property records be maintained in sufficient detail to enable property owners to ascertain the method, rules, and standards of value by which property is appraised.)

(4) The property characteristics considered in appraising each lot, parcel, tract, building, structure and improvement, in accordance with the schedules of values, standards, and rules, be accurately recorded on the appropriate property record.

(5) Upon the request of the owner, the board of equalization and review, or the board of county commissioners, any particular lot, parcel, tract, building, structure or improvement be actually visited and observed to verify the accuracy of property characteristics on record for that property.

(6) Each lot, parcel, tract, building, structure and improvement be separately appraised by a competent appraiser, either one appointed under the provisions of G.S. 105-296 or one employed under the provisions of G.S. 105-299.

(7) Notice is given in writing to the owner that he is entitled to have an actual visitation and observation of his property to verify the accuracy of property characteristics on record for that property.

(c) The values, standards, and rules required by subdivision (b)(1) shall be reviewed and approved by the board of county commissioners before January 1 of the year they are applied. The board of county commissioners may approve the schedules of values, standards, and rules to be used in appraising real property at its true value and at its present-use value either separately or simultaneously. Notice of the receipt and adoption

by the board of county commissioners of either or both the true value and present-use value schedules, standards, and rules, and notice of a property owner's right to comment on and contest the schedules, standards, and rules shall be given as follows:

(1) The assessor shall submit the proposed schedules, standards, and rules to the board of county commissioners not less than 21 days before the meeting at which they will be considered by the board. On the same day that they are submitted to the board for its consideration, the assessor shall file a copy of the proposed schedules, standards, and rules in his office where they shall remain available for public inspection.

(2) Upon receipt of the proposed schedules, standards, and rules, the board of commissioners shall publish a statement in a newspaper having general circulation in the county stating:

a. That the proposed schedules, standards, and rules to be used in appraising real property in the county have been submitted to the board of county commissioners and are available for public inspection in the assessor's office; and

b. The time and place of a public hearing on the proposed schedules, standards, and rules that shall be held by the board of county commissioners at least seven days before adopting the final schedules, standards, and rules.

(3) When the board of county commissioners approves the final schedules, standards, and rules, it shall issue an order adopting them. Notice of this order shall be published once a week for four successive weeks in a newspaper having general circulation in the county, with the last publication being not less than seven days before the last day for challenging the validity of the schedules, standards, and rules by appeal to the Property Tax Commission. The notice shall state:

a. That the schedules, standards, and rules to be used in the next scheduled reappraisal of real property in the county have been adopted and are open to examination in the office of the assessor; and

b. That a property owner who asserts that the schedules, standards, and rules are invalid may except to the order and appeal therefrom to the Property Tax Commission within 30 days of the date when the notice of the order adopting the schedules, standards, and rules was first published.

(d) Before the board of county commissioners adopts the schedules of values, standards, and rules, the assessor may collect data needed to apply the schedules, standards, and rules to each parcel in the county. (1939, c. 310, s. 501; 1959, c. 704, s. 4; 1967, c. 944; 1971, c. 806, s. 1; 1973, c. 476, s. 193; c. 695, s. 5; 1981, c. 224; c. 678, s. 1; 1985, c. 216, s. 2; c. 628, s. 4; 1987, c. 45, s. 1; c. 295, s. 1; 1997-226, s. 5.)

2.3 Credible Mass Appraisals: Standards Rule 5

In developing a mass appraisal, an appraiser must be aware of, understand, and correctly employ those recognized methods and techniques necessary to produce and communicate credible mass appraisals.

The standards in this section come from Standard 5 in the *Uniform Standards of Professional Appraisal Practice (USPAP), 2018-2019 Edition*. This standard applies to all mass appraisals of real or personal property.

Standard 5 is directed toward the substantive aspects of developing credible analyses, opinions, and conclusions in the mass appraisal of properties. The reporting and jurisdictional exceptions applicable to public mass appraisals prepared for ad valorem taxation do not apply to mass appraisals prepared for other purposes.

A mass appraisal includes seven components:

1. Identifying properties to be appraised
2. Defining market area of consistent behavior that applies to properties
3. Identifying characteristics (supply and demand) that affect the creation of value in that market area
4. Developing a model structure that reflects the relationship among the characteristics affecting value in the market area
5. Calibrating the model structure to determine the contribution of the individual characteristics affecting value
6. Applying the conclusions reflected in the model to the characteristics of the property(ies) being appraised
7. Reviewing the mass appraisal results

The jurisdictional exception rule may apply to several sections of Standard 5 because ad valorem tax administration is subject to various state, county, and municipal laws.

2.3.1 Standards Rule 5-1

In developing a mass appraisal, an appraiser must:

(a) Be aware of, understand, and correctly employ those recognized methods and techniques necessary to produce a credible mass appraisal;

- Comment: Mass appraisal provides for a systematic approach and uniform application of appraisal methods and techniques to obtain estimates of value that allow for statistical review and analysis of results. This requirement recognizes that the principle of change continues to affect the manner in which appraisers perform mass appraisals. Changes and developments in the real property and personal property fields have a substantial impact on the appraisal profession. To keep abreast of these changes and developments, the appraisal profession is constantly reviewing and revising appraisal methods and techniques and devising new methods and techniques to meet new circumstances. For this reason it is not sufficient for appraisers to simply maintain the skills and the knowledge they

possess when they become appraisers. Each appraiser must continuously improve his or her skills to remain proficient in mass appraisal.

(b) Not commit a substantial error of omission or commission that significantly affects a mass appraisal; and
- Comment: An appraiser must use sufficient care to avoid errors that would significantly affect his or her opinions and conclusions. Diligence is required to identify and analyze the factors, conditions, data, and other information that would have a significant effect on the credibility of the assignment results.

(c) Not render a mass appraisal in a careless or negligent manner.
- Comment: Perfection is impossible to attain, and competence does not require perfection. However, an appraiser must not render appraisal services in a careless or negligent manner. This Standards Rule requires an appraiser to use due diligence and due care.

2.3.2 Standards Rule 5-2

In developing a mass appraisal, an appraiser must:

(a) Identify the client and other intended users;
- Comment: It is the appraiser's responsibility to identify the client and other intended users. In ad valorem mass appraisal, the assessor, or party responsible for certification of the assessment or tax roll is required to apply the relevant law or statute and identify the client, and other intended users (if any).

(b) Identify the intended use of the appraisal;
- Comment: An appraiser must not allow the intended use of an assignment or a client's objectives to cause the assignment results to be biased.

(c) Identify the type and definition of value, and, if the value opinion to be developed is market value, ascertain whether the value is to be the most probable price:
  (i) In terms of cash; or
  (ii) In terms of financial arrangements equivalent to cash; or
  (iii) In such other terms as may be precisely defined; and
  (iv) If the opinion of value is based on non-market financing or financing with unusual conditions or incentives, the terms of such financing must be clearly identified and the appraiser's opinion of their contributions to or negative influence on value must be developed by analysis of relevant market data;

(d) Identify the effective date of the appraisal;

(e) Identify the characteristics of the properties that are relevant to the type and definition of value and intended use, including:

(i) The group with which a property is identified according to similar market influence;
(ii) The appropriate market area and time frame relative to the property being valued; and
(iii) Their location and physical, legal, and economic characteristics;

- Comment: The properties must be identified in general terms, and each individual property in the universe must be identified, with the information on its identity stored or referenced in its property record. When appraising proposed improvements, an appraiser must examine and have available for future examination, plans, specifications, or other documentation sufficient to identify the extent and character of the proposed improvements.
  Ordinarily, proposed improvements are not appraised for ad valorem tax purposes. Appraisers, however, are sometimes asked to provide opinions of value of proposed improvements so that developers can estimate future property tax burdens. Sometimes units in condominiums and planned unit developments are sold with an interest in un-built community property, the pro rata value of which, if any, must be considered in the analysis of sales data.

(f) Identify the characteristics of the market that are relevant to the purpose and intended use of the mass appraisal including:
(i) Location of the market area;
(ii) Physical, legal, and economic attributes;
(iii) Time frame of market activity; and
(iv) Property interests reflected in the market;

(g) In appraising real property or personal property:
(i) Identify the appropriate market area and time frame relative to the property being valued;
(ii) When the subject is real property, identify and consider any personal property, trade fixtures, or intangibles that are not real property but are included in the appraisal;
(iii) When the subject is personal property, identify and consider any real property or intangibles that are not personal property but are included in the appraisal;
(iv) Identify known easements, restrictions, encumbrances, leases, reservations, covenants, contracts, declarations, special assessments, ordinances, or other items of similar nature; and
(v) Identify and analyze whether an appraised fractional interest, physical segment or partial holding contributes pro rata to the value of the whole;

- Comment: The above requirements do not obligate the appraiser to value the whole when the subject of the appraisal is a fractional interest, physical segment, or a partial holding. However, if the value of the whole is not identified, the appraisal must clearly reflect that the value of the property being appraised cannot be used to develop the value opinion of the whole by mathematical extension.

(h) Analyze the relevant economic conditions at the time of the valuation, including market acceptability of the property and supply, demand, scarcity, or rarity;

(i) Identify any extraordinary assumptions and any hypothetical conditions necessary in the assignment; and

- Comment: An extraordinary assumption may be used in an assignment only if:
  - It is required to properly develop credible opinions and conclusions;
  - The appraiser has a reasonable basis for the extraordinary assumption;
  - Use of the extraordinary assumption results in a credible analysis; and
  - The appraiser complies with the disclosure requirements set forth in USPAP for extraordinary assumptions.

  A hypothetical condition may be used in an assignment only if:
  - Use of the hypothetical condition is clearly required for legal purposes, for purposes of reasonable analysis, or for purposes of comparison;
  - Use of the hypothetical condition results in a credible analysis; and
  - The appraiser complies with the disclosure requirements set forth in USPAP for hypothetical conditions.

(j) Determine the scope of work necessary to produce credible assignment results in accordance with the SCOPE OF WORK RULE.

2.3.3 Standards Rule 5-3

When necessary for credible assignment results, an appraiser must:

(a) In appraising real property, identify and analyze the effect on use and value of the following factors: existing land use regulations, reasonably probable modifications of such regulations, economic supply and demand, the physical adaptability of the real estate, neighborhood trends, and highest and best use of the real estate; and

- Comment: This requirement sets forth a list of factors that affect use and value. In considering neighborhood trends, an appraiser must avoid stereotyped or biased assumptions relating to race, age, color, gender, or national origin or an assumption that race, ethnic, or religious homogeneity is necessary to maximize value in a neighborhood. Further, an appraiser must avoid making an unsupported assumption or premise about neighborhood decline, effective age, and remaining life. In considering highest and best use, an appraiser must develop the concept to the extent required for a proper solution to the appraisal problem.

(b) In appraising personal property, identify and analyze the effects on use and value of industry trends, value-in-use, and trade level of personal property. Where applicable, analyze the current use and alternative uses to encompass what is profitable, legal, and physically possible, as relevant to the type and definition of value and intended use of the appraisal. Personal property has several measurable marketplaces; therefore, the

appraiser must define and analyze the appropriate market consistent with the type and definition of value.

- Comment: The appraiser must recognize that there are distinct levels of trade and each may generate its own data. For example, a property may have a different value at a wholesale level of trade, a retail level of trade, or under various auction conditions. Therefore, the appraiser must analyze the subject property within the correct market context.

2.3.4 Standards Rule 5-4

In developing a mass appraisal, an appraiser must:

(a) Identify the appropriate procedures and market information required to perform the appraisal, including all physical, functional, and external market factors as they may affect the appraisal;

- Comment: Such efforts customarily include the development of standardized data collection forms, procedures, and training materials that are used uniformly on the universe of properties under consideration.

(b) Employ recognized techniques for specifying property valuation models; and

- Comment: The formal development of a model in a statement or equation is called model specification. Mass appraisers must develop mathematical models that, with reasonable accuracy, represent the relationship between property value and supply and demand factors, as represented by quantitative and qualitative property characteristics. The models may be specified using the cost, sales comparison, or income approaches to value. The specification format may be tabular, mathematical, linear, nonlinear, or any other structure suitable for representing the observable property characteristics. Appropriate approaches must be used in appraising a class of properties. The concept of recognized techniques applies to both real and personal property valuation models.

(c) Employ recognized techniques for calibrating mass appraisal models.

- Comment: Calibration refers to the process of analyzing sets of property and market data to determine the specific parameters of a model. The table entries in a cost manual are examples of calibrated parameters, as well as the coefficients in a linear or nonlinear model. Models must be calibrated using recognized techniques, including, but not limited to, multiple linear regression, nonlinear regression, and adaptive estimation.

2.3.5 Standards Rule 5-5

In developing a mass appraisal, when necessary for credible assignment results, an appraiser must:

(a) Collect, verify, and analyze such data as are necessary and appropriate to develop:
   (i) The cost new of the improvements;
   (ii) Depreciation;
   (iii) Value of the land by sales of comparable properties;
   (iv) Value of the property by sales of comparable properties;
   (v) Value by capitalization of income or potential earnings (i.e., rentals, expenses, interest rates, capitalization rates, and vacancy data);
   - Comment: This Standards Rule requires appraisers engaged in mass appraisal to take reasonable steps to ensure that the quantity and quality of the factual data that are collected are sufficient to produce credible appraisals. For example, in real property, where applicable and feasible , systems for routinely collecting and maintaining ownership, geographic, sales, income and expense, cost, and property characteristics data must be established. Geographic data must be contained in as complete a set of cadastral maps as possible, compiled according to current standards of detail and accuracy. Sales data must be collected, confirmed, screened, adjusted, and filed according to current standards of practice. The sales file must contain, for each sale, property characteristics data that are contemporaneous with the date of sale. Property characteristics data must be appropriate and relevant to the mass appraisal models being used. The property characteristics data file must contain data contemporaneous with the date of appraisal including historical data on sales, where appropriate and available. The data collection program must incorporate a quality control program, including checks and audits of the data to ensure current and consistent records.

(b) Base estimates of capitalization rates and projections of future rental rates and/or potential earnings capacity, expenses, interest rates, and vacancy rates on reasonable and appropriate evidence;
   - Comment: This requirement calls for an appraiser, in developing income and expense statements and cash flow projections, to weigh historical information and trends, current market factors affecting such trends, and reasonably anticipated events, such as competition from developments either planned or under construction.

(c) Identify and, as applicable, analyze terms and conditions of any available leases; and

(d) Identify the need for and extent of any physical inspection.

2.3.6 Standards Rule 5-6

When necessary for credible assignment results in applying a calibrated mass appraisal model an appraiser must:

(a) Value improved parcels by recognized methods or techniques based on the cost approach, the sales comparison approach, and income approach;

(b) Value sites by recognized methods or techniques; such techniques include but are not limited to the sales comparison approach, allocation method, abstraction method, capitalization of ground rent, and land residual technique;

(c) When developing the value of a leased fee estate or a leasehold estate, analyze the effect on value, if any, of the terms and conditions of the lease;
- Comment: In ad valorem taxation the appraiser may be required by rules or law to appraise the property as if in fee simple, as though unencumbered by existing leases. In such cases, market rent would be used in the appraisal, ignoring the effect of the individual, actual contract rents.

(d) Analyze the effect on value, if any, of the assemblage of the various parcels, divided interests, or component parts of a property; the value of the whole must not be developed by adding together the individual values of the various parcels, divided interests, or component parts; and
- Comment: When the value of the whole has been established and the appraiser seeks to value a part, the value of any such part must be tested by reference to appropriate market data and supported by an appropriate analysis of such data.

(e) When analyzing anticipated public or private improvements, located on or off the site, analyze the effect on value, if any, of such anticipated improvements to the extent they are reflected in market actions.

2.3.7 Standards Rule 5-7

In reconciling a mass appraisal an appraiser must:

(a) Reconcile the quality and quantity of data available and analyzed within the approaches used and the applicability and relevance of the approaches, methods and techniques used; and

(b) Employ recognized mass appraisal testing procedures and techniques to ensure that standards of accuracy are maintained.
- Comment: It is implicit in mass appraisal that, even when properly specified and calibrated mass appraisal models are used, some individual value conclusions will not meet standards of reasonableness, consistency, and accuracy. However, appraisers engaged in mass appraisal have a professional responsibility to ensure that, on an overall basis, models produce value conclusions that meet attainable standards of accuracy. This responsibility requires appraisers to evaluate the performance of models, using techniques that may include but are not limited to,

goodness-of-fit statistics, and model performance statistics such as appraisal-to-sale ratio studies, evaluation of hold-out samples, or analysis of residuals.

2.4 Mass Appraisal, Reporting: Standards Rule 6

This final collection of standards also comes from the *Uniform Standards of Professional Appraisal Practice (USPAP), 2018-2019 Edition*. Here, we present three rules from Chapter 6, which provide ethics standards for the assessor to follow while conducting property valuations.

As USPAP notes, "in reporting the results of a mass appraisal, an appraiser must communicate each analysis, opinion, and conclusion in a manner that is not misleading."

2.4.1 Standards Rule 6-1

Each written report of a mass appraisal must:

(a) Clearly and accurately set forth the appraisal in a manner that will not be misleading;

(b) Contain sufficient information to enable the intended users of the appraisal to understand the report properly; and
- Comment: Documentation for a mass appraisal for ad valorem taxation may be in the form of 1) property records, 2) sales ratios and other statistical studies, 3) appraisal manuals and documentation, 4) market studies, 5) model building documentation, 6) regulations, 7) statutes, and 8) other acceptable forms.

(c) Clearly and accurately disclose all assumptions, extraordinary assumptions, hypothetical conditions, and limiting conditions used in the assignment.
- Comment: The report must clearly and conspicuously: 1) state all extraordinary assumptions and hypothetical conditions; and 2) state that their use might have affected the assignment results.

2.4.2 Standards Rule 6-2

Each written report of a mass appraisal must:

(a) State the identity of the client, unless the client has specifically requested otherwise; state the identity of any intended users by name or type;
- Comment: An appraiser must use care when identifying the client to avoid violations of the Confidentiality section of the ETHICS RULE. If a client requests that the client's identity be withheld from the report, the appraiser may comply with this request. In these instances, the appraiser must document the identity of the client in the work file and must state in the report that the identity of the client has been withheld at the client's request.

(b) State the intended use of the appraisal;

(c) Disclose any assumptions or limiting conditions that result in deviation from recognized methods and techniques or that affect analyses, opinions, and conclusions;

(d) State the effective date of the appraisal and the date of the report;
- Comment: In ad valorem taxation the effective date of the appraisal may be prescribed by law. If no effective date is prescribed by law, the effective date of the appraisal, if not stated, is presumed to be contemporaneous with the data and appraisal conclusions.
  The effective date of the appraisal establishes the context for the value opinion, while the date of the report indicates whether the perspective of the appraiser on the market and property as of the effective date of the appraisal was prospective, current, or retrospective.

(e) State the type and definition of value and cite the source of the definition;
- Comment: Stating the type and definition of value also requires any comments needed to clearly indicate to intended users how the definition is being applied. When reporting an opinion of market value, state whether the opinion of value is: 1) In terms of cash or of financing terms equivalent to cash; or 2) Based on non-market financing with unusual conditions or incentives. When an opinion of market value is not in terms of cash or based on financing terms equivalent to cash, summarize the terms of such financing and explain their contributions to or negative influence on value.

(f) State the properties appraised including the property rights;
- Comment: The report documents the sources for location, describing and listing the property. When applicable, include references to legal descriptions, addresses, parcel identifiers, photos, and building sketches. In mass appraisal this information is often included in property records. When the property rights to be appraised are specified in a statute or court ruling, the law must be referenced.

(g) Summarize the scope of work used to develop the appraisal; exclusion of the sales comparison approach, cost approach, or income approach must be explained;
- Comment: Because intended users' reliance on an appraisal may be affected by the scope of work, the report must enable them to be properly informed and not misled. Sufficient information includes disclosure of research and analyses performed and might also include disclosure of research and analyses not performed. When any portion of the work involves significant mass appraisal assistance, the appraiser must describe the extent of that assistance. The signing appraiser must also state the name(s) of those providing the significant mass appraisal assistance in the certification, in accordance with Standards Rule 6-3.

(h) Summarize and support the model specification(s) considered, data requirements, and the model(s) chosen;

- Comment: The appraiser must provide sufficient information to enable the client and intended users to have confidence that the process and procedures used conform to accepted methods and result in credible value conclusions. In the case of mass appraisal for ad valorem taxation, stability and accuracy are important to the credibility of value opinions. The report must include a summary of the rationale for each model, the calibration techniques to be used, and the performance measures to be used.

(i) Summarize the procedure for collecting, validating, and reporting data;
- Comment: The report must summarize the sources of data and the data collection and validation processes. Reference to detailed data collection manuals or electronic records must be made, as appropriate, including where they may be found for inspection.

(j) Summarize calibration methods considered and chosen, including the mathematical form of the final model(s); summarize how value conclusions were reviewed; and, if necessary, state the availability and location of individual value conclusions;

(k) When an opinion of highest and best use, or the appropriate market or market level was developed, summarize how that opinion was determined;
- Comment: The mass appraisal report must reference case law, statute, or public policy that describes highest and best use requirements. When actual use is the requirement, the report must discuss how use-value opinions were developed. The appraiser's reasoning in support of the highest and best use opinion must be provided in the depth and detail required by its significance to the appraisal.

(l) Identify the appraisal performance tests used and the performance measures attained;

(m) Summarize the reconciliation performed, in accordance with Standards Rule 5-7; and

(n) Include a signed certification in accordance with Standards Rule 6-3.

2.4.3 Standards Rule 6-3

Each written mass appraisal report must contain a signed certification that is similar in content to the following form:

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

- ☐ The statements of fact contained in this report are true and correct.
- ☐ The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.

- ☐ I have no (or the specified) present or prospective interest in the property that is the subject of this report, and I have no (or the specified) personal interest with respect to the parties involved.
- ☐ I have performed no (or the specified) services, as an appraiser or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
- ☐ I have no bias with respect to any property that is the subject of this report or to the parties involved with this assignment.
- ☐ My engagement in this assignment was not contingent upon developing or reporting predetermined results.
- ☐ My compensation for completing this assignment is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
- ☐ My analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the *Uniform Standards of Professional Appraisal Practice*.
- ☐ I have (or have not) made a personal inspection of the properties that are the subject of this report. (If more than one person signs the report, this certification must clearly specify which individuals did and which individuals did not make a personal inspection of the appraised property.)
- ☐ No one provided significant mass appraisal assistance to the person signing this certification. (If there are exceptions, the name of each individual providing significant mass appraisal assistance must be stated.)

Comment: The final certification in the list is not intended to disturb an elected or appointed assessor's work plans or oaths of office. A signed certification is an integral part of the appraisal report. An appraiser, who signs any part of the mass appraisal report, including a letter of transmittal, must also sign this certification.

In an assignment that includes only assignment results developed by the real property appraiser(s), any appraiser(s) who signs a certification accepts full responsibility for all elements of the certification, for the assignment results, and for the contents of the appraisal report. In an assignment that includes personal property assignment results not developed by the real property appraiser(s), any real property appraiser(s) who signs a certification accepts full responsibility for the real property elements of the certification, for the real property assignment results, and for the real property contents of the appraisal report.

In an assignment that includes only assignment results developed by the personal property appraiser(s), any appraiser(s) who signs a certification accepts full responsibility for all elements of the certification, for the assignment results, and for the contents of the appraisal report. In an assignment that includes real property assignment results not developed by the personal property appraiser(s), any personal property appraiser(s) who signs a certification accepts full responsibility for the personal property elements of the certification, for the personal property assignment results, and for the personal property contents of the appraisal report.

When a signing appraiser(s) has relied on work done by appraisers and others who do not sign the certification, the signing appraiser is responsible for the decision to rely on their work. The signing appraiser(s) is required to have a reasonable basis for believing that those individuals performing the work are competent. The signing appraiser(s) also must have no reason to doubt that the work of those individuals is credible.

The names of individuals providing significant mass appraisal assistance who do not sign a certification must be stated in the certification. It is not required that the description of their assistance be contained in the certification, but disclosure of their assistance is required in accordance with Standards Rule 6-2(g).

Chapter 2
Sales Utilization and Fair Market Value

Sales collection and verification is the single most important activity undertaken by the assesors's office. There is no other task that is as necessary to the appraisal process as the meticulous and regimented collection of sales data. Ultimately, all three valuation approaches—the cost approach, sales approach, and income approach—rely on the analysis of valid, qualified sales in order to properly value a subject property.

1 Meeting Legislative Requirements

In recent years, legislators have mandated the assessment of real property at 100% of the fair market value. This makes it absolutely imperative that property appraisers have a sales file that is both accurate and supportable, so that the market approach can be properly implemented. But even if a property's data are meticulously collected and completely accurate, these data are useless if there is no sales data against which it can be compared.

No matter which appraisal approach is used to value a property, it will be necessary to analyze sales parcels in order to complete the following tasks:

- Develop regression equations
- Set cost/market base rates
- Determines depreciation schedules
- Determine income capitalization or discount rates

Without relevant sales, the appraiser must depend entirely on the cost approach and the income approach, and make decisions based on those alone. Therefore, sales are needed to support the cost approach. Sales also help determine depreciation and obsolescence in the cost approach, and capitalization rates in the income approach.

The Register of Deeds makes basic sales information available to appraisers. However, before the sales for the tax year can be compared against similar properties that did not sell, the appraiser must verify four things: 1) that these sales represent arm's length transactions, 2) that the source of this information is correct, 3) that all rights and benefits of property ownership were transferred, and 4) whether any personal property was involved in the transaction. Altogether, this process is known as **sales qualification**.

2 Steps in Sales Qualification

Sales involving agricultural, industrial, and commercial properties often include personal property, as do some residential property transactions. It is also safe to assume that there will be some number of inter-company or intra-family transfers, "distress" sales, and so on, which have limiting terms and conditions that affect the sales prices. For these reasons (and many others) it

is essential that sales of this type are further qualified through conversations with one or more of the parties involved in order to determine whether the sales price should be adjusted for terms, personal property, etc. In some cases, a sale may need to be disqualified entirely.

Mecklenburg County has designed a Sales Questionnaire Form to help standardize this process and create a wellspring of useful sales data. The Sales Questionnaire is a record of the sales research that was conducted in order to establish the quality of a particular sale. Having a collection of qualified sales to draw from is extremely helpful when establishing unit land values, base rates, depreciation schedules, or checking the quality and degree of equalization of all work performed.

Since recent sales are the best indication of market value and have a strong effect on the entire mass appraisal process, the importance of handling them carefully and qualifying each and every sale cannot be overemphasized.

Figure 2.1: Sale Verification Questionnaire – Residential

Mecklenburg County
Assessor's Office
Real Property Division
PO Box 31127
Charlotte, NC 28231
http://charmeck.org/Mecklenburg/County/AssessorsOffice

SALE VERIFICATION QUESTIONNAIRE
THIS IS NOT A BILL

<<MAILDATE>>

<<NAME1>>
<<NAME2>>
<<ADDRESS1>>
<<ADDRESS2>>
<<CITY>>, <<STATE>> <<ZIP>>

Email Return:
SaleVerification@MecklenburgCountyNC.gov

Parcel ID: <<PARCELID>>

Dear Property Owner:

Public records indicate that, on **<<SALEDATE>>**, you purchased the property at **<<SITUS>>** in Mecklenburg County, in the amount of **<<PURCHASE PRICE>>** from **<<SELLER>>**.

This sale verification questionnaire is designed to help the County Assessor's Office track sales and get an understanding of what is taking place in the market. The information you provide will help us in determining which sales are fair market, arms-length transactions. Sales play a vital role in determining market value and our goal is to determine what the true sale price is of each property that is sold. Please take the time to answer the questionnaire as accurately as possible.

1) WAS THIS PURCHASED FROM A FRIEND OR FAMILY MEMBER? YES ___ NO ___

2) WAS A PRIVATE CORPORATION FOR WHOM YOU WORK INVOLVED IN THE SALE? YES ___ NO ___

3) WAS ANYTHING INCLUDED IN THE SALE WHICH YOU WOULD NOT CONSIDER REAL ESTATE (e.g., FIXTURES, APPLIANCES, PERSONAL PROPERTY, ETC.)? YES ___ NO ___

If yes, please list _____

4) HAVE YOU COMPLETED ANY MAJOR REPAIRS OR REMODELING TO THE PROPERTY SINCE YOUR PURCHASE? YES ___ NO ___

If yes, please explain briefly _____

5) WAS A TRADE OF PROPERTY INVOLVED IN THIS SALE? YES ___ NO ___

If yes, please describe briefly and give estimate _____

_____

6) IF ANY UNPAID TAXES OR ASSESSMENTS WERE ASSUMED BY YOU, PLEASE IDENTIFY THEM, INDICATE THE AMOUNTS INVOLVED, AND INDICATE WHETHER THEY WERE INCLUDED IN OR EXCLUDED FROM THE SALE PRICE _____

_____

7) WAS THERE ANY SELLER FINANCING? YES ___ NO ___

If yes, please specify the terms _____

8) WAS THE PURCHASE SUBJECT TO AN EXISTING MORTGAGE, AND IF SO, IN WHAT AMOUNT? _____

9) WAS THE SALE IN ANY WAY FORCED (e.g., IN LIEU OF FORECLOSURE, BY AN ESTATE, BY COURT ORDER, etc.)? _____

10) WAS THERE AN APPRAISAL MADE ON THIS PROPERTY, AND IF SO, IN WHAT AMOUNT?

_____

11) IS THERE ANY ADDITIONAL INFORMATION WHICH YOU FEEL MAY INFLUENCE THE VALUE OF THIS PROPERTY? _____

_____

Please use the enclosed self-addressed envelope and return this form to the County Assessor's Office, or return by email. Also, please sign, date and provide a contact number or email address so that you may be contacted to clarify any information that you have provided. Should you have any questions please contact our Real Property Assessment Division at 704-336-6348. We appreciate your cooperation in advance.

SIGNATURE: _____

DATE: _____ PHONE/EMAIL: _____

Figure 2.2: Sale Verification Questionnaire – Commercial

Mecklenburg County
Assessor's Office
Real Property Division
PO Box 31127
Charlotte, NC 28231
http://charmeck.org/Mecklenburg/County/AssessorsOffice

SALE VERIFICATION QUESTIONNAIRE
THIS IS NOT A BILL

<<MAILDATE>>

<<NAME1>>
<<NAME2>>
<<ADDRESS1>>
<<ADDRESS2>>
<<CITY>>, <<STATE>> <<ZIP>>

Email Return:
SaleVerification@MecklenburgCountyNC.gov

Parcel ID: <<PARCELID>>

Dear Property Owner:

Public records indicate that, on **<<SALEDATE>>**, you purchased the property at **<<SITUS>>** in Mecklenburg County, in the amount of **<<PURCHASE PRICE>>** from **<<SELLER>>**.

This sale verification questionnaire is designed to help the County Assessor's Office track sales and get an understanding of what is taking place in the market. The information you provide will help us in determining which sales are fair market, arms-length transactions. Sales play a vital role in determining market value and our goal is to determine what the true sale price is of each property that is sold. Please take the time to answer the questionnaire as accurately as possible.

1. Was this a purchase from a related party or corporate partner? Yes ___ No ___
2. Was anything other than real estate included in the sale (e.g., business equipment, furniture, etc.)?
   Yes ___ No ___ If yes, please provide the approximate value _____
3. Was there any special financing involved in the sale (e.g., seller financing, trade of property)?
   Yes ___ No ___ If yes, please explain _____
4. Was the sale in any way forced (i.e. In lieu of foreclosure, estate sale, court order)?
   Yes ___ No ___ If yes, please explain _____
5. Have any major repairs or remodeling been completed in the last two years? Yes ___ No ___

If yes, please provide the approximate value _____

6. Is a lease involved in this sale? Yes ___ No ___
   - Net Leasable Area _____ OR Gross Leasable Area _____
   - Common Area Space _____
   - Annual/Monthly Rent Rate $_____
   - Term of Lease _____
   - CAP Rate _____
7. Please list a primary contact person that may be contacted by our commercial appraisal staff should we need additional information to verify the sale of this property:
   Name: _____
   Phone: _____
   Email: _____

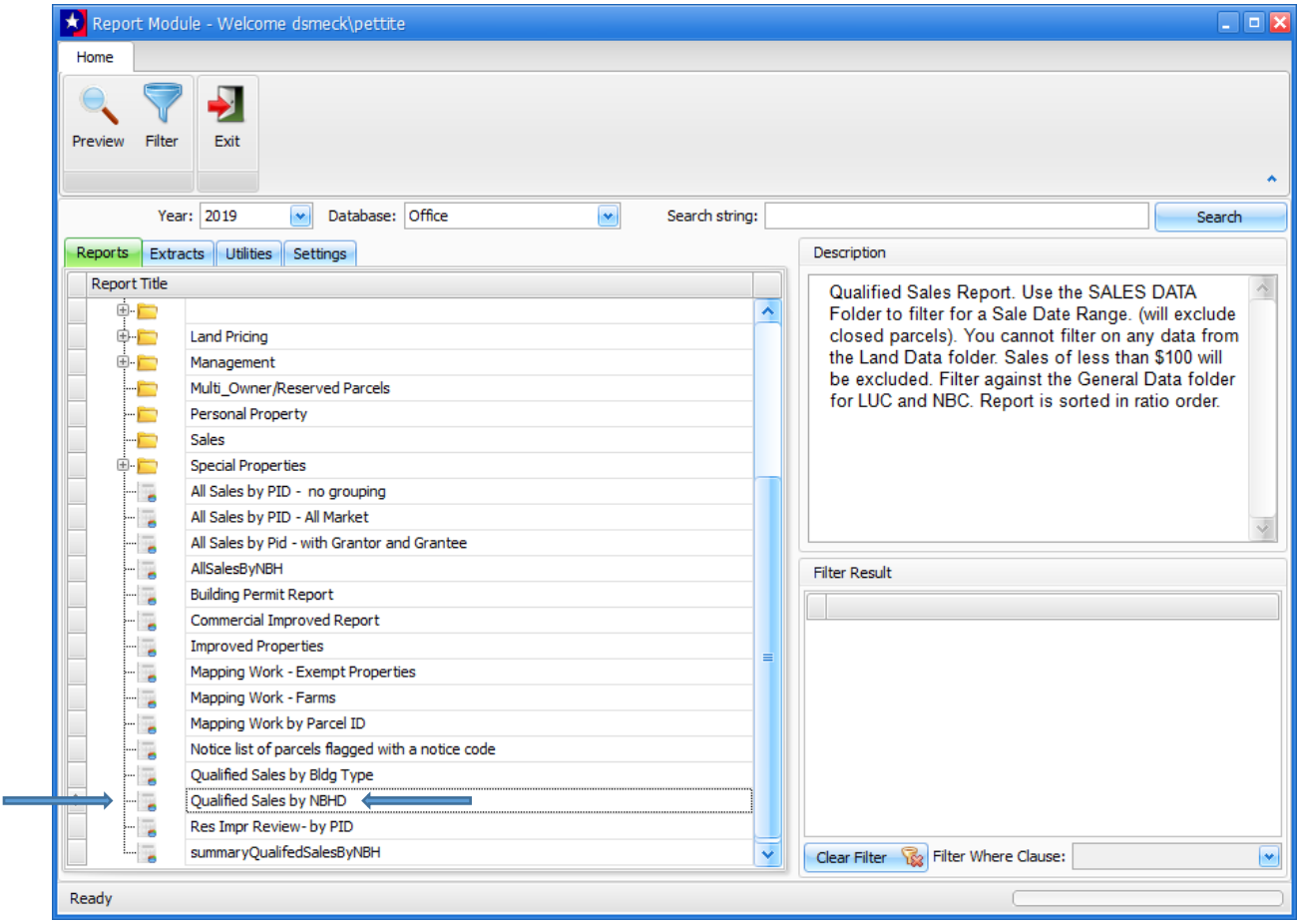
We ask your cooperation in supplying income and expense statements and rent rolls when returning this letter. This information will remain strictly confidential.

Please use the enclosed self-addressed envelope and return this form to the County Assessor's Office, or return by email. Also, please sign and date this form below. Should you have any questions please contact our Real Property Assessment Division at 704-336-6348. We appreciate your cooperation in advance.

SIGNATURE: _____ DATE: _____

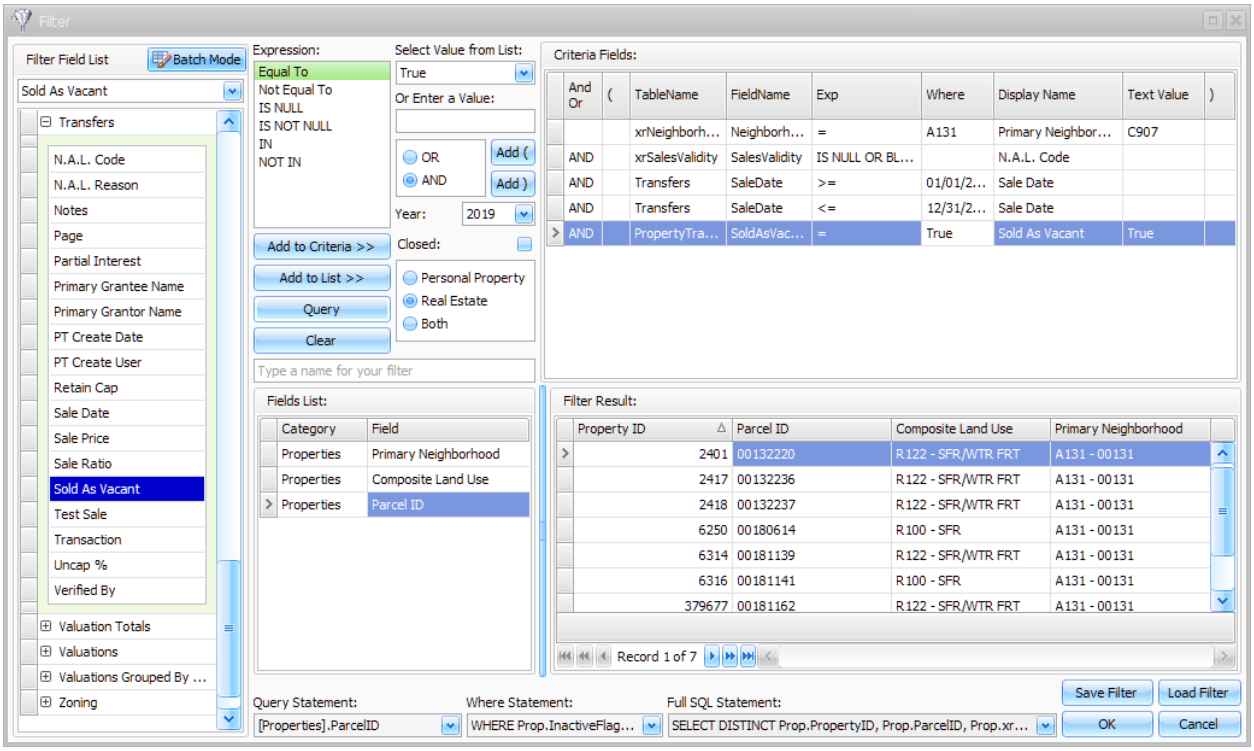
The filter shown in the screenshot below allows an appraiser to choose which qualified sales report to review.

Figure 2.3: Qualified Land Sale Report



This next screenshot depicts which filters are applied to create the qualified sales report.

Figure 2.4: Qualified Sales by NBH Report



The following table shows the report view of the filters that were applied to the qualified sales report. The qualified sales report shows which sales were looked at to assist in valuing the neighborhood.

Figure 2.5: Mecklenburg County Qualified Sales 3/11/2016 to 10/20/2017

01/19/2018 3:28:08PM QualifiedSalesByNBH

Mecklenburg County

Qualified Sales 3/11/2016 to 10/20/2017

Page 1 of 1

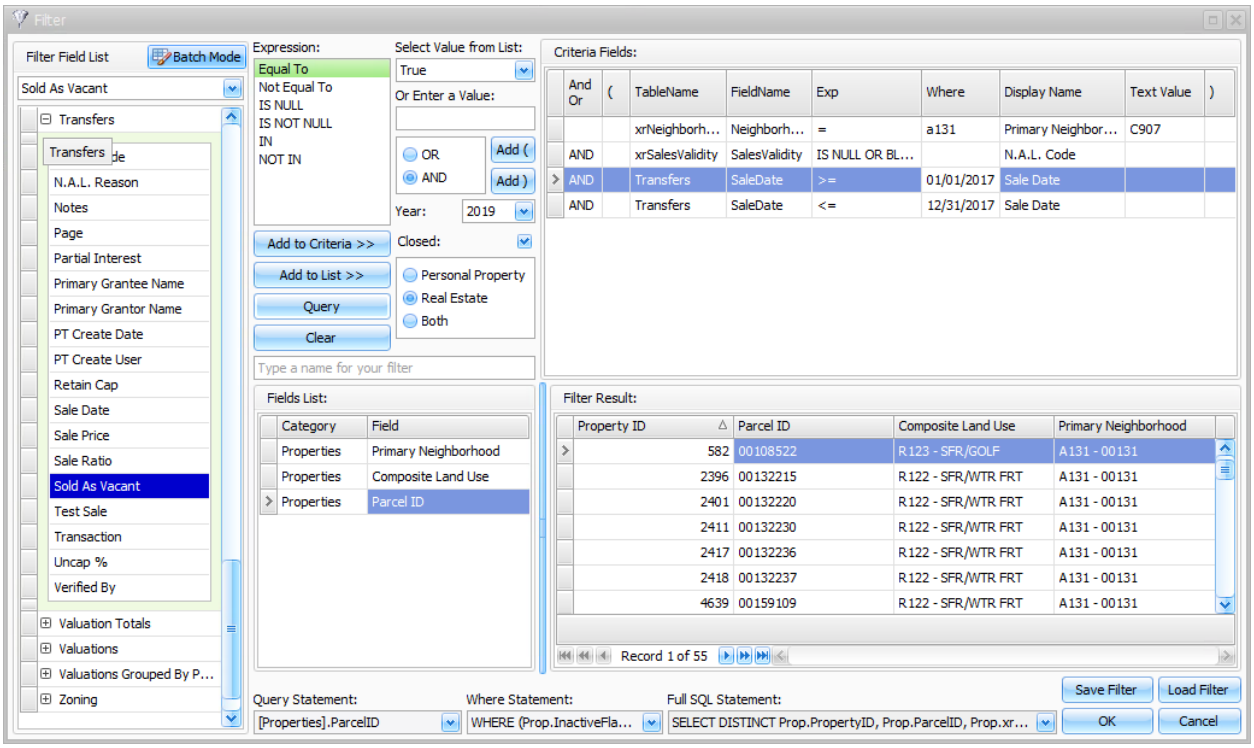
* Represents Vacant Land Sale

Parcel ID	Deed Bk-Pg	Address	Finished Area	LUC	NBC	Bld Typ	Act YB	Eff YB	Total AC	Grade	Verified By	Sale Date	Land Value	SFYI Value	Bldg Value	Total Value	Sale Price	Ratio	$unit
Nbhd Code:	**A131**																		
00132237	32211-119	18002 HARBOR LIGHT BV	0	R122	A131				1.00		08	10/20/2017	700,000	0	0	700,000	975,000 *	0.718	1.00
00132236	32059-566	18006 HARBOR LIGHT BV	0	R122	A131				1.00		08	08/22/2017	1,000,000	0	0	1,000,000	1,375,000 *	0.727	1.00
00132236	32059-566	18006 HARBOR LIGHT BV	0	R122	A131				1.00		08	08/22/2017	1,000,000	0	0	1,000,000	1,375,000 *	0.727	1.00
00132220	31558-868	18324 HARBOR LIGHT BV	0	R122	A131				1.00		08	02/10/2017	700,000	0	0	700,000	950,000 *	0.737	1.00
00132220	31558-868	18324 HARBOR LIGHT BV	0	R122	A131				1.00		08	02/10/2017	700,000	0	0	700,000	950,000 *	0.737	1.00
00132220	31127-179	18324 HARBOR LIGHT BV	0	R122	A131				1.00		64	08/30/2016	700,000	0	0	700,000	940,000 *	0.745	1.00
00132220	31127-179	18324 HARBOR LIGHT BV	0	R122	A131				1.00		64	08/30/2016	700,000	0	0	700,000	940,000 *	0.745	1.00
00181139	30656-325	15509 FISHERMAN'S REST C	0	R122	A131				1.00		68	03/11/2016	700,000	4,600	0	704,600	925,000 *	0.757	1.00
00132236	31212-319	18006 HARBOR LIGHT BV	0	R122	A131				1.00		64	09/29/2016	1,000,000	0	0	1,000,000	1,225,000 *	0.816	1.00
00132236	31212-319	18006 HARBOR LIGHT BV	0	R122	A131				1.00		64	09/29/2016	1,000,000	0	0	1,000,000	1,225,000 *	0.816	1.00
00181141	31528-192	18205 MOORINGS VIEW CV	0	R100	A131				1.00		08	01/27/2017	175,000	0	0	175,000	205,000 *	0.854	1.00
00181162	31906-41	FISHERMAN'S REST CT	0	R122	A131				1.00		08	06/23/2017	1,000,000	0	0	1,000,000	1,050,000 *	0.952	1.00
00180614	30977-101	18717 SQUARE SAIL RD	0	R100	A131				1.00		68	07/08/2016	175,000	0	0	175,000	180,500 *	0.970	1.00

Nbhd Code:	**A131**	**Mean:**	**0.792**	**Min Ratio:**	**0.718**	**WeightedMean:**	**0.780**
Count:	**13**	**Median:**	**0.745**	**Max Ratio:**	**0.970**	**PRD:**	**1.02**
Standard Deviation:	**0.086**	**Avg. Abs. Dev.**	**0.060**	**COD:**	**7.996**		

This next screenshot shows the filters applied for the qualified sales report, based on improved properties.

Figure 2.6: Qualified Improved Sales Report



The following table shows the report view of compiled data, after the filters shown above were applied.

Figure 2.7: Mecklenburg County Qualified Sales 1/3/2017 to 11/9/2017

01/20/2018 1:14:40PM QualifiedSalesByNBH

Mecklenburg County

Qualified Sales 1/3/2017 to 11/9/2017

Page 2 of 2

* Represents Vacant Land Sale

Parcel ID	Deed Bk-Pg	Address	Finished Area	LUC	NBC	Bld Typ	Act YB	Eff YB	Total AC	Grade	Verified By	Sale Date	Land Value	SFYI Value	Bldg Value	Total Value	Sale Price	Ratio	$unit
00132230	31832-18	18046 HARBOR LIGHT BV	6,337	R122	A131	01	2002	2002	1.00	56	08	05/26/2017	700,000	12,100	1,303,500	2,015,600	2,000,000	1.008	315.61
00180150	31846-208	18815 HARBOR LIGHT BV	3,486	R100	A131	01	2013	2013	1.00	43	08	06/01/2017	175,000	0	567,100	742,100	725,000	1.024	207.97
00166228	31938-683	18204 MAINSAIL POINTE D	5,868	R122	A131	01	2000	2000	1.00	53	08	07/03/2017	700,000	10,200	1,016,100	1,726,300	1,660,000	1.040	282.89
00168117	31870-240	19213 HIDDEN COVE LN	5,410	R122	A131	01	2001	2001	1.00	51	08	06/09/2017	700,000	0	838,000	1,538,000	1,435,000	1.072	265.25
00132215	32260-395	18432 HARBOR LIGHT BV	8,494	R122	A131	01	2002	2002	1.00	61	08	11/09/2017	700,000	25,300	1,865,300	2,590,600	2,400,000	1.079	282.55
00168212	32011-66	19309 PENINSULA SHORE	5,987	R122	A131	01	1998	1998	1.00	46	08	08/01/2017	700,000	19,000	852,300	1,571,300	1,400,000	1.122	233.84
00161115	31502-225	18936 BALMORE PINES LI	6,705	R122	A131	01	1998	1998	1.00	53	08	01/17/2017	700,000	20,700	1,065,200	1,785,900	1,590,000	1.123	237.14
00168119	31814-729	19233 HIDDEN COVE LN	2,804	R122	A131	01	1995	1995	1.00	41	08	05/19/2017	700,000	2,900	395,400	1,098,300	975,000	1.126	347.72
00159120	31547-446	19004 DOUBLE EAGLE DR	3,399	R122	A131	01	1992	1992	1.00	41	08	02/06/2017	525,000	20,700	423,300	969,000	825,000	1.175	242.72
00168134	31916-603	17723 SPINNAKERS REAC	4,349	R122	A131	01	1993	1993	1.00	41	08	06/27/2017	700,000	6,600	385,700	1,092,300	928,000	1.177	213.38
00168217	31809-429	19401 PENINSULA SHORE	6,259	R122	A131	01	1994	1994	1.00	56	08	05/18/2017	700,000	38,600	1,126,200	1,864,800	1,550,000	1.203	247.64
00162117	31678-993	18825 COVESIDE LN	4,588	R122	A131	01	1994	1994	1.00	43	08	03/30/2017	700,000	0	539,800	1,239,800	1,012,500	1.224	220.68
00181132	31742-688	15536 FISHERMAN'S RES	7,060	R122	A131	01	1997	1997	1.00	56	08	04/25/2017	455,000	4,000	1,103,200	1,562,200	1,175,000	1.330	166.43
00181131	31473-881	18209 TOWN HARBOUR R	6,555	R122	A131	01	2004	2004	1.00	56	08	01/03/2017	700,000	12,200	1,456,400	2,168,600	1,495,000	1.451	228.07

Nbhd Code:	A131	Mean:	0.917	Min Ratio:	0.637	WeightedMean:	0.920
Count:	55	Median:	0.877	Max Ratio:	1.451	PRD:	0.99
Standard Deviation:	0.173	Avg. Abs. Dev.	0.130	COD:	14.816		

There are three main steps in the sales qualification procedure.

2.1 Step 1: Deed Qualification of All Sales

In the first step, the appraiser examines deeds for any conditions or statements which might indicate that the sale was not an arm's length transaction. This is usually all that is necessary to obtain accurate sales data for single-family residences.

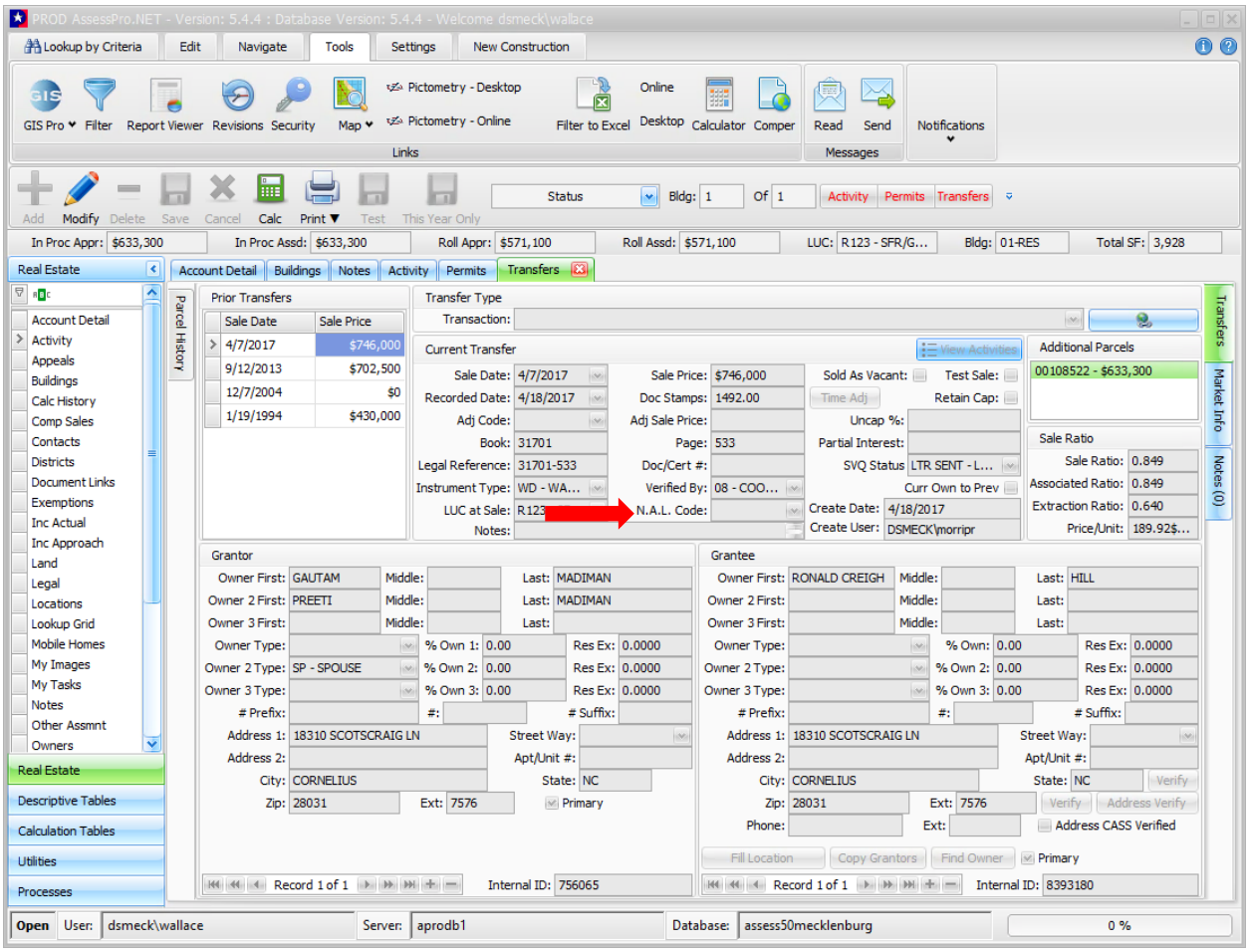
However, not all sales can be qualified, and those sales should not be used to value property. Deeds that have any of the following conditions are unqualified, and should be captured on the sales tab in the CAMA system, along with the appropriate NAL Code (see pages 34 and 35 for a complete list of NAL codes):

- Quitclaim, corrective, or tax deeds
- State documentary stamps, $.50
- Same family name as to grantee and grantor
- Deeds from or to banks or loan companies
- Deeds indicating a trade or exchange, or conveying less than whole interest (e.g., life estates)
- Deeds including live stock or personal property, (e.g., trucks, equipment, cattle)
- Multi-parcel sales, unless the amount paid for each parcel is specified
- Deeds including exchanges of real or personal property
- Deeds to or from any of the following:
    - Administrators
    - Clerks of court
    - Executors
    - County commissioners
    - Guardians
    - Counties
    - Receivers
    - Trustees of internal imp. fund
    - Sheriffs
    - Cities and/or municipalities
    - Masters
    - United States of America or federal agencies
    - Churches
    - Utility companies
    - Lodges
    - Educational institutions
    - Fraternal institutions
    - Benevolent institutions

2.2 Step 2: Sales Research

This next screenshot shows the tab on AssessPro where the sale is qualified or disqualified. This screen will also show the NAL code, if a sale is disqualified, along with the name of the appraiser who made this determination.

Figure 2.8: Sales Qualification Procedures



In the second step, appraisal staff qualify sales using sales questionnaires, data from property owners, or information collected during field visits and from realtors. The associated documentation is then scanned into the computer system and attached to the parcel.

All sales that are deemed to be “non arm’s length” transactions should be identified as such using the appropriate Sales Validity Code (NAL).

SALES VALIDITY CODES (NAL – NON ARM'S LENGTH)	
Code	**Description (Reason for Rejection)**
A	The transaction involves the conveyance of two or more parcels of real estate
B	Improvements were not included in the sales price
C	Deed shows $6.00* or less in excise (revenue) stamps *Transaction is for $3,000 or less
D	The date the deed was made, entered or notarized is outside the dates of the study period
E	The transaction is between parties of the same family name, relatives
F	The deed conveys an unspecified, undivided, or fractional interest in property
FC	Foreclosure
G	The deed reserves unto the grantor a life estate or some other interest
H	The deed reserves unto the grantor the possession of or lease of, the property for a specified period following the sale
I	One or both of the parties involved in the transaction is governmental, a public utility, a lending institution or relocation firm
J	The deed conveys a cemetery lot or other tax-exempt property
K	One or both of the parties involved in the transaction is a church, school, lodge, or some other benevolent, educational, or fraternal organization
L	A deed of trust indicates a sale price greater than the excise tax stamps
M	The deed indicates that the property conveyed is situated in more than one county
N	The transaction is for minerals, timber, etc. or the rights to mine or cut same
O	The transaction includes the conveyance of personal property, and the value of such is not specified separate from the real property value in the deed
P	The transaction is the result of a forced sale or auction
PB	The sale involved a probate
Q	Transaction made by the use of a "contract for sale" the agreement for which is executed and sale actually made prior to the study period
R	The transaction involved the trade or exchange of real property or a loan assumption
S	The transaction is for real property that cannot be clearly identified on the county tax records
TEMP	The sale is temporarily disqualified pending verification of the conditions of the sale or the property
U	A sale that includes parcels to be assembled for development purposes (Assemblage)

SALES VALIDITY CODES (NAL – NON ARM'S LENGTH)	
Code	**Description (Reason for Rejection)**
UC	The property is under construction or has incomplete remodeling/additions
UR	The property is under review with final value pending the results
V	Condominium Declaration
X	Other condition affected the sale that requires explanation
Y	The sale involved the demolition of improvements to the property
Z	The sale was made to a builder and does not represent typical market conditions

2.3 Step 3: Qualification of Sales by Deed

In the third step, the sales that remain unqualified may be qualified directly by the appraiser through conversations with the buyer or seller, either by phone, email, or in person. If enough qualified sales exist to support the validity of a sale that remains unqualified, the appraiser may qualify the sale from the deed stamps for use in our statistical reports. The appraiser should also do an onsite inspection to verify data. If this is done, the Qualification Code should be changed to indicate that the sale was qualified by deed stamps.

By completing the three steps of the sales qualification process, the majority of sales in the county can be effectively qualified.

3 Evaluating Sales

Completed sales questionnaires should be reviewed by the appraiser most familiar with the type of property or area being researched—for example, income-producing properties should be reviewed by the commercial/industrial appraiser, and residential properties by the residential appraiser.

During the investigation of sales, other factors may come to light indicating that it is necessary to make an adjustment to the sales price of what appears to be an otherwise qualified sale. These include market and economic factors. For example, if a property has to remain on the market for an excessive period of time prior to its sale, then an adjustment may be appropriate.

An appraiser who is familiar with the local market conditions will be in the best position to determine the type of adjustment(s) required. If there is a valid reason for an adjustment to be made, then it should be applied so that qualified comparable sales are available for valuing similar properties.

4 Use of Sales Analysis Reports in the Qualification Process

For counties that have a large volume of sales activity, AssessPro makes it possible for the property appraiser to identify the sales with outliers, and to limit their sales qualification activities to those sales.

AssessPro can generate reports based on location, improvement type, model number, and so on. Therefore, sales with the most extreme ratios can be subjected to the sales qualification procedure by setting parameters for analysis (e.g., all ratios greater than 100 and less than 75) based on requirements, available staff, and other resource constraints.

AssessPro is designed so that the property appraiser does not have to manually research his or her own files for various property types, but can generate reports detailing only those parcels that he or she wishes to research, based on the selected parameters. These parameters might be based on location, age, building type, land use, or other characteristics.

During the revaluation process, sales ratio studies are normally performed neighborhood by neighborhood, using the sales that were recorded in the years preceding the effective date of the revaluation. It is the intent of Mecklenburg County to appraise all neighborhoods within the performance standard defined by the *Standard on Ratio Studies* from the International Association of Assessing Officers (IAAO), which is as follows:

Type of Property	Measure of Central Tendency	(COD) Coefficient of Dispersion	PRD*
Single Family Residential			
Newer, more homogeneous areas	.90 – 1.10	10.0 or less	.98 – 1.03
Older, heterogamous areas	.90 – 1.10	15.0 or less	.98 – 1.03
Rural residential	.90 – 1.10	20.0 or less	.98 – 1.03
Income Producing Properties			
Larger, urban jurisdictions	.90 – 1.10	15.0 or less	.98 – 1.03
Smaller, rural jurisdictions	.90 – 1.10	20.0 or less	.98 – 1.03
Vacant Land	.90 – 1.10	20.0 or less	.98 – 1.03
Other Real Property	.90 – 1.10	varies	.98 – 1.03

5 Statements Regarding Intangible Assets

TURNER
BUSINESS APPRAISERS

July 12, 2018

Re: Mecklenburg County 2019 Revaluation Intangibles Testing

Intangible assets are long lived assets used in the production of goods and services. They lack physical properties and represent legal rights or competitive advantages (a bundle of rights) developed or acquired by an owner. In order to have value, intangibles should generate some measureable amount of economic benefit to the owner, such as incremental revenues or earnings (pricing, volume, and better delivery, among others), cost savings (process economies and marketing cost savings) and increased market share or visibility. The International Glossary of Business Valuation Terms (IGBVT) is a glossary of business valuation terms that defines intangible assets as "non- physical assets such as franchises, trademarks, patents, copyrights, goodwill, equities, mineral rights, securities and contracts (as distinguished from physical assets) that grant rights and privileges, and have value for the owner."[1]

A note regarding "goodwill":

The intangible asset "goodwill" is usually only quantifiable in businesses which return an above industry average rate of return on the market value of their tangible assets.[2] The excess earnings generated by the business create an income stream the value of which can be quantified using an income approach. The value of the income stream above the reasonable rate of return on the tangible assets is normally considered "goodwill" which in this context is an encompassing term. Goodwill value quantified in this manner is not segregated among the various intangible assets which underlie the sum total of the goodwill value. Thus, if other intangible assets exist they would be lumped together. However, the asset, income, or market approaches can be employed to segregate "goodwill" into its various intangible components if desired.

North Carolina General Statute 105-273 (31) exempts intangible personal property from taxation. According to an article published by the International Assessing of Assessing Officers there are two circumstances in which assessors may come across intangible assets:

1. Property sells as a going concern, such as a hotel with a franchise agreement in place
2. A restaurant with a well-known name sold as part of the real estate[3]

[1] https://www.cgma.org/resources/tools/valuing-intangible-assets.html
[2] Rev. Rul. 68-609 n1
[3] IAAO, Understanding Intangible Assets and Real Estate: A Guide for Real Property Valuation Professionals, November 12, 2016

The Mecklenburg County revaluation team is making substantial effort to insure that intangible value is excluded from any and all real estate assessments. These efforts include an independent review by Turner Business Appraisers, hereinafter "Turner," for the existence of any intangible value within a sample of proposed 2019 commercial real estate assessments. Moreover, during the revaluation process management promulgated information to the appraisal team to insure all members were cognizant of property types whose income stream or sales price could contain elements of intangible value.

The aforementioned review of commercial properties by "Turner" is underway to proactively identify and review certain types of commercial properties which can have intangible value. Among the types of properties under review are hotel/lodging facility, carwash, and storage facility.[4] The review process involves testing a sample of 2019 proposed property assessments for selected properties from each of the aforementioned property types. Analysis is conducted to ascertain if the proposed 2019 real estate assessment for each select parcel includes only real estate based upon the cost, income, and market approaches. If a proposed real estate assessment was or is deemed to possibly contain an element of intangible value it is flagged and submitted for review by County staff. "Turner" is using a four part test to determine if an intangible asset could exist at a property:

1. The intangible asset was identifiable
2. There was evidence in the subject property of legal ownership, that is, documents that substantiate rights
3. The intangible asset was capable of being separate and divisible from the real estate
4. The intangible asset was legally transferrable[5]

The flagged properties have or will undergo further review by County revaluation staff. The flagged 2019 proposed assessment of properties were or will be adjusted to eliminate any intangible amount or returned to "Turner" with supplementary data for additional testing. In the final analysis it is our agreed upon goal that all properties identified as potentially containing intangible value are adjusted to insure all assessments contain real estate value only. Additional study is ongoing by "Turner" as County revaluation staff completes their 2019 revaluation analysis.

Respectfully Submitted on behalf of the firm,

Jim H. Turner, Jr., CPA, CVA
CEO/President and Founder
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[4] ibid
[5] ibid

Chapter 3
Land Records Procedures

All property within Mecklenburg County shall be mapped as a parcel to include all necessary attributes. These attributes shall include, at minimum:

- PIN number
- Real PID (old parcel number)
- Deeded Acreage
- Survey Acreage Calculated Acreage
- Tax Neighborhood Designation
- Subdivision Name, Lot Number, and Plat Reference (when applicable)
- Year Entered

In addition, an AssessPro record shall be created and maintained for each parcel.

1 Definition of a Parcel

For the purposes of the Land Records Department, a parcel is a single tract of land as described in a deed or plat, and is physically one unit of land. If more than one tract of land is on a particular deed or plat, a separate parcel shall be created for each tract described. If a parcel of land is described as one, but another parcel is split from it causing it to be non-contiguous, then each part of the parcel that is noncontiguous shall become its own parcel. This is created when split by another parcel or a right-of-way.

1.1 Parcels that Cross the County Line

Properties that cross the county line shall be mapped to the county line, listing and assessing the acreage that is within Mecklenburg County limits. All buildings and improvements that are wholly located in the county will be assessed by Mecklenburg County. Buildings that are split by the county line will be taxed based on the percentage of the property which resides in Mecklenburg County.

1.2 Acreage

All parcel records in the Land Records Department shall reflect the acreage cited in the original deed or plat, unless there is no acreage cited in the original document. If there is no acreage cited, then a "0" shall be put in the "Deeded Acreage" or Survey Acreage field of GIS, and the calculated acreage followed by "(CAL)" shall be put as the acreage annotation in GIS and in the acreage field of AssessPro.

In the case of a property split, the parent tract shall reflect the original deeded acreage less the deeded acreage of the child parcel or parcels. If the child parcel does not cite acreage, then the calculated acreage shall be subtracted from the parent parcel's deeded acreage, and the calculated acreage designation of "(CAL)" shall be added to the parent and child parcel(s). There are some parcels on record that do not have an acreage, and for these parcels Polaris calculates the area in the Polygon and this acreage will show with GIS beside it.

2 Citing Ownership

Ownership shall be listed with the name(s) of the person(s) cited on the original deed, will, or court proceeding. The name is to be listed exactly as it appears on the deed. Descriptive information about the grantee (marital status, state of incorporation, etc.) should not be listed, only the name of the owner or name of the company that owns it.

2.1 Changing a Name Without Transferring Ownership

For an individual, a new deed (filed in the Mecklenburg County Register of Deeds) is the best way to change the name for an existing owner. Generally, a correction deed is best suited when there is an error or omission in the original document. In the case of a marriage/divorce/name change, a new deed is also best. However, if a name change has been appropriately filed with the Clerk of Courts, it can be used.

For a corporation, as with individuals, recording a new deed is preferable. However, for a corporation or business, the owner of a record can be changed based on Articles of Name Change, Articles of Merger/Acquisition, or other similar documents, as long as they have been appropriately filed with the North Carolina Secretary of State, Corporations Division, and/or the Mecklenburg County Register of Deeds. However, this can only be done if legal documentation is provided.

2.2 Transferring Ownership

The only way to transfer ownership of a parcel is via a recorded, legal land record document. There are three documents that fit this description:

1. A deed
2. A will
3. A special proceeding/court order

These documents must be a recorded public record in Mecklenburg County, either in the Register of Deeds or Clerk of Courts. A document filed in another county or state cannot be used to transfer a property. To transfer a parcel, staff must first identify the property described by the deed. Once the parcel is identified, then staff must verify that the grantor has an interest in the property to transfer. If the grantor does not, then the preparing attorney shall be contacted to obtain more information or to request a correction.

Mecklenburg County Land Records can only transfer a parcel or interest in a parcel if the grantor actually owns interest in it. If the grantor does not have interest in a parcel, then that deed reference shall be added to the parcel, but the ownership will not change. Per North Carolina statute, if the ownership of a parcel is in dispute, then the property should be listed to unknown owner.

3 Intent of a Deed

Property shall be transferred or split exactly as it is described in the deed. However, minor typographical errors in a deed can be overlooked as long as the intent of the deed is clear. If the intent is not clear, then that deed shall be held until a correction deed is recorded.

For example, if the grantor owns lot 125 of XYZ subdivision and a deed is recorded from that grantor for lot 25 of that subdivision, staff shall research the situation. If staff finds that the grantor actually owned lot 125, the mailing address and prior deed reference reflect lot 125, and the grantor never owned lot 25, then it would be obvious that lot 25 was a typographical error omitting the "1" and that they intended to transfer lot 125. The attorney and owner shall be notified of this error, but for our purposes staff shall transfer lot 125 to the new owner.

As another example, let's say that one of the deed calls is reversed. As long as staff can determine what property is to be conveyed, then the deed shall be mapped/transferred. If a deed comes through for lot 5 of ABC subdivision as recorded in map book 105 / page 1, and that plat is a different subdivision owned by the grantor, then the intent would not be clear because the grantor owns both parcels and either could be correct. This parcel would not be transferred until a correction deed is recorded. For this section, staff shall use their best judgment to determine if an error is minor enough to transfer the property, or whether a correction is necessary.

4 Property Mapping Basics

Each parcel shall be mapped in GIS according to the metes and bounds description on the original deed or plat. In the event of a conflict in a legal description, the following order should take precedence:

1. Right of possession
2. Senior right (which property/description was done first)
3. Location of a natural monument
4. Location of a man-made monument
5. Adjoining owners
6. Direction and distance
7. Area
8. Coordinates

When mapping parcels, there should be no overlaps or gaps between parcels. However, these issues do sometimes occur.

4.1 Gaps

Though gaps can exist, they are rare and come about only when there is a survey on each side that denotes the existence of a gap between the two owners. That polygon is given a PID and a record is created in AssessPro under unknown ownership. That is not to say that you won't see gaps in the mapping layer. These usually occur when the mapper is adding new parcels and didn't execute the join properly. Parcel Fabric does not give us tools to find these small gaps, and appraisers have to rely on visual QC to identify and remove them. Many don't have a PID, though some inherit the parent PID due to a process called Parcel Remainder. If you see these and have a question about them, please feel free to forward staff a screen shot and they will try to clean them up.

4.2 Overlaps

Overlaps are never shown. If two different surveys overlap, the most recent survey takes precedence and the older adjacent parcel is adjusted to the new one. If the property owner with the older survey had a new survey made and recorded, we would then adjust the common boundary to reflect the newest survey on record. Staff does not decide which survey is correct, that's a legal issue. True overlaps between two surveys are rare.

4.3 Plats

A plat is to be mapped at the time it is recorded, and a separate parcel number assigned to each lot and section of common open space. In order for the plat to be mapped, the owner of record must be the owner of all of the land shown on the plat and must have signed the plat as the owner. In the case of a company owning the property, it must be signed by an authorized representative of the company in their official capacity, not as an individual. If the land shown in the plat is comprised of different tracts owned by multiple different people/entities, then the plat must be held until a deed is recorded that puts the land under the names that match the owners cited on the plat.

When revisions to a lot or plat are recorded which change lot lines/sizes/etc., the affected parcel(s) shall be updated accordingly, so long as the owner cited on the plat is still the owner of record. AssessPro and GIS shall be updated to show the new plat reference as the primary reference. When revisions change something other than the lots—such as a plat that is recorded after the original to show the edge of pavement, location of utilities, etc.—then that plat shall be shown in AssessPro as an additional plat reference. The newest plat that actually shows/creates/modifies the parcel(s) in question shall be shown as the primary plat reference in GIS and AssessPro.

4.4 Correction Deeds

Per North Carolina N.C. gen. stat. SEC. 47-36.1, a correction deed can only correct "obvious typographical or other minor errors in a deed." This means that a correction deed can correct a

misspelling of a person's name, plat reference, etc. However, "un-recording" a parcel, transferring a different parcel than on the original deed, adding or deleting parcels to a deed, changing the grantee, etc. are not minor errors and a new deed shall be recorded in order to change the listing.

5 GIS Procedures and Data Entry Standards

All parcels shall annotate parcel dimensions for all lines in parcels in accordance with the North Carolina Land Records Management Program's *Technical Specifications for Base and Cadastral Maps*. In addition, side and back line dimensions shall be annotated for parcels 5.01 acres or larger, unless it is comprised of many small but separate calls such as the run of a river or stream, in which case those dimensions may be omitted. No dimensions are required for condominium and townhome polygons.

Attributes shall be populated as prescribed by the current GIS data model. Easements shall be drawn in one of three categories: 1) ingress/egress, 2) utility, or 3) other/misc. The "other/misc." category is used for drainage easements, greenway easements, and similar matters.

5.1 Abbreviations

All data entered in the Land Records Map Card database shall be in compliance with the *Mecklenburg County Land Records Abbreviation Standards*, which are referenced in the three following tables.

ABBREVIATIONS FOR NAMES AND PROPERTY DESCRIPTIONS	
Tax Listing	**Deed**
&	and
(HSB)	Husband
(WF)	Wife
DBA [only used on deed]	d/b/a / Doing Business As
TRUSTEE	Trustee
INC	Inc / Incorporated
LLC	LLC / Limited Liability Company
AC	Acre / ACRES
PB	Plat Book Page
HWY	Highway / NC Highway [shown on Map]
HWY	State Highway [shown on Map]
SR	State Route / State Road [shown on Map]
HWY	US Highway / US Route [shown on Map]

ABBREVIATIONS FOR NAMES AND PROPERTY DESCRIPTIONS	
Tax Listing	**Deed**
ASSN	Association
PT or P	Part / Part of
L	Lot / Lots
BUS	Business
B	Block
PH	Phase [only on deeds or Map]
SEC	Section [only on deeds or Map]
C/O	Care of / In care of
LF EST	Life Estate
REM	Remainderman
CTY	City [only used with ownership]
CNTY	County [only used with ownership]

CITY CODE	
Code	**Description**
10	Charlotte, Mecklenburg
11	Charlotte, Mecklenburg, MSD 1
12	Charlotte, Mecklenburg, MSD 1 & 2
13	Charlotte, Mecklenburg, MSD 1 & 3
14	Charlotte, Mecklenburg, MSD 4
15	Charlotte, Mecklenburg, MSD 5
20	Davidson, Mecklenburg
30	Cornelius, Mecklenburg
40	Pineville, Mecklenburg
50	Matthews, Mecklenburg
60	Huntersville, Mecklenburg
70	Mint Hill, Mecklenburg
80	Stallings, Mecklenburg

For this next table, please note that the instrument types (or deed types) listed are simply types of documents that are used to update ownership, create new parcels, split and combine parcels, work right of ways, or give land records the information needed to process a transfer. However, some of them are not entered into AssessPro.

INSTRUMENT TYPES	
Code	**Description**
AF	Affidavit
AX	Annexation
BA	Boundary Agreement
CB	Corporation Book [used in the register of deeds office only]
CD	Consolidation Deed
CM	Commissioner's Deed
CO	CORRECTIVE DEED
CT	Certificate of Name Change
UF	Condominium Unit
CV	Civil Action/SPECIAL PROCEEDING [only placed into the notes]
DT	Deed of Trust [do not use at this time]
EA	Easement
ED	Executors Deed
EF	Estate File - Will Book
ES	ESTOPPEL DEED
FC	Foreclosure
FD	FORECLOSURE DEED
GD	GIFT DEED
GQ	Quit Claim
GU	Guardian Deed
GW	General Warranty Deed
HO	HOME OWNERS ASSOC. LIEN DEED
LA	Lease Agreement
LS	LOAN ASSUMPTION
LW	LIMITED WARRANTY DEED
MA	Memo of Action [used in right of way R/W's]
MC	Marriage Certificate
MG	COMPANY MERGER
NW	Non-Warranty
QC	Quit Claim Deed
QD	Original Deed
RR	Re-Recorded Deed
RW	Right-of-Way
SD	Sheriff/Commissioner's Deed
SH	Sheriff's Deed
SP	Special Proceedings

INSTRUMENT TYPES	
Code	**Description**
SS	SECRETARY OF STATE ARTICLES
ST	Substitute Trustee Deed
SV	SURVEY
SW	Special Warranty Deed
TR	TRUSTEE DEED
WL	Will or Estate File

5.2 Names

All names entered into the system follow these guidelines:

- All names are to be entered ***Last Name*** first, then ***First Name***. It does not matter if it is entered in upper or lower case, the system will automatically change it to upper case when you save the record. No comma "," is to be used. Additionally, if initials are on the deed such as "A.T. Smith", the initials are to be separated with a space and no periods are to be used.
    - Example: DOE JOHN
    - Example 2: SMITH A T
- If the property is owned by a married couple and no tenancy is specifically cited, then it reverts to Tenancy by the Entirety. In this scenario, both names can be put on the same line, but the last name *must* be entered for both.
- If the property is owned by more than one person and they are not married, or tenancy is specified other than Tenancy by the Entirety, each owner is to be placed on a separate line with the appropriate percent of owner associated with it. If after research is conducted by the Land Records Department, the percent of ownership cannot be determined or is in dispute, then the fields are left blank in AssessPro.

This next set of rules governs how names related to a Life Estate /Life Tenant are treated:

- A Life Estate Holder/Life Tenant shall be designated by adding "(LF EST)" after their name(s) to signify that they are the holder of the lifetime rights. The Remainderman (that is, the person who inherits or is entitled to inherit property once the estate of the former owner is terminated) shall be designated by adding their name into the notes, but not listing them on the ownership screen. If there are multiple Life Estate holders, then the first listed will be named on the ownership screen. If there are multiple Remaindermen, they will be listed in the notes screen.
    - Example: DOE JOHN & DOE JANE (WF) (LF EST)
      Notes section – DOE JAMIE (REM)
- When a Life Estate holder passes, the property is to be keyed as a transfer to the Remainderman on a separate line (or lines, if multiple Remaindermen exist) using the same deed reference that designated the Life Estate/Remainderman ship, flagging it

as the current owner. If the percentage is listed on the deed, the percent of ownership should be changed from 0% to the appropriate percentage.

For records that deal with the former Life Estate, the following guidelines are used:

- The holder's record is to be flagged CURRENT OWNER = NO, and the date of their death placed in comments on their line.
- When Land Records is notified of the death of a property owner, the transaction shall be processed as follows:
    - If the property is owned by Tenancy by the Entirety (husband and wife), and one spouse has passed, then the property is to be transferred on a new line to the surviving by the original deed/instrument. In the COMMENTS for that line, the Name and Date of Death shall be cited for the spouse that passed.
    - If the property is owned by an individual or the decedent is one of multiple owners, the property is to be transferred to that person's Estate by adding "THE ESTATE OF" after the name. (In the case of multiple owners, the decedent's interest shall be transferred to their Estate.) If there is no Will or the Will has not been probated, the property is to remain in the name of the Estate until it is probated or a Judgment is made and filed in the Clerk of Courts office. If or when the Will has been probated or a Judgment made and filed, the property will then be transferred from the Estate to the new owner(s) in accordance with the Will or Judgment. The date that the estate was probated, or the date on which the Judgment was filed, is the date that is to be used and logged into the notes of the activity line. This date can be obtained in the Register of Deeds.

Corporate name changes have additional guidelines:

- If a company files a name change, and that change is via a document filed in the Mecklenburg County Registry, then the property is to be transferred to the new name as a correction.
- If the name is changed via a filing with the North Carolina Secretary of State, it shall be transferred to the new name using the original deed reference and date. A brief comment, the SOSID, and the date from the filing shall be cited in COMMENTS for that new line.
    - Example: Corporate Name Change per SOSID 1234568 filed 1/4/2004

5.3 Acreage, Size, and Property Description

Acreage is cited in the LOT SIZE/ACREAGE field, abbreviated as "AC", and decimal places are to be recorded just as they are found on the deed or plat (rounded to three decimal places), unless it has been adjusted for Splits and/or Acreage Adjustments. In other words, if the deed says "1 acre", it should be cited in the system as "1 AC". If the deed says "4.28745 acres", then it is cited

as “4.287 AC”. If the acreage is calculated, then “CAL” should follow the acreage (for example, “1.5 AC CAL”).

It is a good practice to record how the acreage was described in the deed by writing it in the internal comments field, in case the acreage is questioned in the future. This will be done by a property assessor when updating the land screen.

If parcel dimensions are known (such as an old city lot that was designated by dimensions such as 25’x100’), it is a good idea to also include them in the LOT SIZE/ACREAGE field. The dimensions should be placed after the acreage. An example would be “0.34 AC 100’x150’”. This is not technically a requirement, but can be quite helpful. If dimensions used are not from the deed or plat, then they are to be put in parenthesis.

Property descriptions are limited to 100 characters and should be entered using the format below. Abbreviations should be in accordance with the *Mecklenburg County Land Records Abbreviation Standards*, located in Section 5.1 of this document.

- **Subdivision Parcel**
  L (lot number) (subdivision name) B (block)
  L 7 MICKEY MOUSE FARMS B 2
  COS XYZ BUSINESS PARK

- **Non-Subdivision Parcel**
  If there is no designated description, then a NA will be used for a legal description. There are some that still have street names as their legal description, but these will be updated when a deed for that property comes through.

Chapter 4
Land Appraisal Procedures

When sufficient sales are available for a neighborhood, the market sales comparison approach is the preferred method for the valuation of land. However, a majority of Mecklenburg County is developed, which causes a scarcity of available comparable land sales in many neighborhoods throughout the County. In these neighborhoods, the allocation method or the market extraction methods are used.

Income capitalization techniques should also be considered for properties for which sufficient sales data is not available for vacant parcels. As often happens in the downtown area and in older subdivisions (where no vacant parcels remain), value may be estimated using a land residual approach, as described in Chapter 8 (Income Property Valuation).

Some of the factors that influence land value and therefore must be considered include:

- Location
- Size
- Shape
- Topography
- Accessibility
- Present use
- Highest and best use
- Zoning
- Utilities
- Income that the land brings in
- Supply and demand

Other factors that influence land value are improvements made either *to* or *on* the land. Improvements *to* the land include irrigation, drainage, sea walls, sidewalks, curbs, gutters, and so on. Improvements *on* the land include building structures, and these are typically valued separately from the land (exceptions to this rule include some condominium or cooperative buildings).

1 Land Appraisal Procedures

There are four general steps involved in appraising land.

1.1 Step 1: Verify Neighborhood Boundaries

First, an appraiser will examine existing neighborhood boundaries to determine whether the properties encompassed by those boundaries are affected by the same economic factors. Neighborhood boundaries are defined by:

1. Physical boundaries, such as thoroughfares, streams, railroad right-of-ways, etc.
2. Uniform land-use controls, such as zoning districts
3. Relatively homogenous types of properties

The appraiser will identify and delineate the populations of properties that share similar geographic, economic, legal, and physical attributes.

1.2 Step 2: Establish a Base Lot Value

The first part of establishing a base lot value is analyzing homogenous subdivision neighborhoods. These areas are chosen because they usually have more current sales data to rely on, making this process relatively quick and easy. Working on these homogenous neighborhoods first allows appraisers to familiarize themselves with the process, which gives them the opportunity to develop ideas that will help them work with more difficult neighborhoods later.

There are three separate methods used to arrive at base site rates by neighborhood:

1. **Direct sales comparison approach.** This is the preferred method for estimating base lot rates when there are sufficient market sales of existing lots available for analysis. In this approach, appraisers search for arms-length sales of typical lots within a neighborhood in order to determine the base lot value. The premise of this approach is based on the building lot theory, which states that buyers will normally pay a going rate for a site, regardless of minor differences in size, topography, etc.
2. **Allocation method.** In neighborhoods where there are insufficient vacant land sales, appraisers can use the allocation method to determine the base lot rate. Sales data can be obtained from other, similar neighborhoods that are located nearby the subject neighborhood. These neighborhoods should contain houses of a similar style, age, and price range to the homes in the subject neighborhood. The thought process behind this approach that these neighborhoods are competing with the subject neighborhood for the same pool of buyers in the marketplace. By relying on current sales data from the comparable neighborhood(s), appraisers can establish typical land/building ratios, which are then applied to the subject neighborhood to help arrive at new base lot rate.
3. **Abstraction method.** This methodology is also used in neighborhoods where there are not enough vacant sales for the direct sales comparison approach to be used. Appraisers can examine newer construction sales in these neighborhoods, and then subtract the depreciated cost value of the improvements in order to arrive at a residual land value. The Cost Residual Report in AssessPro has been developed specifically to assist staff appraisers with this process.

For the clear majority of residential neighborhoods, the only land unit type will be a *lot*, and most parcels in the neighborhood are appraised on a per lot basis. For some of the neighborhoods, particularly those in outlying areas, an acreage unit type may be needed as well. In those cases, size adjustment curves are applied automatically on a neighborhood-by-neighborhood basis. If enough vacant sales data for these acreage tracts are gathered, then the sales price/acre of these tracts can be plotted in order to develop an AssessPro size-adjustment curve that replicates what is observable in the local market area.

1.3 Step 3: Review Land Use Codes (LUCs) with Zoning and Influence Codes

In this third step, appraisers run the "Land Line Detail by NBHD" report in order to review all data related to Land Use Codes (LUC), Zoning, Neighborhood Codes, base pricing rates, percentage influence codes, current vs. previous land value calculation, and the percentage change in site values. These reports are edited manually and used to update AssessPro when completed.

1.4 Step 4: Quality Control Measures

Finally, a "Current vs. Previous by NBHD" report is run for all neighborhoods. When the report asks for a previous value to refer to, the focus is set to "Land." This report is used to search for "outliers"—that is, parcels that have decreased in land value, or parcels that have increased by an amount other than what would be considered normal for that particular neighborhood.

LAND USE CODES			
Residential Property Land Units and Location Units	**Code**	**Commercial/Industrial Property Land Units**	**Code**
Lot	LT	Square Foot	SF
Acres	AC	Acre	AC
Golf Course	GC	**Agricultural Property Land Units**	**Code**
Waterfront	WF	Acre	AC
Water View	WV		
Point Lot	PT		
SWIM Buffer	SWIM		

Note that some properties may require the use of two or more different land units.

2 Rural Residential

Acreage in Rural Residential neighborhoods has been valued using a size curve (as shown in the table below) that emulates the Nonlinear Curve-Fitting (Data-Fitting). This methodology is employed for rural acreage tracts according to the Principle of Increasing and Decreasing Returns, where smaller tracts typically sell for a higher price per acre than larger tracts do. The relationship may be non-linear, resulting in an adjustment curve.

The valuation model is calibrated with these factors to provide a best fit for each market area. The adjustment curve in different markets will change according to the market demand.

RURAL RESIDENTIAL SIZE CURVE								
From Area	To Area	Price	Standard Size	Curve %	Max Factor	Min Factor	Area	Factor
0	99999.999	30,000	4.5	40	3.5	0.5	1	1

By using the following formula, one can calculate the size adjustment for any acreage tract:

Size Adjustment = [Standard Size / Actual Size × (Curve % / 100) + (1 – (Curve % / 100))]

3 The Base Price Method

The Base Price Method is a sound methodology when utilizing the neighborhood concept for different locations within the jurisdiction being appraised. Zoning will guide the appraiser on the Highest and Best Use for each parcel. The market indicates that land values change when properties have different amenities—such as road frontage and public utilities—and based on the road type and size of tract.

The following sections describe how each of these factors affects each parcel of land.

3.1 Location

Location is the key factor in determining the market value of properties within the County. For this reason, appraisers established location areas (also called base price areas) throughout the County, organized by market demand and sales prices. Within each base price area, other location factors may be applied to a given parcel.

The concept of neighborhood homogeneity may tend to fluctuate values as the parcel becomes more influenced by the neighborhood, and less influenced by the total base area. The market demands that properties located in or near active market areas have higher prices. Factors that tend to increase market demand include the desirability of a subdivision, the availability of water and sewer services, proximity to shopping areas, and the existence of other amenities. Conversely, parcels near a declining subdivision or undesirable industrial or commercial use areas may see a decline in market demand. All of these influences must be determined by the appraiser, and adjusted on an individual basis.

3.2 Size

The size of a parcel plays a major role in determining the per acre price at which it will sell. Because of diminishing marginal utility, larger tracts typically sell for less per acre, but have a higher total sale price. The total price asked for a larger parcel of land has an inverse correlation with the number of potential buyers in the market, as more buyers leads to more price negotiation and longer marketing periods for large tracts of land. Consequently, the actual cash

value per acre decreases as the size of the parcel increases. An exception to this rule exists in the present market, where developers are willing to pay a premium for larger tracts that are becoming scarce.

The value of small lots that contain less than one acre depends greatly on zoning and health department restrictions where public water and sewer do not exist. Therefore, these lots may be valued on either a per lot basis or a per acre basis, depending on which one provides the best market fit. Tracts that are one acre or greater are to be priced by using the base price in conjunction with size factor curve similar to the example shown on the previous page.

3.3 Access

The following factors related to access also play a role in determining a parcel's value, and should be adjusted for as described.

- Paved road. This is considered to be the norm, and no adjustment is needed.
- Dirt road. Parcels located on dirt roads may be adjusted for as indicated by the market.
- Gravel road. Dirt roads with gravel may be adjusted for as indicated by the market.
- Rural dirt road (not state maintained). These roads are usually maintained by a group of property owners, and may be adjusted for as indicated by the market.
- No state maintained access. Parcels that have no access are useful mainly as add-on property for adjoining owners that do have access. Residential use is limited on these parcels; therefore, small tracts do not show the dramatic increase in per acre price. Market-defined factors are to be applied to these parcels, in order to reduce both the base price and the size factor influence.
- No public access (private drive). This refers to parcels that have established access drives to the property, but no state-maintained frontage.

ACCESS CODES FOR RURAL NEIGHBORHOODS	
Access Code	**Type**
RP	Rural paved, is considered normal
PW	Paved, with public or community water
PS	Paved, with public water and sewer
RG	Rural gravel, state-maintained road
PD	Private drive or easement (no public access)
NX	No access to property

ACCESS CODES FOR URBAN NEIGHBORHOODS	
Access Code	**Type**
RP	Rural paved, is adjusted for lack of water and sewer
SP	Suburban paved, is adjusted for lack of water and sewer
UP	Urban paved, is adjusted for lack of water and sewer
IS	Interstate, is adjusted for location
RD	Rural dirt, is adjusted for lack of water, sewer, and paving
SD	Suburban dirt, is adjusted for lack of water, sewer, and paving
UD	Urban dirt, is adjusted for lack of water, sewer, and paving
RG	Rural gravel, is adjusted for lack of water, sewer, and paving
RT	Private dirt, is adjusted for lack of water, sewer, paving, and maintenance
DW	Rural dirt, government maintained with water
GW	Rural gravel, government maintained with water
PD	Private drive or easement (no public access)
PS	Paved, with public water and sewer
PW	Paved, with public water
NX	No legal access to property

3.4 Topography

Land considered to be usable but that suffers from rough topography may need further adjustment to achieve market value, since rough topography increases the development and building cost required to gain the optimum use from a parcel of land. The usable land on each parcel must be looked at and adjustments applied as indicated by comparable sales.

Certain tracts of land in Mecklenburg County have problems with percolation. Adjustments to the land value will be made only when the property owner's request is accompanied by evidence, such as a rejection certificate from the Environmental Health Department. Such parcels should be assigned the land use code (LUC) 9699 (Unsuitable for Septic), and an influence code NP (No Perc) should be used to identify the cause of adjustment. Adjustments for NP are made based on market indications.

3.5 Shape

It is possible that the shape of a specific parcel may affect its utility, and adjustments for shape are made based on market indications.

3.6 Rights of Way

Land falling within a state road right of way should be assigned LUC 9401 (Right of Way). This code will suppress 100% of the neighborhood land unit price assigned.

Surface easements governing power, natural gas, and petroleum rights of way may have varying effects on each parcel. If the actual amount of acreage within the easement is known, the appraiser will assign LUC 9402 (Utility Easement) to that area, which will suppress 90% of that value.

In a privately-owned railroad right of way, the appraiser will use LUC 9404, which will suppress 90% of the value.

In cases where the acreage amount is unknown, the appraiser may apply the UE (utility easement) influence code to factor the base unit price according to market-extracted data. The extent of the liability and the impact on value is based mainly on the easement's location within the parcel.

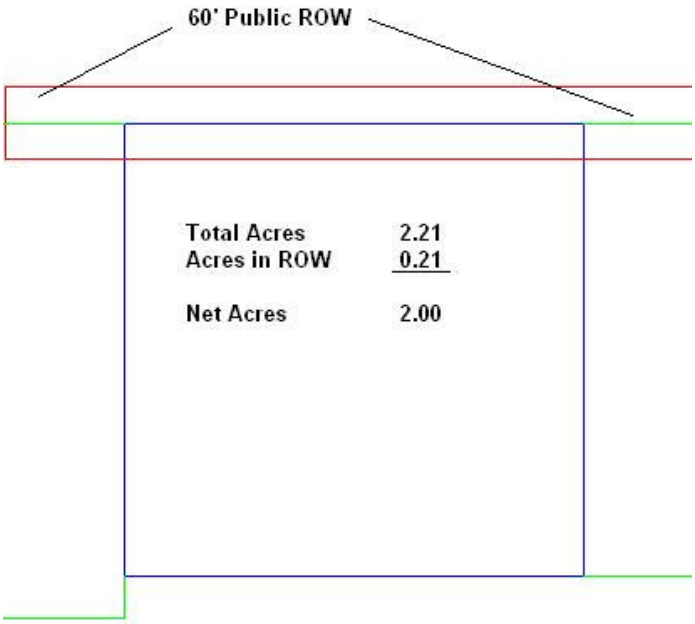
3.7 Acreage within a Right of Way

Mecklenburg County Tax Administration's guidelines on acreage within a right of way specify that we must assess all parcels based on deeded acreage as recorded at the register of deeds office. There has been some ambiguity as to which acreage to use when acreage is cited both to the centerline and to the edge of the right of way, so the following two sections seek to clarify these two points.

3.7.1 Public Right of Way

As demonstrated in the figure below, a plat may be drawn that shows the parcel extending to the centerline of the road and the location of the limits of the right of way. Such an illustration cites the total number of acres, the number of acres in the right of way, and the net acres (that is, the acres left over after the right of way acres are taken out).

Figure 4.1: Public Right of Way Plat



The same situation may exist in a written deed, for example: "… containing 2.21 acres, more or less, and including 0.21 acres of right of way, leaving a net of 2.00 acres, more or less…".

Mecklenburg County's guidelines stipulate that the deeded acreage must be cited as the total acreage (2.21 in the illustration), and a note made in the "land notes" section that captures the acreage that is in the right of way. Real Property/Revaluation will appraise all of the deeded acreage, but the land in the right of way will have LUC 9401, with a base price of $0, leaving it at no value.

If the deed or plat goes to the centerline and the legal document does NOT cite the number of acres in the right of way, then the cited acreage will be assessed at market value. If a property owner falls into this category and wishes for the acreage in the right of way to be valued at $0 (no value), then he or she must provide us with a survey showing the amount of property that exists both in and out of the right of way.

3.7.2 Private Right of Way

If there is a deed or plat that specifies a right of way that is NOT dedicated as public, then a parcel is to be created for that right of way and assigned an appropriate PIN and Real ID. This is to be sent to Real Property/Revaluation for the creation of a tax record. Like the right of way described above, the land in this right of way will have LUC 9401, with a base price of $0, leaving it at no value. However, we will still maintain a property record including the owner of record.

An example of this would be a subdivision where there are lots drawn to the edge of the right of way, but where the right of way is not dedicated as public. This right of way would then become a parcel.

4 Land Data Entry (AssessPro)

Land data entered into AssessPro includes the land or lot size, the neighborhood code, neighborhood modifiers, the land use code, zoning, and whether or not a parcel is vacant. An unlimited number of land lines may be entered per parcel. There are also a variety of influences and modifiers available. The following list outlines the types of data that are entered into AssessPro.

1. LAND USE CODE
   Select the primary Land Use Code on the first card on the first line. The Land Use Code is abbreviated to LUC throughout the application.

   Related Table: Land Use Descriptive Table

   Required Field: Yes

LUC FACTOR
Displays a factor to be assigned on this land line if there is a Land Use Code factor assigned in the Land Use Code Descriptive Table for the Land Use Code you selected.

Related Table: Land Use Descriptive Table

2. PRIMARY JURIST CODE
   Select the jurisdiction code from the list. This code is used with the neighborhood code to further define the factors applied to land based on location.

   Related Table: Jurisdiction Descriptive Table

3. JURIST FACT
   Displays a factor to be assigned on this land line if there is a Jurisdictional factor assigned in the Jurisdictional Factors Descriptive Table for the jurisdiction selected.

   Related Table: Jurisdiction Descriptive Table

4. NO OF UNITS
   Enter the number of land units, such as square feet or acres, in this field. This field and the Unit Type field are closely related. Typically, all of the land measurements will be entered on the first land line. Subsequent land lines may only be used to track building information. In these cases, enter a zero as the number of units.

   Text Type: Number

   Required Field: Yes

5. UNIT TYPE
   Select the measurement type that will be assigned to the number of units. The Unit Type determines the unit price, based on the Neighborhood Code.

   Related Table: Land Unit Codes Descriptive Table

   Text Type: Text

   Required Field: Yes

6. UNITS FOR VALUE
   Enter the number of land units to be used for the size adjustment basis. This is only needed if a different size basis is desired. This field is also used for depth, if depth factor tables are used.

   Text Type: Number

7. ALT LUC
   Enter the secondary Land Use Code for mixed-use. A prompt will appear where one can automatically post the code and % to the building information, if desired.

   Text Type: Text

8. ALT LUC %
   Enter the percentage of your land that belongs to the Alternate LUC. The value must be less than 51.

   Text Type: Number

9. PRIMARY NEIGH CODE
   Select the Neighborhood Code from the list. This code determines the price schedule and is very important for other factors.

   Related Table: Neighborhood Codes Descriptive Table

   Required Field: Yes

10. PRIM NBC MOD
    Enter an adjustment to be applied when indicated for higher or lower value pockets in a neighborhood. Adjustments range from Minus -5 to Minus -95, and from Plus +5 to Plus +1800.

11. UNIT PRICE
    Display of the standard price per unit, based on the Neighborhood Code as defined in the Price Data Calculation Table.

12. INFLU CODE 1
    Select a category to give a positive or negative adjustment for the land based on an influence that is not represented elsewhere on this screen. For example, there may be waterfront or view influence codes.

    Related Table: Land Influence Types Descriptive

    INFLU CODE 1%:
    Enter the percent adjustment. Enter a positive number to increase, or a negative number for a reduction.

    Text Type: Number

INFLU CODE 2:
Select a code for the type of land influence.

Related Table: Land Influence Types Descriptive

INFLU CODE 2%:
Enter the percent adjustment. Enter a positive number to increase, or a negative number for a reduction.

Text Type: Number

INFLU CODE 3:
Select a code for the type of land influence.

Related Table: Land Influence Types Descriptive

INFLU CODE 3%:
Enter the percent adjustment. Enter a positive number to increase, or a negative number for a reduction.

Text Type: Number

13. SPECIAL LAND CODE
    Select a code for special land. Special land—such as farmland, recreational land, or forest—can be adjusted either by applying a factor to the value of the land, or by setting a price for a given land area (e.g., $800 per acre). If there is a Special Land Factor assigned in this table it will be displayed in the space to the right side of this field.

    Related Table: Land Use Table

14. SPECIAL LAND FACTOR
    Adjustment to the scheduled Special Land Price.

    Text Type: Number

15. SPECIAL LAND PRICE
    Displays the value calculated based on the Special Land Prices Table for Land Use Code.

    Related Table: Special Land Price Table

16. ASSESSED VALUE
    Displays the calculated assessed value for the land line you are viewing. This is the actual assessment.

    Text Type: Number

17. NOTES
    Area for notes, if any.

    Text Type: Text

18. ZONING (LINE)
    Select a Zoning code to apply to a specific land line in this parcel. Zoning must be added to the Owner / ID / Tax Info screen before it will be available in this field.

    Related Table: Zoning Codes Descriptive Table

19. TOTAL AREA
    Enter total land units for the parcel. This field is not specific to a land line. This can be used to display the total land for the parcel on the record card if the process used to determine value does not include land size. For example, front feet may have been used to derive value, but the size of the parcel is still recorded.

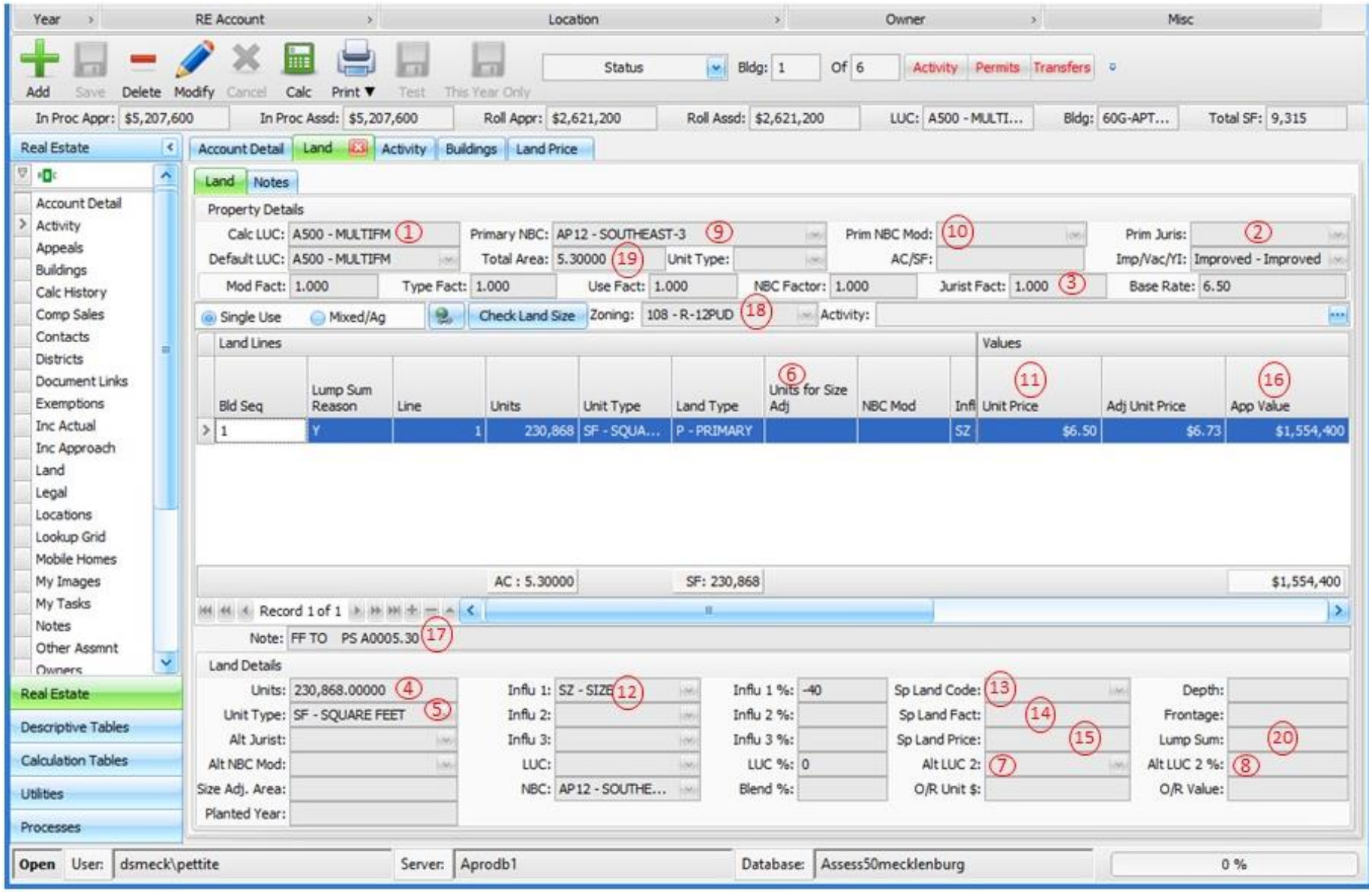
    Text Type: Number

20. LUMP SUM ADJ
    Enter an adjustment to be applied to the final land value as a lump sum. This value is not specific to a land line.

    Text Type: Number

The screenshot below illustrates where each of these data fields appear in the relevant screen in AssessPro.

Figure 4.2: Land Data Screenshot



The following tables list the various Land Use Codes used for different types of property within the AssessPro system.

LAND USE CODES – RESIDENTIAL	
Code	**Description**
R100	Single family residential
R101	Single family residential – creek
R102	Single family exceptional
R103	Single family gated community
R111	Single family residential – common
R113	Single family residential – river
R120	Single family residential – rural
R122	Single family residential – waterfront
R123	Single family residential – golf course
R124	Single family residential – water view
R134	Single family residential – mini farm
R135	Single family residential – water access
R140	Single family residential – water front point
R141	Single family residential – water front cove
R150	Patio home
R151	Patio home – common
R153	Patio home – river/creek
R160	Patio home – rural acreage
R162	Patio home – waterfront
R163	Patio home – golf course
R164	Patio home – water view

LAND USE CODES – MOBILE HOME	
Code	**Description**
R200	Mobile home – subdivision
R201	Mobile home – HS
R210	Mobile home – park
R220	Recreational vehicle park

LAND USE CODES – CONDOMINIUM	
Code	**Description**
R300	Condominium
R306	Condominium – high rise
R311	Condominium – common area
R313	Condominium – river/creek
R320	Condominium – rural acreage
R322	Condominium – water frontage
R323	Condominium – golf course
R324	Condominium – water view

LAND USE CODES – TOWN HOUSE	
Code	**Description**
R309	Town house – single family residence
R371	Town house – common area
R373	Town house – river/creek
R382	Town house – water frontage
R383	Town house – golf course
R384	Town house – water access

LAND USE CODES – MULTI-FAMILY	
Code	**Description**
A500	Multi-family
A501	Multi-family – common area
A503	Multi-family – river/creek
A510	Multi-family – rural acreage
A512	Multi-family – water frontage
A513	Multi-family – golf course
A514	Multi-family – water access
A560	Multi-family – garden
A561	Multi-family – town house
A562	Multi-family – duplex/triplex
A563	Multi-family – high rise

LAND USE CODES – OFFICE	
Code	**Description**
O400	Office
O418	Office > 4 stories
O419	Medical office
O420	Medical condominium
O421	Medical condominium – common area
O424	Office condominium
O425	Office condominium – common area
O431	Day care center

LAND USE CODES – INDUSTRIAL	
Code	**Description**
I600	Industrial
I601	Fertilizer plants
I602	Seafood processing
I603	Industrial – common area
I604	Industrial – park
I628	Mini – warehouse
I630	Laboratory/research
I640	Warehouse condominium – common area
I641	Light manufacturing
I642	Heavy manufacturing
I643	Lumber yards
I644	Packing plants
I645	Cigarette manufacturers
I646	Breweries, bottlers, cannery, winery
I647	Warehouse condominium
I648	Warehousing
I649	Steel frame warehouse
I651	Cold storage/freezer
I652	Truck terminal
I653	Service garage
I654	Flex warehouse
I655	Stadium/arena
I657	Motor sports garage
06EX	Industrial excess land

LAND USE CODES – COMMERCIAL	
Code	**Description**
C700	Commercial
C701	Commercial – water frontage
C703	Billboard site
C710	Convenience/fast food
C711	Convenience stores
C712	Car wash
C713	Department store
C714	Supermarket
C715	Shopping center (mall)
C716	Shopping center (strip)
C717	Drug store/pharmacy
C721	Restaurants
C722	Fast foods
C723	Banks
C725	Commercial
C726	Service station
C727	Auto sales & service
C728	Parking/parking decks
C731	Commercial condominium – common area
C732	Theaters
C733	Lounges, night clubs, bars, micro-brewery
C734	Bowling alleys, skating rinks
C735	Commercial condominium
C736	Business park
C737	Hotels, motels > 6 floors
C738	Furniture stores
C739	Hotels, motels < 7 floors
C780	Marina land
C781	Commercial – common area
C782	Cell towers site
C783	Billboard site

LAND USE CODES – OTHER	
Code	**Description**
7000	Institutional
7100	Churches
7200	Schools, colleges (private)
7300	Hospitals (private)
7400	Homes for the aged
7401	Nursing homes
7500	Orphanages
7600	Funeral (mortuary, cemetery, crematorium, mausoleums)
7700	Clubs, lodges, union halls, swim clubs
7710	Yacht clubs
7720	Retreats
7721	Land conversation (private)
7800	Private country clubs
7801	Par “3” golf courses
7802	Miniature golf courses
7803	Public golf courses (regulation)
7804	Semi-private golf courses
7900	Airports
8000	Marinas

LAND USE CODES – GOVERNMENT-OWNED	
Code	**Description**
8100	Military
8200	Recreational area
8300	Schools (public)
8400	Colleges (public)
8500	Hospitals (public)
8600	Other county properties
8601	Water plants
8602	Fire departments
8603	Recycling
8604	Disposal
8605	Jail
8700	Other state (marshland)
8701	State ports
8702	Land conservation (state-owned)
8703	State correctional
8800	Other federal
8900	Other municipal
8901	Municipal education
8902	Municipal airport
8903	Municipal housing authority

LAND USE CODES – MISCELLANEOUS	
Code	**Description**
9000	Leasehold interest
9010	No land interest
9100	Utility (gas, electric, telephone)
9101	Utility/private
9200	Mining
9300	Petroleum and gas
9400	Right of way
9401	Roadway corridor
9402	Utility Easement
9403	Air rights
9404	Railroad right of way (private, owned by individual)
9410	Greenway trail
9500	Submerged land (rivers and lakes)
9501	Island
9600	Sliver, wasteland, gullies, rock outcrop
9601	No perk lot
9602	Well site
9603	Environmental hazard
9610	Buffer strip
9611	Wetland
9612	Flood plain – AC
9613	Flood plain – LT
9614	Floodway – restricted
9615	Water retention pond
9633	Commercial landfill
9699	Unsuitable for septic
9700	Mineral rights
9710	Less mineral rights (taxed elsewhere)
9800	Owner unknown
9900	New parcel
9901	Transfer (corrections)
9902	AC change only
9904	Combination
9905	Split
9910	Deleted parcel

5 Definitions of Land Classifications

The following definitions are pulled from G.S. 105-277.2, and were adhered to during valuations of these three land types.

5.1 Agricultural Land

"Agricultural land" means land that is part of a farm unit that is actively engaged in the commercial production or growing of crops, plants, or animals under a sound management program. Agricultural land includes woodland and wasteland that is part of the farm unit, but the woodland and wasteland included in the unit shall be appraised under the use-value schedules as woodland or wasteland.

A farm unit may consist of more than one tract of agricultural land, but at least one of the tracts must meet the requirements in G.S. 105-277.3(a)(1), and each tract must be under a sound management program. If the agricultural land includes less than 20 acres of woodland, then the woodland portion is not required to be under a sound management program. Also, woodland is not required to be under a sound management program if it is determined that the highest and best use of the woodland is to diminish wind erosion of adjacent agricultural land, protect water quality of adjacent agricultural land, or serve as buffers for adjacent livestock or poultry operations.

5.2 Forestland

"Forestland" means land that is part of a forest unit that is actively engaged in the commercial growing of trees under a sound management program. Forestland includes wasteland that is part of the forest unit, but the wasteland included in the unit shall be appraised under the use-value schedules as wasteland. A forest unit may consist of more than one tract of forestland, but at least one of the tracts must meet the requirements in G.S. 105-277.3(a)(3), and each tract must be under a sound management program.

5.3 Horticultural Land

"Horticultural land" means land that is part of a horticultural unit that is actively engaged in the commercial production or growing of fruits or vegetables or nursery or floral products under a sound management program. Horticultural land includes woodland and wasteland that is part of the horticultural unit, but the woodland and wasteland included in the unit shall be appraised under the use-value schedules as woodland or wasteland. A horticultural unit may consist of more than one tract of horticultural land, but at least one of the tracts must meet the requirements in G.S. 105-277.3(a)(2), and each tract must be under a sound management program.

If the horticultural land includes less than 20 acres of woodland, then the woodland portion is not required to be under a sound management program. Also, woodland is not required to be under a sound management program if it is determined that the highest and best use of the

woodland is to diminish wind erosion of adjacent horticultural land or protect water quality of adjacent horticultural land.

Land used to grow horticultural and agricultural crops on a rotating basis, or where the horticultural crop is set out or planted and harvested within one growing season, may be treated as agricultural land as described in subdivision 5.2 when there is determined to be no significant difference in the cash rental rates for the land.

6 Present-Use Value

Effective January 1, 1974, the North Carolina General Assembly enacted the Present-Use Value Program, which allows certain agricultural land, horticultural land, and forestland to be assessed at a value consistent with its present use rather than its higher market value.

The rates are determined by the North Carolina Use – Value Advisory Board, in accordance with G.S. 105-277.7. The rates are published annually by the North Carolina Department of Revenue. For a detailed explanation of the North Carolina Present-Use Value Program, please visit: https://www.ncdor.gov/documents/2019-use-value-manual.

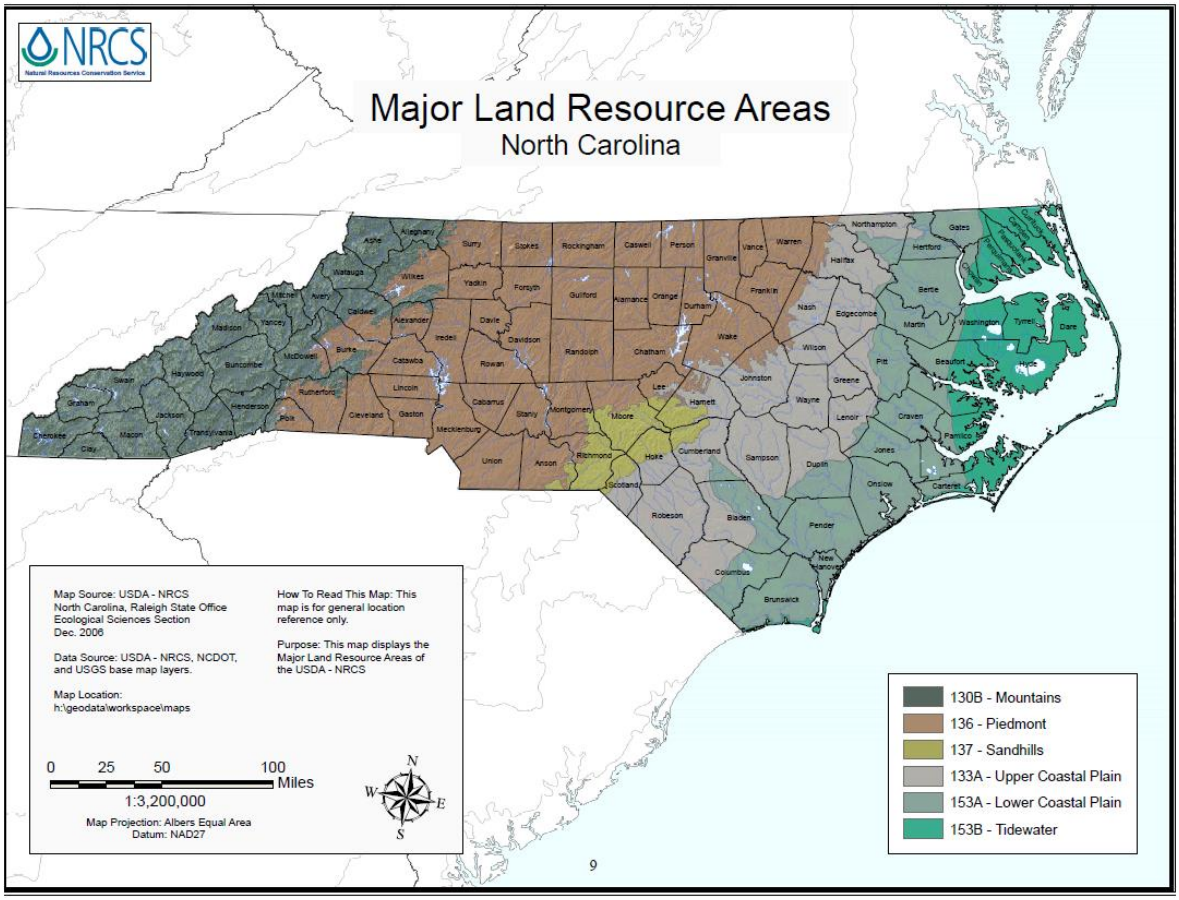
PRESENT-USE VALUE LAND USE CODES		
Code	**Description**	**Price Per Acre**
4314	Conservation – wildlife	$645.00
5000	Use value homesite	market value
5001	Cell tower site	market value
5002	Billboard site	market value
5102	Disqualified open land	market value
5310	Agricultural – commercial production	$645.00
5933	Disqualified agricultural land	market value
5934	Deeded access r/w	$0.00
5935	Disqualified conservation easement	market value
6100	Forest – commercial production	$360.00
6210	Woodland – excess on AG PCL	$360.00
6711	Horticultural – commercial production	$1,370.00
6800	Waterfront – present-use value	$645.00
6800	Disqualified forest land	market value

There are six Major Land Resource Areas (MLRAs) in the state of North Carolina, as shown in the table below.

MAJOR LAND RESOURCE AREAS (MLRAs)	
Code	**Description**
MLRA 130B	Mountains
MLRA 133A	Upper Coastal Plain
MLRA 136	Piedmont *[where Mecklenburg County resides]*
MLRA 137	Sandhills
MLRA 153A	Lower Coastal Plains
MLRA 153B	Tidewater

The map below shows where each of these resource areas is located.

Figure 4.3: MLRAs in North Carolina



Within each MLRA, the soil is characterized as being one of the following four classes of productivity for agricultural and horticultural:

1. Class I – Best Soils
2. Class II – Average Soils
3. Class III – Fair Soils
4. Class IV – Non-Productive Soils

Note that forestland has two additional classes—Class V and Class VI (Non-Productive Land).

The next table shows the Mecklenburg County region for soil types and classification, along with the rents for each class type.

MLRA 136 – Piedmont (in dollars per acre)			
Class	**Agriculture**	**Horticulture**	**Forestry**
I	$950	$1,370	$360
II	$645	$890	$255
III	$420	$615	$250
IV	$40	$40	$160
V	n/a	n/a	$115
VI	n/a	n/a	$40

The next three sections describe how each type of land is calculated to determine the rent per acre of qualified present-use value land.

6.1 Agricultural Land

Capitalizing the above net incomes at 6.5% produces the following results:

Typical agricultural land in Mecklenburg County will use Class II (Average Soils) land pricing. This equates to $645 per acre (rounded).

This rounded price per acre is also applicable to agricultural land used as a farm for aquatic species as specified under NC G.S. 105-277.3(1)(1). Note that all agricultural land categorized as Class IV, or Non-Productive Land, will be appraised at $40.00 per acre.

For 2019, rents were increased 10% in order to more accurately represent the current cash rents, and were then divided by a capitalization rate of 6.5% to produce the Agricultural Schedule. (As required by statute, agricultural values cannot exceed $1,200.)

6.2 Horticultural Land

Capitalizing the net average cash rents for Horticultural Rental income for the state of North Carolina at 6.5% produces the following results:

Typical Horticultural land in Mecklenburg County will use Class I (Best Soils) land pricing. This equates to $1,370 per acre (rounded).

All horticultural crops requiring more than one growing season between planting or setting out and harvest, such as Christmas trees, ornamental shrubs and nursery stock, apple and peach orchards, grapes, blueberries, strawberries, sod, and other similar horticultural crops should be classified as horticulture regardless of their location in the state. Note that all horticultural land categorized as Class IV, or Non-Productive Land, will be appraised at $40.00 per acre.

For 2019, rents were increased 10% to more accurately represent the current cash rents, and were then divided by a capitalization rate of 6.5% to produce the Horticultural Schedule.

6.3 Forestland

Woodland or wasteland used in conjunction with a use value unit will use a forestry value range for pricing. This will typically be Forestry Class I (Best Soils) land price. This equates to $360 per acre (rounded), using a cap rate of 9.0% as required by statute.

Note that all forestland categorized as Class VI, or Non-Productive Land, will be appraised at $40.00/Acre. An exception to this rule would be that for MLRA 130, you should use 80% of the lowest valued productive land.

Net Present Values were divided by a capitalization rate of 9.0% to produce the Forestland Schedule.

7 Common Open Space Procedures

If ownership continues in the Builder/Developer’s name, then it is taxable at market value. However, adjustments must be made for access to utilities (e.g., water, sewer), the shape of the plot, topographical features (typically flood plain), access, and right of ways (e.g., power, gas, or other utilities). All improvements will be priced at full market value.

If ownership transfers to the Home Owner Association, an application for exclusion would need to be filed. If the plot qualifies for exclusion (that is, if the HOA owns it), then the land will be assessed at a 0% value for tax purposes. (The LUC for a single family residence common area is R111.) All improvements will also be placed at 0% of value.

7.1 Flood Plain Adjustments

Parcels with acreage being developed must typically have some open space; therefore, the flood plain has a value as open space. Mecklenburg County has four areas of concern when valuing

property. Parcels that have flood plain should be adjusted according to the acreage that is within the various flood plain areas. There are four flood plain areas designated on the GIS maps:

1. **SWIM buffer** is identified as a water quality buffer for naturally vegetated zones along the banks of streams and lakes.
2. **Floodway** is a channel for an overflow of water caused by flooding, which cannot be developed.
3. The **100-Year Flood Zone** has some limited development potential, which means there is a 1% chance that the property will see a flood like the one on the FEMA flood map each and every year.
4. The **500-Year Flood Zone** is typically found as a thin band around the outside of the 100-Year Flood Zone, and has a much greater potential for development since there is only a 0.2% annual chance of flooding.

When sufficient market data is available, the flood plain adjustment will be based on this data.

For parcels priced by lots (typically located within a subdivision), the appraiser will use current sales to dictate whether these flood areas have a negative impact to property, and what type of adjustment is required. In some instances, these flood areas present a larger buffer to give home owners more privacy, causing no adjustment needed. In some instances, it may even require a positive adjustment.

8 Pricing Guidelines

8.1 Excess Land Residential Lots

The value of excess land in residential lots varies from area to area, depending on the market. In many new subdivisions it is desirable to have small lots with small yards. In such subdivisions, excessive size may yield no additional value.

In subdivisions that appeal to buyers who are looking for large lots that provide more privacy, room for outdoor activities, or additional square footage for other yard items, excess land is desirable and should be reflected in the appraised value. When evaluating a neighborhood, the appraiser must decide how to appraise excess land. Some suggested guidelines are: 1) make no adjustment, or 2) use the 50% rule.

When using the 50% rule, the appraiser decides what the average lot size is and sets the base lot price. They then adjust lots that are larger or smaller than the base by valuing the difference at 50% of value. This approach is especially useful when converting older subdivisions from front footage to lot pricing, but can also be used in modern subdivisions.

The following four examples show the 50% rule in action:

- The typical lot size is 75 feet and the subject lot is 90 feet. 90/75 = 120%, which means that the subject lot is 20% larger. 20% × 50% = 10%, so the subject lot requires a +10% Size Adjustment.

- The typical lot size is 75 feet and the subject lot is 60 feet. 60/75 = 80%, which means that the subject lot is 20% smaller. -20% x 50% = -10%, so the subject lot requires a -10% Size Adjustment.
- The typical lot size is .75 acres and the subject lot is 1.25 acres. 1.25/.75 = 1.67%, which means that the subject lot is 67% larger. 67% x 50% = +33.5%, which can be rounded to a +35% Size Adjustment. If it is determined that the lot is unbuildable due to the zoning requirements, then multiply the result of the calculation by 30%.
- The typical lot size is 75 feet and the subject lot is 30 feet. 30/75 = 40%, which means that the subject lot is 60% smaller. -60% x 50% = -30%, so the subject requires a -30% Size Adjustment. This yields a 70% condition factor, which should be reduced by 30%. 70% x 30% = 21%, which can be rounded to 20%, or -80% for size and unbuildable.

In the event that a house is built in the middle of two or more lots, and no additional homes can be built on the land, then one lot will be valued at full value and each additional lot will be valued at 50% of value, unless the size of the house built required the use of two or more lots. In that case, all lots will be valued at full value.

The following two examples demonstrate this concept:

- The typical lot size is 75 feet and the subject lot is two 75-foot lots. 100% + 50% = 150% - 50% / 2 lots = 75%, or a -25% Size Adjustment. The subject lot should be priced as 2.00 LT with a condition factor of 75% HSE ON 2 LTS.
- The typical lot size is 75 feet and the subject lot is three 75-foot lots. 100% + 50% + 50% = 200% - 200% / 3 lots = 67%, or a -33% Size Adjustment. The subject lot should be priced as 3.00 LT with a condition factor of 67% HSE ON 3 LTS.

In custom quality neighborhoods where additional lots may be necessary to accommodate the size of the home being built, all lots may need to be valued at full value.

If the 50% rule does not work for a particular neighborhood, then adjust the percentage to what the market dictates (30%, 75%, etc.) and follow the examples above.

8.2 Adjustments for Lots Unsuitable for Septic When Sewer is Not Available (NO PERC)

If there is no suitable system available and alternative systems are unknown, then the price should be adjusted by -70% of the base lot value. Once a public sewer is available, this adjustment should be removed. The appropriate department within the county will need to certify the land is unsuitable for sewer lines.

For example, say that it is determine that a subject lot is unsuitable for any type of septic system. The NO PERC adjustment of -70% (comparable to No Build) is entered as an influence factor on the land line.

8.3 Land Conservation Adjustment

The Catawba Land Conservancy (CLC) is a local land trust that protects land primarily in six counties in the Southern Piedmont of North Carolina. This land is made up of both public properties and private properties. The public properties are labeled as nature preserves and are owned and managed by CLC. These are usually undeveloped and important natural areas that are being permanently protected to safeguard valuable wildlife habitat, water quality, farmland, or regionally significant geological areas.

The private properties are labeled conservation easements, and are lands that are owned by private landowners or other entities. However, CLC holds the real estate interest and restricts development for conservation purposes. These land conservation easements restrict the properties to some level of development rights. Each easement is classified into three basic categories, and an adjustment is made based on the level of development rights.

Mecklenburg County has approximately 46 properties—which are made up of 1,890.37 acres, and date back to 1995—and it will use the following chart to make appropriate adjustments according to the deed restrictions placed on each parcel.

LAND CONSERVATION ADJUSTMENTS			
Category	**Description**	**Min. Adjustment**	**Max. Adjustment**
Forever Wild (full restrictions)	No touch; no building, farming or timbering	50.00%	90.00%
Mid-Tier (ecological asset protection)	Given up real value	40.00%	60.00%
Working Landscape/Open Space	Still farm and timber with wildlife protection	20.00%	55.00%
	1 - 2 houses only	40.00%	55.00%
	3 - 4 houses only	30.00%	40.00%
	5 + houses	20.00%	30.00%

9 Air Rights, Subterranean Rights, and Commercial Real Estate Development

Air rights and subterranean rights may be considered for inclusion within the bundle of rights. In Mecklenburg County, air rights have been recorded for areas above hospitals, commercial buildings, uptown streets, over dwellings, and so on. Hospitals have reserved these rights for helipads. Commercial buildings use air rights for a variety of income properties—including, but not limited to, hotels, residential dwellings (apartments/condos), offices, antennas, and so on. Skybridges are built over uptown streets. The Airport has purchased air rights over some residential dwellings in the flight path. Common law air rights are inherent in real estate ownership and are not recorded separately, unless severed from the property.

Subterranean rights have been used as tunnels to access some of the buildings in uptown Charlotte. Subterranean rights also include minerals, oils, and other substances found beneath the Earth's surface. Sometimes these rights have value as real property.

Zoning air rights are derived from the zoning authority of local government. These allow restrictions on the development potential of a property, including height, volume, and square footage. Developments that do not fully utilize the extent of space provided by the zoning regulations have a surplus area which may be developed. This area may be sold to a secondary user of the property above the primary development as air rights. These air rights are derived from the fee simple estate.

The values associated with a particular air right will vary according to the development potential of the property. When sales data are scarce, then an alternative approach must be used. The generally accepted method is the Land Residual Technique, where the income contribution attributed to the air rights is converted by a capitalization rate into a value. When verifiable market sales data are scarce or unavailable, this Income Residual Technique will be used. Likewise, where subterranean rights have been severed and market sales are scarce, a similar Income Residual Technique will be used.

Chapter 5
Data Collection Procedures in the Field

In order to apply a standardized method in the appraisal of a structure, work must be performed in three areas: fieldwork, calculation, and valuation. The purpose of this chapter is to supply basic definitions of terms associated with this work, and to give examples of common situations that an appraiser is likely to face in the field. It contains material taken directly from the *Appraisers' Field Manual*.

Fieldwork should be approached with three basic objectives in mind:

1. To collect and/or verify measurements of any improvements
2. To correct any measurements that are incorrect
3. To record information correctly on the field data collection instrument

The first two objectives are discussed within this chapter; the third will be addressed in Chapter 6 (Field Data Collection Form: Instrument Completion).

1 Types of Data Collection

Data collection and maintenance are positively vital to a successful revaluation. Mecklenburg County employs a variety of methods to collect and maintain the accuracy of property data. Examples include field canvassing, the review of building permits, and site visits to verify sales data.

1.1 Field Canvassing

Real property appraisers and field canvassers at Mecklenburg County are responsible for physically visiting each and every parcel in the County. Appraiser/field canvassers select packets from a constantly renewed pool. Each packet contains information relating to a specific neighborhood, including a map with aerial photography, overlaid with parcel boundaries and parcel identifiers; a cover sheet detailing the contents of the packet, along with notes about the chain-of-custody of the packet and room for the appraiser/field canvasser to take down special notes and quality control notes; the individual property record cards of each parcel within the neighborhood; and an improvement type report showing the overview for all improvements made within the selected neighborhood.

These packets were initially produced by support staff and assigned to each appraiser/ field canvasser based upon the location and complexity. They would then "check out" the parcel by entering it into a log book, and "check it in" by completing the entry.

Field canvassers visit each property and introduce themselves at the door. If anyone is home, then the canvasser asks a few simple facts about the home (number of bedrooms, bathrooms, etc.) in order to confirm that data, and requests permission to examine the exterior of the home.

The exterior inspection of each property involves a visual check of the items that appear on the property record card. If the appraiser/canvasser notices any discrepancy with the records, then a physical measurement is taken. A star should be placed on the sketch to indicate where the A/C units are located.

If no one answers the door, then the appraiser/field canvasser operates on the law of implied right of access, and continues with an examination of the property. If they are asked to leave at any time, then the appraiser/field canvasser readily exits the property. Property that cannot be accessed due to fences and other barriers are examined visually to the best of the field canvasser's ability, and a note is made in reference to this limitation.

Where it is reasonable to believe that our records are inaccurate, then additional contact is attempted by office staff. A source code is then placed on the property record card to indicate how the information was obtained:

- Owner (1) – used only when the staff member speaks with the owner of the property
- Tenant (2) – used if the staff member talks with the person renting the property
- Agent (3) – used for information obtained from the landlord or realtor
- Inspected (4) – used if no one was home during a field visit, but the staff member was still able to examine in the property
- Estimated (5) – used for property that could not be accessed due to a fence or other reason
- Contractor (6) – used for information obtained from a contractor
- Manager (7) – used for information obtained from the person in charge of operations or business at the premises
- Secretary (8) – used for information obtained from a secretary
- Refused Information (9)– used if the staff member was asked to leave the property, or if the person present refused to answer questions

In addition to site visits, commercial and industrial properties are also sent mailed questionnaires. However, given the low response rate, any data received this way can only be treated as supplemental, and is not a core part of our valuation process.

1.2 Data Processing

The large amount of records to be processed made it necessary to hire temporary staff. The task of each temporary staff member was to work through the data collection packets and enter any indicated changes into our CAMA system (AssessPro). See Chapter 6 for a step-by-step description of the data entry process for this task.

During this phase, additional quality control measures are employed. Data processors are tasked with reviewing the work of the data collectors, based upon the information provided. Minor

details that were missed by the data collectors are noticed and flagged by the data processors. A review of all processed cards is then conducted by the data collectors to verify that the information was entered correctly, and to address any flagged issues found by the data processors. This additional layer of quality control ensures that our tax records represent the highest level of accuracy that is possible to achieve.

1.3 Review of Neighborhood Delineation

Alongside their other work, the appraisal staff is tasked with a review of the neighborhood delineation. Neighborhood delineation is a study of the outside forces that could potentially influence property value.

Through this process, conclusions are made about the typical housing, economic, social, and demographic characteristics of the geographic area considered a homogeneous neighborhood. For analysis purposes, a "neighborhood" is defined as the largest geographic grouping of properties where the significant economic forces of those properties are generally uniform.

1.4 Building Permits

The appraisal staff uses data provided by the county code enforcement department to keep track of all permits issued in the County. This allows us to determine when changes to real property are made (structural, mechanical, etc.), and field visits are then conducted so that appropriate updates and corrections can be made to the property record card.

1.5 Sales Verification

The appraisal staff uses data provided by the county register of deeds to track all deed transfers. Changes in ownership, sales prices, and terms of the sales are analyzed in order to qualify or disqualify sales. Doing this allows us to build and maintain an accurate sales file for the CAMA system. Field visits are conducted so that appropriate updates and corrections can be made to the property record card.

2 Data Collection Procedures in the Field

2.1 Canvas Collection or Verification of Construction Data

The majority of the data is confirmed through a visual inspection, and can be completed while walking up to the front door of a property. It is helpful to give the area that you are canvassing a "windshield" preview while looking for a parking spot. Driving through the area gives you a good indication of the typical exterior components—such as roofs and exterior walls—and helps you to develop a "feel" for the neighborhood.

In order to work at maximum efficiency, plan your route ahead of time. Check your map and arrange cards in the order you will want to approach properties. Ideally, you will stop and start at the same point.

Figure 5.1: Sample Route for Canvassing a Neighborhood

As you approach each house, check the exterior walls, roof structure, and roof cover. Also, look for anything that gives an indication of the type of heating used—chimney, compressor, oil drum, etc. At each door, identify yourself and your purpose, remembering at all times to be polite and respectful. One approach is as follows:

"Good morning. My name is Jane Doe and I am with the Mecklenburg County Assessor's Office *(show your identification card)*. I am here to verify data for the Property Record Card. Could I ask you a few questions, and then have your permission to walk around the outside of the house?"

The sole purpose of this job is to collect or verify data; not to come up with the assessment value. While you are introducing yourself, glance inside to check for interior wall construction, flooring, and indications of heating and cooling systems.

Here are some questions you might want to ask as you review the house:

- What kind of floors do you have? (Don't confuse rugs with carpet. Carpet is physically secured to the floor, while rugs are not.)

- How do you heat and cool your house? (If they don't know, which sometimes happens, you can almost always see physical indications from the outside of the house that will answer this question, such as a chimney or an oil drum.)
- How many bathrooms and bedrooms do you have?

Once you've finished this brief interview, thank them for their time and ask if you can take a quick look around the outside of the house.

2.2 Collection Building Sketch Procedure

There are times when you will need to take measurements in order to appraise improvements. Should you need to measure the whole house, explain to the property owner that you are collecting and verifying building measurements.

There are a few tricks you can use that make taking measurements a little quicker and easier. For one, a screwdriver or long nail serves as a good anchor for the tape end when you cannot get to the wall because of fences or shrubs.

Sometimes the measurements you take will not produce a square or even-sided house due because they have been rounded up or done. In this case, you can check you work by adding up the North vs South and East vs West measurements. Be sure to describe your findings in detail before turning in the appraisal card.

There are four basic steps involved in creating a sketch during the listing/reviewing process in the field:

1. The front of the improvement is always placed at the bottom of the sketch, and the back of the improvement at the top
2. Measure each side of the structure accurately
3. Draw a diagram, placing dimensions—rounded to the nearest foot—beside each line. If measurements between 1" and 5", round down. If they are greater than 6", round up.
4. Label all auxiliary areas or structural variations with appropriate abbreviations (FEP, FSP, FCP, etc.). Write all lets and numbers neatly, with measurements written in such a way that they can be read from the bottom of the card looking up. In other words, the numbers written on the sketch should be positioned so that they run in the same direction.

2.3 To Check for Closure

It is essential that the measurements collected produce an even-sided structure. That is, the sums of the lengths of the opposite sides must be equal to each other.

A simple method for confirming this is to add all the front measurements (bottom horizontal) and all of the back measurements (top horizontal) to see if the two are equal. The same should be done for the sides of the house (left and right verticals). This is known as "checking for

closure.” Another way to insure the proper length is to measure the length without any offsets to get the overall length. The same can be done for the width.

The following sections contain examples that depict how various types of improvements should be drawn, labeled, and checked for closure.

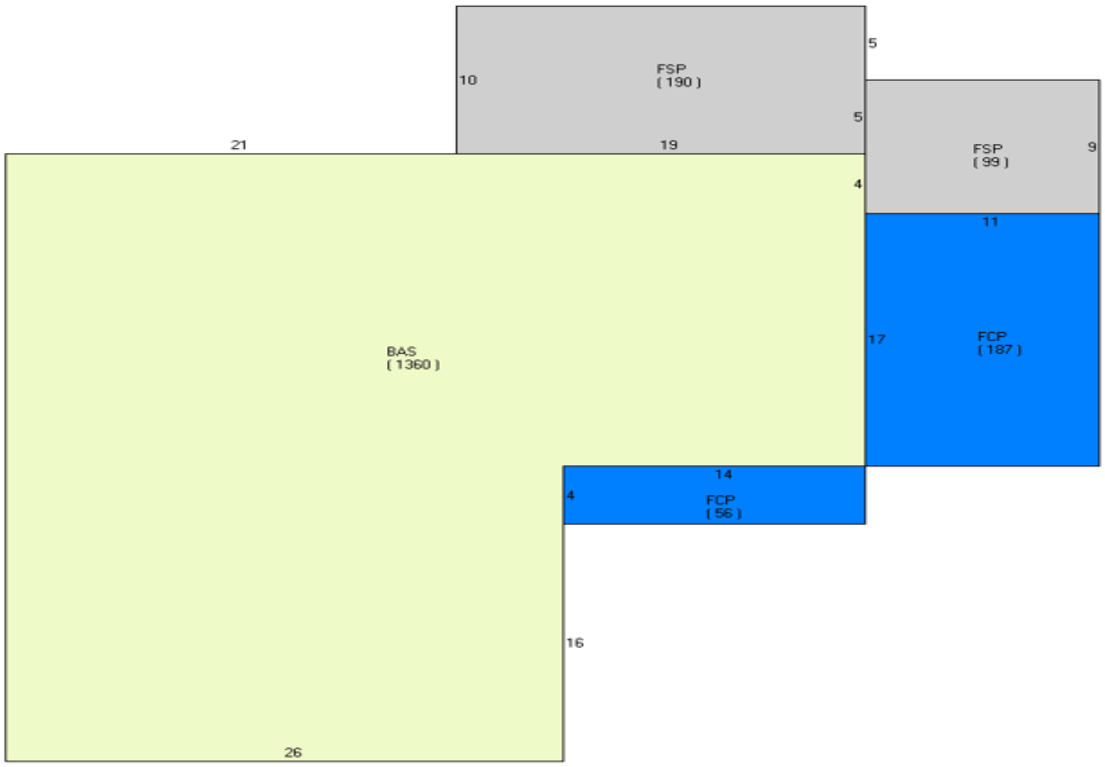
2.3.1 Standardized Method of Drawing Structures

It is important to adopt a uniform method for drawing and labeling structures. Mecklenburg County employed the following method:

1. Orient the drawing so that the front of the structure is towards the bottom of the card. All labeling should be oriented in this direction.
2. It is essential to delineate the auxiliary areas properly and in order, so that they can be easily distinguished from the base area.
3. Familiarity with auxiliary area abbreviations is essential, along with an understanding of the visual indications of these areas. For example, an enclosed porch may have windows different from the base, a lower foundation than the base, or a different roof cover.
4. If you are confronted with an exceptionally large property with many sides, then a piece of graph paper used invaluable in preventing errors when drawing the sketch.

Further refinements of are necessary to contend with many older, oddly-shaped homes, which often have two or more stories. Careful attention must be paid to sub areas or auxiliary areas, and whether or not these areas extend to all floors.

Figure 5.2: Structure Sketch Example 1



Horizontal lines (left to right):

- TOP WEST: 11 + 19 + 21 = 51
- BOTTOM EAST: 26 + 14 + 11 = 51

$$11 + 19 + 21 = 51$$
$$26 + 14 + 11 = 51$$

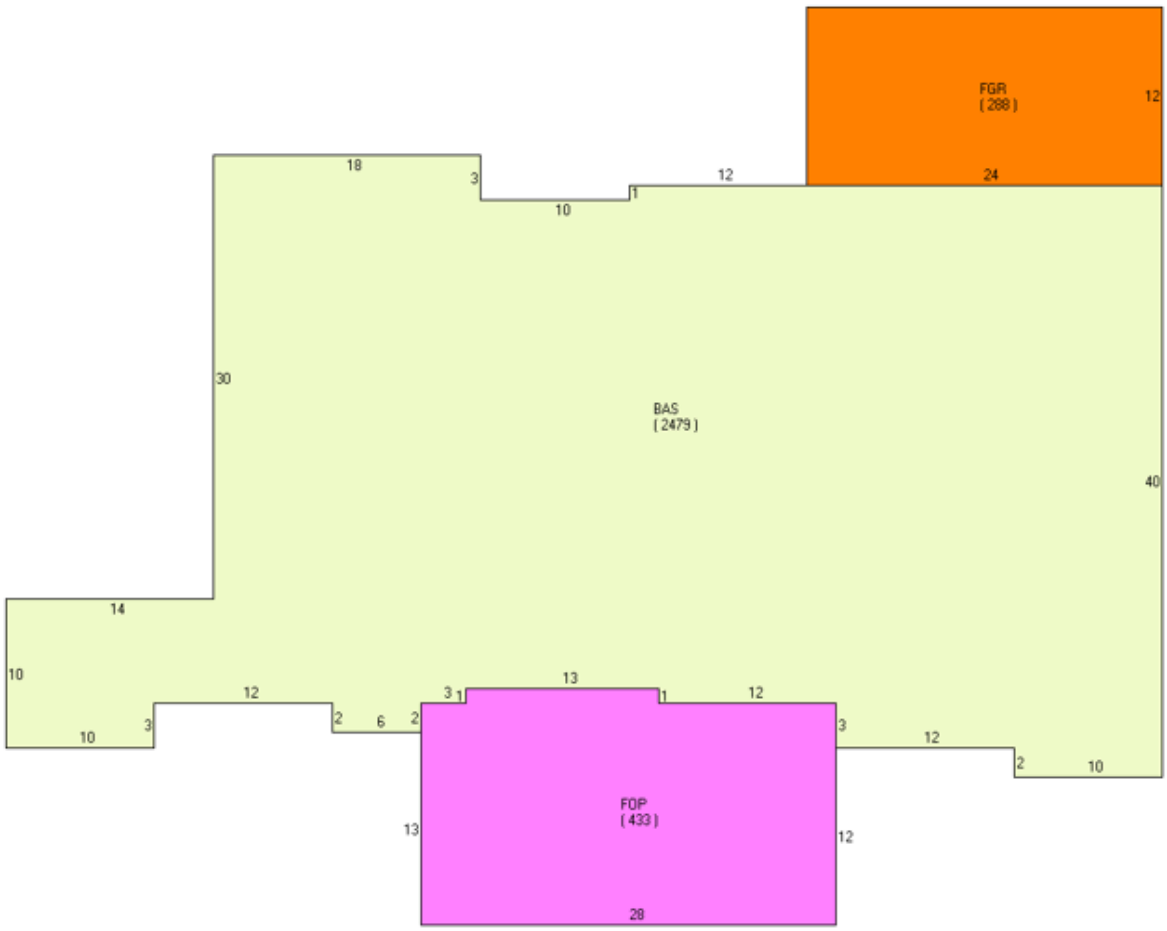
Vertical lines (top to bottom)

- LEFT SOUTH: 10 + 39 = 49
- RIGHT NORTH: 7 + 9 + 17 + 4 + 12 = 49

$$\begin{array}{r} 10 \\ +\ 39 \\ \hline 49 \end{array} \qquad \begin{array}{r} 7 \\ 9 \\ 17 \\ 4 \\ +\ 12 \\ \hline 49 \end{array}$$

In the example above, the auxiliary areas, such as the screened porch (FSP), will make it impossible to measure some of the walls of the base. This can be overcome by recording the actual measurements of the perimeter, and then deriving some of the base wall measurements from them. In this example, the length of the rear wall of the base is determined by adding the length of the rear wall of the screened porch (19) to that of the accessible rear wall of the base (21).

Figure 5.3: Structure Sketch Example 2



For the figure above, part of the trick is to be sure to capture all of the small measurements left to right.

Horizontal lines (left to right):

WEST: 24 + 12 + 10 + 18 + 14 = 78

EAST: 10 + 12 + 6 + 3 + 13 + 12 + 12 + 10 = 78

Vertical lines (top to bottom):

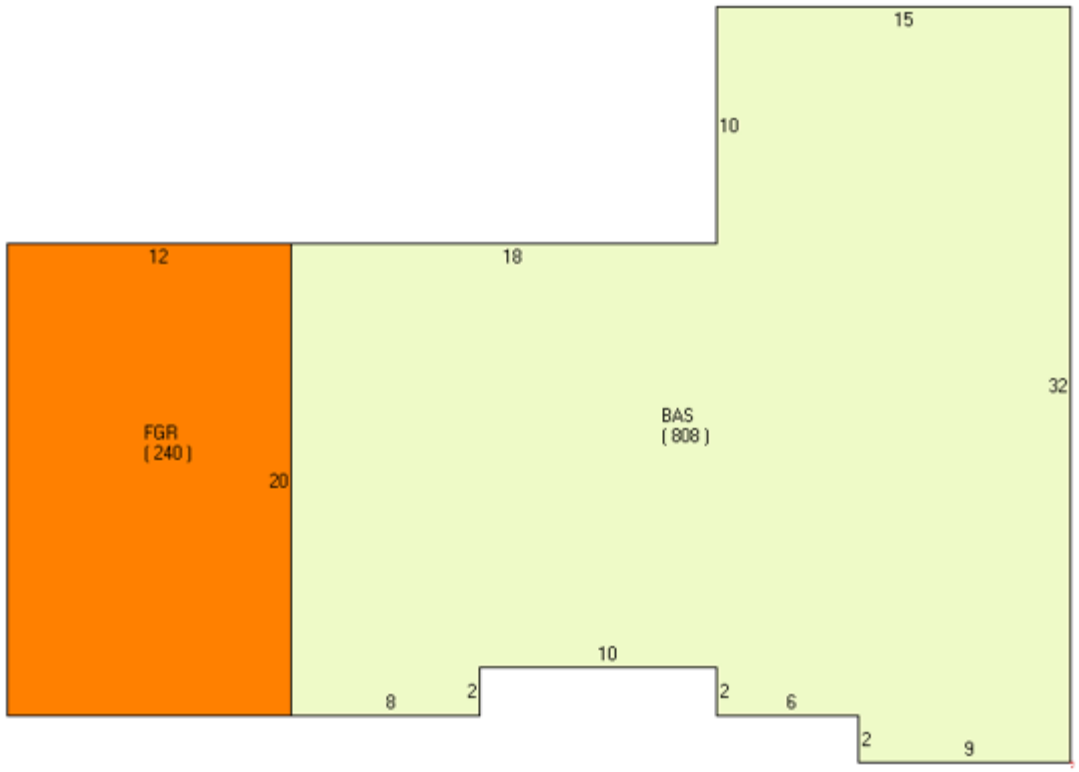
SOUTH:

1
30
10
1
3
+ 2
50

NORTH:

3
3
2
+ 40
50

Figure 5.4: Structure Sketch Example 3



Horizontal lines (left to right):

WEST: 15 + 18 + 12 = 45

EAST: 12 + 8 + 10 + 6 + 9 = 45

Vertical lines (top to bottom):

SOUTH:

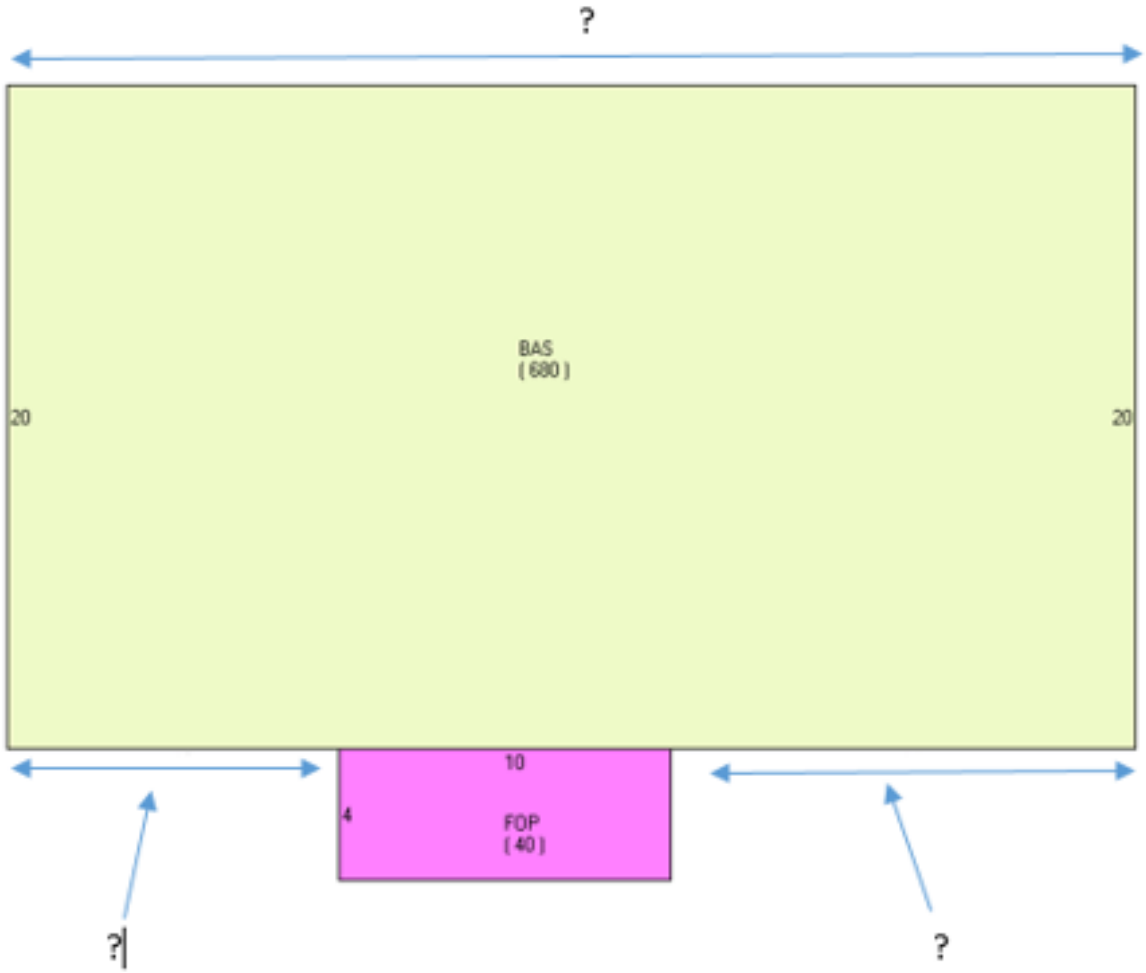
10
20
2
+ 2
34

NORTH:

2
+ 32
34

Be sure to label each side of the property, placing these dimensions on the *inside* of the sketch to show ACTUAL length. Measurements that are used to determine the position of auxiliary areas along the perimeter of the base should be placed on the *outside* of the sketch, if they are not included within an auxiliary area. This is illustrated as follows:

Figure 5.5: Incorrect Listing



As you can see in the figure above, the labeled measurements are missing. These should be added in to tell us where to place the FOP and how long the building is. A correct version is shown in the figure below.

Figure 5.8: Correct Listing

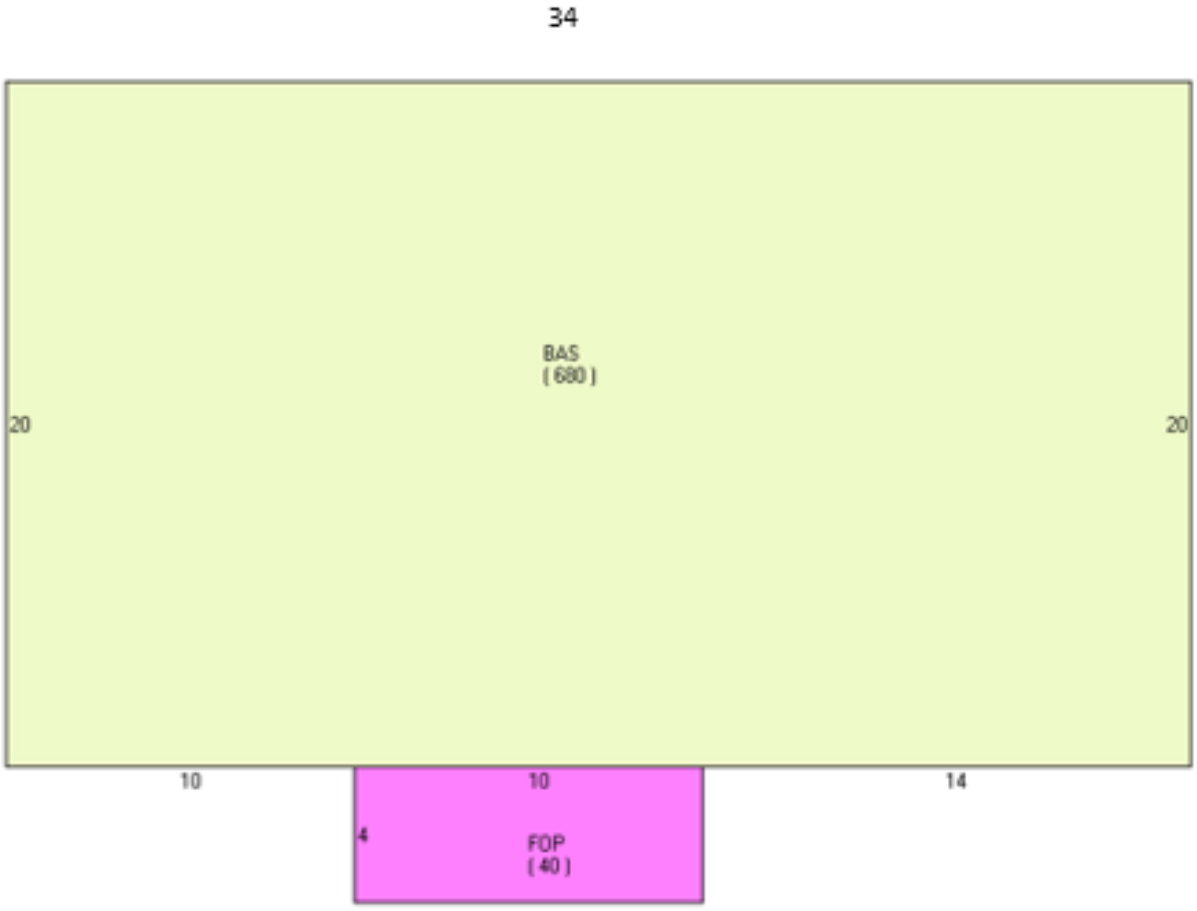
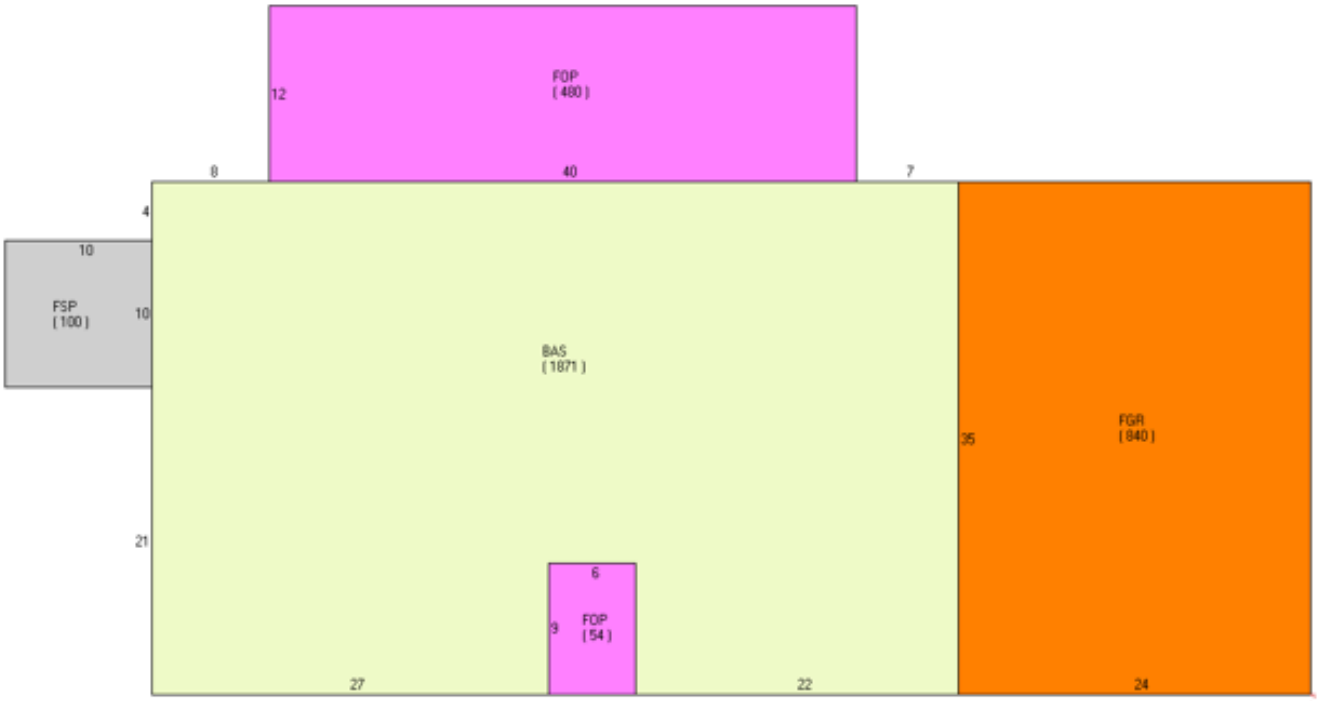


Figure 5.9: Structure Sketch Example 5



In order to property code a structure, it is critical that adequate measurements of the perimeter and auxiliary areas are supplied, so that the correct location of the auxiliary areas can be determined with respect to the base.

2.3.2 Buildings Over One Story

The following two figures show an example of a sketch drawn for a building that is over one story. The example used here is a garage apartment.

Figure 5.10: Garage Apartment, Sketch A

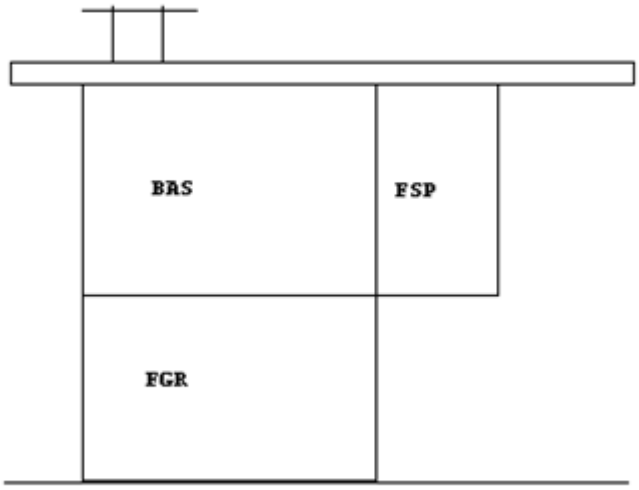
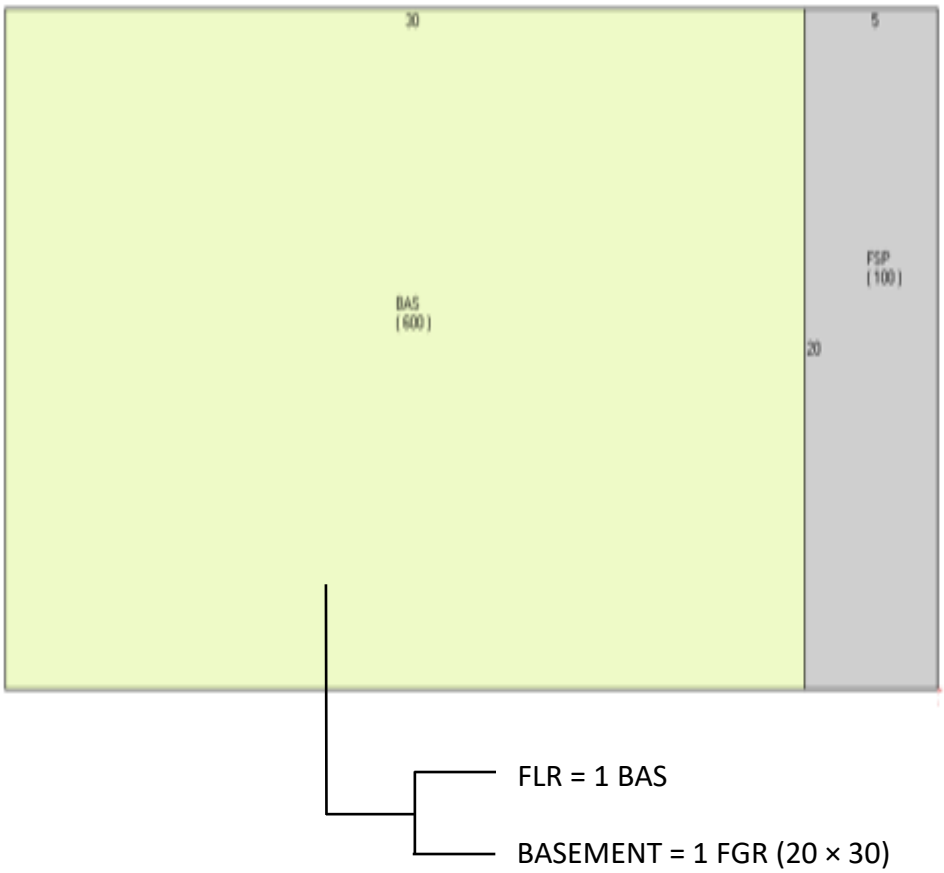


Figure 5.11: Garage Apartment, Sketch B



2.3.3 Two Story Residence

The sketch for a two story residence would be drawn as follows. Notice that the first level plan is drawn with FUS above the BAS area.

Figure 5.12: Two Story Residence, Sketch A

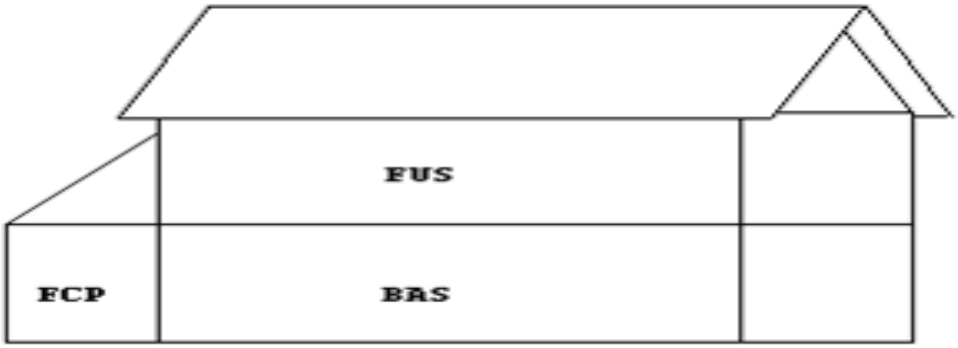
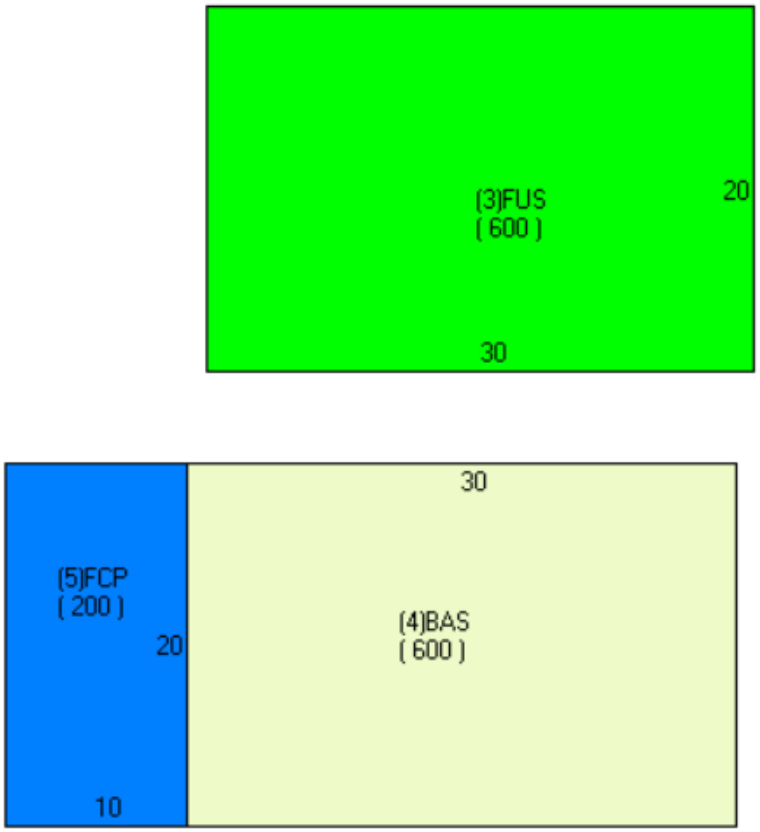


Figure 5.13: Two Story Residence, Sketch B



2.3.4 Two Story Residence with a Basement

For a two story residence with a basement, the sketches would be drawn as follows.

Figure 5.14: Two Story with Basement, Sketch A

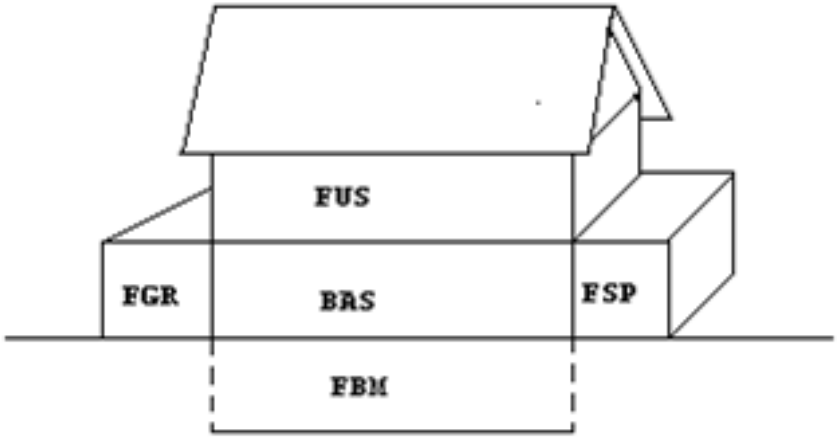
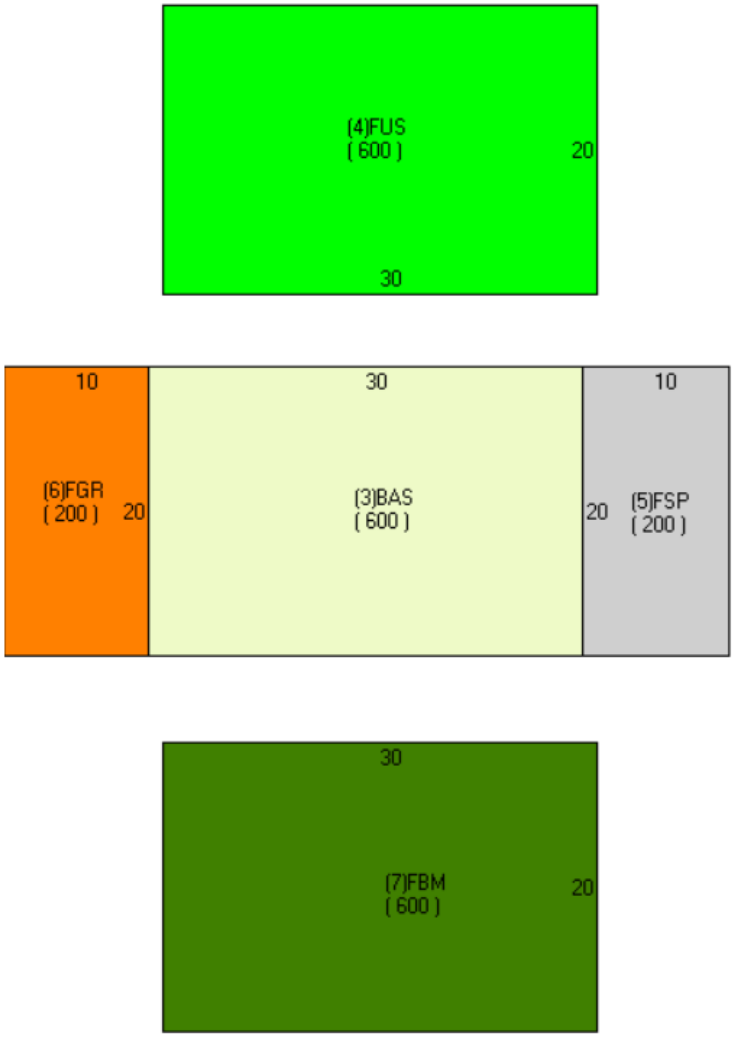


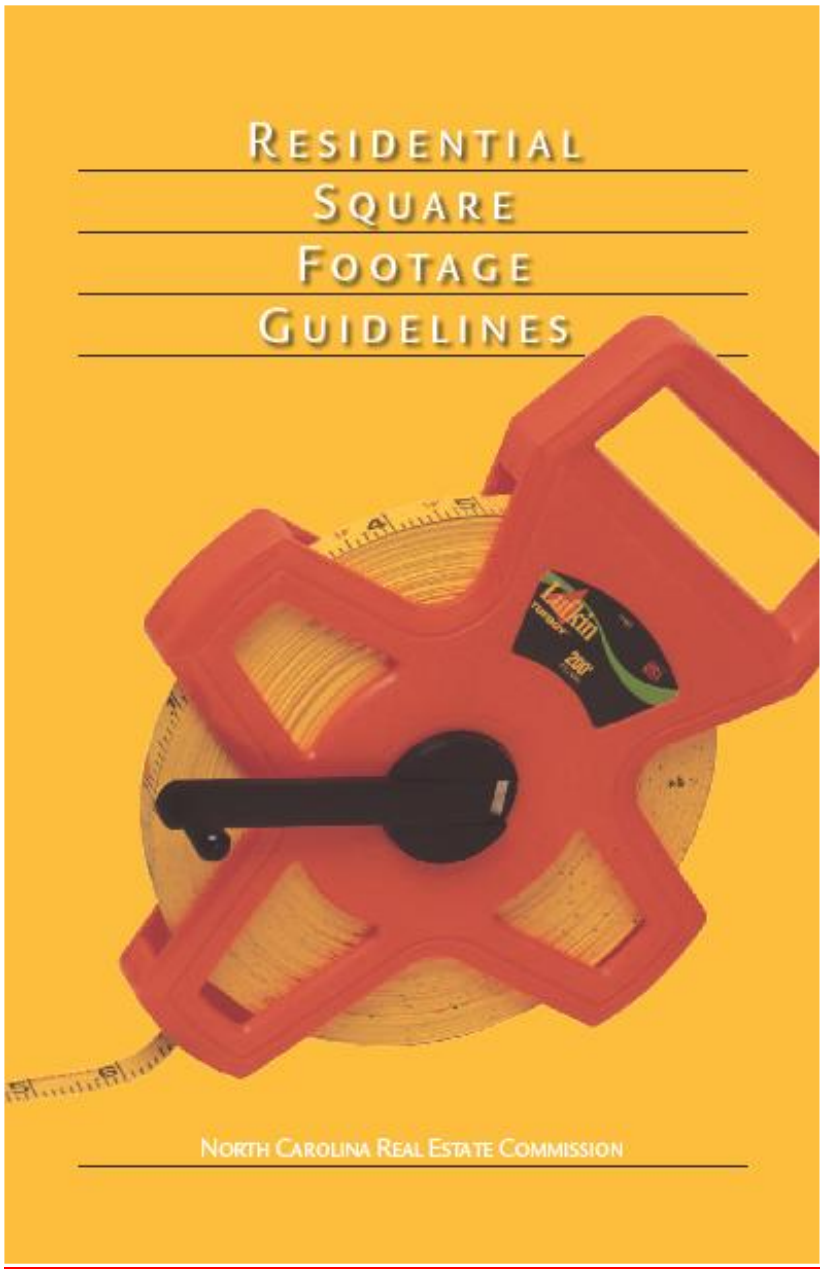
Figure 5.15: Two Story with Basement, Sketch B



2.4 Residential Square Footage Guidelines

Residential Square Footage Guidelines is a brochure published by the North Carolina Real Estate Commission, and offers precisely that. These guidelines were followed by Mecklenburg County. Free copies can be found at: http://www.ncrec.gov/Brochures/Measurement.

Figure 5.17: *Residential Square Footage Guidelines* Brochure



3 Quality Control Measures

To ensure that field data is being collected and recorded accurately, there are Quality Control procedures in place. These procedures help to identify errors in the listing and whether there is a need for additional training, based on mistakes found during review.

Once field cards are turned in for data processing, a portion of them are randomly selected for review. The goal is to review 3% of all work done in the field.

There are four steps involved in this Quality Control review process:

1. The field card is reviewed to make sure that all boxes have been marked. This includes the date, parcel ID, address, and all features of the property.
2. The card is reviewed for the appropriate Notice Code, if applicable.
3. The card is compared to online GIS tools (Pictometry, Polaris, and iLookabout). The sketch is checked to verify that it closes and that all square footage was collected.
    a. If there is a problem with the card and the online tools are not effective in verifying the property, then an additional site visit is required.
4. Each Parcel reviewed is recorded on a spreadsheet. See the table on the following page (titled PARCEL REVIEW SPREADSHEET) for an example.
    a. When errors are found, a supervisor addresses the errors with the employee who made them.
    b. If the number of errors found is excessive, training will be conducted to make sure that the employee is on the right track.

Management, along with the Quality Control team, reviews and documents the field cards.

PARCEL REVIEW SPREADSHEET									
Parcel Number	**Neighborhood**	**Appraiser**	**Method of Review**	**Date Visited by Appraiser**	**Date of Review**	**Needs to be Fixed?**	**What Needs to be Fixed?**	**Spoken to Appraiser about Error?**	**Manager Name who Reviewed It**
12101233	CO02	Joel	Office	26-Apr-18	10-May-18	no		n/a	Scott
12103216	IN01	Joel	Office	26-Apr-18	10-May-18	no		n/a	Scott

Chapter 6
Field Data Collection Form: Instrument Completion

The assessment process often requires a field inspection of the subject parcel. Over the course of a single year, the assessor's staff makes thousands of field inspections in Mecklenburg County. These inspections include new construction, modifications to existing structures, sales verification, canvassing, tax appeal inspections, owner requests for inspection, discoveries, and so on. A Field Data Collection Form is used to maintain conformity and to ensure that all of the required data is collected. If the subject parcel is an existing improvement, then the Property Record Card may be used for inspections or modifications.

1 Field Data Collection Form

Identified within this Schedule of Values are elements that influence the assessed value. The Field Data Collection Form has been designed to include these elements in the form of a checklist. During the property inspection for new construction, the appraiser checks the appropriate box for each element of the associated subject parcel.

Often, the appraiser will complete the form and turn it over to the Assessment Analyst for data entry. The Field Data Collection Form has been designed to facilitate data entry operations. Therefore, it is essential that consistency and uniformity are maintained by the appraiser, and that data is correctly entered by the Assessment Analysis. Once the data have been entered, the Field Data Collection Form serves as a source card.

The Field Data Collection Form is separated into the basic groupings of data that can be most readily collected. The process of completing this form should be reasonably intuitive for a trained staff member.

Figure 6.1: Field Data Collection Form - Front

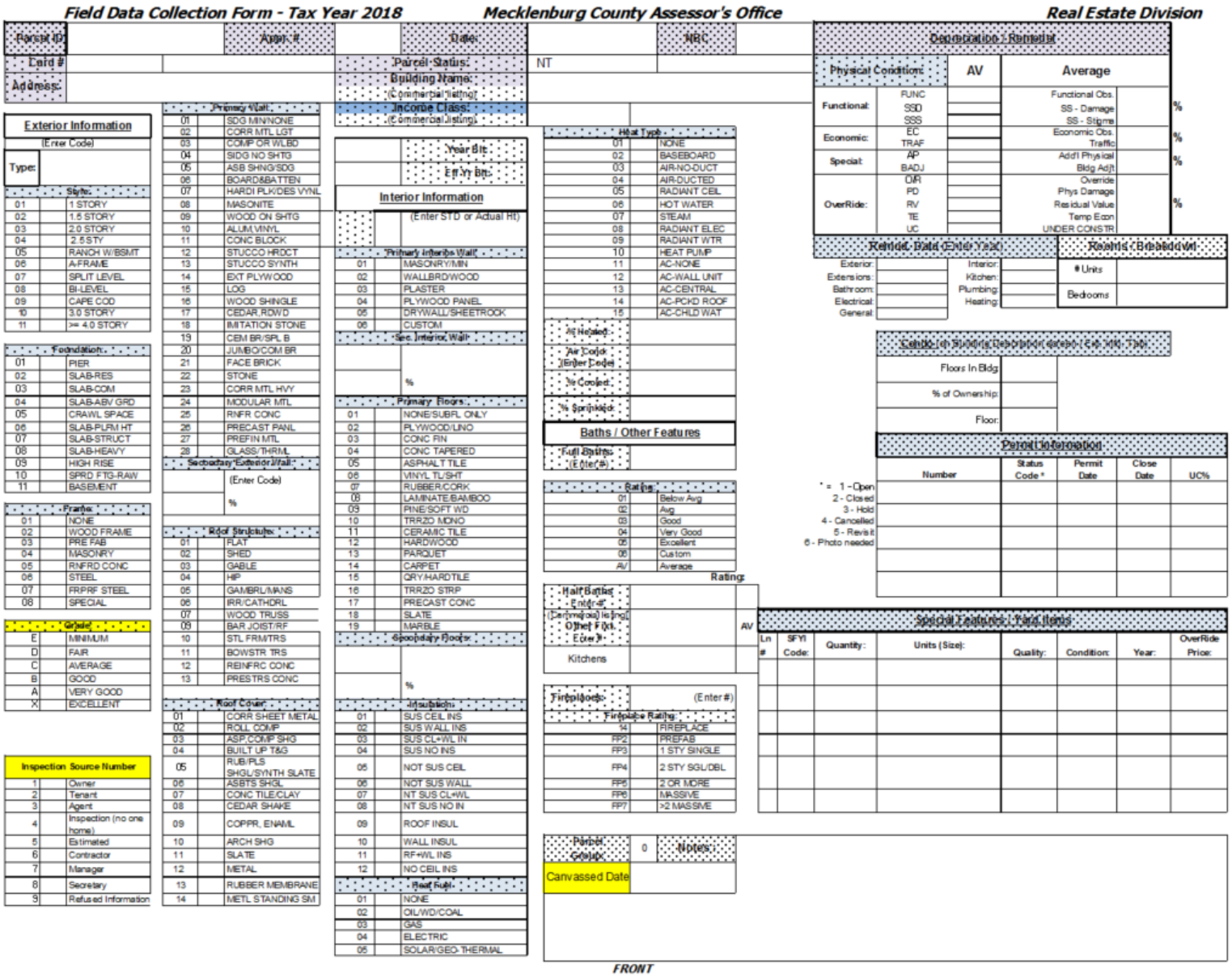
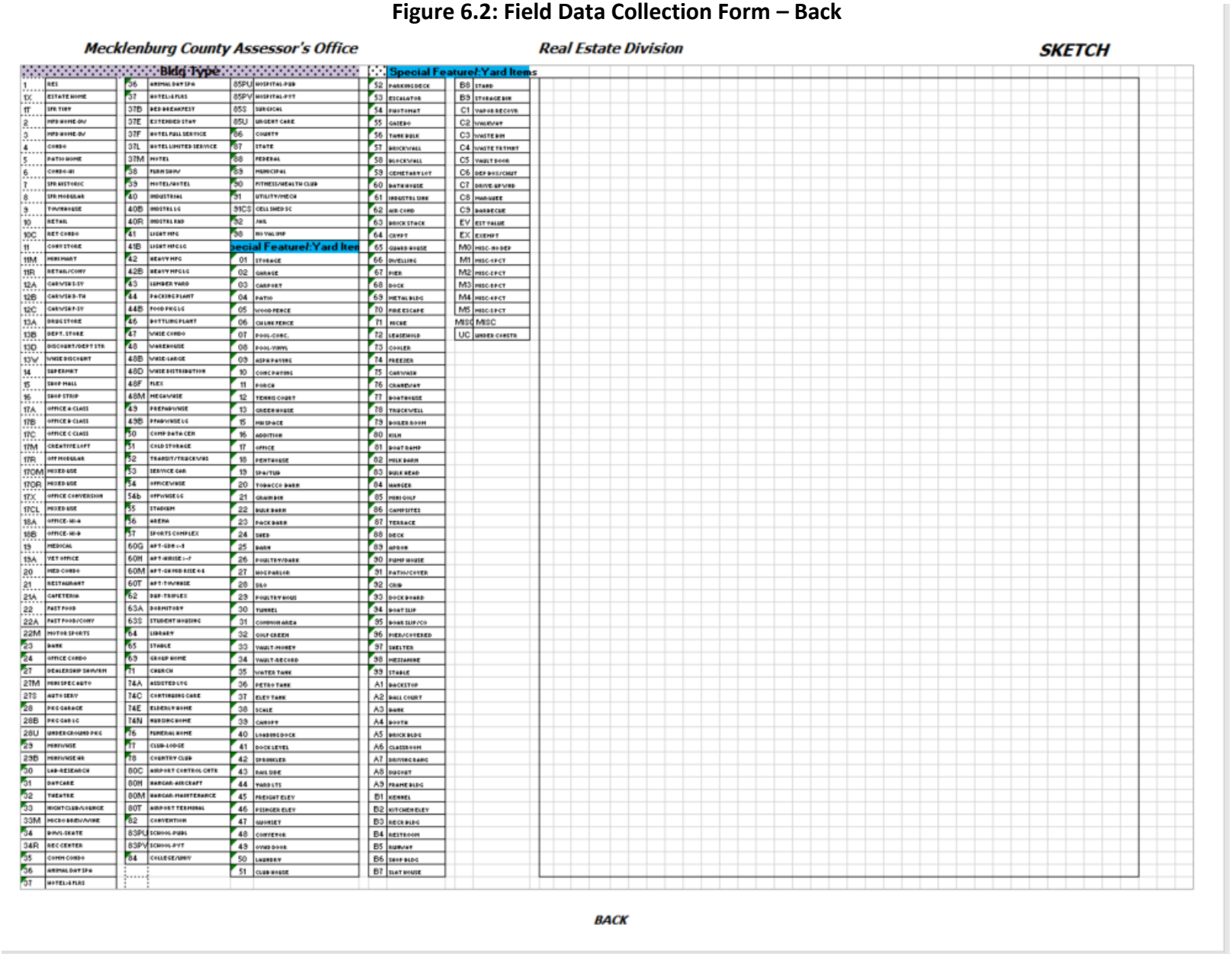


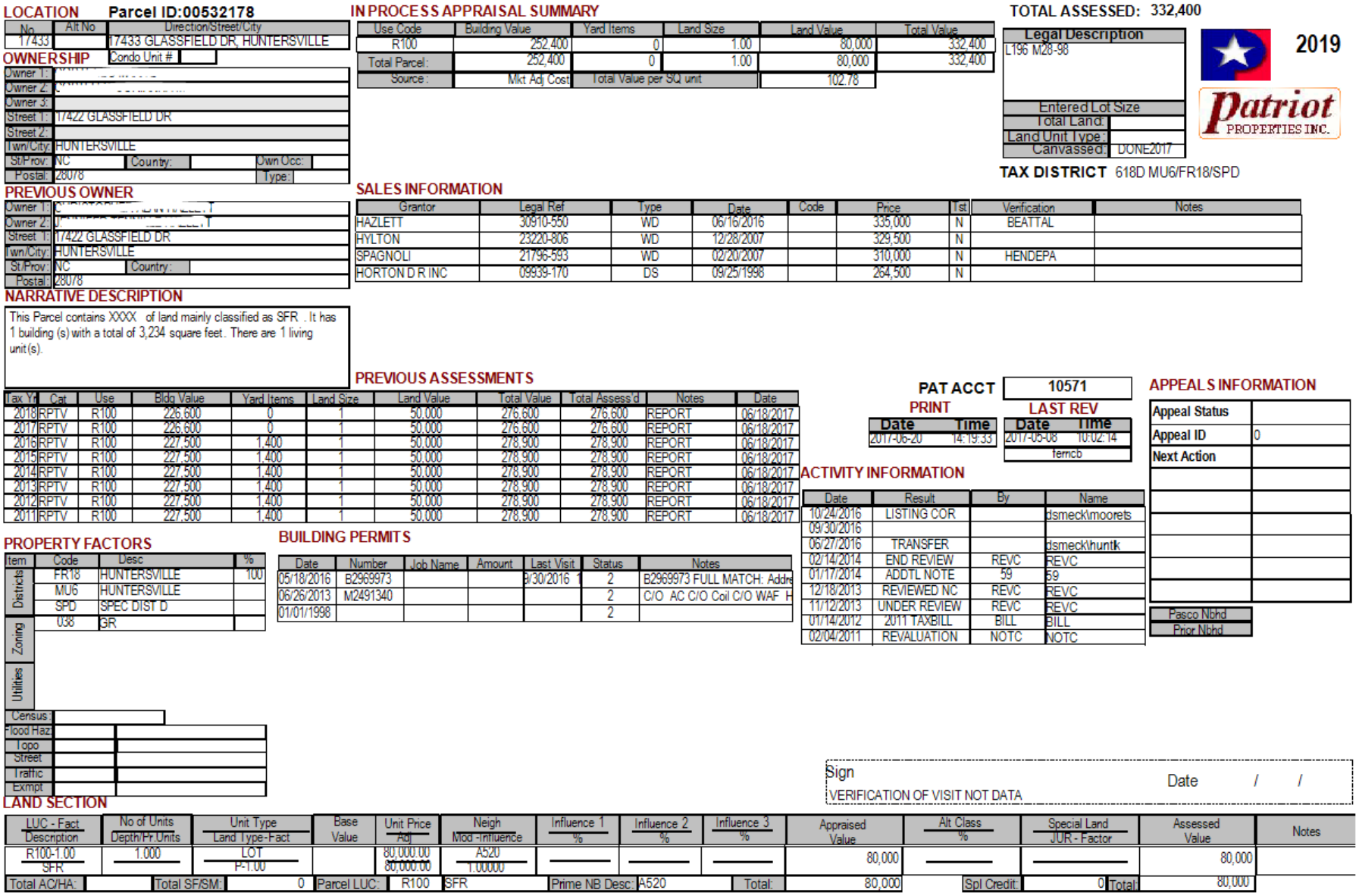
Figure 6.2: Field Data Collection Form – Back



The previous two figures an example of a Field Data Collection Form used in Mecklenburg County. The elements of construction are broken down into groups. During the field visit, the appraiser checks the appropriate box for each element. The specific item has a number designation which is the data entry number used by the Assessment Analysis staff to enter these checks into the AssessPro software. Each item relates to a factor that is used to develop the Assessed Value. These numerical factors are identified in Chapter 11 of the Schedule of Values.

The next two figures show a sample Property Record Card, used in field data collection in Mecklenburg County.

Figure 6.3: Property Record Card for Field Data Collection - Front



LOCATION **Parcel ID:00532178**

No	Alt No	Direction/Street/City
17433		17433 GLASSFIELD DR, HUNTERSVILLE

OWNERSHIP Condo Unit #

Owner 1:	
Owner 2:	
Owner 3:	
Street 1:	17422 GLASSFIELD DR
Street 2:	
Twn/City:	HUNTERSVILLE
St/Prov:	NC Country: Own Occ:
Postal:	28078 Type:

PREVIOUS OWNER

Owner 1:	
Owner 2:	
Street 1:	17422 GLASSFIELD DR
Twn/City:	HUNTERSVILLE
St/Prov:	NC Country:
Postal:	28078

NARRATIVE DESCRIPTION

This Parcel contains XXXX of land mainly classified as SFR . It has 1 building (s) with a total of 3,234 square feet. There are 1 living unit(s).

IN PROCESS APPRAISAL SUMMARY

Use Code	Building Value	Yard Items	Land Size	Land Value	Total Value
R100	252,400	0	1.00	80,000	332,400
Total Parcel:	252,400	0	1.00	80,000	332,400
Source:	Mkt Adj Cost	Total Value per SQ unit		102.78	

TOTAL ASSESSED: 332,400

Legal Description
L196 M28-98

Entered Lot Size	
Total Land:	
Land Unit Type:	
Canvassed:	DONE2017

2019

Patriot PROPERTIES INC.

TAX DISTRICT 618D MU6/FR18/SPD

SALES INFORMATION

Grantor	Legal Ref	Type	Date	Code	Price	Tst	Verification	Notes
HAZLETT	30910-550	WD	06/16/2016		335,000	N	BEATTAL	
HYLTON	23220-806	WD	12/28/2007		329,500	N		
SPAGNOLI	21796-593	WD	02/20/2007		310,000	N	HENDEPA	
HORTON D R INC	09939-170	DS	09/25/1998		264,500	N		

PREVIOUS ASSESSMENTS

Tax Yr	Cat	Use	Bldg Value	Yard Items	Land Size	Land Value	Total Value	Total Assess'd	Notes	Date
2018	RPTV	R100	226,600	0	1	50,000	276,600	276,600	REPORT	06/18/2017
2017	RPTV	R100	226,600	0	1	50,000	276,600	276,600	REPORT	06/18/2017
2016	RPTV	R100	227,500	1,400	1	50,000	278,900	278,900	REPORT	06/18/2017
2015	RPTV	R100	227,500	1,400	1	50,000	278,900	278,900	REPORT	06/18/2017
2014	RPTV	R100	227,500	1,400	1	50,000	278,900	278,900	REPORT	06/18/2017
2013	RPTV	R100	227,500	1,400	1	50,000	278,900	278,900	REPORT	06/18/2017
2012	RPTV	R100	227,500	1,400	1	50,000	278,900	278,900	REPORT	06/18/2017
2011	RPTV	R100	227,500	1,400	1	50,000	278,900	278,900	REPORT	06/18/2017

PAT ACCT 10571

PRINT

Date	Time
2017-06-20	14:19:33

LAST REV

Date	Time
2017-05-08	10:02:14
ferricb	

APPEALS INFORMATION

Appeal Status	
Appeal ID	0
Next Action	

Pasco Nbhd

Prior Nbhd

ACTIVITY INFORMATION

Date	Result	By	Name
10/24/2016	LISTING COR		dsmeck\moorets
09/30/2016			
06/27/2016	TRANSFER		dsmeck\huntk
02/14/2014	END REVIEW	REVC	REVC
01/17/2014	ADDTL NOTE	59	59
12/18/2013	REVIEWED NC	REVC	REVC
11/12/2013	UNDER REVIEW	REVC	REVC
01/14/2012	2011 TAXBILL	BILL	BILL
02/04/2011	REVALUATION	NOTC	NOTC

PROPERTY FACTORS

Item	Code	Desc	%
Districts	FR18	HUNTERSVILLE	100
	MU6	HUNTERSVILLE	
	SPD	SPEC DIST D	
Zoning	038	GR	
Utilities			

Census:		
Flood Haz:		
Topo		
Street		
Traffic		
Exmpt		

BUILDING PERMITS

Date	Number	Job Name	Amount	Last Visit	Status	Notes
05/18/2016	B2969973			9/30/2016	2	B2969973 FULL MATCH: Addr
06/26/2013	M2491340				2	C/O AC C/O Coil C/O WAF H
01/01/1998					2	

Sign

VERIFICATION OF VISIT NOT DATA

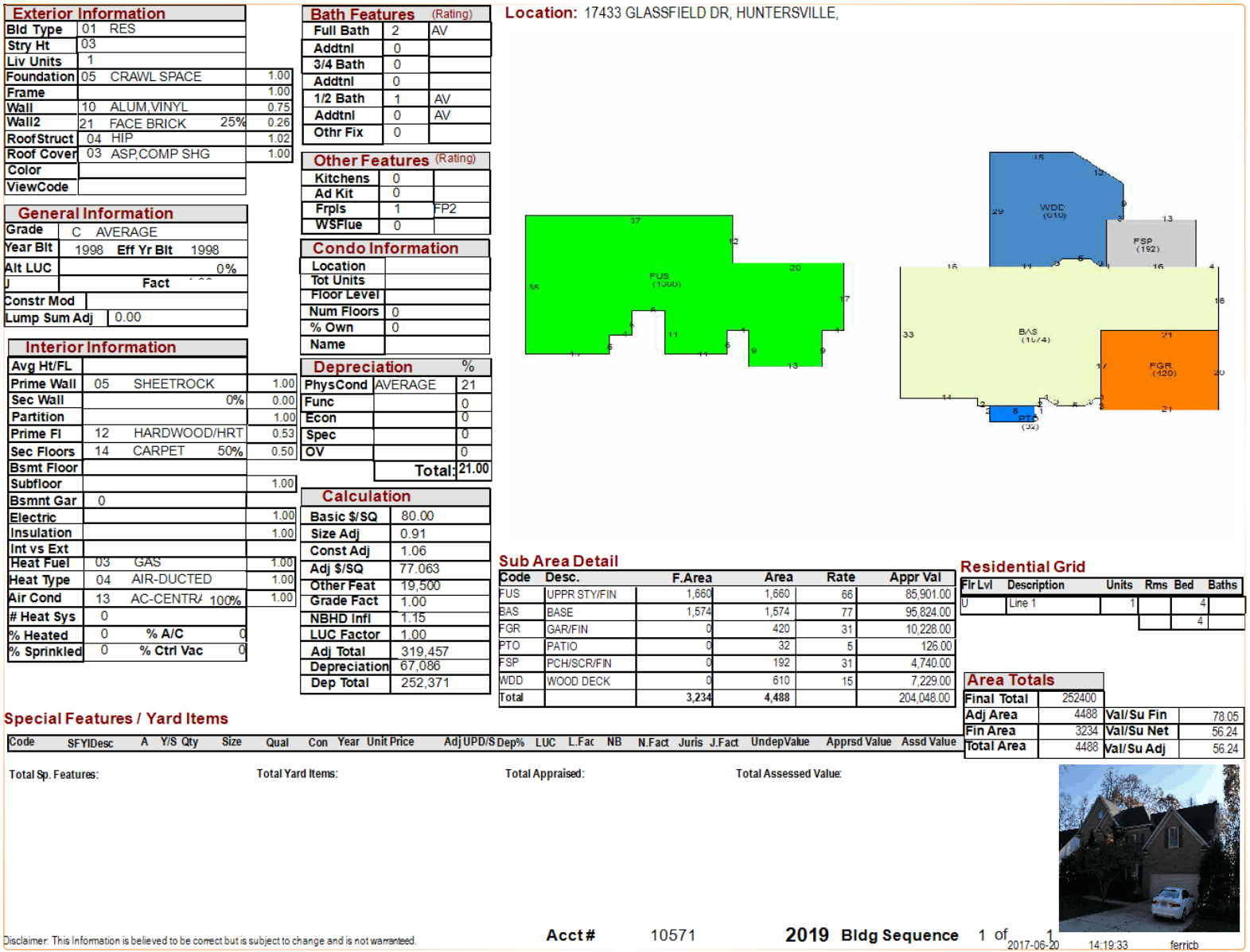
Date / /

LAND SECTION

LUC - Fact Description	No of Units Depth/Pr.Units	Unit Type Land Type-Fact	Base Value	Unit Price Adj	Neigh Mod -Influence	Influence 1 %	Influence 2 %	Influence 3 %	Appraised Value	Alt Class %	Special Land JUR - Factor	Assessed Value	Notes
R100-1.00 SFR	1.000	LOT P-1.00		80,000.00 80,000.00	A520 1.00000				80,000			80,000	

Total AC/HA:		Total SF/SM:	0	Parcel LUC:	R100	SFR	Prime NB Desc:	A520	Total:	80,000	Spl Credit:	0	Total: 80,000

Figure 6.4: Property Record Card for Field Data Collection - Back



Exterior Information

Bld Type	01 RES		
Stry Ht	03		
Liv Units	1		
Foundation	05 CRAWL SPACE		1.00
Frame			1.00
Wall	10 ALUM,VINYL		0.75
Wall2	21 FACE BRICK	25%	0.26
RoofStruct	04 HIP		1.02
Roof Cover	03 ASP,COMP SHG		1.00
Color			
ViewCode			

General Information

Grade	C AVERAGE		
Year Blt	1998	Eff Yr Blt	1998
Alt LUC			0%
J		Fact	
Constr Mod			
Lump Sum Adj	0.00		

Interior Information

Avg Ht/FL				
Prime Wall	05	SHEETROCK		1.00
Sec Wall			0%	0.00
Partition				1.00
Prime Fl	12	HARDWOOD/HRT		0.53
Sec Floors	14	CARPET	50%	0.50
Bsmt Floor				
Subfloor				1.00
Bsmnt Gar	0			
Electric				1.00
Insulation				1.00
Int vs Ext				
Heat Fuel	03	GAS		1.00
Heat Type	04	AIR-DUCTED		1.00
Air Cond	13	AC-CENTRA	100%	1.00
# Heat Sys	0			
% Heated	0	% A/C	0	
% Sprinkled	0	% Ctrl Vac	0	

Bath Features (Rating)

Full Bath	2	AV
Addtnl	0	
3/4 Bath	0	
Addtnl	0	
1/2 Bath	1	AV
Addtnl	0	AV
Othr Fix	0	

Other Features (Rating)

Kitchens	0	
Ad Kit	0	
Frpls	1	FP2
WSFlue	0	

Condo Information

Location	
Tot Units	
Floor Level	
Num Floors	0
% Own	0
Name	

Depreciation

		%
PhysCond	AVERAGE	21
Func		0
Econ		0
Spec		0
OV		0
	Total:	21.00

Calculation

Basic $/SQ	80.00
Size Adj	0.91
Const Adj	1.06
Adj $/SQ	77.063
Other Feat	19,500
Grade Fact	1.00
NBHD Infl	1.15
LUC Factor	1.00
Adj Total	319,457
Depreciation	67,086
Dep Total	252,371

Location: 17433 GLASSFIELD DR, HUNTERSVILLE,

Sub Area Detail

Code	Desc.	F.Area	Area	Rate	Appr Val
FUS	UPPR STY/FIN	1,660	1,660	66	85,901.00
BAS	BASE	1,574	1,574	77	95,824.00
FGR	GAR/FIN	0	420	31	10,228.00
PTO	PATIO	0	32	5	126.00
FSP	PCH/SCR/FIN	0	192	31	4,740.00
WDD	WOOD DECK	0	610	15	7,229.00
Total		3,234	4,488		204,048.00

Residential Grid

Flr Lvl	Description	Units	Rms	Bed	Baths
U	Line 1	1		4	
				4	

Area Totals

Final Total	252400		
Adj Area	4488	Val/Su Fin	78.05
Fin Area	3234	Val/Su Net	56.24
Total Area	4488	Val/Su Adj	56.24

Special Features / Yard Items

Code	SFYIDesc	A	Y/S	Qty	Size	Qual	Con	Year	Unit Price	Adj	UPD/S	Dep%	LUC	L.Fac	NB	N.Fact	Juris	J.Fact	UndepValue	Apprsd Value	Assd Value

Total Sp. Features: Total Yard Items: Total Appraised: Total Assessed Value:

Disclaimer: This Information is believed to be correct but is subject to change and is not warranteed.

Acct # 10571 2019 Bldg Sequence 1 of 1

2017-06-20 14:19:33 ferricb

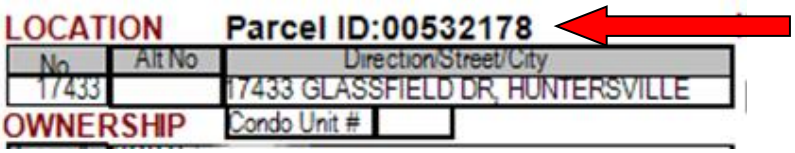
2 Instructions – General Elements

This section enumerates the various data points that are entered into a Field Data Collection Forms, and gives guidance for how they should be filled out.

2.1 Parcel Identification Number (PID)

The parcel identification number (PID) is a unique number identifying each parcel in Mecklenburg County. All properties are identified, and computer files matched based upon this PID. It is of critical importance that the PID be filled in accurately on the Field Data Collection Form. The following is the format of the County parcel number as required for coding all input data. (Note that Alpha characters are only applicable in certain situations.)

Map	3 characters, Numeric
Block	3 characters, Numeric
Lot	2 characters, Numeric
Interest or City/County Split Parcel	1 Alpha character

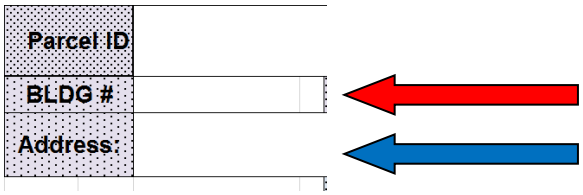


This number is edited to help prevent incorrect data from reaching the Master Appraisal File. In addition, proper use of this format on the Tax Roll File will enable the Master Appraisal File and Tax Roll Files to be matched, which allows for the automated transfer of data between these two computer files.

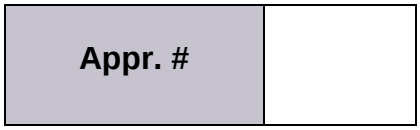
2.2 Building Number, Address, Appraiser Number, Date, and Neighborhood Code

Included on the Field Data Collection Form is the Building Number. Parcels that have substantial secondary improvements may require a separate listing and sketch for each additional building. This field is REQUIRED when additional buildings are identified on a parcel. Each building card is sequentially numbered within each parcel. If a single parcel (ownership) has three buildings, it would require three Filed Data Collection Forms to be completed—one per building. They would all have the same Parcel Number, but would have Building Numbers 1, 2, 3, etc.

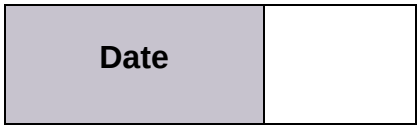
On the figure below, the place where the Building Number should be entered is designated with a red arrow, and the place where the building's address should be entered is designated with blue arrow.



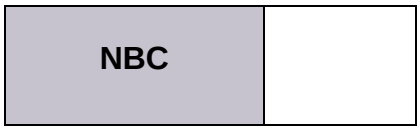
The Appraiser Number (referred to as Appr. # on the Form) is the number assigned to the appraiser performing the inspection, and should be entered here:



Date refers to the date that the inspection took place.

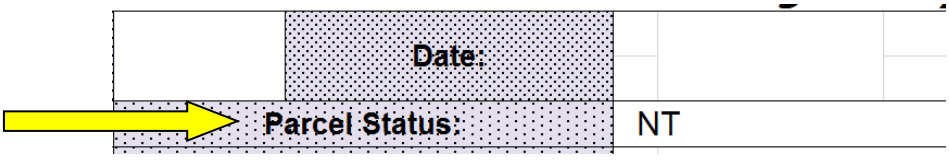


The Neighborhood Code (NBC) is four (or more) alphanumeric characters, and it identifies the neighborhood of the subject parcel.



2.3 Notice Code (NT Code)

Into the box below it marked Parcel Status (yellow arrow), input the corresponding Notice Code for the type of construction—for example, NT01 = notice for new inspection.



A Notice Code must be entered any time there is a change in value so the owner may be notified and given appeal rights. The Machinery Act provides that when changes are made to Assessed Values, a notification of the change must be made to the parcel owner. Parcel Status/Notice Codes are used to generate a Notice of the change with a brief description. These are usually mailed to the parcel owner. This notification describes the status/condition of the improvement as of January 1 of the respective Tax Year.

Activity Result			
Code #	**Description of Notice**	**Code #**	**Description of Notice**
NT01	NEW BUILDING	NT36	SQUARE FOOTAGE ADJUSTMENT
NT02	IMP/ADDITION/REMOD COMPLETED FOR TAX YEAR	NT37	STATE LINE ADJUSTMENT
NT03	REMODELED IMPROVEMENTS AND OR NEW ADDITION	NT38	LAND VALUE CORRECTION
NT04	ADDED AIR CONDITIONING	NT39	PROPERTY IS PARTIALLY TAXABLE
NT05	BUILDING DEMOLISHED	NT40	HOMESTEAD EXCLUSION DENIED
NT06	COMBINED REAL ESTATE	NT41	HOMESTEAD EXCLUSION APPROVED
NT07	CORRECTION OF LAND AREA:AC/SQFT/DIM	NT42	VETERAN EXCLUSION DENIED
NT08	DIVISION OF REAL ESTATE/OR NEW PARCEL	NT43	VETERAN EXCLUSION APPROVED
NT09	CHANGE OF ZONING OR USE	NT44	CIRCUIT BREAKER DEFERMENT DENIED
NT10	EQUALIZATION OF VALUE	NT45	CIRCUIT BREAKER DEFERMENT APPROVED
NT11	CORRECTION OF LISTING	NT46	BROWNFIELD EXCLUSION DENIED
NT12	BOARD OF EQUALIZATION ADJUSTMENT FOR EQUITY	NT47	BROWNFIELD EXCLUSION APPROVED
NT13	PROPERTY IS TAXABLE	NT48	BUILDERS INVENTORY DEFERMENT APPROVED
NT14	RIGHT OF WAY TAKING	NT49	BUILDERS INVENTORY DEFERMENT DENIED
NT15	BUILDING PARTIALLY DEMOLISHED	NT50	WILDLIFE USE VALUE
NT16	BUILDING REMOVED FOR TAX YEAR	NT51	WATERFRONT USE VALUE
NT17	BUILDING MOVED ON TO PARCEL FOR TAX YEAR	NT52	WEBSITE RESPONSE
NT18	BUILDING PARTIALLY COMPLETE FOR TAX YEAR	NT53	REVALUATION REVIEW
NT19	VALUE REDUCTION	NT54	BUILDERS INVENTORY EXCLUSION LAND APPROVED

NT20	DISCOVERY (IMPROVEMENTS AND/OR LAND)	NT55	BUILDERS INVENTORY LAND/BUILDING DENIED
NT21	REVISED NOTICE	NT56	BUILDERS INVENTORY LAND APPROVED/BUILDING DENIED
NT22	AGRICULTURAL USE VALUE	NT57	BUILDERS INVENTORY LAND DENIED/BUILDING APPROVED
NT23	FOREST USE VALUE	NT58	BUILDERS INVENTORY LAND DENIED
NT24	HORTICULTURE USE	NT59	BUILDERS INVENTORY LAND APPROVED
NT25	COUNTYWIDE REVALUATION	NT60	BUILDERS INVENTORY BUILDING DENIED
NT26	CHANGE OF OWNERSHIP	NT61	BUILDERS INVERTORY BUILDING APPROVED
NT27	REVIEWED - NO CHANGE IN VALUE	NT62	EXEMPTION APPROVED
NT28	MH SITE	NT91	LAND RECORDS PENDING
NT29	HISTORIC	NT92	APPRAISAL PENDING
NT30	ROAD PAVED	NT94	NC COURT OF APPEALS
NT31	USE VALUE DENIED	NT96	PROPERYT UNDER APPEAL TO STATE
NT32	NO VALUE CHANGE DUE TO RIGHT OF WAY TAKING	NT97	PROPERTY UNDER APPEAL TO BER
NT33	APPRAISAL PENDING	NT98	REVIEW
NT34	VALUE CHANGE		
NT35	TAXABLE TO EXEMPT		

3 Instructions – Structural Elements

This section covers the structural characteristics that are recorded by the appraiser. For all buildings other than those covered by Special Features and Yard Items (SFYI), the indicated portion of the form must be filled out. The exact items that must be input are referenced in the Appendix of this manual.

3.1 Building – Exterior Information

3.1.1 Type

This two-digit code is one of the most important fields on the entire card, as it identifies the type of the improvement. It is entered into the form here:

Exterior Information	
	(Enter Code)
Type:	

EXAMPLES OF BUILDING TYPES		
Building Type	**Description**	**Full Description**
01	RES	SINGLE FAMILY RESIDENTIAL
01T	SFR TINY	SINGLE FAMILY RES TINY HOME
02	MFD HOME-DW	MANUFACTURED HOME-DOUBLEWIDE
03	MFD HOME-SW	MANUFACTURED HOME-SINGLEWIDE
04	CONDO	CONDOMINIUM < 7 STORIES
05	PATIO HOME	PATIO HOME
06	CONDO-HI	CONDO HI-RISE > 6 STORIES
07	SFR HISTORIC	SINGLE FAMILY HISTORICAL PROPERTY
08	SFR MODULAR	SINGLE FAMILY MODULAR
09	TOWNHOUSE	TOWNHOUSE

3.1.2 Story Height/Style

This section refers to the style of the building.

Style:		
01		1 STORY
02		1.5 STORY
03		2.0 STORY
04		2.5 STY
05		RANCH W/BSMT
06		A-FRAME
07		SPLIT LEVEL
08		BI-LEVEL
09		CAPE COD
10		3.0 STORY
11		>= 4.0 STORY

3.1.3 Foundation

Foundation codes describe the foundation and sub-floor structure of a building. Some codes are more often associated with residential type construction, while others describe commercial properties, typically involving a heavier type of construction. Generally, wall height and roof type determine the thickness of the foundation.

Foundation:		
01		PIER
02		SLAB-RES
03		SLAB-COM
04		SLAB-ABV GRD
05		CRAWL SPACE
06		SLAB-PLFM HT
07		SLAB-STRUCT
08		SLAB-HEAVY
09		HIGH RISE
10		SPRD FTG-RAW
11		BASEMENT

3.1.4 Wall Framing

This category describes the wall framing system (not including exterior walls or facade). The wall framing typically supports the roof of a building. Most contemporary single family residential construction uses a wood frame wall system with wood studs.

Frame:		
01		NONE
02		WOOD FRAME
03		PRE-FAB
04		MASONRY
05		RNFRD CONC
06		STEEL
07		FRPRF STEEL
08		SPECIAL

3.1.5 Primary and Secondary Wall

Exterior walls certainly represent the greatest portion of a structure visible from the exterior. Much of the quality and construction technique is reflected in the exterior wall type. Only two exterior wall types may be marked and entered in the appropriate spaces. When more than two types are present, the two that have the most coverage should be selected. The Primary Wall is the wall which covers the majority of the exterior. A check is made on the form for the Primary Wall.

Primary Wall:		
01		SDG MIN/NONE
02		CORR MTL LGT
03		COMP OR WLBD
04		SIDG NO SHTG
05		ASB SHNG/SDG
06		BOARD&BATTEN
07		HARDI PLK/DES VYNL
08		MASONITE
09		WOOD ON SHTG
10		ALUM,VINYL
11		CONC BLOCK
12		STUCCO HRDCT
13		STUCCO SYNTH
14		EXT PLYWOOD
15		LOG
16		WOOD SHINGLE
17		CEDAR,RDWD
18		IMITATION STONE
19		CEM BR/SPL B
20		JUMBO/COM BR
21		FACE BRICK
22		STONE
23		CORR MTL HVY
24		MODULAR MTL
25		RNFR CONC
26		PRECAST PANL
27		PREFIN MTL
28		GLASS/THRML

If applicable, the Secondary Wall is entered on the form using the Code number with its correlating percentage of the exterior.

Secondary Exterior Wall:	
	(Enter Code)
	%

3.1.6 Roof Structure

Roof structure is also selected as a check on the form.

Roof Structure:		
01		FLAT
02		SHED
03		GABLE
04		HIP
05		GAMBRL/MANS
06		IRR/CATHDRL
07		WOOD TRUSS
09		BAR JOIST/RF
10		STL FRM/TRS
11		BOWSTR TRS
12		REINFRC CONC
13		PRESTRS CONC

3.1.7 Primary Roof Cover

The roof cover is also selected as a check on the form.

Roof Cover:		
01		CORR SHEET METAL
02		ROLL COMP
03		ASP,COMP SHG
04		BUILT UP T&G
05		RUB/PLS SHGL/SYNTH SLATE
06		ASBTS SHGL
07		CONC TILE/CLAY
08		CEDAR SHAKE
09		COPPR, ENAML
10		ARCH SHG
11		SLATE
12		METAL
13		RUBBER MEMBRANE
14		METL STANDING SM

3.1.8 Income Class

This classification is applied to an income producing property (such as an industrial, retail, or office building) in order to direct the property towards the proper "income model" by commercial neighborhood to create a value through the income approach. See Chapter 8 (Income Property Valuation) for more details.

List the income class for the property. This is used for commercial properties and apartments.

Income Class:	
(Commercial listing)	

3.1.9 Quality

Here the appraiser identifies the overall quality of construction, including such things as architectural design and market appeal that may positively or negatively influence the market value of a property. Quality will be defined in detail in the Appendix.

Grade:		
E		MINIMUM
D		FAIR
C		AVERAGE
B		GOOD
A		VERY GOOD
X		EXCELLENT

3.1.10 Year Built

The Actual Year Built is entered and must reflect the original year of construction. This is a 4 digit field.

	Year Blt:
	Eff Yr Blt:

Effective Year Built (EYB) is based on the estimated effective age of the improvement. This is based primarily on the appraiser's judgment concerning the observed condition of the property and should reflect any modernization or refurbishing done to the improvements. This is a 4-digit field. EYB drives the amount of depreciation. This will be established by the Revaluation team and should be consistent throughout the neighborhood.

3.1.11 Custom Quality Modifier

The Custom Quality Modifier is a factor that may be applied at the parcel level to capture the exceptional level of detail and craftsmanship of Custom (XX) homes. These types of homes are typically found in Mecklenburg County's more affluent neighborhoods, where a high degree of construction excellence is to be expected.

3.1.12 Building Name

This is a free form field to be used for the BUILDING NAME or Identification. This is an optional field.

Building Name: (Commercial listing)	

3.2 Building – Interior Information

3.2.1 Average Height/Floor

The height of the first-floor wall should be entered to the nearest foot. The AssessPro program will determine if it is non-standard and make appropriate adjustments. If the field is not entered, the standard height for the particular model will be assumed. If the building has multiple sections throughout the building, then use the average.

Interior Information	
	(Enter STD or Actual Ht)

The following are considered to be the standard wall heights applicable to the system models:

Building Group	Description	Standard Height
04	Office	12 feet
06	Warehouse	20 feet
07	Commercial	14 feet
08	Hotel/Motel	10 feet
09	Stadium/Arena	16 feet
10	Gov't-Inst.	12 feet

3.2.2 Primary Interior Wall

Two interior walls may be selected. If the interior of the structure has a large proportion of two distinct wall types (this commonly would occur when you have a paneled wall and drywall), both would be marked. List the predominant one first.

Primary Interior Wall:		
01		MASONRY/MIN
02		WALLBRD/WOOD
03		PLASTER
04		PLYWOOD PANEL
05		DRYWALL/SHEETROCK
06		CUSTOM

3.2.3 Secondary Interior Wall & Secondary Interior Wall %

The Secondary Interior Wall covering should be identified, and an estimate made of the percentage of the building having the secondary interior wall covering.

Sec. Interior Wall	
	%

3.2.4 Primary Floor

The appraiser records the predominant floor type of the structure. A Primary and Secondary Floor may be selected. The predominant flooring is selected as the Primary Flood. When carpet is over hardwood, the appraiser would select code 12 (Hardwood). If carpet is over plywood, the appraiser records code 14 (Carpet). This is a check box selection.

Primary Floors:		
01		NONE/SUBFL ONLY
02		PLYWOOD/LINO
03		CONC FIN
04		CONC TAPERED
05		ASPHALT TILE
06		VINYL TL/SHT
07		RUBBER/CORK
08		LAMINATE/BAMBOO
09		PINE/SOFT WD
10		TRRZO MONO
11		CERAMIC TILE
12		HARDWOOD
13		PARQUET
14		CARPET
15		QRY/HARDTILE
16		TRRZO STRP
17		PRECAST CONC
18		SLATE
19		MARBLE

3.2.5 Secondary Floor/Secondary Floor %

The Secondary Floor Covering should be identified, and an estimate made of what percentage of the building has that secondary interior floor covering. Secondary Floor requires writing the Code number in the box (it is not a check box).

Secondary Floors:	
	%

3.2.6 Insulation

This section is part of the listing for commercial properties and is not recorded for residences. The appraiser marks an entry which best describes the ceiling insulation type, such as Suspended Ceiling Insulated, and so forth.

Insulation:		
01		SUS CEIL INS
02		SUS WALL INS
03		SUS CL+WL IN
04		SUS NO INS
05		NOT SUS CEIL
06		NOT SUS WALL
07		NT SUS CL+WL
08		NT SUS NO IN
09		ROOF INSUL
10		WALL INSUL
11		RF+WL INS
12		NO CEIL INS

3.2.7 Heat Fuel

This element is to be marked to indicate fuel used to heat a structure. Only one element may be marked at a time, but one *must* be marked.

Heat Fuel		
01		NONE
02		OIL/WD/COAL
03		GAS
04		ELECTRIC
05		SOLAR/GEO-THERMAL

3.2.8 Heat Type

This element is to be marked to indicate the method by which a structure is heated. Only one element may be marked, but it is required to mark one.

Heat Fuel		
01		NONE
02		OIL/WD/COAL
03		GAS
04		ELECTRIC
05		SOLAR/GEO-THERMAL

3.2.9 Percent Heated

It is assumed the living area is 100% heated so this block is not typically used.

% Heated:	

3.2.10 Air Conditioning

This element is to be marked to indicate the method used to cool a structure. Only one element may be marked.

Heat Type		
01		NONE
02		BASEBOARD
03		AIR-NO-DUCT
04		AIR-DUCTED
05		RADIANT CEIL
06		HOT WATER
07		STEAM
08		RADIANT ELEC
09		RADIANT WTR
10		HEAT PUMP
11		AC-NONE
12		AC-WALL UNIT
13		AC-CENTRAL
14		AC-PCKD ROOF
15		AC-CHLD WAT

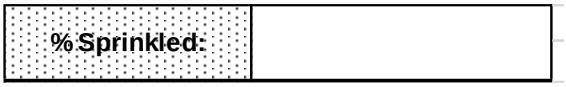
3.2.11 Percent Cooled

Enter the percent of the total structure that is cooled.

% Cooled:	

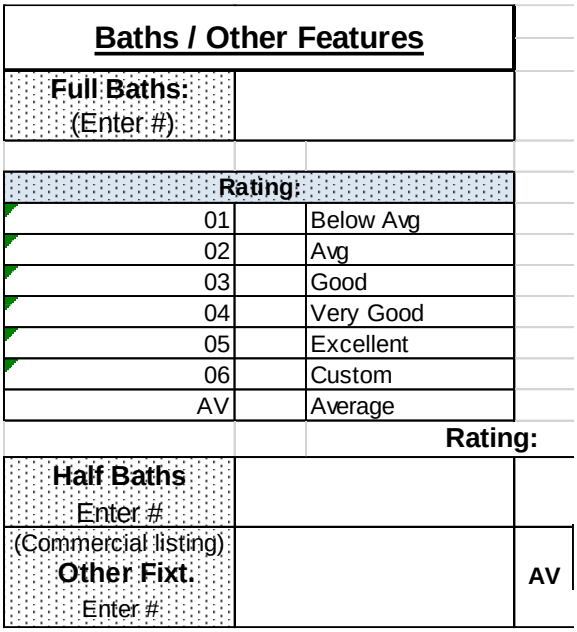
3.2.12 Percent Sprinkled

Enter the percent of the total structure that has sprinklers installed. This data element identifies an area within a building. Used for commercial property only.



3.2.13 Full/Half Baths & Other Fixtures

Enter the number of full baths, the full bath rating, the number of half baths, and the half bath rating.



For a single family residential, the total number of full baths should be entered. (Full is defined as a bathroom containing a sink, toilet, and tub/shower.)

Baths are to receive a quality rating, which allows the appraiser to indicate a level of quality that may be less than, equal to, or greater than that of the structure in general. This quality rating is relative to the quality of the dwelling itself. An excellent quality house should have an excellent quality bath, but the bath in this case would be entered as AVERAGE as it relates to this quality. In most cases, the bathrooms will be entered as AVERAGE. Unless there is support for a greater or lesser adjustment, then AVERAGE should be selected.

For a single family residential, the total number half baths also should be entered. (Half bath is defined as a bathroom containing only a sink and toilet.) To rate a half bath, use the same rate codes as were used for the full bath.

For non-residential properties, the appraiser should enter the total number of fixtures per building.

3.2.14 Fireplaces

Enter the appropriate code for the number of fireplaces for single-family properties. MASSIVE generally refers to those fireplaces with components such as extra-large hearths, extra-large fireplaces, decorative stone, ornamentation and trim, etc.

Fireplaces:		(Enter #)
Fireplace Rating:		
14		FIREPLACE
FP2		PREFAB
FP3		1 STY SINGLE
FP4		2 STY SGL/DBL
FP5		2 OR MORE
FP6		MASSIVE
FP7		>2 MASSIVE

4 Instructions – Depreciation/Remodel Elements

Unless an override is selected, the amount of physical depreciation is determined by the Effective Year Built. Physical depreciation is the "Condition" factor and is based on two tables: Average and High Rise. In most cases, average will be selected, unless the subject parcel is a high rise.

Depreciation / Remodel					
Physical Condition:		**AV**	**Average**		
Functional:	FUNC		Functional Obs.		**%**
	SSD		SS - Damage		
	SSS		SS - Stigma		
Economic:	EC		Economic Obs.		**%**
	TRAF		Traffic		
Special:	AP		Add'l Physical		**%**
	BADJ		Bldg Adj't		
OverRide:	O/R		Override		**%**
	PD		Phys Damage		
	RV		Residual Value		
	TE		Temp Econ		
	UC		UNDER CONSTR		

This section of the Field Data Collection Form is completed according to the following:

4.1 Functional Obsolescence

The types of functional obsolescence available to be adjusted are shown below.

Functional	Short Description	Full Description
FUNC	FUNCTIONAL	UNSPECIFIED FUNCTIONAL OBSOLESCENCE
SSD	SS - DAMAGE	SYNTHETIC STUCCO - DAMAGE
SSS	SS - STIGMA	SYNTHETIC STUCCO - STIGMA
null	Null Factor	Null Factor
FOSA	F.O.-SUPR AD	FUNCTIONAL OBSOLESCENCE - SUPER ADEQUACY

If applicable, the appropriate form of Functional Obsolescence “Description” is selected, and the estimated percentage entered on the Form.

4.2 External Obsolescence

If applicable, the appropriate form of External Obsolescence “Description” is selected, and the estimated percentage entered.

External	Short Description	Full Description
ECON	GENERAL ECON	GENERAL ECONOMIC - NOT SPECIFIED
TRAF	ECON-TRAFFIC	ECONOMIC OBS - TRAFFIC
null	Null Factor	Null Factor
APIN	ECON-AIRPORT	ECONOMIC OBS - AIRPORT INFLUENCE

4.3 Special Obsolescence

Special Obsolescence refers to any Additional Physical Depreciation (AP) beyond the normal physical depreciation that results from a building’s effective age. For example, this listing would be used to account for the wear and tear on a home as a result of deferred maintenance. AP should be added to normal depreciation and any economic obsolescence that may be present.

Special	Short Description	Full Description
AP	ADD'L PHYS	ADDITIONAL PHYSICAL DEPRECIATION
BADJ	BLDG ADJSTMT	BUILDING (FRAME, EX.WALL OR ROOF) ADJUSTMENT
TE	TEMP ECON	TEMPORARY ECONOMIC OBSOLENCE
null	Null Factor	Null Factor
SAJB	Sch billed	Schedule adjustment billed
SAJN	Sch no bill	Schedule adjustment not billed

4.4 Override

The four prior forms of depreciation (condition, functional, external, and special) are additive. However, an Override will replace these depreciation rates with the single entry placed in this category. This listing is used to create a residual value due to unusual circumstances, such as the need to Override (O/R) the system to create a value estimate, to reflect Physical Damage (PD), create a Residual Value (RV) for a “non-conforming use” property, reflect Temporary Economic Obsolescence (TE) due to excessive vacancy in a commercial property, or to assign a partial value to a property that is Under Construction (UC).

Care must be taken in the use of these codes as they will override the depreciation developed from the normal depreciation, external obsolescence, and functional obsolescence.

Override	Short Description	Full Description
O/R	Override	Override Depr.
PD	PHYS DAMAGE	PHYSICALLY DAMAGED
RV	RESIDUAL VAL	RESIDUAL VALUE
UC	UNDER CONSTR	UNDER CONSTRUCTION
null	Null Factor	Null Factor
SAJN	Sch no bill	Schedule adjustment not billed

There are a few instances in which the nature of a parcel is so unique that none of the valuation models can be applied to give the desired results. Therefore, the appraiser has been given the ability to override the system and make the value adjustment necessary to achieve the proper appraisal on a specific parcel. The property appraiser should utilize the system override only after careful consideration of the subject and the capabilities of the various models.

4.5 Remodeling Data (Year)

All the categories below have a four-character year field and are used to capture information concerning various types of renovation work that may occur in a building. These fields are for information purposes and do not directly influence value.

Remod. Data (Enter Year)			
Exterior:		Interior:	
Extensions:		Kitchen:	
Bathroom:		Plumbing:	
Electrical:		Heating:	
General:			

4.6 Solid Waste Units

Enter the number of solid waste units (SFW # UNITS) for this parcel, at one unit per residential living unit (guest house does not count).

4.7 Bedrooms

Enter the total number of bedrooms for the property.

Rooms / Breakdown	
# Units	
Bedrooms	

MULTIFAMLY

RESIDENTIAL

5 Instructions – Condominium Elements

The Condo Information Section shown in the example below is completed for Condominiums as follows.

Condo (on Building Description screen / Ext. Info. Tab)			
Floors In Bldg:			
% of Ownership:			
Floor:			

5.1 Location

Captures information about the location of a particular unit within a condominium building.

CORNER		NO CORNER	
Code	**Description**	**Code**	**Description**
00	N/A	10-NN	No Corner, No View
01-CN	Corner, No View	11-NV	No Corner, With View
02-CV	Corner, View	12-NC	No Corner, Cove View
03-CC	Corner, Cove View	13-NL	No Corner, Lake View
04-CP	Corner, Point View	14-NG	No Corner, Golf View
05-CL	Corner, Lake View	15-NP	No Corner, Pool View
06-CG	Corner, Golf View	16-NS	No Corner, Stadium View
07-CP	Corner, Pool View	17-NU	No Corner, Uptown View
08-CS	Corner, Stadium View		
09-CU	Corner, Uptown View		

5.2 Floors in Building

Enter the total number of floors in the condominium building.

5.3 Shares

Enter the percent of ownership that is associated with each unit. This information is a feature of the Declaration of the Common Element for the condominium complex.

5.4 Number of Units

This is the total number of units in the building.

5.5 Floor

Enter the floor where the BAS level of the unit is located.

6 Instructions – Permit Information

This grid may be used to post permit information for the purpose of tracking the status of various building permits which may have been issued for the structure, and which reside within the system. This will allow the clerical staff to identify those properties whose permit work has been completed by the appraisal staff.

The permit number will be B for building, M for mechanical, and either five or six numbers. The status will be one of the following. UC % is the % remaining to be complete.

	Permit Information				
	Number	Status Code *	Permit Date	Close Date	UC%
* = 1 - Open					
2 - Closed					
3 - Hold					
4 - Cancelled					
5 - Revisit					
6 - Photo needed					

7 Instructions – Special Features/Yard Items (SFYI)

This section is used to indicate any Special Features about the building, or any Yard Items located on the parcel. Examples of Special Features/Yard Items include items not attached to the dwelling including storage buildings, gazebo, pools, spa, etc.

This section generally contains the quantity and size of a Special Feature or Yard Item using an SFYI code, a quality code, the condition of the item, the year the item or feature was built, and an automatic size-adjusted unit price or user-optional override price. The depreciation source may be taken from a defined table, manually entered, or automatically tied to the building depreciation.

Special Features / Yard Items							
Ln #	SFYI Code:	Quantity:	Units (Size):	Quality:	Condition:	Year:	OverRide Price:

Within the AssessPro system, the appraiser may indicate whether the item is attached to the main building, detached, or attached to an adjacent item.

It is better to spend time up front accurately determining the data elements called for in the system. Such items as boat houses, docks, pools, garages, and other items of major value must be recorded in order to properly value the parcel. The appraiser has a clear idea of what is to be recorded in Mecklenburg County and what is not before beginning with this item. Items commonly handled in this manner include:

- Special features
  - Bank vault
  - Boat docks
  - Dock boards
  - Dock levelers
  - Escalators
  - Freight elevators
  - Loading Dock
  - Passenger elevators

- Yard items
  - Barns
  - Carports
  - Garages
  - Paving
  - Storage buildings
  - Golf greens
  - Swimming pools
  - Poultry houses
  - Hot houses

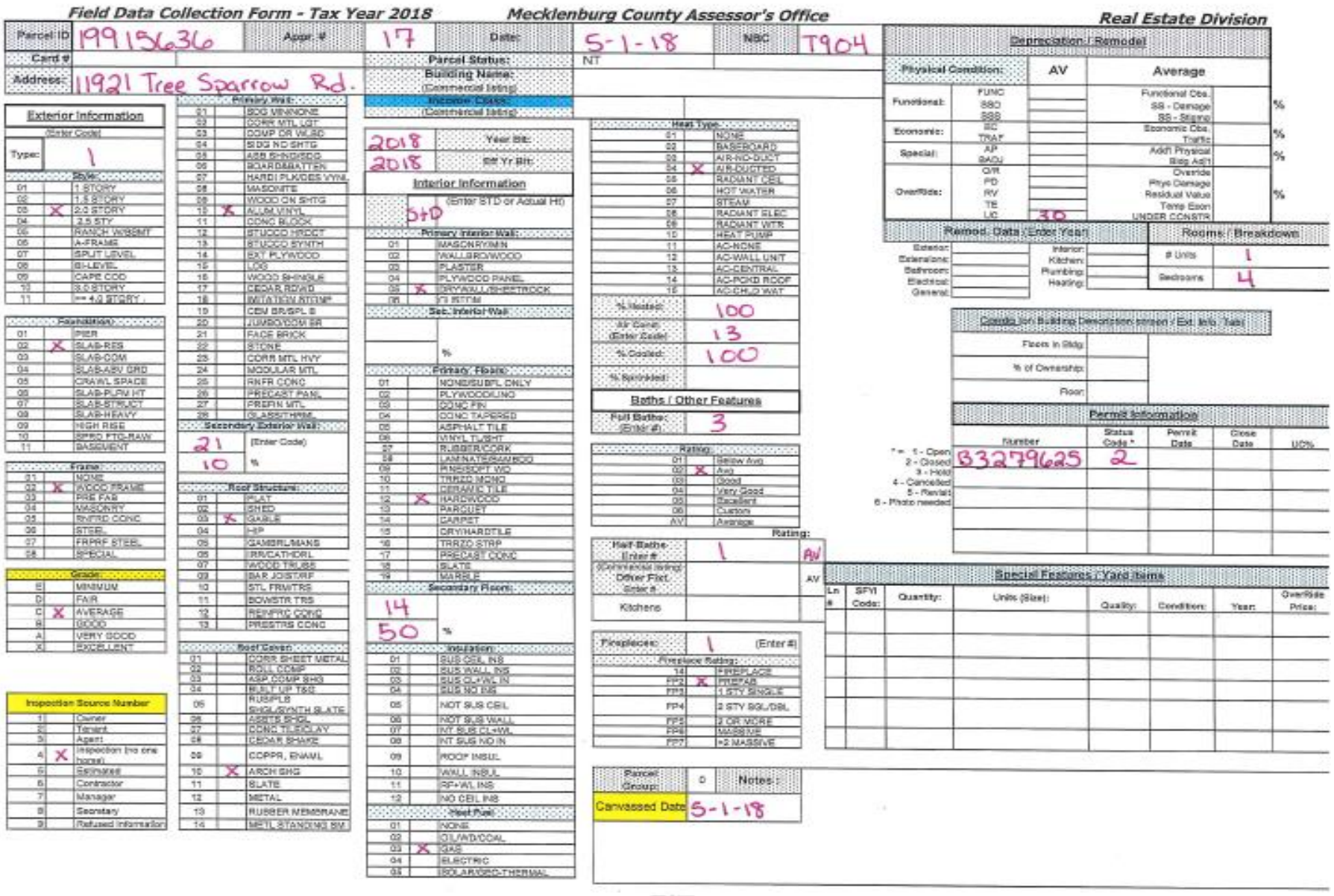
Each of the following fields must be entered:

- Code. The appraiser inputs the appropriate code in this field and the computer will automatically fill in the description, unit price and depreciation.
- Quantity. The appraiser inputs the appropriate number of a particular Special Feature or Yard Item.
- Units. The total units (size) by which the extra feature is valued must be entered here.
- Quality. The vast majority of entries should be of an average quality, although this field allows the appraiser to identify features or items that are either above or below the quality associated with the rest of the structure.
- Condition. Like the Quality above, the vast majority of entries should be of an average condition, although this field allows the appraiser to identify Special Features or Yard Items that are either above or below the condition associated with the rest of the structure.
- Year. The appraiser uses this field to identify the year built for the particular Special Feature or Yard Item.
- Notes. The appraiser uses this field to make any notes related to the property. Only highly relevant data is to be entered here, and may include such information as review dates and results, property history, usual characteristics, etc. Entry is freeform.

- Canvas date. The appraiser will use this field to record the date of a field canvas of the property, if applicable.

Parcel Group:	0	Notes :
Canvassed Date		

Figure 6.5: Field Data Collection Form, Completed – Front



Field Data Collection Form - Tax Year 2018 — Mecklenburg County Assessor's Office — Real Estate Division

Parcel ID: 19919636 | Appr #: 17 | Date: 5-1-18 | NBC: T904
Card #: | Parcel Status: NT
Address: 11921 Tree Sparrow Rd. | Building Name: (Commercial listing) | Income Code: (Commercial listing)

Exterior Information (Enter Code)
Type: 1

Style:
01 1 STORY
02 1.5 STORY
X 03 2.0 STORY
04 2.5 STY
06 RANCH W/BSMT
05 A-FRAME
07 SPLIT LEVEL
08 BI-LEVEL
09 CAPE COD
10 3.0 STORY
11 >= 4.0 STORY

Foundation:
01 PIER
X 02 SLAB-RES
03 SLAB-COM
04 SLAB-ABV GRD
05 CRAWL SPACE
06 SLAB-PLAN HT
07 SLAB-STRUCT
08 SLAB-HEAVY
09 HIGH RISE
10 SPRD FTG-RAW
11 BASEMENT

Frame:
01 NONE
X 02 WOOD FRAME
03 PRE FAB
04 MASONRY
05 RNFRD CONC
06 STEEL
07 FRPRF STEEL
08 SPECIAL

Grade:
E MINIMUN
D FAIR
C X AVERAGE
B GOOD
A VERY GOOD
X EXCELLENT

Inspection Source Number:
1 Owner
2 Tenant
3 Agent
4 X Inspection (no one home)
5 Estimated
6 Contractor
7 Manager
8 Secretary
9 Refused Information

Primary Wall:
01 SDG MINIMUM
02 COMB MTL LGT
03 COMP OR WOOD
04 SDG NO SHTG
05 ASB SHINGLES
06 BOARD&BATTEN
07 HARDI PLK/DES VYNL
08 MASONITE
09 WOOD ON SHTG
X 10 ALUM,VINYL
11 CONC BLOCK
12 STUCCO H'DCT
13 STUCCO SYNTH
14 EXT PLYWOOD
15 LOG
16 WOOD SHINGLE
17 CEDAR BOARD
18 MULTI-TEXTURED
19 CBN BRK/PLS
20 JUMBO/COMMER
21 FACE BRICK
22 STONE
23 CORR MTL HVY
24 MODULAR MTL
25 RNFR CONC
26 PRECAST PANL
27 PREFIN MTL
28 GLASS/THRML

Secondary Exterior Wall:
21 (Enter Code)
10 %

Roof Structure:
01 FLAT
02 SHED
X 03 GABLE
04 HIP
05 GAMBREL/MANS
06 IRR/CATHDRL
07 WOOD TRUSS
08 BAR JOIST/RF
10 STL FRM/TRS
11 BOW/STR TRS
12 REINFRC CONC
13 PRESTRS CONC

Roof Cover:
01 CORR SHEET METAL
02 ROLL COMP
03 ASP COMP SHG
04 BUILT UP T&G
05 RUBPLB SHGL/SYNTH SLATE
06 ASBTS SHGL
07 CONC TL/CLAY
08 CEDAR SHAKE
09 COPPR, ENAML
X 10 ARCH SHG
11 SLATE
12 METAL
13 RUBBER MEMBRANE
14 METL STANDING SM

Year Blt: 2018
Eff Yr Blt: 2018

Interior Information
1 (Enter STD or Actual Ht)
STD

Primary Interior Wall:
01 MASONRY/MIN
02 WALL BRD/WOOD
03 PLASTER
04 PLYWOOD PANEL
X 05 DRYWALL/SHEETROCK
06 PANELLING

Sec. Interior Wall:
%

Primary Floors:
01 NONE/SUBFL ONLY
02 PLYWOOD/UNO
03 CONC FIN
04 CONC TAPERED
05 ASPHALT TILE
06 VINYL TILE/T
07 RUBBER/CORK
08 LAM NATR/PARQUET
09 PINE/SOFT WD
10 TILED WOOD
11 CERAMIC TILE
X 12 HARDWOOD
13 PARQUET
14 CARPET
15 DRY/HARDTILE
16 TRTZO STRP
17 PRECAST CONC
18 SLATE
19 MARBLE

Secondary Floors:
14
50 %

Insulation:
01 SUS CEIL INS
02 SUS WALL INS
03 SUS CL+WL IN
04 SUS NO INS
05 NOT SUS CEIL
06 NOT SUS WALL
07 INT SUS CL+WL
08 INT SUS NO IN
09 ROOF INSUL
10 WALL INSUL
11 RF+WL INS
12 NO CEIL INS

Heat Fuel:
01 NONE
02 OIL/KD/COAL
X 03 GAS
04 ELECTRIC
05 SOLAR/GEO-THERMAL

Heat Type:
01 NONE
02 BASEBOARD
03 AIR-NO-DUCT
X 04 AIR-DUCTED
05 RADIANT CEIL
06 HOT WATER
07 STEAM
08 RADIANT ELEC
09 RADIANT WTR
10 HEAT PUMP
11 AC-NONE
12 AC-WALL UNIT
13 AC-CENTRAL
14 AC-PCKG ROOF
15 AC-CHLD WAT

% Heated: 100
Air Cond (Enter Code): 13
% Cooled: 100
% Sprinkled:

Baths / Other Features
Full Baths: (Enter #) 3

Rating:
01 Below Avg
X 02 Avg
03 Good
04 Very Good
05 Excellent
06 Custom
AV Average

Rating:
Half-Baths: (Enter #) 1 AV
(Commercial listing) Other Fixt: (Enter #) AV
Kitchens

Fireplaces: 1 (Enter #)
Fireplace Rating:
14 FIREPLACE
FP2 X PREFAB
FP3 1 STY SINGLE
FP4 2 STY SGL/DBL
FP5 2 OR MORE
FP6 MASSIVE
FP7 +2 MASSIVE

Parcel Group: 0 Notes:
Canvassed Date: 5-1-18

Depreciation / Remodel

Physical Condition:		AV	Average	
Functional:	FUNC		Functional Obs.	
	SBD		SB - Damage	%
	SBB		SB - Stigma	
Economic:	EC		Economic Obs.	
	TRAF		Traffic	%
Special:	AP		Addl Physical	
	BADJ		Bldg Adj't	%
Override:	OVR		Override	
	PD		Phys Damage	
	RV		Residual Value	%
	TE		Temp Econ	
	UC	30	UNDER CONSTR	

Remod. Data (Enter Year)

Exterior:		Interior:	
Extensions:		Kitchen:	
Bathroom:		Plumbing:	
Electrical:		Heating:	
General:			

Rooms / Breakdown

# Units	1
Bedrooms	4

Condo (or Building Description) Info / Ext. Info / Tab

Floors in Bldg:	
% of Ownership:	
Floor:	

Permit Information

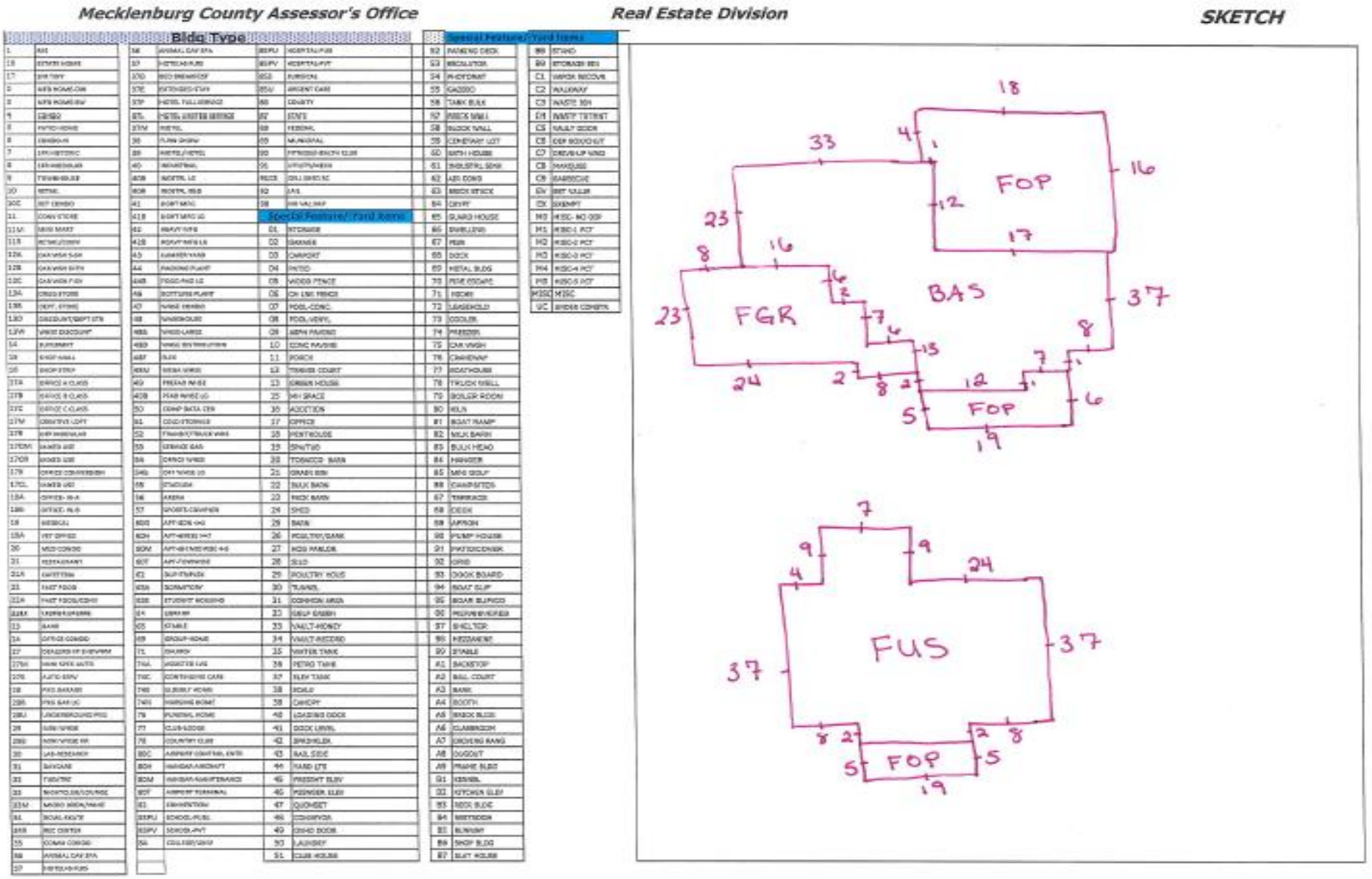
Number	Status Code *	Permit Date	Close Date	UC%
B3279625	2			

* = 1 - Open, 2 - Closed, 3 - Hold, 4 - Cancelled, 5 - Revisit, 6 - Photo needed

Special Features / Yard Items

Ln #	SFI Code:	Quantity:	Units (Size):	Quality:	Condition:	Year:	OverRide Price:

Figure 6.6: Field Data Collection Form, Completed – Back



8 SketchPro Summary

SketchPro is a sketching application designed to work with Patriot Properties' Real Property Application, AssessPro. Using the mouse, keyboard, and numeric keypad, an appraiser can create and edit exterior dimensions for all types of properties.

SketchPro will automatically calculate the square feet or meters and perimeter for each assigned area. It can also store un-displayed areas. Units for size may be set to any decimal place and sketched areas may be displayed in a multitude of colors. An angle, angles-on-angles, arcs, and polygons are all easily drawn. Dimensions and angles are displayed interactively while drawing.

IMPORTANT: *In order to start using SketchPro on a new parcel in Real Estate, the parcel MUST BE marked "Improved" in the Land Data screen. For instructions on how to change this information, see the Land Data section in the Real Estate Manual.*

8.1 Sketch Examples

Whether using the mouse or the numeric keypad to draw a sketch, it is recommended that the largest enclosed area be drawn first, then any separating walls or additions.

The recommended order of operations for the sketching process is:

1. Sketch the lines and enclose areas
2. Label the enclosed areas
3. Calculate the sketch
4. Exit

The following figures show examples of sketches that were designed with SketchPro.

Figure 6.7: Example of Sketched Area

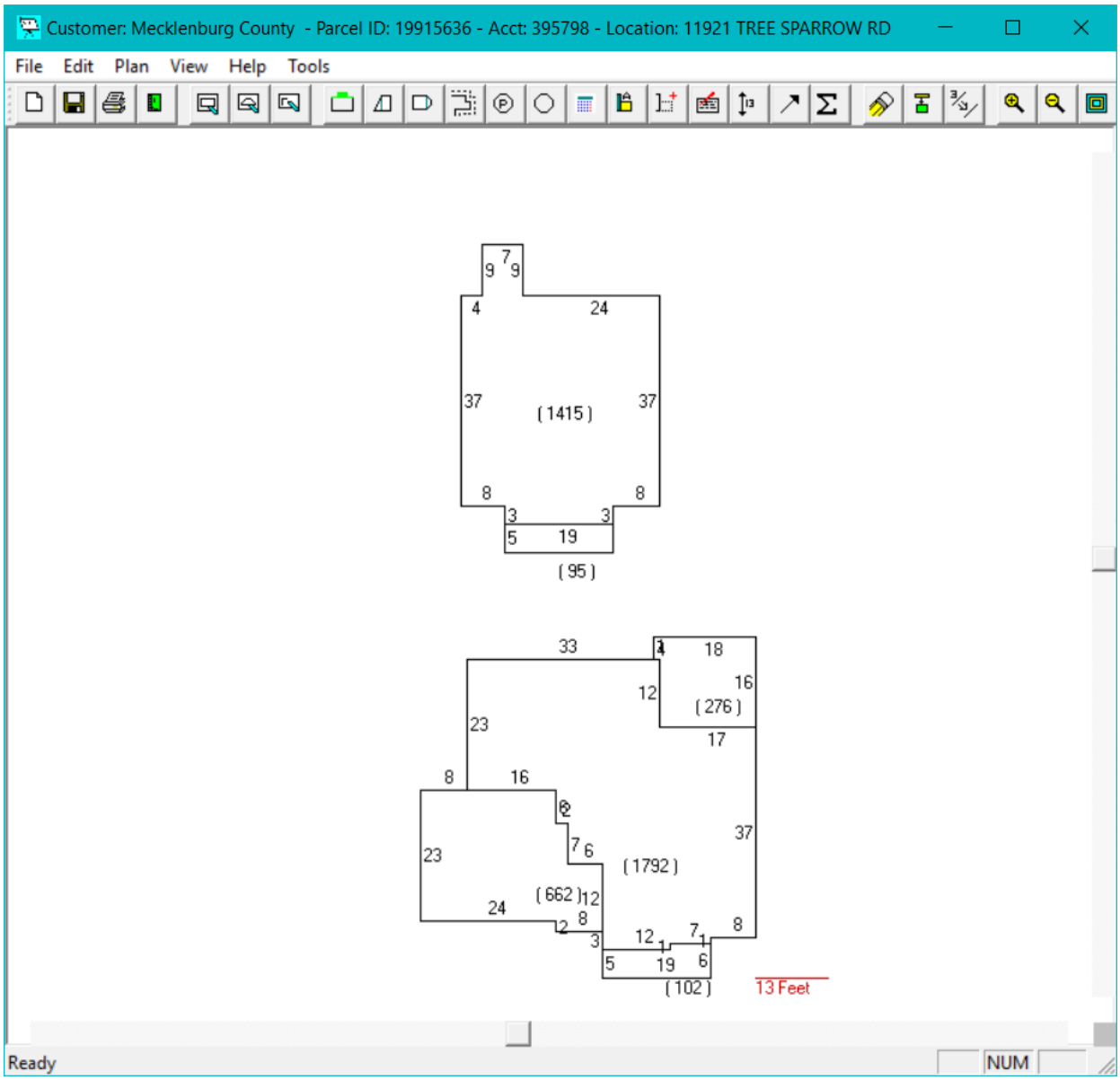
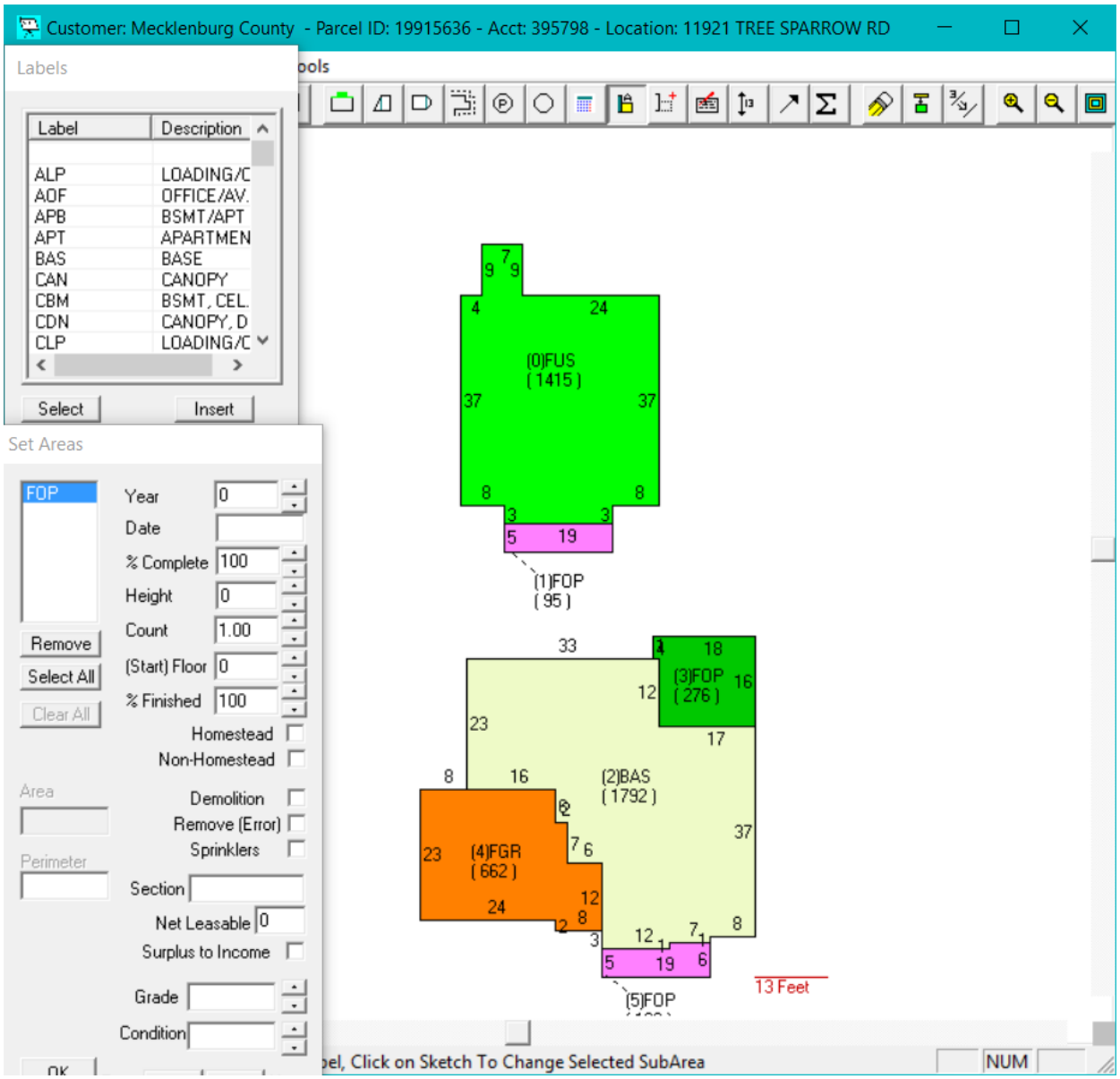


Figure 6.8: Example of Sketched Area with Appropriate Labeled Areas



The Machinery Act of North Carolina 105-317 (3)(a) authorizes the appraisal of partially completed structures in accordance with the degree of completion on January 1st. This next table is used to indicate the degree to which a structure under construction is complete, measured as a percentage. This table is used for Residential and Multi-Family Property.

Work Completed	Percentage Complete	AssessPro Entry
WALL AND ROOF FRAMING	20%	UC80
EXTERIOR WALL AND ROOF	35%	UC65
WINDOWS AND DOORS IN PLACE	50%	UC50
SHEETROCK INSTALLED	60%	UC40
TRIM WORK COMPLETE	70%	UC30
PAINT / FURNACE SET	90%	UC10
LANDSCAPING / MISCELLANEOUS	100%	NO UC ENTRY

If a building is less than 100% complete, the appraiser should select the "UC" in the Override section of the Depr / Remod. part of the Field Data Collection Form, and then enter the applicable number (from table above) in the UNDER CONSTRUCTION % field.

The last table is used for commercial properties and indicates percentage of completion for SHELL CONDITION properties (SHELL CONDITION = the interior upfit is in a “raw” or incomplete state).

Building Type	Percentage Complete	AssessPro Entry
OFFICE	60%	UC40
COMMERCIAL	80%	UC20
WAREHOUSE/ INDUSTRIAL	100%	NO UC ENTRY

Chapter 7
Calculation of System Values: AssessPro Calculations, Patriot Properties

Simple compilation of data is only one part of the system's function. The determination of values associated with the varied structural components of each improvement type is the function of any computer assisted mass appraisal (CAMA) system. The following chapter details how the AssessPro system makes its calculations in the derivation of property values.

1 Land Calculation

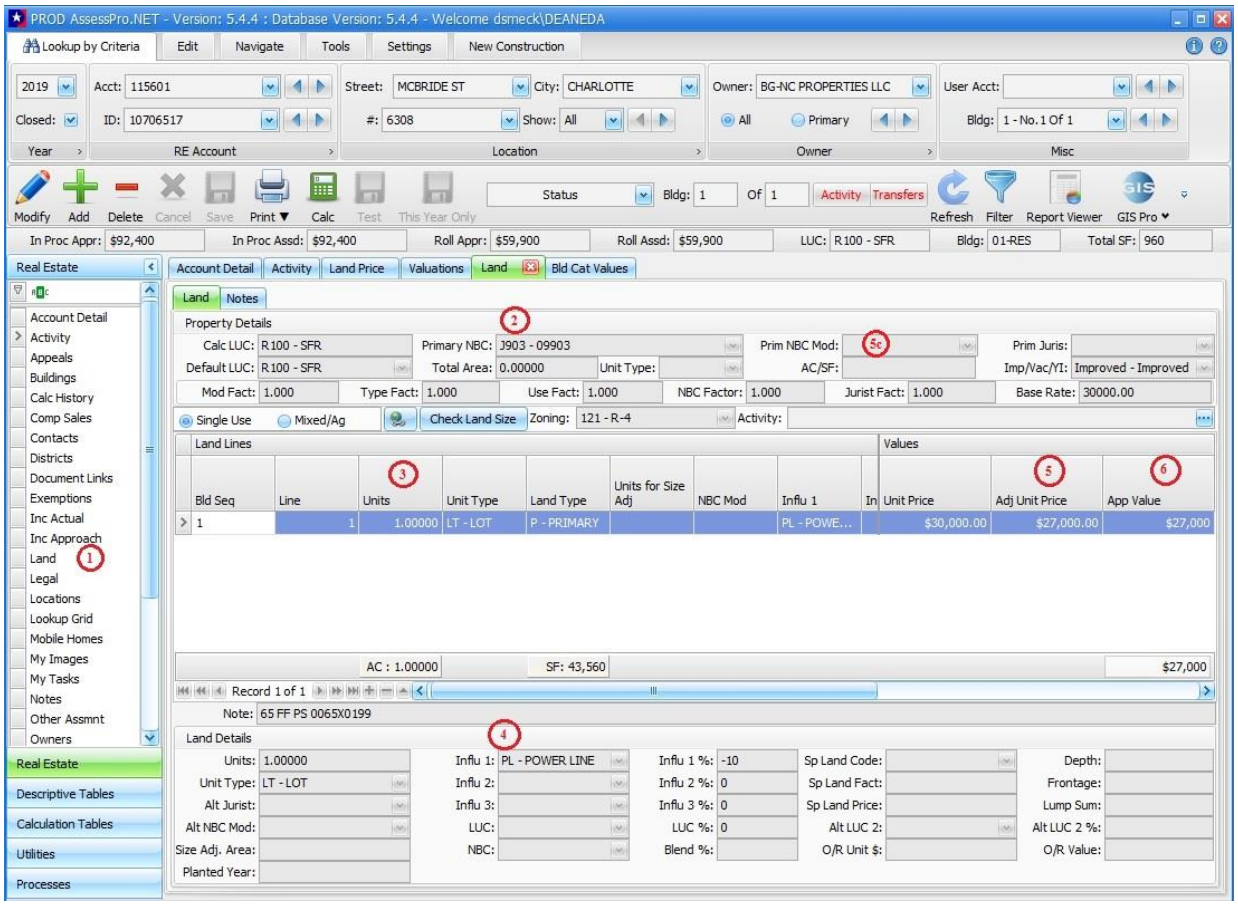
The land calculation is based primarily upon data in the Land, Size Adjustment (if applicable), and the Land Price Tables. The following sections provide information on each of these tables, and include screenshots from AssessPro for illustrative purposes.

1.1 The Land Data Screen

This tool allows for the user to value land and incorporate any influences necessary to arrive at a fair market value.

1. Select the Land Data Screen from the Real Estate Tab
2. Select the applicable Neighborhood Code for the parcel to be calculated. The relevant Land Model will be used based on the Neighborhood Code that is selected.
3. Select the appropriate Unit Type and Number of Units being used to measure the parcel. This can be Lot-based, Acreage-based or Square-foot-based. The Acreage and Square-foot-based options apply an automatic Size Adjustment per the parameters of that Land Model.
4. Select any applicable Land Influences that affect the Subject Parcel, and input the % adjustment that is to be applied for the influence. This can be a positive or negative adjustment.
5. The Adjusted Unit Price is calculated based on the following factors:
    a. Any Influences that may have been applied
    b. Any Size Adjustment that may have been applied if the unit type selected was an Acreage based Land Model
    c. Any additional Neighborhood Modifiers that may have been applied
6. The final assessed value of the land is calculated by multiplying the Number of Units by the Adjusted Unit Price

Figure 7.1: AssessPro – Land Data Screen



1.2 Size Adjustment and Land Pricing

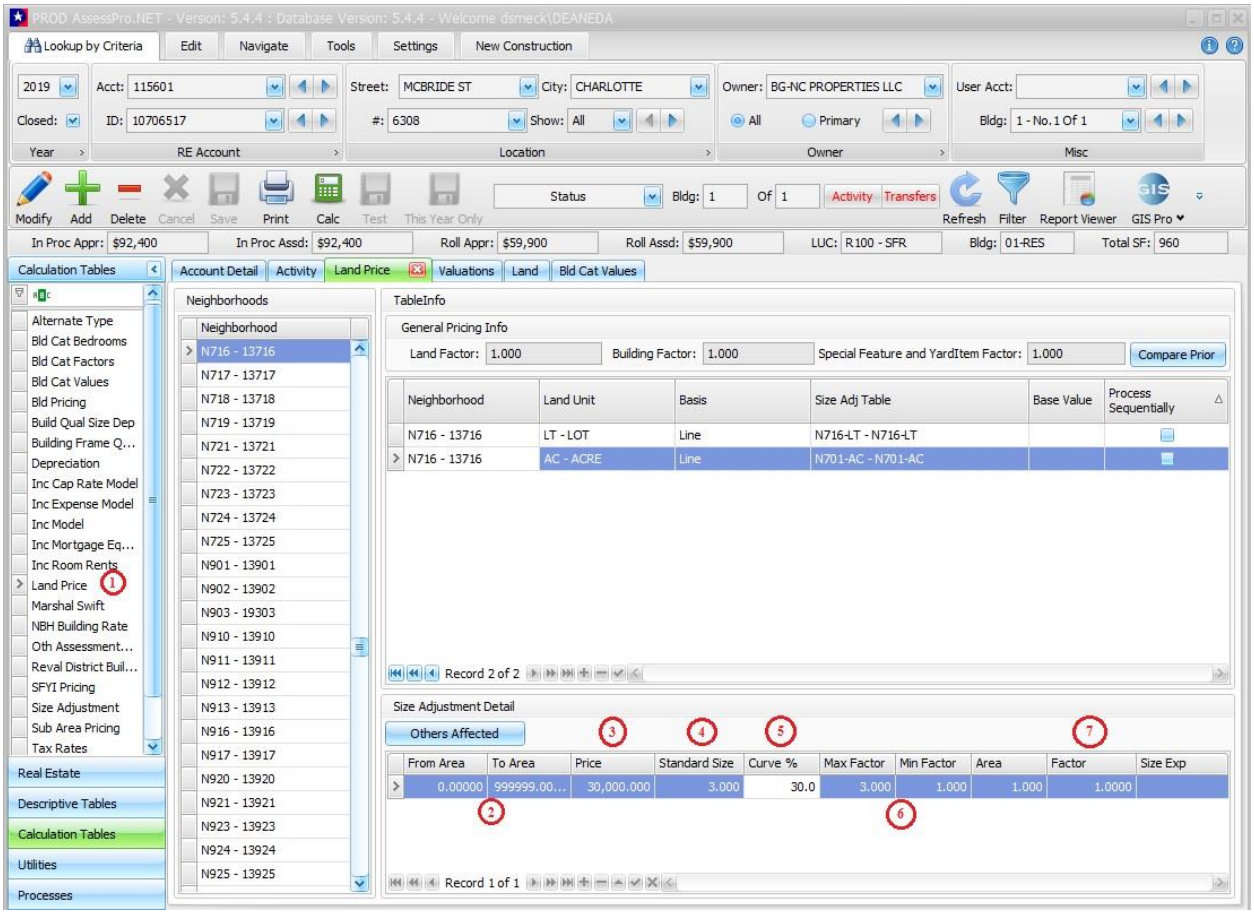
This tool allows the system to make an automated adjustment to the Unit Price based on the size of the property. The following parameters for each Size Adjustment Detail need to be entered:

1. Select the Land Price Screen under the Calculation Tables Tab
2. The range to which the size adjustment is to apply is entered under the From Area and To Area sections
3. The Base Price is the price that is applicable at the Standard Size within the Neighborhood
4. The Standard Size is typically around the Median Size within the market area or Neighborhood
5. The Curve % is an important parameter that determines the degree to which an adjustment is made based on the size. As the curve percent increases, the variance for the size adjustment increases. For example, a 15% curve will keep all size adjustments much closer to the standard size adjustment factor of 1.00 than a 30% curve. See page 4 of Chapter 7 for the table example.
6. Min and Max Factor determines the minimum and maximum adjustment that will be made. For example, if the Base Unit Price is $50,000, the Min Factor is 0.5, and the

Max Factor is 3.0, then the Adjusted Unit Price will not drop below $25,000 and will not exceed $150,000.

7. The Area, Factor, and Size Exponential factors are available for other variations of a size adjustment calculation, but are not used and remain at 1.00 or blank

Figure 7.2: AssessPro – Size Adjustment and Land Pricing Screen



The Standard Size Adjustment Formula used in the calculations is as follows:

(Standard Size / Actual Size × (Curve % / 100)) + (1 - (Curve % / 100)) = Calculated Size Adjustment Factor

The following table represents an example of how the size adjustment is made around the standard size of 1 Acre. As the Acre Size decreases, the Adjusted Unit Price increases. Alternatively, as the Acre Size increases, the Adjusted Unit Price decreases.

Base Rate	Acre Size	Curve %	1 minus Curve %	Std Area	Std / Actual	Size Factor	Adjusted Unit Price	Appr Value
$50,000	0.94	0.30	0.70	1.0000	1.0638	1.01915	$50,957	$47,900
$50,000	0.95	0.30	0.70	1.0000	1.0526	1.01579	$50,789	$48,250
$50,000	0.96	0.30	0.70	1.0000	1.0417	1.01250	$50,625	$48,600
$50,000	0.97	0.30	0.70	1.0000	1.0309	1.00928	$50,464	$48,950
$50,000	0.98	0.30	0.70	1.0000	1.0204	1.00612	$50,306	$49,300
$50,000	0.99	0.30	0.70	1.0000	1.0101	1.00303	$50,152	$49,650
$50,000	1.00	0.30	0.70	1.0000	1.0000	1.00000	$50,000	$50,000
$50,000	1.01	0.30	0.70	1.0000	0.9901	0.99703	$49,851	$50,350
$50,000	1.02	0.30	0.70	1.0000	0.9804	0.99412	$49,706	$50,700
$50,000	1.03	0.30	0.70	1.0000	0.9709	0.99126	$49,563	$51,050
$50,000	1.04	0.30	0.70	1.0000	0.9615	0.98846	$49,423	$51,400
$50,000	1.05	0.30	0.70	1.0000	0.9524	0.98517	$49,286	$51,750
$50,000	1.06	0.30	0.70	1.0000	0.9434	0.98302	$49,151	$52,100

Calibrating the Standard Size, Curve, Min, and Max factors typically takes some time. The initial setting with modest curves and min/max factors will usually ensure that great variances in adjusted base rates don't impact the values too much.

By utilizing land sales in the subject market area or neighborhood, the size adjustment curve can be tested and calibrated to where the majority of properties are being accurately adjusted. Outliers within a neighborhood may require additional manual adjustment for size.

1.3 Summary of Land Calculation

In summary, the AssessPro System follows a series of calculation steps that starts with the Base Unit Price and ends with an Adjusted Unit Price that is multiplied by the Number of Units to determine the total Appraised Value. A simplified step by step process of this calculation is as follows:

Item	Example
Base Unit Price	$50,000
×	
Size Adjustment Factor	1.01579
×	
Land Influence Factor (Net)	0.90
×	
Neighborhood Modifier Factor	1.15
=	
Adjusted Unit Price	$52,567
×	
Number of Units	0.95
=	
Appraised Value	$49,939

2 Special Land Calculation

Special land calculations generally involve both the calculation of Appraised Value and the calculation of a Use Value (such as agricultural, forestry or recreational uses). Use Value is typically lower than Appraised Value.

While the Use Value may be calculated using either an Override or Factoring Method, only the Override Method is currently being used to derive the Assessed Value. This Override Method utilized in performing a Special Land Calculation is as follows:

1. Under the Special Land Price Table, set the various special Land Uses and their respective Value Effect (Override Rate)
2. Under the Land Screen, select the Mixed/Ag option
3. Create an additional Land Line and select the appropriate Special Land Use that was created in Step 1
4. The Special Land Price is populated as an Override Rate
5. The Override Land Price is multiplied by the number of units to calculate the Assessed Value

Figure 7.3: AssessPro – Special Land Calculation Screen I

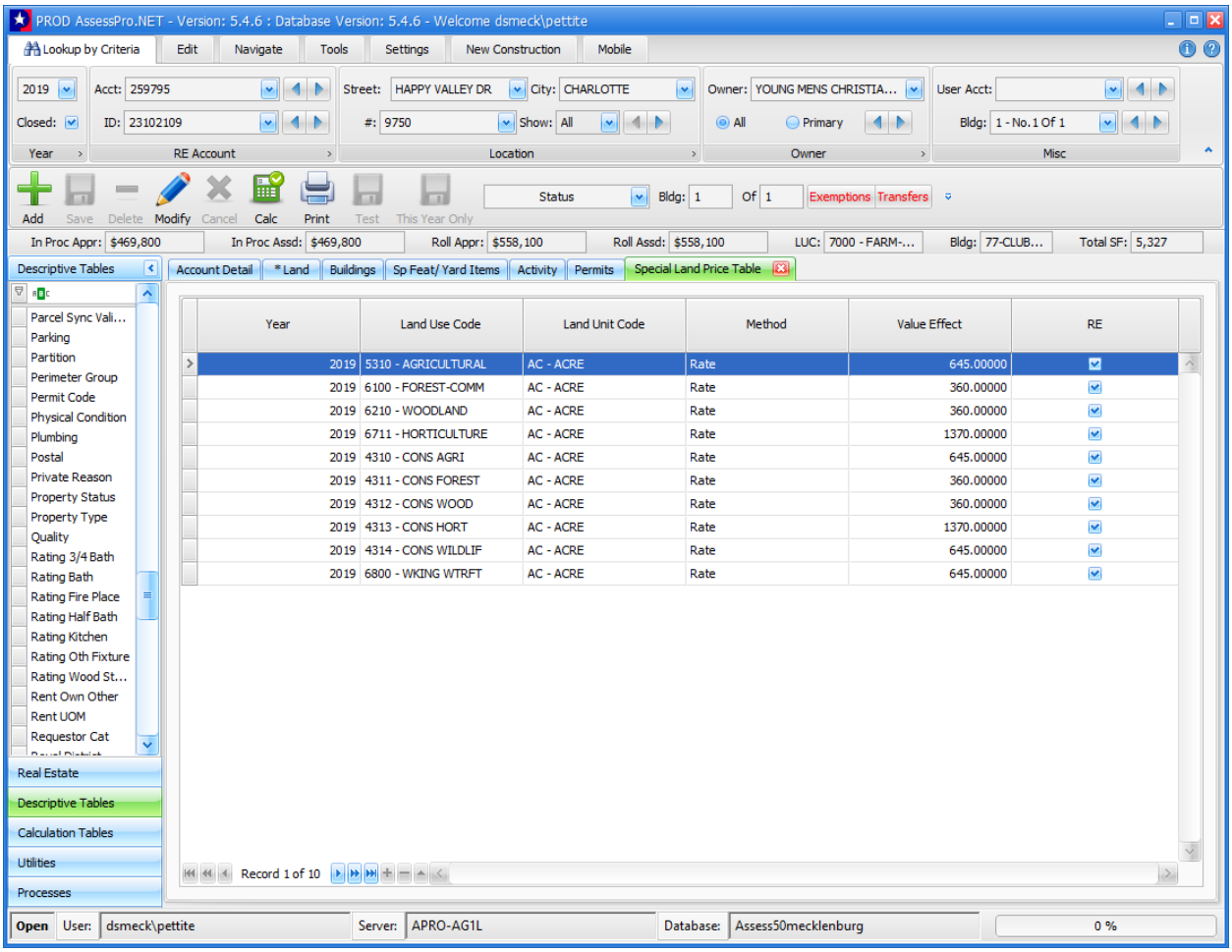
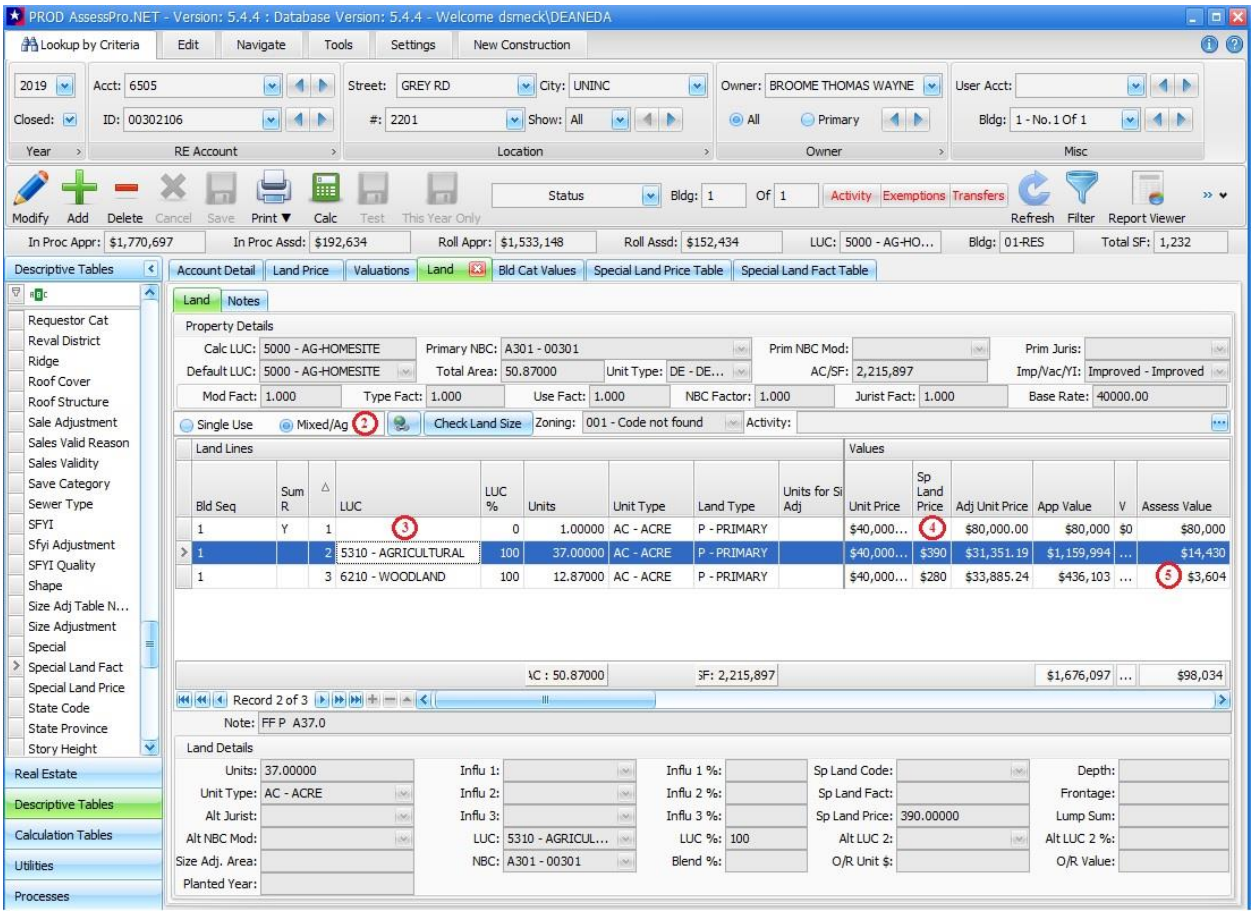


Figure 7.4: AssessPro - Special Land Calculation Screen II



3 Building Calculation

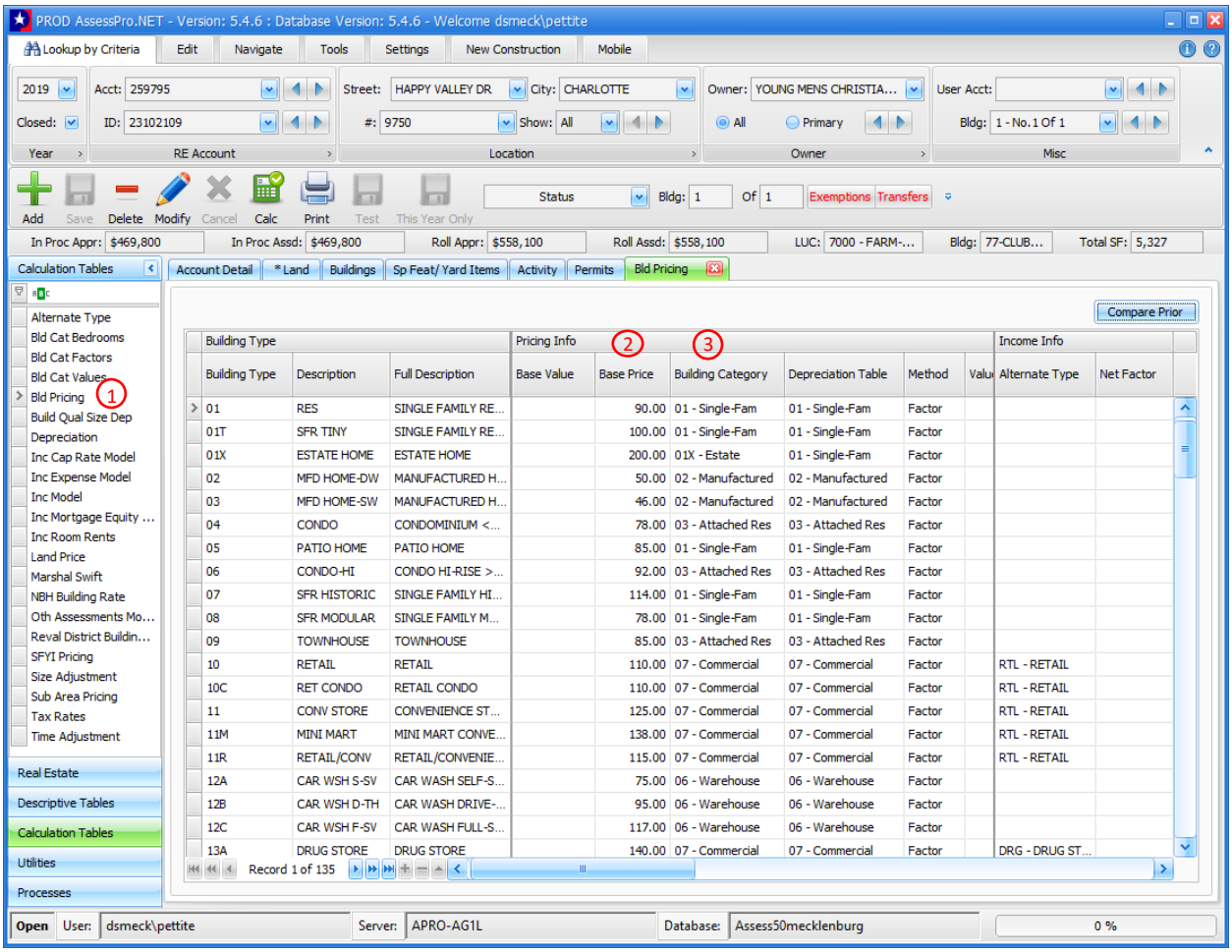
The building calculation is based primarily upon data in the Building Pricing, Size Adjustment (if applicable), Building Category Factors, Sub Area Pricing Tables, and Other Features. The following sections provide information on each of these tables and includes screenshots from AssessPro for illustrative purposes.

3.1 Building Pricing Table

There are two steps involved in creating a Building Pricing Table:

1. Select the Building Pricing Table, which is located under the Calculation Tables Tab
2. Select the appropriate Base Price for each Building Type
    a. Each Building Type is allocated to a particular Building Category, which will have differing depreciation schedules and factors

Figure 7.5: AssessPro – Building Pricing Table Screen



3.2 Size Adjustment

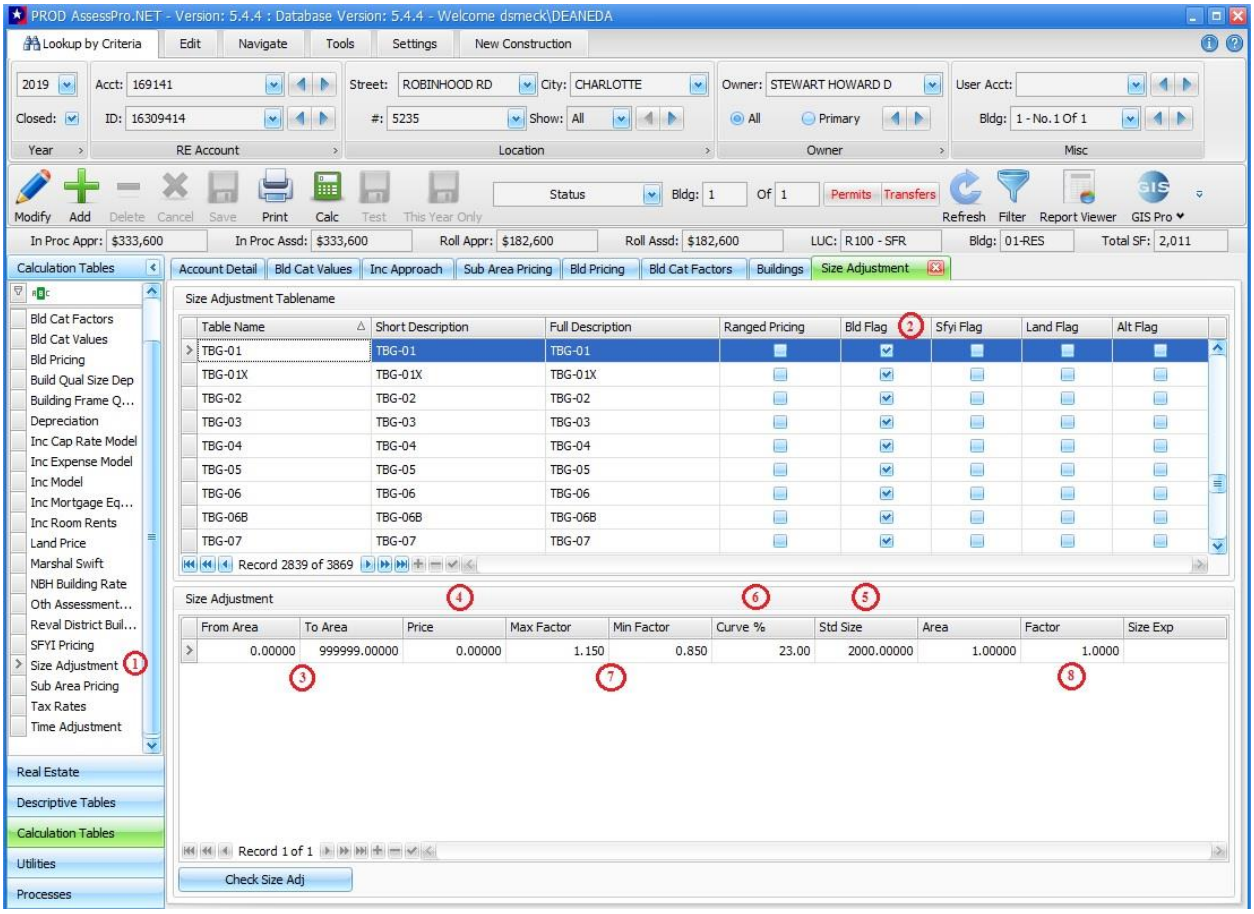
The Building Size Adjustment follows the same principles as the Land Size Adjustment and uses the same formula in its calculations. The following parameters for each Size Adjustment Detail need to be entered:

1. Select the Size Adjustment Screen under the Calculation Tables Tab
2. Building Size Adjustments are identified by being checked with a Bldg Flag
3. The Range to which the size adjustment is to apply is entered under the From Area and To Area sections
4. The Base Price. Unlike in the Land Size Adjustment, the Price is set to $0.00 so that the calculation will then adjust off the Base Rate specific to the Building Type as viewed under the Building Pricing Schedule.
5. The Standard Size is typically around the Median Size Square Foot for that particular Building Type
6. The Curve % is an important parameter that determines the degree to which an adjustment is made based on the size. As the Curve % increases, the variance for the

size adjustment increases. For example, a 15% curve will keep all size adjustments much closer to the standard size adjustment factor of 1.00 than a 30% curve.

7. Min and Max Factors determine the minimum and maximum adjustments that will be made. For example, if the Base Unit Price is $82/SQF, the Min Factor is 0.85, and the Max Factor is 1.15, then the Adjusted Unit Price will not drop below $69.70/SQF and will not exceed $94.30/SQF.
8. The Area, Factor, and Size Exponential Factors are available for other variations of a size adjustment calculation, but are not used and remain at 1.00 or blank

Figure 7.6: AssessPro – Size Adjustment Screen



The Standard Size Adjustment Formula used in the calculations is as follows:

(Standard Size / Actual Size × (Curve % / 100)) + (1 - (Curve % / 100)) = Calculated Size Adjustment Factor

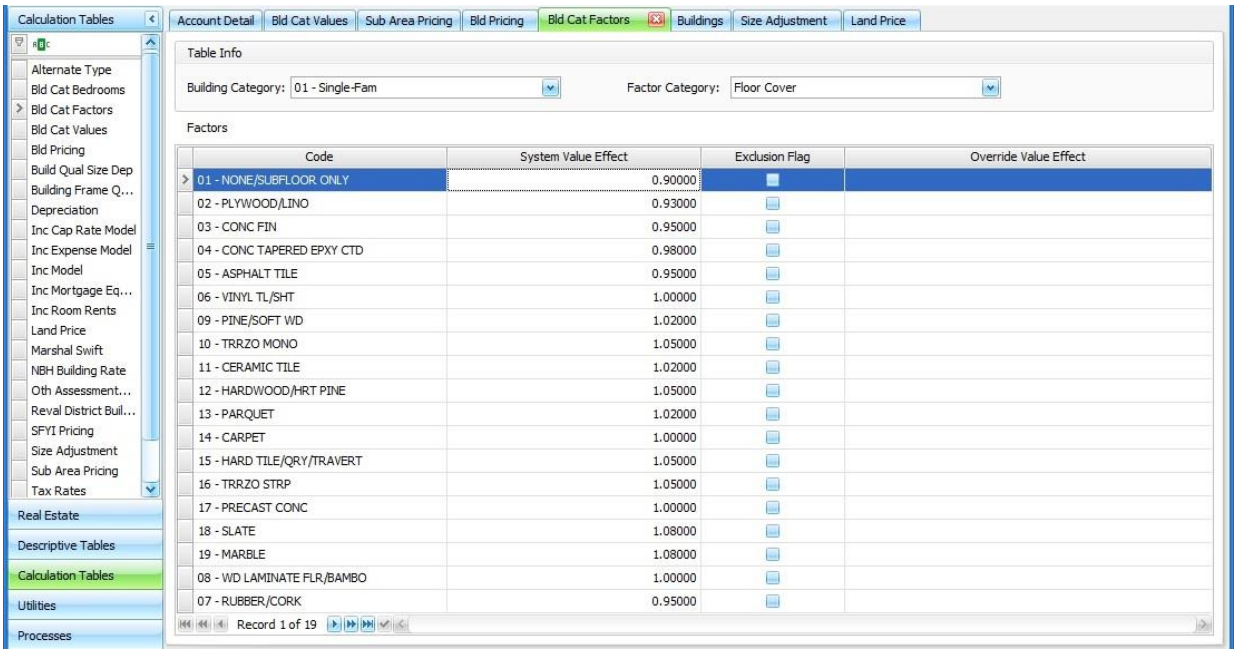
The following table represents an example of how the size adjustment is made around the standard size of 2,000 square feet. As the building size decreases, the Adjusted Unit Price increases. Alternatively, as the building size increases, the Adjusted Unit Price decreases.

Base Rate	SQF Size	Curve %	1 minus Curve %	Std Area	Std / Actual	Size Factor	Adjusted Price/SQF	Appr Value
$90	1400	0.23	0.77	2000	1.4286	1.09857	$98.87	$138,420
$90	1500	0.23	0.77	2000	1.3333	1.07667	$96.90	$145,350
$90	1600	0.23	0.77	2000	1.25	1.0575	$95.18	$152,280
$90	1700	0.23	0.77	2000	1.1765	1.04059	$93.65	$159,210
$90	1800	0.23	0.77	2000	1.1111	1.02556	$92.30	$166,141
$90	1900	0.23	0.77	2000	1.0526	1.01211	$91.09	$173,071
$90	2000	0.23	0.77	2000	1	1	$90.00	$180,000
$90	2100	0.23	0.77	2000	0.9524	0.98905	$89.01	$186,930
$90	2200	0.23	0.77	2000	0.9091	0.97909	$88.12	$193,860
$90	2300	0.23	0.77	2000	0.8696	0.97	$87.30	$200,790
$90	2400	0.23	0.77	2000	0.8333	0.96167	$86.55	$207,721
$90	2500	0.23	0.77	2000	0.8	0.954	$85.86	$214,650
$90	2600	0.23	0.77	2000	0.7692	0.94692	$85.22	$221,579

3.3 Construction Adjustment

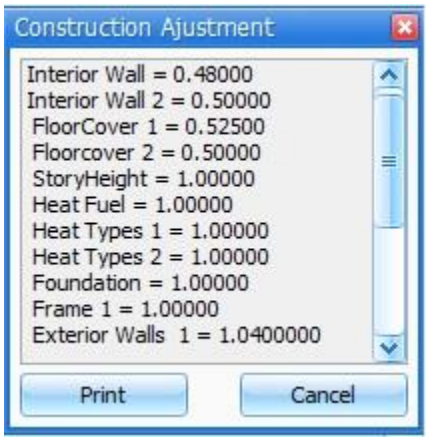
The Construction Adjustment refers to any adjustments that are made to the Base Rate based on the building's construction detail, such as flooring or siding, etc. Each Building Category has unique Building Category Factors attributed to each of these attributes. The following is an example of just one list of Building Category Factors for the flooring in the Single Family Building Category. See Chapter 11 for detail of Construction Adjustments on each building group.

Figure 7.7: AssessPro – Construction Adjustment Screen



In the calculation of the Construction Adjustment, the factors for each of the building attributes are multiplied together to produce a Net Construction Adjustment Factor. An example of the list of these Building Category Factors in the Construction Adjustment Calculation is provided below.

Figure 7.8: Building Category Factors

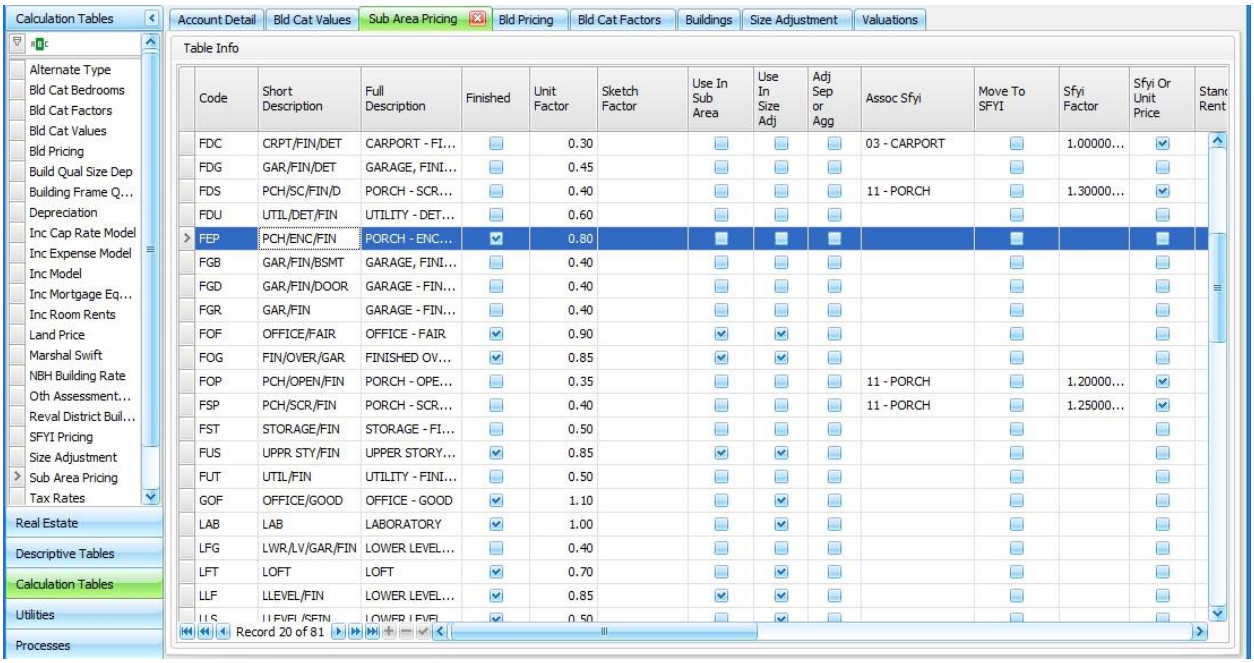


Once the Size Adjustment and Construction Adjustment Factors have been applied to the Base Rate, the resulting Adjusted Base Rate is used in the Sub Area calculations.

3.4 Sub Area Calculations

Each building sketch comprises Sub Areas which identify areas that differ in construction material and therefore differ in construction price. To account for these differences, the Sub Area prices are adjusted by means of a factor in relation to the Adjusted Base Rate for the Base (Main) Level.

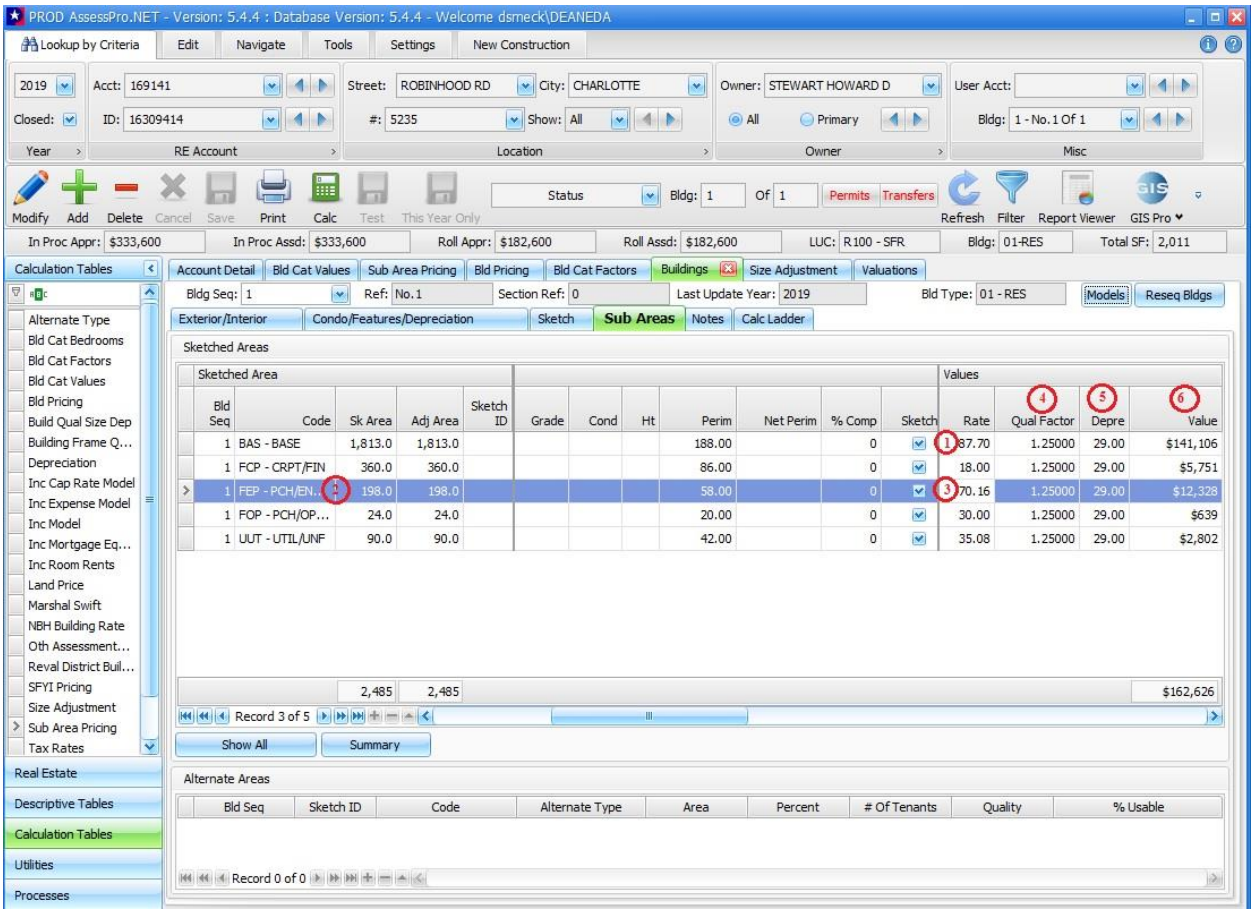
Figure 7.9: AssessPro – Sub Area Pricing Screen



The example below indicates how the Sub Area Calculations are made:

1. The Adjusted Base Rate (after the Size and Construction Adjustments) is calculated at $87.70
2. A Finished Enclosed Porch (FEP) is set at a factor of 0.80 to the Adjusted Base Rate of the BAS
3. The FEP Rate is calculated as follows: $87.70 x 0.80 = $70.16
4. The Grade/Quality Factor is multiplied by the Rate for each Sub Area
5. The Depreciation is applied to each Sub Area as a %
6. The Appraised Value for each Sub Area is calculated by computing 3, 4, and 5 together

Figure 7.10: AssessPro – Sub Area Calculations Screen



3.5 Other Features Calculations

Other Features—such as bathrooms and fireplaces—are added as lump sum items. These lump sum amounts are summed under the Calculation Ladder as Other Features Total. Depreciation is then applied to the Other Features Total and the depreciated amount is added to the total Sub Area appraised value.

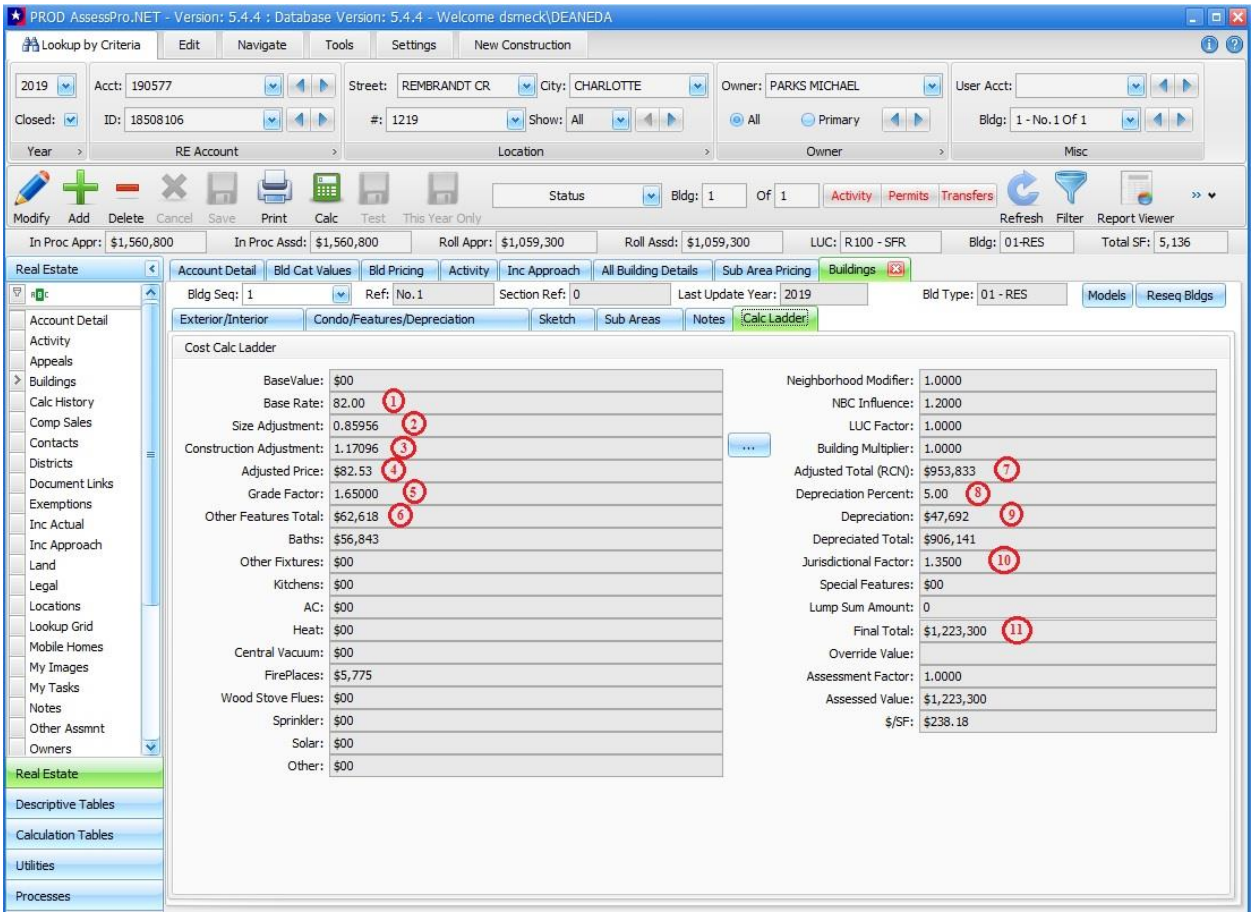
3.6 Summary of Building Calculations

The following Calculation Ladder provides an example of the steps that occur during the building calculation.

1. The Building Pricing Table sets the Base Rate for each Building Type
2. The Size Adjustment Factor is calculated
3. The Construction Adjustment is calculated
4. The Adjusted Price is calculated by multiplying the above items 1, 2, and 3 together
5. The Adjusted Price is multiplied by the Grade Factor and, if applicable, by the Neighborhood Modifier, NBC Influence, LUC Factor, and Building Multiplier

6. The Other Features Total is calculated by summing all Other Features
7. The Other Features Total and the total undepreciated Sub Area Value are summed to produce the Adjusted Total (RCN)
8. The Adjusted Total (RCN) is multiplied by the Depreciation Percent to calculate the Depreciation
9. The Depreciation is subtracted from the RCN to calculate the Depreciated Total
10. The Deprecated Total is multiplied by the Jurisdictional Factor (if applicable)
11. If applicable, additional Lump Sum amounts are added to produce the Final Total or Assessed Value

Figure 7.11: AssessPro – Calculation Ladder Screen



4 Special Features and Yard Items (SFYI) Calculation

The SFYI calculation is based primarily upon data in the SFYI Pricing under the Calculation Tables and the SFYI Screen on each property. The following sections provide information on each of these tables, and include screenshots from AssessPro for illustrative purposes.

4.1 SFYI Pricing

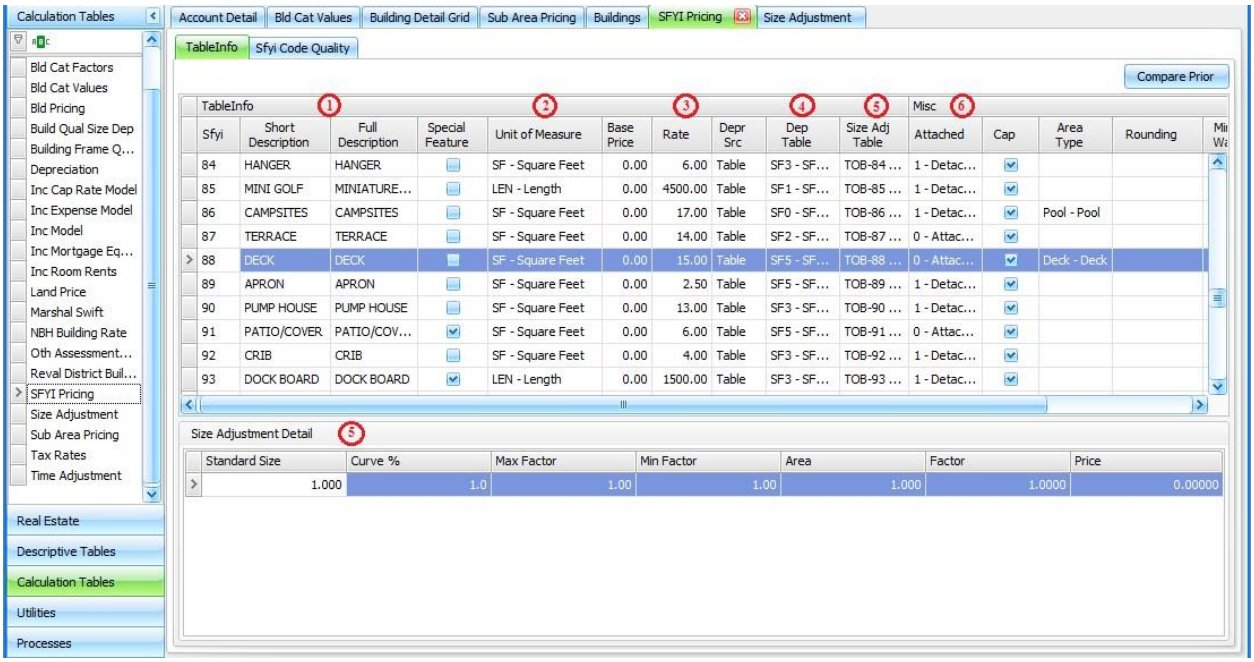
Similar to the Building Pricing table, this is where the Base Rate is established for each of the SFYI items, as well as which of the Depreciation Table each SFYI applies to.

Unlike in the building calculation, a Size Adjustment is NOT applied to SFYI items. Although the system requires that each SFYI item be tied to a Size Adjustment Table, these factors are set to a default of 1.00, with no impact on size in the calculations.

The following steps are taken when creating a new SFYI item in the SFYI Pricing Table.

1. Create a unique code and description for the SFYI
2. Select the Unit of Measurement for the SFYI
3. Enter the Rate that is applicable for that unit of measurement
4. Select the Depreciation Table that is applicable for the SFYI
5. Select the appropriate Size Adjustment Table which is set to make NO adjustment
6. Identify if the SFYI is typically attached or detached from the main building

Figure 7.12: AssessPro – SFYI Pricing Screen



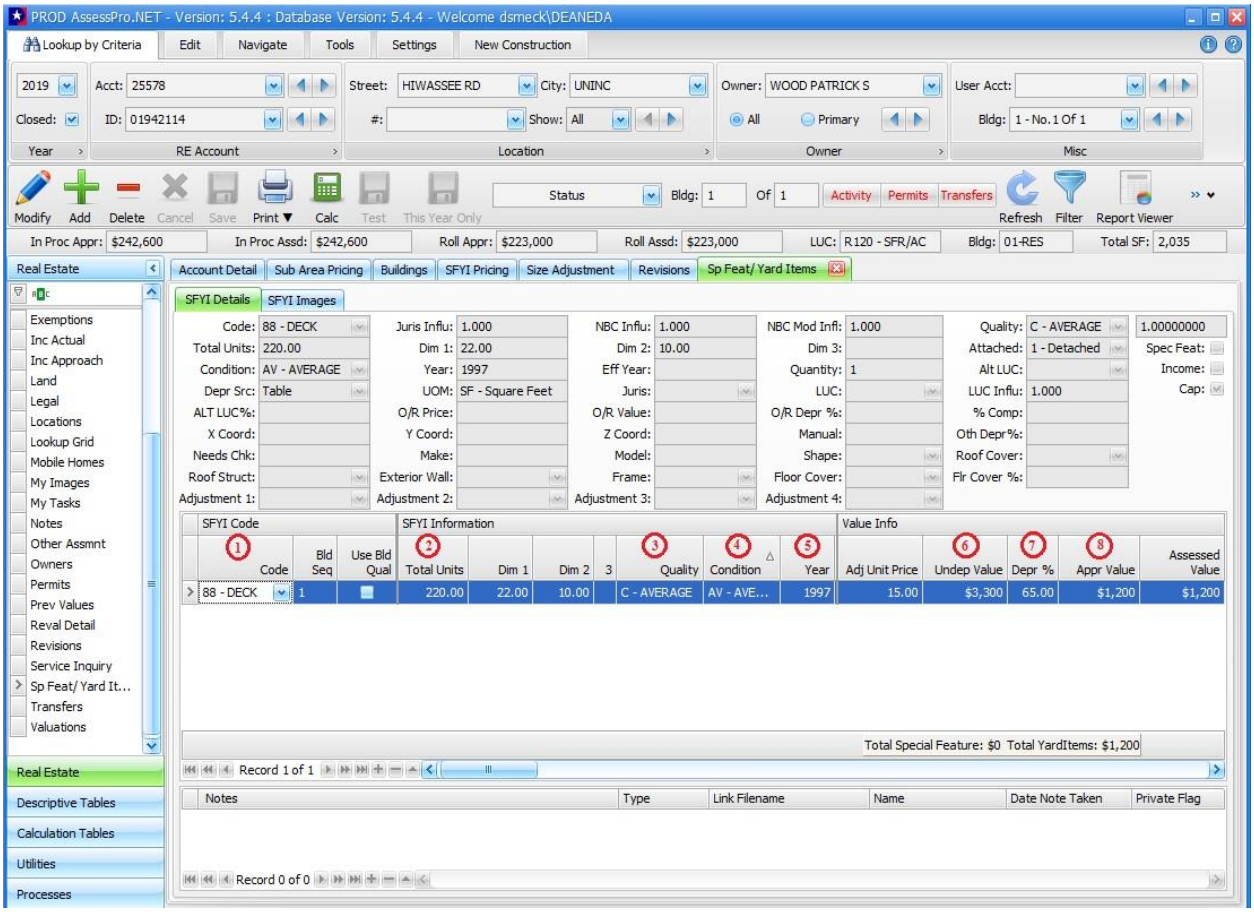
4.2 SFYI CALCULATIONS

If a building has SFYI items, they are entered under the Sp Feat/Yard Items Screen (located under the Real Estate Tab) as follows:

1. Select the SFYI from the drop down SFYI table
2. Enter either the total number of units or the dimensions. If the dimensions are entered, the Total Units will calculate automatically.
3. Select the Quality/Grade applicable to the SFYI

4. Select the condition applicable to the SFYI
5. Select the Year Built and, if applicable, the Effective Year Built
6. The Adjusted Unit Price is multiplied by the Total Units to calculate the Undepreciated Value
7. The Depreciation is calculated based on the Effective Year Built of the SFYI and the Depreciation Table that is applicable to the SFYI
8. The Deprecation is subtracted from the Undepreciated Value to calculate the Appraised Value

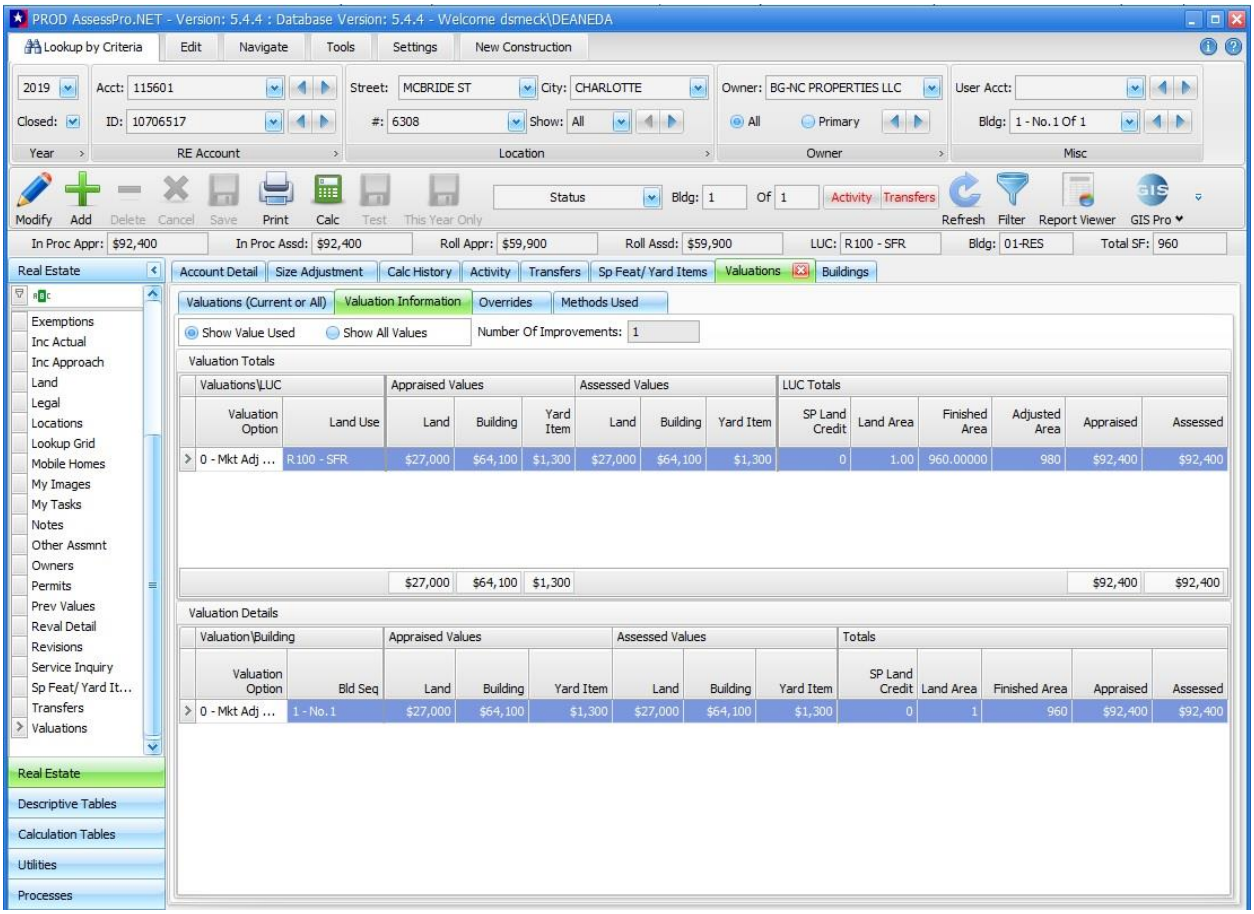
Figure 7.13: AssessPro – SFYI Calculations Screen



5 Calculate Total Assessed Value

Once the Land, Building and SFYI calculations are completed, these three values are summed together to produce both the Total Appraised Value and the Total Assessed Value. These values are summarized under the Valuation Tab, under the Valuation Information as illustrated below.

Figure 7.14: AssessPro – Valuation Information Screen



This final figure shows an example of how a building's total assessment value is calculated.

Figure 7.15 Example of How Buildings are Calculated

Description	Reference Chapter and Page for Tables	Adjustment Rates	Adjusted Base Rates	
Start with Residential BASE RATE	*Ch.11,Pg.32*	-	*90.000*	
Multiply the Base Rate by the Size Adjustment Factor	*Ch.7,Pg.10*	*0.92*	*82.715*	
Multiply the Size Adjusted Base Rate by the Construction Factor	*Ch.7,Pg.11*	*1.04*	*85.631*	
Multiply the Adjusted Base Rate by the Grade Factor	*Ch.11,Pg. 3*	*1.00*	*85.631*	
ADJUSTED BASE RATE			*85.631*	
Rates and Adjustments Applied to Square Footage				*Adjusted Values*
Sq. Footage Multiplied by the Adjusted Base Rate SubArea BAS (1st Floor)**100%**	*Ch.7,Pg.12*	*1372*	*85.631*	***$117,485.73***
Sq. Footage Multiplied by the Adjusted Base Rate SubArea FUS (2nd Floor) **85%**	*Ch.7,Pg.12*	*1714*	*72.786*	***$124,755.20***
Sq. Footage Multiplied by the Adjusted Base Rate SubArea FGR (Garage) **40%**	*Ch.7,Pg.12*	*484*	*34.252*	***$16,577.97***
Sq. Footage Multiplied by the Adjusted Base Rate SubArea FOP (Framed Open Porch)**35%**	*Ch.7,Pg.12*	*144*	29.970	***$4,315.68***
Add the Other Features I.E. (Baths, Fireplace)	*Ch.7,Pg.13*	*20000.00*	*$263,134.58*	***$283,134.58***
Multiply the Depreciation Rate	*Ch.11,Pg.37*	*14%*	*$283,134.58*	***$39,638.84***
Subtract the Depreciated value from the Adjusted Value	*Ch.7,Pg.16*	*$283,134.58*	*$39,796.07*	***$243,338.51***
Adjusted Building Value				***$243,338.51***
Add the Special Features / Yard Items				***$9,600.00***
Add the Land Value				***$60,000.00***
Total Assessed Value	*Ch.7,Pg16*			***$312,938.51***
			Rounded to the nearest Thousand	***$313,000.00***

Chapter 8
Income Property Valuation

This chapter is not designed to be a comprehensive text on income properties, but rather a summary and outline of the income approach to value that can be applied in the AssessPro CAMA System, as well as in individual pro forma analysis spreadsheets utilized outside the mass appraisal system. AssessPro's income approach module enables ad valorem appraisers to apply methods that heretofore proved too complex or time-consuming for mass appraisal.

Mecklenburg County has done an in-house commercial data analysis, including apartments, retail, industrial, etc. In this analysis Mecklenburg County gathered rental rates, expenses, vacancies, and capitalization rates in defined commercial market areas. Data sources included, but were not limited to: Real Data, CoStar, Trepp, and income letters sent to property owners.

As part of Mecklenburg County's preparation for the 2019 countywide revaluation, the real property appraisal division of the assessor's office contracted the services of Damon Bidencope, of Bidencope & Associates, to conduct a review of market conditions pertaining to certain types of income-producing properties. Similar documents have been provided during the 1998, 2003, and the 2011 countywide revaluations, and the county appraisal staff found that document to be very helpful in the valuation of income producing properties.

The resulting Commercial Data Study is a general narrative report of the regional market conditions on apartments, offices, retail facilities, industrial (warehouse) properties, hotels, and miscellaneous property types. The data from this report will aid in the determination of income classification of properties within the AssessPro system, the implementation of the income approach by neighborhood, and in creating individual, off-line pro forma analysis of properties using direct capitalization, discounted cash flow analysis, and, where desired or possible, value estimates using the PGIM and EGIM (see definitions in later sections of this chapter).

Valuation information and conclusions were derived from the Commercial Data Study, provided by Bidencope & Associates, and the Mecklenburg County Commercial Data Analysis, provided by the assessor's office in-house research.

Recommended reading for further study on the income approach should include *Property Assessment Valuation – Third Edition* (published June 1, 2010 by the International Association of Assessing Officers), as well as such texts as Dr. William N. Kinnard's *Income Property Valuation.* These sources will help familiarize the reader with some of the more subtle but important points of the income approach to value.

1 The Income Approach to Value

In order to simplify the understanding of the basic steps of income appraisal, a brief outline is presented here before taking a more in-depth look at each step.

STEP 1: Estimate potential gross income (PGI)

a. Determine rental type (i.e. per unit, per square foot. etc.)
b. Determine current market rents

STEP 2: Estimate effective gross income (EGI)

a. Calculate PGI
b. Identify vacancy and collection loss
c. Identify other income (e.g., parking fees, concessions, laundry, etc.)

STEP 3: Identify operating expenses

a. Fixed expenses (taxes and Insurance)
b. Variable expenses
c. Repairs and replacements
d. Sources of operating expense data

STEP 4: Calculate net operating income

a. Calculate EGI
b. Subtract operating expenses & replacement reserves

STEP 5: Determine the overall capitalization rate

a. Band of investment
b. Built-up

STEP 6: Identify method of capitalization to use

a. Direct capitalization
b. Gross income multiplier
    i. Estimate potential gross income multiplier (PGIM)
    ii. Effective gross income multiplier (EGIM)
    iii. Gross annual rent multiplier (GARM)
    iv. Gross room rent multiplier (GRRM)

1.1 Estimate Potential Gross Income

The primary measure of a commercial property's worth is the amount of income that a property can earn or command in the local market. Therefore, it is important to derive a good understanding of the rental income that the space would command on the open market.

The basic question needing to be answered is, "What is the current market rent of the subject properties?" The *gross income* is what the property will produce over a period of one year. It includes the total amount of rental revenue a property is capable of producing prior to the deduction for vacancy and expenses.

An appraiser must estimate the current market rents for various types of property.

- **Apartments.** Generally, the market rent for apartment complexes is determined by their monthly rent per unit. The total square feet of a unit included into the monthly rent gives you a monthly square foot rate. To determine the gross annual rent of the entire complex, the monthly rents of each unit type are summed together and multiplied by 12 months.
    - **Apartments (student housing).** While market rents for apartments are generally determined on a monthly, per unit basis, the income generated from student housing is based on a per bed basis. To determine the gross annual rent of the entire complex, the monthly rents per bed are summed together and multiplied by 12 months.
- **Low-income housing.** There are multifamily and apartment properties throughout the County that qualify for low-income subsidy. The amount of income that is capitalized in order to derive a value estimate is based upon the actual contract rent (x12 months) paid by the lessee under the low-income housing program.
- **Commercial, office, and industrial buildings**. This will differ depending on the type of building.

1.2 Estimate Effective Gross Income

1.2.1 Identify Vacancy and Collection Loss

The amount of income that can be produced is determined not only by the size of the property but also the degree to which the property is utilized. Commonly, most properties experience some vacancies throughout the year along with collection losses. This amount is usually expressed as a percentage of the potential gross.

These measures of losses from vacancies and collections are particularly applicable to multi-tenant properties. There are many sources of such information: past experience of the subject, market experience of similar properties, income-based questionnaires mailed to owners/investors, the engagement of real estate professionals in the local market, and other published studies and reports, such as The Karnes Report, The CoStar Group, the Carolinas Real Data Apartment market research, The PwC Korpacz Real Estate Investor Survey, The Building Owners and Managers Association (BOMA) publications, and The Charlotte Apartment Report.

Example		
PGI (20 apt. @ $1,200/year)		$24,000
Less 5% vacancy and collection	–	$1,200
Effective gross income		**$22,800**

1.2.2 Identify Other (Miscellaneous) Income

Other income covers all income generated by the operation of the real property, that is not derived directly from the scheduled rental of space. Examples include, but are not limited to:

- Vending machines
- Parking fees
- Coin operated laundries
- Food and beverage
- Telephone service
- Wi-Fi

Typically, other income is added to the difference of PGI and vacancy/collection loss to arrive at an estimate of EGI.

Example		
PGI (20 apt. @ $1,200/year)		$24,000
Less 5% vacancy and collection	–	$1,200
Plus 1% other income	+	$240
Effective gross income		**$23,040**

1.3 Identify Operating Expenses

To estimate a net operating income (NOI), it is necessary to deduct the operating expenses from the EGI. Operating expenses represent typical and on-going expenses, necessary to keep the property fully functional, and rented competitively with similar properties in the area.

Operating expenses should not include one-time expenses, or expenses not related to the operation of the real property. Such improper expenses would include: depreciation, amortization, mortgage interest, income taxes, capital improvements, and interest expense.

1.3.1 Fixed Expenses

These are expenses that vary very little, if at all, with occupancy from year to year and have to be paid whether the property is occupied or vacant. *Property taxes* and *property insurance* are the two major items in this category. It must be remembered that these expenses need be deducted only insofar as they are an expense incurred by the property.

Note that property taxes, although considered an expense component, are not considered so for ad valorem purposes as the taxes are unknown as the revaluation date. Instead, the actual effective tax rate is added to the cap rate through direct capitalization to create an "overall rate" or "loaded rate."

The IAAO, which is the governing body for mass appraisal, advocates the use of a loaded cap rate methodology.

1.3.2 Variable Expenses

Included in this category are such expenditures as management fees, payroll and personnel, supplies and materials, utilities, grounds care, etc. These tend to vary, at least in part, with the percentage of occupancy. Much depends on the type of property, the climate, and the landlord-tenant relationship as to expenses incurred.

1.3.3 Repairs and Replacements

These items vary from year to year and tend to be concentrated in some years. For valuation purposes it is necessary to spread the cost of certain major repairs and/or replacements over their useful life. Dividing the replacement cost for each category by the forecast useful life yields an annual payment to cover replacement. Some typical items would be air conditioners, heating systems, and roof covers. It should be noted that actual participants in market sales apparently do not fund reserve accounts. Expenses reported at the sale date typically do not include reserves for replacement, so overall capitalization rates derived from most market transactions do not consider reserves.

1.3.4 Sources of Operating Expense Data

There are several sources for providing information on operating expenses of properties. Sources are past experience of the subject, market experience of similar properties, income/expense questionnaires mailed to owners/investors, the engagement of real estate professionals in the local market, and published studies and reports on local, regional and national fronts, such as The Karnes Report, The PwC Korpacz Real Estate Investor Survey, the Building Owners and Managers Association (BOMA) publications, the Charlotte Apartment Report, and Trepp.

1.4 Calculate Net Operating Income

Net operating income (NOI) is the annual dollar amount that a property is capable of producing under typical conditions and is equal to the gross income less vacancy and collection losses, operating expenses and replacement reserves.

Example		
Gross Income (20 apt. @ $1,200/year)		$24,000
Less 5% vacancy and collection	–	$1,200
Plus 1% other income	+	$240
Effective gross income		**$23,040**
Less 35% operating expenses	–	$8,064
Net operating income		**$14,976**

The net operating income usually takes into consideration the lease agreement presently in place to determine the dollar amount (income) to the investor and/or owner.

The County also analyzes the leases of competitive properties to estimate contract rent, market rent, and other forms of income. The most common lease types are:

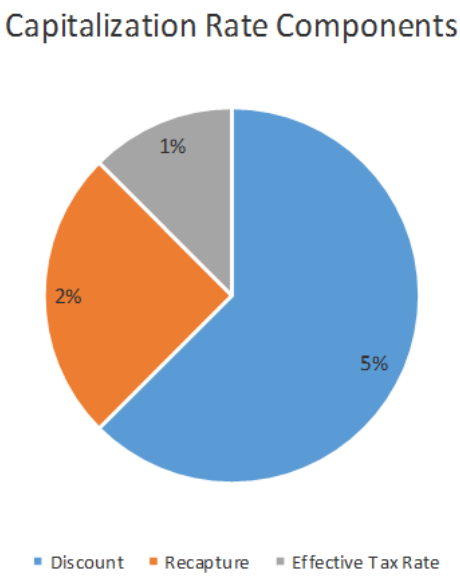
- **Full service (gross).** The landlord is required to pay all operating expenses associated with the real estate including CAM (common area maintenance). This is the most typical lease type for office properties.
- **Triple net (NNN).** The most popular type of net lease for freestanding commercial and retail space, as well as warehouse and flex. Under a triple net lease, the tenant pays all insurance, property taxes, and CAM on top of the base monthly rent. (Note that in a multi-tenant environment, landlords typically estimate expenses and charge tenants based on their pro-rata share.)
- **Modified gross.** A hybrid of both the triple net and gross leases, the distribution of responsibility for the operating expenses is a matter of individual negotiation between the lessor and lessee. This agreement is specified in the lease contract.
- **Percentage lease.** The tenant is responsible for paying the base rent on the property, as well as a monthly percentage rent that is due upon achieving a stated sales volume.

General Statute 105-317 (a)(2) states in part that it shall be the duty of the persons making appraisals to determine the true value to consider, in part: past income, probable future income, and any other factors that may affect its value. Lease analysis is important, and all characteristics of leases must be fully understood.

1.5 Determine the Overall Capitalization Rate

The preferred method of developing overall capitalization rates is by direct market extraction from sales of income-producing properties. When comparable sales data is in short supply, a capitalization rate can be derived arithmetically by adding together the discount rate, recapture rate, and for ad valorem purposes, the effective tax rate.

Figure 8.1: Capitalization Rate Components



In the above example, the discount rate (5%), the recapture rate (2%), and effective tax rate (1%) are added together, resulting in an overall capitalization rate of 8%.

Although a shortage of sales is typically not the case in Mecklenburg County, the following discussion covers several alternate methods of determining the discount rate component of the overall rate in the absence of reliable sales data.

The discount rate, the basic building block in the income approach, is also called a *rate of return on investment*. The forces of supply and demand for investment funds determine this. A rate of return on an investment is paid or offered to attract investment capital. The discount rate is generally estimated in one of two ways: 1) the band of investment method, or 2) the built-up method. The rate must compensate the investor for:

- Overcoming time preference
- Giving up liquidity
- Assuming investment management burdens
- Assuming the risks of investment and ownership

1.5.1 Band of Investment

The band of investment method recognizes the discount rate as the weighted average of mortgage interest rate(s), based on typical financing, and the equity yield rate, derived from market data. It is based on the premise that investments in income-producing properties are usually financed with a mortgage at the best available terms. The weighting factor is the percentage of the total investment represented by each component contributing thereto. The procedure involved in the band of investment method is illustrated below.

Assume a property is financed with an 80% mortgage at 8.5% interest. Equity investors are seeking a 13% return on this type of investment. The indicated discount rate would be developed as follows:

Band of Investment Method Example

	Rate		Weight		Weighted Rate
First Mortgage	.1300	×	.80	=	.1040
Equity Investment	.1500	×	.20	=	.0300
Indicated Discount Rate					**.1340**

1.5.2 Built-Up Method

The built-up method involves the "building" of a discount. The discount rate is "built" by taking the current "safe rate," or non-risk of ownership; the illiquidity of the investment; and the burden of management.

The safe rate is that rate of return that can be earned annually on a risk free, highly liquid investment requiring virtually no rate that can be earned on a savings account or negotiable one-year certificate of deposit to the prime-lending rate corresponding to the size of the investment.

Risk arises from the possibility that the net income forecast would not be realized, and refers to the investments continued ability to earn income caused by uncertainties and instabilities in the market place.

The allowance for illiquidity refers to the marketability, or ease with which the investment can be converted to cash. This allowance can be considerable in large or valuable parcels because substantial negotiations may be required and the number of potential local investors may be significantly reduced.

The management allowance refers to the time and effort required to manage the investment, not the property itself. The cost of managing the property is an operating expense that is reflected in the net income statement.

Built-Up Method Example	
Safe Rate	6.5%
Risk	2.0%
Illiquidity	1.5%
Management	0.5%
Ad Valorem Taxes	1.5%
Total Discount Rate	**12.0%**

The idea of the built-up method is to load the safe rate with rates that reflect the quality of the income stream. The higher the quality of the income stream, the lower the rate necessary to attract investors. Conversely, the poorer the quality, the higher the rate would be. In essence, the proper interest rate is that rate necessary to attract capital to the investment.

The preceding discussion has detailed how the net operating income is derived and also the various components of the capitalization rate.

1.6 Identify Method of Capitalization to Use

Capitalization is a process whereby an income stream of future payments is discounted to a figure that represents the present worth of the right to receive the income. The basic relationship between the income and value is expressed as follows:

Value = Net Operating Income / Capitalization Rate

1.6.1 Direct Capitalization

Direct capitalization refers to the method used to convert net income from a property into an indication of value, using an overall rate extracted from the market. Direct capitalization is a property residual technique, which is to say it does not consider the land separate from the building (as in the land and building residual techniques). This method capitalizes either the first year's income or the stabilized (averaged) income from several years, and the overall capitalization rate is derived directly from comparable properties that have sold and which represent similar investor expectations.

Direct capitalization is the most applicable method to use in revaluation projects. The overall rate is the ratio of NOI to present worth of the property. Overall rates are expressed as an annual percentage rate and are most effective when derived directly from market sales.

Direct Capitalization Example

(Given)		
Gross Annual Income	=	$50,000
Vacancy/Rent Loss	=	10%
Other Income	=	$1,000
Expenses	=	30%
Overall Rate from Market	**=**	**10%**
Potential Gross Income		$50,000
Less Vacancy/Collection Loss	–	$5,000
Plus Other Income	+	$1,000
Effective Gross Income		$46,000
Less Expenses	–	$13,800
Net Operating Income		$32,200
Divided by Overall Rate		.10
Total Present Value		**$322,000**

The AssessPro system utilizes the direct capitalization method to derive a value by income approach for certain properties.

The appraisal staff will also make use of pro forma spreadsheets based on data from the Commercial Data Study and the Mecklenburg County Commercial Data Analysis.

2 Commercial Data Study

As mentioned earlier in this chapter, the real property appraisal division of the assessor's office contracted the services of Damon Bidencope, of Bidencope & Associates (a local appraisal firm), to conduct a review of market conditions pertaining to certain types of income-producing properties. The resulting Commercial Data Study provides a useful overview of various sectors of the non-residential real estate market, suggests classification of those properties based on age, condition and location, and provides market-derived estimates for rent ranges, expense ratios and capitalization rates.

Below are excerpts from the Commercial Data Study. Please see the attached document, which contains the complete Commercial Data Study

2.1 Mecklenburg County Market Summary – Apartment Overview

Demand for apartments in the Charlotte Metropolitan area continues to be strong, with more than 13,944 under construction in the area with 13,067 units proposed. The number of units under construction and proposed are at historical levels.

There are 131,536 units metro wide and 105,767 units in Mecklenburg County, with the county growing by 19,555 units from 111,981 in February 2015 as indicated by Real Data.

The majority of new development projects are Class A properties located in infill locations in the Downtown, Southeast-1, and East-1 submarkets. These submarkets include the Downtown, South End, SouthPark, NoDa, and Elizabeth neighborhoods, and offer developers higher rental rates due to close-in locations.

Same-unit rents have grown 2.9% in the last year.

- The average rent is now $1,142 per month
- One bedroom units average $1,040 per month
- Two bedrooms rent for an average of $1,169 per month
- Three bedrooms rent at $1,305 per month

2.2 Mecklenburg Retail Market Conclusion

Retail investment in Mecklenburg County has surpassed pre-recessions levels. Numerous infill and suburban retail developments are currently under construction, with delivery anticipated for 2018 and the years following. However, not all retail is performing at record levels. Many Class B and C centers are feeling the direct impact of e-commerce and the "Amazon Effect". To combat these detractors in the retail market, investors must create new customer experiences and fill vacant space with "Amazon-proof" concepts such as home discount stores and grocers.

2.3 Charlotte Office Market Conclusion

The Charlotte office has seen a tremendous amount of capital investment over the last several years. Numerous major office projects and developments are currently under construction, with a large delivery expected over the next several years. This drive is heavily influenced by tight vacancy rates coupled with tenant demand for more space.

Overall, the Charlotte office market is expected to remain strong over the next several years, outpacing national level expectations.

Information from the available market surveys was analyzed and an estimated vacancy range, market rent, and operating expenses for each of the submarkets was derived.

2.4 Mecklenburg Industrial Market Conclusion

The general trend within the Charlotte industrial market is low vacancy rates, increased rents, and compressed overall rates. Where e-commerce has detracted from the retail and shopping center market, the industrial market has gained. Demand for new product is at an all-time high, specifically in the 100,000 sf + market.

Overall, the Charlotte industrial market is expected to remain strong over the next several years. The market is expected to outpace the national markets, which themselves have strong indicators.

2.5 Mecklenburg County Hotel Data

The information is compiled from 323 hotel properties in Mecklenburg County. The generally improving occupancy levels peaked in October 2016 at 72.4%, trailing 12 month average, and as of April 2018 were 69.6% (2.8% from the high).

The ADR's have shown a similar pattern of being pushed to the current upper limit. They have progressively increased at around 5% levels, until recently slowing to sub-3.5% annual growth levels.

The RevPAR indications had shown significant growth from 2013 to December 2016, and have been flat since that time. Increased room demand has outpaced room supply, and room revenues have seen solid growth.

Chapter 1 Economic Indicators								
Per Room Basis	Economy		Midscale		Upper Scale		Upper Luxury	
	Inferior	Superior	Inferior	Superior	Inferior	Superior	Inferior	Superior
ADR (Ranges)	$30.00	$60.00	$90.00	$105.00	$150.00	$180.00	$ 180.00	$250.00
Occupancy (Ranges)	50%	75%	60%	70%	65%	75%	65%	75%
RevPAR (Ranges)	$15.00	$45.00	$54.00	$73.50	$97.50	$135.00	$ 117.00	$187.50
Expenses OER	65%	65%	50%	60%	65%	65%	65%	65%
Expenses per room night	$9.75	$29.25	$27.00	$44.10	$63.38	$87.75	$76.05	$121.88
NOI per room night	$5.25	$15.75	$27.00	$29.40	$34.13	$47.25	$40.95	$65.63
Ro (Max / Min)	13%	8%	13%	8%	11%	8%	11%	8%
Vo	$40.38	$196.88	$207.69	$367.50	$310.23	$590.63	$ 372.27	$820.31
Value per room	$14,740	$71,859	$75,808	$134,138	$113,233	$215,578	$135,880	$299,414
GRRM Implied	2.69	4.38	3.85	5.00	3.18	4.38	3.18	4.38

2.6 Charlotte Parking Market Summary

The city of Charlotte parking market is robust with over 46,000 total parking spaces. Of these 46,000 spaces, over 37,000 are located in parking decks, and there are over 7,000 surface parking spaces. The market also includes approximately 1,100 on-street parking (mostly metered) spaces. Prices for parking in Charlotte vary widely depending on location, with central downtown parking being significantly more expensive.

The city of Charlotte has heavily invested in alternative transportation, including light rail, bike sharing services, and bus rapid transit. This, along with a strong competitive market, will keep the rates at current levels for the foreseeable future.

Structured parking in suburban locations is typically provided without charge and/or included within the rent charged for adjoining building space.

3 Mecklenburg County Commercial Data Analysis

The Mecklenburg County Revaluation Team gathered and analyzed data in-house as well as in assisting in the valuation of commercial property. A variety of data sources were used during research, such as CoStar, Trepp, Real Data, CBRE, Cushman, and Wakefield, and questionnaires were mailed to out to property owners. The rates and ranges in the County Commercial Analysis will be used in conjunction with the Commercial Data Study , by Bidencope & Associates, to value income-producing property for the 2019 Revaluation. The following tables are rates and ranges complied by the revaluation team during their research.

Mecklenburg County Commercial Data Analysis

CLASS	A		B		C	
APARTMENTS	**AVERAGE RENT**		**AVERAGE RENT**		**AVERAGE RENT**	
RENT RANGES 1 BR	$1,334		$932		$660	
2BR	$1,664		$1,102		$776	
3BR	$1,900		$1,291		$878	
4BR	$2,516		$2,125		$896	
VACANCY	12.6%		5.5%		2.4%	
OPERATING EXPENSE RATIOS:	35%		35%		35%	
OVERALL CAPITALIZATION RATE L/H	4.5%	10.5%	4.5%	10.5%	4.5%	10.5%

*Overall Market Study as of 02/2018 per Real Data/Costar
**Expense Ratios include Replacement Reserves

CLASS	A		B		C	
STUDENT HOUSING	**AVERAGE RENT**		**AVERAGE RENT**		**AVERAGE RENT**	
RENT RANGES 1 BR	$997		$600		$500	
2BR	$1,420		$700		$600	
3BR	$1,896		N/A		N/A	
4BR	$2,357		$700		$600	
5BR	$3,025		N/A		N/A	
VACANCY	8.2%		2%		3%	
OPERATING EXPENSE RATIOS:	35%		40%		45%	
OVERALL CAPITALIZATION RATE L/H	5%	6%	5%	6%	5%	6%

*Overall Market Study as of 02/2018 per Real Data/Costar
**Expense Ratios include Replacement Reserves

CLASS	A		B		C	
OFFICE	**LOW**	**HIGH**	**LOW**	**HIGH**	**LOW**	**HIGH**
RENT RANGES	$16	$41	$6	$42	$6	$44
VACANCY	5.5%	14.0%	3.7%	23.7%	1.0%	10.1%
OPERATING EXPENSE RATIOS:	30%		30%		30%	
OVERALL CAPITALIZATION RATE	6.0%		7.5%		8.0%	

*Leases assumed to be Gross

ALL RETAIL	**LOW**	**HIGH**
RENT RANGES	$8	$74
VACANCY	1.8%	4.3%
OPERATING EXPENSE RATIOS:	7%	7%
OVERALL CAPITALIZATION RATE	5.1%	14.1%

*Leases assumed to be Net

INDUSTRIAL/WAREHOUSE	**LOW**	**HIGH**
DISTRIBUTION/MANUFACTURING		
RENT RANGES	$2.75	$20
VACANCY	1%	5.9%
OPERATING EXPENSE RATIOS:	7%	7%
OVERALL CAPITALIZATION RATE	5%	14%

*Leases assumed to be Net

INDUSTRIAL	**LOW**	**HIGH**
FLEX SPACE		
RENT RANGES	$5	$15
VACANCY	3.6%	30.8%
OPERATING EXPENSE RATIOS:	7%	7%
OVERALL CAPITALIZATION RATE	5.0%	14.0%

*Leases assumed to be Net

SEGMENT	FULL SERVICE	LIMITED SERVICE	ECONOMY/ EXTENDED
HOTELS	**AVERAGE**	**AVERAGE**	**AVERAGE**
ADR	$140	$95	$65
VACANCY	23%	23%	23%
OPERATING EXPENSE RATIOS:	60%	60%	60%
OVERALL CAPITALIZATION RATE	9%	10%	11.0%

MECKLENBURG COUNTY ASSESSOR'S OFFICE

REAL PROPERTY APPRAISAL DIVISION

OFFICE VALUATION TEMPLATE

TAX MAP NO. **12345678**

PROJECT: **Tall Tower**

ADDRESS: **123 Prime St**

MENU

CLASS OF PROJECT	A	DEFERRED MAINTENANCE	$0
VACANCY	7.0%	DCF? (Y=1 or N=0)	1
EXPENSE RATIO W/O RESERVES	26.0%	INCOME GROWTH RATE:	3%
CONSIDER RESERVES? (Y=1 or N=0)	0	EXPENSE GROWTH RATE:	3%
EXPENSE RATIO WITH RESERVES	27.1%	ADJUSTMENT FOR TERMINAL RATE:	0.30%
OVERALL RATE W/O RESERVES	9.10%	DISCOUNT RATE:	10.10%
RESERVES ADJUSTMENT	0.90%	EXPENSE OF RESALE:	3%
OVERALL RATE WITH RESERVES	8.20%	PGIM:	0
		EGIM:	8

INCOME:

AREA	QUALITY	LOCATION	TENANTS	SF	ANN. RENT /SF	ANNUAL RENT
				65,000	$18.00	$1,170,000
						$0
TOTALS/AVERAGES				65,000	$18.00	$1,170,000

MAKE NO ENTRIES BELOW THIS LINE

DIRECT CAPITALIZATION

POTENTIAL GROSS INCOME	$1,170,000	***MARKET DATA MULTIPLIER***	
VACANCY	81,900		
EFFECTIVE GROSS INCOME	$1,088,100	PGIM:	**$0**
EXPENSES	282,906	EGIM:	**$8,704,800**
NET OPERATING INCOME	$805,194		
OVERALL RATE	0.091		
INDICATED VALUE BEFORE DEDUCTS	$8,848,286	***TERMINAL CAP RATE:***	
LESS: DEFERRED MAINTENANCE	$0	Going In Rate:	9.10%
INDICATED VALUE	$8,848,286	Adj. for Terminal Rate:	0.30%
ADD: EXCESS LAND (IF APPLICABLE)		Adjusted Terminal Rate:	9.40%
TOTAL VALUE	$8,848,286		
SAY	**$8,850,000**		

4 The Income Approach in AssessPro

In Assesspro, the income approach module is accessed by selecting “Income Approach” from the “Real Estate” menu. The income approach is table-driven from the CAMA system through user-defined parameters *unless* the user overrides them. The system utilizes a direct capitalization process to determine an indicated value by the income approach.

Since it is table-driven, individual data entry is not required to generate values by the income approach. However, the income approach values are affected by changes made to the parcel (sub-area detail and sketch changes, in particular).

At the initial generation of the income approach, the system will check if the building type has been associated to a default alternate type and/or a default lease type, which are set in the building price calculation table. If it *has* been associated, an income approach can be generated.

The number of units of finished area based upon the sketch and is transferred to the income approach section of AssessPro, as is the room and bedroom counts from the residential breakdown in the “Rooms/Breakdown” screen. Separate income lines are created for the different sub area types, floor levels, alternate types, and/or room counts. The income is then calculated using the Income - Economic Rent calculation tables.

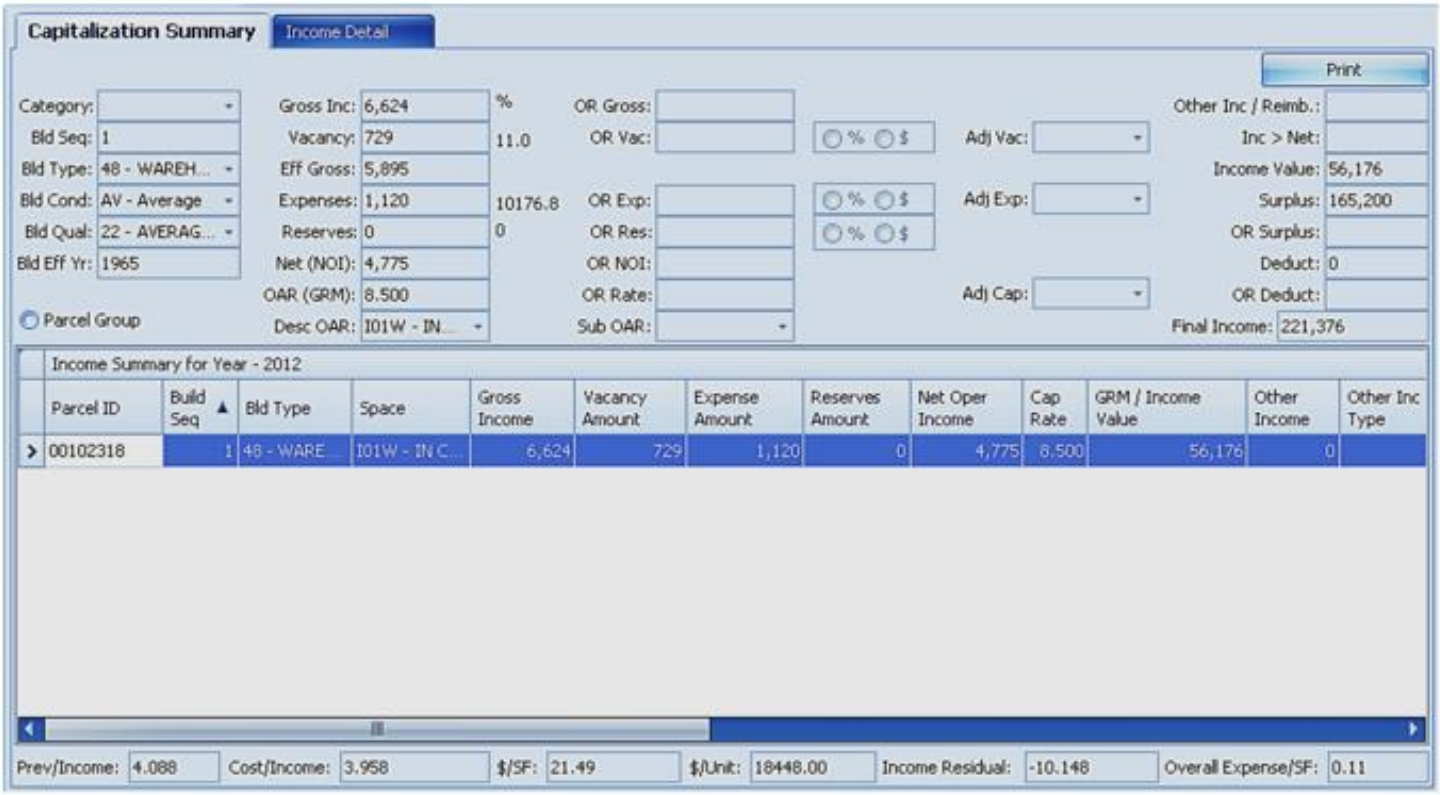
A gross annual income is generated and a vacancy/credit loss percentage, expense percentage and reserve for replacement percentage is deducted based upon the lease type for the building type. This will derive a net operating income that is capitalized into an indicated value by the overall rate assigned to the lease type for the building code.

The following sections contain a series of screenshots that will walk you through this process.

4.1 Capitalization Summary Tab

On this tab you can see detailed information for each income type, and have the ability to override, if necessary.

Figure 8.2: Capitalization Summary Tab



The following list contains descriptions of the fields present in the screenshot above.

- **Gross Inc:** Total income derived from leased area(s) of building—calculated. This is the sum of the “gross income” column of the Income Detail tab.
- **Vacancy / DL:** Taken from table "lease type": vacancy % x gross income.
- **Eff Gross:** The effective gross income is the difference of gross income and vacancy plus any other income generated by the property.
- **Expenses:** Taken from table "lease type": expenses % x effective gross income.
- **Reserves:** Taken from table "lease type": reserve % x effective gross income.
- **Net (NOI):** Net operating income is final total of gross income - vacancy - expenses - reserves.
- **OAR (GRM):** Overall capitalization rate used to capitalize the NOI. This rate includes effective tax rate.
- **Desc OAR:** Is the lease type from submarket.
- **OR Gross:** Allows the appraiser to override the gross income estimate.
- **OR Vac, OR Exp & OR Res:** Allows the appraiser to override the default vacancy, expense, or reserve estimates. In this case, fields can be entered as a dollar amount or percentage depending on the %/$/$ radio button selection.

- **OR NOI:** Allows the appraiser to override the net operating income.
- **OR Rate:** Allows the appraiser to override the default capitalization rate.
- **Sub OAR:** Allows the appraiser to override the default submarket lease type.
- **Other Inc / Reimb:** All other income generated by the property apart from scheduled rents and/or any expense reimbursements should be entered here.
- **Inc > Net:** This allows the appraiser to enter an income amount to add after the final net income.
- **Income Value:** Assessed value derived from the income approach.
- **Surplus & OR (override) Surplus:** Entered by appraiser—will be added to indicated value (e.g., surplus land).
- **Deduct & OR (override) Deduct:** Entered by appraiser—will be subtracted from indicated value (e.g., personal property).
- **Final Income:** Calculated (Indicated Value + SURPLUS) or (Indicated Value – DEDUCT).

4.2 Income Detail Tab

The Income Detail Tab, shown in the figure below, has two sections:

1. Area Based. Displays detailed income information such as (gross leasable) area and rent necessary to calculate gross income. Rents and area fields have the ability to be overriden by the appraiser.
2. Rooms Based. This grid displays the # of units for the building type and associated rents. The calculation for each line/floor is (# of units x rent x 12 months = annual gross income). The # of units is based on the information entered in the building detail screen in the Residential Living Units (e.g., apartment/student housing valuation).

Figure 8.3: Income Detail Tab

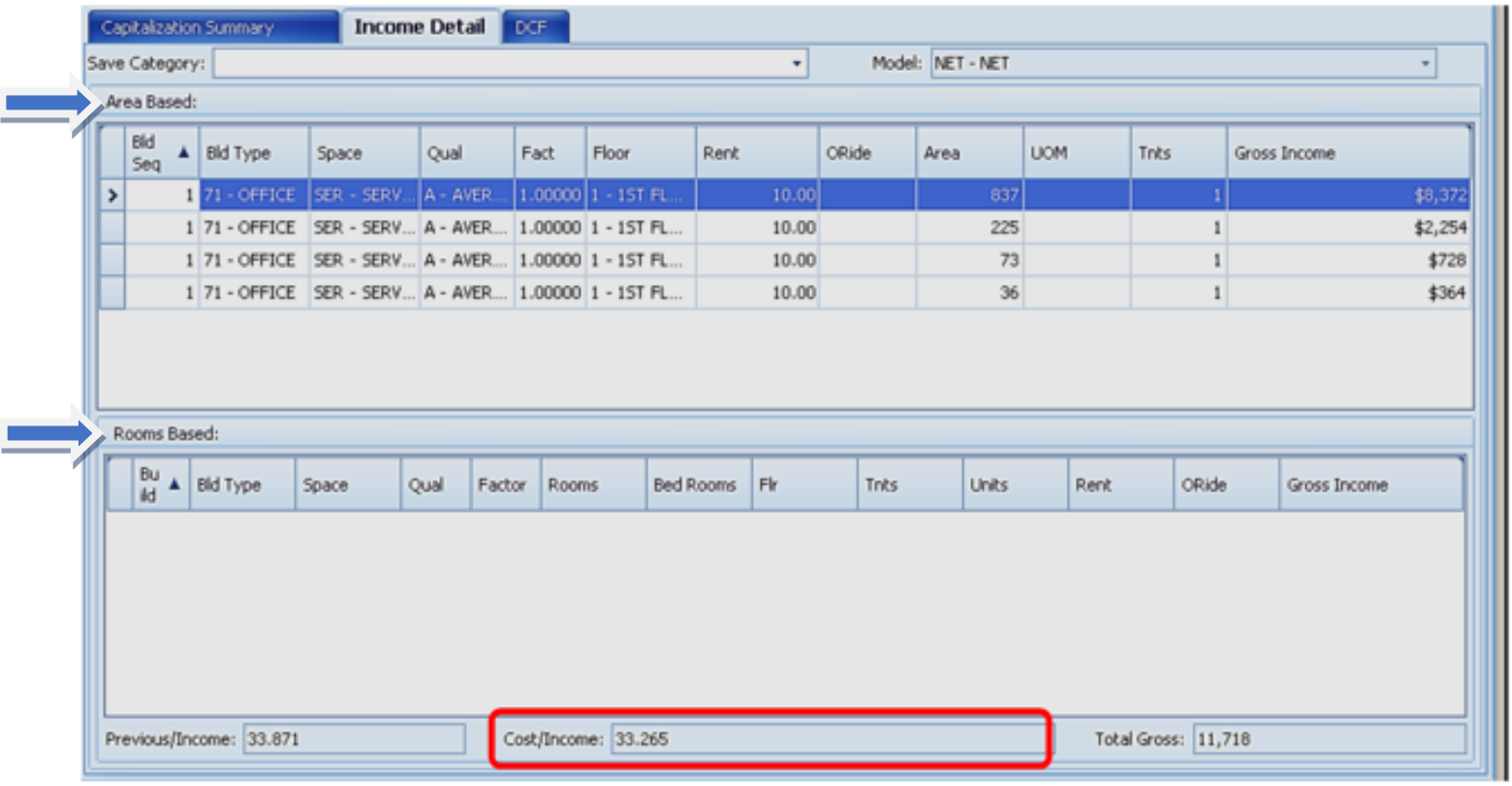
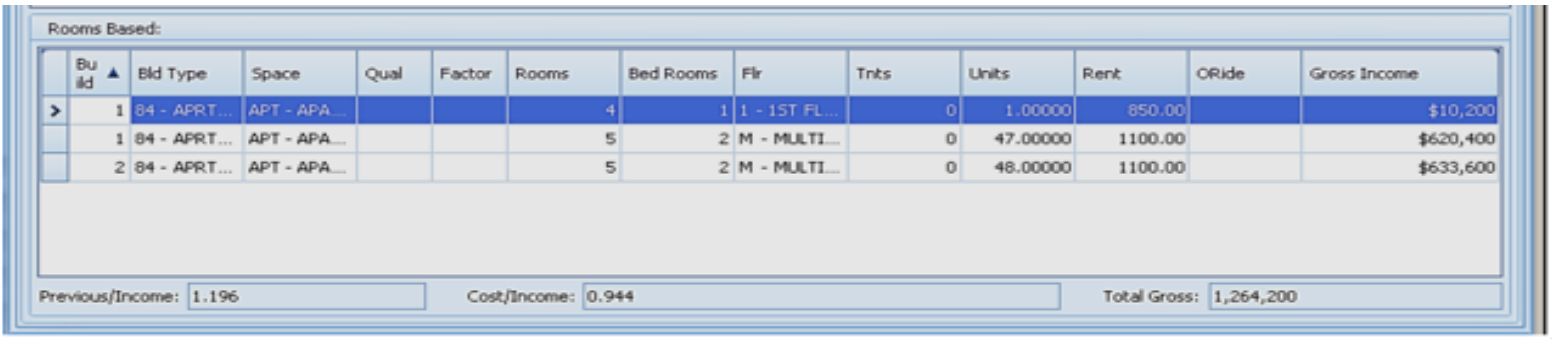


Figure 8.4: Rooms Based Example

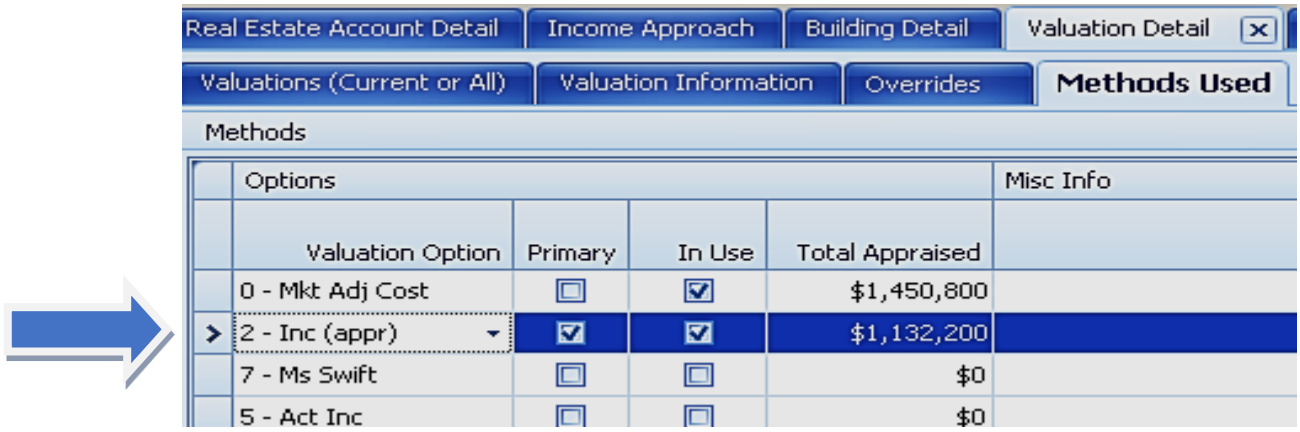


4.3 Method Used Tab

To calculate the Income, click the "Calc" (calculator) button on the Action Toolbar. The newly calculated income value estimate will appear in the "Parcel Total" field of the "Capitalization Summary" tab. Although, a new income value has been calculated, it will not appear as the as *the* method of valuation until it is actually selected.

By selecting the "Valuations" field from the "Real Estate" menu, you will then select the "Methods Used" tab. Click the radio buttons, "Primary" and "In Use" to choose the income approach as the valuation method to be used for this parcel.

Figure 8.5: Methods Used Tab



4.4 Setting Up the Income Approach

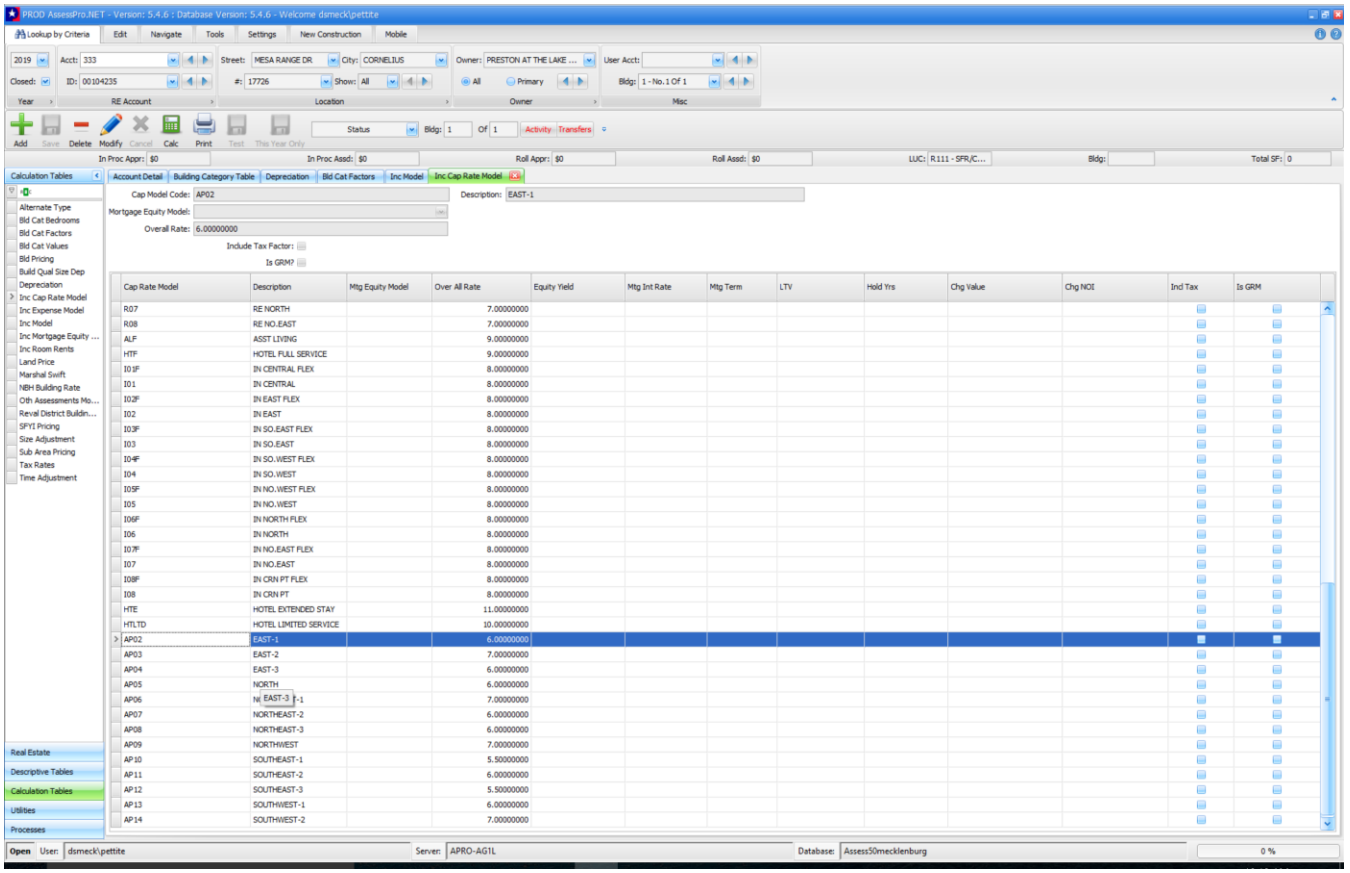
The following tables are required to set up the income approach in AssessPro:

- Alternate Types with rental and cap rate info
- Income Cap Rate Model
- Income Expense Model
- Income Rooms Rents (if rooms based)
- Income Model
- Income Mortgage Equity (optional)

4.4.1 Create an Income Cap Rate Model

Click on the “Add” button and enter values into the grid.

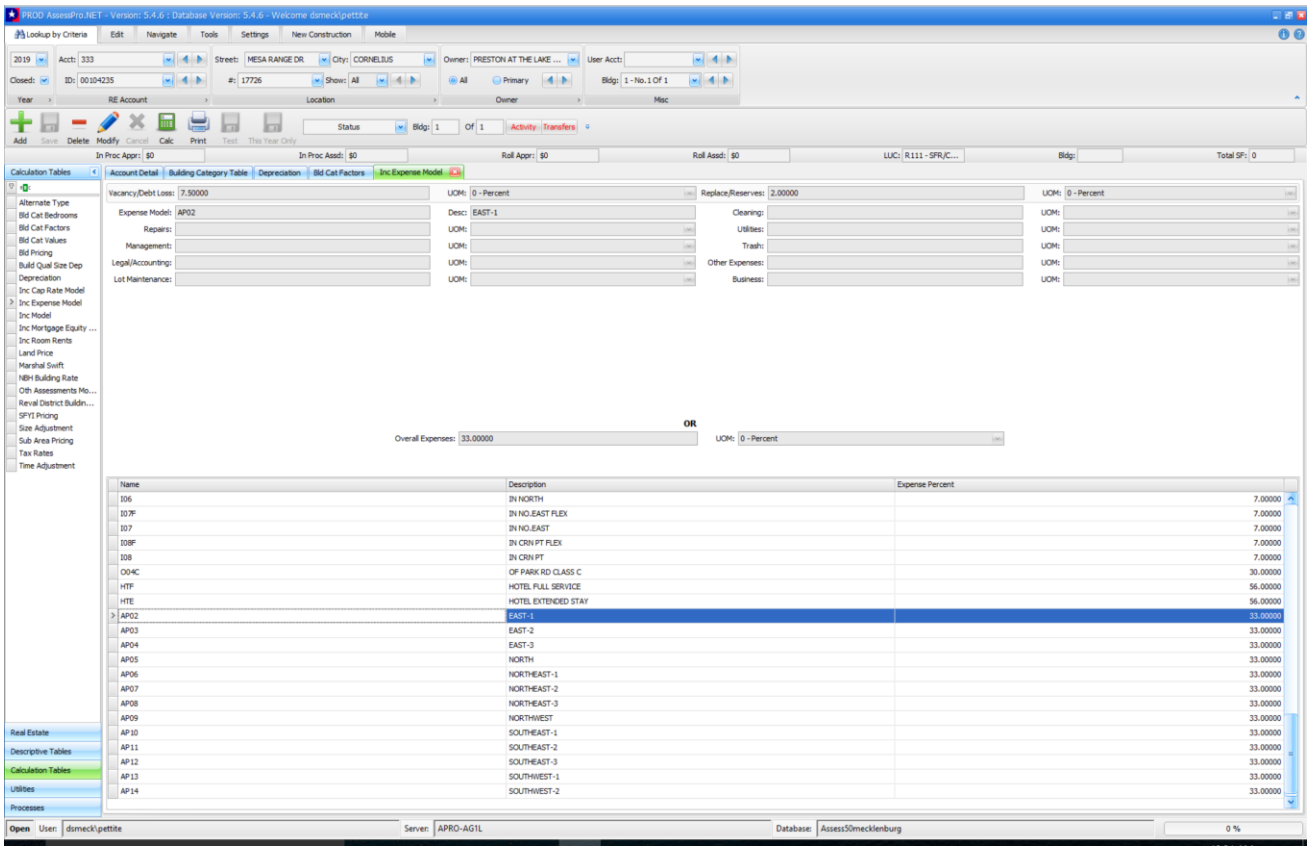
Figure 8.6: Income Capitalization Rate Model Tab



4.4.2 Create an Income Expense Model

Click on the “Add” button on the toolbar and enter expenses values. You can enter values and assign an UOM for each type of expenses separately (e.g., utilities, management, cleaning), or you can enter the expenses total into the “Overall Expenses” field.

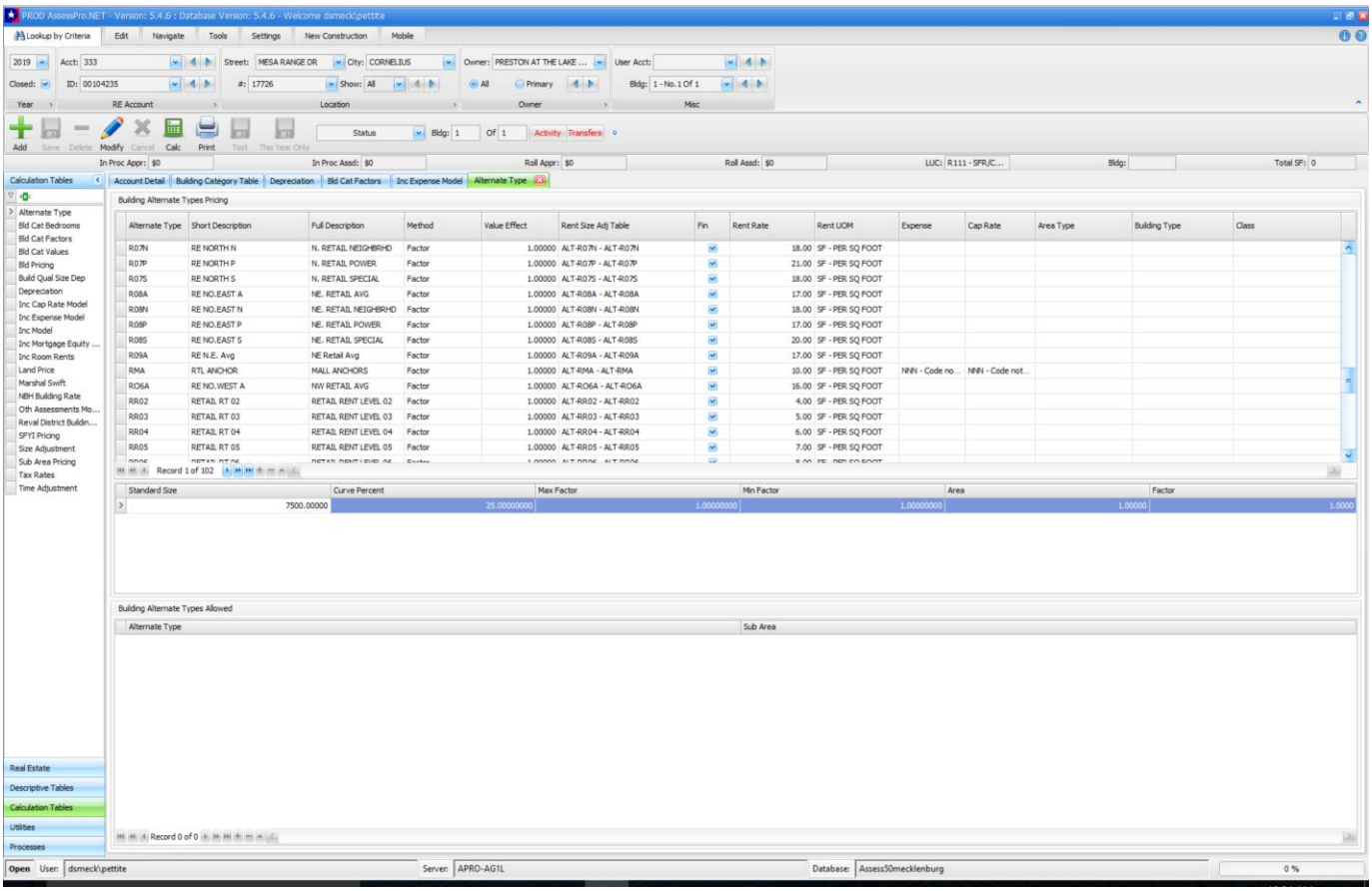
Figure 8.7: Income Expense Model Tab



4.4.3 Set Up Alternate Types

Assign an alternate type (rental type) to the building price table for each building type for which you wish to be able to execute an income approach. (Alternate types must be defined first.) There may also be alternate types assigned in the sub area detail section of the record card. For example, a retail building with a bank in part of it may have BNK assigned as an alternate type in sub area detail (as a percent or as an assignment to a particular sub area).

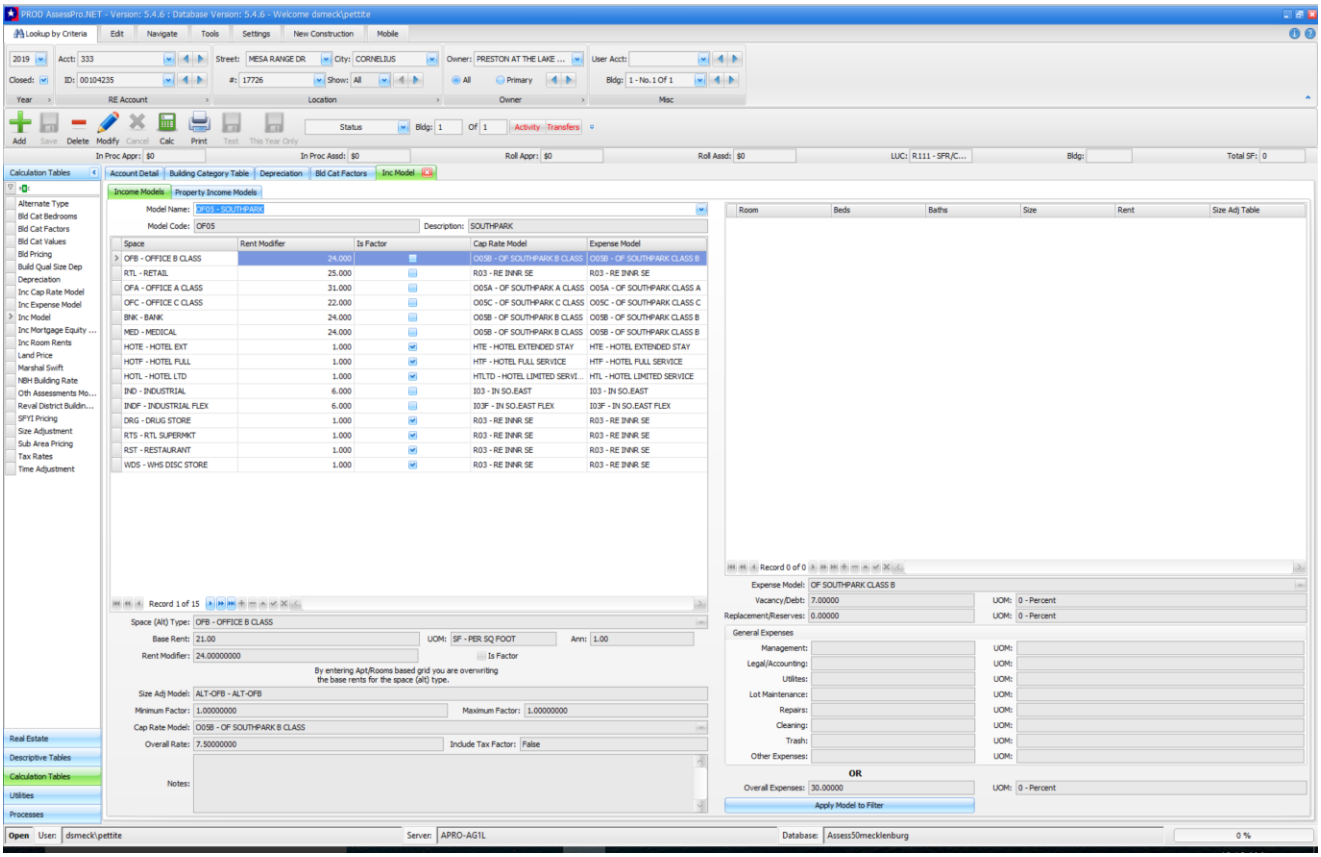
Figure 8.8: Alternate Type Detail Tab



4.4.4 Create an Income Model

In the “Income Model” tab, relate expense models, cap rate models, and alternate types/room rents. Assign a model to a set of parcels with the “Apply Model to Filter” button on the Income Model’s table. When calculating an income approach, it will look at the filter to see what parcels are associated with which filter, and find the relevant rental, expense, and cap rate info.

Figure 8.9: Income Model Tab



The valuation process is conducted as shown in the screenshots that follow.

The user can also adjust each income line individually. The quality of the rent is used to factor the selected economic rent per unit and the override allows the user to place an override rent per unit selected.

Figure 8.10: Valuation Process Screenshot I

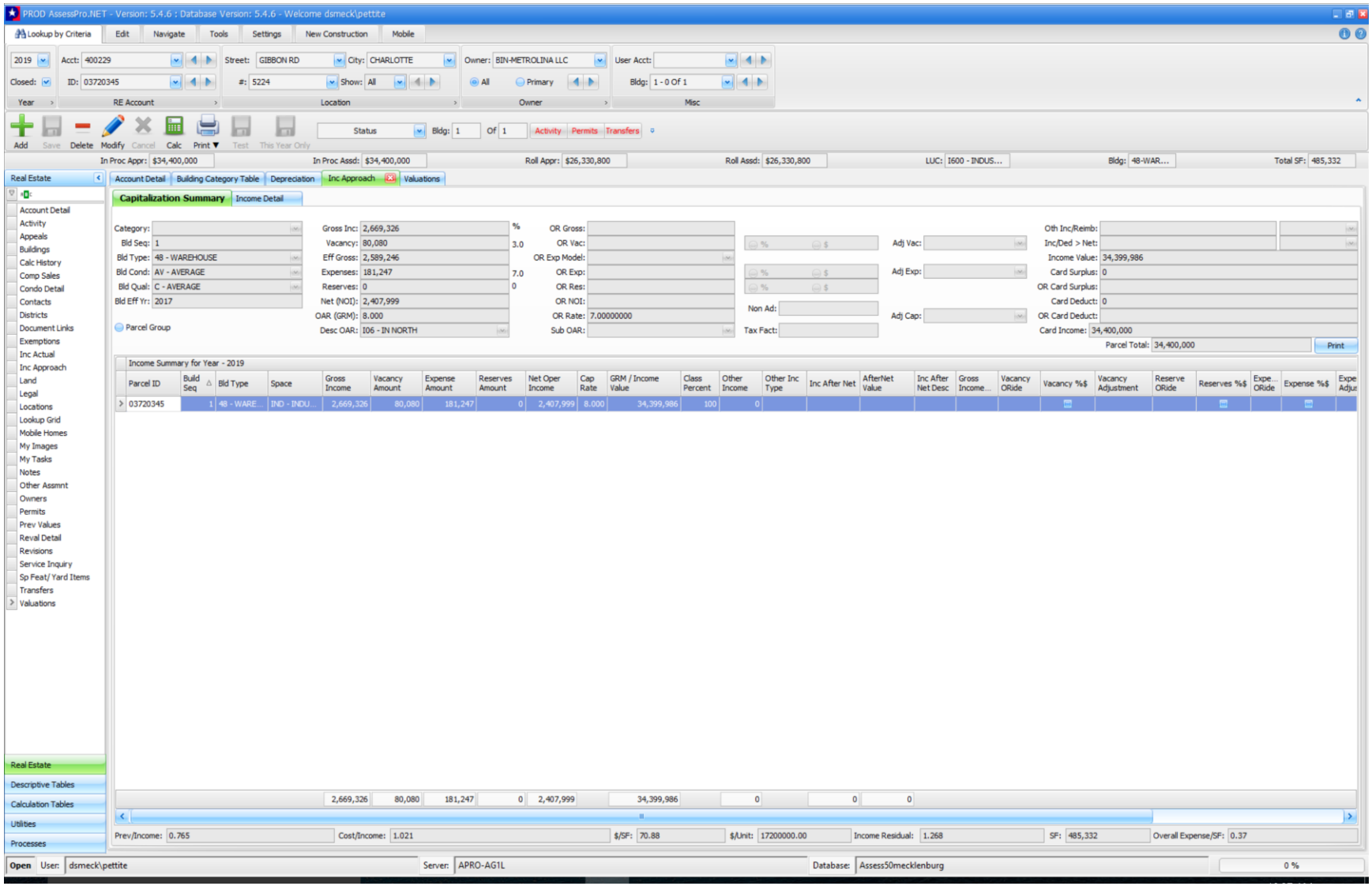
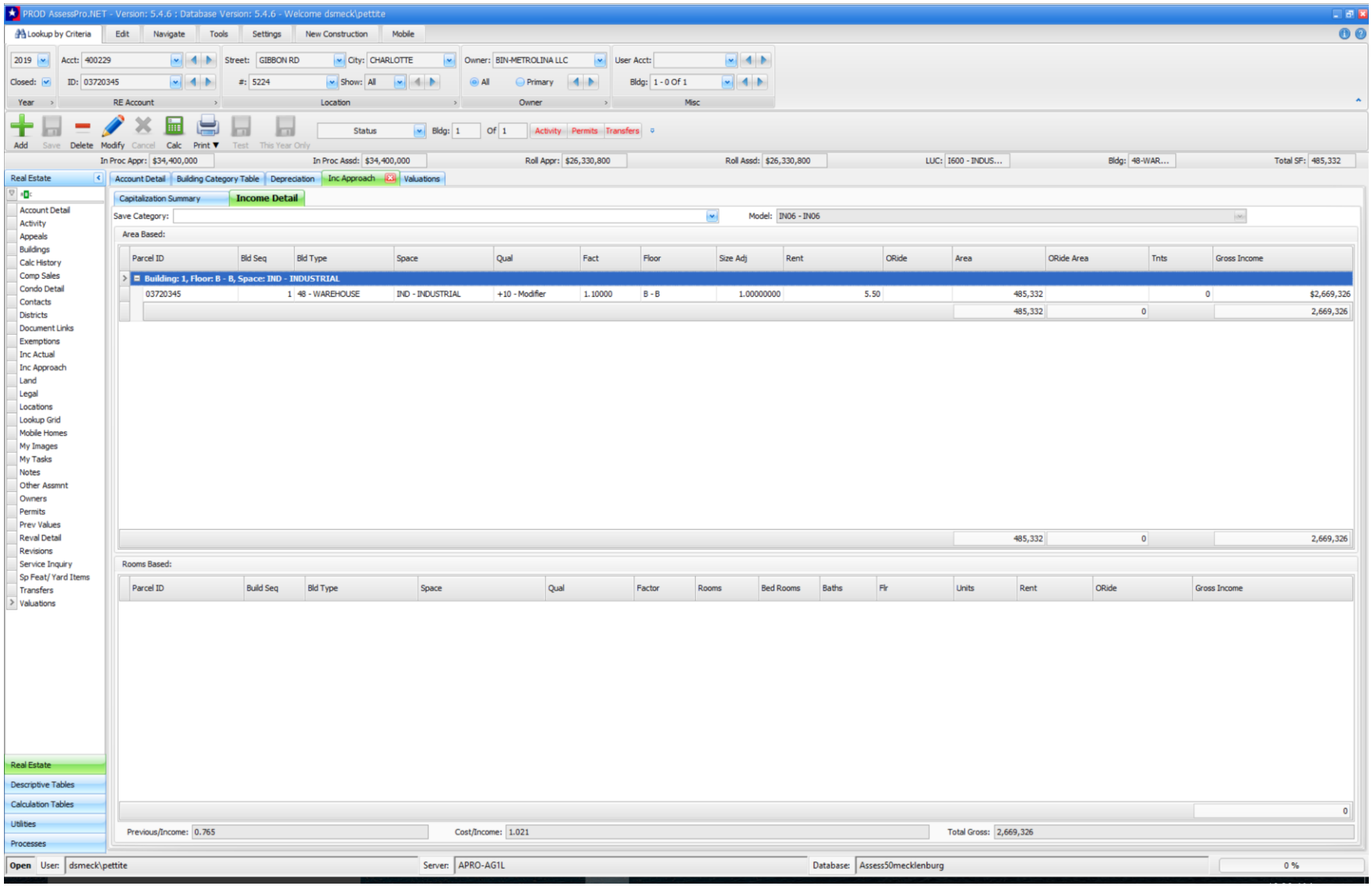


Figure 8.11: Valuation Process Screenshot II



Chapter 9
Valuation of Special Properties

1 Mobile Home Parks

Mobile home parks are typically classified by inside access roads, density, facilities, and general appearance, as demonstrated in the table below.

Classification	Description
Below average	Narrow, unpaved roads or broken pavement
	High density (older park)
	No or deteriorated recreation hall and/or laundry
	No curbing, no street lights
	Many mobile homes without skirts
	Little effort to maintain attractive appearance
Average	Average location and design
	Medium density (10-15 sites per acre)
	Adequate laundry and recreation hall
	Lawns trimmed, good general appearance
Good	Good location and design
	Streets wide enough for cars to pass
	Curbing and sidewalks
	Streets with streetlights and street signs
	Good recreation hall, shuffleboard, swimming pool
	Attractive entrance and good general appearance (lawns cut and edged, bushes trimmed)
	Density around 8 sites per acre
Very Good	Very Good location and design
	Attractive entrance
	Wide paved and curbed streets
	Street lights and street signs
	Very good recreation hall facilities
	Swimming pool, shuffle board, and other leisure time equipment
	Management sponsored activities
	Manicured lawns and trees
	Maximum density of 8 sites per acre

1.1 Mobile Home Guidelines

The following statutes govern the assessment of mobile homes.

- G.S. 105-273(13) Effective July 1, 2008 – "Real Property," "real estate" and "land" mean not only land itself, but also buildings, structures, improvements and permanent fixtures on the land and all rights and privileges belonging or in any way appertaining to the property. These terms also mean a manufactured home as defined in G.S. 143-143.9(6) if it is a residential structure; has the moving hitch, wheels, and axles removed; and is placed upon a permanent foundation on the land owned by the owner of the manufactured home or on land in which the owner of the manufactured home has a leasehold interest pursuant to a lease with a primary term of at least 20 years for the real property on which the manufactured home is affixed and where the lease expressly provides for disposition of the manufactured home upon termination of the lease. A manufactured home as defined in G.S. 143-143.9(6) that does not meet these conditions is considered tangible personal property.
- G.S. 143-143.9(6) – "Manufactured home" or "mobile home" means a structure, transportable in one or more sections, which, in traveling mode, is eight feet or more in width or is 40 feet or more in length, or when erected on site is 320 or more square feet, and which is built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation when connected to the required utilities, and includes the plumbing, heating, air conditioning, and electrical systems contained therein.

All manufactured homes that meet the following four requirements are considered real:

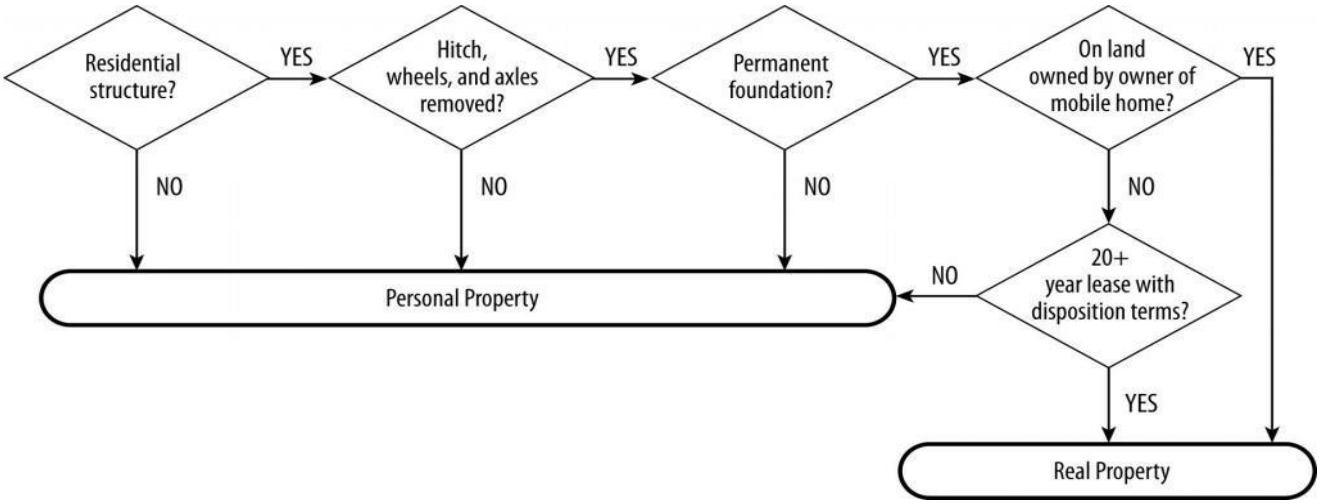
1. It must be a residential unit
2. It must have the moving hitch, wheels, and axels removed
3. It must be placed on a permanent foundation
4. IT must be located on land owned by the owner of the unit

A manufactured home that does not meet these conditions is counted as tangible personal property. If it has commercial use, then it is personal property. The only foundation required by the building code for a manufactured home is footings—either of poured concrete type or a pre-case solid concrete pad—and piers.

Modular homes are built under the North Carolina Building Code just like site built homes and should be assessed as real property, even if the modular home is placed on the land of someone other than the owner of the home.

The following figure shows a decision tree used to determine whether a manufactured home should be classified as personal or real property.

Figure 9.1: Classification of Manufactured Homes, by Christopher McLaughlin



2 Golf Courses

The costs listed are for a basic commercial developed course with four (4) quality classifications. Costs of complete irrigation systems constitute approximately 25% of the cost per hole. Architectural design, supervision, and engineering costs are approximately 10%. A golf course with special engineering and a name architect can run twice the averages listed. Older courses may be at the lower end of the cost ranges where design layout and improvements have not been affected by restrictive land use and/or environmental controls.

Although the golf course valuation for the 2019 Mecklenburg County Revaluation will primarily be derived using the cost approach to value, the income approach (using data from revenue and expense information obtained from each golf course facility) will be used as support documentation for the final value estimate. Sales from the market place will also be analyzed.

GOLF COURSE DESIGN	
Design	**Size**
Core Courses	Typically 140 acres of land
Double-Fairway Course	Typically 150 acres of land
Single Fairway (continuous course)	Typically 175 acres of land
Single Fairway (returning nines)	Typically 175 acres of land

COST RANGE PER HOLE		
Class	**Description**	**Cost Range**
1	Minimal quality, simply developed, course on open natural or flat terrain, few bunkers and trees. Greens are small.	$74,500 to $102,000
2	Simple designed course on relatively flat terrain. Few bunkers, built-up tees and greens, trees.	$106,000 to $152,000
3	Typical private-club on undulating terrain, bunkers at most greens, average elevated tees and greens.	$154,000 to $226,000
4	Better championship-type course on good undulating terrain, fairway and greens, bunkered and contoured, large trees and greens; may have name architect.	$232,000 to $371,000
5	Good championship course with some high-cost features.	$333,000 to $514,000
6	Excellent championship course with extensive features.	$650,000 to $1,020,000

COMPONENT COST PER HOLE	
Class	**Cost**
1	$86,490
2	$127,355
3	$182,870
4	$293,600
5	$413,400
6	$813,850

The following matrix provides a cost per hole and a range per hole to value golf facilities new. The costs indicated to not include, clubhouse, maintenance building, cart sheds, starter's shack, snack bar, or extensive landscape and improvements, etc.

VALUATION MATRIX			
Classification	**Quality**	**Average Cost Per Hole**	**Range: Cost Per Hole**
Class 1	Low Cost	$86,490	$74,500 to $102,000
Class 1 and Class 2: Mid-Point		$107,148	
Class 2	Fair	$127,355	$106,000 to $152,000
Class 2 and Class 3: Mid-Point		$155,113	
Class 3	Average	$182,870	$154,000 to $226,000
Class 3 and Class 4: Mid-Point		$238,235	
Class 4	Above Average	$293,600	$232,000 to $371,000
Class 4 and Class 5: Mid-Point		$353,500	
Class 5	Good	$413,400	$333,000 to $514,000
Class 5 and Class 6: Mid-Point		$613,625	
Class 6	Excellent	$813,850	$650,000 to $1,020,000

In addition…

- Golf courses with pitch and putting greens: $39,500 to $55,750
- Golf courses with driving range that are lighted with separate stations, fenced, irrigation: $7,250 to $10,500 per station
- Golf courses with driving range that are *not* lighted with separate stations, fenced, irrigation: $5,500 to $7,875 per station (for no-lights, deduct 25%)
- Par 3 golf course with nine (9) holes situated on 15-20 acres and 1,400 yards in length, with irrigation: $50,500 to $70,000 per hole (excluding structures and lighting)

MINIATURE GOLF FACILITIES			
Quality	**# of Holes**	**Square Feet**	**Range: Cost Per Hole**
Minimal	18	2,000 to 4,000	$1,790 to $5,450
Average	18	4,000 to 10,000	$6,950 to $21,700
Good	18	10,000 to 20,000	$22,500 to $51,750

Source: *CoreLogic Marshall Valuation Service*

3 Cemeteries

The first step in appraising cemeteries is to determine the total number of acres in the ownership. This total should be found in the legal description of the parcel, and in the total acreage of the landlines. In other words, just because lots are sold off and become exempt, you still need to account for all of the acreage within that tract.

Cemeteries are generally divided into four categories:

1. Developed acreage. This category includes land prepared for the immediate use of cemetery plots. Depending on the sale record of the cemetery, this is generally two to five acres. The acreage would typically remain the same because as soon as lots are sold, they prepare the undeveloped acreage. The cost to prepare the land increases the market value of the developed acreage, usually from $4,000 to $10,000 per acre.
2. Undeveloped acreage (future gravesites). Undeveloped acreage refers to land in its natural state, and is appraised comparable to surrounding land with the same zoning. When making your annual adjustments for deeded lots, adjust this acreage down and the deeded acreage up. Through this act, you are assuming that developed acreage will remain the same simply because cemeteries must keep developed acreage available for immediate use.
3. Waste land acreage (roads, gullies, etc.). This is land that is not plotted or surveyed for graves because it is a road, gully, or building site. Waste land should be appraised comparable to surrounding waste lands and remain the same size and acreage unless a new survey is made that adds roads, or the owners of the cemetery filled in the gullies and other areas that can then be made use of at a later date.
4. Deeded acreage (except occupied lots). Deeded acreage refers to acreage that is sold off into plots to individuals and recorded in the Registrar of Deeds. Plots that are sold on contract are not exempt until they have been paid for and recorded. Generally, a well-designed cemetery will have 900 to 1,100 graves per acre.

The total acreage in these for categories should always equal the original acreage in the ownership or legal description.

The owner of the cemetery should verify the number of gravesites that are planned for the cemetery. To determine the average graves per acre, take the number of total graves and divide it by the total usable acreage. If this information is not available, approximate 1,000 graves per acre, and record this decision in the note lines of the appraisal card.

Adjustments can be made annually when the owner sends the number of graves sold and recorded. For example, a cemetery that sold 625 graves in a year has reduced the number of undeveloped acreage by 0.625 acres (or 0.63 acres), and increased the deeded acres by 0.625 acres (or 0.63 acres).

Private cemeteries are income-producing properties that make a profit. In order to establish market value, the appraiser must consider the factors that are involved in purchasing this type of property. These include:

- How many grave sites are available for sale (developed)
- How many grave sites sell per year (that is, the absorption rate)
- How much usable land is available that has not been surveyed and landscaped (undeveloped)

Once these data are known, the appraiser can estimate market value and the assessor can determine how much of the cemetery is exempt. Typical ratios would be 900 to 1,000 sites per

acre, with two to five acres surveyed and landscaped for sale. Because of the cost of surveying, landscaping, and obtaining permits, the developed acreage should be appraised at a higher rate per acre.

Cemeteries with more graves per acre are worth more—it is therefore appropriate to account for an added value per gravesite in the Extra Feature column. Gravesites that are undeveloped would not have the same value as prepared and available gravesites. Therefore, the value is reduced based on the absorption rate. Deeded gravesites are exempt, so for every 1,000 graves deeded, one acre of land is exempt. When the owners of the cemetery report the deeded lots each year, the assessed value is adjusted appropriately. The total acreage should stay the same, barring any adjustments made for use.

4 Mining Properties

Mining properties differ greatly from other types of property for several reasons. First, the location is not subject to the choice of the miner, but rather dictated by nature. The specific location of the mineral property can and does affect the costs of mining. An aggregate property close to their market lessons the cost of transportation, enhancing the value of that mining concern based upon location.

Second, because of the nature of the uncertainties and hazards involved in a mining operation, a proportionately larger profit margin may be necessary to justify the risk taken by the investors. Third, minerals are depleting assets. Most mineral deposits are exhaustible. Finally, mineral prices may be subject to great fluctuation, and may be sensitive to world market forces.

While all three approaches to value (sales, cost, and income) may be used in the assessment of a mining concern, typically the cost approach and the income approaches are used. Using a market approach to value in a mining concern is difficult due to the lack of comparability of the mining product, the life of the reserves, and associated expenses. Two mineral properties are seldom alike.

The cost approach is useful in developing the aspects of the value of a mining concern. Mining properties are typically personal property intensive, have many site improvements, and include buffer land. The cost approach is also necessary in segregating out the total property components when employing the income approach to value.

The income approach to value is the preferred method of valuation in mining properties, as this valuation method relies on the principle of anticipation. In this type of appraisal, a discounted cash flow analysis is appropriate, as the economic life of a property is determined by its proved reserves. The economic life can be determined by dividing the proved reserves by the typical annual production:

Proved Reserves \ Annual Production = Economic Limit

Estimates of market value of the mining product—based on the "free on board" price of the product—should be determined by the market prices and historical pricing of the property. Using the "free on board" price excludes any profit from transportation and delivery, which would not be income to the property.

Estimates of expenses for the mining product must also be made based on industry standards and historical expenses of the property. It is again important to remove any cost of transportation off of the plant for delivery, as well as removing property taxes as an expense. Reserves for replacements should be included in the expenses.

In employing a discounted cash flow analysis, a discount rate shall be applied to the final net operating income. The three types of discount rate derivations typically used are:

1. Rate derivation from market sales data
2. Surveys of market participants
3. Use of the band of investment or weighted average cost of capital (WACC)

When using a discounted cash flow analysis for a total property valuation of the mining concern, the final step is to use the cost approach to segregate out the values of the real and personal property.

Chapter 10
Statistics and the Appraisal Process

Like for many of the technical aspects of appraising, such as income valuation, an appraiser must work with and use statistics to gain an understanding of the property data. The point is that just because one is not familiar with these tools, there should be no hesitation in trying a few of the simpler ones at least.

A statistical measure, or "statistic," is a tool that assists the appraiser in describing the characteristics of a set of data, such as the relationship of sale price to appraised value. Another definition comes from Fred N. Kerlinger's book, *Foundations of Behavioral Research*: "Statistics is the theory and method of analyzing quantitative data obtained from samples of observations in order to study and compare sources of phenomena, to help make decisions to accept or reject hypothesized relations between the phenomena, and to aid in making reliable inferences from empirical observation." Kerlinger's book is an excellent source for anyone who would like to improve their understanding of many different statistical tools. Another book, *An Introduction to Business and Economics Statistics* by John R. Stockton, also comes highly recommended, and is a little more beginner-friendly.

The purpose of this chapter is to indicate which statistical measures are useful to the property appraiser, and how they are used in valuation.

1 Measures of Ratio

Sales offer the only set of data that can truly be used to indicate a property's market value. Appraisals that are completed in order to supplement sales—such as parcels used for comparison against other properties—are merely attempts to predict what the sales price would be, should that parcel sell. It is our belief that surrogates for actual sales are needed only when parcels show a statistically insignificant number of sales.

Sales are almost always available, particularly for single-family residential properties. In most cases they're even legitimate, arm's length transactions. This section explains which statistics can help answer the question, "Where does a particular sale stand in relation to the market?"

Level of assessment in relation to market is one part of the answer. It is usually expressed as a ratio of appraised values to sale values. Common measures of this ratio are called means, measures of central tendency, or averages.

1.1 Simple or Unweighted Mean

The mean is a measure of central tendency. The result of adding all the values of a variable and dividing by the number of values. For example, the mean of 3, 5, and 10 is 18 divided by 3, or 6. It is also called arithmetic mean.

This measure is found by dividing the sum of all individual sales by the total number of sales. See the following list of hypothetical sales, below. This list of hypothetical sales will be used in examples throughout the chapter.

Observation Number	Sale Price	Appraised Value	Sales Ratio
1	$22,600	$21,500	95%
2	$31,000	$28,600	92%
3	$37,800	$34,000	90%
4	$38,400	$33,000	86%
5	$34,300	$29,500	86%
6	$20,000	$16,000	80%
7	$13,000	$9,800	75%
8	$18,700	$13,500	72%
9	$26,900	$17,200	64%
10	$40,800	$24,500	60%
Total	**$283,500**	**$227,600**	**80%**

Based on that list, the mean can be computed as follows:

Mean sales ratio = 800 / 10 = 80%

Mean appraised value = $227,600 / 10 = $22,760

Mean sale price = $283,500 / 10 = $28,350

As you can see, there are several different types of means that can be computed from these data. Each of these computations is an expression of central tendency.

There is another type of mean called a “weighted mean,” which reflects the impact of the dollar magnitude of the values in the calculation. It is obtained by dividing the sum of all appraised (or assessed) values by the sum of all sales prices. For example:

$227,600 / $283,500 = 8.028%

Or, using the previous example:

total assessed value / total sales price = weighted mean

Using this measure, large values will have a proportionally greater impact on the ratio than smaller values. Because of that, the weighted mean is generally less useful in sales ratio work than the unweighted mean.

1.2 Median

The median is also measure of central tendency. The value of the middle item in an uneven number of items arranged or arrayed according to size; the arithmetic average of the two central items in an even number of items similarly arranged; a positional average that is not affected by the size of extreme values.

To find the median, simply identify the middle value in list of values that are arranged in ascending or descending order. For lists with an odd number of items, this is relatively simple. However, if the list contains an even number of items then an average must be taken of the two values on either side of the theoretical mid-point.

Using the hypothetical sales list from before, the median would be found as follows:

Median = (Total Number of Sales + 1) / 2 = (10 + 1) / 2 = 5.5th item in the list

That is, the median appears halfway between item 5 and 6 (halfway between the ratio 86 and 80), or:

Median = (86 + 80) / 2 = 166 / 2 = 83%

This statistic is generally not usable in more advanced mathematical manipulations; however, it is useful to us because it helps judge uniformity and level of assessment. (Note that you may also calculate a median sales value as well as a median appraised value.)

1.3 Mode

The mode is the value in the set of observations that occurs most frequently. In our example, the mode of sales ratios would be 86% because it occurs two times, while all of the other ratios only occur once.

1.4 Standard Deviation

The statistic calculated from a set of numbers by subtracting the mean from each value and squaring the remainders, adding together all the squares, dividing by the size of the sample less one, and taking the square root of the result. When the data are normally distributed, one can calculate the percentage of observations within any number of standard deviations of the mean

from normal probability tables. When the data are not normally distributed, the standard deviation is less meaningful, and one should proceed cautiously.

1.5 Coefficient of Dispersion (COD)

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

1.6 Price-Related Differential (PRD)

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

2 Josh Myers Valuation Services

The figure below gives a summary of the residential model review process as it was conducted by Josh Myers Valuation Services for Mecklenburg County.

Figure 10.1: Summary of Residential Model Review Process – Josh Myers Valuation Solutions

Josh Myers
Valuation Solutions

Summary of Residential Model Review Process

In August 2017, the Mecklenburg County, NC contracted with Josh Myers Valuation Solutions to review the residential model and recommend improvements. This review was conducted over the period of September 2017 to July 2018. The scope of work is limited to single-family residential properties. The following are the precepts of this project and the list of analyses performed.

Precepts

- Make sure that all work performed can be entered into the Patriot CAMA System.
- Research the Patriot CAMA System so that all factors used in the residential model are understood.
- Do not change the existing model framework but, rather, calibrate the existing factors within that framework.
- Concentrate on the major factors in the model that drive value.
- Forward time-adjust sale prices used in the analysis to the revaluation date of January 1 2019, so that the model produces values very near to 100% of the market value.
- Provide updates to Mecklenburg County staff at regular intervals because as time goes on additional neighborhoods are brought into the sale file, new sales are cataloged, and property information is updated.
- The end goal is to recommend model changes that yield the improved ratio study results.
- Communicate regularly with Mecklenburg County staff and draw on local knowledge where needed.

Analyses Performed

- Exploratory data analysis to understand the property data.
- Time trend analysis using an additive model calibrated by robust linear regression analysis.
- Non-linear regression analysis to calibrate the existing residential model.
- Ratio study analysis to assess the quality of a model, including the median ratio, the coefficient of dispersion, and the coefficient of price-related bias.

Signature: _____

Printed: **Josh Myers**

3 Spatialest Valuations

3.1 Multiple Regression Analysis

For the 2019 revaluation, Mecklenburg County will employ Multiple Regression Analysis (MRA), utilizing a geographically spatial-oriented modeling program (Spatialest) developed by Spatialest Inc, Deland Florida, for the valuation of residential property types (regression modeling is not typically used in valuing commercial properties). This valuation approach is essentially a direct sales comparison technique suited to the mass appraisal environment by analyzing all qualified sales within market sub-regions of the county. Every sold property has unique characteristics, and MRA modeling allows the aggregate sales to be compared to one another and the contributory value of each characteristic measured. What follows is an explanation of MRA modeling and its application to mass appraisal, written by Spatialest Inc Consultants.

3.1.1 MRA Theory & Background

Regression analysis is a procedure which examines the correlation between variables—in the context of regression analysis property attributes are often called "variables"—and constructs a model for predicting the value of one variable (the dependent variable, in this case market value) from one or more other variables (the independent variables). If there is more than one independent variable it is called Multiple Regression Analysis (MRA). MRA, then, is a statistical technique used to analyze data records in order to predict the value of one variable—the dependent variable is the variable of primary importance, such as market value, which can be predicted from known values of other independent variables such as size, land value, room count, quality, style, and so on.

3.1.2 How MRA Works

MRA analysis attempts to construct a formula for calculating an estimate for the dependent variable from a weighted combination of the independent variables. In real estate appraisal, these independent variables are property characteristics found in a neighborhood or group of neighborhoods. For a simplified example, suppose the dependent variable is Sale_Price (SP) and the independent variables are Living_Area (LA), Parcel_Size (PS) and Basement_Size (BS). Each of these characteristics has a contributory impact on predicted sale price, measured as a coefficient. MRA analysis will statistically calculate the coefficients B0, B1, B2, and B3 for each of these property attributes, so that the formula:

$$Estimate\ SP = B0 + B1LA + B2PS + B3BS$$

generates the best possible estimates for Sale_Price. Actual MRA models used by the County include a far greater array of variables in estimating value.

An MRA analysis can only be based on data records which contain a value (dollar amount or other unit of comparison) for the dependent variable and all the independent variables. The model statistically generates the impact or weight that each variable has on market value. There are options available for automatically replacing missing values in records so that those records can be included in the analysis.

3.1.3 Terminology for MRA Model

The formula is called the MRA model. The coefficient B0 is called the constant of the model and B1, B2, and B3 are the regression coefficients (or just coefficients)—that is, the relative weight or impact of the characteristics—and there is one for each of the independent variables. When an MRA model is used to calculate an estimated value for a data record (e.g., a single property record), this estimate is called the MRA estimate.

3.1.4 Interpretation of Coefficients

MRA coefficients can be interpreted as the value that an additional unit in an independent variable contributes to the overall value. For example, suppose B0=22,174.66; B1=97.14; B2=48.93; and B3=5.44. Then, from the formula above it is clear that increasing the value of LA by 1 increases the overall estimate by 97.14. Thus, we can interpret this coefficient value as saying that each square foot of living area increases the value of a property by $97.14.

3.1.5 Additive and Multiplicative Models

The form of the MRA model formula given above is the normal MRA model and is referred to as an additive model because the influence each independent variable has on the overall estimate is to add a certain amount irrespective of the value of the other independent variables.

A multiplicative MRA model uses a formula that multiplies together values calculated from each independent variable. For example, using the same variables as above, the formula would be as follows:

$$Estimate\ SP = B_0 * (LA^{B1})*(PS^{B2})*(BS^{B3})$$

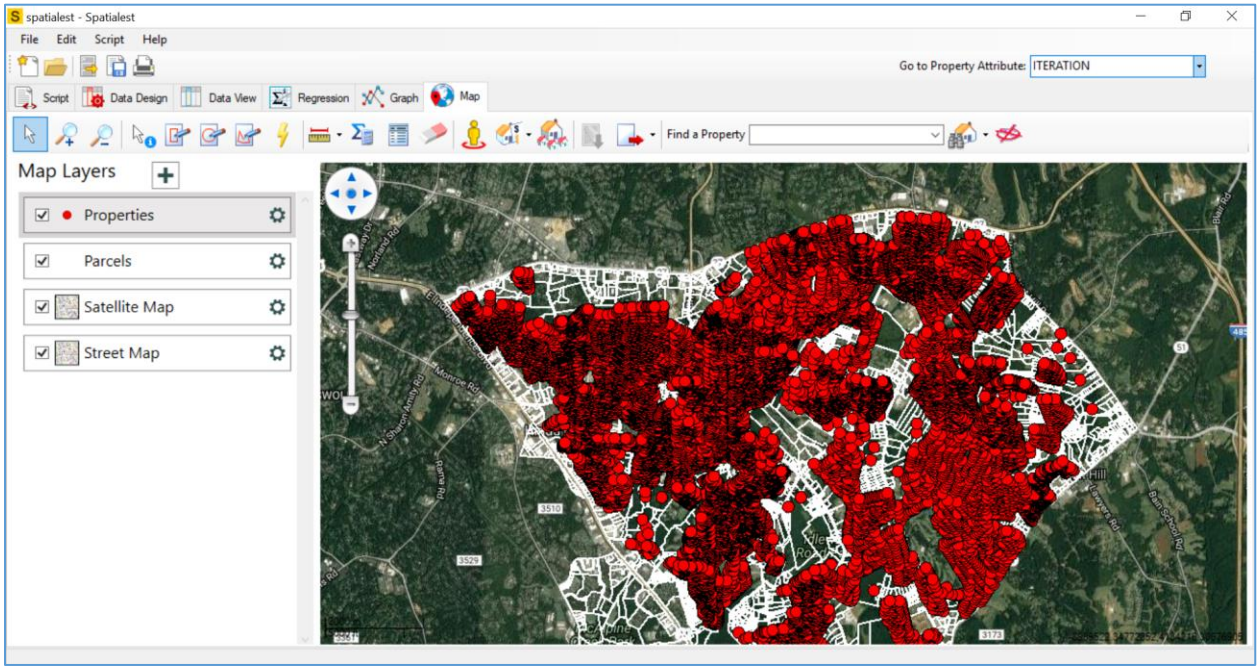
In order to calculate the best coefficients, the variables are all converted into a form which allows the same mathematical procedure to be used as for an additive model. This conversion involves taking the logarithm of the values of the variables. As a consequence, the values of variables cannot be zero or negative.

There are advantages and disadvantages to both models and choosing between an additive model and a multiplicative model depends on the relationship between the dependent variable and each independent and between the independent variables as well.

3.2 Spatialest Overview

Spatialest is the complete GIS-based Toolset for assessment and appraisal. It provides functionality to clean, analyze, model (MRA & Comp Sales), generate ratios, and more, all within a map environment. It is a tool that brings geographic information to the appraisers desktop. Without GIS, an accurate measurement of the impact of location in real estate models is difficult. The ability of GIS to discern location, and thus proximity, is invaluable within computer based predictive analysis and furthermore is unique to GIS. By using GIS as the hub of the analytical process, Spatialest will identify highly similar, locally proximate comparables. Using a map output and a list of the pertinent property characteristics creates an easily explainable output.

Figure 10.2: Spatialest Map



Spatialest allows the user to:

- Appraise properties using MRA
- Appraise properties using a location sensitive model
- Calibrate the model, stratify or remove outliers (Values that differ markedly from the average value. Some will be legitimate whilst others may be caused by erroneous data)
- Review location and characteristics of comparables (Property records which exhibit similar characteristics such as property type, number of bedrooms, etc.)
- Understand patterns and trends
- Seamlessly integrate with existing databases or other back office solutions

3.3 Spatialest Valuation Process

The Spatialest valuation process is generated through a combination of regression analysis, and similarity and proximity of comparable sales.

3.3.1 Multiple Regression Analysis

Regression analysis can be generated in Spatialest using either additive or multiplicative models. Hybrid models may also be created by utilizing the 'compute' function in Spatialest to generate the necessary variables, such as LOG of SQUARE FOOT LIVING AREA. The results of regression analysis contain a series of familiar statistics.

Mecklenburg County appraisal staff will evaluate the residential marketing areas of the county based on shared spheres of influence and redefine the existing market areas where necessary. An MRA model will be developed for each of the market area. Each model will analyze the sales that occur within the market area over and an 18 to 24 month period. By comparing the independent variables (property attributes) against the dependent variable (sale price) the model will extract coefficients and correspondent weights for the characteristics that most heavily influence sale price in the area (Finished Area, Effective Age, Quality Grade, Style, Number of Full Baths, and Basement Area, for example).

When a model has been run successfully, each of the properties used in the model is then valued and the ratio of the Sale Price to this value is calculated. Looking at the values of these ratios gives a good measure of how well the model predicts values. The ratio statistics calculated are as follows.

Figure 10.3: Regression Value/Sale Price

Ratio: Regression Value / Sale Price

Statistic	Value
Total ratios	571
COD	8.6295
COV Median	0.1124
COV Mean	0.1115
Median	1.0033
Mean	1.0128
Weighted Mean Ratio	1.0000
Price Related Differential	1.0128
Price Related Bias	-0.0409

The International Association of Assessing Officers (IAAO) has set industry standards for the quality of assessments. For a heterogeneous residential market area, the maximum coefficient of dispersion (COD) should be no greater than 15. The MRA model example above generated a dispersion of 8.62. The median assessment to sales ratio (ASR) for this area is 100%, which meets North Carolina's statutory guidelines for property assessment.

3.3.2 Regression Calculator

The Spatialest Regression Calculator generates an MRA estimate for all properties (sold and unsold) using the regression coefficients generated and output via the Regression Analysis step. The calculator constructs a formula using these coefficients to calculate an estimate of value from a weighted combination of the independent variables.

3.3.3 Spatialest Comparable Model

Spatialest uses a powerful and advanced method of property valuation. It introduces location to the valuation process and generates estimates of values based upon the optimum comps. The Comp model is unlike other 'comp selectors' in that it:

- Selects visually similar comps—those which exhibit the most similar property characteristics to that of the subject property, such as size, style, quality, number of bedrooms, etc.
- Selects nearby comps
- Generates an estimate of value from those highly similar, locally proximate comps

A series of parameters is required to enable the comparable model component to run successfully. To select the best comparable properties for a particular property (the subject property), Spatialest uses the distance of each comparable from the subject and the similarity. The primary condition comparable properties must meet is distance from the subject property. All potential properties comparable within the specified radius must also meet the criteria set by every specified comparable rule.

Working spatially offers unique benefits. Users can interact with map based information more easily than tabular data. Consequently, the users can interpret sophisticated spatial information and recognize patterns and trends which might not have been apparent within a purely non-spatial environment. With Spatialest, users can see how models have worked quickly and easily within a map based system. "Hot spots" of property value or the influence of geographic features such as water frontage or proximity to highways can be immediately recognized and accounted for.

Due to its geographic core, Spatialest can assist within the general process of appeals. The provision of a map containing the appellants' property, the comparables used to determine the assessed value, and a summary of property attributes and model parameters can be used to address inquiries of most residential property owners.

Figure 10.4: Spatialest Map

Mecklenburg County will use Spatialest software to perform a series of descriptive analyses in an attempt to capture an indication of the impact of certain easements on property values in the county. This section references powerlines as an example of such an easement. The analysis will split the data into two sets for comparative purposes; the first dataset containing sold properties tagged as being influenced by the powerlines, the second dataset containing sold properties where the belief is that powerlines do not influence value. Statistical descriptive analyses will be carried out to compare values such as the Sales Prices and Sale Price Per SQFT (SPPSF) of various subsets of properties within each of the two previously mentioned groups. The reliability of such analyses will be influenced by the availability of powerline information as well as a sufficient number of clean, reliable, and at-arm's-length sales in each of the groups.

Alternatively, the study will use the Spatialest software to carry out regression analysis in an attempt to capture the influence that proximity to powerlines (or other encumbrances) has on property value. A regression model is a statistical technique used to analyse records in order to predict the value of one variable (the dependent variable) from known values of other variables (the independent variables). In this study, the dependent variable will be sale price and the independent variables will be those that drive the value of the properties. Typical independent variables include size, grade, land value, neighbourhood, and location influences such as the presence of a powerline. The Mecklenburg County powerline information is a binary variable: 'Y' indicates the presence of a powerline, 'N' indicates that there is no powerline. So, the regression will output a fixed contributed dollar amount for each value, comparing the influence of being close to a powerline, as opposed to not.

The success of regression analysis is limited by the availability of powerline locations, key value driving attributes (with special emphasis on powerlines in this case), cleanliness of the data, and sufficient recent sales to capture the influence and the normal inherent limitations of linear regressions data.

Chapter 11
Codes and Conventions

Specific information that directly concerns Mecklenburg County is presented in this chapter, including the following data sets:

- Parcel Number Conventions
- Valuation Models for the Building Groups
- Improvement Base Rate Schedules
- Improvement Depreciation Schedules
- Auxiliary Area Codes
- Land Use Codes
- Urban and Rural Land Schedules

1 Parcel Number Conventions

In order to make it as simple and efficient as possible to find, maintain, and transfer data related to a specific parcel, Mecklenburg County requires that all parcel numbers follow a specific format when coding input data.

When used properly on the Tax Roll File, this format will allow data from the Tax Roll File and the Master Appraisal File to be matched for automated transfer between these two files.

MECKLENBURG COUNTY PARCEL NUMBER CONVENTIONS	
Internal Representation	**Limitations**
Map	3 characters - Alpha/Numeric
Page	3 characters - Alpha/Numeric
Parcel	2 characters - Alpha/Numeric
Interest	1 character – Alpha
City/County Split	1 character – Alpha

2 Building Groups

Building Types of similar construction are organized by the AssessPro CAMA system into models, which are also called “Building Groups”. These Building Groups are listed below:

Code	Description
01	Single Family Residential
02	Manufactured Home
03	Single Family Attached
04	Office
05	Multifamily
06	Warehouse
07	Commercial
08	Hotel / Motel
09	Stadium / Arena
10	Government / Institutional

The tables that follow depict structural element valuation models arranged by Building Group. These models are expressions of value that were used by AssessPro to determine the estimated Market Adjustment Cost value of a property.

STRUCTURAL ELEMENT DATA – BUILDING GROUP 01 (SINGLE FAMILY RESIDENTIAL)			
Foundation	**Index**	**Exterior Wall**	**Index**
01 - PIER-NO FOUND WALL	0.92	01 - SDG MIN/NONE	0.76
02 - SLAB-RES	0.95	02 - CORR MTL LGT	0.77
03 - SLAB-COM	1.00	03 - COMP OR WLBD	0.80
04 - SLAB-ABV GRD	1.01	04 - SIDG NO SHTG	0.89
05 - CRAWL SPACE	1.00	05 - ASB SHNG/SDG	0.94
06 - SLAB-PLFM HT	1.00	06 - BOARD&BATTEN	0.98
07 - SLAB-STRUCT	1.00	07 - HARDIPLK/DSGN VINYL	1.02
08 - SLAB-HEAVY	1.00	08 - MASONITE	0.98
09 - HIGH RISE	1.00	09 - WOOD ON SHTG	0.99
10 - SPRD FTG-RAW	1.00	10 - ALUM, VINYL	1.00
11 - BASEMENT	1.00	11 - CONC BLOCK	0.91
Frame	**Index**	12 - STUCCO HRDCT	1.03
01 - NONE	1.00	13 - STUCCO SYNTH	0.93
02 - WOOD FRAME	1.00	14 - EXT PLYWOOD	0.95
03 - PRE-FAB	0.97	15 - LOG	1.05
04 - MASONRY	1.00	16 - WOOD SHINGLE	0.99
05 - RNFRD CONC	1.05	17 - CEDAR, RDWD	1.03
06 - STEEL	1.08	19 - CEM BR/SPL B	1.07
07 - FRPRF STEEL	1.10	20 - JUMBO/COM BR	1.07
08 - SPECIAL	1.10	21 - FACE BRICK	1.04
Grade	**Index**	22 - STONE	1.04
E - MINIMUM	0.75	23 - CORR MTL HVY	0.76
D - FAIR	0.85	24 - MODULAR MTL	0.89
C - AVERAGE	1.00	25 - RNFR CONC	1.10
B - GOOD	1.25	26 - PRECAST PANL	1.15
A - VERY GOOD	1.45	27 - PREFIN MTL	1.15
X - EXCELLENT	1.80	28 - GLASS/THRML	1.10
XX - CUSTOM	2.20	18 - IMITATION STONE	1.01
Interior Wall	**Index**	**Fireplace**	**Lump Sum**
01 - MASONRY/MIN	0.89	14 - FIREPLACE	$6,000
02 - WALLBRD/WOOD	0.89	FP2 - PREFAB	$3,500
03 - PLASTER	1.00	FP3 - 1 STY SINGLE	$6,000
04 - PLYWOOD PANL	0.96	FP4 - 2 STY SGL/DB	$8,000
05 - SHEETROCK	1.00	FP5 - 2 OR MORE	$12,000
06 - CUSTOM	1.12	FP6 - MASSIVE	$12,000
		FP7 - >2 MASSIVE	$18,000

STRUCTURAL ELEMENT DATA – BUILDING GROUP 01 (SINGLE FAMILY RESIDENTIAL)			
Roof Structure	**Index**	**Floor Types**	**Index**
01 - FLAT	0.96	01 - NONE/SUBFLOOR ONLY	0.90
02 - SHED	0.98	02 - PLYWOOD/LINO	0.93
03 - GABLE	1.00	03 - CONC FIN	0.95
04 - HIP	1.00	04 - CONC TAPERED EPXY CTD	0.98
05 - GAMBRL/MANS	1.02	05 - ASPHALT TILE	0.95
06 - IRR/CATHDRL	1.06	06 - VINYL TL/SHT	1.00
07 - WOOD TRUSS	1.00	09 - PINE/SOFT WD	1.02
09 - BAR JOIST/RF	1.05	10 - TRRZO MONO	1.05
10 - STL FRM/TRS	1.05	11 - CERAMIC TILE	1.02
11 - BOWSTR TRS	1.05	12 - HARDWOOD/HRT PINE	1.05
12 - REINFRC CONC	1.05	13 - PARQUET	1.02
13 - PRESTRS CONC	1.05	14 - CARPET	1.00
Roof Cover	**Index**	15 - HARD TILE/QRY/TRAVERT	1.05
01 - CRG SHEET METAL	0.95	16 - TRRZO STRP	1.05
02 - ROLL COMP	0.98	17 - PRECAST CONC	1.00
03 - ASP,COMP SHG	1.00	18 - SLATE	1.08
04 - BUILT-UP TAR&GRAVEL	1.01	19 - MARBLE	1.08
06 - ASBTS SHGL	1.00	08 - WOODD LAMINATE FLOOR	1.02
07 - CONC/CLAY TILE	1.10	07 - RUBBER/CORK	0.95
08 - CEDAR/WOOD SHAKE	1.03	**Heating System Type**	**Index**
09 - COPPR, ENAML	1.07	01 - HEAT - NONE	0.95
10 - ARCH SHGL	1.00	02 - BASEBOARD	0.97
11 - SLATE	1.11	03 - AIR-NO-DUCT	0.97
12 - METAL PREFIN	1.04	04 - AIR-DUCTED	1.00
05 - RUBBER SHINGLE/SYNTHETIC	1.05	05 - RADIANT CEIL	0.98
13 - RUBBER MEMBRANE	1.10	06 - HOT WATER	1.01
14 - METAL STND SEAM	1.07	07 - STEAM	1.01
Heat Fuel	**Index**	08 - RADIANT FLR	0.99
01 - NONE	0.95	09 - RADIANT WTR	1.02
02 - OIL/WD/COAL	0.98	10 - HEAT PUMP	1.00
03 - GAS	1.00	11 - AC-NONE	0.95
04 - ELECTRIC	1.00	12 - AC-WALL UNIT	0.95
05 - SOLAR/GEOTHRM	1.00	13 - AC-CENTRAL	1.00
		14 - AC-PCKD ROOF	1.00
		15 - AC-CHLD WAT	1.00

STRUCTURAL ELEMENT DATA – BUILDING GROUP 01 (SINGLE FAMILY RESIDENTIAL)	
Insulation	**Index**
01 - SUS CEIL INS	1.00
02 - SUS WALL INS	1.00
03 - SUS CL+WL IN	1.00
04 - SUS NO INS	1.00
05 - NOT SUS CEIL	1.00
06 - NOT SUS WALL	1.00
07 - NT SUS CL+WL	1.00
08 - NT SUS NO IN	1.00
09 - ROOF INSUL	1.00
10 - WALL INSUL	1.00
11 - RF+WL INS	1.00
12 - NO CEIL INS	1.00

Bath Pricing - 01	**Lump Sum**
FIRST FULL BATH	$7,500
ADD'L FULL BATHS (EACH)	$4,500
HALF BATHS (EACH)	$4,000
ADD'L HALF BATHS (EACH)	$1,500
ADDITIONAL FIXTURES (EACH)	$750

Shape/Design Factor	**Index**
01 - SQUARE	0.88
02 - RECTANGULAR	0.96
03 - SLIGHTLY IRREGULAR	1.00
04 - IRREGULAR	1.06
05 - VERY IRREGULAR	1.15
06 - EXCEPTIONALLY IRREGULAR	1.25

Bath Pricing - 01X	**Lump Sum**
FIRST FULL BATH	$10,000
ADD'L FULL BATHS (EACH)	$7,500
HALF BATHS (EACH)	$7,000
ADD'L HALF BATHS (EACH)	$4,500
ADDITIONAL FIXTURES (EACH)	$1,000

STRUCTURAL ELEMENT DATA – BUILDING GROUP 02 (MANUFACTURED HOME)			
Foundation	**Index**	**Exterior Wall**	**Index**
01 - PIER-NO FOUND WALL	0.92	01 - SDG MIN/NONE	0.76
02 - SLAB-RES	0.95	02 - CORR MTL LGT	0.77
03 - SLAB-COM	1.00	03 - COMP OR WLBD	0.80
04 - SLAB-ABV GRD	1.01	04 - SIDG NO SHTG	0.89
05 - CRAWL SPACE	1.00	05 - ASB SHNG/SDG	0.94
06 - SLAB-PLFM HT	1.00	06 - BOARD&BATTEN	0.98
07 - SLAB-STRUCT	1.00	07 - HARDIPLK/DSGN VINYL	1.02
08 - SLAB-HEAVY	1.00	08 - MASONITE	0.98
09 - HIGH RISE	1.00	09 - WOOD ON SHTG	0.99
10 - SPRD FTG-RAW	1.00	10 - ALUM, VINYL	1.00
11 - BASEMENT	1.00	11 - CONC BLOCK	0.91
Frame	**Index**	12 - STUCCO HRDCT	1.03
01 - NONE	1.00	13 - STUCCO SYNTH	0.93
02 - WOOD FRAME	1.00	14 - EXT PLYWOOD	0.95
03 - PRE-FAB	1.00	15 - LOG	1.05
04 - MASONRY	1.00	16 - WOOD SHINGLE	0.99
05 - RNFRD CONC	1.05	17 - CEDAR, RDWD	1.03
06 - STEEL	1.08	19 - CEM BR/SPL B	1.07
07 - FRPRF STEEL	1.10	20 - JUMBO/COM BR	1.07
08 - SPECIAL	1.10	21 - FACE BRICK	1.04
Grade	**Index**	22 - STONE	1.04
E - MINIMUM	0.75	23 - CORR MTL HVY	0.76
D - FAIR	0.85	24 - MODULAR MTL	0.89
C - AVERAGE	1.00	25 - RNFR CONC	1.10
B - GOOD	1.25	26 - PRECAST PANL	1.15
A - VERY GOOD	1.45	27 - PREFIN MTL	1.15
X - EXCELLENT	1.80	28 - GLASS/THRML	1.10
XX - CUSTOM	2.20	18 - IMITATION STONE	1.01
Interior Wall	**Index**	**Fireplace**	**Lump Sum**
01 - MASONRY/MIN	0.89	14 - FIREPLACE	$6,000
02 - WALLBRD/WOOD	0.89	FP2 - PREFAB	$3,500
03 - PLASTER	1.00	FP3 - 1 STY SINGLE	$6,000
04 - PLYWOOD PANL	0.96	FP4 - 2 STY SGL/DB	$8,000
05 - SHEETROCK	1.00	FP5 - 2 OR MORE	$12,000
06 - CUSTOM	1.12	FP6 - MASSIVE	$12,000
		FP7 - >2 MASSIVE	$18,000

STRUCTURAL ELEMENT DATA – BUILDING GROUP 02 (MANUFACTURED HOME)			
Roof Structure	**Index**	**Floor Types**	**Index**
01 - FLAT	0.96	01 - NONE/SUBFLOOR ONLY	0.90
02 - SHED	0.98	02 - PLYWOOD/LINO	0.93
03 - GABLE	1.00	03 - CONC FIN	0.95
04 - HIP	1.00	04 - CONC TAPERED EPXY CTD	0.98
05 - GAMBRL/MANS	1.02	05 - ASPHALT TILE	0.95
06 - IRR/CATHDRL	1.06	06 - VINYL TL/SHT	1.00
07 - WOOD TRUSS	1.00	09 - PINE/SOFT WD	1.02
09 - BAR JOIST/RF	1.05	10 - TRRZO MONO	1.05
10 - STL FRM/TRS	1.05	11 - CERAMIC TILE	1.02
11 - BOWSTR TRS	1.05	12 - HARDWOOD/HRT PINE	1.05
12 - REINFRC CONC	1.05	13 - PARQUET	1.02
13 - PRESTRS CONC	1.05	14 - CARPET	1.00
Roof Cover	**Index**	15 - HARD TILE/QRY/TRAVERT	1.05
01 - CRG SHEET METAL	0.97	16 - TRRZO STRP	1.05
02 - ROLL COMP	1.00	17 - PRECAST CONC	1.00
03 - ASP,COMP SHG	1.00	18 - SLATE	1.08
04 - BUILT-UP TAR&GRAVEL	1.00	19 - MARBLE	1.08
06 - ASBTS SHGL	1.00	08 – WOOD LAMINATE FLOOR	1.02
07 - CONC/CLAY TILE	1.10	07 - RUBBER/CORK	0.95
08 - CEDAR/WOOD SHAKE	1.05	**Heating System Type**	**Index**
09 - COPPR, ENAML	1.10	01 - HEAT - NONE	0.95
10 - ARCH SHGL	1.02	02 - BASEBOARD	0.97
11 - SLATE	1.11	03 - AIR-NO-DUCT	0.97
12 - METAL PREFIN	1.00	04 - AIR-DUCTED	1.00
05 - RUBBER SHINGLE/SYNTHETIC	1.00	05 - RADIANT CEIL	0.98
13 - RUBBER MEMBRANE	1.00	06 - HOT WATER	1.01
14 - METAL STND SEAM	1.07	07 - STEAM	1.01
Heat Fuel	**Index**	08 - RADIANT FLR	0.99
01 - NONE	0.95	09 - RADIANT WTR	1.02
02 - OIL/WD/COAL	0.98	10 - HEAT PUMP	1.00
03 - GAS	1.00	11 - AC-NONE	0.95
04 - ELECTRIC	1.00	12 - AC-WALL UNIT	0.95
05 - SOLAR/GEOTHRM	1.00	13 - AC-CENTRAL	1.00
		14 - AC-PCKD ROOF	1.00
		15 - AC-CHLD WAT	1.00

STRUCTURAL ELEMENT DATA – BUILDING GROUP 02 (MANUFACTURED HOME)			
Insulation	**Index**	**Shape/Design Factor**	**Index**
01 - SUS CEIL INS	1.00	01 - SQUARE	0.88
02 - SUS WALL INS	1.00	02 - RECTANGULAR	0.96
03 - SUS CL+WL IN	1.00	03 - SLIGHTLY IRREGULAR	1.00
04 - SUS NO INS	1.00	04 - IRREGULAR	1.06
05 - NOT SUS CEIL	1.00	05 - VERY IRREGULAR	1.15
06 - NOT SUS WALL	1.00	06 - EXCEPTIONALLY IRREGULAR	1.25
07 - NT SUS CL+WL	1.00	**Bath Pricing - 02**	**Lump Sum**
08 - NT SUS NO IN	1.00	FIRST FULL BATH	$6,000
09 - ROOF INSUL	1.00	ADD'L FULL BATHS (EACH)	$4,000
10 - WALL INSUL	1.00	HALF BATHS (EACH)	$3,000
11 - RF+WL INS	1.00	ADD'L HALF BATHS (EACH)	$2,500
12 - NO CEIL INS	1.00	ADDITIONAL FIXTURES (EACH)	$500

STRUCTURAL ELEMENT DATA – BUILDING GROUP 03 (SINGLE FAMILY ATTACHED)			
Foundation	**Index**	**Exterior Wall**	**Index**
01 - PIER-NO FOUND WALL	0.92	01 - SDG MIN/NONE	0.76
02 - SLAB-RES	0.95	02 - CORR MTL LGT	0.77
03 - SLAB-COM	1.00	03 - COMP OR WLBD	0.80
04 - SLAB-ABV GRD	1.01	04 - SIDG NO SHTG	0.89
05 - CRAWL SPACE	1.00	05 - ASB SHNG/SDG	0.94
06 - SLAB-PLFM HT	1.00	06 - BOARD&BATTEN	0.98
07 - SLAB-STRUCT	1.00	07 - HARDIPLK/DSGN VINYL	1.02
08 - SLAB-HEAVY	1.00	08 - MASONITE	0.98
09 - HIGH RISE	1.00	09 - WOOD ON SHTG	0.99
10 - SPRD FTG-RAW	1.00	10 - ALUM,VINYL	1.00
11 - BASEMENT	1.00	11 - CONC BLOCK	0.91
Frame	**Index**	12 - STUCCO HRDCT	1.03
01 - NONE	1.00	13 - STUCCO SYNTH	0.93
02 - WOOD FRAME	1.00	14 - EXT PLYWOOD	0.95
03 - PRE FAB	0.97	15 - LOG	1.05
04 - MASONRY	1.00	16 - WOOD SHINGLE	0.99
05 - RNFRD CONC	1.05	17 - CEDAR,RDWD	1.03
06 - STEEL	1.08	19 - CEM BR/SPL B	1.07
07 - FRPRF STEEL	1.10	20 - JUMBO/COM BR	1.07
08 - SPECIAL	1.10	21 - FACE BRICK	1.04
Grade	**Index**	22 - STONE	1.04
E - MINIMUM	0.75	23 - CORR MTL HVY	0.76
D - FAIR	0.85	24 - MODULAR MTL	0.89
C - AVERAGE	1.00	25 - RNFR CONC	1.10
B - GOOD	1.25	26 - PRECAST PANL	1.15
A - VERY GOOD	1.45	27 - PREFIN MTL	1.15
X - EXCELLENT	1.80	28 - GLASS/THRML	1.10
XX - CUSTOM	2.20	18 - IMITATION STONE	1.01
Interior Wall	**Index**	**Fireplace**	**Lump Sum**
01 - MASONRY/MIN	0.89	14 - FIREPLACE	$6,000
02 - WALLBRD/WOOD	0.89	FP2 - PREFAB	$3,500
03 - PLASTER	1.00	FP3 - 1 STY SINGLE	$6,000
04 - PLYWOOD PANL	0.96	FP4 - 2 STY SGL/DB	$8,000
05 - SHEETROCK	1.00	FP5 - 2 OR MORE	$12,000
06 - CUSTOM	1.12	FP6 - MASSIVE	$12,000
		FP7 - >2 MASSIVE	$18,000

STRUCTURAL ELEMENT DATA – BUILDING GROUP 03 (SINGLE FAMILY ATTACHED)			
Roof Structure	**Index**	**Floor Types**	**Index**
01 - FLAT	0.96	01 - NONE/SUBFLOOR ONLY	0.90
02 - SHED	0.98	02 - PLYWOOD/LINO	0.93
03 - GABLE	1.00	03 - CONC FIN	0.95
04 - HIP	1.00	04 - CONC TAPERED EPXY CTD	0.98
05 - GAMBRL/MANS	1.02	05 - ASPHALT TILE	0.95
06 - IRR/CATHDRL	1.06	06 - VINYL TL/SHT	1.00
07 - WOOD TRUSS	1.00	09 - PINE/SOFT WD	1.02
09 - BAR JOIST/RF	1.05	10 - TRRZO MONO	1.05
10 - STL FRM/TRS	1.05	11 - CERAMIC TILE	1.02
11 - BOWSTR TRS	1.05	12 - HARDWOOD/HRT PINE	1.05
12 - REINFRC CONC	1.05	13 - PARQUET	1.02
13 - PRESTRS CONC	1.05	14 - CARPET	1.00
Roof Cover	**Index**	15 - HARD TILE/QRY/TRAVERT	1.05
01 - CRG SHEET METAL	0.95	16 - TRRZO STRP	1.05
02 - ROLL COMP	0.98	17 - PRECAST CONC	1.00
03 - ASP,COMP SHG	1.00	18 - SLATE	1.08
04 - BUILT-UP TAR&GRAVEL	1.01	19 - MARBLE	1.08
06 - ASBTS SHGL	1.00	08 - WOOD LAMINATE FLOOR	1.02
07 - CONC/CLAY TILE	1.10	07 - RUBBER/CORK	0.95
08 - CEDAR/WOOD SHAKE	1.03	**Heating System Type**	**Index**
09 - COPPR, ENAML	1.07	01 - HEAT - NONE	0.95
10 - ARCH SHGL	1.00	02 - BASEBOARD	0.97
11 - SLATE	1.11	03 - AIR-NO-DUCT	0.97
12 - METAL PREFIN	1.04	04 - AIR-DUCTED	1.00
05 - RUBBER SHINGLE/SYNTHETIC	1.05	05 - RADIANT CEIL	0.98
13 - RUBBER MEMBRANE	1.10	06 - HOT WATER	1.01
14 - METAL STND SEAM	1.07	07 - STEAM	1.01
Heat Fuel	**Index**	08 - RADIANT FLR	0.99
01 - NONE	0.95	09 - RADIANT WTR	1.02
02 - OIL/WD/COAL	0.98	10 - HEAT PUMP	1.00
03 - GAS	1.00	11 - AC-NONE	0.95
04 - ELECTRIC	1.00	12 - AC-WALL UNIT	0.95
05 - SOLAR/GEOTHRM	1.00	13 - AC-CENTRAL	1.00
		14 - AC-PCKD ROOF	1.00
		15 - AC-CHLD WAT	1.00

STRUCTURAL ELEMENT DATA – BUILDING GROUP 03 (SINGLE FAMILY ATTACHED)			
Insulation	**Index**	**Shape/Design Factor**	**Index**
01 - SUS CEIL INS	1.00	01 - SQUARE	0.88
02 - SUS WALL INS	1.00	02 - RECTANGULAR	0.96
03 - SUS CL+WL IN	1.00	03 - SLIGHTLY IRREGULAR	1.00
04 - SUS NO INS	1.00	04 - IRREGULAR	1.06
05 - NOT SUS CEIL	1.00	05 - VERY IRREGULAR	1.15
06 - NOT SUS WALL	1.00	06 - EXCEPTIONALLY IRREGULAR	1.25
07 - NT SUS CL+WL	1.00	**Bath Pricing - 03**	**Lump Sum**
08 - NT SUS NO IN	1.00	FIRST FULL BATH	$7,500
09 - ROOF INSUL	1.00	ADD'L FULL BATHS (EACH)	$4,500
10 - WALL INSUL	1.00	HALF BATHS (EACH)	$4,000
11 - RF+WL INS	1.00	ADD'L HALF BATHS (EACH)	$1,500
12 - NO CEIL INS	1.00	ADDITIONAL FIXTURES(EACH)	$750

STRUCTURAL ELEMENT DATA – BUILDING GROUP 04 (OFFICE)			
Foundation	**Index**	**Exterior Wall**	**Index**
01 - PIER-NO FOUND WALL	0.93	01 - SDG MIN/NONE	0.91
02 - SLAB-RES	1.00	02 - CORR MTL LGT	0.91
03 - SLAB-COM	1.00	03 - COMP OR WLBD	0.91
04 - SLAB-ABV GRD	1.01	04 - SIDG NO SHTG	0.91
05 - CRAWL SPACE	1.00	05 - ASB SHNG/SDG	0.93
06 - SLAB-PLFM HT	1.02	06 - BOARD&BATTEN	0.93
07 - SLAB-STRUCT	1.01	07 - HARDIPLK/DSGN VINYL	1.00
08 - SLAB-HEAVY	1.03	08 - MASONITE	0.93
09 - HIGH RISE	1.03	09 - WOOD ON SHTG	0.95
10 - SPRD FTG-RAW	0.95	10 - ALUM,VINYL	0.98
11 - BASEMENT	1.00	11 - CONC BLOCK	1.01
Frame	**Index**	12 - STUCCO HRDCT	1.00
01 - NONE	1.00	13 - STUCCO SYNTH	0.95
02 - WOOD FRAME	1.00	14 - EXT PLYWOOD	0.93
03 - PRE FAB	0.97	15 - LOG	1.05
04 - MASONRY	1.00	16 - WOOD SHINGLE	1.00
05 - RNFRD CONC	1.05	17 - CEDAR,RDWD	1.03
06 - STEEL	1.10	19 - CEM BR/SPL B	1.01
07 - FRPRF STEEL	1.12	20 - JUMBO/COM BR	1.01
08 - SPECIAL	1.10	21 - FACE BRICK	1.03
Grade	**Index**	22 - STONE	1.05
E - MINIMUM	0.75	23 - CORR MTL HVY	0.98
D - FAIR	0.85	24 - MODULAR MTL	0.91
C - AVERAGE	1.00	25 - RNFR CONC	1.01
B - GOOD	1.25	26 - PRECAST PANL	1.01
A - VERY GOOD	1.45	27 - PREFIN MTL	1.00
X - EXCELLENT	1.65	28 - GLASS/THRML	1.05
XX-CUSTOM	2.00	18 - IMITATION STONE	1.03
Interior Wall	**Index**	**Fireplace**	**Lump Sum**
01 - MASONRY/MIN	0.95	14 - FIREPLACE	$6,000
02 - WALLBRD/WOOD	0.95	FP2 - PREFAB	$3,500
03 - PLASTER	0.98	FP3 - 1 STY SINGLE	$6,000
04 - PLYWOOD PANL	0.95	FP4 - 2 STY SGL/DB	$8,000
05 - SHEETROCK	1.00	FP5 - 2 OR MORE	$12,000
06 - CUSTOM	1.10	FP6 - MASSIVE	$12,000
		FP7 - >2 MASSIVE	$18,000

STRUCTURAL ELEMENT DATA – BUILDING GROUP 04 (OFFICE)			
Roof Structure	**Index**	**Floor Types**	**Index**
01 - FLAT	1.00	01 - NONE/SUBFLOOR ONLY	0.93
02 - SHED	1.00	02 - PLYWOOD/LINO	0.95
03 - GABLE	1.00	03 - CONC FIN	0.98
04 - HIP	1.00	04 - CONC TAPERED EPXY CTD	1.00
05 - GAMBRL/MANS	1.00	05 - ASPHALT TILE	0.96
06 - IRR/CATHDRL	1.04	06 - VINYL TL/SHT	0.98
07 - WOOD TRUSS	1.00	09 - PINE/SOFT WD	1.03
09 - BAR JOIST/RF	1.05	10 - TRRZO MONO	1.04
10 - STL FRM/TRS	1.05	11 - CERAMIC TILE	1.01
11 - BOWSTR TRS	1.03	12 - HARDWOOD/HRT PINE	1.03
12 - REINFRC CONC	1.08	13 - PARQUET	1.03
13 - PRESTRS CONC	1.08	14 - CARPET	1.00
Roof Cover	**Index**	15 - HARD TILE/QRY/TRAVERT	1.03
01 - CRG SHEET METAL	0.98	16 - TRRZO STRP	1.04
02 - ROLL COMP	0.98	17 - PRECAST CONC	0.93
03 - ASP,COMP SHG	1.00	18 - SLATE	1.10
04 - BUILT-UP TAR&GRAVEL	1.00	19 - MARBLE	1.10
06 - ASBTS SHGL	1.00	08 - WOOD LAMINATE FLOOR	1.00
07 - CONC/CLAY TILE	1.06	07 - RUBBER/CORK	0.95
08 - CEDAR/WOOD SHAKE	1.04	**Heating System Type**	**Index**
09 - COPPR, ENAML	1.08	01 - HEAT - NONE	0.91
10 - ARCH SHGL	1.01	02 - BASEBOARD	0.95
11 - SLATE	1.08	03 - AIR-NO-DUCT	0.95
12 - METAL PREFIN	1.01	04 - AIR-DUCTED	1.00
05 - RUBBER SHINGLE/SYNTHETIC	1.00	05 - RADIANT CEIL	0.95
13 - RUBBER MEMBRANE	1.05	06 - HOT WATER	1.00
14 - METAL STND SEAM	1.03	07 - STEAM	1.00
Heat Fuel	**Index**	08 - RADIANT FLR	0.95
01 - NONE	0.95	09 - RADIANT WTR	0.95
02 - OIL/WD/COAL	0.98	10 - HEAT PUMP	1.00
03 - GAS	1.00	11 - AC-NONE	0.91
04 - ELECTRIC	1.00	12 - AC-WALL UNIT	0.98
05 - SOLAR/GEOTHRM	1.00	13 - AC-CENTRAL	1.00
		14 - AC-PCKD ROOF	1.00
		15 - AC-CHLD WAT	1.05

STRUCTURAL ELEMENT DATA – BUILDING GROUP 04 (OFFICE)			
Insulation	**Index**	**Shape/Design Factor**	**Index**
01 - SUS CEIL INS	1.00	01 - SQUARE	0.88
02 - SUS WALL INS	1.00	02 - RECTANGULAR	0.96
03 - SUS CL+WL IN	1.00	03 - SLIGHTLY IRREGULAR	1.00
04 - SUS NO INS	0.96	04 - IRREGULAR	1.06
05 - NOT SUS CEIL	1.00	05 - VERY IRREGULAR	1.15
06 - NOT SUS WALL	1.00	06 - EXCEPTIONALLY IRREGULAR	1.25
07 - NT SUS CL+WL	1.00	**Bath Pricing - 04**	**Lump Sum**
08 - NT SUS NO IN	0.96	FIRST FULL BATH	$0
09 - ROOF INSUL	1.00	ADD'L FULL BATHS (EACH)	$0
10 - WALL INSUL	1.00	HALF BATHS (EACH)	$0
11 - RF+WL INS	1.00	ADD'L HALF BATHS (EACH)	$0
12 - NO CEIL INS	0.96	ADDITIONAL FIXTURES(EACH)	$850

STRUCTURAL ELEMENT DATA – BUILDING GROUP 05 (MULTIFAMILY)			
Foundation	**Index**	**Exterior Wall**	**Index**
01 - PIER-NO FOUND WALL	0.93	01 - SDG MIN/NONE	0.80
02 - SLAB-RES	1.00	02 - CORR MTL LGT	0.80
03 - SLAB-COM	1.00	03 - COMP OR WLBD	0.83
04 - SLAB-ABV GRD	1.02	04 - SIDG NO SHTG	0.88
05 - CRAWL SPACE	1.00	05 - ASB SHNG/SDG	0.98
06 - SLAB-PLFM HT	1.05	06 - BOARD&BATTEN	0.98
07 - SLAB-STRUCT	1.05	07 - HARDIPLK/DSGN VINYL	1.03
08 - SLAB-HEAVY	1.07	08 - MASONITE	0.98
09 - HIGH RISE	1.07	09 - WOOD ON SHTG	1.00
10 - SPRD FTG-RAW	1.00	10 - ALUM,VINYL	0.99
11 - BASEMENT	1.00	11 - CONC BLOCK	1.01
Frame	**Index**	12 - STUCCO HRDCT	1.00
01 - NONE	0.97	13 - STUCCO SYNTH	0.98
02 - WOOD FRAME	1.00	14 - EXT PLYWOOD	0.99
03 - PRE FAB	0.98	15 - LOG	1.00
04 - MASONRY	1.01	16 - WOOD SHINGLE	1.01
05 - RNFRD CONC	1.05	17 - CEDAR,RDWD	1.02
06 - STEEL	1.05	19 - CEM BR/SPL B	1.01
07 - FRPRF STEEL	1.07	20 - JUMBO/COM BR	1.02
08 - SPECIAL	1.11	21 - FACE BRICK	1.04
Grade	**Index**	22 - STONE	1.04
E - MINIMUM	0.75	23 - CORR MTL HVY	0.84
D - FAIR	0.85	24 - MODULAR MTL	0.94
C - AVERAGE	1.00	25 - RNFR CONC	1.02
B - GOOD	1.25	26 - PRECAST PANL	1.02
A - VERY GOOD	1.45	27 - PREFIN MTL	1.09
X - EXCELLENT	1.65	28 - GLASS/THRML	1.05
XX-CUSTOM	2.00	18 - IMITATION STONE	1.04
Interior Wall	**Index**	**Fireplace**	**Lump Sum**
01 - MASONRY/MIN	0.95	14 - FIREPLACE	$6,000
02 - WALLBRD/WOOD	1.00	FP2 - PREFAB	$3,500
03 - PLASTER	1.00	FP3 - 1 STY SINGLE	$6,000
04 - PLYWOOD PANL	0.96	FP4 - 2 STY SGL/DB	$8,000
05 - SHEETROCK	1.00	FP5 - 2 OR MORE	$12,000
06 - CUSTOM	1.10	FP6 - MASSIVE	$12,000
		FP7 - >2 MASSIVE	$18,000

STRUCTURAL ELEMENT DATA – BUILDING GROUP 05 (MULTIFAMILY)			
Roof Structure	**Index**	**Floor Types**	**Index**
01 - FLAT	0.96	01 - NONE/SUBFLOOR ONLY	0.98
02 - SHED	0.98	02 - PLYWOOD/LINO	0.97
03 - GABLE	1.00	03 - CONC FIN	0.98
04 - HIP	1.00	04 - CONC TAPERED EPXY CTD	0.98
05 - GAMBRL/MANS	1.02	05 - ASPHALT TILE	0.97
06 - IRR/CATHDRL	1.06	06 - VINYL TL/SHT	1.00
07 - WOOD TRUSS	1.00	09 - PINE/SOFT WD	1.02
09 - BAR JOIST/RF	1.00	10 - TRRZO MONO	1.04
10 - STL FRM/TRS	1.05	11 - CERAMIC TILE	1.02
11 - BOWSTR TRS	1.02	12 - HARDWOOD/HRT PINE	1.04
12 - REINFRC CONC	1.05	13 - PARQUET	1.03
13 - PRESTRS CONC	1.05	14 - CARPET	1.00
Roof Cover	**Index**	15 - HARD TILE/QRY/TRAVERT	1.04
01 - CRG SHEET METAL	0.98	16 - TRRZO STRP	1.04
02 - ROLL COMP	0.98	17 - PRECAST CONC	0.96
03 - ASP,COMP SHG	1.00	18 - SLATE	1.10
04 - BUILT-UP TAR&GRAVEL	1.02	19 - MARBLE	1.10
06 - ASBTS SHGL	1.00	08 - WOOD LAMINATE FLOOR	1.02
07 - CONC/CLAY TILE	1.05	07 - RUBBER/CORK	0.95
08 - CEDAR/WOOD SHAKE	1.03	**Heating System Type**	**Index**
09 - COPPR, ENAML	1.10	01 - HEAT - NONE	0.96
10 - ARCH SHGL	1.00	02 - BASEBOARD	0.98
11 - SLATE	1.08	03 - AIR-NO-DUCT	0.98
12 - METAL PREFIN	1.00	04 - AIR-DUCTED	1.00
05 - RUBBER SHINGLE/SYNTHETIC	1.03	05 - RADIANT CEIL	0.99
13 - RUBBER MEMBRANE	1.05	06 - HOT WATER	1.00
14 - METAL STND SEAM	1.03	07 - STEAM	1.00
Heat Fuel	**Index**	08 - RADIANT FLR	0.98
01 - NONE	0.95	09 - RADIANT WTR	1.02
02 - OIL/WD/COAL	0.98	10 - HEAT PUMP	1.00
03 - GAS	1.00	11 - AC-NONE	0.94
04 - ELECTRIC	1.00	12 - AC-WALL UNIT	0.95
05 - SOLAR/GEOTHRM	1.00	13 - AC-CENTRAL	1.00
		14 - AC-PCKD ROOF	1.00
		15 - AC-CHLD WAT	1.05

STRUCTURAL ELEMENT DATA – BUILDING GROUP 05 (MULTIFAMILY)			
Insulation	**Index**	**Shape/Design Factor**	**Index**
01 - SUS CEIL INS	1.00	01 - SQUARE	0.88
02 - SUS WALL INS	1.00	02 - RECTANGULAR	0.96
03 - SUS CL+WL IN	1.00	03 - SLIGHTLY IRREGULAR	1.00
04 - SUS NO INS	0.98	04 - IRREGULAR	1.06
05 - NOT SUS CEIL	0.99	05 - VERY IRREGULAR	1.15
06 - NOT SUS WALL	0.99	06 - EXCEPTIONALLY IRREGULAR	1.25
07 - NT SUS CL+WL	1.00	**Bath Pricing - 05**	**Lump Sum**
08 - NT SUS NO IN	0.99	FIRST FULL BATH	$0
09 - ROOF INSUL	0.99	ADD'L FULL BATHS (EACH)	$0
10 - WALL INSUL	0.99	HALF BATHS (EACH)	$0
11 - RF+WL INS	1.00	ADD'L HALF BATHS (EACH)	$0
12 - NO CEIL INS	0.99	ADDITIONAL FIXTURES (EACH)	$1,300
		KITCHENS	$5,500

STRUCTURAL ELEMENT DATA – BUILDING GROUP 06 (WAREHOUSE)			
Foundation	**Index**	**Exterior Wall**	**Index**
01 - PIER-NO FOUND WALL	0.91	01 - SDG MIN/NONE	0.90
02 - SLAB-RES	1.00	02 - CORR MTL LGT	0.90
03 - SLAB-COM	1.00	03 - COMP OR WLBD	0.90
04 - SLAB-ABV GRD	1.02	04 - SIDG NO SHTG	0.90
05 - CRAWL SPACE	1.00	05 - ASB SHNG/SDG	0.94
06 - SLAB-PLFM HT	1.04	06 - BOARD&BATTEN	0.94
07 - SLAB-STRUCT	1.06	07 - HARDIPLK/DSGN VINYL	0.94
08 - SLAB-HEAVY	1.08	08 - MASONITE	0.94
09 - HIGH RISE	1.10	09 - WOOD ON SHTG	0.94
10 - SPRD FTG-RAW	1.00	10 - ALUM,VINYL	0.98
11 - BASEMENT	1.00	11 - CONC BLOCK	1.01
Frame	**Index**	12 - STUCCO HRDCT	1.00
01 - NONE	0.93	13 - STUCCO SYNTH	1.00
02 - WOOD FRAME	0.95	14 - EXT PLYWOOD	0.94
03 - PRE FAB	0.97	15 - LOG	1.00
04 - MASONRY	1.00	16 - WOOD SHINGLE	0.94
05 - RNFRD CONC	1.05	17 - CEDAR,RDWD	0.95
06 - STEEL	1.10	19 - CEM BR/SPL B	1.04
07 - FRPRF STEEL	1.12	20 - JUMBO/COM BR	1.05
08 - SPECIAL	1.15	21 - FACE BRICK	1.03
Grade	**Index**	22 - STONE	1.05
E - MINIMUM	0.75	23 - CORR MTL HVY	1.03
D - FAIR	0.85	24 - MODULAR MTL	1.00
C - AVERAGE	1.00	25 - RNFR CONC	1.05
B - GOOD	1.25	26 - PRECAST PANL	1.08
A - VERY GOOD	1.45	27 - PREFIN MTL	1.05
X - EXCELLENT	1.65	28 - GLASS/THRML	1.08
XX - CUSTOM	2.00	18 - IMITATION STONE	1.05
Interior Wall	**Index**	**Fireplace**	**Lump Sum**
01 - MASONRY/MIN	0.98	14 - FIREPLACE	$6,000
02 - WALLBRD/WOOD	1.00	FP2 - PREFAB	$3,500
03 - PLASTER	1.00	FP3 - 1 STY SINGLE	$6,000
04 - PLYWOOD PANL	1.00	FP4 - 2 STY SGL/DB	$8,000
05 - SHEETROCK	1.05	FP5 - 2 OR MORE	$12,000
06 - CUSTOM	1.10	FP6 - MASSIVE	$12,000
		FP7 - >2 MASSIVE	$18,000

STRUCTURAL ELEMENT DATA – BUILDING GROUP 06 (WAREHOUSE)			
Roof Structure	**Index**	**Floor Types**	**Index**
01 - FLAT	0.96	01 - NONE/SUBFLOOR ONLY	0.95
02 - SHED	0.98	02 - PLYWOOD/LINO	0.98
03 - GABLE	1.00	03 - CONC FIN	1.00
04 - HIP	1.00	04 - CONC TAPERED EPXY CTD	1.05
05 - GAMBRL/MANS	1.00	05 - ASPHALT TILE	1.00
06 - IRR/CATHDRL	1.03	06 - VINYL TL/SHT	1.00
07 - WOOD TRUSS	1.00	09 - PINE/SOFT WD	1.00
09 - BAR JOIST/RF	1.00	10 - TRRZO MONO	1.00
10 - STL FRM/TRS	1.03	11 - CERAMIC TILE	1.00
11 - BOWSTR TRS	1.00	12 - HARDWOOD/HRT PINE	1.05
12 - REINFRC CONC	1.05	13 - PARQUET	1.00
13 - PRESTRS CONC	1.05	14 - CARPET	1.00
Roof Cover	**Index**	15 - HARD TILE/QRY/TRAVERT	1.05
01 - CRG SHEET METAL	0.96	16 - TRRZO STRP	1.00
02 - ROLL COMP	0.98	17 - PRECAST CONC	1.03
03 - ASP,COMP SHG	1.00	18 - SLATE	1.00
04 - BUILT-UP TAR&GRAVEL	1.00	19 - MARBLE	1.00
06 - ASBTS SHGL	1.00	08 - WOOD LAMINATE FLOOR	1.02
07 - CONC/CLAY TILE	1.05	07 - RUBBER/CORK	0.95
08 - CEDAR/WOOD SHAKE	1.00	**Heating System Type**	**Index**
09 - COPPR, ENAML	1.00	01 - HEAT - NONE	0.95
10 - ARCH SHGL	1.00	02 - BASEBOARD	0.98
11 - SLATE	1.10	03 - AIR-NO-DUCT	0.99
12 - METAL PREFIN	1.00	04 - AIR-DUCTED	1.00
05 - RUBBER SHINGLE/SYNTHETIC	1.02	05 - RADIANT CEIL	1.00
13 - RUBBER MEMBRANE	1.05	06 - HOT WATER	1.00
14 - METAL STND SEAM	1.03	07 - STEAM	1.00
Heat Fuel	**Index**	08 - RADIANT FLR	1.00
01 - NONE	0.95	09 - RADIANT WTR	1.04
02 - OIL/WD/COAL	0.98	10 - HEAT PUMP	1.00
03 - GAS	1.00	11 - AC-NONE	0.98
04 - ELECTRIC	1.00	12 - AC-WALL UNIT	1.00
05 - SOLAR/GEOTHRM	1.00	13 - AC-CENTRAL	1.00
		14 - AC-PCKD ROOF	1.00
		15 - AC-CHLD WAT	1.05

STRUCTURAL ELEMENT DATA – BUILDING GROUP 06 (WAREHOUSE)			
Insulation	**Index**	**Shape/Design Factor**	**Index**
01 - SUS CEIL INS	1.00	01 - SQUARE	0.88
02 - SUS WALL INS	1.00	02 - RECTANGULAR	0.96
03 - SUS CL+WL IN	1.00	03 - SLIGHTLY IRREGULAR	1.00
04 - SUS NO INS	0.98	04 - IRREGULAR	1.06
05 - NOT SUS CEIL	0.99	05 - VERY IRREGULAR	1.15
06 - NOT SUS WALL	0.99	06 - EXCEPTIONALLY IRREGULAR	1.25
07 - NT SUS CL+WL	1.00	**Bath Pricing - 06**	**Lump Sum**
08 - NT SUS NO IN	0.99	FIRST FULL BATH	$0
09 - ROOF INSUL	0.99	ADD'L FULL BATHS (EACH)	$0
10 - WALL INSUL	0.99	HALF BATHS (EACH)	$0
11 - RF+WL INS	1.00	ADD'L HALF BATHS (EACH)	$0
12 - NO CEIL INS	0.99	ADDITIONAL FIXTURES (EACH)	$850

STRUCTURAL ELEMENT DATA – BUILDING GROUP 07 (COMMERCIAL)			
Foundation	**Index**	**Exterior Wall**	**Index**
01 - PIER-NO FOUND WALL	0.93	01 - SDG MIN/NONE	0.85
02 - SLAB-RES	1.00	02 - CORR MTL LGT	0.85
03 - SLAB-COM	1.00	03 - COMP OR WLBD	0.85
04 - SLAB-ABV GRD	1.02	04 - SIDG NO SHTG	0.89
05 - CRAWL SPACE	1.00	05 - ASB SHNG/SDG	0.85
06 - SLAB-PLFM HT	1.04	06 - BOARD&BATTEN	0.90
07 - SLAB-STRUCT	1.05	07 - HARDIPLK/DSGN VINYL	1.02
08 - SLAB-HEAVY	1.05	08 - MASONITE	0.98
09 - HIGH RISE	1.08	09 - WOOD ON SHTG	0.85
10 - SPRD FTG-RAW	0.95	10 - ALUM,VINYL	1.00
11 - BASEMENT	1.00	11 - CONC BLOCK	1.00
Frame	**Index**	12 - STUCCO HRDCT	1.01
01 - NONE	0.90	13 - STUCCO SYNTH	0.95
02 - WOOD FRAME	1.00	14 - EXT PLYWOOD	0.85
03 - PRE FAB	0.95	15 - LOG	1.00
04 - MASONRY	1.00	16 - WOOD SHINGLE	0.85
05 - RNFRD CONC	1.05	17 - CEDAR,RDWD	0.95
06 - STEEL	1.10	19 - CEM BR/SPL B	1.01
07 - FRPRF STEEL	1.11	20 - JUMBO/COM BR	1.03
08 - SPECIAL	1.16	21 - FACE BRICK	1.03
Grade	**Index**	22 - STONE	1.05
E - MINIMUM	0.75	23 - CORR MTL HVY	0.95
D - FAIR	0.85	24 - MODULAR MTL	0.85
C - AVERAGE	1.00	25 - RNFR CONC	1.03
B - GOOD	1.25	26 - PRECAST PANL	1.05
A - VERY GOOD	1.45	27 - PREFIN MTL	1.00
X - EXCELLENT	1.65	28 - GLASS/THRML	1.10
XX - CUSTOM	2.00	18 - IMITATION STONE	1.03
Interior Wall	**Index**	**Fireplace**	**Lump Sum**
01 - MASONRY/MIN	0.98	14 - FIREPLACE	$6,000
02 - WALLBRD/WOOD	1.00	FP2 - PREFAB	$3,500
03 - PLASTER	1.00	FP3 - 1 STY SINGLE	$6,000
04 - PLYWOOD PANL	1.00	FP4 - 2 STY SGL/DB	$8,000
05 - SHEETROCK	1.00	FP5 - 2 OR MORE	$12,000
06 - CUSTOM	1.10	FP6 - MASSIVE	$12,000
		FP7 - >2 MASSIVE	$18,000

STRUCTURAL ELEMENT DATA – BUILDING GROUP 07 (COMMERCIAL)			
Roof Structure	**Index**	**Floor Types**	**Index**
01 - FLAT	0.95	01 - NONE/SUBFLOOR ONLY	0.90
02 - SHED	0.95	02 - PLYWOOD/LINO	0.98
03 - GABLE	1.00	03 - CONC FIN	1.00
04 - HIP	1.00	04 - CONC TAPERED EPXY CTD	1.03
05 - GAMBRL/MANS	1.00	05 - ASPHALT TILE	1.00
06 - IRR/CATHDRL	1.05	06 - VINYL TL/SHT	1.00
07 - WOOD TRUSS	1.00	09 - PINE/SOFT WD	1.04
09 - BAR JOIST/RF	1.00	10 - TRRZO MONO	1.10
10 - STL FRM/TRS	1.03	11 - CERAMIC TILE	1.05
11 - BOWSTR TRS	1.00	12 - HARDWOOD/HRT PINE	1.05
12 - REINFRC CONC	1.05	13 - PARQUET	1.04
13 - PRESTRS CONC	1.08	14 - CARPET	1.00
Roof Cover	**Index**	15 - HARD TILE/QRY/TRAVERT	1.05
01 - CRG SHEET METAL	0.98	16 - TRRZO STRP	1.10
02 - ROLL COMP	0.98	17 - PRECAST CONC	1.00
03 - ASP,COMP SHG	1.00	18 - SLATE	1.10
04 - BUILT-UP TAR&GRAVEL	1.00	19 - MARBLE	1.12
06 - ASBTS SHGL	1.00	08 - WOOD LAMINATE FLOOR	1.02
07 - CONC/CLAY TILE	1.05	07 - RUBBER/CORK	1.00
08 - CEDAR/WOOD SHAKE	1.03	**Heating System Type**	**Index**
09 - COPPR, ENAML	1.15	01 - HEAT - NONE	0.90
10 - ARCH SHGL	1.03	02 - BASEBOARD	0.95
11 - SLATE	1.10	03 - AIR-NO-DUCT	0.95
12 - METAL PREFIN	1.03	04 - AIR-DUCTED	1.00
05 - RUBBER SHINGLE/SYNTHETIC	1.00	05 - RADIANT CEIL	0.95
13 - RUBBER MEMBRANE	1.05	06 - HOT WATER	1.00
14 - METAL STND SEAM	1.05	07 - STEAM	1.00
Heat Fuel	**Index**	08 - RADIANT FLR	0.95
01 - NONE	0.95	09 - RADIANT WTR	0.95
02 - OIL/WD/COAL	0.98	10 - HEAT PUMP	1.00
03 - GAS	1.00	11 - AC-NONE	0.90
04 - ELECTRIC	1.00	12 - AC-WALL UNIT	0.97
05 - SOLAR/GEOTHRM	1.00	13 - AC-CENTRAL	1.00
		14 - AC-PCKD ROOF	1.00
		15 - AC-CHLD WAT	1.10

STRUCTURAL ELEMENT DATA – BUILDING GROUP 07 (COMMERCIAL)			
Insulation	**Index**	**Shape/Design Factor**	**Index**
01 - SUS CEIL INS	1.00	01 - SQUARE	0.88
02 - SUS WALL INS	1.00	02 - RECTANGULAR	0.96
03 - SUS CL+WL IN	1.00	03 - SLIGHTLY IRREGULAR	1.00
04 - SUS NO INS	0.98	04 - IRREGULAR	1.06
05 - NOT SUS CEIL	0.99	05 - VERY IRREGULAR	1.15
06 - NOT SUS WALL	0.99	06 - EXCEPTIONALLY IRREGULAR	1.25
07 - NT SUS CL+WL	1.00	**Bath Pricing - 07**	**Lump Sum**
08 - NT SUS NO IN	0.99	FIRST FULL BATH	$0
09 - ROOF INSUL	0.99	ADD'L FULL BATHS (EACH)	$0
10 - WALL INSUL	0.99	HALF BATHS (EACH)	$0
11 - RF+WL INS	1.00	ADD'L HALF BATHS (EACH)	$0
12 - NO CEIL INS	0.99	ADDITIONAL FIXTURES (EACH)	$850

STRUCTURAL ELEMENT DATA – BUILDING GROUP 08 (HOTEL/MOTEL)			
Foundation	**Index**	**Exterior Wall**	**Index**
01 - PIER-NO FOUND WALL	0.93	01 - SDG MIN/NONE	0.85
02 - SLAB-RES	1.00	02 - CORR MTL LGT	0.91
03 - SLAB-COM	1.00	03 - COMP OR WLBD	0.91
04 - SLAB-ABV GRD	1.01	04 - SIDG NO SHTG	0.91
05 - CRAWL SPACE	1.00	05 - ASB SHNG/SDG	0.93
06 - SLAB-PLFM HT	1.02	06 - BOARD&BATTEN	0.93
07 - SLAB-STRUCT	1.03	07 - HARDIPLK/DSGN VINYL	1.02
08 - SLAB-HEAVY	1.03	08 - MASONITE	0.93
09 - HIGH RISE	1.03	09 - WOOD ON SHTG	0.93
10 - SPRD FTG-RAW	1.03	10 - ALUM,VINYL	1.00
11 - BASEMENT	1.00	11 - CONC BLOCK	1.01
Frame	**Index**	12 - STUCCO HRDCT	1.01
01 - NONE	0.94	13 - STUCCO SYNTH	0.95
02 - WOOD FRAME	1.00	14 - EXT PLYWOOD	0.93
03 - PRE FAB	0.95	15 - LOG	1.00
04 - MASONRY	1.00	16 - WOOD SHINGLE	0.95
05 - RNFRD CONC	1.05	17 - CEDAR,RDWD	1.00
06 - STEEL	1.10	19 - CEM BR/SPL B	1.01
07 - FRPRF STEEL	1.12	20 - JUMBO/COM BR	1.03
08 - SPECIAL	1.14	21 - FACE BRICK	1.03
Grade	**Index**	22 - STONE	1.05
E - MINIMUM	0.75	23 - CORR MTL HVY	0.91
D - FAIR	0.85	24 - MODULAR MTL	0.91
C - AVERAGE	1.00	25 - RNFR CONC	1.03
B - GOOD	1.25	26 - PRECAST PANL	1.05
A - VERY GOOD	1.45	27 - PREFIN MTL	1.00
X - EXCELLENT	1.65	28 - GLASS/THRML	1.10
XX - CUSTOM	2.00	18 - IMITATION STONE	1.03
Interior Wall	**Index**	**Fireplace**	**Lump Sum**
01 - MASONRY/MIN	1.00	14 - FIREPLACE	$6,000
02 - WALLBRD/WOOD	1.00	FP2 - PREFAB	$3,500
03 - PLASTER	1.00	FP3 - 1 STY SINGLE	$6,000
04 - PLYWOOD PANL	0.98	FP4 - 2 STY SGL/DB	$8,000
05 - SHEETROCK	1.00	FP5 - 2 OR MORE	$12,000
06 - CUSTOM	1.10	FP6 - MASSIVE	$12,000
		FP7 - >2 MASSIVE	$18,000

STRUCTURAL ELEMENT DATA – BUILDING GROUP 08 (HOTEL/MOTEL)			
Roof Structure	**Index**	**Floor Types**	**Index**
01 - FLAT	1.00	01 - NONE/SUBFLOOR ONLY	0.93
02 - SHED	1.00	02 - PLYWOOD/LINO	0.95
03 - GABLE	1.00	03 - CONC FIN	0.98
04 - HIP	1.00	04 - CONC TAPERED EPXY CTD	0.99
05 - GAMBRL/MANS	1.00	05 - ASPHALT TILE	0.98
06 - IRR/CATHDRL	1.04	06 - VINYL TL/SHT	0.98
07 - WOOD TRUSS	1.00	09 - PINE/SOFT WD	1.03
09 - BAR JOIST/RF	1.00	10 - TRRZO MONO	1.04
10 - STL FRM/TRS	1.03	11 - CERAMIC TILE	1.03
11 - BOWSTR TRS	1.00	12 - HARDWOOD/HRT PINE	1.03
12 - REINFRC CONC	1.05	13 - PARQUET	1.04
13 - PRESTRS CONC	1.08	14 - CARPET	1.00
Roof Cover	**Index**	15 - HARD TILE/QRY/TRAVERT	1.04
01 - CRG SHEET METAL	0.95	16 - TRRZO STRP	1.04
02 - ROLL COMP	0.98	17 - PRECAST CONC	0.98
03 - ASP,COMP SHG	1.00	18 - SLATE	1.10
04 - BUILT-UP TAR&GRAVEL	1.00	19 - MARBLE	1.10
06 - ASBTS SHGL	1.00	08 - WOOD LAMINATE FLOOR	1.02
07 - CONC/CLAY TILE	1.05	07 - RUBBER/CORK	0.95
08 - CEDAR/WOOD SHAKE	1.04	**Heating System Type**	**Index**
09 - COPPR, ENAML	1.12	01 - HEAT - NONE	0.90
10 - ARCH SHGL	1.03	02 - BASEBOARD	0.95
11 - SLATE	1.10	03 - AIR-NO-DUCT	0.95
12 - METAL PREFIN	1.03	04 - AIR-DUCTED	1.00
05 - RUBBER SHINGLE/SYNTHETIC	1.00	05 - RADIANT CEIL	0.95
13 - RUBBER MEMBRANE	1.05	06 - HOT WATER	1.00
14 - METAL STND SEAM	1.05	07 - STEAM	1.00
Heat Fuel	**Index**	08 - RADIANT FLR	0.95
01 - NONE	0.95	09 - RADIANT WTR	1.00
02 - OIL/WD/COAL	0.98	10 - HEAT PUMP	1.00
03 - GAS	1.00	11 - AC-NONE	0.90
04 - ELECTRIC	1.00	12 - AC-WALL UNIT	1.00
05 - SOLAR/GEOTHRM	1.00	13 - AC-CENTRAL	1.00
		14 - AC-PCKD ROOF	1.00
		15- AC CHILD WAT	1.05

STRUCTURAL ELEMENT DATA – BUILDING GROUP 08 (HOTEL/MOTEL)			
Insulation	**Index**	**Shape/Design Factor**	**Index**
01 - SUS CEIL INS	1.00	01 - SQUARE	0.88
02 - SUS WALL INS	1.00	02 - RECTANGULAR	0.96
03 - SUS CL+WL IN	1.00	03 - SLIGHTLY IRREGULAR	1.00
04 - SUS NO INS	0.98	04 - IRREGULAR	1.06
05 - NOT SUS CEIL	0.98	05 - VERY IRREGULAR	1.15
06 - NOT SUS WALL	0.98	06 - EXCEPTIONALLY IRREGULAR	1.25
07 - NT SUS CL+WL	1.00	**Bath Pricing - 08**	**Lump Sum**
08 - NT SUS NO IN	0.96	FIRST FULL BATH	$0
09 - ROOF INSUL	0.98	ADD'L FULL BATHS (EACH)	$0
10 - WALL INSUL	1.00	HALF BATHS (EACH)	$0
11 - RF+WL INS	1.00	ADD'L HALF BATHS (EACH)	$0
12 - NO CEIL INS	0.95	ADDITIONAL FIXTURES (EACH)	$850

STRUCTURAL ELEMENT DATA – BUILDING GROUP 09 (STADIUM/ARENA)			
Foundation	**Index**	**Exterior Wall**	**Index**
01 - PIER-NO FOUND WALL	0.91	01 - SDG MIN/NONE	0.90
02 - SLAB-RES	1.00	02 - CORR MTL LGT	0.90
03 - SLAB-COM	1.00	03 - COMP OR WLBD	0.90
04 - SLAB-ABV GRD	1.02	04 - SIDG NO SHTG	0.90
05 - CRAWL SPACE	0.95	05 - ASB SHNG/SDG	0.94
06 - SLAB-PLFM HT	1.02	06 - BOARD&BATTEN	0.94
07 - SLAB-STRUCT	1.00	07 - HARDIPLK/DSGN VINYL	0.94
08 - SLAB-HEAVY	1.06	08 - MASONITE	0.94
09 - HIGH RISE	1.10	09 - WOOD ON SHTG	0.94
10 - SPRD FTG-RAW	1.00	10 - ALUM,VINYL	1.00
11 - BASEMENT	1.00	11 - CONC BLOCK	1.00
Frame	**Index**	12 - STUCCO HRDCT	1.02
01 - NONE	0.95	13 - STUCCO SYNTH	1.02
02 - WOOD FRAME	0.95	14 - EXT PLYWOOD	0.94
03 - PRE FAB	0.95	15 - LOG	1.00
04 - MASONRY	1.00	16 - WOOD SHINGLE	0.94
05 - RNFRD CONC	1.00	17 - CEDAR,RDWD	0.95
06 - STEEL	1.10	19 - CEM BR/SPL B	1.09
07 - FRPRF STEEL	1.15	20 - JUMBO/COM BR	1.10
08 - SPECIAL	1.10	21 - FACE BRICK	1.12
Grade	**Index**	22 - STONE	1.14
E - MINIMUM	0.75	23 - CORR MTL HVY	1.00
D - FAIR	0.85	24 - MODULAR MTL	0.90
C - AVERAGE	1.00	25 - RNFR CONC	1.03
B - GOOD	1.25	26 - PRECAST PANL	1.05
A - VERY GOOD	1.45	27 - PREFIN MTL	0.95
X - EXCELLENT	1.65	28 - GLASS/THRML	1.12
XX - CUSTOM	2.00	18 - IMITATION STONE	1.03
Interior Wall	**Index**	**Fireplace**	**Lump Sum**
01 - MASONRY/MIN	1.00	14 - FIREPLACE	$6,000
02 - WALLBRD/WOOD	1.00	FP2 - PREFAB	$3,500
03 - PLASTER	1.03	FP3 - 1 STY SINGLE	$6,000
04 - PLYWOOD PANL	1.03	FP4 - 2 STY SGL/DB	$8,000
05 - SHEETROCK	1.05	FP5 - 2 OR MORE	$12,000
06 - CUSTOM	1.10	FP6 - MASSIVE	$12,000
		FP7 - >2 MASSIVE	$18,000

STRUCTURAL ELEMENT DATA – BUILDING GROUP 09 (STADIUM/ARENA)			
Roof Structure	**Index**	**Floor Types**	**Index**
01 - FLAT	0.95	01 - NONE/SUBFLOOR ONLY	0.90
02 - SHED	0.95	02 - PLYWOOD/LINO	0.95
03 - GABLE	1.00	03 - CONC FIN	1.00
04 - HIP	1.00	04 - CONC TAPERED EPXY CTD	1.05
05 - GAMBRL/MANS	1.00	05 - ASPHALT TILE	1.00
06 - IRR/CATHDRL	1.05	06 - VINYL TL/SHT	1.00
07 - WOOD TRUSS	1.00	09 - PINE/SOFT WD	1.10
09 - BAR JOIST/RF	1.00	10 - TRRZO MONO	1.20
10 - STL FRM/TRS	1.03	11 - CERAMIC TILE	1.20
11 - BOWSTR TRS	1.00	12 - HARDWOOD/HRT PINE	1.15
12 - REINFRC CONC	1.05	13 - PARQUET	1.15
13 - PRESTRS CONC	1.08	14 - CARPET	1.10
Roof Cover	**Index**	15 - HARD TILE/QRY/TRAVERT	1.15
01 - CRG SHEET METAL	0.96	16 - TRRZO STRP	1.15
02 - ROLL COMP	0.96	17 - PRECAST CONC	1.00
03 - ASP,COMP SHG	1.00	18 - SLATE	1.20
04 - BUILT-UP TAR&GRAVEL	1.00	19 - MARBLE	1.25
06 - ASBTS SHGL	1.02	08 - WOOD LAMINATE FLOOR	1.02
07 - CONC/CLAY TILE	1.17	07 - RUBBER/CORK	1.00
08 - CEDAR/WOOD SHAKE	1.06	**Heating System Type**	**Index**
09 - COPPR, ENAML	1.15	01 - HEAT - NONE	1.00
10 - ARCH SHGL	1.01	02 - BASEBOARD	1.05
11 - SLATE	1.20	03 - AIR-NO-DUCT	1.12
12 - METAL PREFIN	1.04	04 - AIR-DUCTED	1.17
05 - RUBBER SHINGLE/SYNTHETIC	1.05	05 - RADIANT CEIL	1.06
13 - RUBBER MEMBRANE	1.10	06 - HOT WATER	1.05
14 - METAL STND SEAM	1.07	07 - STEAM	1.05
Heat Fuel	**Index**	08 - RADIANT FLR	1.06
01 - NONE	0.95	09 - RADIANT WTR	1.05
02 - OIL/WD/COAL	0.98	10 - HEAT PUMP	1.10
03 - GAS	1.00	11 - AC-NONE	1.00
04 - ELECTRIC	1.00	12 - AC-WALL UNIT	1.00
05 - SOLAR/GEOTHRM	1.00	13 - AC-CENTRAL	1.06
		14 - AC-PCKD ROOF	1.15
		15- AC CHLD WAT	1.15

STRUCTURAL ELEMENT DATA – BUILDING GROUP 09 (STADIUM/ARENA)			
Insulation	**Index**	**Shape/Design Factor**	**Index**
01 - SUS CEIL INS	1.09	01 - SQUARE	0.88
02 - SUS WALL INS	1.09	02 - RECTANGULAR	0.96
03 - SUS CL+WL IN	1.11	03 - SLIGHTLY IRREGULAR	1.00
04 - SUS NO INS	1.07	04 - IRREGULAR	1.06
05 - NOT SUS CEIL	1.07	05 - VERY IRREGULAR	1.15
06 - NOT SUS WALL	1.07	06 - EXCEPTIONALLY IRREGULAR	1.25
07 - NT SUS CL+WL	1.09	**Bath Pricing - 09**	**Lump Sum**
08 - NT SUS NO IN	1.05	FIRST FULL BATH	$0
09 - ROOF INSUL	1.00	ADD'L FULL BATHS (EACH)	$0
10 - WALL INSUL	1.00	HALF BATHS (EACH)	$0
11 - RF+WL INS	1.02	ADD'L HALF BATHS (EACH)	$0
12 - NO CEIL INS	0.98	ADDITIONAL FIXTURES (EACH)	$850

STRUCTURAL ELEMENT DATA – BUILDING GROUP 10 (GOVERNMENT/INSTITUTIONAL)			
Foundation	**Index**	**Exterior Wall**	**Index**
01 - PIER-NO FOUND WALL	0.93	01 - SDG MIN/NONE	0.90
02 - SLAB-RES	1.00	02 - CORR MTL LGT	0.91
03 - SLAB-COM	1.00	03 - COMP OR WLBD	0.91
04 - SLAB-ABV GRD	1.02	04 - SIDG NO SHTG	0.91
05 - CRAWL SPACE	1.00	05 - ASB SHNG/SDG	0.93
06 - SLAB-PLFM HT	1.04	06 - BOARD&BATTEN	0.95
07 - SLAB-STRUCT	1.05	07 - HARDIPLK/DSGN VINYL	1.05
08 - SLAB-HEAVY	1.06	08 - MASONITE	0.95
09 - HIGH RISE	1.10	09 - WOOD ON SHTG	0.93
10 - SPRD FTG-RAW	1.00	10 - ALUM,VINYL	1.00
11 - BASEMENT	1.00	11 - CONC BLOCK	1.00
Frame	**Index**	12 - STUCCO HRDCT	1.02
01 - NONE	1.00	13 - STUCCO SYNTH	0.95
02 - WOOD FRAME	1.00	14 - EXT PLYWOOD	0.93
03 - PRE FAB	0.97	15 - LOG	1.00
04 - MASONRY	1.00	16 - WOOD SHINGLE	0.93
05 - RNFRD CONC	1.05	17 - CEDAR,RDWD	1.00
06 - STEEL	1.10	19 - CEM BR/SPL B	1.02
07 - FRPRF STEEL	1.12	20 - JUMBO/COM BR	1.04
08 - SPECIAL	1.10	21 - FACE BRICK	1.04
Grade	**Index**	22 - STONE	1.08
E - MINIMUM	0.75	23 - CORR MTL HVY	1.00
D - FAIR	0.85	24 - MODULAR MTL	0.91
C - AVERAGE	1.00	25 - RNFR CONC	1.03
B - GOOD	1.25	26 - PRECAST PANL	1.05
A - VERY GOOD	1.45	27 - PREFIN MTL	1.00
X - EXCELLENT	1.65	28 - GLASS/THRML	1.10
XX-CUSTOM	2.00	18 - IMITATION STONE	1.03
Interior Wall	**Index**	**Fireplace**	**Lump Sum**
01 - MASONRY/MIN	0.98	14 - FIREPLACE	$6,000
02 - WALLBRD/WOOD	0.95	FP2 - PREFAB	$3,500
03 - PLASTER	1.00	FP3 - 1 STY SINGLE	$6,000
04 - PLYWOOD PANL	1.00	FP4 - 2 STY SGL/DB	$8,000
05 - SHEETROCK	1.00	FP5 - 2 OR MORE	$12,000
06 - CUSTOM	1.10	FP6 - MASSIVE	$12,000
		FP7 - >2 MASSIVE	$18,000

STRUCTURAL ELEMENT DATA – BUILDING GROUP 10 (GOVERNMENT/INSTITUTIONAL)			
Roof Structure	**Index**	**Floor Types**	**Index**
01 - FLAT	0.95	01 - NONE/SUBFLOOR ONLY	0.93
02 - SHED	0.95	02 - PLYWOOD/LINO	0.95
03 - GABLE	1.00	03 - CONC FIN	0.98
04 - HIP	1.00	04 - CONC TAPERED EPXY CTD	1.00
05 - GAMBRL/MANS	1.00	05 - ASPHALT TILE	0.96
06 - IRR/CATHDRL	1.04	06 - VINYL TL/SHT	1.00
07 - WOOD TRUSS	1.00	09 - PINE/SOFT WD	1.03
09 - BAR JOIST/RF	1.03	10 - TRRZO MONO	1.04
10 - STL FRM/TRS	1.03	11 - CERAMIC TILE	1.03
11 - BOWSTR TRS	1.00	12 - HARDWOOD/HRT PINE	1.03
12 - REINFRC CONC	1.05	13 - PARQUET	1.04
13 - PRESTRS CONC	1.08	14 - CARPET	1.00
Roof Cover	**Index**	15 - HARD TILE/QRY/TRAVERT	1.05
01 - CRG SHEET METAL	0.98	16 - TRRZO STRP	1.05
02 - ROLL COMP	0.98	17 - PRECAST CONC	0.99
03 - ASP,COMP SHG	1.00	18 - SLATE	1.10
04 - BUILT-UP TAR&GRAVEL	1.00	19 - MARBLE	1.13
06 - ASBTS SHGL	1.00	08 - WOOD LAMINATE FLOOR	1.02
07 - CONC/CLAY TILE	1.06	07 - RUBBER/CORK	0.95
08 - CEDAR/WOOD SHAKE	1.04	**Heating System Type**	**Index**
09 - COPPR, ENAML	1.10	01 - HEAT - NONE	0.91
10 - ARCH SHGL	1.03	02 - BASEBOARD	0.95
11 - SLATE	1.10	03 - AIR-NO-DUCT	0.99
12 - METAL PREFIN	1.03	04 - AIR-DUCTED	1.00
05 - RUBBER SHINGLE/SYNTHETIC	1.00	05 - RADIANT CEIL	0.95
13 - RUBBER MEMBRANE	1.05	06 - HOT WATER	1.00
14 - METAL STND SEAM	1.05	07 - STEAM	1.00
Heat Fuel	**Index**	08 - RADIANT FLR	0.95
01 - NONE	0.95	09 - RADIANT WTR	0.95
02 - OIL/WD/COAL	0.98	10 - HEAT PUMP	1.00
03 - GAS	1.00	11 - AC-NONE	0.97
04 - ELECTRIC	1.00	12 - AC-WALL UNIT	0.98
05 - SOLAR/GEOTHRM	1.00	13 - AC-CENTRAL	1.00
		14 - AC-PCKD ROOF	1.00
		15 - AC-CHLD WAT	1.05

STRUCTURAL ELEMENT DATA – BUILDING GROUP 10 (GOVERNMENT/INSTITUTIONAL)			
Insulation	**Index**	**Shape/Design Factor**	**Index**
01 - SUS CEIL INS	1.00	01 - SQUARE	0.88
02 - SUS WALL INS	1.00	02 - RECTANGULAR	0.96
03 - SUS CL+WL IN	1.00	03 - SLIGHTLY IRREGULAR	1.00
04 - SUS NO INS	0.96	04 - IRREGULAR	1.06
05 - NOT SUS CEIL	0.98	05 - VERY IRREGULAR	1.15
06 - NOT SUS WALL	0.98	06 - EXCEPTIONALLY IRREGULAR	1.25
07 - NT SUS CL+WL	1.00	**Bath Pricing - 10**	**Lump Sum**
08 - NT SUS NO IN	0.96	FIRST FULL BATH	$0
09 - ROOF INSUL	0.98	ADD'L FULL BATHS (EACH)	$0
10 - WALL INSUL	0.98	HALF BATHS (EACH)	$0
11 - RF+WL INS	1.00	ADD'L HALF BATHS (EACH)	$0
12 - NO CEIL INS	0.96	ADDITIONAL FIXTURES (EACH)	$850

3 Building Type Codes and Base Rates

Base rates for the various Building Groups were derived through a comparison and analysis of data collected through three sources: 1) market research conducted in-house, 2) Marshall & Swift cost services, and 3) surveys conducted to gather estimates from local builders and contractors.

Building Use Code	Description	Base Price	Building Category	Depreciation Expected Life
01	SINGLE FAMILY RESIDENTIAL	90.00	01 - Single-Fam	65
01T	SINGLE FAMILY RES TINY HOME	100.00	01 - Single-Fam	65
01X	ESTATE HOME	200.00	01- Single-Fam	65
02	MANUFACTURED HOME-DOUBLEWIDE	50.00	02 - Manufactured	30
03	MANUFACTURED HOME-SINGLEWIDE	46.00	02 - Manufactured	30
04	CONDOMINIUM < 7 STORIES	78.00	03 - Attached Res	65
05	PATIO HOME	85.00	01 - Single-Fam	65
06	CONDO HI-RISE > 6 STORIES	92.00	03 - Attached Res	65
07	SINGLE FAMILY HISTORICAL PROPERTY	114.00	01 - Single-Fam	65
08	SINGLE FAMILY MODULAR	78.00	01 - Single-Fam	65
09	TOWNHOUSE	85.00	03 - Attached Res	65
10	RETAIL	110.00	07 - Commercial	40

Building Use Code	Description	Base Price	Building Category	Depreciation Expected Life
10C	RETAIL CONDO	110.00	07 - Commercial	40
11	CONVENIENCE STORE	150.00	07 - Commercial	40
11M	MINI MART CONVENIENCE STORE	138.00	07 - Commercial	40
11R	RETAIL/CONVENIENCE STORE	115.00	07 - Commercial	40
12A	CAR WASH SELF-SERVICE TYPE	75.00	06 - Warehouse	45
12B	CAR WASH DRIVE-THRU TYPE	95.00	06 - Warehouse	45
12C	CAR WASH FULL-SERVICE TYPE	117.00	06 - Warehouse	45
13A	DRUG STORE	140.00	07 - Commercial	40
13B	DEPARTMENT STORE	123.00	07 - Commercial	40
13D	DISCOUNT/DEPARTMENT STORE	100.00	07 - Commercial	40
13W	WAREHOUSE DISCOUNT STORE	85.00	07 - Commercial	40
14	SUPERMARKET	105.00	07 - Commercial	40
15	SHOPPING MALL	180.00	07 - Commercial	40
16	STRIP SHOPPING CENTER	115.00	07 - Commercial	40
17A	OFFICE A CLASS	115.00	04 - Office	50
17B	OFFICE B CLASS	115.00	04 - Office	50
17C	OFFICE C CLASS	115.00	04 - Office	50
17CL	CREATIVE LOFT	115.00	04 - Office	50
17M	OFFICE MODULAR	82.00	04 - Office	50
17OM	OFFICE & MULTI-FAMILY	115.00	04 - Office	50
17OR	OFFICE & RETAIL	115.00	04 - Office	50
17R	SFR TO OFFICE	90.00	04 - Office	50
17X	OFFICE/RETAIL/MULTI-FAMILY	115.00	04 - Office	50
18A	OFFICE HI-RISE A > 4 STORIES	161.00	04 - Office	50
18B	OFFICE HI-RISE B > 4 STORIES	161.00	04 - Office	50
19	MEDICAL/DENTAL	142.00	04 - Office	50
19A	VETERINARIAN OFFICE	140.00	04 - Office	50
20	MEDICAL CONDOMINIUM	131.00	04 - Office	50
21	RESTAURANT	123.00	07 - Commercial	40
21A	CAFETERIA	115.00	07 - Commercial	40
22	FAST FOOD	150.00	07 - Commercial	40
22A	FAST FOOD/CONVENIENCE STORE	135.00	07 - Commercial	40
22M	MOTOR SPORTS GARAGE	75.00	07 - Commercial	40
23	BANK	170.00	04 - Office	50
24	OFFICE CONDOMINIUM	115.00	04 - Office	50

Building Use Code	Description	Base Price	Building Category	Depreciation Expected Life
27	DEALERSHIP SHOWROOM	100.00	06 - Warehouse	45
27M	MINI SPECIALTY AUTOMOTIVE	150.00	07 - Commercial	40
27S	AUTO SERVICE CENTER	75.00	07 - Commercial	40
28	PARKING GARAGE	51.00	06 - Warehouse	45
28B	PARKING GARAGE > 75,000 SF	51.00	06 - Warehouse	45
28U	UNDERGROUND PARKING	90.00	06 - Warehouse	45
29	MINI WAREHOUSE	55.00	06 - Warehouse	45
29B	MINI WAREHOUSE HIG RISE	65.00	06 – Warehouse	45
30	LAB- RESEARCH	176.00	04 - Office	50
31	DAYCARE	114.00	04 - Office	50
32	THEATRE	125.00	07 - Commercial	40
33	NIGHTCLUB/LOUNGE	110.00	07 - Commercial	40
33M	MICRO BREWERY/WINERY	100.00	07 - Commercial	40
34	BOWLING ALLEY/SKATING RINK	80.00	07 - Commercial	40
34R	RECREATIONAL CENTER	130.00	07 - Commercial	40
35	COMMERCIAL CONDOMINIUM	70.00	07 - Commercial	40
36	ANIMAL DAY SPA	90.00	07 - Commercial	40
37	HOTEL LODGING HI-RISE > 6 STORIES	100.00	08 - Hotel/Motel	55
37B	BED & BREAKFEST	110.00	08 - Hotel/Motel	55
37E	HOTEL/EXTENDED STAY	110.00	08 - Hotel/Motel	55
37F	HOTEL FULL SERVICE	160.00	08 - Hotel/Motel	55
37L	HOTEL LIMITED SERVICE	125.00	08 - Hotel/Motel	55
37M	MOTEL	90.00	08 - Hotel/Motel	55
38	FURNITURE SHOWROOM	85.00	07 - Commercial	40
39	MOTEL/HOTEL LODGING < 7 STORIES	110.00	08 - Hotel/Motel	55
40	INDUSTRIAL	55.00	06 - Warehouse	45
40R	INDUSTRIAL RESEARCH & DEVELOPMENT	75.00	06 - Warehouse	45
41	LIGHT MANUFACTURING	55.00	06 - Warehouse	45
41B	LIGHT MANUFACTURING > 75,000 SF	45.00	06 - Warehouse	45
42	HEAVY MANUFACTURING	115.00	06 - Warehouse	45
43	LUMBER YARD	25.00	06 - Warehouse	45
44	PACKING PLANT	55.00	06 - Warehouse	45
46	BOTTLING PLANT	55.00	06 – Warehouse	45
47	WAREHOUSE CONDOMINIUM	55.00	06 - Warehouse	45
48	WAREHOUSE	55.00	06 - Warehouse	45

Building Use Code	Description	Base Price	Building Category	Depreciation Expected Life
48B	WAREHOUSE LARGE	55.00	06 - Warehouse	45
48D	WAREHOUSE DISTRIBUTION	60.00	06 - Warehouse	45
48F	INDUSTRIAL FLEX	65.00	06 - Warehouse	45
48M	MEGA WAREHOUSE	50.00	06 - Warehouse	45
49	PREFAB WAREHOUSE	30.00	06 - Warehouse	45
50	COMPUTER DATA CENTER	135.00	06 - Warehouse	45
51	COLD STORAGE	80.00	06 - Warehouse	45
52	TRANSIT/TRUCK WAREHOUSE	66.00	06 - Warehouse	45
53	SERVICE GARAGE	55.00	06 - Warehouse	45
54	OFFICE/ WAREHOUSE	35.00	06 - Warehouse	45
55	STADIUM	250.00	09 - Stadium Arena	30
56	ARENA	100.00	09 - Stadium Arena	30
57	SPORTS ENTERTAINMENT CENTER	130.00	07 - Commercial	40
60G	APARTMENT-GARDEN <=3 STORIES	115.00	05 - Multi-Family	55
60H	APARTMENT-HIRISE >=7 STORIES	140.00	05 - Multi-Family	55
60M	MID RISE APARTMENT 4-6 STORIES	115.00	05 - Multi-Family	55
60T	APARTMENT-TOWNHOUSE	100.00	05 - Multi-Family	55
62	DUPLEX-TRIPLEX	80.00	01 - Single-Fam	65
63A	DORMITORY	110.00	05 - Multi-Family	55
63S	STUDENT HOUSING	100.00	05 - Multi-Family	55
64	LIBRARY	140.00	04 - Office	50
65	STABLE	66.00	06 - Warehouse	45
69	GROUP HOME	96.00	01 - Single-Fam	65
71	CHURCH	125.00	10 - Govt-Inst	50
74A	ASSISTED LIVING	110.00	05 - Multi-Family	55
74C	CONTINUING CARE	125.00	05 - Multi-Family	55
74E	HOME FOR THE ELDERLY	110.00	05 - Multi-Family	55
74N	NURSING HOME/CONVALESCENT HOSPITAL	144.00	05 - Multi-Family	55
76	FUNERAL HOME/MORTUARY	110.00	04 - Office	50
77	CLUB-LODGE	100.00	04 - Office	50
78	COUNTRY CLUB	135.00	04 - Office	50
80C	AIRPORT CONTROL CENTER	532.00	04 - Office	50
80H	HANGAR-AIRCRAFT	36.00	06 - Warehouse	45

Building Use Code	Description	Base Price	Building Category	Depreciation Expected Life
80M	HANGAR-MAINTENANCE	55.00	06 - Warehouse	45
80T	AIRPORT TERMINAL	115.00	07 - Commercial	40
82	CONVENTION CENTER	134.00	04 - Office	50
83PU	SCHOOL-PUBLIC	136.00	10 - Govt-Inst	50
83PV	SCHOOL-PRIVATE	136.00	10 - Govt-Inst	50
84	COLLEGE/UNIVERSITY	152.00	10 - Govt-Inst	50
85PU	HOSPITAL-PUBLIC	217.00	04 - Office	50
85PV	HOSPITAL-PRIVATE	217.00	04 - Office	50
85S	SURGICAL CENTER	214.00	04 - Office	50
85U	URGENT CARE FACILITY	130.00	04 - Office	50
86	COUNTY	148.00	10 - Govt-Inst	50
87	STATE	148.00	10 - Govt-Inst	50
88	FEDERAL	148.00	10 - Govt-Inst	50
89	MUNICIPAL	148.00	10 - Govt-Inst	50
90	FITNESS CENTER/HEALTH CLUB	115.00	07 - Commercial	40
91	UTILITY/MECHANICAL EQUIPMENT BUILDING	95.00	10 - Govt-Inst	50
91CS	CELLULAR EQUIPMENT SHED - STATE CERTIFIED	0.00		
92	JAIL	150.00	10 - Govt-Inst	50
95	CLUB HOUSE HOA NO VALUE	0.00		
98	NO VALUE IMPROVMENT	0.00		

4 Depreciation Schedules

Depreciation is the loss in value of an object, relative to its replacement cost new, reproduction cost new, or original cost, whatever the cause of the loss in value. Depreciation schedules are tables used in mass appraisal that show the typical loss in value at various ages or effective ages for different types of properties.

Building Group	Building Group Name	(Approx) % of Depr. Per Year	Max Depr.	Max Age
01	Single-Fam	1.00%	80.00%	65
02	Manufactured	3.00%	90.00%	30
03	Attached Res	1.00%	80.00%	65
04	Office	1.60%	80.00%	50
05	Multi-Family	1.45%	80.00%	55
06	Warehouse	1.78%	80.00%	45
07	Commercial	2.00%	80.00%	40
08	Hotel/Motel	1.45%	80.00%	55
09	Stadium/Arena	3.00%	90.00%	30
10	Govt-Inst	1.60%	80.00%	50

Table A depicts a **65 Year Life Depreciation Schedule** for:

- Building Group 01 – Single Family Residence
- Building Group 03 – Condominium

Table A					
Effect. Age	Total Depr.	Percent Good	Effect. Age	Total Depr.	Percent Good
0	1	99	33	33	67
1	1	99	34	34	66
2	2	98	35	35	65
3	3	97	36	36	64
4	4	96	37	37	63
5	5	95	38	38	62
6	6	94	39	39	61
7	7	93	40	40	60
8	8	92	41	41	59
9	9	91	42	42	58
10	10	90	43	43	57

Table A					
Effect. Age	**Total Depr.**	**Percent Good**	**Effect. Age**	**Total Depr.**	**Percent Good**
11	11	89	44	44	56
12	12	88	45	45	55
13	13	87	46	46	54
14	14	86	47	47	53
15	15	85	48	48	52
16	16	84	49	49	51
17	17	83	50	50	50
18	18	82	51	51	49
19	19	81	52	52	48
20	20	80	53	53	47
21	21	79	54	54	46
22	22	78	55	55	45
23	23	77	56	56	44
24	24	76	57	57	43
25	25	75	58	58	42
26	26	74	59	59	41
27	27	73	60	60	40
28	28	72	61	61	39
29	29	71	62	62	38
30	30	70	63	63	37
31	31	69	64	64	36
32	32	68	65	65	35

Table B depicts a **30 Year Life Depreciation Schedule** for:

- Building Group 02 – Manufactured Home (Double Wide)
- Building Group 09 – Stadium/Arena

Table B					
Effect. Age	**Amount of Depr.**	**Percent Good**	**Effect. Age**	**Amount of Depr.**	**Percent Good**
0	1	99	20	60	40
1	3	97	21	63	37
2	6	94	22	66	34
3	9	91	23	69	31
4	12	88	24	72	28
5	15	85	25	75	25
6	18	82	26	78	22
7	21	79	27	81	19
8	24	76	28	84	16
9	27	73	29	87	13
10	30	70	30	90	10
11	33	67			
12	36	64			
13	39	61			
14	42	58			
15	45	55			
16	48	52			
17	51	49			
18	54	46			
19	57	43			

Table C depicts a **50 Year Life Depreciation Schedule** for:

- Building Group 04 – Office

Table C							
Effect. Age	**Condition**	**Amount of Depr.**	**Percent Good**	**Effect. Age**	**Condition**	**Amount of Depr.**	**Percent Good**
0	AV - AVERAGE	1	99	26	AV - AVERAGE	41.6	58.4
0	HR - HIGH RISE	1	99	26	HR - HIGH RISE	37.44	62.56
1	AV - AVERAGE	1.6	98.4	27	AV - AVERAGE	43.2	56.8
1	HR - HIGH RISE	1.44	98.56	27	HR - HIGH RISE	38.88	61.12
2	AV - AVERAGE	3.2	96.8	28	AV - AVERAGE	44.8	55.2
2	HR - HIGH RISE	2.88	97.12	28	HR - HIGH RISE	40.32	59.68
3	AV - AVERAGE	4.8	95.2	29	AV - AVERAGE	46.4	53.6
3	HR - HIGH RISE	4.32	95.68	29	HR - HIGH RISE	41.76	58.24
4	AV - AVERAGE	6.4	93.6	30	AV - AVERAGE	48	52
4	HR - HIGH RISE	5.76	94.24	30	HR - HIGH RISE	43.2	56.8
5	AV - AVERAGE	8	92	31	AV - AVERAGE	49.6	50.4
5	HR - HIGH RISE	7.2	92.8	31	HR - HIGH RISE	44.64	55.36
6	AV - AVERAGE	9.6	90.4	32	AV - AVERAGE	51.2	48.8
6	HR - HIGH RISE	8.64	91.36	32	HR - HIGH RISE	46.08	53.92
7	AV - AVERAGE	11.2	88.8	33	AV - AVERAGE	52.8	47.2
7	HR - HIGH RISE	10.08	89.92	33	HR - HIGH RISE	47.52	52.48
8	AV - AVERAGE	12.8	87.2	34	AV - AVERAGE	54.4	45.6
8	HR - HIGH RISE	11.52	88.48	34	HR - HIGH RISE	48.96	51.04
9	AV - AVERAGE	14.4	85.6	35	AV - AVERAGE	56	44
9	HR - HIGH RISE	12.96	87.04	35	HR - HIGH RISE	50.4	49.6
10	AV - AVERAGE	16	84	36	AV - AVERAGE	57.6	42.4
10	HR - HIGH RISE	14.4	85.6	36	HR - HIGH RISE	51.84	48.16
11	AV - AVERAGE	17.6	82.4	37	AV - AVERAGE	59.2	40.8
11	HR - HIGH RISE	15.84	84.16	37	HR - HIGH RISE	53.28	46.72
12	AV - AVERAGE	19.2	80.8	38	AV - AVERAGE	60.8	39.2
12	HR - HIGH RISE	17.28	82.72	38	HR - HIGH RISE	54.72	45.28
13	AV - AVERAGE	20.8	79.2	39	AV - AVERAGE	62.4	37.6
13	HR - HIGH RISE	18.72	81.28	39	HR - HIGH RISE	56.16	43.84
14	AV - AVERAGE	22.4	77.6	40	AV - AVERAGE	64	36
14	HR - HIGH RISE	20.16	79.84	40	HR - HIGH RISE	57.6	42.4
15	AV - AVERAGE	24	76	41	AV - AVERAGE	65.6	34.4

15	HR - HIGH RISE	21.6	78.4	41	HR - HIGH RISE	59.04	40.96
16	AV - AVERAGE	25.6	74.4	42	AV - AVERAGE	67.2	32.8
16	HR - HIGH RISE	23.04	76.96	42	HR - HIGH RISE	60.48	39.52
17	AV - AVERAGE	27.2	72.8	43	AV - AVERAGE	68.8	31.2
17	HR - HIGH RISE	24.48	75.52	43	HR - HIGH RISE	61.92	38.08
18	AV - AVERAGE	28.8	71.2	44	AV - AVERAGE	70.4	29.6
18	HR - HIGH RISE	25.92	74.08	44	HR - HIGH RISE	63.36	36.64
19	AV - AVERAGE	30.4	69.6	45	AV - AVERAGE	72	28
19	HR - HIGH RISE	27.36	72.64	45	HR - HIGH RISE	64.8	35.2
20	AV - AVERAGE	32	68	46	AV - AVERAGE	73.6	26.4
20	HR - HIGH RISE	28.8	71.2	46	HR - HIGH RISE	66.24	33.76
21	AV - AVERAGE	33.6	66.4	47	AV - AVERAGE	75.2	24.8
21	HR - HIGH RISE	30.24	69.76	47	HR - HIGH RISE	67.68	32.32
22	AV - AVERAGE	35.2	64.8	48	AV - AVERAGE	76.8	23.2
22	HR - HIGH RISE	31.68	68.32	48	HR - HIGH RISE	69.12	30.88
23	AV - AVERAGE	36.8	63.2	49	AV - AVERAGE	78.4	21.6
23	HR - HIGH RISE	33.12	66.88	49	HR - HIGH RISE	70.56	29.44
24	AV - AVERAGE	38.4	61.6	50	AV - AVERAGE	80	20
24	HR - HIGH RISE	34.56	65.44	50	HR - HIGH RISE	72	28
25	AV - AVERAGE	40	60				
25	HR - HIGH RISE	36	64				

Table D depicts a **55 Year Life Depreciation Schedule** for:

- Building Group 05 – Multi-Family
- Building Group 08 – Hotel/Motel

Table D

Effect. Age	Amount of Depr.	Percent Good	Effect. Age	Amount of Depr.	Percent Good
0	1	99	28	40.6	59.4
1	1.45	98.55	29	42.05	57.95
2	2.9	97.1	30	43.5	56.5
3	4.35	95.65	31	44.95	55.05
4	5.8	94.2	32	46.4	53.6
5	7.25	92.75	33	47.85	52.15
6	8.7	91.3	34	49.3	50.7
7	10.15	89.85	35	50.75	49.25
8	11.6	88.4	36	52.2	47.8
9	13.05	86.95	37	53.65	46.35
10	14.5	85.5	38	55.1	44.9
11	15.95	84.05	39	56.55	43.45
12	17.4	82.6	40	58	42
13	18.85	81.15	41	59.45	40.55
14	20.3	79.7	42	60.9	39.1
15	21.75	78.25	43	62.35	37.65
16	23.2	76.8	44	63.8	36.2
17	24.65	75.35	45	65.25	34.75
18	26.1	73.9	46	66.7	33.3
19	27.55	72.45	47	68.15	31.85
20	29	71	48	69.6	30.4
21	30.45	69.55	49	71.05	28.95
22	31.9	68.1	50	72.5	27.5
23	33.35	66.65	51	73.95	26.05
24	34.8	65.2	52	75.4	24.6
25	36.25	63.75	53	76.85	23.15
26	37.7	62.3	54	78.3	21.7
27	39.15	60.85	55	79.75	20.25

Table E depicts a **45 Year Life Depreciation Schedule** for:

- Building Group 06 – Warehouse

Table E					
Effect. Age	**Amount of Depr.**	**Percent Good**	**Effect. Age**	**Amount of Depr.**	**Percent Good**
0	1	99	23	40.94	59.06
1	1.78	98.22	24	42.72	57.28
2	3.56	96.44	25	44.5	55.5
3	5.34	94.66	26	46.28	53.72
4	7.12	92.88	27	48.06	51.94
5	8.9	91.1	28	49.84	50.16
6	10.68	89.32	29	51.62	48.38
7	12.46	87.54	30	53.4	46.6
8	14.24	85.76	31	55.18	44.82
9	16.02	83.98	32	56.96	43.04
10	17.8	82.2	33	58.74	41.26
11	19.58	80.42	34	60.52	39.48
12	21.36	78.64	35	62.3	37.7
13	23.14	76.86	36	64.08	35.92
14	24.92	75.08	37	65.86	34.14
15	26.7	73.3	38	67.64	32.36
16	28.48	71.52	39	69.42	30.58
17	30.26	69.74	40	71.2	28.8
18	32.04	67.96	41	72.98	27.02
19	33.82	66.18	42	74.76	25.24
20	35.6	64.4	43	76.54	23.46
21	37.38	62.62	44	78.32	21.68
22	39.16	60.84	45	80	20

Table F depicts a **40 Year Life Depreciation Schedule** for:

- Building Group 07 – Commercial

Table F					
Effect. Age	**Amount of Depr.**	**Percent Good**	**Effect. Age**	**Amount of Depr.**	**Percent Good**
0	1	99	21	42	58
1	2	98	22	44	56
2	4	96	23	46	54
3	6	94	24	48	52
4	8	92	25	50	50
5	10	90	26	52	48
6	12	88	27	54	46
7	14	86	28	56	44
8	16	84	29	58	42
9	18	82	30	60	40
10	20	80	31	62	38
11	22	78	32	64	36
12	24	76	33	66	34
13	26	74	34	68	32
14	28	72	35	70	30
15	30	70	36	72	28
16	32	68	37	74	26
17	34	66	38	76	24
18	36	64	39	78	22
19	38	62	40	80	20
20	40	60			

Table G depicts a **50 Year Life Depreciation Schedule** for:

- Building Group 10 – Government/Institutional

Table G					
Effect. Age	**Amount of Depr.**	**Percent Good**	**Effect. Age**	**Amount of Depr.**	**Percent Good**
0	1	99	26	41.6	58.4
1	1.6	98.4	27	43.2	56.8
2	3.2	96.8	28	44.8	55.2
3	4.8	95.2	29	46.4	53.6
4	6.4	93.6	30	48	52
5	8	92	31	49.6	50.4
6	9.6	90.4	32	51.2	48.8
7	11.2	88.8	33	52.8	47.2
8	12.8	87.2	34	54.4	45.6
9	14.4	85.6	35	56	44
10	16	84	36	57.6	42.4
11	17.6	82.4	37	59.2	40.8
12	19.2	80.8	38	60.8	39.2
13	20.8	79.2	39	62.4	37.6
14	22.4	77.6	40	64	36
15	24	76	41	65.6	34.4
16	25.6	74.4	42	67.2	32.8
17	27.2	72.8	43	68.8	31.2
18	28.8	71.2	44	70.4	29.6
19	30.4	69.6	45	72	28
20	32	68	46	73.6	26.4
21	33.6	66.4	47	75.2	24.8
22	35.2	64.8	48	76.8	23.2
23	36.8	63.2	49	78.4	21.6
24	38.4	61.6	50	80	20
25	40	60			

5 Sub Area Factors

This table represents defined areas valued at a percentage of the building type.

SUB AREA FACTORS										
DESCRIPTION	**01**	**02**	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**10**
ALP - LOADING/CAN	0.25	0.25	0.25	0.25	0.25	0.50	0.25	0.25	0.50	0.25
AOF - OFFICE/AVG	1.00	1.00	1.00	1.20	1.20	1.75	1.00	1.20	1.75	1.20
APB - BSMT/APT	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
APT - APARTMENT	0.90	0.90	0.90	0.80	1.00	2.00	1.20	1.00	2.00	0.80
BAS - BASE	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CAN - CANOPY	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
CBM - BSMT, CELLAR	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
CDN - CANOPY, DET	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
CLP - LOADING/COV	0.40	0.40	0.40	0.40	0.40	0.70	0.40	0.40	0.70	0.40
FAT - ATTIC/FIN	0.55	0.50	0.55	0.50	0.50	0.50	0.50	0.50	0.50	0.50
FBM - BSMT/FIN	0.50	0.50	0.50	0.70	0.70	0.60	0.70	0.70	0.60	0.70
FCB - POOL HS FIN.	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
FCP - CRPT/FIN	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
FDC - CRPT/FIN/DET	0.30	0.30	0.30	0.40	0.40	0.50	0.40	0.40	0.50	0.40
FDG - GAR/FIN/DET	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
FDS - PCH/SC/FIN/D	0.40	0.40	0.40	0.50	0.50	0.60	0.50	0.50	0.60	0.50
FDU - UTIL/DET/FIN	0.60	0.60	0.60	0.60	0.60	0.80	0.70	0.60	0.80	0.60
FEP - PCH/ENC/FIN	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
FGB - GAR/FIN/BSMT	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
FGD - GAR/FIN/DOOR	0.40	0.40	0.40	0.55	0.65	0.75	0.65	0.65	0.75	0.55
FGR - GAR/FIN	0.40	0.40	0.40	0.50	0.50	0.70	0.60	0.50	0.70	0.50
FOF - OFFICE/FAIR	1.00	1.00	1.00	1.10	1.70	1.00	1.00	1.00	0.50	1.10
FOG - FIN/OVER/GAR	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
FOP - PCH/OPEN/FIN	0.35	0.35	0.35	0.30	0.35	0.50	0.35	0.35	0.50	0.30
FSP - PCH/SCR/FIN	0.40	0.40	0.40	0.50	0.50	0.60	0.50	0.50	0.60	0.50
FST - STORAGE/FIN	0.50	0.50	0.50	0.50	0.50	0.70	0.60	0.50	0.70	0.50
FUS - UPPR STY/FIN	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FUT - UTIL/FIN	0.50	0.50	0.50	0.50	0.50	0.70	0.60	0.50	0.70	0.50

SUB AREA FACTORS										
DESCRIPTION	**01**	**02**	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**10**
GOF - OFFICE/GOOD	1.10	1.10	1.10	1.30	1.30	2.25	1.40	1.30	2.25	1.30
LAB - LAB	1.00	1.00	1.00	1.00	1.00	3.00	1.75	1.00	3.00	1.00
LFG - LWR/LV/GAR/FIN	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
LFT - LOFT	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
LLF - LLEVEL/FIN	0.85	0.85	0.85	0.90	0.90	0.90	0.90	0.90	0.90	0.90
LLS - LLEVEL/SFIN	0.50	0.50	0.50	0.50	0.70	0.70	0.70	0.70	0.70	0.50
LLU - LLEVEL/UNF	0.25	0.25	0.25	0.30	0.30	0.30	0.30	0.30	0.30	0.30
LUG - LWR/LV/GAR/UNFN	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
MEZ - MEZZANINE	0.25	0.25	0.25	0.25	0.50	0.50	0.60	0.50	0.50	0.25
MFA - MANF/AVERAGE	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MFF - MANF/FAIR	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
MFG - MANF/GOOD	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
MFM - MANF/MIN	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
OEB - BSMT/OE/FIN	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
OFA - OFF CLS A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OFB - OFF CLS B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OFD - OFF CLS D	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OLA - OUT/LIV. AREA	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
POD - PERGOLA/DECK	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
POP - PERGOLA/PATIO	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
PTO - PATIO	0.05	0.05	0.05	0.05	0.05	0.10	0.05	0.05	0.10	0.05
SBM - BSMT/SFIN	0.35	0.35	0.35	0.50	0.50	0.60	0.50	0.50	0.60	0.50
SDA - STORE DSPLAY	1.00	1.00	1.00	1.00	1.00	1.60	1.00	1.00	1.60	1.00
SFB - BASE/SFIN	0.80	0.80	0.80	0.80	0.80	0.85	0.85	0.80	0.85	0.80
SKW - SKYWAY	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
SPA - SERV PROD	1.00	1.00	1.00	0.75	0.75	1.00	0.65	0.75	1.00	0.75
SRH - SUN ROOM HEAT	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
SRU - SUN ROOM UNHEAT	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
STP - STOOP	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
TER - TERRACE RAISED	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
UAT - ATTIC/UNF	0.20	0.20	0.20	0.10	0.10	0.10	0.10	0.10	0.10	1.00
UBM - BSMT/UNF	0.20	0.20	0.20	0.35	0.35	0.50	0.40	0.35	0.50	0.35

SUB AREA FACTORS										
DESCRIPTION	**01**	**02**	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**10**
UCB - CABANA	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
UCP - CRPT/UNF	0.15	0.15	0.15	0.15	0.15	0.40	0.15	0.15	0.40	0.15
UDC - CRPT/UNF/DET	0.20	0.20	0.20	0.30	0.30	0.30	0.30	0.30	0.30	0.30
UDG - GAR, UNFIN, DET	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
UDS - PCH/SC/F/DET	0.30	0.30	0.30	0.40	0.40	0.50	0.40	0.40	0.50	0.40
UDU - UTIL/UNF/DET	0.50	0.50	0.50	0.50	0.50	0.70	0.60	0.50	0.70	0.50
UEP - PCH/ENC/UNF	0.50	0.50	0.50	0.60	0.60	0.60	0.60	0.60	0.60	0.60
UGB - GAR/BSMT/UNF	0.30	0.30	0.30	0.35	0.35	0.50	0.40	0.35	0.50	0.35
UGD - GAR/UNF/DOOR	0.30	0.30	0.30	0.45	0.55	0.65	0.55	0.55	0.65	0.45
UGR - GAR/UNF	0.30	0.30	0.30	0.40	0.50	0.60	0.50	0.50	0.60	0.40
ULP - LOADING/UCOV	0.30	0.30	0.30	0.30	0.15	0.30	0.15	0.15	0.30	0.30
UOG - UNFIN/OVER/GAR	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
UOP - PCH/UNF	0.25	0.25	0.25	0.20	0.25	0.40	0.25	0.25	0.40	0.20
USP - PCH/SC/UNF	0.30	0.30	0.30	0.40	0.40	0.30	0.40	0.40	0.30	0.40
UST - STORAGE/UNF	0.40	0.40	0.40	0.40	0.40	0.60	0.50	0.40	0.60	0.40
UUS - UPPR STY/UNF	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
UUT - UTIL/UNF	0.40	0.40	0.40	0.45	0.45	0.65	0.55	0.45	0.65	0.45
WDD - WOOD DECK	0.20	0.20	0.20	0.15	0.20	0.50	0.20	0.20	0.50	0.15
WDS - WOOD/DCK/SYN	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40

Chapter 12
Special Features / Yard Items

The Special Features and Yard Items (SFYI) section of the AssessPro CAMA (computer assisted mass appraisal) system is used to indicate any special features about the building or any yard items (also called "outbuildings") located on the parcel.

This section can be used for a variety of functions. It generally contains: 1) the quantity and size of a special feature or yard item using a user-defined SFYI code, 2) a quality code and the condition of the item, 3) the year the item or feature was built or acquired, and 4) an automatic size-adjusted unit price or user-optional override price. The depreciation source may be taken from a defined table, manually entered, or automatically tied to the building depreciation.

Additional factors that can affect the valuation are the Land and Use Code, the Jurisdictional Factor, or the Neighborhood Code. Also, there is a section for attachments, where the user may indicate whether the item is attached to the main building, detached, or attached to an adjacent item.

Listed below are general definitions of some buildings listed as yard items to be used as appraisal guidelines:

- **Silo.** A tower or pit on a farm used to store grain.
- **Dugout.** Used to shelter players on athletic fields.
- **Freight elevator.** Used for carrying freight (also known as a service elevator).
- **Guard house.** Used to house a guard who controls the entrance to the grounds of a property.
- **Terrace.** A level paved area or platform.

As indicated in the above narrative, the appraisal staff may adjust the unit price as needed to reflect a particular SFYI item's quality and condition. Base unit prices for SFYI items were derived by comparing lump sum or per unit costs from the Marshall & Swift Cost Service and local building contractors.

The following four pages contain a list of SFYI Codes in alphabetic order, with the associated full descriptions, annual depreciation used, and the unit prices for use in the Mecklenburg County 2019 Revaluation. This is followed by a list of SFYI Codes in numeric order.

SFYI Codes – Alphabetic Order				
Full Description	**SFYI Code**	**Rate**	**UOM Code**	**Annual Depreciation**
ADDITION	16	$60	SF - Square Feet	3%
AIR COND	62	$12	SF - Square Feet	5%
APRON	89	$5	SF - Square Feet	5%
ASPHALT PAVING	09	$3.50	SF - Square Feet	5%
BACKSTOP	A1	$26	SF - Square Feet	5%
BALL COURT	A2	$5	SF - Square Feet	5%
BANK	A3	$110	SF - Square Feet	2%
BARBEQUE	C9	$7	SF - Square Feet	5%
BARN	25	$30	SF - Square Feet	3%
BATH HOUSE	60	$93	SF - Square Feet	5%
BLOCK WALL	58	$11	SF - Square Feet	5%
BOAT RAMP	81	$7	SF - Square Feet	5%
BOAT SLIP	94	$50	SF - Square Feet	5%
BOAT SLIP/COVERED	95	$65	SF - Square Feet	5%
BOATHOUSE	77	$28	SF - Square Feet	5%
BOILER ROOM	79	$11.50	SF - Square Feet	3%
BOOTH	A4	$100	SF - Square Feet	3%
BRICK BUILDING	A5	$29	SF - Square Feet	2%
BRICK STACK	63	$7	SF - Square Feet	3%
BRICK WALL	57	$20	SF - Square Feet	5%
BULK BARN	22	$20	SF - Square Feet	5%
BULK HEAD	83	$17	SF - Square Feet	5%
CAMPSITES	86	$17	SF - Square Feet	0%
CANOPY	39	$35	SF - Square Feet	1%
CAR WASH	75	$50	SF - Square Feet	5%
CARPORT	03	$18	SF - Square Feet	3%
CEMETARY LOT	59	$0	SF - Square Feet	0%
CHAIN LINK FENCE	06	$14	SF - Square Feet	5%
CLASSROOM	A6	$108	SF - Square Feet	3%
CLUB HOUSE	51	$95	SF - Square Feet	2%
COMMON AREA	31	$0	SF - Square Feet	0%
CONCRETE PAVING	10	$5	SF - Square Feet	5%
CONVEYER	48	$3.50	SF - Square Feet	3%
COOLER	73	$70	SF - Square Feet	5%
CRANEWAY	76	$60	SF - Square Feet	2%
CRIB	92	$4	SF - Square Feet	3%
CRYPT	64	$1,800	LEN - Length	0%

SFYI Codes – Alphabetic Order				
Full Description	**SFYI Code**	**Rate**	**UOM Code**	**Annual Depreciation**
DECK	88	$15	SF - Square Feet	5%
DEPOSIT BOX/CHUTE	C6	$0	SF - Square Feet	3%
DOCK	68	$35	SF - Square Feet	5%
DOCK BOARD	93	$1,500	LEN - Length	3%
DOCK LEVEL	31	$5500	EA- Per Each	3%
DRIVE-UP WINDOW	C7	$10	SF - Square Feet	3%
DRIVING RANGE	A7	$7,000	LEN - Length	1%
DUGOUT	A8	$15	SF - Square Feet	5%
DWELLING	66	$12	SF - Square Feet	5%
ELEV TANK	37	$20	SF - Square Feet	3%
ESCALATOR	53	$170,000	LEN - Length	2%
EST VALUE	EV	$0	SF - Square Feet	0%
EXEMPT	EX	$0	SF - Square Feet	0%
FIRE ESCAPE	70	$5,000	LEN - Length	2%
FRAME BUILDING	A9	$12	SF - Square Feet	3%
FREEZER	74	$100	SF - Square Feet	5%
FREIGHT ELEV	45	$28,000	LEN - Length	2%
GARAGE/DETACHED	02	$36	SF - Square Feet	2%
GAZEBO	55	$40	SF - Square Feet	3%
GOLF COURSE - PAR 3*	GCP3	$50,000	LEN - Length	1%
GOLF COURSE - PITCH & PUTT*	GCPP	$38,000	LEN - Length	1%
GOLF GREEN *	32	$160,000	EA - Per Each	1%
GRAIN BIN	21	$3	SF - Square Feet	5%
GREEN HOUSE	13	$35	SF - Square Feet	5%
GUARD HOUSE	65	$130	SF - Square Feet	3%
HANGER	84	$36	SF - Square Feet	3%
HOG PARLOR	27	$25	SF - Square Feet	5%
INDUSTRIAL SINK	61	$25	SF - Square Feet	2%
KENNEL	B1	$10	SF - Square Feet	5%
KILN	80	$20	SF - Square Feet	5%
KITCHEN ELEVATOR	B2	$16,000	LEN - Length	3%
LAUNDRY	50	$73	SF - Square Feet	2%
LEASEHOLD	72	$0	SF - Square Feet	2%
LOADING DOCK	40	$8	SF - Square Feet	3%
MARQUEE	C8	$0	SF - Square Feet	5%
METAL BLDG	69	$5	SF - Square Feet	5%

SFYI Codes – Alphabetic Order				
Full Description	**SFYI Code**	**Rate**	**UOM Code**	**Annual Depreciation**
MEZZANINE	98	$20	SF - Square Feet	2%
MILK BARN	82	$36	SF - Square Feet	3%
MINIATURE GOLF	85	$4,500	LEN - Length	1%
MISCELLANEOUS - 1 PCT DEPRECIATION PER YEAR	M1	$0	SF - Square Feet	1%
MISCELLANEOUS - 2 PCT DEPRECIATION PER YEAR	M2	$0	SF - Square Feet	2%
MISCELLANEOUS - 3 PCT DEPRECIATION PER YEAR	M3	$0	SF - Square Feet	3%
MISCELLANEOUS - 4 PCT DEPRECIATION PER YEAR	M4	$0	SF - Square Feet	4%
MISCELLANEOUS - 5 PCT DEPRECIATION PER YEAR	M5	$0	SF - Square Feet	5%
MISCELLANEOUS - NO DEPRECIATION	M0	$0	SF - Square Feet	0%
MOBILE HOME SPACE	15	$10,000	LEN - Length	0%
NICHE	71	$150	SF - Square Feet	0%
OFFICE	17	$60	SF - Square Feet	3%
OUTDOOR FIREPLACE	C10	$8,000	EA - Per Each	3%
OVERHEAD DOOR	49	$1,200	LEN - Length	3%
PACK BARN	23	$18	SF - Square Feet	3%
PARKING DECK	52	$24	SF - Square Feet	2%
PASSENGER ELEV	46	$25,500	LEN - Length	2%
PATIO	04	$5	SF - Square Feet	3%
PATIO/COVERED	91	$6	SF - Square Feet	5%
PENTHOUSE	18	$35	SF - Square Feet	3%
PETRO TANK	36	$2.95	SF - Square Feet	3%
PIER	67	$50	SF - Square Feet	5%
PIER/COVERED	96	$55	SF - Square Feet	5%
POOL-CONCRETE	07	$60	SF - Square Feet	5%
POOL-VINYL	08	$45	SF - Square Feet	5%
PORCH	11	$25	SF - Square Feet	3%
POULTRY HOUSE	29	$10	SF - Square Feet	4%
POULTRY/DARK	26	$20	SF - Square Feet	4%
PUMP HOUSE	90	$13	SF - Square Feet	3%
QUONSET	47	$13	SF - Square Feet	3%
RAIL SIDE	43	$110	SF - Square Feet	0%
RECREATION BLDG	B3	$47	SF - Square Feet	2%

SFYI Codes – Alphabetic Order				
Full Description	**SFYI Code**	**Rate**	**UOM Code**	**Annual Depreciation**
RESIDENTIAL PASSENGER ELEVATOR	46R	$10,000	EA - Per Each	2%
RESTROOM	B4	$137	SF - Square Feet	3%
RUNWAY	B5	$85	SF - Square Feet	2%
SCALE	38	$60	SF - Square Feet	5%
SHED	24	$10	SF - Square Feet	5%
SHELTER	97	$28	SF - Square Feet	3%
SHOP BUILDING	B6	$20	SF - Square Feet	3%
SILO	28	$8,500	LEN - Length	5%
SLAT HOUSE	B7	$.50	SF - Square Feet	5%
SPA/TUB	19	$75	SF - Square Feet	5%
SPRINKLER	42	$2	SF - Square Feet	3%
STABLE	99	$26	SF - Square Feet	3%
STAND	B8	$15	SF - Square Feet	5%
STORAGE	01	$17	SF - Square Feet	3%
STORAGE BIN	B9	$8	SF - Square Feet	3%
TANK BULK	56	$4.90	SF - Square Feet	3%
TENNIS COURT	12	$5	SF - Square Feet	5%
TERRACE	87	$14	SF - Square Feet	2%
TOBACCO BARN	20	$20	SF - Square Feet	5%
TRUCK WELL	78	$3,500	EA - Per Each	5%
TUNNEL	30	$200	SF - Square Feet	2%
UNDER CONST	UC	$0	SF - Square Feet	0%
VAPOR RECOVERY	C1	$0	SF - Square Feet	0%
VAULT DOOR	C5	$0	SF - Square Feet	2%
VAULT-MONEY	33	$200	SF - Square Feet	2%
VAULT-RECORD	34	$75	SF - Square Feet	2%
WALKWAY	C2	$12	SF - Square Feet	3%
WASTE BIN	C3	$10	SF - Square Feet	3%
WASTE TREATMENT	C4	$5	SF - Square Feet	3%
WATER TANK	35	$0	SF - Square Feet	3%
WELL/COMMERCIAL	H20C	$14,000	EA - Per Each	5%
WELL/PRIVATE	H2OR	$7,000	EA - Per Each	5%
WOOD FENCE	05	$20	SF - Square Feet	5%
YARD LIGHTS	44	$750	EA - Per Each	3%

Override price: For these particular units, the specifications can be customized and requiring material and construction over a range of costs. In most instances where overrides are used, the Assessor's office has contacted local contractors to obtain cost estimates used in the analysis of these special features. * Will be update after Golf Course Study us finalized

SFYI Codes – Numeric Order

SFYI Code	Full Description	SFYI Code	Full Description
01	STORAGE	40	LOADING DOCK
02	GARAGE/DETACHED	41	DOCK LEVEL
03	CARPORT	42	SPRINKLER
04	PATIO	43	RAIL SIDE
05	WOOD FENCE	44	YARD LIGHTS
06	CHAIN LINK FENCE	45	FREIGHT ELEV
07	POOL-CONCRETE	46	PASSENGER ELEV
08	POOL-VINYL	46R	RES. PASSENGER ELEVATOR
09	ASPHALT PAVING	47	QUONSET
10	CONCRETE PAVING	48	CONVEYER
11	PORCH	49	OVERHEAD DOOR
12	TENNIS COURT	50	LAUNDRY
13	GREEN HOUSE	51	CLUB HOUSE
15	MOBILE HOME SPACE	52	PARKING DECK
16	ADDITION	53	ESCALATOR
17	OFFICE	55	GAZEBO
18	PENTHOUSE	56	TANK BULK
19	SPA/TUB	57	BRICK WALL
20	TOBACCO BARN	58	BLOCK WALL
21	GRAIN BIN	59	CEMETARY LOT
22	BULK BARN	60	BATH HOUSE
23	PACK BARN	61	INDUSTRIAL SINK
24	SHED	62	AIR COND
25	BARN	63	BRICK STACK
26	POULTRY/DARK	64	CRYPT
27	HOG PARLOR	65	GUARD HOUSE
28	SILO	66	DWELLING
29	POULTRY HOUSE	67	PIER
30	TUNNEL	68	DOCK/RESIDENTIAL
31	COMMON AREA	69	METAL BLDG
32	GOLF GREEN	70	FIRE ESCAPE
33	VAULT-MONEY	71	NICHE
34	VAULT-RECORD	72	LEASEHOLD
35	WATER TANK	73	COOLER

SFYI Codes – Numeric Order			
SFYI Code	**Full Description**	**SFYI Code**	**Full Description**
36	PETRO TANK	74	FREEZER
37	ELEV TANK	75	CAR WASH
38	SCALE	76	CRANEWAY
39	CANOPY	77	BOATHOUSE
78	TRUCK WELL	B2	KITCHEN ELEVATOR
79	BOILER ROOM	B3	RECREATION BLDG
80	KILN	B4	RESTROOM
81	BOAT RAMP	B5	RUNWAY
82	MILK BARN	B6	SHOP BUILDING
83	BULK HEAD	B7	SLAT HOUSE
84	HANGER	B8	STAND
85	MINIATURE GOLF	B9	STORAGE BIN
86	CAMPSITES	C1	VAPOR RECOVERY
87	TERRACE	C2	WALKWAY
88	DECK	C3	WASTE BIN
89	APRON	C4	WASTE TREATMENT
90	PUMP HOUSE	C5	VAULT DOOR
91	PATIO/COVERED	C6	DEPOSIT BOX/CHUTE
92	CRIB	C7	DRIVE-UP WINDOW
93	DOCK BOARD	C8	MARQUEE
94	BOAT SLIP	C9	BARBEQUE
95	BOAT SLIP/COVERED	C10	OUTDOOR FIREPLACE
96	PIER/COVERED	EV	EST VALUE
97	SHELTER	EX	EXEMPT
98	MEZZANINE	GCP3	GOLF COURSE - PAR 3
99	STABLE	GCPP	GOLF COURSE - PITCH & PUTT
A1	BACKSTOP	H20C	WELL/COMMERCIAL
A2	BALL COURT	H2OR	WELL/PRIVATE
A3	BANK	M0	MISCELLANEOUS - NO DEPRECIATION
A4	BOOTH	M1	MISCELLANEOUS - 1 PCT DEPRECIATION PER YEAR
A5	BRICK BUILDING	M2	MISCELLANEOUS - 2 PCT DEPRECIATION PER YEAR
A6	CLASSROOM	M3	MISCELLANEOUS - 3 PCT DEPRECIATION PER YEAR
A7	DRIVING RANGE	M4	MISCELLANEOUS - 4 PCT DEPRECIATION PER YEAR

SFYI Codes – Numeric Order			
SFYI Code	**Full Description**	**SFYI Code**	**Full Description**
A8	DUGOUT	M5	MISCELLANEOUS - 5 PCT DEPRECIATION PER YEAR
A9	FRAME BUILDING	UC	UNDER CONST
B1	KENNEL		

Appendix

1 Definitions of Building Improvement Codes

DEFINITIONS OF BUILDING IMPROVEMENT CODES	
01	**Single Family Residential**
Dwellings designed for occupancy by one family. This code is used for all individual unit single family detached structures located inside of municipal boundaries or platted subdivisions. Dwellings designed for occupancy by one family. A detached stick built dwelling with open yards situated on a recorded lot of record described by plat or metes and bounds.	
01X	**Single Family Residential – Exceptional/Estates**
A detached, stick built dwelling with open yards situated on a recorded lot of record described by plat or metes and bounds with superior quality finishes.	
01T	**Single Family Residential Tiny Homes**
A detached, stick built dwelling with open yards situated on a recorded lot of record described by plat or metes and bounds with a square footage under 1,000 square feet but typically less than 500 square feet.	
02	**Manufactured Home (Multi Sectional)**
Factory-produced multi-sectional housing transported to a building site owned by or under a long-term lease by the owner of the home and set up on a permanent foundation with the axel and tongue removed. (Homes built after June 15, 1976 must meet the federal Manufactured Home Construction and Safety Standards.)	
03	**Manufactured Home (Single Wide)**
Factory-produced single-sectional housing transported to a building site owned by or under a long-term lease by the owner of the home and set up on a permanent foundation with the axel and tongue removed. Homes built after June 15, 1976 must meet the federal Manufactured Home Construction and Safety Standards.	
04	**Condominium**
Dwellings designed for occupancy by one family. This code is used for single family properties where there is a divided interest in a multi-unit building. The owner has fee ownership of the unit and joint ownership of the land and common areas. Individual land interest is to be listed and valued as one unit, with the unit value being derived by the land residual technique or through abstraction.	
05	**Patio Home**
Dwellings designed for occupancy by one family. These are single family structures that are located on small lots and connected to neighboring properties by porches or patios. The land is typically owned by the owner of the unit. Individual lots are to be listed and valued by the land residual technique or through abstraction.	

DEFINITIONS OF BUILDING IMPROVEMENT CODES	
06	**Condominium High Rise**
Dwellings designed for occupancy by one family. These are single family properties with a divided interest in a multi-unit building; the interest is both vertical and horizontal. The owner has fee ownership of the unit and joint ownership of the land and common areas. (Individual land interest is to be listed and valued as one unit, with the unit value being derived by the land residual technique or through abstraction. High rise buildings are to be listed with special footings and structural slabs.)	
07	**Single Family Historic Property**
Dwellings designed for occupancy by one family. This code is to be used for single family structures located in a Historical District or designated as a historical structure.	
08	**SFR Modular**
A dwelling unit which is constructed in compliance with the State Building Code and composed of components substantially assembled in an off-site manufacturing plant and transported to the building site for final assembly on a permanent foundation. (These units will have HUD modular home labels inside the structure.)	
09	**Townhouse Single Family**
Dwellings designed for occupancy by one family, where there is a divided interest in a multi-unit building. The owner has fee ownership of the unit and the land it sits on, and joint ownership of the common areas. (This property is similar to a condominium with the exception that the land is owned by the owner of the unit instead of the land being jointly owned. Individual lots are to be listed and valued by the land residual technique or through abstraction.)	
10	**Retail**
Structures designed for retail sales and display; usually has display or decorative fronts. This code may be used for various types of retail stores not otherwise described in the manual, including secondary or junior department stores with limited merchandise lines, specialty shops, and general occupancy.	
10C	**Retail Condo**
Structures designed for retail sales and display; usually has display or decorative fronts where there is a divided interest in a multi-unit building. The owner has fee ownership of the unit and joint ownership of the land and common areas. Individual land interest is to be listed and valued as one unit, with the unit value being derived by the land residual technique or through abstraction.	
11	**Convenience Store**
Small food stores, typically 1,300 to 3,000 square feet, with limited interior facilities; usually sell gas, with multiple pumps covered by a large canopy. Above Average and Custom qualities include Expanded Convenience Stores with quick serve food service, typically 2,800 to 3,600 square feet.	

DEFINITIONS OF BUILDING IMPROVEMENT CODES	
11M	**Mini-Mart Convenience Store**

Mini-mart food stores are very small convenience outlets, typically 1,000 to 2,000 square feet, that cater primarily to a transient trade for self-service snack foods and beverages. The better stores will have public restrooms and limited hot or deli food preparation and service areas. Lower qualities are minimum code throughout. Often associated with big box stores or located near off-ramps.

11R	**Retail Convenience Store**

Custom and Excellent qualities include Hyper Convenience Stores which may include sit-down restaurants, pharmacies, bakery, etc., typically 4,000 square feet or more. These stores typically attract truckers and are located near high traffic areas. Fast food/convenience stores have a national chain fast food restaurant as a tenant, with recognizable exterior design on one side of the building.

12A	**Car Wash – Self-Service**

Small coin-operated car wash for self-serve user operation, usually an open bay structure with enclosed equipment room constructed of masonry, steel panels, or wood frame with siding or stucco. The costs include concrete floors and sump, roofing, and bay wall finish commensurate with the quality. Low cost includes only partial bay walls, while the Good quality includes completely enclosed bays. The following are not included in the costs: wash equipment, signage, and yard improvements.

12B	**Car Wash – Drive Thru**

A small, single-car self-drive-thru roll-over robot-type automated tunnel car wash, usually constructed of masonry, steel panels, or wood frame with siding or stucco. Costs include the basic building drive-thru shell and equipment area with concrete floor, sump, and basic electrical exterior cloth or pressure wash typically found at convenience stores. List plumbing fixtures only for restrooms; rough plumbing to tunnel is included in the base rate, and all equipment in the tunnel should be listed as equipment on the personal property listing.

12C	**Car Wash – Full Service**

A full-service automatic or tunnel car wash service building, usually constructed of masonry, steel panels, or wood frame with siding or stucco. The costs include the finished office/sales area, locker and restrooms, and basic equipment room commensurate with the quality. List plumbing fixtures only for restrooms; rough plumbing to tunnel is included in the base rate, and all equipment in the tunnel should be listed as equipment on the personal property listing.

13A	**Drug Store**

These buildings include both small neighborhood pharmacies and the large chain discount-type stores with a variety of merchandise departments, including convenience foods containing built-in refrigerators. The better qualities have some storefront and well-finished interiors. Some storage and office areas commensurate with the overall quality of the building are included.

DEFINITIONS OF BUILDING IMPROVEMENT CODES	
13B	**Department Store**

These buildings are often two or more stories designed to display and sell multiple lines of merchandise. The front elevations usually vary with the quality of the store. The higher quality department stores have large, ornate display areas and fronts while, at the Average quality level, the displays are relatively smaller.

Most department stores have elevators and escalators. Floor coverings are a mixture of carpet and resilient tile, with the better qualities utilizing high-traffic type floor finishes such as terrazzo. Department stores generally have combined heating and cooling systems and good store lighting. Allowances are included for suitable office and employee areas and restroom facilities.

13D	**Discount/Department Store**

These buildings are generally built as large, open shell one-story structures. Even though departments commonly divide areas in better discount stores, they generally do not match the quality of construction found in department stores. The better qualities will have some storefront and well-finished interiors. Some storage and office areas commensurate with the overall quality of the building are included. The building is broken into departments separated by walk ways and may include a grocery section.

This code is to be used for stores such as Target, Wal-Mart, and other similar stores. This code is to be used for large chain stores that have been adapted for a secondary use or other similar structures. Typical occupants are Big Lots, Rug and Home, Restore, Habitat Stores, and other similar stores.

13W	**Discount Warehouse Store**

These structures are of warehouse construction with minimal interior partitioning. Membership stores typically fall into this category. Low quality structures are unfinished shell types with minimum code throughout. Better qualities have partitioned offices. This code is to be used for stores such as BJ's, Sam's, Garden Ridge, and other similar stores. Stores that are of warehouse construction with minimal interior partitions and finish. This code is to be used for stores such as Lowes, Home Depot, and other similar stores.

14	**Super Market**

These are large self-serve retail food stores that often handle several lines of other merchandise. Items that are generally classed as real property are included in the costs, i.e., built-in refrigerators, cold rooms, and ancillary cooling equipment. Other items found in this occupancy, which are classed as personal property or trade fixtures, are not included in the costs.

In this occupancy, 75 to 80 percent of the total store is devoted to space for display with the remainder of the floor space being utilized for storage, pre-packaging areas, and coolers. This category may include local food stores or large chain stores such as Harris Teeter, Lowes, Bi-Lo, and other similar stores. Most supermarkets range in size from about 25,000 to 65,000 square feet and greater.

DEFINITIONS OF BUILDING IMPROVEMENT CODES	
15	**Shopping Center – Mall**

(Also called Regional Shopping Centers) Enclosed Shopping Mall structures which have three components: major anchor stores, small strip shops, and the mall concourse. Typically include a food court and individual restaurants. Typically, each structure type of the three major components is individually priced, based on its own characteristics. However, Concord Mills Mall is a major outlet mall and as such is made up of many major and minor anchor stores. Therefore, it is listed with all three components grouped together. The real property pricing of Concord Mills considers the stores to be unfinished and all finish work, whether real or personal, which are paid for by the lessee through direct investment or tenant allowances are assessed to the tenant.

The typical (not limited to) tenant mixes for Community Shopping Centers are:

- Retail – 47% – All general retail and specialty occupancies
- Discount – 19% – Large drug, furniture, hardware, garden, etc.
- Food – 8% – Market, convenience-specialty foods, delicatessen, bakery, florist, etc.
- Food service – 8% – Restaurant, lounge, cafeteria, fast food outlets, etc.
- Commercial – 4% – Office, financial, medical, post office, etc.
- Personal services – 3% – Laundry, barber, beauty, repair shops, health clubs, etc.
- Recreational – 4% – Theater, bowling, skating, clubhouse, day care, etc.
- Miscellaneous – 7% – Storage and center service areas (office, security, etc.)

17A	**Office – Class A**
17B	**Office – Class B**
17C	**Office – Class C**

These buildings are designed for commercial occupancies and are typically subdivided into smaller units for tenant use. The interior finish may have plaster or drywall and, depending on the quality, utilize glass and special wall covering.

Floor finishes are carpet, terrazzo or vinyl. Ceiling finishes vary with the quality. Luminous ceilings and high intensity fluorescent lighting are found in the better qualities.

In the restrooms, both the number and quality of fixtures generally correspond to the quality of the building. Typically, floor finishes in the restroom areas are ceramic tile. At all quality levels, metal partitions and commercial plumbing fixtures can be found.

Most offices have a combined heating and cooling system while the lower cost structures have heating only.

The following are not included in the costs: signs and office furnishings or equipment. General office structures, this code may be used for any office building that is not specifically defined in this schedule. For purposes of using the income models, these are divided into 17A, 17B, and 17C.

DEFINITIONS OF BUILDING IMPROVEMENT CODES	
17M	**Office Modular**
These buildings are designed using prefab metal and prefab framing. Typically of modular construction, where tongue and axils have been removed and have a permanent foundation. These relocatable buildings are designed as office structures, typically found in school facilities, and are generally smaller and utilitarian in scope. The lower qualities are generally composed of light mobile/modular structures with minimal finishes. The better qualities will have good modular frames with well-finished walls and floors, good acoustical ceilings, good lighting, cabling, and plumbing fixtures.	
17R	**Office Conversion Residential**
These are typically single family residential construction and converted into offices, retail-service type home. Located in an area transitioning into a more commercial setting.	
17OM	**Mixed Use – Office & Multi-Family**
An office property containing a combination of uses where office is the dominant component. A property that includes office and multi-family uses.	
17OR	**Mixed Use – Office & Retail**
An office property containing a combination of uses where office is the dominant component. A property that includes office and retail uses.	
17X	**Mixed Use – Office, Retail & Multi-Family**
An office property containing a combination of uses where office is the dominant component. A property that includes office, retail, and multi-family uses.	
17CL	**Creative/Loft**
Older retail/industrial buildings converted to office use and favored by creative users such as the entertainment industry, advertising agencies, and high technology firms. Interior finish typically reflects a deconstructive style that exposes the building's structural and mechanical systems. These buildings often have a shortage of parking because creative/high-tech users are more people intensive than the original users of the buildings.	
18A	**Office High Rise > 4**
18B	**Office High Rise > 4**
General office structures which are greater than four floors. High rise buildings are to be listed with special footings and structural slabs. For purposes of using the income models, these are divided into 18A and 18B.	
19	**Medical/Dental Building**
These are buildings designed for medical and/or dental services with examination and outpatient treatment. They include a reception/lobby area as well as individual rooms. Floor finishes are carpet or resilient flooring. Ceilings are acoustic tile and may be on a suspended system. Most use high-intensity fluorescent lighting, with the better qualities also having x-ray capabilities and built-in cabinetry. Individual treatment rooms may have plumbing and sinks. Restrooms are adequate to service the amount of personnel working in the building.	

DEFINITIONS OF BUILDING IMPROVEMENT CODES	
19A	**Veterinarian's Office**

These structures are designed for the medical and surgical care and treatment of small animals. Floor finishes are resilient covering. Wall finishes, either plaster or drywall, are plain. Good quality facilities also have some lab and x-ray areas. Individual cubicles or rooms within the structure include adequate lighting and plumbing.

20	**Medical Condo**

Structures used for medical or dental services where there is a divided interest in a multi-unit building. The owner has fee ownership of the unit and joint ownership of the land and common areas. Individual land interest is to be listed and valued as one unit, with the unit value being derived by the land residual technique or through abstraction.

21	**Restaurant**

These buildings are constructed for the preparation and service of food and beverages. They include a combination of the following areas: consumption, production, serving, receiving and storage, sanitation, non-dining and employee, and restrooms. Good restaurants include the typical chain operation and suburban neighborhood restaurants catering to regional trade. Average quality includes neighborhood restaurants or coffee shops or a lower priced franchise operation.

They include suitable office areas and all necessary plumbing and electrical connections for kitchen equipment with higher requirements for heating, cooling, and ventilation.

21A	**Cafeteria**

A building or portion of which is used as a restaurant where patrons receive a reduced level of service where they either serve themselves or are served at a serving line and dine in a dining hall or room. They include commercial as well as institutional facilities with a combination of the following areas: consumption, production, serving, receiving and storage, sanitation, and restrooms.

22	**Fast Food**

These structures have limited consumption or dining area in relation to the preparation area. Drive-up windows commensurate with the quality are included. The average fast food restaurant normally includes some outer roof overhang, but no large separate canopies and carports. The lower qualities are built to minimum building and health codes. The median area for a fast food restaurant is 3,150 square feet with a range of 1,375 to 4,250 square feet. The seating space is normally less than 45 percent of the total area. These buildings have suitable office space and restroom facilities. This building type includes businesses such as McDonalds, Burger King, Wendy's, and other similar stores.

22A	**Fast Food/Convenience**

This is a combination of the fast food restaurant and the convenience store located on separate sides of one building. Usually with an open passage way from one business to the other to allow for a one-stop shopping experience.

DEFINITIONS OF BUILDING IMPROVEMENT CODES	
22M	**Motor Sports Garage**

Structures designed for development and construction of race cars. The service area is listed as the base (BAS) area and offices (AOF, GOF, etc.) are designated and described appropriately. These are considered a specialty type building.

23	**Bank**

This occupancy also includes savings and loan institutions where the design is similar to a bank. Exteriors have some ornamentation at all quality levels with the better qualities using stone, ornamental concrete, brick, and/or solar glass. The interiors have plaster or drywall with special detailing in some areas. There are some office and storage areas. The office area may be open and located in the same general area as the main banking services. Floor finishes usually are terrazzo, carpet, vinyl composition tile, or vinyl sheet flooring. These buildings have drive-up windows, night depositories, surveillance systems, and vaults. Restroom interiors of the higher quality levels are tiled and have high quality commercial fixtures. Lighting is usually recessed fluorescent fixtures. This code is to be used for all bank, savings and loan, or similar buildings, and includes the cost of a built-in vault.

24	**Office Condo**

Office properties where there is a divided interest in a multi-unit building. The owner has fee ownership of the unit and joint ownership of the land and common areas. Individual land interest is to be listed and valued as one unit with the unit value being derived by the land residual technique or through abstraction.

27	**Dealership Showrooms**

These structures include showroom-office and parts-service facilities. Because of the wide range in mix of facilities (15 percent to 55 percent showroom) and qualities, it is best to price each area individually, using the appropriate showroom and service repair garage costs. The large open areas used for display typically have storefronts. There are also some office and storage areas next to the sales cubicles. The service area is designed primarily for vehicular repair and maintenance. Better qualities will have more showroom space. Display and sales areas for vehicle sale. This area will also include rest rooms, waiting areas, and break rooms.

27S	**Auto Service Center**

Structures designed and used for vehicular repair and maintenance. This can include vehicle dealerships and auto service centers. The service area is listed as the base (BAS) area and offices (AOF, GOF, etc.) or store display (SDA) areas are designated and described appropriately. List with special footings to account for pits and lifts.

27M	**Mini Specialty Automotive**

Small structures designed for fast and specialized vehicular maintenance. The service area is listed as the base (BAS) area and offices (AOF, GOF, etc.) or store display (SDA) areas are designated and described appropriately. List with special footings to account for pits and lifts.

DEFINITIONS OF BUILDING IMPROVEMENT CODES	
28	**Parking Garage**
Built above grade, these structures are designed for live load storage of autos. They commonly have either no exterior walls or partial exterior walls and are usually Class A or B buildings (in some cases, Class S). Only the better quality structures have some small office and service areas. There is low-level lighting and adequate plumbing for office restrooms and service areas. The quality of these structures can be influenced by their design characteristics. Ramp designs vary from separate and exclusive ramps, which separate the travel and the parking/un-parking operations, to continuous sloping floor or adjacent ramps, which integrate both the travel and parking operations within the same space. The type of ramp used is determined based on the site's shape and dimensions and the parking demand characteristics.	
28U	**Parking Garage – Underground**
These structures, like occupancy 345 (Parking Structure), are made for automobile storage. They are built below grade and contain a number of levels. Generally, the grade level roof is a park or other public facility. Structural steel or a reinforced concrete frame provides most of the support for the parking structure. All floors are heavy concrete and the roof is load bearing. Ventilation systems are common. They normally have small office and service facilities. Ramp designs vary from separate and exclusive ramps, which separate the travel and the parking/un-parking operations, to continuous sloping floor or adjacent ramps, which integrate both the travel and parking operations within the same space. The type of ramp used is determined based on the site's shape and dimensions and the parking demand characteristics.	
29	**Mini Warehouse**
Structures/facilities/properties used for the storage of goods, and/or materials divided into cubicle/booths for individuals or businesses rental. Ancillary activities might include the sell or rental of boxes, locks, packaging supplies or similar items, as well as truck and or trailer rental. Often there will be some office/living space for security personnel and/or property management. Also referred to as self-storage facilities	
29B	**Mini Warehouse – High Rise**
Multi-story structures/facilities/properties used for storing goods and/or materials divided into cubicles/booths for individual or businesses rental. Often include optional climate control. Ancillary activities might include the sale or rental of boxes, locks, packaging supplies, or similar items, as well as truck and/or trailer rental. Often there will be some office/living space for security personnel and/or property management. Also called multistory self-storage facilities.	
30	**Laboratory/Research**
Structures that provide controlled conditions for product development, scientific or technological research. Laboratories include commercial and research and development facilities exclusive of lab equipment. Interiors will have clean surfaces with good enamels, vinyl and glazed tiles, and conductive flooring commensurate with the quality level. Costs include laboratory plumbing, electrical and cabinetry, but not fume hoods. The better qualities are highly ornamented with good offices, testing areas, research, and numerous workstations. They typically use higher requirements for heating, cooling, and ventilation.	

DEFINITIONS OF BUILDING IMPROVEMENT CODES	
31	**Day Care Center**
Structures designed and/or used for the care and supervision of children and/or handicapped individuals on a day to day basis.	
32	**Theater**
These structures are designed or used for cinemas or live stage presentations. Cinemas include little to no stage area, restroom facilities, a projection area, and sound system; also projection area, lighting, and sound systems commensurate with the overall quality. Live stage theaters are designed for live shows and include a stage matching the construction quality. Includes restroom and live stage dressing room facilities, entrances, and suitable office and cloakroom facilities. Lighting and sound systems commensurate with the overall quality are also included.	
32A	**Auditorium**
Structures designed or used for mass seating and stage for vocal and visual presentations.	
33	**Lounge/Nightclub**
Structures designed and/or used as an entertainment venue that include the service of beverages and/or foods and is distinguished from bars, pubs and taverns by the live music, DJ booths and dance floors. (They are typically larger facilities than bars, with entertainment floors and stages, and with the better qualities containing full kitchens.)	
33M	**Micro Brewery/Winery**
Structures and/or properties designed and/or used that produce relatively small quantities of beer/wine (or root beer). Some ancillary on-site service and consumption are common, but the principle function for this use type is for properties used in the production of beer/wine.	
34	**Bowling Alley/Skating Rink**
This occupancy includes plumbing and electrical connections for restaurants, bars, billiard rooms, restrooms, and miscellaneous rooms within the basic structure. Side aisles are typically found in service areas behind the pinsetters and adjacent to each lane along exterior walls. Includes partitions for offices and auxiliary facilities commensurate with quality. Areas designated for spectator seating and promenades vary in size depending on design characteristics and personnel capacities. Bowling alleys typically have some type of combined heating and cooling system. Floor finishes are usually a combination of carpet and resilient floor coverings. Skating (ice/roller) rinks are typically lower-quality auditoriums modified for that particular use. Cost are connections, but do not include any equipment or fixtures.	
34R	**Recreation Center**
These buildings are complete municipal multi-sport recreational complexes distinguished by large gymnasium/auditorium-type structures. These multipurpose buildings will include gym/ basketball, handball/racquetball, bowling and other sport courts, rinks, varied swimming/ natatorium facilities, running tracks, as well as exercise, craft, game, and other social/ multipurpose exercise rooms. The number of varied amenities and support facilities (locker room, sauna, snack bars, etc.) will vary with the quality level. Equipment and trade fixtures associated with these amenities are not included.	

DEFINITIONS OF BUILDING IMPROVEMENT CODES	
36	**Day Spa Center – Animal**

This occupancy is predominantly for the overnight and weekend boarding of small animals with fully enclosed play areas. Wash and grooming areas with better quality facilities have limited examination and treatment areas and may include larger public animal control.

37	**Hotel/Motel High Rise > 3**

Buildings over three stories constructed with multiple sleeping units without individual kitchen facilities and a lobby. Full service hotels will have meeting rooms, ballroom, banquet, dinning, and lounge space and will be listed at a higher than average quality index. High rise buildings are to be listed with special footings and structural slabs.

37B	**Bed & Breakfast**

These residential-type buildings are designed for transient boarding and are more family in character than lodges or motels.

37E	**Hotel – Extended Stay**

Buildings are three stories or less with sleeping units and kitchen facilities. Motels include offices, laundry, lobby, and some recreation space commensurate with the size and the quality of the facility. These structures are built of either masonry or wood frame construction. Low-end budget facilities are single rooms with low-cost finishes throughout and include a minimal kitchenette area. Better qualities are all-suite sleeping rooms with good kitchens, and include paneling and wallpaper in the common areas.

37F	**Hotel – Full Service**

These structures are three or more stories high, having multiple sleeping units without individual kitchen facilities. Where the ground floor is entirely divided into stores and shops. The quality of the hotel is determined primarily from the interior refinements. The best quality hotels have a large amount of high-cost wall cover and floor finish in the open and public areas. Sleeping rooms also contain high-cost wall cover as part of the interior finish. The size of the support facilities—e.g., restaurants, bars, meeting spaces—is largely dependent on the size and capacity of the facility rather than the quality of the improvements. Lobby, lounges, restaurants, ballrooms, meeting rooms, kitchens, laundry, storage facilities, and office areas are commensurate with the building class and quality chosen.

37L	**Hotel – Limited Service**

Originally defined as a hotel without restaurant or banquet facilities, the services and amenities offered to guests of limited-service hotels are typically simple. The range of amenities might include a business center, a fitness room, a guest laundry facility, a market pantry, an indoor and/or outdoor pool and whirlpool, and small meeting rooms.

DEFINITIONS OF BUILDING IMPROVEMENT CODES	
37M	**Motel**

These buildings are three stories or less, and consist mainly of sleeping units without kitchens. Motels also include offices, lobby, and some coffee shop or restaurant and meeting rooms commensurate with the size and the quality of the facility. These structures are built of either masonry or wood frame construction. Interiors are of plaster or drywall with wall coverings. Paneling and wallpaper are included in the better qualities in the common areas and sleeping rooms. Bath areas have ceramic tile on the floors and walls and some counters. Floor coverings in the common areas are, in most cases, carpet with some resilient flooring found in the kitchen, storage, and work areas.

38	**Furniture Showroom**

These structures are typical of the large walk-through furniture outlets with a semi-finished showroom and large carryout warehouse as one complete facility. Low quality structures are unfinished shell types with minimum code throughout. Better qualities have partitioned offices, similar to discount stores.

40	**Industrial**

Structures designed for manufacturing at a level between light and heavy manufacturing. This code is used on older mill-type buildings such as buildings originally built as textile mills. The manufacturing area is listed as the base (BAS) area and offices (AOF, GOF, etc.) are designated and described appropriately.

41	**Light Manufacturing**

Structures designed for typical light manufacturing processes. These buildings are designed to shelter manufacturing processes. There is an average amount of office and support space commensurate with the quality included, typically for light industrials, between 4 and 25 percent. This includes suitable locker, break, and lunchroom facilities to accommodate the personnel load. Offices may be single story or stacked. Single-story offices may have a softwood flooring storage mezzanine overhead as part of the office area costs.

Exterior finishes are masonry or concrete, typically tilt-up panels or metal siding. Frames are typically light open metal or glulam structures. The interiors, except for the office area, will usually have little or no interior finish. Fluorescent lighting is found throughout both the office and shop with the office area having better quality fixtures. The costs include all the power leads to the building and industrial sewer and drainage lines, but do not include the following: power panel, power wiring or industrial piping to the fixtures, equipment used in the manufacturing process, hoists, or cranes. The manufacturing area is listed as the base (BAS) area and offices (AOF, GOF, etc.) are designated and described appropriately.

DEFINITIONS OF BUILDING IMPROVEMENT CODES	
42	**Heavy Manufacturing**

Structures designed for heavy manufacturing processes. Buildings designed for heavy specialized manufacturing processes and power or utility service plants. There is an average amount of office or support space commensurate with the quality included, typically for heavy industrials, between 4 and 12 percent. Heavy industrials are characterized by their typically heavy frames, crane-ways, walls, and floors. The structural support will greatly influence the cost and quality selection.

Exterior finishes are thick masonry or concrete, or heavy gauge metal siding. The interiors, except for the office, stores, or shop areas, usually have minimal interior partitions and are large open areas. Lighting may consist of many heavy-duty or spark-proof fixtures.

The costs include all the power leads to the building and industrial sewer and drainage lines, but do not include the following: power panels, power wiring or industrial piping to the fixtures, equipment used in the manufacturing process, hoists, cranes, or personnel lifts. The manufacturing area is listed as the base (BAS) area and offices (AOF, GOF, etc.) are designated and described appropriately.

43	**Lumber Storage**

Structures designed for storage of lumber. Horizontal lumber storage buildings are generally designed as a shed with an open front and only three exterior walls. These wood framed structures have wood, metal or plaster (stucco) exterior wall finishes. Floors are unfinished with the quantity of the racks varying with the quality of the structure. The costs include storage racks.

44	**Packing Plant/Food Process**

Structures designed for processing of consumable products made for human consumption. They are characterized by heavy frames, walls, footings, floors, and plumbing and electrical loads typical of specialized processes. The manufacturing area is listed as the base (BAS) area and offices (AOF, GOF, etc.) are designated and described appropriately.

47	**Warehouse Condo**

Structures designed for storage or distribution where there is a divided interest in a multi-unit building. The owner has fee ownership of the unit and joint ownership of the land and common areas. Individual land interest is to be listed and valued as one unit, with the unit value being derived by the land residual technique or through abstraction. The storage area is listed as the base (BAS) area and offices (AOF, GOF, etc.) are designated and described appropriately.

48	**Warehouse**

Structures designed for storage. Typically, a large open space with few partitions and small percentage of office area. The storage area is listed as the base (BAS) area and offices (AOF, GOF, etc.) are designated and described appropriately.

DEFINITIONS OF BUILDING IMPROVEMENT CODES	
48D	**Warehouse – Distribution**

Structures designed for distribution of products. Typically, more partitions and a larger percentage of office area than storage warehouses accommodate the breakdown and transfer of products. They have more plumbing and lighting than storage warehouses in order to service the large personnel load. The storage area is listed as the base (BAS) area and offices (AOF, GOF, etc.) are designated and described appropriately.

48F	**Flex Warehouse**

Structures designed as multi-tenant warehouse distribution structures. These mall buildings are the modern multi-tenant loft structures, typically of low-rise construction. The lower qualities are purely light industrial buildings having minimal subdivisions and finish per shop space user with overhead door entries. The better qualities have fully finished customer service areas with storefront entries. Display-office areas in the higher qualities have finished floors and ceilings with good restroom facilities. These buildings are sometimes called business centers. The service area is listed as the base (BAS) area and offices (AOF, GOF, etc.) or store display (SDA) areas are designated and described appropriately.

48M	**Warehouse Mega**

These large buildings, typically 200,000 to over a million square feet, are designed for major regional distribution and storage centers. They include an amount of office and personnel support space commensurate with the quality of the building (typically 1 to 5 percent). Support areas typically have plaster or drywall interior partitions and have finished ceilings. The better qualities have large cafeterias and kitchens. Heating and ventilating facilities are sufficient to protect goods from freezing and other spoilage. The storage area is listed as the base (BAS) area and offices (AOF, GOF, etc.) are designated and described appropriately.

49	**Prefab Warehouse**

Small (under 10,000 square feet) inexpensive light duty pre-engineered structures designed for storage. The storage area is listed as the base (BAS) area and offices (AOF, GOF, etc.) are designated and described appropriately. List with 03 Prefabricated Structural Frame.

50	**Computer Data Center**

Computer centers are electronic data processing plants, including ancillary offices. Most facilities will have a rather plain exterior appearance with little fenestration. The cost and quality selection will depend primarily on the amount of interior finish. An amount of raised computer floors are included, commensurate with the quality level. The better qualities have a large amount of good support rooms and many offices.

DEFINITIONS OF BUILDING IMPROVEMENT CODES	
51	**Cold Storage/Freezer**

Structures designed to keep stored commodities at controlled temperature levels. Some production or process areas are included in the better qualities. Sharp freezers, freezer rooms, offices, and production or process areas are included in the better qualities. The front elevation will have some ornamental detail and an office/store front type entry. Lower qualities have cooler storage areas, few partitions, and small office areas that are very plain with very little or any front entry trim or ornamentation. Cold Storage facilities have specialized cooling/ freezing equipment. The storage area is listed as the base (BAS) area and offices (AOF, GO, etc.) are designated and described appropriately.

*Cold storage areas attached to fast food/restaurant building are listed as personal property.

52	**Truck Terminal/Transit Warehouse**

Structures designed for temporary closed storage, freight distribution, and loading. Often called truck terminals, they are most commonly built with masonry, wood frame, or steel frame walls. The interiors have some finished offices and driver areas. Lighting and plumbing, although adequate to service the personnel, are not excessive or ornate. Heating and ventilation is sufficient to protect stored goods and materials from freezing or other forms of spoilage. List the floor system as “Platform Height.” The storage area is listed as the base (BAS) area and offices (AOF, GOF, etc.) are designated and described appropriately.

53	**Service Garage**

Structures designed for vehicular maintenance and repair in non-retail environments. The service area is listed as the base (BAS) area and offices (AOF, GOF, etc.) are designated and described appropriately. List with special footings to account for pits and lifts.

55	**Stadium**

A place or venue for (mostly) outdoor sports, concerts, or other events. Consists of a field or stage either partly or completely surrounded by a tiered structure designed to allow spectators to stand or sit and view the event.

56	**Arena/Coliseum**

Level area surrounded by seats for spectators, in which sports, entertainments, and other public events are held.

57	**Sports Entertainment Center**

A premier entertainment complex and event center with restaurant, bar, and arcade areas. One example is Topgolf.

DEFINITIONS OF BUILDING IMPROVEMENT CODES	
60G	**Garden Apartment**

These structures are usually less than four floors, with each individual unit contained on one level. Each unit has a kitchen and bath, designed for long-term occupancy. A multiple-unit low-rise dwelling having considerable lawn or garden space.

60H	**High Rise Apartment**

High rise apartments are structures greater than seven stories of multiple dwelling units. The structures are built of all construction classes. Each dwelling unit consists of its own separate living area and kitchen facility. Normally, structures over seven stories have elevators, but this depends on the height of the building and the need for transportation to the upper levels. These structures have a lobby area, interior hall access to dwelling units, and some type of stairway for fire exit.

60M	**Mid-Rise Apartment**

Mid-rise apartments are structures with four to six stories of multiple dwelling units. The structures are built of all construction classes. Each dwelling unit consists of its own separate living area and kitchen facility. Normally, structures over three stories have elevators, but this depends on the height of the building and the need for transportation to the upper levels. These structures have a lobby area, interior hall access to dwelling units, and some type of stairway for fire exit.

60T	**Townhouse Apartment**

These structures are usually less than four floors, with each individual unit occupying more than one level. Each unit has a kitchen and bath, designed for long-term occupancy.

62	**Duplex/Triplex/Quadraplex**

These structures are similar to single family homes in appearance but each building has two, three, or four units. Each unit has a kitchen and bath, designed for long-term occupancy.

63A	**Dormitory**

These buildings include college and boarding school residence halls, intern or nurses' quarters, and military service quarters. They generally have a lounge and frequently have common dining facilities. In the better qualities, the rooms are soundproof, furniture is built-in, baths are tiled and painted, and halls, lounges and rooms are carpeted. Plaster and drywall are the most common wall finishes used. The amount of detail on the interior is commensurate with the overall quality.

63S	**Student Housing**

Typically, these are apartments type buildings located just off college/university campuses that rent to students and instructors. These are typically rented by the number of beds rather than bedrooms.

DEFINITIONS OF BUILDING IMPROVEMENT CODES	
64	**Library**

This occupancy refers to structures used to provide books and services to meet the reading and research needs of a community. Variations can be found in the design, due primarily to the amount of service programs and the amount of people serviced by the library. Typically, libraries can be subdivided into several different sections. Each library may not have all segments due to its design characteristics and services offered. There are control areas, staff work areas, reading areas, collection areas, and restrooms in most libraries. The better-quality libraries may have, in addition to the sections specified, study cubicles, conference/meeting rooms, audiovisual facilities, and various processing, cataloging, and exhibiting areas.

Exteriors have special features and designs in the better qualities that include marble, special veneers, ornate entries, and metal and glass panels. Lower qualities are plain with little, if any, ornamentation. Interiors of the better-quality libraries are very similar to those found in large cities. Plaster or drywall finish with wallpaper or paneling, carpet, vinyl, or terrazzo on the floor and high-cost lighting are frequently found. At the average quality level are small college or city libraries and some branch libraries. Lower cost buildings are typically very plain, small branch libraries.

65	**Stable**

These are usually designed for the care and housing of horses. The better qualities have some decoration and include brick, brick veneer, or wood as the exterior finish. Interiors have finished stalls, with restrooms, tack room, and good finishes throughout. Good lighting and water service are also included. The lower quality stall barns use block or low-cost wood finishes on the walls and low-cost roof systems. Floors may be finished only in feed and tack rooms, with the remaining floors being dirt. Stalls are not finished and there is no lighting or plumbing. The stable's size and the needs of the owners influence the facilities that would be included within the stable. Commonly, the following areas can be found: stalls or boxes, feed, tack, manure bunkers, and lavatory accommodations. The better qualities may also include a sick box, washing and cleaning room, and sitting room for grooms. Lesser quality stables should be priced from the OBXF section of this manual.

69	**Group Homes**

Structures designed are small congregate care buildings that are more family- or residential-style in character than convalescent hospitals. This occupancy includes group care facilities for the physically or mentally handicapped, substance abusers, the battered, the homeless, and other similar group care or special need buildings. Therapy or lounge rooms commensurate with the quality are included.

70	**Institutional**

Office-type structures designed for a variety of institutional uses not associated with churches or governments.

71	**Church**

Structures designed or used for worship activities; the base rate for this code includes the sanctuary and classrooms. When valuing just the sanctuary, increase the quality adjustment.

DEFINITIONS OF BUILDING IMPROVEMENT CODES	
74A	**Assisted Living**

Structures designed for elder living with studios and one or two bedroom suites with limited kitchens, common dining areas, lounges, craft and game rooms, and so on according to quality. These resemble similar garden apartments. These are three stories or less, where each studio and one- or two-bedroom suites has limited individual kitchen facilities and a mix of common support areas associated with congregate housing for the elderly. The better qualities have good lounges, craft and game areas, beauty parlors, and therapy rooms. They also have plaster, paneling, good detailing in molding, and trim and high-cost floor finishes.

74C	**Continuing Care/Retirement**

Structures designed to include a mix of independent living and assisted living, including facilities for dementia patients and skilled nursing units. May have fitness facilities.

74E	**Home for the Elderly**

Structures designed for assistance living congregate housing for the elderly, typically three or more floors, consisting of one or two room suits, limited individual kitchens, common kitchen and dining, lounges, nursing, and therapy rooms.

74N	**Nursing Home/Convalescent Hospital**

Structures designed as convalescent hospitals or skilled nursing homes for intense care for the elderly or infirmed. These are primarily designed to provide a home-like environment while patients recover from long-term illnesses or medical procedures. This occupancy includes rest homes, sanitariums, nursing homes, and buildings of hospital-type construction that give nursing care. They are designed for bed care and/or hotel and nursing care for ambulatory patients. They have treatment and therapy rooms, service and administration areas, nurses' stations, and signaling systems commensurate with the building class and quality. These facilities do not have equipment for surgical care and treatment. Exterior and interior finishes are very similar to hospitals in terms of the materials used. While most have some type of combined heating and cooling system, lower quality units may have heating only.

76	**Mortuary, Cemetery, etc.**

Structures used as funeral homes including chapels, crematoriums and laboratories according to quality.

77	**Club, Lodge, Hall**

Structures used for several types of meetings, general recreation, or activities. Usually with a light kitchen, large general use room, and multiple restrooms. They sometimes have stages and game rooms.

78	**County Club**

Structures designed as specialized clubhouses, used mainly for entertainment and generally associated with a golf course. Typically have a ballroom, kitchen facilities, bar, pro shop, and locker and shower rooms.

DEFINITIONS OF BUILDING IMPROVEMENT CODES	
80C	**Airport Control Center**
A facility established to provide air traffic control service to aircraft operating on IFR flight plans within controlled airspace, principally during the *en route* phase of flight.	
80H	**Aircraft Hanger**
These buildings are designed primarily for aircraft storage and light maintenance and repair. The highest quality storage hangars are for line servicing of large commercial airplanes. Storage hangars have some office area, storage area, and restroom and plumbing facilities for small crews of maintenance personnel. The storage area is listed as the base (BAS) area and offices (AOF, GOF, etc.) are designated and described appropriately.	
80M	**Aircraft Maintenance Hanger**
Structures designed for the maintenance of aircraft, generally heavier structures with more electrical, plumbing, and lighting to accommodate more personnel loads for the maintenance and repair function. The service area is listed as the base (BAS) area and offices (AOF, GOF, etc.) are designated and described appropriately.	
80T	**Airport Terminal**
Structure designed for the mass movement of people. Includes a baggage area, ticket lobby, concessions, and concourse area. Larger, better quality terminals will have shops, lounges, and restaurants.	
82	**Convention Center**
These structures are large, open arena auditorium-type facilities for short-term meeting and/or trade show display of products. The better facilities will have varied multi-functional spaces with movable partitions and ancillary eating and entertainment facilities.	
83PU	**School – Public**
Structures designed as public educational facilities. The base rate is designed to cover the average total cost of the entire facility, which may include a mixture of classrooms, multipurpose rooms, administrative offices, cafeteria, library, and so on. If the campus is made up of multiple buildings of different uses, they may be priced separately according to their use.	
83PV	**School – Private**
Structures designed as private educational facilities. The base rate is designed to cover the average total cost of the entire facility, which may include a mixture of classrooms, multipurpose rooms, administrative offices, cafeteria, library, and so on. If the campus is made up of multiple buildings of different uses, they may be priced separately according to their use.	
84	**College/University**
Structures designed for college or university facilities. The base rate is designed to cover the average total cost of the entire facility, which may include a mixture of classrooms, multipurpose rooms, administrative offices, cafeteria, library, and so on. If the campus is made up of multiple buildings of different uses, they may be priced individually according to their use.	

DEFINITIONS OF BUILDING IMPROVEMENT CODES	
85PU	**Hospital – Public**
Structures designed as general hospitals with complete facilities, including emergency care, surgical rooms, intensive care, maternity care, and general care.	
85PV	**Hospital – Private**
Structures designed as private general hospitals with complete facilities, including emergency care, surgical rooms, intensive care, maternity care, and general care.	
85S	**Surgical Center**
These buildings are freestanding outpatient or same-day surgery facilities. This category will also include specialized radiation and imaging treatment and diagnostic centers. They include clinical surgery, diagnostic, lab, administrative, and public areas. Operating rooms on average represent 2.5 percent of the total floor area. Most centers have complete heating, ventilating and air conditioning systems, and emergency power equipment, since outpatient/surgical centers have higher requirements for heating, cooling, and ventilation. The cost includes fixed equipment only, but does not include the following: canopies and balconies, Group II equipment that may be installed and becomes a part of the real property but is typically not a part of the general contract (such as autoclaves, permanent surgical lights, and other equipment), and Group III equipment that is movable personal property (such as furniture, fixtures, instruments, etc.).	
85U	**Urgent Care Center**
These are buildings designed for urgent care or emergency first aid and medical treatment. Typically, they do not have facilities for surgery, although the better qualities may have some small surgical capabilities. They do generally have some office space. Floor coverings are either ceramic tile or some type of resilient floor finish throughout the structure. Lighting and plumbing are adequate for emergency first aid use.	
86	**County Office**
Government office structures owned by the County Government, generally of higher quality than general offices.	
87	**State Office**
Government office structures owned by the State Government, generally of higher quality than general offices.	
88	**Federal Office**
Government office structures owned by the Federal Government, generally of higher quality than general offices.	
89	**Municipal Office**
Government office structures owned by a Municipal Government, generally of higher quality than general offices.	

DEFINITIONS OF BUILDING IMPROVEMENT CODES	
90	**Fitness Center/Health Club**

Health clubs are designed as physical fitness facilities with varied exercise and conditioning areas. Better quality clubs generally have a snack bar, massage and steam room, and sauna facilities, as well as locker and shower rooms. Buildings are complete multi-sport, commercial recreational complexes distinguished by large gymnasium/auditorium-type structures with private membership and public community center facilities. Excellent quality is used for fitness centers. These multipurpose buildings will include a basketball gym; handball, racquetball, bowling, and other sport courts; rinks; varied swimming/natatorium facilities; running tracks; as well as exercise, craft, game, and other social/multipurpose exercise rooms.

91	**Utility/Mechanical Equipment**

General structures used in the utilities industry. These will include mining, petroleum, and gas structures.

92	**Jail/Correctional Facility**

Structures designed for the housing of inmates held by the legal justice system. Structures designed as offices for the sheriff or police officers should be listed separately.

93-97	**Blank (not in use)**
98	**Valueless Improvement**

Structures that do not have a market value, such as club houses owned by a Home Owner's Association.

99	**New Parcel**

This code is used to flag new parcels that have been created by Land Records. The code will be changed to the appropriate code when the parcel is appraised.

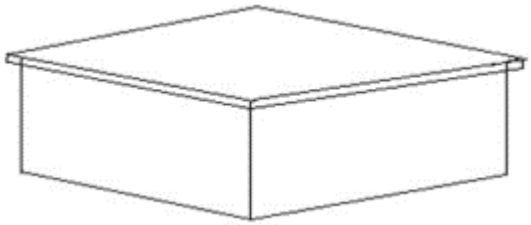
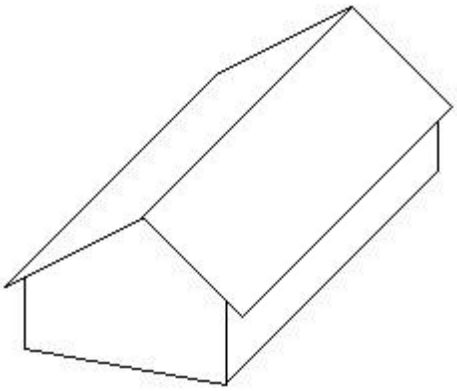
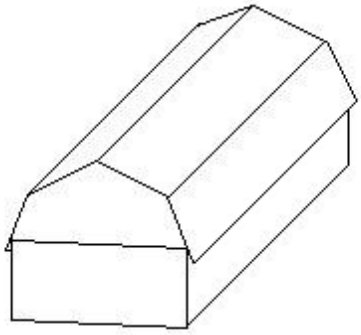
2 Construction Details

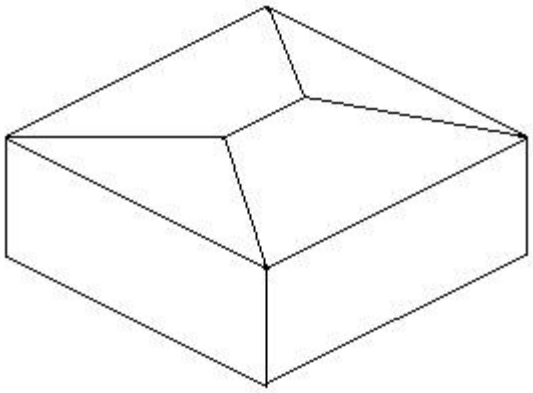
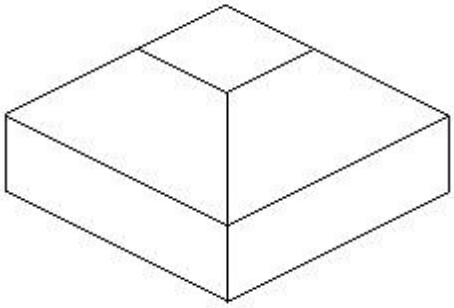
CONSTRUCTION DETAILS	
Foundations	**Details**
PIERS – NO FOUNDATION WALL	Concrete or block footings placed under pier locations only.
SLAB – RESIDENTIAL	Concrete slab poured on surface at ground level.
SLAB – COMMERCIAL	Commercial type footing used with concrete slab floor system.
SLAB ABOVE GRADE	Concrete slab poured on a built-up surface above ground level.
CRAWL SPACE/ CONTINUOUS FOOTING	A concrete footing poured continuously around the perimeter foundation of a building. Used on buildings that has a crawl space or basement, used on manufactured homes that have masonry under pinning.
SLAB – PLATFORM HEIGHT	A pre-cast deck with pre-cast or steel joist elevated to a loading dock height.
STRUCTURAL SLAB	Reinforced slab made to support a high-rise building or certain industrial buildings of excessive weight or special requirements.
SLAB – HEAVY	Heavy or mat foundation is a thick concrete slab reinforced with steel which covers the entire contact area of the structure like a thick floor.
HIGH RISE	Piles are driven inside the rock for fixity, so those entire building loads coming from columns are transferred to rock. Used on construction which are taller than four (4) floors.
SPREAD FOOTING – RAW	No concrete footings. Used on buildings constructed with dirt floors with pole type construction.
BASEMENT	The floor of a building partly or entirely below ground level.

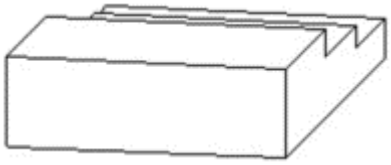
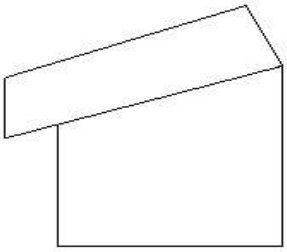
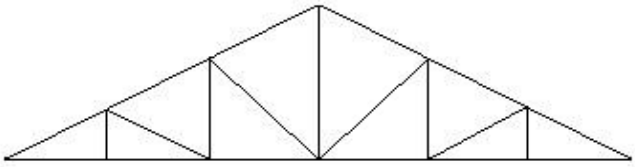
CONSTRUCTION DETAILS	
Exterior Walls	**Details**
ALUMINUM SIDING	Flat or corrugated aluminum sheets fastened to a wood or metal frame as direct replacement or cover for horizontal wood siding.
ASBESTOS-FIBER SHINGLE/CORR WALL	Refers to asbestos or fiber shingle or corrugated material laid over wood frame with sheathing. The principle composition of these materials is asbestos, fiberglass, or other mineral or organic fibers occurring in long and delicate fibers or fibrous masses. It is incombustible, non-conducting, and chemically resistant. Typically, these materials are hard and brittle in nature with a noticeable grain or texture.
BOARD AND BATTEN ON PLYWOOD WITH STRIPS	Sheeting placed on walls in a vertical position with the joints covered by narrow wooden strips called battens.

CONSTRUCTION DETAILS	
Exterior Walls	**Details**
BOARD AND BATTEN 12" BOARDS	With 12" boards nailed to sheathing in a vertical position and the joints covered by battens (which are narrow wooden strips). This form of siding is commonly used on small buildings.
CEDAR OR REDWOOD SIDING	Horizontal cedar or redwood lap siding or panel siding (normally unfinished) or naturally stained, which is desirable because of color and maintenance free characteristics. Usually the lap siding has above average excellent type construction.
HARDIPLANK	Cement fiber siding composed of asbestos-free fiber and cement combined under pressure. This product may come in boards, sheets, or shingles and are usually attached over sheathing. Sheet siding may come ribbed or corrugated.
COMMON BRICK	Brick commonly used for construction purposes; primarily made for buildings and not specially treated for color. They are made from clay or a clay mixture molded into blocks, which are then hardened in the sun or baked in a kiln.
COMPOSITION OR WALL BOARD	Refers to composition siding, which comes in varied thickness and rolls, and is usually fastened over wood framing by nailing. Can be any of the various man-made materials on wood or metal framing such as Homosote or Cleotex, or other trade name products. These must be treated or painted to withstand weather. Generally inexpensive construction.
CONCRETE OR CINDER BLOCK	The standard concrete or cinder block, which can range in size from 8 to 16 inches.
CORRUGATED ASBESTOS	Sometimes called by trade names such as Transite, this is asbestos manufactured in corrugated sheets, which can be fastened to wood or metal framing.
CORRUGATED METAL (LIGHT)	Inexpensive steel or galvanized siding with minimum thickness. This is usually manufactured in sheets, which can be fastened to wood or metal framing.
CORRUGATED METAL (HEAVY)	An expensive steel or galvanized siding generally used for commercial construction.
PLYWOOD	A sheet material manufactured from thin layers or "plies" of wood veneer that are glued together with adjacent layers having their wood grain rotated up to 90 degrees to one another. It is an engineered wood from the family of manufactured boards which includes medium-density fiberboard (MDF) and particle board (chipboard).
FACE BRICK	The better quality of brick such as that used on exposed parts of a building and is usually color treated and finished.
FACE BLOCK	The better quality of block such as that used on exposed parts of a building and is usually color treated, textured and finished.

CONSTRUCTION DETAILS	
Exterior Walls	**Details**
GLASS/THERMOPLANE	A glass sandwich designed for use on exterior walls. Usually tinted and with an aluminum or metal framing system. This normally occurs only on large commercial office buildings.
LOG	The exterior wall is made of logs.
MASONITE	Highly compressed wood fiber hardboard siding, may come in 6- to 12-inch boards or in sheets.
MODULAR METAL	This refers to the common pre-finished metal walls used in warehouses, older mobile homes, commercial construction, and other similar prefab metal walls.
PRECAST PANEL	A modular construction material usually with a washed pebble finish. Such panels are pre-cast and brought to the site to be erected or poured in place and tilted up. Normally used as the major exterior wall finish, it is most often found on commercial and industrial buildings.
PREFINISHED METAL	This refers to the enameled or anodized metal, which is commonly used on service stations, convenience stores, and other metal, commercial structures.
REINFORCED CONCRETE	Concrete which has been reinforced with steel bars and poured in place as exterior walls.
SIDING MINIMUM	Used to describe infrequent or unusual combinations not otherwise described and reflects very low quality materials.
SINGLE SIDING WITH WOOD FRAMING NOT SHEATHING	Denotes inexpensive wood framing without sheathing.
STONE	Refers to various good stone or stone veneers.
STUCCO	Stucco is a coating in which cement is used for covering walls and is put on wet, but when dry it becomes exceedingly hard and durable. Stucco may be applied to block or a wire of wood lath.
STUCCO SYNTHETIC	An exterior wall consisting of rigid insulation board, reinforcing mesh, and synthetic plaster or stucco covering.
UTILITY BRICK	Utility brick or jumbo brick is normally a 4" brick wall backed with masonry or wood.
WOOD ON SHEATHING OR PLYWOOD	Wood is either lapped or 4 x 8 panels. Horizontal wood siding, which is normally lapped over the sheathing and painted, or a wood paneled (plywood) nailed to the sheathing.
WOOD SHINGLE	These are usually cedar or redwood shingles, and usually appears on expensive homes; the irregular shaped cedar shakes being the most expensive.

CONSTRUCTION DETAILS	
Roofing Structure	**Details**
BOWSTRING TRUSS	Commercial. A large curved truss common to airplane hangars and Quonset huts. 
FLAT ROOF	Residential. A flat roof refers to a structural material, which spans a horizontal or nearly horizontal position from wall-to-wall or beam-to-beam. 
GABLE	Residential. A gable roof is pitched (pitch is the slope of the roof) in two directions. 
GAMBREL	Residential. A type of roof which has its slope broken by an obtuse angle so that the lower slope is steeper than the upper slope; a roof with two pitches such as is common on a barn. 

CONSTRUCTION DETAILS	
Roofing Structure	**Details**
HIP ROOF	Residential. The hip roof is usually pitched in four directions. 
IRREGULAR/CATHEDRAL ROOF	Residential. Any of a variety of unusual slopes, which do not have the same rise per foot, run throughout.
MANSARD	Residential. A roof with two slopes on all four sides; the lower slope very steep, the upper slope almost flat. 
PRESTRESSED CONCRETE	Commercial. Roofs that are made up of concrete, which has been made up elsewhere, pre-stressed, and erected in place with cranes. Pre-stressing makes it possible to use less steel and is usually less bulky than reinforcing.
REINFORCED CONCRETE ROOF	Commercial. Roof framing where concrete is formed and poured in place with a system of steel rods or mesh for absorbing tensile and shearing stresses. Roof framing of this type has been formed and poured on the ground, and, through a system of hydraulic jacks, raised to proper position.
RIGID FRAME WITH BAR JOIST	Commercial. Bar joists are fabricated steel open trusses, which have been set close together, and serve as roof beams or ceiling joists. The span of these is limited due to their lightness and depth. Bar joists limit roof shape to flat or shed and are to be used in place of flat or shed roofs on commercial buildings with medium spans.

CONSTRUCTION DETAILS	
Roofing Structure	**Details**
SAW TOOTH ROOF	Commercial. A roof, which is formed of a number of trusses having unequal slopes. When viewed from the end, such a roof presents a serrated profile similar to the teeth of a saw. 
SHED ROOF	Residential. Similar to flat roof except that it has a noted slope in one direction. 
STEEL FRAME OR TRUSS	Commercial. A truss made up of various shapes of steel members either bolted or welded together and which can, due to strength of steel and depth of truss, cover large spans in either flat, shed, hip, gable, mansard, or gambrel shapes and is to be used on commercial buildings with heavy loads or wide spans in place of flat, shed, gable, hip, mansard, or gambrel shapes. 
WOOD TRUSS	Commercial. This is made up of various size lumber or timber such as beams, bars, and ties, usually arranged in triangular units to form a rigid framework and may be flat, shed, or pitched. Spans are limited due to the strength of the material. This is to be used in place of the flat or shed on commercial buildings with limited spans.

CONSTRUCTION DETAILS	
Roofing Cover	**Details**
ASBESTOS, FIBER SHINGLE, OR CORRUGATED	Made of rigid products, which come in individual shingles or sheets and are, fastened down in the same manner as wood or composition. Includes products such as Ondura.
BUILT UP TAR AND GRAVEL	Gravel embedded in tar is hot mopped over various types of composition concrete, metal, or gypsum roofing. This product requires a very low pitched or flat roof shape. Built up refers to the building up of waterproof layers with the mopped tar.
ASPHALT COMPOSITION SHINGLE	Refers to shingles made from felt or fiberglass saturated with asphalt and surfaced with mineral or ceramic granules 235 lb or less. These are pliable shingles, which are fastened down by nailing to some type of sheathing.
ARCHITECTURAL SHINGLES	Refers to shingles made from felt or fiberglass saturated with asphalt and surfaced with mineral or ceramic granules greater than 235 lb. These are pliable shingles, which are fastened down by nailing to some type of sheathing.
CEDAR SHAKES	Comes in random widths and lengths, and is very expensive. These are pliable shingles, which are fastened down by nailing to some type of sheathing.
CEMENT FIBER SHINGLES	Siding composed of asbestos-free fiber and cement combined under pressure.
COPPER	Various types of copper roofing; flat, standing seam, or batten seam.
ENAMEL METAL SHINGLE	This refers to metal shingles with a heat-bonded enamel glazed coating. This type of shingle is usually predrilled and fastened down by nailing to some type of sheathing on strips.
METAL PREFINISHED	Metal roofing that comes in sheets or shingles and has a baked-on paint finish.
METAL – STANDING SEAM	Metal roofing that comes in sheets, has standing seams and has a baked-on paint finish.
MINIMUM ROOFING, CORRUGATED, OR SHEET METAL	Sheet metal is either flat, corrugated, or V-crimp metal of either aluminum or steel products, and is fastened over wood or steel framing.
ROLLED OR BUILT-UP COMPOSITION	A roof consisting of felt saturated with asphalt and assembled with asphalt cement, which comes in rolls and is fastened over decking with tar and nails.
RUBBERIZED/SYNTHETIC/ PLASTIC	All of the lines of rubber, composition, or plastic roofing materials used on flat roof surfaces. A plastic product in either flat or half-round form, which is laid over a built-up surface and is available in a variety of colors.
SLATE	Shingles made of slate fastened down to sheathing or strips.

CONSTRUCTION DETAILS	
Roofing Cover	**Details**
CONCRETE/CLAY TILE	Clay tile is usually a half-round clay product, which has been kiln, baked to a hardness, which gives a wearing surface that needs no paint. Bermuda roofing is formed from lightweight cement and/or gypsum products to give the appearance of a heavy, wide lapped roof. A cement product in either flat or half-round form, which is laid over a built-up surface and painted.
WOOD SHINGLE	These are usually cedar or redwood shingles and usually appears on expensive homes.

CONSTRUCTION DETAILS	
Interior Wall Construction	**Details**
DRYWALL/SHEETROCK	A sandwich of plaster with paper surfaces normally available in 4' x 8' sheets, which are cut to fit. It is fastened to studding or furring strips, and requires a seal where joints occur, and only paint as finish. It has become popular due to ease of installation and also to the fact that no plastering, as such, is necessary.
MASONRY INTERIOR WALL	Normally exterior walls, which serve as an interior, wall face usually of brick or block material which are usually unfinished although they may be painted.
PLASTERED	This refers to all plaster on lath interior walls.
PLYWOOD PANEL	These are mostly inexpensive 4' x 8' plywood panels, which are decorative in nature and characteristically a veneer.
WALL BOARD OR WOOD WALL	Wall boards come in many marks or trade names, but all are made up of a composition of materials to form boards which are usually 4' x 8' in size. These are treated paper such as Celotex, plasterboards, or other paper products pressed together. Wood Wall is used for older painted board walls.
CUSTOM	Very high-grade plywood veneers or solid hardwoods in tongue and groove, which are used as interior finish. Very high-grade wallpapers or very high-grade moldings, trims, doors, or any combination, which creates an expensive interior finish.

CONSTRUCTION DETAILS	
Interior Flooring	**Details**
ASPHALT TILE	This applies to the various composition tiles that are laid over wood or concrete floors and includes the concrete or wood.
CARPET	Carpeting is the floor finish where the base is prepared and the carpet acts as the finish and includes the underlay. Carpet is fastened to the floor.

CONSTRUCTION DETAILS	
Interior Flooring	**Details**
CERAMIC TILE	Refers to hard burned high gloss ceramic tile set in grout.
CONCRETE TAPERED W/ EPOXY RESIN	Same as finished concrete that has had a surface treatment applied.
CONCRETE FINISHED	A floor finish where the concrete is troweled, and a hardener applied with no other floor covering.
HARDWOOD/HEART PINE	A layer of hardwood usually over sub-flooring.
PARQUET	Refers to a wearing surface made up of small pieces of hardwood set in patterns or designs over sub-flooring. Can also be made up in blocks and laid in mastic over concrete.
PINE OR SOFTWOOD	Floor finish of pine or other similar soft woods.
PLYWOOD, LINOLEUM	A single layer of light wood, usually of small thickness laid on floor joists; a composition material known as linoleum, which comes in sheets or tiles and is used as a floor covering.
PRECAST CONCRETE	Applies in this case to either pre-stressed or poured concrete floors, which are suspended as in multistory commercial buildings.
QUARRY OR HARD TILE	Refers to hard burned tiles, which are machine made and glazed.
RUBBER/CORK	A fibrous rubber floor covering.
SHEET VINYL/VINYL TILE	A smooth, seamless floor covering material, manufactured with a resilient backing usually to either concrete or wood sub-flooring. All types of vinyl tile.
WOOD LAMINATE/BAMBOO	Laminate flooring (also called floating wood tile) is a multi-layer synthetic flooring product fused together with a lamination process. Laminate flooring simulates wood (or sometimes stone) with a photographic applique layer under a clear protective layer.
SLATE FLOOR	Refers to cut or random broken slate set in grout over concrete.
TERRAZZO MONOLITHIC	A ground and polished terrazzo where metal strips with a finite modular spacing are incorporated in the poured terrazzo.
TERRAZZO “EPOXY” STRIP	A ground and polished terrazzo where metal with a finite modular spacing are incorporated in the poured terrazzo and finished with an epoxy resin.
VINYL ASBESTOS	A tough, strong, non-crystalline, thermoplastic tile.
MARBLE	Marble is a natural stone, and when properly finished can be transformed into beautiful flooring. Marble flooring is one of the most luxurious and sophisticated floorings to install in a home and adds a whole new element of class.

CONSTRUCTION DETAILS	
Heating Fuel	**Details**
ELECTRIC	Electrical.
GAS	Natural or manufactured gas.
OIL/WOOD OR COAL	Oil fired, wood, or coal heating.
SOLAR	Use of sun's radiation to heat.

CONSTRUCTION DETAILS	
Heating Type	**Details**
BASEBOARD	Electric heat, which radiates from baseboard heating units mounted in each room and usually controlled in each room.
FORCED AIR (DUCTED)	A central type heating system that provides for the distribution of the air through ducts or conduits to the various parts of the building.
FORCED AIR (NOT DUCTED)	A heating element and fan and/or blower enclosed in a common housing for circulating the heated air but no ducted distribution system.
HEAT PUMP	A reverse cycle refrigeration unit, which can be used for heating or cooling and is ducted throughout the structure.
HEAT PUMP WALL UNIT	A reverse cycle refrigeration unit, which can be used for heating or cooling and is not ducted.
HEAT PUMP LOOP SYSTEM	A reverse cycle refrigeration unit, which can be used for heating or cooling and is ducted throughout the structure. The unit uses water looped through the ground or well to extract heating or cooling.
RADIANT SUSPENDED	A heating system, which heats a space by use of suspended radiant unit heaters, which may be connected to a continuous loop system and uses reflectors.
RADIANT ELECTRIC	A heating system, which heats a room by use of concealed resistance wires. Most contemporary radiant-heating systems have extensive wires in the floor structure or in the walls and ceilings, which are to be used as heating panels.
RADIANT WATER	A heating system, which heats a room by use of concealed hot water heating coils. Most contemporary radiant-heating systems have extensive pipe coils in the floor structure or in the walls and ceilings, which are to be used as heating panels.
HOT WATER	A heating system, which circulates hot water through baseboard units in each room (usually residential).
DIRECT STEAM HEAT	This heating system uses radiators in the rooms to be heated, the steam or vapor being delivered from boiler to radiators through one of several arrangements of piping. The one-pipe gravity vapor system is used for larger installations.

CONSTRUCTION DETAILS	
Air Conditioning Type	**Details**
CENTRAL	Refers to a central cooling system with ductwork, thermostats, and forced cold air.
CHILLED WATER	Usually a commercial air conditioning system utilizing a cooling tower as a heat exchanger and associated compressors with ducting.
PACKAGED ROOF TOP	Usually found in commercial buildings. The air conditioning unit is located on the roof of the property.
WALL UNIT	A wall unit built into the wall or as part of a wall unit heat pump.

3 Quality Adjustments

MINIMUM (E) – To be used on the lowest quality of construction in use. These buildings were built before building codes were established. Building materials are sub-standard and many components are nonexistent. Appliances and fixtures are of minimum quality or nonexistent.

FAIR (D) – To be used on construction which is not quite average. Such dwellings feature a plain design using ready available or basic floor plans featuring minimal fenestration and basic finishes with minimal exterior ornamentation and limited interior detail. These buildings are built to conform to the very minimum building codes or are frequently mass produced or modular homes. Interior finish and exterior ornamentation are plain with few refinements. Building materials, appliances, and fixtures are below average.

AVERAGE (C) – To be used on average construction as prevalent and general throughout the particular county. These buildings are built slightly above the building codes and are built of average quality materials. Appliances and fixtures are of average quality stock items with no luxury items.

GOOD (B) – To be used on construction which is slightly above average. Above average buildings will have many components that are average, as well as many that are above average. Many of the materials used will be of better than average quality, as will some of the appliances and fixtures. Some luxury items may be present.

VERY GOOD (A) – To be used on construction that is truly above average. These homes are usually individually designed and decorated. Most of the materials used are top quality. Much attention has been given to interior refinements and detail. Some luxury items will be present.

EXCELLENT (X) – To be used on the best quality of construction. Excellent quality buildings will be custom or architecturally designed and have much ornamentation. Most materials used will be of top quality, and items not accounted for in the point system—such as appliances, lighting, fixtures, wiring, bathroom fixtures, etc.—will be of top quality. Many luxury items will be present, such as central vacuum systems, intercom systems, hot tubs, spas, saunas, etc.

CUSTOM (XX) – To be used on the highest quality of construction. Custom quality buildings will be architecturally designed and have detailed ornamentation and special design. All materials used will be of the highest quality, and items not accounted for—such as appliances, lighting, fixtures, wiring, bathroom fixtures, etc.—will be of the highest quality. Many luxury items will be present, such as central vacuum systems, intercom systems, hot tubs, spas, saunas, etc.

MINIMUM QUALITY (E) RESIDENCES

To be used on the lowest quality of construction in use. These buildings were built before building codes were established. Building materials are sub-standard and many components are nonexistent. Appliances and fixtures are of minimum quality or nonexistent.

Item	Basic Specifications
DESIGN	Basic "box" shape. Walls will have minimum openings (windows and doors).
FOUNDATION	Slab or crawl (typically low, with concrete block foundation walls with minimum concrete footings and piers).
EXTERIOR WALL	Frame, vinyl, asbestos, composite roll, or concrete block. All walls will be of low quality materials. Exterior trim lacking.
ROOF	Pitch is very low or flat with little or no overhang. Roof covering is on the lowest quality (light-weight asphalt shingles, roll or metal on exterior grade plywood). Usually rafters or pre-fab truss system.
FLOOR	Wood sub-floor with low cost covering (vinyl, carpet, etc.). Rarely hardwood. Sometimes dirt floor.
CEILING	7-foot to 8-foot on main level. Upper levels typically 7-foot. No trey, vaulted, or cathedral ceilings.
KITCHEN	Countertops and cabinets are minimal and inadequate. Fixtures are the cheapest available.
BATH	Low cost tile floors and walls (or vinyl/drywall). Typically, inadequate and cramped.
TRIM	Little to no interior trim. Closets are small (or may be missing). Lowest cost hollow-core or flat panel doors. Few cabinets and hardware, no built-ins.
ELECTRICITY	Minimal (or non-existent). Inadequate number/location of outlets and light fixtures.
MECHANICAL	Minimal (or non-existent). Unit, baseboard, radiant, or forced hot air with minimum capacity and duct-work. Sometimes includes fireplace.
PLUMBING	Minimal (or non-existent). Low-cost fixtures. Galvanized, plastic, or black piping.

FAIR QUALITY (D) RESIDENCES

Fair quality residences are usually mass produced and will meet or exceed the minimum construction requirements of lending institutions, mortgage insuring agencies, and building codes. By most standards, the quality of materials and workmanship is acceptable, but does not reflect typical custom craftsmanship. Cabinets, doors, hardware, and plumbing are usually stock items. Architectural design will include ample fenestration and some ornamentation on front elevation.

Item	Basic Specifications
DESIGN	Rectangular "box" (ranch, cape cod, or colonial style). Walls have adequate openings (windows and doors).
FOUNDATION	Slab foundation is the norm for new homes, while older homes may have crawlspace (frequently low with brick or concrete foundation walls and concrete footings with interior or perimeter piers).
EXTERIOR WALL	Vinyl siding is the norm for newer homes, while older homes may be asbestos, composite roll, brick veneer, stucco, wood frame, or concrete block. Dentils, quoin corners, patterned brick, arched windows, or doors are virtually non-existent.
ROOF	Roof pitches are low-to-moderate with little overhang and gable roofs predominate (though some examples of flat roofs may be seen). Roof coverings are of low-to-middle quality (light-weight asphalt shingles on exterior plywood). Rafters or pre-fab truss system. May have galvanized gutters and downspouts.
FLOOR	Older homes may feature hardwood floors, but new homes are typically low-to-mid quality carpet and vinyl (some parquet flooring may exist). Older homes may have low-cost tile in baths.
CEILING	8-foot on main level. 7-foot to 8-foot on upper levels. No tray, vaulted, or cathedral ceilings.
KITCHEN	Countertops and cabinets are basic and sometimes inadequate. Fixtures are "builder grade."
BATH	Typically does not have double sinks or both shower and garden tubs.
TRIM	Interior trim is almost non-existent (base board molding being the only typical example). Low cost hollow-core or flat panel doors. Few cabinets and hardware, little to no built-ins, and little attention to detail paid to finish work. Closets are medium-sized and walk-in closets are very rare.
ELECTRICITY	Adequate number/location of outlets and light fixtures.
MECHANICAL	Adequate. Floor furnace, baseboard, radiant, or forced hot air with minimum capacity and duct work. May or may not have wood or gas fireplace.
PLUMBING	Adequate. Low-to-mid cost fixtures. Galvanized or plastic piping.

AVERAGE QUALITY (C) RESIDENCES

Average quality is to be used on average construction as prevalent and general throughout the county. These buildings are built slightly above the building codes and are built of average quality materials. Appliances and fixtures are of average quality stock items with no luxury items.

Item	Basic Specifications
DESIGN	Basic and generally more “box-like” than higher grades. Walls will have adequate openings (windows and doors).
FOUNDATION	New homes may be slab or crawlspace (brick or concrete foundation walls, concrete footings with interior piers). Most older homes are crawlspace.
EXTERIOR WALL	Vinyl siding predominates, but brick veneer, stucco, Masonite, aluminum, and frame siding are not uncommon. Dentils, quoin corners, patterned brick, arched windows, or doors may exist but are not typical.
ROOF	Roof pitches are moderate with adequate overhang and gable roofs predominate. Roof coverings are usually of low-to-mid quality (average quality asphalt shingles on grade plywood sheathing), although some will use architectural shingles. Rafters or truss systems. Galvanized gutters and downspouts are common.
FLOOR	Hardwood floors, if present, are of basic quality and typically only exist on the first floor, while vinyl and carpet floors predominate. Older homes may have "small" tile baths. Better homes may have "large" tile baths.
CEILING	8-foot to 9-foot ceilings on main level. 8-foot ceilings on upper levels. Sparse use of trey, vaulted, or cathedral ceilings is not uncommon in new homes (but not required). Older homes typically lack trey/vaulted/ cathedral ceilings.
KITCHEN	Countertops are basic but may be upgraded (such as solid surface counters) while cabinets are usually "stock." Fixtures are usually "builder grade" but may be upgraded to name brands.
BATH	Double sinks and/or both shower and garden tub may exist in master bathrooms, but other bathrooms typically do not have extra fixtures.
TRIM	Interior trim is basic, sometimes including crown molding or wainscoting. A small to medium sized walk-in closet is not uncommon but is also not required. Secondary bedrooms have medium-sized closets. Medium grade or stock hollow-core doors. Stock cabinets and hardware, few if any built-ins, and some attention to detail paid to finish work.
ELECTRICITY	Location/number of outlets and light fixtures meet or exceed code. May have recessed/suspended/spot/vanity lights. Ceiling fans common.
MECHANICAL	FHA with AC with adequate capacity and insulated duct-work is standard. Older homes may utilize baseboard, radiant, or forced hot air without AC. Fireplaces are common upgrades, but not required.
PLUMBING	"Stock" or "builder grade" fixtures. Galvanized, copper, or plastic piping.

GOOD QUALITY (B) RESIDENCES

Good quality is to be used on construction which is slightly above average. Above average buildings will have many components that are average, as well as many that are above average. Many of the materials used will be of better than average quality, as will some of the appliances and fixtures. Some luxury items may be present.

Item	Basic Specifications
DESIGN	More complex and less boxy than "C" grade, may incorporate multiple "cuts" and may use angles other than 90 degrees. Exterior walls will have ample openings (windows and doors).
FOUNDATION	Typically crawlspace (brick or reinforced concrete foundation walls, concrete footings w/interior piers). Some slab homes are "B" grade.
EXTERIOR WALL	Brick or Hardiplank siding is common on newer homes, although vinyl, Masonite, wood frame, stucco and other sidings are in use. All exterior walls will be of above average quality and constructed with attention to detail by experienced craftsmen. Dentils, quoin corners, patterned brick, arched windows, and doors are common.
ROOF	Roof pitch is high with good overhang. Complex roof designs are common. Roof coverings are generally of good quality (architectural shingles, cedar shake, or similar on wood sheathing). Rafters or truss system. Gutters and downspouts are of good quality.
FLOOR	Moderate-to-extensive hardwood floors, good quality carpet, and basic tile flooring in bathrooms.
CEILING	9-foot ceilings on all floors. Trey, vaulted and cathedral ceilings are common and used moderately.
KITCHEN	Countertops are frequently granite with good quality cabinets. Fixtures are name brand in the middle to upper range.
BATH	Bathrooms typically include double sinks and both shower and garden tub.
TRIM	At least one walk-in closet of good size is typical, while secondary bedrooms may feature large closets or small walk-ins. Interior trim is more pronounced with wainscoting in the dining area and crown molding in most "public" rooms (but not necessarily bed and bath). Good grade hollow-core doors, some built-ins.
ELECTRICITY	Exceeds code. Ample outlets and light fixtures. Moderate use of recessed/ suspended/spot/vanity lights. Ceiling fans and chandeliers common.
MECHANICAL	FHA with AC with adequate capacity and insulation duct-work (older home may have radiant, baseboard, or forced hot air without AC). One fireplace is standard, but some homes will have multiple fireplaces while others will have no fireplace.
PLUMBING	Exceeds code. Typically, copper or plastic pipe. New homes may have tankless W/H.

VERY GOOD QUALITY (A) RESIDENCES

Very good quality are typical of those built in high quality tracts or developments and are frequently individually designed. Attention has been given to interior refinements and detail. Exteriors have a good fenestration with some custom ornamentation.

Item	Basic Specifications
DESIGN	Complex with multiple “cuts." Off-angle sections are not uncommon. Exterior walls will have numerous openings (windows and doors).
FOUNDATION	Crawlspace (brick or reinforced concrete foundation walls, footings with interior piers) or basement. High-crawlspace common.
EXTERIOR WALL	Brick or Hardiplank is standard, although cedar shake shingles, stucco, or frame siding may be in use (especially among older homes). Dentils, quoin corners, patterned brick, arched windows, and doors are extensively used.
ROOF	Roof pitch is steep with good overhang and roof design is complex. Roof coverings are of the best quality. Slate, tile asbestos, cedar shake shingles, or heavy asphalt singles on good quality sheathing and well-braced rafters. Very good quality gutters and downspouts.
FLOOR	High quality hardwood floors are extensively used, with sparing use of top quality carpet and good quality tile flooring in the bathrooms.
CEILING	9-foot to 10-foot ceilings (or higher in rare cases) on main level. 9-foot ceilings on upper levels. Trey, vaulted, and cathedral ceilings are extensively used.
KITCHEN	Countertops are universally granite, Corian, marble, while cabinetry is of excellent quality. Fixtures are name brand of the highest quality.
BATH	Bathrooms typically include double sinks and both shower and garden tubs. In addition, custom multi-head showers are not uncommon.
TRIM	Interior trim with crown molding. Best quality hollow or good quality solid interior doors. Good quality built-in cabinets/shelves. Multiple walk-in closets of good size are the norm.
ELECTRICITY	Abundant outlets and light fixtures. Extensive use of recessed/suspended/ spot/vanity lights. Multiple ceiling fans and chandeliers.
MECHANICAL	FHA with AC with ample capacity and insulated duct-work. At least one fireplace, although multiple fireplaces are common.
PLUMBING	Far exceeds code. Typically, copper or plastic piping. Newer homes may have tankless water heaters.

EXCELLENT QUALITY (X) RESIDENCES

Excellent quality is to be used on the best quality of construction. Excellent quality buildings will be custom or architecturally designed and have ornamentation and special design. Most materials used will be of top quality, and items not accounted for—such as appliances, lighting, fixtures, wiring, bathroom fixtures, etc.—will be of top quality. Many luxury items will be present, such as central vacuum systems, intercom systems, hot tubs, spas, saunas, etc.

Item	Basic Specifications
DESIGN	Complex with multiple “cuts" and off-angle sections. Exterior walls will have numerous openings (windows and doors).
FOUNDATION	High crawlspace (brick or reinforced concrete foundation walls, footings with interior piers) or basement.
EXTERIOR WALL	Brick, stone, or Hardiplank standard. Cedar shake, stucco, and frame siding sometimes used (especially in older homes). All exterior coverings will be of high quality and constructed with much attention to detail by experienced craftsmen.
ROOF	Architectural shingles, slate, tile, or cedar shake on good quality sheathing. Well-braced rafters. Excellent quality gutters and downspouts.
FLOOR	Best quality hardwood floors are extensively used, with sparing use of top quality carpet and top quality tile (or heated tile) flooring in the bathrooms.
CEILING	9-foot to 12-foot ceilings (or higher in rare cases) on main level. 9-foot to 10-foot ceilings on upper levels. Trey, vaulted, and cathedral ceilings are extensively used.
KITCHEN	Granite (or marble) countertops. Best quality custom cabinetry. Fixtures are of the highest quality.
BATH	Bathrooms typically include double sinks and both shower and garden tubs. Custom multi-head showers and granite counters are common.
TRIM	Interior trim is elaborate and finely detailed. Best quality solid interior doors. Best quality built-in cabinets/shelves. Multiple walk-in closets of good size.
ELECTRICITY	Far exceeds code. Abundant outlets and light fixtures. Extensive use of recessed/suspended/spot/vanity lights. Multiple ceiling fans and chandeliers.
MECHANICAL	FHA with AC with ample capacity and insulated duct-work. Multiple fireplaces.
PLUMBING	Exceptional. Copper or plastic piping. May have tankless water heaters.

CUSTOM QUALITY (XX) RESIDENCES

Custom quality is to be used on the highest quality of construction. Custom quality buildings will be architecturally designed and have detailed ornamentation and special design. All materials used will be of the highest quality, and items not accounted for—such as appliances, lighting, fixtures, wiring, bathroom fixtures, etc.—will be of the highest quality. Many luxury items will be present, such as central vacuum systems, intercom systems, hot tubs, spas, saunas, etc.

Item	Basic Specifications
DESIGN	Complex with multiple “cuts" and off-angle sections. Exterior walls will have numerous openings (windows and doors).
FOUNDATION	High crawlspace (brick or reinforced concrete foundation walls, footings with interior piers) or basement.
EXTERIOR WALL	Brick, stone, or Hardiplank standard. Cedar shake, stucco, and frame siding sometimes used (especially in older homes). All exterior coverings will be of highest quality and constructed with much attention to detail by experienced craftsmen.
ROOF	Architectural shingles, slate, tile, or cedar shake on good quality sheathing. Well-braced rafters. Excellent quality gutters and downspouts.
FLOOR	Highest quality hardwood floors are extensively used, with sparing use of top quality carpet and top quality tile (or heated tile) flooring in the bathrooms.
CEILING	9-foot to 12-foot ceilings (or higher in rare cases) on main level. 9-foot to 10-foot ceilings on upper levels. Trey, vaulted, and cathedral ceilings are extensively used.
KITCHEN	Granite (or marble) countertops (or other superior material). Finest quality custom cabinets. Fixtures are of the highest quality.
BATH	Bathrooms typically include double sinks and both shower and garden tubs. Custom multi-head showers and granite counters are common.
TRIM	Interior trim is elaborate and finely detailed. Finest quality solid interior doors and built-in cabinets/shelves. Multiple walk-in closets of good size.
ELECTRICITY	Exceptional. Abundant outlets and light fixtures. Extensive use of recessed/suspended/spot/vanity lights. Multiple ceiling fans and chandeliers.
MECHANICAL	FHA with AC with ample capacity and insulated duct-work. Multiple fireplaces.
PLUMBING	Exceptional. Copper or plastic piping. May have tankless water heaters.

4 Depreciation

- ACTUAL YEAR BUILT – The actual number of years that have elapsed since the completed construction of an improvement; also referred to as historical age or chronological age.
- EFFECTIVE YEAR BUILT – The typical age of a structure equivalent to the one in question with respect to its utility and condition, as of the appraisal date. Knowing the effective age of an old, rehabilitated structure or a building with substantial deferred maintenance is generally more important in establishing value than knowing the chronological age.
- ECONOMIC OBSOLESCENCE – (1) A cause of depreciation that is a loss in value as a result of impairment in utility and desirability caused by factors outside the property's boundaries. (2) Loss in value of a property (relative to the cost of replacing it with a property of equal utility) that stems from factors external to the property.
- FUNCTIONAL OBSOLESCENCE – Loss in value of a property resulting from changes in tastes, preferences, technical innovations, or market standards.
- SPECIAL CONDITION CODES – The table below describes the five special condition codes in use.

SPECIAL CONDITION CODES		
Code	**Description**	**Full Description**
UC	Under Construction	Use with the percent condition to indicate percent of completion of construction as of January 1 of the tax year (see Chapter 6). Overrides all other depreciation.
PD	Physically Damaged	Use with the percent condition to indicate percent of remaining utility after a damaging event as of January 1 of the tax year. Overrides all other depreciation.
AP	Abnormal Physical Depreciation	Use with the percent condition to indicate a percentage to be added to the normal depreciation to account for increased depreciation due to physical depreciation over and above the norm for the age of the property. Typically a percentage of cost to cure vs total assessed value.
TE	Temporary Economic	Use with the percent condition to indicate a percentage to be added to the normal depreciation to account for increased depreciation due to the impairment of desirability or useful life of the property from an external factor that is temporary in nature. An example would be the widening of a street that may substantially obstruct the access to a commercial property for the entire tax year, impacting rent the owner could charge for the property for a given time period of one year or more.

SPECIAL CONDITION CODES		
Code	**Description**	**Full Description**
RV	Residual Value	Use with the percent condition to indicate a percent of remaining utility as of January 1 of the tax year, overrides all other depreciation. Usually used on structures that still exist, but have very little remaining useful value.

- PERCENT CONDITION – The percent adjustment to be applied to the improvement based on the definition above. NOTE: To use the Percent Condition, one of the Special Condition Codes must be used. Also, care must be taken in the use of these codes, as UC, PD, TE, and RV will override the depreciation developed from the normal depreciation, economic obsolescence, and functional obsolescence; AP will add to the other forms of depreciation.

5 Miscellaneous

5.1 Condo/Co-op

- FLOOR – The floor level the subject unit is on. May also be used to describe the total number of floors in a commercial building that are not divided into individual unit interest.
- LOCATION – Use the following two-digit codes:

Code	Description
CN	Corner, no view
CV	Corner, with view
CC	Corner, cove view
CP	Corner, point view
CL	Corner, lake view
CG	Corner, golf view
NN	No corner, no view
NV	No corner, with view
NC	No corner, cove view
NL	No corner, lake view
NG	No corner, golf view
NP	No corner, pool view
NS	No corner, stadium view

- NUMBER OF UNITS – The total number of units in the condominium or cooperative.
- OWNERSHIP % – The percentage of common land, recreational building, golf privileges, etc., which are available to the unit owner.

6 Code Appendix

DISTRICT CODES			
District	**Full Description**	**District**	**Full Description**
FR00	CITY OF CHARLOTTE	MU0	MECKLENBURG COUNTY-UNINCORPORATED
FR01	WEST MECKLENBURG	MU1	CHARLOTTE
FR05	MINT HILL RURAL	MU2	DAVIDSON
FR06	DAVIDSON	MU3	CORNELIUS
FR07	IDLEWILD	MU4	PINEVILLE
FR08	LONG CREEK	MU5	MATTHEWS
FR09	CORNELIUS	MU6	HUNTERSVILLE
FR10	MINT HILL	MU7	MINT HILL
FR11	COOKS	MU8	STALLINGS
FR12	ROBINSON	SP1	DOWNTOWN DISTRICT 1
FR13	CHARLOTTE RURAL	SP2	DOWNTOWN DISTRICT 2
FR14	STEELE CREEK #1	SP3	DOWNTOWN DISTRICT 3
FR16	PROVIDENCE	SP4	DOWNTOWN DISTRICT 4
FR17	MATTHEWS	SP5	UNIVERSITY AREA
FR18	HUNTERSVILLE	SP9	DOWNTOWN DAVIDSON
FR19	CAROLINA	SPA	FIRE SERVICE A
FR20	PINEVILLE	SPB	FIRE SERVICE B
FR23	HUNTERSVILLE RURAL	SPC	FIRE SERVICE C
FR24	STEELE CREEK #2	SPD	FIRE SERVICE D
FR25	HEMBY BRIDGE	SPE	FIRE SERVICE E
FR26	MIDLAND	SPF	FIRE SERVICE F
FR27	DAVIDSON RURAL	SPG	FIRE SERVICE G
FR28	CORNELIUS RURAL		

TAX EXEMPT CODES			
Exemption	**Full Description**	**Exemption**	**Full Description**
01	RELIGIOUS	18	CONTINUING CARE RETIREMENT CENTER
02	COUNTY	19	LODGES
03	STATE	20	INFORMATION ONLY/NOT TAXABLE
04	FEDERAL	21	TOWNSHIP OWNED
05	CITY	22	BROWNFIELD
06	EDUCATIONAL - GOVERNMENTAL	AG	AGRICULTURAL FLAG
07	CHARITABLE	ELD	ELDERLY/HOMESTEAD EXCLUSION
08	AV12	HIST	HISTORICAL DEFERMENT
09	OTHER	NSWA	NO SOLID WASTE FEE FLAG A
10	VACANT CHARITABLE	NSWB	NO SOLID WASTE FEE FLAG B
11	UTILITY	VA	VETERANS - SPECIAL HOUSING
12	EDUCATIONAL NOT OWNED/OPERATED BY GOV OR RELIG	VSRD	VETERANS WITH SERVICE RELATED DISABILITIES
13	EDUCATIONAL OPERATED ONLY BE RELIG ORGANIZATION	CRBK	CIRCUIT BREAKER DEFERMENT
14	CHARITABLE - HOSPITAL	BINV	BUILDERS INVENTORY RES DEFERMENT
15	HOUSING - SICK, AGED, INFIRM	BIEL	BUILDERS INVENTORY EXCLUSION LAND M
16	HOUSING - LOW/MOD INCOME	BIEB	BUILDERS INVENTORY EXCLUSION BLDG M
17	SCIENTIFIC - LITERARY		

7 IAAO Appraisal Principles

Principle of Anticipation – The appraisal principle that value depends on the expectation of benefits to be derived in the future.

Principle of Balance – The principle of balance as used in appraising is that the greatest value in property will occur when the type and size of improvements and uses are proportional to each other as well as to the land.

Principle of Change – The principle of change asserts that all markets are in a continual state of change. According to this principle, properties generally go through the three stages of integration (development), equilibrium (stasis), and disintegration (decline).

Principle of Conformity – The principle of conformity states that the value of a group of properties will rise to its highest possible level in an area where architectural styles are reasonably homogenous and surrounding land uses are compatible with the use of the specified properties.

Principle of Contribution – The principle of contribution requires an appraiser to measure the value of any improvement to a property by the amount it contributes to market value, not by its cost.

Principle of Progression – The principle of progression holds that the worth of an inferior property is increased by its proximity to better properties of the same use class.

Principle of Substitution – The principle of substitution states that no buyer will pay more for a good than he or she would have to pay to acquire an acceptable substitute of equal utility in an equivalent amount of time.