

## Preface

The intent of the property revaluation program is to readjust the appraised values of real property so that values are brought into line with "true market value" as of January 1, 2015. The Tax Administrator's office estimates market value by accumulating descriptive data of the real property in our county and by studying the property transactions in our county. The goal of this effort is to uniformly estimate market value for all county parcels in an efficient manner. Market value as defined by "Machinery Act of North Carolina" under G.S. 105-283 Uniform Appraisal Standards 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."**

To accomplish the County's goal of determining just and equitable values the County Assessor must turn to mass appraisal methods and techniques based on solid appraisal principles. In mass appraising - as in any kind of appraising - the realities of the local market, along with state and local laws, must be considered. Also, fundamental to any mass appraisal system, are knowledge, judgment and the ability to adapt a standardized system to the local market. A standardized system and method of handling both data and the application of the three basic approaches to value is necessary to achieve equalization and uniformity in the valuation process.

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

### **COST APPROACH**

This approach consists of estimating the land value and the depreciated cost of the improvements to arrive at a value. Theoretically, the substitution principle is the basis for determining the maximum value of the property by this approach. The substitution principle assumes the value is equal to the cost of acquiring a substitution of equal utility assuming no cost delay is encountered.

### **MARKET APPROACH**

This approach utilizes the application of prior sales data from the market and is also referred to as the sales or comparison approach. Use of this approach requires that the sales used should be analyzed to determine that the conditions of fair market value have been satisfied.

### **INCOME APPROACH**

The two most common applications of this approach in mass appraising are the capitalized net income and the gross rent multiplier.

The use of any of the three approaches requires careful consideration to be given to:

1. The relevancy of the approach applied to the property under consideration.
2. The inherent strengths and weaknesses of the approach used.
3. The amount and reliability of the data collected.
4. The effect of the local market on the data collected.

This standardized system or Schedule of Values is designed and adopted to be used to establish Fair Market Value as of January 1 of the Revaluation year. Revaluation projects are mandated by State law to be performed every eight years unless the Board of County Commissioners desires to perform the projects more frequently. Bladen County's last revaluation was effective January 1, 2007.

Finally, it must be remembered, the true test of a mass appraisal system rests upon its acceptance by the County Assessor, the taxpayers and administrative review bodies such as the Board of County Commissioners, Board of Equalization and Review, Department of Revenue and the courts.

The material contained in this manual is provided to enable the user to apply standard procedures to the mass appraisal of property. In certain cases, the procedures are manually implemented and controlled; in others, the highly sophisticated data processing and appraisal systems are available to assure standard methods are employed. The principle to be recognized is that of standardization of data and operations as a vehicle to achieving the goals of the appraisal system.

Although the resulting estimates of value for each property will be used later in calculation of property tax, at this point the sole responsibility of the Tax Administrator and his appraisal staff is to reasonably approach and estimate the most probable total selling price for all parcels.

Also at this point, the property owner should acknowledge only that the Tax Administrator did, or did not, reasonably estimate the approximate market value for the property. The appraisal staff will be available to informally discuss any concerns a property owner may have prior to the meeting of the *Board of Equalization and Review*. A general provision, set out by Statute 105-

394, states that "Immaterial irregularities in the listing, appraisal, or assessment of property for taxation ... or in any other proceeding or requirement of this subchapter shall not invalidate the tax imposed upon any property or any process of listing, appraisal, assessments, levy, collection, or any other proceeding under this Subchapter."

All real estate appraisal work in the United States must be accomplished in compliance with the *Uniform Standards of Professional Appraisal Practice*. USPAP Standard 6, which governs real estate appraisal practice for *ad valorem* tax purposes, together with the Tax Administrator's statements of compliance, comprises a large portion of this *2015 Schedule of Values*.

Rules governing the listing, appraisal and assessment of real property for taxation are set out in Subchapter II of Chapter 105 of the General Statutes of North Carolina. These rules are collectively referred to as *The Machinery Act of North Carolina*. Some important excerpts of current statutes which directly apply to this manual are reprinted in Section 1.

To assist property owners, employees, and administrative interest in understanding and applying assessment standards, this manual of values, standards, and rules is required.

## REVALUATION OVERVIEW

*The purpose of a general reappraisal is not to raise revenue but to equalize property values.*

The common denominator or the basis for equalization is market value; that price which an informed and intelligent person - fully aware of the existence of competing properties and not being compelled to act - is justified in paying for a particular property.

The job of the appraiser is to arrive at a reasonable estimate of that justified price. To accomplish this, the coordination of approaches to the valuation of the various classes of property must be made so that they are related one to another in such a way as to reflect the motives of the prospective purchasers of each type of property.

The prime objective of mass appraisals for tax purposes is to equalize property values. Not only must the value of one residential property be equalized with another, but it must also be equalized with each agricultural, commercial, and industrial property within the county.

A prospective purchaser of a residential property is primarily interested in its capacity to render service to the family as a place to live. Its location, size, quality, design, age, condition, desirability and usefulness are the primary factors to be considered in making a selection. By relying heavily upon powers of observation and inherent intelligence, knowing what could be afforded and simply comparing what is available, one property will eventually stand out to be more appealing than another. So it is likewise the job of the appraisers to evaluate the relative degree of appeal of one property to another for tax purposes.

The prospective purchaser of agricultural property will be motivated somewhat differently. The primary interest will be in the productive capabilities of the land. It is reasonable to assume that the purchaser will be familiar, at least in a general way, with the productive capacity of the farm. It might be expected that the prudent investor would compare one farm's capabilities against another. Accordingly, the appraiser for local tax equalization purposes must rely heavily upon prices being paid for comparable farmland in the community.

The prospective purchaser of commercial property is primarily interested in the potential net return and tax shelter the property will provide. That price which is justified to pay for the property is a measure of the prospects for a net return from the investment. Real estate, as an investment, then, must not only compete with other real estate, but also with stocks, bonds annuities, and other similar investment options. The commercial appraiser must explore the rental market and compare the income-producing capabilities of one property to another.

The prospective purchaser of industrial property is primarily interested in overall utility value of the property. Of course, in evaluating the overall utility, individual considerations must be given to the land and each improvement thereon. Industrial buildings are generally of special purpose design, and as such, cannot readily be divorced from the operation for which they were built. As long as the operation remains effective, the building likewise retains its utility. The upper limit of its value is its replacement cost new, and its present day value is some measure of its present day usefulness in relation to the purpose for which it was originally designed.

Any effective approach to valuations for tax purposes must be patterned in such a way as to reflect the “modus operandi” of buyers in the market place. As indicated above, the motives influencing prospective buyers tend to differ depending upon the type of property involved. It follows that the appraiser’s approach to value must differ accordingly.

The residential appraiser must rely heavily upon the market data approach to value; analyzing the selling prices of comparable properties and considering the very same factors of location, size, quality, design, age, condition, desirability, and usefulness which were considered by the buyer.

The agricultural appraiser must likewise rely primarily upon the market data approach to value, but in addition to analyzing the selling prices of comparable properties, an effective analysis of the farm’s productive potential must also be made.

Rural dwellings are similar to urban dwellings in that their primary purpose is to provide a family with a home; as such, the appraiser should value them in the same manner as the valuation of any other residence. The approach to farm buildings, however, must be somewhat different. Here, the primary objective is to arrive at that value which the building’s presence adds to the productivity of the land; their degree of utility or usefulness. In determining the productive capabilities of the land, it will be necessary to divide the land into various classes according to specific types and uses, such as tillable, pasture, woodland, and wasteland; to compute the acreage of each class, and to value each class individually. Due consideration must be given to soil types and fertility, making every effort to utilize all soil and land maps available through agriculture extension services and state universities. Similarly, equal consideration must be given to all other factors affecting the value of the property, such as its location relative to the market place, its relative accessibility, the topography of the land, the shape and size of the fields, the extent and condition of the fences, drainage, water supply, etc.

The commercial appraiser will find that since commercial property is not bought and sold as frequently as is residential property, the sales market will then be hard to establish. Two other options for valuing commercial property are the cost approach and the income approach. For the most part, the income approach to value should be used. By relying on the income approach to value, the net economic rent, which the property is capable of

yielding, can usually be determined. The amount of investment required to effect that net return at a rate commensurate with the normal expectations of typical investors can be determined. This can only be achieved through a comprehensive study of the income-producing capabilities of comparable properties and an analysis of present day investment practices.

The industrial appraiser will not be able to rely primarily on the market data approach because of the absence of comparable sales, each sale generally reflecting different circumstances and conditions. Also, it is not possible to rely primarily upon the income approach. Again because of the absence of comparable investments, and because of the inability to accurately determine the contribution of each unit of production to the overall income produced. Therefore, by relying primarily on the cost approach to value, a determination must be made of the upper limit or replacement cost new of each improvement and the subsequent loss of value resulting from the overall physical, functional, and economic factors.

The fact that there are different approaches to value - some of which are more applicable to one class of property than to another - does not, by any means, preclude equalization between classes. Remember that the objective in each approach is to arrive at a price which an informed and intelligent person, fully aware of the existence of competing properties and not being compelled to act, is justified in paying for any one particular property. Underlying and fundamental to each of the approaches is the comparison process. Regardless of whether the principal criteria are actual selling prices, income-producing capabilities, or functional usefulness, like properties must be treated alike. **The primary objective is equalization.** The various approaches to value, although valid in themselves, must nevertheless be coordinated one to the other in such a way as to produce values, which are not only valid and accurate, but are also equitable. The same "yardstick" of values must be applied to all properties, and must be applied by systematic and uniform procedures.

It is obvious that sales on all properties are not required to effectively apply the market data approach. The same is true regarding any other approach. What is needed is a comprehensive record of all the significant physical and economic characteristics of each property in order to compare the properties of "unknown" values with the properties of "known" values. All significant differences between properties must in some measure, either positively or negatively, be reflected in the final estimate of value.

Each property must be given individual treatment, but the treatment must be uniform and standardized, and essentially no different than that given to any other property. All the factors affecting value must be analyzed and evaluated for each and every property within the entire county. It is only by doing this that equalization between properties and between classes of properties can be ultimately affected.

All this, at best, is an over-simplification of the equalization process underlying the entire Mass Appraisal Program. The program itself consists of various operational phases. Its success depends primarily upon the systematic coordination of collecting and recording data, analyzing and processing the data to an indicated value.

## **DATA COLLECTION AND RECORDING**

Basic to the appraisal process is the collecting and recording of pertinent data. The data will consist of general supporting data. Referring to the data required to develop the elements essential to the valuation process is: *neighborhood* data, referring to information regarding pre-delineated neighborhood units; and *specific property* data, referring to the data compiled for each parcel of property to be processed into an indication of value by the cost, market and/or income approach.

The data must be comprehensive enough to allow for the adequate consideration of all factors, which significantly affect property values. In keeping with economics of a mass appraisal program, it is costly and impractical to collect, maintain, and process data of no or marginal contribution to the desired objectives. The axiom "too much data is better than insufficient data" does not apply. What does apply is the proper amount of data, no more or no less, which is necessary to provide the database required to generate the desired output.

*General Supporting Data.* The appraisal staff will be primarily concerned with cost, sales and income data, but they will also find it necessary to research and compile general social-economic information pertaining to the entire county under appraisal. The information will serve to assist the staff during the analytical phase of the operation and should include, but not necessarily be limited to, population trends, prevailing geographical factors, primary transportation facilities, primary income sources, unemployment and income levels, institutional influences, the annual volume of new construction and ownership transfers, availability of vacant land, construction labor and material costs, preponderance of residential rentals, and the amount of residential vacancies.

*Cost data* must be sufficient enough to develop or select and validate the pricing schedules and cost tables required to compute the replacement cost new of improvements needed to apply the cost approach to value.

All data pertaining to the cost of total buildings in place should include the parcel identification number, property address, date of completion, construction cost, source of information, structural characteristics, and other information pertinent to analysis.

Cost information may be recorded on the same form (unassigned property

record card) used to record specific property data.

The principal sources for obtaining cost data are builders and developers, and it is generally advisable to collect cost data in conjunction with new construction pick-ups.

*Sales data* must be sufficient enough to provide a representative sampling of comparable sales needed to apply the market data approach, to derive unit land values and depreciation indicators needed to apply the cost approach, and to derive gross rent multipliers and elements of the capitalization rate needed to apply the income approach.

All sales data should include the parcel identification number, property classification code, month and year of sale, selling price, source of information (i.e., buyer, seller, agent, or fee), and a reliable judgment as to whether or not the sale is representative of true arm's length transaction.

Sales data should be recorded on the same form (assigned property record card) used to record specific property data, and verified during the property listing phase.

The principal source for obtaining sales data is the County Registry's Office and the real estate transfer returns. Other sources may include developers, Realtors, lending institutions, and individual owners during the listing phase of the operation.

*Income and Expense Data.* Income and expense information data must be sufficient enough to derive capitalization rates and accurate estimates of net income needed to apply the income approach.

Income and expense data should include both general data regarding existing financial attitudes and practices, and specific data regarding the actual incomes and expenses realized by specific properties.

The general data should include such information as equity return expectations, gross rentals, vacancy and operating cost expectations and trends, prevailing property management costs, and prevailing mortgage costs.

Specific data should include the parcel identification number, property address (or building ID), source of information, the amount of equity, the mortgage and lease terms, and an itemized account of the annual gross income, vacancy loss, and operating expenses for the most recent two-year period.

The general data should be documented in conjunction with the development

of capitalization procedural guidelines. The specific data, since it is often considered confidential and not subject to public access, should be recorded on special forms, designed in such a way as to accommodate the property owner or agent thereof in submitting the required information. The forms should also have space reserved for the appraiser's analysis and calculations.

The principal sources for obtaining the general financial data are investors, lending institutions, and property managers. The primary sources for obtaining specific data are the individual property owners and/or tenants during the listing phase of the operation.

*Neighborhood Data.* At the earliest feasible time during the data inventory phase of the operation, and after a thorough consideration of the living environment and economic characteristics of the overall county, or any political subdivision thereof, the appraisal staff should delineate the larger jurisdictions into smaller "neighborhood units," each exhibiting a higher degree of homogeneity in residential amenities, land use, economic trends, and housing characteristics such as structural quality, age and condition. The neighborhood delineations should be outlined on an index (or comparable) map and each assigned an arbitrary Neighborhood Identification Code, which when combined with the parcel identification number system, will serve to uniquely identify it from other neighborhoods.

Neighborhood data must be comprehensive enough to permit the adequate consideration of value-influencing factors to determine the variations in selling prices and income yields attributable to benefits arising from the location of one specific property as compared to another. The data should include the taxing district, the school district (if applicable), the neighborhood identification code, special reasons for delineation (other than obvious physical and economic boundaries), and various neighborhood characteristics such as the type (urban, suburban, etc.), the predominant class (residential, commercial, etc.), the trend (whether it is declining, improving, or relatively stable), its accessibility to the central business district, shopping centers, interstate highways and primary transportation terminals, its housing characteristics, the estimated range of selling prices for residentially-improved properties, and a rating of its relative durability.

All neighborhood data should be recorded on a specially designed form during the delineation phase.

*Specific property data* must be comprehensive enough to provide the data base needed to process each parcel of property to an indication of value, to generate the tax roll and related tax roll requirements, to generate other specified output, and to provide the assessing officials with a permanent record to facilitate maintenance functions and to administer taxpayer assistance and grievance proceedings.

The data should include the parcel identification number, ownership and mailing address, legal description, property address, property classification code, local zoning code, neighborhood identification code, site characteristics, and structural characteristics.

All the data should be recorded on a single, specially-designed property record card customized to meet individual assessing needs. Each card should be designed and formatted in such a way as to accommodate the listing of information and to facilitate data processing. In addition to the property data items noted above, space must be provided for a building sketch, land and building computations, summarization, and memoranda. In keeping with the economy and efficiency of a mass appraisal program, the card should be formatted to minimize writing by including a sufficient amount of site and structural descriptive data, which can be checked and/or circled. The descriptive data should be comprehensive enough to be suitable for listing any type of land and improvement data regardless of class, with the possible exception of large industrial, institutional, and utility complexes, which require lengthy descriptions. In these cases, it will generally be necessary to use a specially designed supplemental property record document, keyed and indexed to the corresponding property record card. The property record card should be made a permanent part of the assessing system, and used not only in conjunction with the revaluation, but also to update the property records for subsequent assessments.

The specific property data should be compiled from existing assessing records and field inspections. The parcel identification number, ownership, mailing address and legal description may be obtained from existing tax rolls. Property classification codes may also be obtained from existing tax rolls (whenever available) and verified in the field. Local zoning codes (if applicable) may be obtained from existing zoning maps. Neighborhood identification codes may be obtained from the neighborhood delineation maps. Lot sizes and acreage may be obtained from existing tax maps. The property address and the site and structural characteristics may be obtained by making a physical inspection of each property.

In transferring lot sizes from the tax maps to the property record cards, the personnel performing the tasks must be specially trained in the use of standardized lot sizing techniques and depth tables, which are necessary to adjust irregular shaped lots and abnormal depths to account for variations from predetermined norms. In regard to acreage, the total acreage may be transferred, but the acreage breakdowns required to effect the valuation of agricultural, commercial, and industrial properties must be obtained in the file from the property owner and verified by personal observation and aerial photographs, if available.

Qualified data collectors under the close supervision of the appraisal staff must conduct field inspections. During this phase of the operation, the data collector must visit each property and attempt to make personal contact with the occupant. In the course of the inspection, the following procedures must be adhered to:

Identification of the property

Verification of the ownership (recording any transfers which may have occurred)

Recording the property address

Verification of the property classification and zoning codes

Measuring and inspecting the exterior of the building, as well as all other improvements on the property, and recording of the dimensions and/or size of each

Recording of the principal building(s), and the main portion of the structure along with any significant attached exterior features, such as porches, etc. All components must be identified and the exterior dimensions shown for each

Selection of and recording the proper quality grade of the improvement

Selection of and recording the proper condition, desirability and usefulness (CDU) for all field items

Reviewing the property record card for completeness and accuracy.

After the field inspection is completed, the property record cards must be submitted to clerical personnel to review the cards for completeness and data entry.

Complete and accurate data are essential to the program. Definite standardized data collection and recording procedures must be followed if these objectives are to be met.

**ANALYZING AND PROCESSING THE DATA**

This phase of the operation involves the analysis of data compiled during the data inventory phase and the processing of the data to an indication of value through the use of the cost, market, and income approaches to value.

During the analytical phase, it will be necessary to analyze cost, market, and income data in order to provide a basis for validating the appropriate cost schedules and tables required to compute the replacement cost new of all buildings and structures; for establishing comparative unit land values for each class of property; for establishing the appropriate depreciation tables and guidelines for each class of property; and for developing gross rent multipliers, economic rent and operating expense norms, capitalization rate tables, and other related standards and norms required to effect the mass appraisal of all the property within the county on an equitable basis.

After establishing the appropriate standards and norms, it remains to analyze the specific data compiled for each property by giving due consideration to the factors influencing the value of that particular property as compared to another, and then to process the data into an indication of value by employing the techniques described in the section of the manual dealing with the application of the traditional approaches to value.

Any one - or all three of the approaches, if applied properly - should lead to an indication of market value; the primary concern is applying the approaches on an equitable basis. This will require the coordinated effort of a number of individual appraisers, each appraiser acting as a member of a team, with the team effort directed toward a valid, accurate, and equitable appraisal of each property within the county. Each property must be physically reviewed during which time the following procedures must be adhered to:

Verification of the accuracy of each of the characteristics recorded on the property record card.

Determination of the proper quality grade and design factor to be applied to each building to account for variations from the base specifications.

Making a judgment of the condition of each improvement in order to arrive at a sound allowance for depreciation.

Capitalization of net income capabilities into an indication of value in order to determine the loss of value attributable to functional and economic obsolescence.

Addition of the depreciated value of all improvements to the land value, and reviewing the total property value in relation to the value of comparable properties.

Determination that the total property value established can be correlated to actual sales of comparable properties.

At the completion of the review phase, the property record cards must be once again submitted to clerical personnel for final mathematical calculations and extensions, and a final check for completeness and accuracy.

Once the final values have been established for each property, the entire program should be evaluated in terms of its primary objectives; do the values approximate a satisfactory level of market value, and - what's more important - are the values equitable? Satisfactory answers to these questions can best be obtained through a statistical analysis of recent sales in an appraisal-to-sale ratio study, if sufficient sales are available.

To perform the study, it is necessary to take a representative sampling of recent valid sales and compute the appraisal-to-sale ratio for each of the sales. If the sample is representative, the computed median appraisal-to-sale ratio will give an indication of how close the appraisals within each district approximate the market value. This is providing, of course, that the sales included represent true market transactions. It is then necessary to determine the deviation of each individual appraisal-to-sale ratio from the median ration, and to compute either the average or the standard deviation, which will give an indication of the degree of equity within each individual district. What remains then is to compare the statistical measures across property classes in order to determine those areas, if any, which need to be further investigated, revising the appraisal, if necessary, to attain a satisfactory level of value and equity throughout the entire county.

The techniques and procedures set forth herein, if applied skillfully, should yield highly accurate and equitable property valuations, and should provide a sound property tax base. It should be noted, however, that no program - regardless of how skillfully administered - can ever be expected to be error-free. The appraisal must be fine-tuned and this can best be done by giving the taxpayer an opportunity to question the value placed upon his property and to produce evidence that the value is inaccurate or inequitable. During this time, the significant errors will be brought to light, and taking the proper corrective action will serve to further the objective of the program. What's important in the final analysis is to use all these measures as well as any other resources available to effect the highest degree of accuracy and equity possible.



## Schedule of Values, Standards, and Rules

### Section 1 Authorization & Standards



Bladen County, North Carolina

Effective January 1, 2015

## Authorization and Standards

### Introduction

The January 1, 2015 revaluation of Bladen County, North Carolina, is conducted under the rules and regulations of:

- (1) Applicable *North Carolina General Statutes* (N.C.G.S.); and
- (2) The *National Uniform Standards of Professional Appraisal Practice, Standard 6* (USPAP) as promulgated by **The Appraisal Foundation** (authorized by the *U.S. Congress* as the source of *Appraisal Standards and Appraiser Qualifications*);
- (3) The *North Carolina Department of Revenue, Property Tax Division* (DOR).

The purpose of this *Schedule of Values* is to document appraisal schedules, standards, rules, and “computer assisted mass appraisal” (CAMA) software used by the Bladen County Tax Department meet N.C.G.S., USPAP, and DOR requirements in the 2015 revaluation. *This Document is inextricably linked to all other required tasks, pieces, and parts.*

North Carolina law requires general reappraisal of real property at least every eight years. Over a long period of time, values assessed under a given revaluation's Schedule of Values lose a uniform relationship to the true market value, as defined by Statute. When compared to sale prices year-by-year during a revaluation's life-cycle, some assessed values become too high while others become too low.

If values fall to a predetermined level with compared to actual market transactions - usually by the fourth year after a general revaluation - certain public utilities are given a reduction in assessments. This reduction continues for three years and can be reduced again in the seventh year after revaluation. These losses result in generally higher tax rates for everyone. In view of inequities of valuation and risk of lost revenue from one source becoming an additional burden on others, more frequent revaluations are desirable.

*From time to time the State of North Carolina may deem it necessary to add or modify guiding statute contained in The Machinery Act. All such Statutory changes and changes to Department of Revenue Rules and Regulations are hereby incorporated into this Schedule of Values.*

## Table of Contents

### **Statutory Authority in The Machinery Act**

§ 105-274. Property subject to taxation	18
§ 105-283. Uniform appraisal standards	18
§ 105-284. Uniform assessment standard	18
§ 105-285. Date as of which property is to be listed and appraised	20
§ 105-286. Time for general reappraisal of real property	20
§ 105-287. Changing appraised value of real property in years in which general reappraisal or horizontal adjustment is not made	22
§ 105-317. Appraisal of real property; adoption of schedules, standards, and rules	23
§ 105-394. Immaterial irregularities	25
§ 105-277.2. Agricultural, horticultural, and forestland – Definitions	26
§ 105-277.3. Agricultural, horticultural, and forestland – Classifications	29
§ 105-277.4. Agricultural, horticultural and forestland – Application; appraisal at use value; appeal; deferred taxes	32
§ 105-301. Place for listing real property	34
§ 105-302. In whose name real property is to be listed	36

### **Uniform Standards of Professional Appraisal Practice (2014-2015 edition)**

#### **Standard 6: Mass Appraisal, Development and Reporting**

Standards Rule 6-1	38
Standards Rule 6-2	40
Standards Rule 6-3	44
Standards Rule 6-4	45
Standards Rule 6-5	46
Standards Rule 6-6	49
Standards Rule 6-7	51
Standards Rule 6-8	52
Standards Rule 6-9	56

<b>North Carolina Department of Revenue Publications and Memorandums</b>	<b>59</b>
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**Article 12.****Property Subject to Taxation.****§ 105-274. Property subject to taxation.**

- (a) All property, real and personal, within the jurisdiction of the State shall be subject to taxation unless it is:
- (1) Excluded from the tax base by a statute of statewide application enacted under the classification power accorded the General Assembly by Article V, § 2(2), of the North Carolina Constitution, or
  - (2) Exempted from taxation by the Constitution or by a statute of statewide application enacted under the authority granted the General Assembly by Article V, § 2(3), of the North Carolina Constitution.
- (b) No provision of this Subchapter shall be construed to exempt from taxation any property situated in this State belonging to any foreign corporation unless the context of the provision clearly indicates a legislative intent to grant such an exemption. (1939, c. 310, ss. 303, 1800; 1961, c. 1169, s. 8; 1967, c. 1185; 1971, c. 806, s. 1.)

**Article 13.****Standards for Appraisal and Assessment.****§ 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.)

**§ 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.
- (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.)

**Article 14.****Time for Listing and Appraising Property for Taxation.****§ 105-285. Date as of which property is to be listed and appraised.**

(a) Annual Listing Required. – All property subject to ad valorem taxation shall be listed annually.

(b) Personal Property; General Rule. – Except as otherwise provided in this Chapter, the value, ownership, and place of taxation of personal property, both tangible and intangible, shall be determined annually as of January 1.

(c) Repealed by Session Laws 1987, c. 813, s. 12.

(d) Real Property. – The value of real property shall be determined as of January 1 of the years prescribed by G.S. 105-286 and G.S. 105-287. The ownership of real property shall be determined annually as of January 1, except in the following situation: When any real property is acquired after January 1, but prior to July 1, and the property was not subject to taxation on January 1 on account of its exempt status, it shall be listed for taxation by the transferee as of the date of acquisition and shall be appraised in accordance with its true value as of January 1 preceding the date of acquisition; and the property shall be taxed for the fiscal year of the taxing unit beginning on July 1 of the year in which it is acquired. The person in whose name such property is listed shall have the right to appeal the listing, appraisal, and assessment of the property in the same manner as that provided for listings made as of January 1.

In the event real property exempt as of January 1 is, prior to July 1, acquired from a governmental unit that by contract is making payments in lieu of taxes to the taxing unit for the fiscal period beginning July 1 of the year in which the property is acquired, the tax on such property for the fiscal period beginning on July 1 immediately following acquisition shall be one half of the amount of the tax that would have been imposed if the property had been listed for taxation as of January 1.

(1939, c. 310, s. 302; 1945, c. 973; 1971, c. 806, s. 1; 1973, c. 735; 1985, c. 656, s. 21; 1987, c. 813, s. 12; 1993, c. 485, s. 17.)

**§ 105-286. Time for general reappraisal of real property.**

(a) Octennial Cycle. – Each county must reappraise all real property in accordance with the provisions of G.S. 105-283 and G.S. 105-317 as of January 1 of the year set out in the following schedule and every eighth year thereafter, unless the county is required to advance the date under subdivision (2) of this section or chooses to advance the date under subdivision (3) of this section.

(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) Mandatory Advancement. – A county whose population is 75,000 or greater according to the most recent annual population estimates certified to the Secretary by the State Budget Officer must conduct a reappraisal of real property when the county's sales assessment ratio determined under G.S. 105-289(h) is less than .85 or greater than 1.15, as indicated on the notice the county receives under G.S. 105-284. A reappraisal required under this subdivision must become effective no later than January 1 of the earlier of the following years:
- a. The third year following the year the county received the notice.
  - b. The eighth year following the year of the county's last reappraisal.
- (3) Optional Advancement. – A county may conduct a reappraisal of real property earlier than required by subdivision (1) or (2) of this subsection if the board of county commissioners adopts a resolution providing for advancement of the reappraisal. The resolution must designate the effective date of the advanced reappraisal and may designate a new reappraisal cycle that is more frequent than the octennial cycle set in subdivision (1) of this subsection. The board of county commissioners must promptly forward a copy of the resolution adopted under this subdivision to the Department of Revenue. A more frequent reappraisal cycle designated in a resolution adopted under this subdivision continues in effect after a mandatory reappraisal required under subdivision (2) of this subsection unless the board of county commissioners adopts another resolution that designates a different date for the county's next reappraisal.

(b), (c) Repealed by Session Laws 2008-146, s. 1.1, effective July 1, 2009. (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; 2008-146, s. 1.1.)

**§ 105-287. Changing appraised value of real property in years in which general reappraisal or horizontal adjustment is not made.**

- (a) In a year in which a general reappraisal of real property in the county is not made under G.S. 105-286, the property shall be listed at the value assigned when last appraised unless the value is changed in accordance with this section. The assessor shall increase or decrease the appraised value of real property, as determined under G.S. 105-286, to recognize a change in the property's value resulting from one or more of the reasons:
- (1) Correct a clerical or mathematical error.
  - (2) Correct an appraisal error resulting from a misapplication of the schedules, standards, and rules used in the county's most recent general reappraisal.
  - (2a) Recognize an increase or decrease in the value of the property resulting from a conservation or preservation agreement subject to Article 4 of Chapter 121 of the General Statutes, the Conservation and Historic Preservation Agreements Act.
  - (2b) Recognize an increase or decrease in the value of the property resulting from a physical change to the land or to the improvements on the land, other than a change listed in subsection (b) of this section.
  - (2c) Recognize an increase or decrease in the value of the property resulting from a change in the legally permitted use of the property.
  - (3) Recognize an increase or decrease in the value of the property resulting from a factor other than one listed in subsection (b).
- (b) In a year in which a general reappraisal of real property in the county is not made, the assessor may not increase or decrease the appraised value of real property, as determined under G.S. 105-286, to recognize a change in value caused by:
- (1) Normal, physical depreciation of improvements;
  - (2) Inflation, deflation, or other economic changes affecting the county in general; or
  - (3) Betterments to the property made by:
    - a. Repainting buildings or other structures;
    - b. Terracing or other methods of soil conservation;
    - c. Landscape gardening;
    - d. Protecting forests against fire; or
    - e. Impounding water on marshland for non-commercial purposes to preserve or enhance the natural habitat of wildlife.
- (c) An increase or decrease in the appraised value of real property authorized by this section shall be made in accordance with the schedules, standards, and rules used in the county's most recent general reappraisal. An increase or decrease in appraised value made under this section is effective as of January 1 of the year in which it is made and is not retroactive. This

section does not modify or restrict the provisions of G.S. 105-312 concerning the appraisal of discovered property.

- (d) Notwithstanding subsection (a), if a tract of land has been subdivided into lots and more than five acres of the tract remain unsold by the owner of the tract, the assessor may appraise the unsold portion as land acreage rather than as lots. A tract is considered subdivided into lots when the lots are located on streets laid out and open for travel and the lots have been sold or offered for sale as lots since the last appraisal of the property.

(1939, c. 310, ss. 301, 500; 1953, c. 970, s. 5; 1955, c. 901; c. 1100, s. 2; 1959, c. 682; c. 704, s. 2; 1963, c. 414; 1967, c. 892, s. 7; 1969, c. 945, s. 1; 1971, c. 806, s. 1; 1973, c. 695, s. 10; c. 790, s. 2; 1987, c. 655; 1997-226, s. 4; 2001-139, s. 2; 2008-146, s. 1.2.)

## **Article 19.**

### **Administration of Real and Personal Property Appraisal.**

#### **§ 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.)

## **Article 30.**

### **General Provisions.**

#### **§ 105-394. Immaterial irregularities.**

Immaterial irregularities in the listing, appraisal, or assessment of property for taxation or in the levy or collection of the property tax or in any other proceeding or requirement of this Subchapter shall not invalidate the tax imposed upon any property or any process of listing, appraisal, assessment, levy, collection, or any other proceeding under this Subchapter.

The following are examples of immaterial irregularities:

- (1) The failure of list takers, tax supervisors, or members of boards of equalization and review to take and subscribe the oaths required of them.
- (2) The failure to sign the affirmation required on the abstract.
- (3) The failure to list, appraise, or assess any property for taxation or to levy any tax within the time prescribed by law.
- (4) The failure of the board of equalization and review to meet or to adjourn within the time prescribed by law or to give any required notice of its meetings and adjournment.

- (5) Any defect in the description upon any abstract, tax receipt, tax record, notice, advertisement, or other document, of real or personal property, if the description be sufficient to enable the tax collector or any person interested to determine what property is meant by the description. (In such cases the tax supervisor or tax collector may correct the description on the documents bearing the defective description, and the correct description shall be used in any documents later issued in tax foreclosure proceedings authorized by this Subchapter.)
  - (6) The failure of the collector to advertise any tax lien.
  - (7) Repealed by Session Laws 1983, c. 808, s. 11.
  - (8) Any irregularity or informality in the order or manner in which tax liens on real property are offered for sale.
  - (9) The failure to make or serve any notice mentioned in this Subchapter.
  - (10) The omission of a dollar mark or other designation descriptive of the value of figures upon any document required by this Subchapter.
  - (11) Any other immaterial informality, omission, or defect on the part of any person in any proceeding or requirement of this Subchapter.
- (1939, c. 310, s. 1715; 1965, c. 192, ss. 1, 2; 1971, c. 806, s. 1; 1983, c. 808, ss. 10, 11.)

### **§ 105-277.2. Agricultural, horticultural, and forestland – Definitions.**

The following definitions apply in G.S. 105-277.3 through G.S. 105-277.7:

- (1) Agricultural land. – Land that is a 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 a part of the farm unit, but the woodland and wasteland included in the unit must 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.
- (1a) Business entity. – A corporation, a general partnership, a limited partnership, or a limited liability company.

- (2) Forestland. – Land that is a 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 a part of the forest unit, but the wasteland included in the unit must 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.
- (3) Horticultural land. – Land that is a 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 a part of the horticultural unit, but the woodland and wasteland included in the unit must 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 (1) of this section when there is determined to be no significant difference in the cash rental rates for the land.
- (4) Individually owned. – Owned by one of the following:
- a. An individual.
  - b. A business entity that meets all of the following conditions:
    1. Its principal business is farming agricultural land, horticultural land, or forestland..
    2. All of its members are, directly or indirectly, individuals who are actively engaged in farming agricultural land, horticultural land, or forestland or a relative of one of the individuals who is actively engaged. An individual is indirectly a member of a business entity that owns the land if the individual is a member of a business entity or a beneficiary of a trust that is part of the ownership structure of the business entity that owns the land.
    3. It is not a corporation whose shares are publicly traded, and none of its members are corporations whose shares are publicly traded.

4. If it leases the land, all of its members are individuals and are relatives. Under this condition, “principal business” and “actively engaged” include leasing.
- c. A trust that meets all of the following conditions:
1. It was created by an individual who owned the land and transferred the land to the trust.
  2. All of its beneficiaries are, directly or indirectly, individuals who are the creator of the trust or a relative of the creator. An individual is indirectly a beneficiary of a trust that owns the land if the individual is a beneficiary of another trust or a member of a business entity that has a beneficial interest in the trust that owns the land.
- d. A testamentary trust that meets all of the following conditions:
1. It was created by an individual who transferred to the trust land that qualified in that individual's hands for classification under G.S. 105-277.3.
  2. At the time of the creator's death, the creator had no relatives.
  3. The trust income, less reasonable administrative expenses, is used exclusively for educational, scientific, literary, cultural, charitable, or religious purposes as defined in G.S. 105-278.3(d).
- e. Tenants in common, if each tenant would qualify as an owner if the tenant were the sole owner. Tenants in common may elect to treat their individual shares as owned by them individually in accordance with G.S. 105-302(c)(9). The ownership requirements of G.S. 105-277.3(b) apply to each tenant in common who is an individual, and the ownership requirements of G.S. 105-277.3(b1) apply to each tenant in common who is a business entity or a trust.
- (4a) Member. – A shareholder of a corporation, a partner of a general or limited partnership, or a member of a limited liability company.
- (5) Present-use value. – The value of land in its current use as agricultural land, horticultural land, or forestland, based solely on its ability to produce income and assuming an average level of management. A rate of nine percent (9%) shall be used to capitalize the expected net income of forestland. The capitalization rate for agricultural land and horticultural land is to be determined by the Use-Value Advisory Board as provided in G.S. 105-277.7.
- (5a) Relative. – Any of the following:
- a. A spouse or the spouse's lineal ancestor or descendant.

- b. A lineal ancestor or a lineal descendant.
  - c. A brother or sister, or the lineal descendant of a brother or sister. For the purposes of this sub-subdivision, the term brother or sister includes stepbrother or stepsister.
  - d. An aunt or an uncle.
  - e. A spouse of a person listed in paragraphs a. through d. For the purpose of this subdivision, an adoptive or adopted relative is a relative and the term "spouse" includes a surviving spouse.
- (6) Sound management program. – A program of production designed to obtain the greatest net return from the land consistent with its conservation and long-term improvement.
- (7) Unit. – One or more tracts of agricultural land, horticultural land, or forestland. Multiple tracts must be under the same ownership and be of the same type of classification. If the multiple tracts are located within different counties, they must be within 50 miles of a tract qualifying under G.S. 105-277.3(a).

(1973, c. 709, s. 1; 1975, c. 746, s. 1; 1985, c. 628, s. 1; c. 667, ss. 1, 4; 1987, c. 698, s. 1; 1995, c. 454, s. 1; 1995 (Reg. Sess., 1996), c. 646, s. 17; 1998-98, s. 24; 2002-184, s. 1; 2004-8, s. 1; 2005-313, ss. 1, 2; 2008-146, s. 2.1.)

### **§ 105-277.3. Agricultural, horticultural, and forestland – Classifications.**

(a) Classes Defined. – The following classes of property are designated special classes of property under authority of Section 2(2) of Article V of the North Carolina Constitution and must be appraised, assessed, and taxed as provided in G.S. 105-277.2 through G.S. 105-277.7.

- (1) Agricultural land. – Individually owned agricultural land consisting of one or more tracts, one of which satisfies the requirements of this subdivision. For agricultural land used as a farm for aquatic species, as defined in G.S. 106-758, the tract must meet the income requirement for agricultural land and must consist of at least five acres in actual production or produce at least 20,000 pounds of aquatic species for commercial sale annually, regardless of acreage. For all other agricultural land, the tract must meet the income requirement for agricultural land and must consist of at least 10 acres that are in actual production. Land in actual production includes land under improvements used in the commercial production or growing of crops, plants, or animals.

To meet the income requirement, agricultural land must, for the three years preceding January 1 of the year for which the benefit of this section is claimed, have produced an average gross income of at least one thousand dollars (\$1,000). Gross income includes income from the sale of the agricultural products produced from the land, any payments received under a governmental soil conservation or land retirement program, and the amount paid to the taxpayer during the taxable year pursuant to P.L. 108-357, Title VI, Fair and Equitable Tobacco Reform Act of 2004.

- (2) Horticultural land. – Individually owned horticultural land consisting of one or more tracts, one of which consists of at least five acres that are in actual production and that, for the three years preceding January 1 of the year for which the benefit of this section is claimed, have met the applicable minimum gross income requirement. Land in actual production includes land under improvements used in the commercial production or growing of fruits or vegetables or nursery or floral products. Land that has been used to produce evergreens intended for use as Christmas trees must have met the minimum gross income requirements established by the Department of Revenue for the land. All other horticultural land must have produced an average gross income of at least one thousand dollars (\$1,000). Gross income includes income from the sale of the horticultural products produced from the land and any payments received under a governmental soil conservation or land retirement program.
  - (3) Forestland. – Individually owned forestland consisting of one or more tracts, one of which consists of at least 20 acres that are in actual production and are not included in a farm unit.
- (b) Individual Ownership Requirements. – In order to come within a classification described in subsection (a) of this section, land owned by an individual must satisfy one of the following conditions:
- (1) It is the owner's place of residence.
  - (2) It has been owned by the current owner or a relative of the current owner for the four years preceding January 1 of the year for which the benefit of this section is claimed.
  - (3) At the time of transfer to the current owner, it qualified for classification in the hands of a business entity or trust that transferred the land to the current owner who was a member of the business entity or a beneficiary of the trust, as appropriate.
- (b1) Entity Ownership Requirements. – In order to come within a classification described in subsection (a) of this section, land owned by a business entity must meet the requirements of subdivision (1) of this subsection and land owned by a trust must meet the requirements of subdivision (2) of this subsection.
- (1) Land owned by a business entity must have been owned by one or more of the following for the four years immediately preceding January 1 of the year for which the benefit of this section is claimed:
    - a. The business entity.
    - b. A member of the business entity.
    - c. Another business entity whose members include a member of the business entity that currently owns the land.
  - (2) Land owned by a trust must have been owned by the trust or by one or more of its creators for the four years immediately preceding January 1 of the year for which the benefit of this section is claimed.

(b2) Exception to Ownership Requirements. – Notwithstanding the provisions of subsections (b) and (b1) of this section, land may qualify for classification in the hands of the new owner if all of the conditions listed in either subdivision of this subsection are met, even if the new owner does not meet all of the ownership requirements of subsections (b) and (b1) of this section with respect to the land.

(1) Continued use. – If the land qualifies for classification in the hands of the new owner under the provisions of this subdivision, then any deferred taxes remain a lien on the land under G.S. 105-277.4(c), the new owner becomes liable for the deferred taxes, and the deferred taxes become payable if the land fails to meet any other condition or requirement for classification. Land qualifies for classification in the hands of the new owner if all of the following conditions are met:

- a. The land was appraised at its present use value at the time title to the land passed to the new owner.
- b. The new owner acquires the land and continues to use the land for the purpose it was classified under subsection (a) of this section while under previous ownership.
- c. The new owner has timely filed an application as required by G.S. 105-277.4(a) and has certified that the new owner accepts liability for any deferred taxes and intends to continue the present use of the land.

(2) Expansion of existing unit. – Land qualifies for classification in the hands of the new owner if, at the time title passed to the new owner, the land was not appraised at its present-use value but was being used for the same purpose and was eligible for appraisal at its present-use value as other land already owned by the new owner and classified under subsection (a) of this section. The new owner must timely file an application as required by G.S. 105-277.4(a).

(c) Repealed by Session Laws 1995, c. 454, s. 2.

(d) Exception for Conservation Reserve Program. – Land enrolled in the federal Conservation Reserve Program authorized by 16 U.S.C. Chapter 58 is considered to be in actual production, and income derived from participation in the federal Conservation Reserve Program may be used in meeting the minimum gross income requirements of this section either separately or in combination with income from actual production. Land enrolled in the federal Conservation Reserve Program must be assessed as agricultural land if it is planted in vegetation other than trees, or as forestland if it is planted in trees.

(d1) Exception for Easements on Qualified Conservation Lands Previously Appraised at Use Value.  
- Property that is appraised at its present-use value under G.S. 105-277.4(b) shall continue to qualify for appraisal, assessment, and taxation as provided in G.S. 105-277.2 through G.S. 105-277.7 as long as (i) the property is subject to an enforceable conservation easement that would qualify for the conservation tax credit provided in G.S. 105-130.34 and G.S. 105-151.12, without regard to actual production or income

requirements of this section; and (ii) the taxpayer received no more than seventy-five percent (75%) of the fair market value of the donated property interest in compensation. Notwithstanding G.S. 105-277.3(b) and (b1), subsequent transfer of the property does not extinguish its present-use value eligibility as long as the property remains subject to an enforceable conservation easement that qualifies for the conservation tax credit provided in G.S. 105-130.34 and G.S. 105-151.12. The exception provided in this subsection applies only to that part of the property that is subject to the easement.

- (d2) Wildlife Exception. – When an owner of land classified under this section does not transfer the land and the land becomes eligible for classification under G.S. 105-277.15, no deferred taxes are due. The deferred taxes remain a lien on the land and are payable in accordance with G.S. 105-277.15.
- (e) Exception for Turkey Disease. – Agricultural land that meets all of the following conditions is considered to be in actual production and to meet the minimum gross income requirements:
- (1) The land was in actual production in turkey growing within the preceding two years and qualified for present use value treatment while it was in actual production.
  - (2) The land was taken out of actual production in turkey growing solely for health and safety considerations due to the presence of Poult Enteritis Mortality Syndrome among turkeys in the same county or a neighboring county.
  - (3) The land is otherwise eligible for present use value treatment.
- (f) Sound Management Program for Agricultural Land and Horticultural Land. – If the property owner demonstrates any one of the following factors with respect to agricultural land or horticultural land, then the land is operated under a sound management program:
- (1) Enrollment in and compliance with an agency-administered and approved farm management plan.
  - (2) Compliance with a set of best management practices.
  - (3) Compliance with a minimum gross income per acre test.
  - (4) Evidence of net income from the farm operation.
  - (5) Evidence that farming is the farm operator's principal source of income.
  - (6) Certification by a recognized agricultural or horticultural agency within the county that the land is operated under a sound management program.

Operation under a sound management program may also be demonstrated by evidence of other similar factors. As long as a farm operator meets the sound management requirements, it is irrelevant whether the property owner received income or rent from the farm operator.

- (g) Sound Management Program for Forestland. – If the owner of forestland demonstrates that the forestland complies with a written sound forest management plan for the production and sale of forest products, then the forestland is operated under a sound management program.

(1973, c. 709, s. 1; 1975, c. 746, s. 2; 1983, c. 821; c. 826; 1985, c. 667, ss. 2, 3, 6.1; 1987, c. 698, ss. 2-5; 1987 (Reg. Sess., 1988), c. 1044, s. 13.1; 1989, cc. 99, 736, s. 1; 1989 (Reg. Sess., 1990), c. 814, s. 29; 1995, c. 454, s. 2; 1997-272, s. 1; 1998-98, s. 22; 2001-499, s. 1; 2002-184, s. 2; 2005-293, s. 1; 2005-313, s. 3; 2007-484, s. 43.7T(c); 2007-497, s. 3.1; 2008-146, s. 2.2; 2008-171, ss. 4, 5; 2011-9, s. 1.)

**§ 105-277.4. Agricultural, horticultural and forestland – Application; appraisal at use value; appeal; deferred taxes.**

- (a) Application. – Property coming within one of the classes defined in G.S. 105-277.3 is eligible for taxation on the basis of the value of the property in its present use if a timely and proper application is filed with the assessor of the county in which the property is located. The application must clearly show that the property comes within one of the classes and must also contain any other relevant information required by the assessor to properly appraise the property at its present-use value. An initial application must be filed during the regular listing period of the year for which the benefit of this classification is first claimed, or within 30 days of the date shown on a notice of a change in valuation made pursuant to G.S. 105-286 or G.S. 105-287. A new application is not required to be submitted unless the property is transferred or becomes ineligible for use-value appraisal because of a change in use or acreage. An application required due to transfer of the land may be submitted at any time during the calendar year but must be submitted within 60 days of the date of the property's transfer.
- (a1) Late application. – Upon a showing of good cause by the applicant for failure to make a timely application as required by subsection (a) of this section, an application may be approved by the board of equalization and review or, if that board is not in session, by the board of county commissioners. An untimely application approved under this subsection applies only to property taxes levied by the county or municipality in the calendar year in which the untimely application is filed. Decisions of the county board may be appealed to the Property Tax Commission.
- (b) Appraisal at Present-use Value. – Upon receipt of a properly executed application, the assessor must appraise the property at its present-use value as established in the schedule prepared pursuant to G.S. 105-317. In appraising the property at its present-use value, the assessor must appraise the improvements located on qualifying land according to the schedules and standards used in appraising other similar improvements in the county. If all or any part of a qualifying tract of land is located within the limits of an incorporated city or town, or is property annexed subject to G.S. 160A-37(f1) or G.S. 160A-49(f1), the assessor must furnish a copy of the property record showing both the present-use appraisal and the valuation upon which the property would have been taxed in the absence of this classification to the collector of the city or town. The assessor must also notify the tax collector of any changes in the appraisals or in the eligibility of the property for the benefit of this classification. Upon a request for a certification pursuant to G.S. 160A-37(f1) or G.S.160A-49(f1), or any change in the certification, the assessor for the county where the land subject to the annexation is located must, within 30 days, determine if the land meets the requirements of G.S. 160A-37(f1)(2) or G.S. 160A-49(f1)(2) and report the results of its findings to the city.
- (b1) Appeal. – Decisions of the assessor regarding the qualification or appraisal of property under this section may be appealed to the county board of equalization and review or, if that board is not in session, to the board of county commissioners. An appeal must be made within 60 days after the decision of the assessor. If an owner submits additional information to the assessor pursuant to G.S. 105-296(j), the appeal must be made within 60 days after the assessor's decision based on the additional information. Decisions of the county board may be appealed to the

## Property Tax Commission.

- (c) Deferred Taxes. – Land meeting the conditions for classification under G.S. 105-277.3 must be taxed on the basis of the value of the land for its present use. The difference between the taxes due on the present-use basis and the taxes that would have been payable in the absence of this classification, together with any interest, penalties, or costs that may accrue thereon, are a lien on the real property of the taxpayer as provided in G.S. 105-355(a). The difference in taxes must be carried forward in the records of the taxing unit or units as deferred taxes. The deferred taxes for the preceding three fiscal years are due and payable in accordance with G.S. 105-277.1F when the property loses its eligibility for deferral as a result of a disqualifying event. A disqualifying event occurs when the land fails to meet any condition or requirement for classification or when an application is not approved.
- (d) Exceptions. – Notwithstanding the provisions of subsection (c) of this section, if property loses its eligibility for present use value classification solely due to one of the following reasons, no deferred taxes are due and the lien for the deferred taxes is extinguished:
- (1) There is a change in income caused by enrollment of the property in the federal conservation reserve program established under 16 U.S.C. Chapter 58.
  - (2) The property is conveyed by gift to a nonprofit organization and qualifies for exclusion from the tax base pursuant to G.S. 105-275(12) or G.S. 105-275(29).
  - (3) The property is conveyed by gift to the State, a political subdivision of the State, or the United States.
- (e) Repealed by Session Laws 1997-270, s. 3, effective July 3, 1997.

(1973, c. 709, s. 1; c. 905; c. 906, ss. 1, 2; 1975, c. 62; c. 746, ss. 3-7; 1981, c. 835; 1985, c. 518, s. 1; c. 667, ss. 5, 6; 1987, c. 45, s. 1; c. 295, s. 5; c. 698, s. 6; 1987 (Reg. Sess., 1988), c. 1044, s. 13.2; 1995, c. 443, s. 4; c. 454, s. 3; 1997-270, s. 3; 1998-98, s. 23; 1998-150, s. 1; 2001-499, s. 2; 2002-184, s. 3; 2005-313, s. 4; 2006-30, s. 4; 2008-35, s. 2.3.)

**Article 17.****Administration of Listing.****§ 105-301. Place for listing real property.**

All taxable real property that is not required by this Subchapter to be appraised originally by the Department of Revenue shall be listed in the county in which it is situated. If all or part of the real property is situated within the boundaries of a municipal corporation, this fact shall be specified on the abstract as required by G.S. 105-309. Nothing in this section shall be construed to conflict with the provisions of G.S. 105-326 through 105-328. (1939, c. 310, s. 700; 1971, c. 806, s. 1; 1973, c. 476, s. 193.)

**§ 105-302. In whose name real property is to be listed.**

- (a) Taxable real property shall be listed in the name of the owner, and it shall be the owner's duty to list it unless the board of county commissioners shall have adopted a permanent listing system as provided in G.S. 105-303(b). For purposes of this section, the board of county commissioners may require that real property be listed in the name of the owner of record as of the day as of which property is to be listed under G.S. 105-285.
- (b) If real property is listed in the name of one other than the person in whose name it should be listed, and the name of the proper person is later ascertained, the abstract and tax records shall be corrected to list the property in the name of the person in whose name it should have been listed. The corrected listing shall have the same force and effect as if the real property had been listed in the name of the proper person in the first instance.
- (c) For purposes of this Subchapter:
  - (1) The owner of the equity of redemption in real property subject to a mortgage or deed of trust shall be considered the owner of the property, and such real property shall be listed in the name of the owner of the equity of redemption.
  - (2) Real property owned by a corporation shall be listed in the name of the corporation.
  - (3) Real property owned by an unincorporated association shall be listed in the name of the association.
  - (4) Real property owned by a partnership shall be listed in the name of the partnership.
  - (5) Real property held in connection with a sole proprietorship shall be listed in the name of the owner, and the name and address of the proprietorship shall be noted on the abstract.
  - (6) Real property of which a decedent died possessed, if not under the control of an executor or administrator, shall be listed in the names of the heirs or devisees if known, but such property

may be listed as property of "the heirs" or "the devisees" of the decedent, without naming them, until they have given the assessor notice of their names and of the division of the estate. It shall be the duty of an executor or administrator having control of real property to list it in his fiduciary capacity, as required by subdivision (c)(7), below, until he is divested of control of the property. However, the right of an administrator or executor of a deceased person to petition for the sale of real property to make assets shall not be considered control of the real property for the purposes of this subdivision.

- (7) Real property, the title to which is held by a trustee, guardian, or other fiduciary, shall be listed by the fiduciary in his fiduciary capacity except as otherwise provided in this section.
  - (8) A life tenant or tenant for the life of another shall be considered the owner of real property, and it shall be his duty to list the property for taxation, indicating on the abstract that he is a life tenant or tenant for the life of another named individual.
  - (9) Upon request to and with the approval of the assessor, undivided interests in real property owned by tenants in common who are not copartners may be listed by the respective owners in accordance with their respective undivided interests. Otherwise, real property held by tenants in common shall be listed in the names of all the owners.
  - (10) Real property owned by husband and wife as tenants by the entirety shall be listed on a single abstract in the names of both tenants, and the nature of their ownership shall be indicated thereon.
  - (11) When land is owned by one party and improvements thereon or special rights (such as mineral, timber, quarry, waterpower, or similar rights) therein are owned by another party, the parties shall list their interests separately unless, in accordance with contractual relations between them, both the land and the improvements and special rights are listed in the name of the owner of the land.
  - (12) If the person in whose name real property should be listed is unknown, or if title to real property is in dispute, the property shall be listed in the name of the occupant or, if there be no occupant, in the name of "unknown owner." Such a listing shall not affect the validity of the lien for taxes created by G.S. 105-355. When the name of the owner is later ascertained, the provisions of subsection (b), above, shall apply.
  - (13) Real property, owned under a time-sharing arrangement but managed by a homeowners association or other managing entity, shall be listed in the name of the managing entity.
- (1939, c. 310, s. 701; 1971, c. 806, s. 1; 1983, c. 785, s. 1; 1987, c. 45, s. 1.)

**Uniform Standards of Professional Appraisal Practice; 2014-2015 Edition (USPAP)  
Standard 6: Mass Appraisal, Development and Reporting**

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.

A mass appraisal includes:

- 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 the 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; and
- 7) reviewing the mass appraisal results.

The JURISDICTIONAL EXCEPTION RULE may apply to several sections of STANDARD 6 because ad valorem tax administration is subject to various state, county, and municipal laws.

**USPAP Standards Rule 6-1**

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;
- (b) not commit a substantial error of omission or commission that significantly affects a mass appraisal; and
- (c) not render a mass appraisal in a careless or negligent manner.

***Compliance with Standards Rule 6-1***

**(6)(1)(a) Methods and Techniques.** Mass appraisal provides 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. The appraisal staff attends continuing education classes to keep abreast of methods and techniques.

*From time to time the Tax Administrator of Bladen County may deem it necessary to add one or another code or appraisal policy contained in this Schedule of Values, to address unforeseen situations.*

*The right to add all such new codes and policy into this Schedule of Values is hereby granted except that no new code or policy may affect the integrity of (equality in) the valuations arising from the implementation of and continuing use of this Schedule, as approved.*

**(6)(1)(b) Errors.** The appraisal staff is responsible for gathering field information and forming objective, credible opinions of value in a careful manner. Staff appraisers are individually responsible for making opinion-based appraisal decisions with due diligence to maintain equity between parcels by appraising each parcel (predicting the sale price) as close to 100% of market value as is possible. Management has created, and will create and will exercise regular quality control measures.

**(6)(1)(c) Carelessness.** The appraisal staff is competent, and will use due diligence and due care in their work. Management will exercise regular quality control measures.

**USPAP Standards Rule 6-2**

In developing a mass appraisal, an appraiser must:

- (a) identify the client and other intended users;
- (b) identify the intended use of the appraisal;
- (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 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;
- (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;
- (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
- (j) determine the scope of work necessary to produce credible assignment results in accordance with the SCOPE OF WORK RULE.

### ***Compliance with Standards Rule 6-2***

**(6)(2)(a) Client.** Bladen County is the Client.

**(6)(2)(b) Intended Use.** The purpose of this revaluation is to appraise real property for 100% of market value. The Client will use each estimate of appraised value as the basis for levying an *ad valorem* (according to value) tax. Because of the nature of *ad valorem* taxation, each owner or other entity paying the resulting tax becomes the End User of the value information produced by the 2013 revaluation. The purpose of a revaluation is to increase uniformity or equity in taxation (and not to increase the Client's income).

**(6)(2)(c) Definition of Value.** N.C.G.S. 105-283 defines Market Value. A second definition of value mandated for qualifying Agricultural, Horticultural, and Forest lands may be found beginning at N.C.G.S. 105-277.2. See *Schedule of Values, Section 1*.

**(6)(2)(d) Effective Date of Appraisal.** According to the dictates of N.C.G.S. 105-286, the effective date of the 2015 revaluation is January 1, 2015 and each January 1 thereafter according to the dictates of N.C.G.S. 105-287. See *Schedule of Values, Section 1*.

**(6)(2)(e) Relevant Characteristics of the Market.** Bladen County is located in southeastern North Carolina, and is bordered by Cumberland County to the north, Sampson County to the northeast, Pender County to the east, Columbus County to the south, and Robeson County to the west.

The Towns of Elizabethtown, Bladenboro, Tar Heel, Dublin, White Lake and Clarkton are located within its borders. For the 2014 tax roll, the County had approximately 29,729 non-exempt parcels of real estate of which about 13,568 had no real property structure, about 11,154 of which were improved with real property residential structures, and about 757 of which were improved with commercial/industrial structures. Large land areas of the County are home to the United States Forestry Service.

**(6)(2)(f) Market Areas.** The appraisal staff has divided Bladen County into over 150 neighborhoods (geographic collections of homogeneous properties). Such neighborhoods are the “location” in the maxim describing the three things in valuing real estate is “location, location, and location”. “Neighborhood” is the most basic market area for analyzing and revaluing real property in the county for the 2015 Tax Roll. Similar neighborhoods will be grouped or clustered into Neighborhood Models.

**(6)(2)(g) Appropriate market time.** The typical residential parcel will find a buyer when exposed to the market for three to nine months. Commercial and/or industrial parcels typically require longer exposure. Real property in Bladen County is typically sold using financial arrangements equivalent to cash.

**(6)(2)(h) Analyze relevant economic conditions at the time of the valuation.** At the time of publication, there exists an oversupply of available property for sale – both improved and unimproved, residential and commercial – and the volume of sales activity is close to the lowest level than at any point over the previous eight years. The ramifications of this oversupply are more particularly discussed within ‘Section 2: Demographic Information on State and County,’ and are critical to understanding the valuation methodology utilized within this report.

**(6)(2)(i) Assumptions, Limiting, and Hypothetical Conditions.**

The Appraiser’s Certification appearing in the *Schedule of Values, Standards Rule 6-8* is subject to the following conditions and to such other specific and limiting conditions as are set forth by each appraiser in the “computer assisted mass appraisal” (CAMA) system “notes” which will appear on the individual property’s *Property Record Card*.

Each appraiser assumes no responsibility for matters of a legal nature affecting the property appraised or the title thereto, nor does each appraiser render an opinion as to the title, which is assumed to be good and marketable. Every real property is appraised assuming a *fee-simple estate* exists (all rights are vested in the owner-of-record).

The present use of each parcel’s land, *as governed by present zoning-in-force*, are assumed to be the parcel’s *Highest and Best Use*.

Building sketches are included to assist the reader in visualizing the building, whose dimensions are rounded to the nearest foot. All administrative data (owner name, legal description, etc.), and other data are based on the best information available. Staff appraisers regularly make field visits to gather data about any given property; but no staff member has made a survey of any property.

The allocation of total value into land and building components are not to be compared to the allocation of total value in any other appraisal. Any such comparison is invalid.

Each appraiser assumes there are no hidden or unapparent conditions of the property, subsoil, or structures which would render it more or less valuable. Each appraiser assumes no responsibility for such conditions, or for engineering which might be required to discover such factors. Once the condition is made known by the owner or his agent, the appraiser will consider whether and how the condition(s) will affect the value.

The best indication of the sale price commonly available is as inferred from the *Excise Tax Stamps* purchased when the deed is recorded (at the rate of \$2.00 per \$1,000 of new money, per N.C.G.S. 105-228.28). Appraisers will confirm and otherwise qualify sales data obtained from this and other sources as time and resources permit.

Information, estimates, and opinions furnished to the Tax Department were obtained from sources considered to be reliable and are believed to be true and correct. Field inspections of properties will be made according to *USPAP Standards Rule 6 (4)(d)*, and each appraiser is responsible to use extreme care in the collection of field data.

The content of the Tax Department's computer files, the *Property Record Card*, the *Schedule of Values* and its *Addendum*, and other archived data (except that specifically shielded by N.C.G.S. 105-296 (h)) is public record information. However conclusions as to property value shall not be used for any purpose other than the stated purpose of *ad valorem* taxation without the previous written consent of the Tax Administrator.

**(6)(2)(j) Scope of Work.** Review the descriptive attributes of all real properties in the field, and accomplish all other tasks necessary to produce a credible, equitable estimate of market value for all properties as of January 1, 2015.

**USPAP Standards Rule 6-3**

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
- (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.

***Compliance with Standards Rule 6-3***

**(6)(3)(a) Market Analysis.** Unless otherwise noted, real property is appraised assuming zoning represents its *Highest and Best Use* (defined in the *Schedule of Values, Glossary*). Sales analysis (which measures the effect of all forces at work in the market) will assist the appraisers in calibrating and reconciling the values within each neighborhood.

Where possible and meaningful, land will be appraised (within each neighborhood) as though vacant and available for development to its *Highest and Best Use* (defined as noted above). The appraisal of improvements on each parcel will measure the contribution of the improvement to the value of the land.

Using the features in the County's "computer assisted mass appraisal" (CAMA) system, the appraisal staff will calibrate the individual appraisals to the County's real estate market as of January 1, 2015.

**(6)(3)(b) Appraisal of Personal Property.** With exception(s), the value of personal property is not applicable to the 2015 revaluation of the real estate in Bladen County.

## USPAP Standards Rule 6-4

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;
- (b) employ recognized techniques for specifying property valuation models; and
- (c) employ recognized techniques for calibrating mass appraisal models.

### *Compliance with Standards Rule 6-4*

**(6)(4)(a) Appraisal Procedures.** Standardized data collection forms, procedures, quality control, and training materials assure that appraisal data will be collected and used uniformly on the universe of properties to be appraised in the 2015 revaluation. The *International Association of Assessing Officers (IAAO)* is the source of generally accepted appraisal practice and procedures used in Bladen County.

**(6)(4)(b) Recognized Appraisal Techniques.** The *Schedule of Values* discusses and defines how the County's "computer assisted mass appraisal" (CAMA) system appraises real property. All appraisal techniques used are widely recognized. Please refer to the textbook *Improving Real Property Assessment* for additional information.

**(6)(4)(c) Recognized Calibration Techniques.** The *Schedule of Values*, Section 6, defines the process the appraisal staff will use to calibrate the County's CAMA software system using sales of comparable properties.

**USPAP Standards Rule 6-5**

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) accrued 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;
- (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;
- (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.”

***Compliance with Standards Rule 6-5***

**(6)(5)(a) Data Collection and Use.** The appraisal staff will utilize standard real property data collection procedures and analysis to both prepare and defend each annual Tax Roll prior to the effective date of the 2015 revaluation, and in the 2015 Tax Roll (and following) using generally accepted appraisal practice of *International Association of Assessing Officers*.

*Section 7* reveals the component detail within the *Schedule of Values*.

*Section 6* discusses the coding, protocol, and rules appraisers use to produce credible, equitable, and defensible appraisals for the 2015 Tax Roll.

*Section 6* discusses how the computer assisted mass appraisal (CAMA) software uses the rates in *Section 7*, and the appraiser’s work product described in the *Appendix*, to produce credible estimates of Market Value.

**(6)(5)(b) Capitalization Rates, Income and Expense Data.** The county contracted with *Assessment Solutions of North Carolina, Inc.* to collect and analyze income model data.

**(6)(5)(c) Specific Income Approach Data.** During each year’s appeal season, the staff will collect, encode, analyze and use submitted income and expense data, as appropriate, to compare and contrast with the indicated conclusions made to reflect the market of January 1, 2015.

**(6)(5)(d) Field Inspections.**

**Examples Where Field Inspection Is Required**

*Appraisers are required to make a personal field inspection before finalizing changes to most land or building descriptive attributes.* Such descriptive attributes include, but certainly are not limited to:

<u>Attribute</u>	<u>Description</u>
Building Sketch	The building sketch may be added or modified only after a field visit where the building, building addition, or suspect dimension was measured.
Building Quality	An appraiser’s judgment of <i>Quality Grade</i> may be added or modified only after field inspection. Further in-office research may also be required.
Effective Age and Condition	Effective Age Group and Condition are major components of depreciation. An appraiser’s judgment of which <i>Effective Age Group</i> or <i>Condition</i> code is appropriate may be added or modified only after a field inspection.
View of water, golf, etc.	Any “view” from a given property sufficient to enhance the value of that property may be added or modified only after a field inspection. This does not apply to individual units within condominium projects.

**Examples Where Field Inspection Is Not Required**

The appraisal staff is able to make certain appraisal decisions from trustworthy data available from a limited number of sources other than by personal inspection. Such data and the source(s) of the data thereof include, but are not limited to:

<u>Attribute</u>	<u>Source</u>
Flood Zone	Federal Emergency Management Agency (FEMA) maps
Land Size	Geographic Information System (GIS) Maps
Land Type	Arial Photographs, GIS Maps

Location	GIS Maps
Lot Shape	GIS Maps
Neighborhood	GIS Maps
Sale Price	Deed Stamps, Realtor's Multiple Listing Service, telephone contact
Utilities Available	Water and Sewer Departments of County, City, and Towns
Water/Golf Frontage, etc.	Arial Photographs, GIS Maps
Zoning	GIS Maps, Planning Departments of County and Towns

**USPAP Standards Rule 6-6**

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;
- (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
- (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.

***Compliance with Standards Rule 6-6***

**(6)(6)(a) Market Adjusted Cost Approach.** The *Cost Approach* is one appraisal method in the County's "computer assisted mass appraisal" (CAMA) software system. The *Schedule of Values, Section 6* discusses the calibration of the appraisal models. This process falls well within the guidelines of *generally accepted appraisal practice*.

**(6)(6)(b) Land Valuation.** The *Schedule of Values, Section 4* discusses how the appraisal staff uses the CAMA system to value land within each neighborhood. Land rates discussed are developed using sales of comparable properties, and/or the allocation/abstraction methods, the capitalization of ground rents, and land residual techniques.

**(6)(6)(c) The Effect of Leases.** A long-term lease is able to divide the value of the whole real property between the lessor and the lessee. To assume the *fee simple estate* exists in all property in the County is to equitably appraise each property. The leasehold interest (and value) created by the existence of a long term lease is not taxable separately from the value of the whole, and is not specifically exempted by N.C.G.S. 105-274. re North Carolina Forestry Foundation, Inc., 35 N.C. App 430, 242 S.E.2d 502 (1978), affirmed 296 N.C. 330, 250 S.E.2d 236 (1979)

**(6)(6)(d) Assemblage.** Combining several parcels into a new whole is “assemblage”. The value of the new whole is freshly established using the business rules and procedures discussed in the *Schedule of Values, Section 6 and 7*.

**(6)(6)(e) Anticipated Improvements.** From time to time the appraisal staff may assist other county departments determine the value of anticipated improvements (those planned, but not yet constructed). However for the annual Tax Roll, the appraiser will only appraise the improvements actually in existence on January 1 of the year in question.

**USPAP Standards Rule 6-7**

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.

***Compliance with Standards Rule 6-7***

**(6)(7)(a) Analysis.** One of management's responsibilities is to calibrate the rates in the computer-assisted mass appraisal (CAMA) system. One of the appraiser's responsibilities is to reconcile each neighborhood and properties therein, bringing each neighborhood to 100% of market value. The tools to accomplish both responsibilities are discussed in the *Schedule of Values, Section 6*.

**(6)(7)(b) Accuracy.** Appraisal management continually develops and uses quality control tools, procedures, and techniques to ensure that standards of accuracy are maintained. Management will continue to develop additional tools, procedures, and techniques throughout the life of a given revaluation cycle (as long as eight years).

It is implicit in mass appraisal that, even when properly specified and calibrated mass appraisal models are used, some individual value estimates will not meet standards of reasonableness, consistency, and accuracy. However, the staff appraisers engaged in this revaluation will have software tools designed to uncover these problems before mailing notices of value for the 2015 revaluation.

**USPAP Standards Rule 6-8**

A written report of a mass appraisal must clearly communicate the elements, results, opinions, and value conclusions of the appraisal.

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;
- (c) clearly and accurately disclose all assumptions, extraordinary assumptions, hypothetical conditions, and limiting conditions used in the assignment;
- (d) state the identity of the client and any intended users, by name or type;
- (e) state the intended use of the appraisal;
- (f) disclose any assumptions or limiting conditions that result in deviation from recognized methods and techniques or that affect analyses, opinions, and conclusions;
- (g) set forth the effective date of the appraisal and the date of the report;
- (h) state type and definition of value and cite the source of the definition;
- (i) identify the properties appraised including the property rights;
- (j) describe the scope of work used to develop the appraisal; exclusion of the sales comparison approach, cost approach, or income approach must be explained;
- (k) describe and justify the model specification(s) considered, data requirements, and the model(s) chosen;
- (l) describe the procedure for collecting, validating, and reporting data;
- (m) describe calibration methods considered and chosen, including the mathematical form of the final model(s); describe how value estimates were reviewed; and, if necessary, describe the availability of individual value estimates;
- (n) when an opinion of highest and best use, or the appropriate market or market level was developed, discuss how that opinion was determined;

- (o) identify the appraisal performance tests used and set forth the performance measures attained;
- (p) describe the reconciliation performed, in accordance with Standards Rule 6-7; and
- (q) include a signed certification in accordance with Standards Rule 6-9.

### *Compliance with Standards Rule 6-8*

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.

The computer files containing appraisal attributes and the printed *Property Record Card* (which lists the appraisal data and other pertinent facts about each property), together with the *Schedule of Values* with its *Addenda* and other items such as sales ratio studies are all part of the “written report” required by USPAP Standards Rule 6-7. Therefore any and all information contained or reported in this approved *Schedule of Values* and its *Addenda*, all work-in-progress forms for data entry purposes, and all final sales ratio studies and market studies are hereby specifically made a part of satisfying this requirement.

**(6)(8)(a) Clearly ... Set Forth the Appraisal.** The staff expects to give full and complete answers to all questions. The “full” *Property Record Card* (available on-demand, both in the department and viewable online) will present all pertinent facts about any real property in a clear and concise manner. Any owner or authorized agent having additional questions will find most of the answers in the *Schedule of Values*, as the various *Addenda* therein pertain(s)

to the property in question. Research in sales ratio studies, and other archived material, may be required to answer every remaining question that arises fully and completely.

**(6)(8)(b) Contain Sufficient Information.** The *Property Record Card* will answer most questions about an individual appraisal. The *Schedule of Values*, with all *Addenda*, will answer the rest. Research in other archived material may rarely be required.

**(6)(8)(c) Extraordinary Assumptions, Conditions, Limiting Conditions.** General statements of Assumptions and Limiting Conditions are in the *Schedule of Values*, USPAP *Standards Rule 6 (2)(d)*. Each appraiser whose initials appear on a given property will have conducted field inspections on that property according to the Statement of Compliance with USPAP *Standards Rule 6 (2)(d)* and *6 (4)(d)*.

**(6)(8)(d) Client, User Identity.** The client and the intended users of the revaluation are stated in the *Schedule of Values*, *Standards Rule 6 (2)(a)* and *6 (2)(b)*.

**(6)(8)(e) Purpose, Intended Use.** The purpose and the intended use of the revaluation are stated in the *Schedule of Values*, *Standards Rule 6 (2)(b)*.

**(6)(8)(f) Assumptions and Limiting Conditions.** Statements containing Assumptions and Limiting Conditions regarding any specific property are in the printable-on-demand *Property Record Card*, as notes.

**(6)(8)(g) Effective Date of Appraisal, Date of Report.** The effective date of this reappraisal, and for any subsequent modification or new appraisal during the life of this Schedule of Values will be January 1, 2015. The date of report will be any date printed on the *Property Record Card*.

**(6)(8)(h) Value Definition.** The definition of market value for the 2015 revaluation is found in N.C.G.S. 105-283. A second definition of value mandated for qualifying Agricultural, Horticultural, and Forest lands (Use Value) is found in N.C.G.S. beginning at 105-277.2.

**(6)(8)(i) Identity of Property Appraised.** Each property being appraised is fully identified on the *Property Record Card*. The property rights being appraised are identified in the *Schedule of Value*, the Compliance Statement for USPAP *Standards Rule 6 (2)(d)*, the *Statement of Assumptions and Limiting Conditions*.

**(6)(8)(j) Scope of Work.** The *Schedule of Values*, including Appendices, defines the plans and tasks necessary to produce credible, equitable estimates of market value for 2015.

**(6)(8)(k) Model Specifications.** The models for the *Schedule of Values*, which are applied by the “computer assisted mass appraisal” (CAMA) software system to every real property in Bladen County, are discussed in *Section 7*.

**(6)(8)(l) Data Collection Procedures.** The procedures for collecting data in the field are discussed in the *Schedule of Values*, *Section 3*.

**(6)(8)(m) Calibration.** The procedure for calibrating and reconciling a revaluation are discussed in the *Schedule of Values, Sections 6 and 7.*

**(6)(8)(n) Highest and Best Use.** *Highest and Best Use* is defined in the *Schedule of Values, Appendix (Glossary).*

**(6)(8)(o) Performance Tests and Measures.** The performance tests and measures to be used to measure the revaluations are set forth in the *Schedule of Values, Section 6.*

**(6)(8)(p) Additional Information.** All information required to explain any given appraisal of real property in the 2015 revaluation will be found in the *Schedule of Values*, including all *Addenda*, and in the *Property Record Card*. Research in the project archives will be required in the rare case a detailed question cannot be answered from these sources.

**(6)(8)(q) Signed Certification.** Appraiser initials/names recorded at the parcel level identifies the appraiser and the recorded initials/names will constitute the required certification.

**USPAP Standards Rule 6-9**

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 analysis, 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 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 the 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 analysis, 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.)

***Compliance with Standards Rule 6-9***

The following Certification, being part of the officially adopted *Schedule of Values*, is hereby specifically made a part of the written appraisal report required under Standards Rule 6-9. The staff appraiser whose initials/name appears in the CAMA system's electronic files (in the *Reviewer ID* field) and on the written appraisal report (the Property Record Card), explicitly agrees to and certifies to all elements of the Certification.

**Appraiser's Certification**

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

- the statements of fact contained in any *Property Record Cards* are true and correct;
- the reported analysis, opinions, and conclusions are limited only by the assumptions and limiting conditions appearing herein; any *Property Record Card's Reviewer ID Field* where my initials may be found contains my personal, impartial, professional analyses, opinions, and conclusions;
- I have no present or prospective interest in any real property in the county except as a matter of public record or temporarily under contract to purchase for my personal account; where such interest does/may exist, I have removed / will remove myself from the appraisal process;
- I have no personal interest with respect to the parties owning an interest in any real property in the county except where family, friends, and acquaintances own such interest; where any such relationship does/may exist; I have removed / will remove myself from the appraisal process.
- I have performed no 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 personal bias with respect to any property that is the subject of any *Property Record Card* or to the parties involved;
- my engagement was not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the County or any owner or agent, the amount of 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 compensation for completing my assignments is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the County or any owner or agent, 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 analysis, opinions, and conclusions were developed, and this report has been prepared, in conformity with the *Uniform Standards of Professional Appraisal Practice*;
- I have not made a personal inspection of each of the properties herein described, although every parcel within the county was visited by my agents, and I visited a fraction of the parcels in a review capacity to ensure quality control;
- where I have made changes to a real property's record that produced a change in value, I have made a personal inspection of the property, excepting only changes defined in *Standards Rule 6(4)(d)*;
- no one other than Timothy F. Cain and Guy R. Ward, of *Assessment Solutions of North Carolina, Inc.*, and the temporary field technicians of record have provided significant mass appraisal assistance to the persons conducting this revaluation.

**North Carolina Department of Revenue Publications and Memoranda**

Occasionally, the North Carolina Department of Revenue issues guidance to county tax departments via publications or memorandum, to illustrate the applicability of General Statutes in specific situations and to offer advice for the resolution of appraisal issues and problems. These memoranda do not establish new standards or interpret existing standards, are not part of duly enacted General Statutes or the Uniform Standards of Professional Appraisal Practice, and are publicly released without public exposure or comment. These memoranda are often based on presumed conditions without investigation or verification of actual circumstances, and do not represent the only possible solution to the issues discussed, and the advice provided may not be applied equally to seemingly similar situations.



**Schedule of Values, Standards, and Rules**

**Section 2**  
**Demographic Information on**  
**State & County**



**Bladen County, North Carolina**

**Effective January 1, 2015**

## DEMOGRAPHIC INFORMATION ON STATE AND COUNTY

### NORTH CAROLINA

#### History of North Carolina

North Carolina was inhabited by a number of Native American tribes at the time of the first European contact. These tribes were distinguished by regional and linguistic variations; however, they did share many cultural traits. The Iroquoian, Siouan and Algonquian represented the three major language families in North Carolina.

The first known European exploration of the North Carolina coast occurred in the summer of 1524 by a Florentine navigator, in the service of France. Later, between 1540 and 1570 several Spanish explorers came up from the Florida region. No attempt was made to colonize the area during any of these periods.

Attempts to colonize the coast of North Carolina were attempted first by English explorers in 1585 and 1587. Both ended in failure; however, the 1587 attempt resulted in several significant events. Two “friendly Indians” were baptized and the child, Virginia Dare was born. When the expedition leader, John White, returned from England in 1590 there were no signs of the now infamous “Lost Colony.”

In 1650, the first permanent settlers in North Carolina were immigrants from the tidewater area of northeast Virginia. They settled in the northeast area of the state in the Albemarle area. Charles II, King of England, granted a charter to eight English gentlemen in 1663, in what would be named “Carolina” in honor of Charles the First.

These eight English gentlemen or Lord Proprietors and their descendants, were in control of Carolina from 1663 to 1729. From 1692 to 1712, North and South Carolina existed as one government; however, in 1729 seven of the Lord Proprietors sold their interest in North Carolina to the Crown and North Carolina became a royal colony. All political functions fell under the Crown until 1775.

North Carolina’s delegates to the Continental Congress were authorized by the state to vote for independence on April 12, 1776. The North Carolina delegates at the Fourth Provincial Congress unanimously adopted the Halifax Resolves. This was the first action by a colony calling for independence.

The first constitution for North Carolina was adopted by the delegates to the Fifth Provincial Congress in early December 1776. On November 21, 1789, North Carolina adopted the United States Constitution and became the twelfth state to enter the federal union.

In 1790, North Carolina ceded her far western lands to the federal government and in 1796 it became the sixteenth state of the Union – Tennessee.

North Carolina seceded from the Union on May 20, 1861, despite much division in the state over it. North Carolina provided more materials and men during the Civil War than any other Confederate State and consequently, suffered more losses than any other Confederate State. The last major Confederate Army was surrendered on April 26, 1865 near Durham. North Carolina was readmitted to the Union in 1868.

In recent years, the state has achieved many notable successes in the areas of education, industry, and agricultural technology. The Research Triangle Park (RTP) was established in 1959 for organizations engaged in institutional, governmental and industrial research. Three major research universities – Duke University in Durham, North Carolina State University in Raleigh, and the University of North Carolina at Chapel Hill are the keystone to the RTP.

North Carolina, as it enters the 21<sup>st</sup> Century, is on the cutting edge of many fields. These include agriculture, banking, construction, health care, high-technology, pharmaceuticals, retail, and travel/tourism. These industries, coupled with the continued growth of the military, allow North Carolina to be one of the most diverse and progressive states in the Union.

Source: State Library of North Carolina. North Carolina Encyclopedia. Historical Highlight of North Carolina. [www.statelibrary.dcr.us/nc/history/history/htm](http://www.statelibrary.dcr.us/nc/history/history/htm)

## Location, Land, Geography, and Climate

North Carolina is located in the southeast region of the United States. The state is bordered by Virginia to the north, Tennessee to the west, South Carolina to the south, and Georgia to the southwest. The Atlantic Ocean forms the eastern border. North Carolina consists of 52,669 square miles and is the 28<sup>th</sup> largest state in the Union. There are three distinct landforms of the Southeast and of North Carolina: the Coastal Plain, the Piedmont, and the Appalachian Mountains. These three landforms make up the three major geographic regions of the state. North Carolina has four distinct seasons, marked by mild to cold winters and warm to hot summers.

Average July Temperature:	70°F
Average January Temperature:	41°F
Average Yearly Participation:	44 inches of rain; 5 inches of snow

Source: North Carolina Department of Public Instruction.  
[www.ncpublicschools.org/nc\\_facts.htm](http://www.ncpublicschools.org/nc_facts.htm)

## Population Growth

### Annual North Carolina Population Growth July 1998 – July 2013

Date	Population	Growth	
		Amount	Percent
July, 1998	7,807,095	153,241	2.00%
July, 1999	7,948,901	141,806	1.82%
July, 2000	8,081,986	133,085	1.67%
July, 2001	8,209,775	127,789	1.58%
July, 2002	8,324,059	114,284	1.39%
July, 2003	8,418,493	94,434	1.13%
July, 2004	8,542,420	123,927	1.47%
July, 2005	8,686,811	143,391	1.68%
July, 2006	8,890,380	204,569	2.36%
July, 2007	9,090,572	200,192	2.25%
July, 2008	9,278,794	188,222	2.07%
July, 2009	9,435,396	156,602	1.69%
July, 2010	9,574,477	139,081	1.47%
July, 2011	9,666,342	91,865	0.96%
July, 2012	9,762,822	96,480	1.00%
July, 2013	9,861,952	99,130	1.02%

Source: North Carolina State Demographics. <http://demog.state.nc.us>

## Growth Projections

### Population Overview: 2015 - 2030

July, 2015	July, 2020	July, 2025	July, 2030
10,055,337	10,564,551	11,069,591	11,576,088

Source: North Carolina State Demographics. <http://demog.state.nc.us>

## Population Comparisons (2013)

### Adjacent State Population Comparisons

	NC	GA	SC	TN	VA
Population	9,848,060	9,992,167	4,774,839	6,495,978	8,260,405
Density (per sq mi), 2010	196.1	168.4	153.9	153.9	202.6
U.S. rank (pop.)	10	8	24	17	12

Source: State & County Demographics. <http://quickfacts.census.gov/qfd/states/>

## General Population Statistics

### Population (2013 estimate)

	North Carolina	United States
Population	9,848,060	316,128,839
Percent Change (2010-2013)	3.3%	2.4%

### Age Distribution (2012)

	North Carolina	United States
Persons under 5 years old	6.4%	6.4%
Persons under 18 years old	23.4%	23.5%
Persons 65 years old and over	13.8%	13.7%

## Household Statistics

	North Carolina	United States
Housing Units, 2013	4,394,261	132,802,859
Homeownership rate, 2008-2012	67.1%	65.5%
Housing Units in multi-units, 2012	17.1%	25.9%
Households, 2008-2012	3,693,221	115,226,802
Persons per Household, 2008-12	2.51	2.61
Median value of o/o units, 2012	\$153,600	\$181,400

Source: U.S. Census Bureau: State and County *QuickFacts*. <http://quickfacts.census.gov/qfd/states>

## General Income Statistics

### Per Capita Personal Income Comparisons

State	2008	2009	2010	2011	2012	2013
South Carolina	\$33,157	\$32,376	\$32,688	\$34,183	\$35,056	\$35,453
Tennessee	35,061	34,412	35,431	37,129	38,752	39,324
North Carolina	35,729	34,934	35,462	36,520	37,910	38,457
Georgia	35,761	34,330	34,343	36,366	37,449	38,179
Virginia	44,900	44,063	44,854	47,126	48,377	48,773
United States	40,873	39,357	40,163	42,298	43,735	44,543

Source: <http://www.bea.gov/regional/>

**Median Family Income (2009-10 v. 2011-12)**

State	2009-10	2011-12	Change
South Carolina	\$43,991	\$42,661	-3.0%
Tennessee	42,005	43,079	+2.6%
North Carolina	45,476	43,852	-3.6%
Georgia	46,244	47,527	+2.8%
Virginia	64,198	64,278	+0.1%
United States	52,513	51,058	-2.8%

Source: <http://www.census.gov/hhes/www/income/data/statemedian/>  
 Figures reported with standard error and at 90 percent confidence level.

**Average Hourly Earnings Rankings**

Rankings of states according to percent change in average hourly earnings of production workers.

State	2012	2013	Change	Rank
South Carolina	\$18.63	\$19.04	+2.2%	26
Tennessee	17.00	17.60	+3.5%	41
North Carolina	16.59	16.97	+2.3%	45
Georgia	17.79	18.25	+2.6%	39
Virginia	19.02	19.40	+2.0%	18
United States	24.02	24.64	+2.6%	N/A

Source: *State Rankings 2014: A Statistical View of America*, Kathleen O'Leary Morgan, ed.

**General North Carolina Industry Statistics****Annual Average Civilian Labor Force Estimates – Seasonally Adjusted (June, 2007-2013)**

	2007	2008	2009	2010	2011	2012	2013
Labor Force	4,485,188	4,564,705	4,561,344	4,621,018	4,649,509	4,659,812	4,700,433
Employment	4,273,346	4,289,054	4,075,828	4,120,202	4,156,421	4,223,904	4,312,113
Unemployment	211,842	275,651	485,516	500,816	493,088	435,908	388,320
Unemployment %	4.7%	6.0%	10.6%	10.8%	10.6%	9.4%	8.3%
Labor Force Participation	65.2%	65.1%	64.1%	63.2%	62.8%	62.3%	62.0%
Employment to Population	62.2%	61.2%	57.3%	56.4%	56.2%	56.5%	56.8%

Source: General North Carolina Industry Statistics. <http://esesc23.esc.state.nc.us/d4/LausSelection.aspx>

**Gross State Product Totals****Real Gross Domestic Product by State, 2007 - 2013 (millions of current dollars)**

State	2007	2008	2009	2010	2011	2012	2013*
GA	\$409,935	\$408,682	\$404,045	\$410,902	\$421,564	\$438,324	\$454,532
NC	397,609	407,008	409,453	420,876	429,793	452,358	471,365
VA	389,984	398,120	406,066	421,325	430,103	445,090	452,585
TN	243,714	249,621	247,465	253,987	264,940	280,485	287,633
SC	160,038	161,779	160,046	163,836	171,546	177,985	183,561
US	14,401,421	14,636,247	14,328,006	14,862,637	15,431,583	16,141,152	16,701,415

Source: Bureau of Economic Analysis, U.S. Department of Commerce.  
[http://www.bea.gov/newsreleases/regional/gdp\\_state/gsp\\_newsrelease.htm](http://www.bea.gov/newsreleases/regional/gdp_state/gsp_newsrelease.htm)

**Percent Change in Earnings, by Industry**  
**2012:IV – 2014:I (Percentage points, seasonally adjusted)**

Industry	North Carolina	United States
Total Earnings	0.71	0.56
Farm	0.00	-0.12
Mining	0.00	0.06
Utilities	0.01	0.01
Construction	0.13	0.14
Manufacturing (durable)	-0.02	-0.01
Manufacturing (non-durable)	0.11	0.06
Wholesale trade	0.03	0.01
Retail trade	0.02	0.02
Transportation	0.04	0.03
Information	0.02	-0.06
Finance and insurance	0.09	0.06

Source: Bureau of Economic Analysis, U.S. Department of Commerce.  
[http://www.bea.gov/newsreleases/regional/spi/sqpi\\_newsrelease.htm](http://www.bea.gov/newsreleases/regional/spi/sqpi_newsrelease.htm)

## Manufacturing and Non-Manufacturing Employers

**North Carolina's 25 Largest Private  
Manufacturing and Non-Manufacturing Employers  
(Ranked in order according to First Quarter 2013 employment size)**

<b>Rank</b>	<b>Company</b>	<b>Industry</b>
<b>1</b>	Wal-Mart Associates Inc.	Retail Trade
<b>2</b>	Duke University	Education and Health Services
<b>3</b>	Food Lion LLC	Retail Trade
<b>4</b>	Wells Fargo Bank, N.A.	Finance & Insurance
<b>5</b>	Bank of America, N.A.	Finance & Insurance
<b>6</b>	Lowes Home Centers Inc.	Retail Trade
<b>7</b>	Harris-Teeter, Inc.	Retail Trade
<b>8</b>	BB&T	Finance & Insurance
<b>9</b>	Smithfield Foods, Inc.	Manufacturing
<b>10</b>	IBM Corporation	Manufacturing
<b>11</b>	North Carolina Baptist Hospitals	Healthcare & Social Assistance
<b>12</b>	United Parcel Service, Inc.	Transportation & Warehousing
<b>13</b>	U S Air, Inc.	Transportation & Warehousing
<b>14</b>	Wake Med	Healthcare & Social Assistance
<b>15</b>	Target Stores	Retail Trade
<b>16</b>	Ingles Markets, Inc.	Healthcare & Social Assistance
<b>17</b>	Moses H. Cone Memorial Hospital	Healthcare & Social Assistance
<b>18</b>	TWC Administration, LLC	Information
<b>19</b>	Belk, Inc.	Retail Trade
<b>20</b>	AT&T Services, Inc.	Information
<b>21</b>	Memorial Mission Hospital, Inc.	Healthcare & Social Assistance
<b>22</b>	Lowes Food Stores, Inc.	Retail Trade
<b>23</b>	Forsyth Memorial Hospital, Inc.	Healthcare & Social Assistance
<b>24</b>	Laboratory Corp of America	Healthcare & Social Assistance
<b>25</b>	General Mills Restaurants, Inc.	Accommodation & Food Services

Source: North Carolina Employment Security Commission. <http://jobs.esc.state.nc.us/lmi/largest/list.htm>

## Specific North Carolina Industry Statistics

## Employment and Wages (2013)

Industry (NAICS)	Establishments	Avg. Employment	Avg. Ann. Wage
Healthcare & Social Assistance	23,037	575,715	\$44,682
Retail Trade	33,943	466,932	25,728
Manufacturing	10,253	442,611	54,527
Accommodation & Food Services	19,688	370,923	15,288
Educational Services	5,712	368,885	40,639
Administrative & Waste Services	16,576	272,982	31,410
Public Administration	2,686	237,754	43,990
Professional & Technical Services	33,483	203,325	69,638
Wholesale Trade	20,173	173,980	64,247
Construction	24,691	173,591	43,864
Finance & Insurance	14,247	150,982	81,101
Transportation & Warehousing	6,823	128,482	44,746
Other Services, exc. Public Admin.	20,974	100,534	30,308
Management of Companies	1,808	77,798	94,451
Information	4,205	70,704	69,789
Arts, Entertainment & Recreation	3,846	64,645	29,175
Real Estate & Rental & Leasing	10,740	49,973	42,304
Agriculture, Forestry, Fishing, etc.	3,040	28,697	30,915
Utilities	432	13,700	86,291
Mining	244	2,935	47,120
<b>TOTAL, All Occupations</b>	<b>256,601</b>	<b>3,878,800</b>	<b>43,784</b>

Source: Employment Security Commission. <http://esesc23.esc.state.nc.us/d4/DownloadForm.aspx>

**Top Farm States - 2012 (in millions)**

Rank	State	Cash Receipts
1	California	\$44,953.8
2	Iowa	\$32,504.0
3	Nebraska	\$24,478.8
4	Texas	\$22,765.5
5	Minnesota	\$20,799.8
6	Illinois	\$19,972.9
7	Kansas	\$16,526.7
8	Indiana	\$12,908.3
9	Wisconsin	\$12,152.6
10	North Carolina	\$12,115.7
14	Georgia	\$9,790.5
29	Tennessee	\$4,687.9
34	Virginia	\$3,780.1
35	South Carolina	\$3,259.2
	United States	\$395,068.7

Source: <http://www.ers.usda.gov/Data/FarmIncome/firkdmuXls.htm>

**Top 20 Farm Commodities - 2012 (in thousands)**

Rank	Commodity	Amount	% of Total
1	Broilers	\$2,838,950	24.3%
2	Hogs	2,552,824	21.8%
3	Turkeys	848,761	7.3%
4	Tobacco	754,091	6.4%
5	Greenhouse, Nursery, etc.	719,084	6.1%
6	Soybeans	705,834	6.0%
7	Corn	607,313	5.2%
8	Cotton	453,172	3.9%
9	Chicken Eggs	392,458	3.4%
10	Cattle and Calves	334,132	2.9%
11	Wheat	282,706	2.4%
12	Sweet Potatoes	198,379	1.7%
13	Dairy Products	191,407	1.6%
14	Peanuts	151,556	1.3%
15	Blueberries	71,000	0.6%
16	Hay	46,589	0.4%
17	Tomatoes, Fresh	37,019	0.3%
18	Potatoes	36,160	0.3%
19	Watermelons	34,860	0.3%
20	Cucumbers: All	29,513	0.3%

**Farm Commodity National Ranking (2012)**

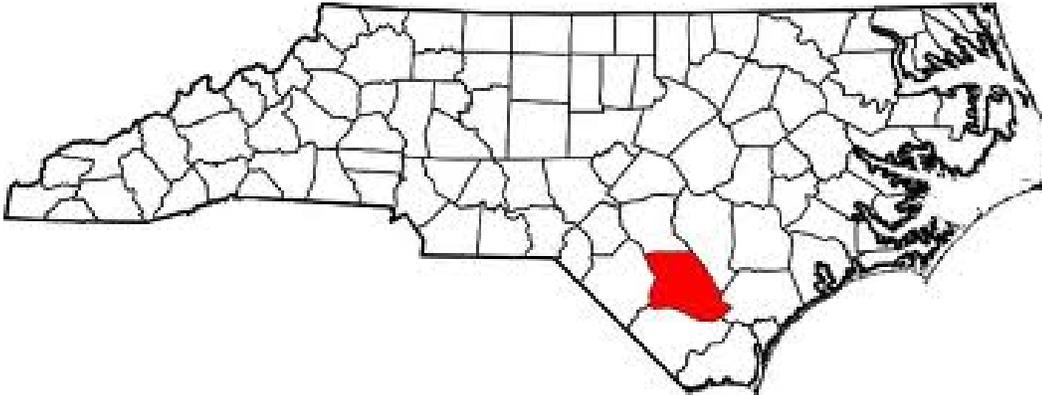
Commodity	NC Rank	% of U.S. Receipts
Tobacco, All	1	50.0%
Tobacco, Flue-cured	1	79.8%
Sweet Potatoes	1	46.8%
All Poultry & Egg Cash Receipts	2	10.7%
Annual Pig Crop (12/09-11/10)	2	15.3%
Christmas Tree Cash Receipts	2	20.3%
Hogs & Pigs (12-1-10)	2	13.6%
Trout Sold (foodsize)	2	6.8%
Turkeys	2	14.2%
Cucumbers: Processing	3	7.0%
Cucumbers: Fresh Market	3	11.0%
Broilers	4	9.5%
Strawberries: Fresh Market	4	0.7%
Tomatoes: Fresh Market	4	3.9%
Upland Cotton	4	7.4%
Bell Peppers	5	4.2%
Tobacco, Burley	5	1.9%
Catfish Sold (foodsize)	5	1.5%
Greenhouse/Nursery Cash Receipts	5	4.6%
Peanuts	5	6.4%
Squash	5	9.1%

Source: N.C. Department of Agriculture. <http://www.ncagr.gov/stats/ncrank.htm>

**Top 10 Cities (by taxable sales)**

Rank	City	2006/07	2007/08	2008/09
1	Charlotte	\$11,024,614,384	\$11,089,503,000	\$9,943,308,205
2	Raleigh	6,766,097,445	6,756,249,936	6,060,697,191
3	Greensboro	4,389,894,167	4,425,824,405	4,038,269,902
4	Durham	3,408,936,222	3,323,905,432	3,283,971,908
5	Winston-Salem	3,217,578,564	3,227,687,146	2,973,199,813
6	Fayetteville	2,253,207,756	2,300,524,240	2,348,317,596
7	Asheville	2,560,472,315	2,466,479,189	2,294,237,001
8	Wilmington	2,440,856,795	2,366,583,844	2,138,026,865
9	Cary	1,329,551,781	1,425,763,884	1,354,632,738
10	Concord	1,241,577,909	1,255,121,189	1,297,564,552

Source: NC Department of Revenue. <http://www.dornrc.com/publications/fiscalyearsales.html>



## Bladen County

A Coastal Plain county and the third largest in North Carolina, Bladen County is rightfully named the “Mother County.” Of the state’s 100 counties, 55 of them were originally part of Bladen County.

Fashioned from New Hanover County in 1734, Bladen County was named after Martin Bladen, Lord Commissioner of Trade and Plantation. Elizabethtown, the county seat, was formed in 1773 and incorporated in 1895. There is debate on the inspiration for the town’s namesake. Historians claim that the name was from either Queen Elizabeth I of England or Isaac Jones’ wife. Jones supplied the land where the original town was built. Other important communities in Bladen County include White Lake, Bladenboro, Dublin, Clarkton, East Arcadia, and Tar Heel.

The Waccamaw were the first to live in the region, but the Highland Scots claimed the area upon English settlement. Seeking freedom from religious persecution in Scotland during the Jacobite Revolt, some settlers stayed in the Bladen region while others moved throughout the Cape Fear River Valley. During the Revolutionary War, a decisive battle took place outside of Elizabeth Town in August 1781. Colonel Thomas Robeson, once receiving news about the British camp near the city, rallied his 70 troops to fight the nearly 400 Tory soldiers. The patriot soldiers were able to push the British back into a ditch near the Cape Fear River. The Battle of Elizabeth Town was a victory, and the ravine where the Brits retreated is now referred as the “Tory Hole.” Other important history sites include Harmony Hall, the Elwell Cable Ferry Crossing, the Oakland Plantation, as well as the historic churches of the area.

Bladen County has several notable geographic features, most of which are bodies of water. The Cape Fear, South, and Black Rivers all pass through the county while the Bladen

Lakes State Forest is an important woodland in the region. The White and Jones Lakes are a few of Bladen County's lakes; most are Carolina Bay phenomena, and Bladen County has more of these bays than any other county in the state. Carolina Bays are oval-shaped depressions that can be hundreds of feet or miles wide and between 15 to 50 feet deep. Scientists dispute the reason for these Carolina Bays but many hold to the belief that meteorite showers caused these indentations.

In regards to Bladen County's economy, it is largely agricultural. Many of Bladen County's farmers grow tobacco, peanuts, blueberries, and cotton. Peanut processing and textile manufacturing are the greatest industries in the area. The East Coast Delta Kite and Glider Competition is just one of the several, annual festivals held in Bladen County.

**Sources:**

Elizabethtown – White Lake, Chamber of Commerce Website, "Bladen County Historical Summary and The Historical Battle of Elizabethtown" <http://www.elizabethtownwhitelake.com/history.php>, <http://www.elizabethtownwhitelake.com/toryhole.php>, (accessed on July 5, 2011) and William S. Powell, ed., Encyclopedia of North Carolina (Chapel Hill, NC 2006).

By [Jonathan Martin](#), North Carolina History Project

**Population**

**Growth Projections**

<b>Bladen County</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>
Population	32,278	34,046	35,171	35,283	35,443	35,606	35,765
Density (sq mi)	36.92	38.94	40.23	40.35	40.54	40.72	40.91

Source: North Carolina State Demographics. <http://demog.state.nc.us>

**Adjacent County Population Comparisons (July, 2012 v. April, 2010)**

	<b>Bladen</b>	Columbus	Cumberland	Pender	Robeson	Sampson
Population	<b>35,146</b>	58,107	331,279	54,259	134,822	64,121
% Change ('02-'12)	<b>+6.75%</b>	+5.49%	+8.55%	+27.09%	+8.03%	+4.91%
Land Area (sq mi)	<b>874.33</b>	937.29	652.32	869.80	949.22	944.74

Source: North Carolina State Demographics. <http://demog.state.nc.us>

**General Population Statistics**

**Population (2012)**

	<b>Bladen</b>	<b>North Carolina</b>
Population	35,146	9,765,229
% Change ('02-'12)	+ 6.75%	+ 17.31%
Land Area (sq. mi.)	874.33	48,617.91

**Age Distribution (2012)**

	<b>Bladen</b>	<b>North Carolina</b>
Persons under 5 years old	5.3%	6.4%
Persons under 18 years old	22.3%	23.4%
Persons 65 years and older	17.2%	13.8%

**Education (2010)**

	<b>Bladen</b>	<b>North Carolina</b>
High school grads (age 25+)	74.8%	84.5%
Bachelor's or higher (25+)	11.1%	26.8%

Source: U.S. Census Bureau: State and County *QuickFacts*. <http://quickfacts.census.gov/qdf/states/>

## Household Statistics

### Miscellaneous Housing Unit Information

	Bladen	North Carolina
Housing units, 2013	17,501	4,394,261
Homeownership rate, 2012	68.2%	67.1%
Households, 2008-2012	14,082	3,693,221
Persons per household, 2012	2.43	2.51
Median value o/o units, 2012	\$80,800	\$153,600
Persons below poverty level	24.4%	16.8%

Source: U.S. Census Bureau: State and County *QuickFacts*. <http://quickfacts.census.gov/qdf/states/>

## General Income Statistics

### Median Household Income

County	2000	2010	% Change
Bladen	\$34,818	\$30,471	- 12.48%
Columbus	\$34,507	\$35,421	+ 2.65%
Cumberland	\$48,724	\$43,834	- 10.04%
Pender	\$47,628	\$44,338	- 6.91%
Robeson	\$36,758	\$29,667	- 19.29%
Sampson	\$41,605	\$35,740	- 14.10%
North Carolina	\$51,125	\$45,570	- 10.87%
United States	\$41,458	\$48,415	+ 16.78%

Source: U.S. Census Bureau: State and County *QuickFacts*. <http://www.census.gov/cgi-bin/saige/saige.cgi>

### Annual Unemployment Rate (June - Seasonally Unadjusted)

	2007	2008	2009	2010	2011	2012	2013
United States	4.7%	5.7%	9.7%	9.6%	9.3%	8.4%	7.8%
North Carolina	4.9%	6.2%	10.8%	10.8%	10.6%	9.6%	8.6%
Bladen	6.4%	7.9%	12.4%	12.5%	13.2%	12.4%	11.9%
Columbus	5.6%	7.7%	12.6%	12.9%	13.9%	12.7%	11.1%
Cumberland	5.6%	6.5%	9.1%	9.7%	10.5%	10.1%	9.6%
Pender	4.4%	5.9%	10.9%	10.9%	12.3%	10.6%	9.6%
Robeson	6.6%	8.0%	12.1%	13.2%	14.2%	13.2%	12.0%
Sampson	4.1%	5.2%	8.7%	8.8%	9.0%	8.4%	7.7%

Source: NC Employment Security Commission.

<http://eslmi40.esc.state.nc.us/ThematicLAUS/clfasp/CLFaasy.asp>

\*Note: 2012 rates reflect May values.

**Annual Average Civilian Labor Force Estimates (June, Unadjusted)**

<b>Bladen Co.</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Labor Force	15,710	15,558	15,763	16,232	15,898	15,414	15,065
Employment	14,707	14,336	13,812	14,196	13,793	13,509	13,279
Unemployment	1,003	1,222	1,951	2,036	2,105	1,905	1,786
Unemp. Rate	6.4%	7.9%	12.4%	12.5%	13.2%	12.4%	11.9%

Source: NC Employment Security Commission.

<http://eslmi40.esc.state.nc.us/ThematicLAUS/clfasp/CLFaasy.asp>

**25 Largest Bladen County Employers (4Q/2013)**

<b>Rank</b>	<b>Company Name</b>	<b>Industry</b>	<b>Employees</b>
1	Smithfield Foods, Inc.	Manufacturing	1,000+
2	Bladen County Schools	Education & Health	500-999
3	Bladen County	Public Administration	250-499
4	Bladen County Hospital	Education & Health	250-499
5	Danaher Controls	Manufacturing	250-499
6	Bladen Community College	Education & Health	100-249
7	Specialty Cleaners	Professional Services	100-249
8	Gildan Yarns, LLC	Manufacturing	100-249
9	N.C. Dep't of Transportation	Public Administration	100-249
10	Richmond Cold Storage Company	Trade, Trans. & Utilities	100-249
11	Quality Home Care	Education & Health	100-249
12	Wal-Mart Associates, Inc.	Trade, Trans. & Utilities	100-249
13	Bo's Supermarket	Trade, Trans. & Utilities	100-249
14	Genesis Healthcare	Professional Services	100-249
15	Elizabethtown Nursing Center	Education & Health	50-99
16	McDonald's Restaurants of NC	Leisure & Hospitality	50-99
17	Campbell Oil & Gas Co.	Trade, Trans. & Utilities	50-99
18	Food Lion	Trade, Trans. & Utilities	50-99
19	N. L. Barnhill Blueberries	Natural Resources	50-99
20	AssistedCare, Inc.	Education & Health	50-99
21	Interim Health Care	Education & Health	50-99
22	Dycos Services, Inc.	Professional Services	50-99
23	Gas Mart, Inc.	Trade, Trans. & Utilities	50-99
24	West Bladen Assisted Living, LLC	Education & Health	50-99
25	Dep't of Public Safety	Public Administration	50-99

Source: NC Employment Security Commission.

<http://esesc23.esc.state.nc.us/d4/QCEW/LargestEmployers.aspx?geog=NC>

**Retail Sales****Gross Retail Sales (State Sales) – 2005 - 2014**

<b>Qtr.</b>	<b>Bladen Co.</b>	<b>Contiguous Cos.</b>	<b>S/E Region</b>	<b>All NC counties</b>
2Q/14	\$	\$	\$	\$
1Q/14	44,087,534	1,329,614,895	2,616,385,532	24,816,203,558
4Q/13	46,420,807	1,303,326,789	2,673,372,036	25,144,301,573
3Q/13	47,966,148	1,329,211,721	2,907,394,979	25,876,554,815
2Q/13	46,457,255	1,378,845,400	2,799,994,910	25,410,565,655
1Q/13	41,226,837	1,352,351,837	2,630,568,209	24,280,574,065
4Q/12	46,269,485	1,324,840,440	2,611,007,707	24,050,234,049
3Q/12	49,079,080	1,338,492,730	2,860,537,196	24,948,566,712
2Q/12	44,316,973	1,389,461,552	2,786,561,773	24,902,232,273
1Q/12	44,239,121	1,354,840,934	2,585,493,112	23,613,747,738
4Q/11	42,294,983	1,281,292,089	2,549,204,874	23,416,563,686
3Q/11	45,740,763	1,334,741,881	2,783,132,798	24,416,971,965
2Q/11	43,441,774	1,333,287,842	2,601,598,204	23,071,309,405
1Q/11	42,660,165	1,291,821,039	2,452,853,723	23,954,648,542
4Q/10	36,706,299	1,198,949,111	2,329,342,094	23,323,913,290
3Q/10	41,973,676	1,258,238,527	2,593,144,986	24,723,953,294
2Q/10	40,442,820	1,249,557,687	2,416,758,098	23,900,826,244
1Q/10	39,505,902	1,203,041,186	2,238,691,642	22,857,202,625
4Q/09	39,460,285	1,197,290,379	2,309,671,057	23,701,728,737
3Q/09	39,517,256	1,223,641,092	2,508,542,600	24,160,856,189
2Q/09	29,396,645	1,079,204,445	2,126,869,964	23,551,428,658
1Q/09	28,141,019	1,157,549,174	2,189,303,312	20,971,647,375
4Q/08	26,379,690	972,226,105	1,948,927,578	19,961,233,894
3Q/08	33,608,716	1,143,761,611	2,464,412,237	23,266,040,271
2Q/08	30,239,337	1,162,598,692	2,381,403,064	23,130,422,686
1Q/08	26,375,893	1,075,190,639	2,158,078,797	22,073,405,656
4Q/07	27,324,306	976,582,760	2,048,272,261	21,453,176,336
3Q/07	31,893,296	1,067,557,629	2,398,905,247	23,323,786,422
2Q/07	31,136,367	1,063,917,457	2,282,996,908	22,499,446,188
1Q/07	32,380,761	1,192,711,012	2,378,914,376	23,650,060,337
4Q/06	29,020,079	974,257,946	2,077,092,189	20,956,498,193
3Q/06	36,755,210	1,120,409,029	2,457,428,477	23,344,283,560
2Q/06	30,126,995	986,723,718	2,113,367,537	20,686,143,438
1Q/06	43,154,141	1,148,563,916	2,340,935,642	22,937,908,260
4Q/05	45,970,160	886,994,140	1,945,449,569	19,619,561,958
3Q/05	53,462,363	1,022,438,550	2,363,468,719	21,725,674,982

Source: North Carolina Department of Revenue. [www.dornc.com/publications/monthlysales.html](http://www.dornc.com/publications/monthlysales.html)



## Schedule of Values, Standards, and Rules

### Section 3 Appraisal Theory



Bladen County, North Carolina

Effective January 1, 2015

## **APPRAISAL THEORY**

An appraisal, in itself, is nothing more than an opinion of value. This does not imply, however, that one opinion is necessarily as good as another. There are valid and accurate appraisals, and there are invalid and inaccurate appraisals. The validity of an appraisal can be measured against the supporting evidence from which it was derived, and its accuracy against that very thing it is supposed to predict – the actual behavior of the market. Each is fully contingent upon the ability of the appraiser to record adequate data and to interpret that data into an indication of value.

Appraising real property, like the solving of any problem, is an exercise in reasoning. It is a discipline, and, like any discipline, is founded on fundamental economic and social principles. From these principles evolve certain premises which, when applied to the valuation of property, serve to explain the reaction of a market. This section concerns itself with those concepts and principles basic to the property valuation process. One cannot overstate the necessity of having a workable understanding of them.

### **BUNDLE OF RIGHTS**

Real estate and real property are often used interchangeably. Generally speaking, real estate pertains to the real or fixed improvements to the land such as structures and other appurtenances, whereas real property encompasses all the interests, benefits and rights enjoyed by the ownership of the real estate.

Real property ownership involves the ‘Bundle of Rights’ Theory, which asserts that the owner has the right to enter, use, sell, lease, or give it away, as he so chooses. Law guarantees these rights, but they are subject to certain governmental and private restrictions.

Governmental restrictions are found in the government’s power to:

- tax property
- take property by condemnation for the benefit of the public, providing that just compensation is made to the owner (Eminent Domain)
- police property by enforcing any regulations deemed necessary to promote the safety, health, morals and general welfare of the public
- provide for the reversion of ownership to the state in cases where a competent heir to the property cannot be ascertained (Escheat)

Private restrictions imposed upon property are often in the form of agreements incorporated into the deed. The deed also spells out precisely which rights of the total bundle of rights the buyer is acquiring. Since value is related to each of these rights, the appraiser should know precisely which rights are involved in his appraisal.

Appraisals for Ad Valorem tax purposes generally assume the property is owned in the “fee simple,” meaning that the total bundle of rights is considered to be intact.

## THE NATURE AND MEANING OF VALUE

An appraisal is an opinion, or estimate, of value. The concept of value is basic to the appraisal process and calls for a thorough understanding. The American Institute of Real Estate Appraisers' Appraisal Terminology Handbook, 1981 edition, offers the following definitions of value:

“The measure of value is the amount (for example, of money) which the potential purchaser probably will pay for possession of the thing desired.”

“The ratio of exchange of one commodity for another, for example, one bushel of wheat in terms of a given number of bushels of corn; thus the value of one thing may be expressed in terms of another thing. Money is the common denominator by which value is measured.”

“It is the power of acquiring commodities in exchange, generally with a comparison of utilities – the utility of the commodity parted with (money) and that of the commodity acquired in the exchange (property).”

“Value depends upon the relation of an object to unsatisfied needs; that is, supply and demand.”

“Value is the present worth of future benefits arising out of ownership to typical users and investors.”

With these definitions, one can see that value is not an intrinsic characteristic of the commodity itself. On the contrary, value is determined by people, and tempered by varying levels of desire. Throughout the definitions, a relationship between the purchase and the commodity (property) is implied; this relationship is “value.” A purchaser *desires* a property because it is a commodity having utility. Utility is a prerequisite to value, but *having* utility alone does not sufficiently create value. If a great supply of a useful commodity exists – air, for example – needs would be easily satisfied, desire would not be aroused, and value would not be created. Therefore, besides having utility, to effectively arouse desire, the commodity must also be scarce.

One additional factor is necessary to complete the value equation: the ability to buy. A translation must be made of desire into a unit of exchange; a buyer must have purchasing power. The relationship is now complete. The commodity has utility and is relatively scarce, it arouses desire, and the buyer is able to satisfy that desire by trading for it; value is created. The question is how much value, and therein lies the job of the appraiser.

Numerous definitions of value have been offered, some simple and some complex. It would seem that any valid definition of value would necessarily embody the elements of utility, desire, scarcity and purchasing power. Furthermore, the concept of value very rarely stands

alone. Instead, it is generally predicated by a descriptive term that serves to relate it to a specific appraisal purpose or activity, such as “loan value.” Since appraisals are made for a variety of reasons, it is important for the appraiser to clarify the specific purpose for the appraisal and the type of value that he seeks to estimate.

For Ad Valorem tax purposes, the value sought is generally market value. The descriptive term “market” indicates the activity of buyers and sellers. Market value is the price which an informed and intelligent buyer, fully aware of the existence of competing properties, and not being compelled to act, would be justified in paying for a particular property.

### **VALUE IN USE AS OPPOSED TO VALUE IN EXCHANGE**

We have stated that there are a number of qualifying distinctions made in reference to the meaning of value. One of the most common, and probably the most important, relative to the purpose of this manual, is the distinction between value in use and value in exchange. We have defined market value as a justifiable price which buyers, in general, will pay in the market. The question arises then as to the value of property which, by nature of its special and highly unique design, is useful to the present owner, but relatively less useful to buyers in the market. One can readily see that such a property’s utility value may differ greatly from its potential sales price. It is even possible that no market for such a property exists. Such a property is said to have value in use, which refers to the actual value of a commodity to a specific person, as opposed to value in exchange, which aligns itself with market value, referring to the dollar-value of a commodity to buyers in general.

### **THE PRINCIPLE OF SUPPLY AND DEMAND**

Among the forces which constantly operate to influence supply and demand are population growth, new techniques in transportation, purchasing power, price levels, wage rates, taxation, governmental controls, and scarcity. A sudden population growth in an area would create an increase in demand for housing. If the demand increased at a higher rate than the supply, this could result in a scarcity of housing. If the demand was backed up by purchasing power, rentals and sale prices would tend to increase and ultimately reach a level which would tend to stimulate more builders to compete for the potential profits and thus serve to increase the supply toward the level of demand. As the supply is increased, demand would be satisfied and begin to taper off. This would result in a leveling of rental and sale prices. When builders, due to increases in labor and material rates, are no longer able to build cheaply enough to meet the new level of prices and rents, competition would tend to taper off and supply would level off. The cycle is then complete.

Balance occurs when reasonable competition serves to coordinate supply with demand. When competition continues unchecked to produce a volume that exceeds the demand, the net returns to investors are no longer adequate to pay all the costs of ownership, resulting in loss rather than profit, and consequently, a decline in values.

A community may well support two shopping centers, but the addition of a third shopping center may increase the supply to excess. If this occurs, one of two effects are caused: either the net dollar return to all the shopping centers will be reduced below that level necessary to support the investment, or one of the shopping centers will flourish at the others' expense.

### **THE PRINCIPLE OF HIGHEST AND BEST USE**

The highest and best use for a property is that use which will produce the highest net return to the land for given period of time within the limits of those uses which are economically feasible, probable, and legally permissible.

On a community-wide basis, the major determining factor in highest and best use is the maximum quantity of land that can be devoted to a specific use and still yield a satisfactory return. Once a suitable basic use has been chosen for a specific property, each increment of capital investment to the existing or planned improvement will increase the net return to the land only up to a certain point. Once this point is reached, the net return to the land begins to diminish. This is the point at which the land is at its highest and best use.

For example, in planning a high-rise office building, each additional upper floor represents an extra capital expenditure that must yield a certain return to the investor. This return will be dependent upon the levels of economic rent that the market will bear at the time. An optimum number of floors can be calculated above which the income yield requirements of additional expenditures will no longer be satisfactorily met. This, notwithstanding the possibility of other more particular considerations, should determine the number of stories of the building.

Detailed analysis of this type is rarely thrust upon the property tax appraiser. Generally the tax appraiser will find a more prudent course of action is to consider the present use and follow development rather than anticipate it.

### **THE PRINCIPLE OF CHANGE**

The impact of change on the value of real property manifests itself in the life cycle of a neighborhood. The cycle is characterized by three stages of evolution: the development and growth evidenced by improving values; the 'leveling off' stage evidenced by static values; and, finally, the stage of deterioration, evidenced by declining values.

The highest and best use of a particular property today does not necessarily correlate to its highest and best use tomorrow. The highest and best use of the land often lies in a succession of uses. A declining single-family residential neighborhood may be ripe for multi-family, commercial or industrial development. Whether it is or not depends upon the relationship of present or anticipated future demand with existing supply.

In estimating value, the appraiser is obligated to reasonably anticipate the future benefits, as well as the present benefits derived from ownership, and to evaluate the property in light of the quality, quantity, and duration of these benefits based on actual data as opposed to speculative or potential benefits that may or may not occur.

### **THE PRINCIPLE OF SUBSTITUTION**

As mentioned earlier, value is created by the marketplace. It is the function of translating demand into a commodity of exchange. When the benefits and advantages derived from two properties are equal, the lowest priced property receives the greatest demand, and rightfully so. The informed buyer is not justified in paying anything more for a property than it would cost to acquire an equally desirable property. That is to say that the value of a property is established as that amount for which equally desirable comparable properties are being bought and sold in the market. Herein is an additional approach to value, and the basis of the valuation process.

### **TRADITIONAL APPROACHES TO VALUE**

In the preceding paragraphs, it has been stated that value is an elusive target that occurs in many different forms, and that the forces and influences which combine to create, sustain, or diminish value are numerous and varied. It is the appraiser's function to define the type of value sought, to compile and to analyze all related data, and – giving due consideration to all the factors which may influence it – to process and translate that data into a final opinion or estimate of value. This he must do for each property he is to appraise.

The processing of this data into a conclusion of value generally takes the form of three recognized approaches to value: Cost, Sales Comparison, and Income. Underlying each of the approaches is the principle that the justifiable price of a property is no more than the cost of acquiring or reproducing an equally desirable substitute property. The use of one or all three approaches in the valuation of a property is determined by the quantity, quality, and accuracy of the data available to the appraiser.

The **COST APPROACH** involves making an estimate of the depreciated cost of reproducing or replacing the building and site improvements. "Reproduction" cost refers to the cost at a given point in time of producing a replica property, whereas "replacement" cost refers to the cost of producing improvements of equal utility. Depreciation is deducted from this cost (new) for loss in value caused by physical deterioration and functional or economic obsolescence. To this depreciated cost is then added the estimated value of the land, resulting in an indication of value derived by the Cost Approach.

The significance of the Cost Approach lies in its extent of application; it is the one approach that can be used on all types of construction. It is often a starting point for appraisers, and therefore a very effective "yardstick" in any equalization program for Ad Valorem taxes. Its

widest application is in the appraisal of properties where the lack of adequate market and income data preclude the reasonable application of the other traditional approaches.

The **SALES COMPARISON** or, **MARKET DATA APPROACH** involves the compiling of sales and offerings of properties that are comparable to the property being appraised. These sales and offerings are then adjusted for any dissimilarity, and a value range obtained by comparison of these properties. The approach is reliable to the extent that the properties are comparable, and the appraiser's judgment of proper adjustments is sound. The procedure for using this approach is essentially the same for all types of property with the only difference being the elements of comparison.

The significance of this approach lies in its ability to produce estimates of value, which directly reflect the attitude of the market. Its application is contingent upon the availability of comparable sales, and therefore finds its widest range in the appraisal of vacant land and residential properties.

The **INCOME APPROACH** measures the present worth of the future benefits of a property by the capitalization of the net income stream over the remaining economic life of the property. The approach involves making an estimate of the "effective gross income" of a property, derived by deducing the appropriate vacant and collection losses from its estimated economic rent, as evidenced by the yield of comparable properties. From this sum, applicable operating expenses are deducted, as well as the costs of taxes and insurance, and reserve allowances for replacements. The resulting figure is an estimate of net income, which may then be capitalized into an indication value.

The approach obviously has its basic application in the appraisals of properties universally bought and sold on their ability to generate and maintain a stream of income for their owners. The effectiveness of the approach lies in the appraiser's ability to relate to the changing economic environment and to analyze income yields in terms of their relative quality and durability.

## PROPERTY VALUATION TECHNIQUES

### APPLYING THE COST APPROACH

If the highest and best use of a property is its present use, a valid indication of value may be derived by estimating the value of the land, and adding the land value to the depreciated value of the structures on the land; the resulting equation being:

	Estimated Land Value
+	Estimated Replacement Cost New of Structures
-	Estimated Depreciation
	<hr style="width: 50%; margin-left: auto; margin-right: 0;"/>
=	Indication of Property Value

### REPLACEMENT COST

Replacement Cost is the current cost of producing an improvement of equal utility to the subject property; it may or may not be the cost of producing a replica property. The distinction being drawn is one between *replacement* cost – which refers to a substitute property of equal utility – as opposed to *reproduction* cost, which refers to a substitute replica property. In certain situations, the two concepts may be interchangeable, but they are not necessarily so. However, they both have application in the Cost Approach to value, with the difference being reconciled in the consideration of depreciation allowances.

In actual practice, outside of a few historic type communities in this country, developers and builders, for obvious economic reasons, replace buildings, not reproduce them. It logically follows that if an appraiser's job is to measure the actions of knowledgeable persons in the market place, the use of proper replacement costs should provide an accurate point of beginning in the valuation of most improvements.

The replacement cost includes the total cost of construction incurred by the builder whether preliminary to, during the course of, or after completion of the construction of a particular building. Among these are material, labor, all subcontracts, builders' overhead and profit, architectural and engineering fees, consultation fees, survey and permit fees, legal fees, taxes insurance, and the cost of interim financing.

### ESTIMATING REPLACEMENT COST

There are various methods that may be employed to estimate replacement cost new. The methods widely used in the appraisal field are the quantity-survey method, the unit-in-place or component part-in-place method, and the model method.

The Quantity-Survey method involves a detailed itemized estimate of the quantities of various materials used, labor and equipment requirements, architect and engineering fees,

contractor's overhead and profit, and other related costs. This method is primarily employed by contractors and cost estimators for bidding and budgetary purposes and is much too laborious and costly to be effective in everyday appraisal work, especially in the mass appraisal field. The method, however, does have its place in that it is used to develop certain unit-in-place costs which can be more readily applied to estimating for appraisal purposes.

The Unit-in-Place method is employed by establishing in-place cost estimates (including material, labor, overhead and profit) for various structural components. The prices established for the specified components are related to their most common units of measurement such as cost per yard of excavation, cost per lineal foot of footings, and cost per square foot of floor covering. The unit prices can then be multiplied by the respective quantities of each as they are found in the composition of the subject building to derive the whole dollar component cost, the sum of which is equal to the estimated cost of the entire building, providing that due consideration is given to all other indirect costs which may be applicable. This "components" part-in-place method of using basic units can also be extended to establish prices for larger components in-place such as complete structural floors (including the finish flooring, sub-floor, joists and framing) which are likely to occur repeatedly in a number of buildings.

The Model method is still a further extension, in that unit-in-place costs are used to develop base unit square foot or cubic foot costs for total specified representative structures in place, which may then serve as "models" to derive the base unit cost of comparable structures to be appraised. The base unit cost of the model most representative of the subject building is applied to the subject building and appropriate tables of additions and deductions are used to adjust the base cost of the subject building to account for any significant variations between it and the model.

Developed and applied properly, these pricing techniques will assist the appraiser in arriving at valid and accurate estimates of replacement cost new as of a given time. The cost generally represents the upper limit of value of a structure. The difference between its replacement cost new and its present value is depreciation. The final step in completing the Cost Approach then is to estimate the amount of depreciation and deduct said amount from the replacement cost new.

## **DEPRECIATION**

Simply stated, depreciation can be defined as "a loss in value from all causes." As applied to real estate, it represents the loss in value between market value and the sum of the replacement cost new of the improvements plus the land value as of a given time.

The causes for the loss in value may be divided into three broad classifications: physical deterioration, functional obsolescence, and economic obsolescence.

Physical deterioration pertains to the wearing out of the various building components, referring to both short- and long-life terms, through the action of the elements, age, and use.

The condition may be considered either “curable” or “incurable,” depending upon whether it may or may not be practical and economically feasible to cure the deficiency by repair or replacement.

Functional obsolescence is a condition caused by either inadequacies or over-adequacies in design, style, composition, or arrangement inherent to the structure itself, which tends to lessen its usefulness. Like physical deterioration, the condition may be considered either curable or incurable. Some of the more common examples of functional obsolescence are excessive wall and ceiling heights, excessive structural construction, surplus capacity, ineffective layouts, and inadequate buildings services.

Economic obsolescence is a condition caused by factors extraneous to the property itself, such as changes in population characteristics and economic trends, encroachment of inharmonious land uses, excessive taxes, and governmental restrictions. The condition is generally incurable in that the causes lie outside the property owner’s realm of control.

## **ESTIMATING DEPRECIATION**

An estimate of depreciation represents an opinion of the appraiser as to the degree that the present and future appeal of a property has been diminished by deterioration and obsolescence. Of the three estimates necessary to the cost approach, it is the one most difficult to make. The accuracy of the estimate will be a product of the appraiser’s experience in recognizing the symptoms of deterioration and obsolescence and the ability to exercise sound judgment in equating all observations to the proper monetary allowance to be deducted from the replacement cost new. There are several acceptable methods that may be employed:

Physical deterioration and/or functional obsolescence can be measured by observing and comparing the physical condition and/or functional deficiencies of the subject property as of a given time with either an actual or hypothetical, comparable, new and properly planned structure.

Curable physical deterioration and functional obsolescence can be measured by estimating the cost of restoring each item of depreciation to a physical condition as good as new, or estimating the cost of eliminating the functional deficiency.

Functional and economic obsolescence can be measured by capitalizing the estimated loss in rental due to the structural deficiency, or lack of market demand.

Total accrued depreciation may be estimated by first estimating the total useful life of a structure and then translating its present condition, desirability, and usefulness into an effective age (rather than an actual age) which would represent that portion of its total life (percentage) which has been used up.

Total accrued depreciation may also be estimated by deriving the amount of depreciation recognized by purchasers as evidenced in the prices paid for property in the market place; the loss of value being the difference between the cost of replacing the structure now and its actual selling price (total property selling price less the estimated value of the land).

### **APPLYING THE MARKET DATA APPROACH**

An indication of the value of a property can be derived through analysis of the selling prices of comparable properties. The use of this technique, often referred to as the “comparison approach” or “comparable sales approach,” involves the selection of a sufficient number of valid comparable sales and the adjustment of each sale to the subject property to account for variations in time, location, site and structural characteristics.

### **SELECTING VALID COMPARABLES**

Since market value has been defined as the price which an informed and intelligent buyer, fully aware of the existence of competing properties and not being compelled to act is justified in paying for a particular property, it follows that if market value is to be derived from analyzing comparable sales, that the sales must represent valid “arm’s length” transactions. Due consideration must be given to the conditions and circumstances of each sale before selecting the sales for analysis. Some examples of sales that do not normally reflect valid market conditions are as follows:

*Sales in connection with foreclosures, bankruptcies, condemnations and other legal actions*

*Sales to, or by, federal, state, county and local governmental agencies*

*Sales to, or by, religious, charitable or benevolent tax exempt agencies*

*Sales involving family transfers, or “love and affection”*

*Sales involving intra-corporate affiliations*

*Sales involving the retention of life interests*

*Sales involving cemetery lots*

*Sales involving mineral or timber rights, and access or drainage rights*

*Sales involving the transfer of part interests*

In addition to selecting valid market transactions, it is equally important to select properties that are truly comparable to the property under appraisal. For instance, sales involving

both real property and personal property, or chattel, may not be used unless the sale can be adjusted to reflect only the real property transaction, nor can sales of non-operating or deficient industrial plants be validly compared with operating plants. The comparable sales and subject properties must exhibit the same use, and the site and structural characteristics must exhibit an acceptable degree of comparability.

## **PROCESSING COMPARABLE SALES**

All comparable sales must be adjusted to the subject property to account for variations of time and location. The other major elements of comparison will differ depending upon the type of property being appraised. In selecting these elements, the appraiser must give prime consideration to the factors that influence prospective buyers of particular types of properties.

The typical homebuyer is interested in the property's capacity to provide the family with a place to live. A primary concern is with the living area, utility area, number of rooms, number of baths, age, structural quality and condition, and the presence of a modern kitchen and recreational conveniences of the house. Equally important is the location and neighborhood, including the proximity to and the quality of schools, public transportation, and recreational and shopping facilities.

In addition to the residential amenities, the buyer of agricultural property is primarily interested in the productive capacity of the land, the accessibility to the market place, and the condition and functional utility of the farm buildings and structures on the land.

The typical buyer of commercial property, including warehouses and certain light industrial plants, is primarily concerned with its capability to produce revenue. Of special interest will be the age, design and structural quality and condition of the improvements, the parking facilities, and the location relative to transportation, labor markets and trade centers.

In applying the market data approach to commercial/industrial property, the appraiser will generally find it difficult to locate a sufficient number of comparable sales, especially of properties that are truly comparable in their entirety. It will, therefore, generally be necessary to select smaller units of comparison such as price per square foot, per unit, per room, etc. In doing so, great care must be exercised in selecting a unit of comparison that represents a logical common denominator for the properties being compared. A unit of comparison that is commonly used and proven to be fairly effective is the Gross Rent Multiplier, generally referred to as GRM, which is derived by dividing the gross annual income into the sales price. Using such units of comparison enables the appraiser to compare two properties that are similar in use and structural features, but differ significantly in size and other characteristics.

Having selected the major factors of comparison, it remains for the appraiser to adjust each of the factors to the subject property. In comparing the site, adjustments for size, location, accessibility, and site improvements must be made. In comparing the structures, adjustments

for size, quality, design, condition, and significant structural and mechanical components also must be made. The adjusted selling prices of the comparable properties will establish a range in value in which the value of the subject property will fall. Further analysis of the factors should enable the appraiser to narrow the range down to the value level that is most applicable to the subject property.

### **APPLYING THE INCOME APPROACH**

The justified price paid for income producing property is no more than the amount of investment required to produce a comparably desirable return. Since the market can be analyzed in order to determine the net return actually anticipated by investors, it follows that the value of income producing property can be derived from the income which it is capable of producing. What is involved is an estimate of income through the collection and analysis of available economic data, the development of a property capitalization rate, and the processing of the net income into an indication of value by employing one or more of the acceptable capitalization methods and techniques.

### **THE PRINCIPLES OF CAPITALIZATION**

Capitalization is the process for converting the net income produced by property into an indication of value. Through the years of appraisal history, a number of procedures have been recognized and employed by appraisal authorities in determining the value of real estate by the income approach. Although present-day practice recommends only certain methods, we will at least touch on the other approaches to value, even though they may not be accepted in today's appraisal scene because they do not accurately reflect the current market conditions.

### **EXPLORING THE RENTAL MARKET**

The starting point for the appraiser is an investigation of current economic rent in a specific area in order to establish a sound basis for estimating the gross income that should be returned from competitive properties. The appraiser must make a distinction between economic rent (the rent which property is normally expected to produce on the open market), as opposed to control rent or the rent which property is actually realizing at the time of the appraisal due to lease terms established sometime in the past.

The first step then is to obtain specific income and expense data on properties that best typify normal activity. The data is necessary to develop local guidelines for establishing the economic rent and related expenses for various types and properties.

The next step is to similarly collect income and expense data on individual properties, and to evaluate the data against the established guidelines. The collection of income and expense data is an essential phase in the valuation of commercial properties. The appraiser is

primarily concerned with the potential earning power of the property. The objective is to estimate its expected net income. Income and Expense Statements of past years are valuable only to the extent that they serve this end. The statements must not only be complete and accurate, but must also stand the test of market validity. Consideration of the following factors should assist the appraiser in evaluating the income and expense data in order to arrive at an accurate and realistic estimate of net income.

### QUESTIONS RELATING TO INCOME DATA

- A. **Was the reported income produced entirely by the subject property?** Very often rents will include an amount attributable to one or more additional parcels of real estate. In this case, it would be necessary to obtain the proper allocations of rent.
- B. **Was the income attributable to the subject property as it physically existed at the time of the appraisal, or did the appraisal include the value of leasehold improvements and remodeling for which the tenant paid in addition to rent?** If so, it may be necessary to adjust the income to reflect economic rent.
- C. **Does the reported income represent a full year's return?** It is often advisable to obtain both monthly and annual amounts as verification.
- D. **Does the income reflect current economic rent?** Is either part or all of the income predicated on old leases? If so, what are the provisions for renewal options and rates?
- E. **Does the reported income reflect 100% occupancy?** What percentage of occupancy does it reflect? Is this percentage typical of this type of property, or is it due to special non-recurring causes?
- F. **Does the income include rental for all marketable space?** Does it include an allowance for space, if any, which is either owner or manager occupied? Is the allowance realistic?
- G. **Is the income attributable directly to the real estate and conventional amenities? Is some of the income derived from furnishings and appliances?** If so, it will be necessary to adjust the income or make provisions for reserves to eventually replace them, whichever local custom dictates.
- H. **Is the property occupied by the owner?** In many properties an actual rental does not exist because the real estate is owner occupied. In this event it is necessary to obtain other information to provide a basis to estimate economic rent. The information required pertains to the business operation using the property. Proper analysis of the annual operating statements of the business, including gross sales or receipt, can provide an accurate estimate of economic rent. Information requirements for a few of the more common property uses are as follows:

Retail Store                      Annual net gross sales (gross sales less returns)

Hotel & Motel                      Annual operating statement of the business. If retail

or office space is leased in these properties, obtain the actual rent paid

Theaters	Annual gross receipts (including admissions and concessions) and seating capacity
Parking	Annual gross receipts

## ANALYSIS OF EXPENSE DATA

The appraiser must consider only those expenses that are applicable to the cost of ownership; that is, those expenses that are normally owner-incurred. Any portion of the expenses incurred directly or indirectly by the tenant should not be considered. Each expense item must stand the test of both legitimacy and accuracy. How do they compare with the established guidelines and norms? Are they consistent with the expenses incurred by comparable properties?

**Management** refers to the costs of administration. These charges should realistically reflect what a real estate management company would actually charge to manage the property. If no management fee is shown on the statement, an allowance should be made by the appraiser. On the other hand, if excessive management charges are reported, as is often the case, the appraiser must disregard the reported charges and use an amount that he deems appropriate and consistent with comparable type properties. The cost of management bears a relationship with the risk of ownership and will generally range between 4 to 10% of the gross income.

**General expenses** may include such items as the cost of services and supplies not charged to a particular category. Unemployment and FICA taxes, Worker's Compensation, and other employee insurance plans are usually legitimate deductions when employees are a part of the building operation.

**Reimbursed expenses** refer to the cost associated with the maintenance of public or common areas of the commercial property. This expense is passed on to the tenants and should, therefore, only be considered when the amount of reimbursement is included as income.

**Miscellaneous expense** is the "catch-all" category for incidentals. This item should reflect a very nominal percentage of the income. If expenses reported seem to be excessive, the appraiser must examine the figures carefully in order to determine if they are legitimate expenses and if so, to allocate them to their proper category.

**Cleaning expenses** are legitimate charges for such items as general housekeeping and maid service, and include the total cost of labor and related supplies. All or a portion of the cleaning services may be provided by outside firms working on a "contract" basis. Cleaning expenses vary considerably and are particularly significant in operation such as offices and

hotels. “Rule of thumb” norms for various operations are made available through national management associations. The appraiser should have little difficulty in establishing local guidelines.

*Utilities* are generally legitimate expenses and, if reported accurately, need very little reconstruction by the appraiser other than to determine if the charges are consistent with comparable properties. Local utility companies can provide the appraiser with definite guidelines.

*Heat and Air Conditioning* costs are often reported separately and in addition to utilities. The expenses would include the cost of fuel other than the above mentioned utilities, and may include – especially in large installations – the cost of related supplies, inspection fees, and maintenance charges. These are generally legitimate costs, and the same precautions prescribed for “utilities” are in order.

*Elevator expenses*, including the cost of repairs and services, are legitimate deductions and are generally handled through service contracts. These fees can generally be regarded as fairly stable annual recurring expenses.

*Decorating and minor alterations* are necessary to maintain the income stream of many commercial properties. In this respect they are legitimate expenses. However, careful scrutiny of these figures is required. Owners tend to include the cost of major alterations and remodeling which are, in fact, capital expenditures, and as such are not legitimate operating expenses.

*Repairs and Maintenance* expense reported for any given year, are not necessarily a true indication of the average or typical annual expense for these items. For example, a statement could reflect a substantial expenditure for a specific year (possibly because the roof was replaced and/or several items of deferred maintenance were corrected); yet the statement for the following year may indicate that repairs and maintenance charges were practically negligible. It is necessary for the appraiser to either obtain complete economic history on each property in order to make a proper judgment as to the average annual expense for these items, or include a proper allowance based on norms for the type and age of the improvements to cover annual expenses. Since it is neither possible nor practical to obtain enough economic history on every property, the latter method is generally used and the amounts reported for repairs and maintenance are then estimated by the appraiser.

*Insurance* – Caution must be used in accepting insurance expense figures. Costs shown may be for more than one year, or may be for blanket policies including more than one building. It is generally more effective for the appraiser to establish his own guidelines for insurance. He must also be careful to include only items applicable to the real estate. Fire extended coverage and owner’s liability are the main insurance expense items. Separate coverage on special component parts of the buildings, such as elevators and plate glass, are also legitimate expenses.

**Real Estate Taxes** – In making appraisals for tax purposes, the appraiser must exclude the actual amount reported for real estate taxes. Since future taxes will be based on his appraised value, the appraiser must express the taxes as a factor of the estimated value. This can be done by including an additional percentage in the capitalization rate to account for real estate taxes.

**Depreciation** – The figure shown for depreciation on an operating statement is a “bookkeeping figure” which the owner uses for Internal Revenue purposes and should not be considered in the income approach. This reflects a tax advantage that is one of the benefits of ownership.

**Interest** – Although interest is considered a legitimate expense, it is always included in the Capitalization Rate. Most property is appraised as if it were “free and clear;” however, the appraiser does consider the interest of a current mortgage in the Capitalization Rate build-up.

**Land Rent** – When appraising for real estate tax purposes, only the sum of the leasehold and the leased fee is usually considered. Land rent is not deducted as an expense. Considered separately, rent from a ground lease would be an expense to the leasehold interest and an income to the leased fee. However, if land were rented from another property to supply additional parking for example, that land rent would be an allowable expense.

It is obvious that there are some expense items encountered on operating statements that the appraiser should not consider as allowable. This is because he is interested in legitimate cash expenses only. Income statements are usually designed for income tax purposes where credit can be taken for borrowing costs and theoretical depreciation losses.

It is virtually impossible and certainly not always practical to obtain a complete economic history on every commercial property being appraised. On many properties, however, detailed economic information can be obtained through the use of Income and Expense forms. One must realistically recognize the fact that the data obtainable on some properties is definitely limited.

In some cases, the gross income and a list of the services and amenities furnished can be obtained during the data gathering operation. However, in order to insure a sound appraisal, it may be necessary to estimate the fixed and operating expenses. This is best accomplished by setting guidelines for expenses, based on a percent of Effective Gross Income or a cost per square foot of leased area. These percentages or costs will vary depending on the services supplied and the type of property.

## **CAPITALIZATION METHODS**

The most prominent methods of capitalization are Direct, Straight Line, Sinking Fund, and Annuity. Each of these is a valid method for capitalizing income into an indication of value.

The basis for their validity lies in the action of the market, which indicates that the value of income producing property can be derived by equating the net income with the net return anticipated by informed investors. This can be expressed in terms of a simple equation:

$$\text{Value} = \text{Net Income divided by Capitalization Rate}$$

The Straight Line and Sinking Fund methods are both actual forms of Straight Capitalization, with one using Straight Line recapture and the other using Sinking Fund recapture. Both methods follow the same basic principles as Direct Capitalization, differing only in that they provide for separate capitalization rates for land and buildings; the building rate differing from the land rate in that it includes an allowance for recapture.

Straight Line Capitalization allows for “recapture” based on remaining economic life of the building – implying that at the end of that period of time, there would be a zero improvement value. There are three fallacies in this thinking. First, the potential buyer (investor) has no intention of holding the property that long. The average investment period might average ten years. Second, the investor anticipates that at the end of that period he will either get all his money back or will make a profit. And third is the depreciation allowance possible in connection with federal income taxes.

Depreciation allowances begin to “run out” between seven and ten years, so the advantages of owning the property are reduced considerably. A prudent owner may choose to sell the property at this point and re-invest in another property so that he may begin the depreciation cycle again and continue to take full advantage of the favorable tax laws.

For these reasons, the Straight Line Capitalization Method does not usually follow what the market indicates.

Straight Line recapture calls for the return of investment capital in equal increments or percentage allowances spread over the estimated remaining economic life of the building.

Sinking Fund recapture calls for the return of invested capital in one lump sum at the termination of the estimated remaining economic life of the building. This is accomplished by providing for the annual return of a sufficient amount needed to invest and annually re-invest in “safe” interest-bearing accounts, such as government bonds or certificates of deposit, which will ultimately yield the entire capital investment during the course of the building’s economic life.

Annuity Capitalization lends itself to the valuation of long-term leases. In this method the appraiser determines, by the use of annuity tables, the present value of the right to receive a certain specified income over stipulated duration of the lease. In addition to the value of the income stream, the appraiser must also consider the value that the property will have once it reverts back to the owner at the termination of the lease. This reversion is valued by discounting its anticipated value against its present day worth. The total property value then is the sum of the capitalized income stream plus the present worth of the reversion value.

## **CURRENT TECHNIQUES**

There are two methods that do lend themselves to an accurate measure of market value based on potential income. These are Direct Capitalization, utilizing the Direct Comparison Method of Rate Selection, and Mortgage Equity Capitalization.

In Direct Capitalization, the appraiser determines a single “overall” capitalization rate. This is done through analysis of actual market sales of similar types of properties. He develops the net income of each property, and divides the net income by the sales price to arrive at an overall rate to provide an indication of value.

Mortgage Equity Capitalization is a form of direct capitalization with the major difference in the two approaches being the development of the overall capitalization rate. In this method, equity yields and mortgage terms are considered influencing factors in construction of the interest rate. In addition, a plus or minus adjustment can be related to the recapture provisions used in other capitalization methods and techniques.

## **RESIDUAL TECHNIQUES**

It can readily be seen that any one of the factors of the Capitalization Equation ( $\text{Value} = \text{Net Income} \div \text{Capitalization Rate}$ ) can be determined if the other two factors are known. Furthermore, since the value of property is the sum of the land value plus the building value, it holds that either of these can be determined if the other is known. The uses of these mathematical formulas in capitalizing income into an indication of value are referred to as the residual techniques, or more specifically, the property residual, the building residual, and the land residual techniques.

The Property Residual Technique is an application of Direct Capitalization. In this technique, the total net income is divided by an overall capitalization rate (which provided for the return on the total investment) to arrive at an indicated value for the property. This technique has received more popular support in recent years because it closely reflects the market. With this technique, the capitalization rate may be developed by either “direct comparison” in the market or by the Mortgage Equity Method.

The Building Residual Technique requires the value of the land to be a known factor. The amount of net income required to earn an appropriate rate of return on the land investment is deducted from the total net income. The remainder of the net income (residual) is divided by the building capitalization rate (which is composed of a percentage for the return on the investment, plus a percentage for the recapture of the investment) to arrive at an indicated value for the building.

The Land Residual Technique requires the value of the building to be a known factor. The amount of net income required to provide both a proper return on, and the recapture of, the investment is deducted from the total net income. The remainder of the net income (residual)

is then divided by the land capitalization rate (which is composed of a percentage for the return on the investment) to arrive at an indicated value for the land.

**MORTGAGE EQUITY METHOD EXAMPLE**

For purposes of illustration, assume an investment financed with a 70% loan at 14.0% interest. The term of the mortgage is 20 years, paid off in level monthly payments. The total annual cost for principal and interest on such a loan can be determined by referring to the mortgage equity tables. Select the Constant Annual percent for an interest rate of 14.0% and a term of 20 years. Note that the constant is 14.92% of the amount borrowed, or .92% more than the interest rate alone.

Assume that the equity investor will not be satisfied with less than an 18% yield. The income necessary to satisfy both Lender and Equity can now be shown. The product of the percent portion and the rate equals the weighted rate. The sum of the weighted rates equals the weighted average.

	<b>PORTION</b>	<b>RATE</b>	<b>WEIGHTED RATE</b>
Mortgage loan (principle interest)	70%	.1492 =	.1044
Equity (down payment)	<u>30%</u>	.18 =	<u>.0540</u>
Weighted Average	100%		.1584

*Note that the “constant annual percent” is used for the rate of the loan.*

Since there is a gain in equity’s position through the years by the loan being paid off little by little, it is necessary to calculate the credit for “Equity Build-Up.” Assume that the investor plans to hold the property for ten years. Since the mortgage is for 20 years, only a portion of the principal will be paid off and this amount must be discounted, as it won’t be received for ten years. From the Table of Loan Balance and Debt Reduction, at the end of ten years for a 20 year mortgage at 14%, the figure is .199108. Consulting the sinking fund tables indicates that the discount factor for 18% at 10 years is .0425.

The credit for Equity Build-Up can now be deducted from the basic rate, thus

$$\begin{array}{rclclcl}
 .199108 & & 70\% & & .0425 & & = & .0059 \\
 (\% \text{ of loan paid in 10 yrs.}) & \times & (\text{loan rate}) & \times & (\text{sinking fund 18\% for 10 yrs.}) & & & \\
 \\
 \text{Resulting Net Rate} & & & & & & = & .1525
 \end{array}$$

## LAND VALUATION TECHNIQUES

In making appraisals for Ad Valorem Tax purposes, it is generally necessary to estimate separate values for the land and the improvements on the land. In actuality, the two are not separated and the final estimate of the property as a single unit must be given prime consideration. However, in arriving at that final estimate of value, aside from the requirements for property tax appraisals, there are certain other reasons for making a separate estimate of value for land:

An estimate of land value is required in the application of the Cost Approach.

An estimate of land value is required to be deducted, from the total property sales price in order to derive indications of depreciation through market-data analysis. (Depreciation being equal to the difference between the replacement cost new of a structure and the actual price paid in the market place for the structure.)

As land is not a depreciable item, a separate estimate of land value is required for bookkeeping and accounting purposes; likewise, the total capitalization rate applicable to land will differ from the rate applicable to the improvements on the land.

Since land may or may not be used to its highest potential, the value of land may be completely independent of the existing improvements on the land.

Real Estate is valued in terms of its highest and best use. The highest and best use of the land (or site), if vacant and available for use, may be different from the highest and best use of the improved property. This will be true when the improvement is not an appropriate use and yet makes a contribution to total property value in excess of the value of the site. Highest and Best Use (Highest and Most Profitable Use; Optimum Use) is that reasonable and probable use which will support the highest present value as of the date of the appraisal. Alternatively, it is the most profitable likely use to which a property can be put. It may be measured in terms of the present worth of the highest net return that the property can be expected to produce over a stipulated long run period of time. (American Institute of Real Estate Appraisers' Appraisal Terminology Handbook, 1981 edition.)

As appraisers' opinions are based on data derived from the market, it is necessary to study and adapt, if possible, procedures used by those closest to everyday transactions.

## COMPARABLE SALES METHOD

The most frequently used method in estimating the value of land is the comparable sales method, in which land values are derived from analyzing the selling prices of similar sites. This method is in essence the application of the market data approach to value and all the considerations pertaining thereto are equally applicable here.

The appraiser must select comparable and valid market transactions, and must weigh and give due consideration to all the factors significant to value, adjusting each to the subject property. The comparable sites must be used in the same way as is the subject property, and subjected to the same zoning regulations and restrictions. It is also preferable, whenever possible, to select comparable sales from the same or a similar neighborhood. The major adjustments will be to account for variations in time, location, and physical characteristics to include size, shape, topography, landscaping, access, as well as other factors which may significantly influence the selling price, such as the productivity of farm land.

Although it is always preferable to use sales of unimproved lots for comparison, it is not always possible to do so. Older neighborhoods are not likely to yield a sufficient number of representative sales of unimproved lots to permit a valid analysis. In such cases, in order to arrive at an estimate of land values using the comparable sales approach, it is necessary to consider improved property sales and to estimate the portion of the selling price applicable to the structure. The procedure would be to estimate the replacement cost of the buildings as of the date of sale, estimate the accrued depreciation and deduct that amount from the replacement cost resulting in the estimated selling price of the buildings, which can be deducted from the total selling price of the property to derive the portion of the selling price which can be allocated to the land. The equation is as follows:

$$\begin{array}{r}
 \text{Selling Price of Property} \\
 - \text{Estimated Depreciated Value of Buildings} \\
 \hline
 = \text{Indication of Land Value}
 \end{array}$$

In some of these older neighborhoods, vacant lots will exist often as a result of fire or normal deterioration. Since the desirability as a new building site is restricted, value is generally determined by adjoining property owners who have a desire for additional land area.

In order to apply the comparable sales method, it is first necessary to establish a common unit of comparison. The units generally used in the valuation of land are price per front foot, price per square foot, price per acre, price per lot, or site, or home site, price per apartment unit, and price per motel unit. The selection of any one particular unit depends upon the type of property being appraised, with frontage being commonly used for platted, uniform type residential lots, and square footage and acreage for larger, unplatted tracts, as well as irregularly shaped lots lacking in uniformity. Use of square footage is especially desirable in Central Business Districts where the entire lot maintains the same level of value (depth

factor adjustments have a tendency to distort this concept). Commercial arteries are also best valued on a square foot basis.

The utility of a site will vary with the frontage, width, depth, and overall area. Similarly, the unit land values should be adjusted to account for differences in size and shape between the comparable and the subject property. Since such an adjustment is generally necessary for each lot, it is beneficial that the appraiser adopts and/or develops standardized procedures for adjusting the lot size and the unit values to account for the variations. It is not uncommon for all lots within a development to market at the same price. Should data indicate this, it is necessary to make alterations or adjustments to maintain this value level. In some cases, a “site value” concept has advantages. Site value tables provide for uniform pricing of standard sized lots within homogenous neighborhoods or subdivisions. Some of the techniques commonly employed are as follows:

*Standard lot sizing techniques* provide for the adjustment of the frontage, width, and depth of irregular shaped lots to make the units of measurement more comparable with uniform rectangular lots. Incremental and decremented adjustments can be applied to account for size differences.

*Standard Depth Tables* provide for the adjustment of front foot unit values to account for variations in depth from a predetermined norm.

*Frontage Tables* provide for the adjustment of front footage unit values to account for variations in the relative utility value of excessive or insufficient frontage as compared to a predetermined norm.

*Acreage or Square Footage Tables* provide for the adjustment of unit values to account for variations in the relative utility value of excessive or insufficient land sizes as compared to a predetermined norm.

During the process of adjusting the comparable sales to account for variations between them and the subject property, the appraiser must exercise great care to include all significant factors and to properly consider the impact of each of the factors upon the total value. If done properly, the adjusted selling prices of the comparable properties will establish a range in value in which the value of the subject property will fall. Further analysis of the factors should enable the appraiser to narrow the range down to the value level that is most applicable to the subject property.

## **THE SOIL PRODUCTIVITY METHOD**

This method involves the classification of agricultural tracts according to a productivity index, and establishing corresponding unit land values either by the analysis of comparable sales or the capitalization of income yields. The method requires a great deal of data and time, and its application, for Ad Valorem tax purposes, is generally limited to the appraisal of predominantly agricultural jurisdictions, in which soil productivity is either the primary

influence to buyers and sellers, or in which soil productivity is the legal basis for the assessment of farm land.

There is a second condition which presupposes the use of the soil productivity method: the availability of current soil maps and related data. Soil productivity refers to the capacity of a soil to produce crops. Its productive capacity is basically dependent upon the properties and characteristics inherent in the soil; the prevailing environmental and climatic conditions; and the level of management input. Since the appraiser, for tax purposes, generally is neither provided with the time nor the resources to survey, analyze, and classify the varied numbers of soils, the use of the method is solely contingent upon the availability of reliable soil maps and data compiled from scientific soil surveys.

Providing then, that the value of the farm land as evidenced in the market place, or as mandated by law, is directly related to its capacity to produce, and that current soil maps and related data are available, it follows that soil productivity should be given prime consideration in the valuation of farm land.

The following is a suggested procedure for establishing unit land values based upon the relative productivity of the soil. Whereas precise terminology may differ from state to state, the general procedure should prove to be fairly applicable to any region.

1. *Obtain soil maps.* Soil maps prepared by soil surveyors should provide an accurate inventory of the soil resources of an area. The soil mapping units delineated on the maps provide a basis for soil-use suggestions and for crop-yield and/or soil productivity estimates.
2. *Obtain or develop soil productivity index ratings for each soil mapping unit.* Soil productivity is generally expressed in terms of yield per acre. In developing a soil productivity approach to value, it is necessary to compare the productivity of different soils and different yields. A productivity index provides the statistical means of expressing the productivity of different soils in relative units of comparison.

Table 1 shows the calculation of a productivity index for Muscatine silt loam at a high management level. The yield estimates are related to a base yield. The same base yield is used for all soils, but the crop-yield estimates and acreage ratio will vary with each soil. The acreage ratio is an expression of the percentage of the time that a particular crop is grown. Management level is held constant. Thus, the soil productivity index provides a measure of the soil contribution in crop production. Such ratings may be prepared for cropland, pasture, and timber.

**TABLE 1. EXAMPLE CALCULATION OF SOIL PRODUCTIVITY INDEX**

<b>CROP</b>	<b>(1) Average Yield (Per Acre)</b>	<b>(2) Base Yield (Index-100)</b>	<b>(3) Relative Yield (1)(2)</b>	<b>(4) Acreage Ratio</b>	<b>(5) Cost Contribution (3) x (4)</b>
Corn	145 Bu	90 Bu	161%	.55	88
Soybeans	46 Bu	30 Bu	153%	.30	46
Wheat	56 Bu	30 Bu	186%	.08	15
Oats	86 Bu	60 Bu	143%	.07	10

Soil Productivity Index (Sum of Crop Contribution) = 159  
 Rounded to the nearest multiple of 5 = 160

3. *Determine appropriate soil-use categories.* Separate soil-use categories may be established for each significant use. However, in many areas, it is often more practical to consider only cropland, and to establish the necessary guidelines for adjusting land in timber, brush, or pasture accordingly.
4. *Compile data on the selling prices and/or income yields or agricultural land in representative soil areas.*
5. *Obtain or measure and record the acreage of each soil-use mapping unit category for each tract of land in the sampling compiled in Step 4.* If measured, a planimeter, grid, or electric area calculator should be used.
6. *Calculate a tract-productivity index for each tract of land in the sampling.* A tract-productivity index may be calculated by using the acreage and soil-productivity index for each soil-mapping unit in a tract. The acreage is multiplied by the soil-productivity index to obtain a soil contribution for each mapping unit. The soil contributions are added together, and the resulting sum is divided by the number of acres in the tract. The result is a weighted index of the soil productivity of the tract. Table 2 shows an example calculation.

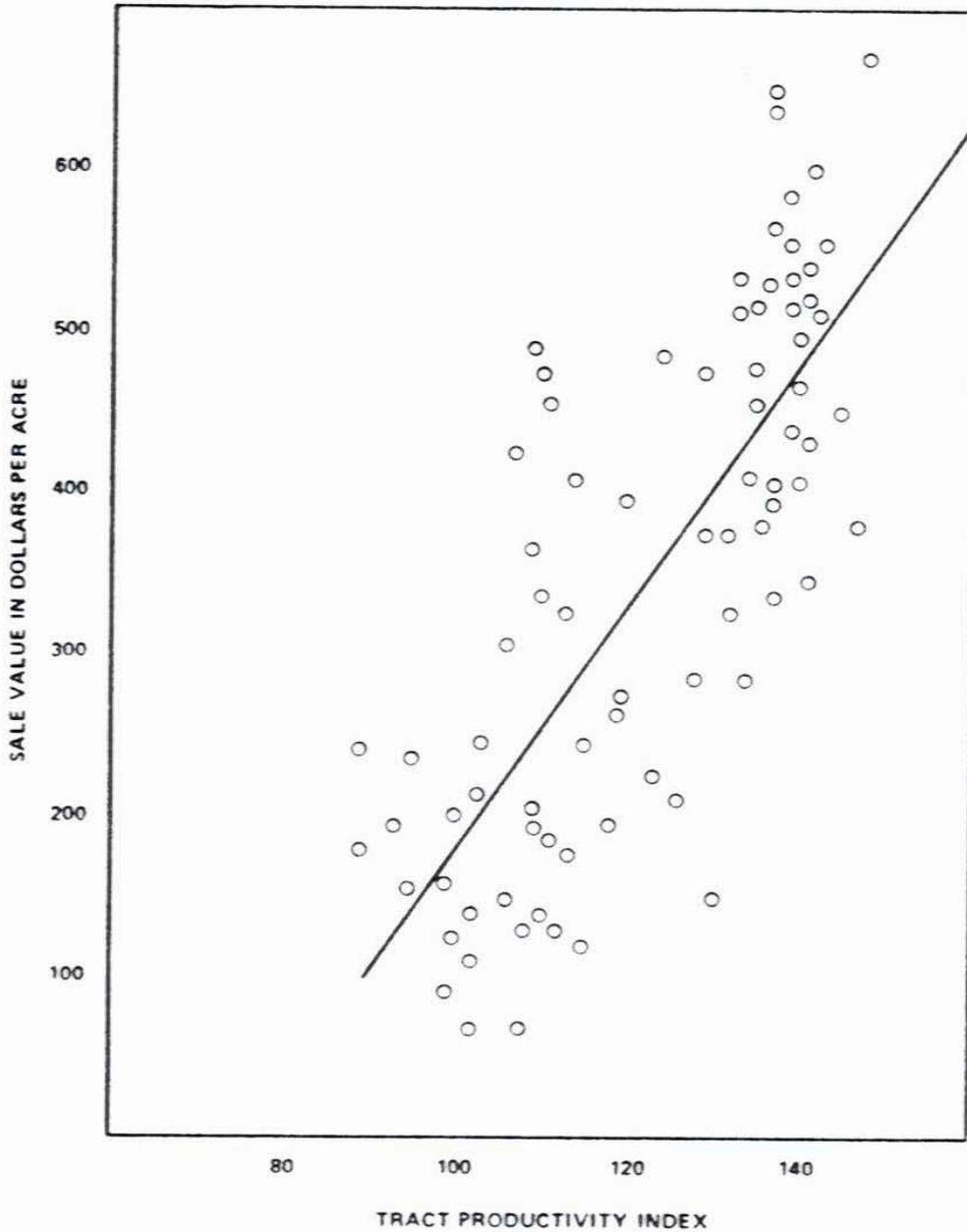
**TABLE 2. EXAMPLE CALCULATION OF TRACT PRODUCTIVITY INDEX**

<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>
<b>Soil Acreage</b>	<b>Mapping Productivity Index</b>	<b>Soil Contribution (3)x(4)</b>	<b>Soil</b>	<b>Unit (From Soil Map)</b>
Stable	68 AO	14	150	2100
Denny	45 AO	2	110	220
Muscatine	41 AO	17	160	2720
Tama	36 C2	7	130	910
<b>Totals</b>	-	<b>40</b>	-	<b>5950</b>

Tract Productivity Index = Sum of (5) / Sum of (3) = 5950/40 = 149

- 7. Determine the relationship of productivity and selling price and/or income yields per acre for each of the tracts included in the sampling. A curve (or graph) may be prepared by plotting the measure of dollar value along the vertical axis, and the productivity along the horizontal axis as shown in Figure 1.

FIGURE 1. Graph showing the relationship of sales price and productivity.



8. *Obtain or measure and record the acreage of each soil-use mapping unit category for each tract of agricultural land to be appraised.*
9. *Calculate a tract productivity index for each tract of agricultural land to be appraised and determine an estimate of its value from the graph generated in Step 7. Once the productivity of the tract is known, the base value of the tract can be determined from such a graph, or if preferred, a table can be prepared from the graph showing the tract productivity in one column and the estimated corresponding base unit level values in an adjoining column.*

Note: the base unit land values obtained in Step 9 will often require adjustments to account for factors such as location, accessibility, special soil conditions, etc., which influence land value, but which cannot be measured by productivity.

In such cases where soil productivity is a prime factor in determining the value of the land (as indicated by the linear relationship between selling prices and soil productivity in Figure 1), the procedural steps outlined above should provide a sound basis for establishing equitable values.

It should be noted, however, that the procedure is not a formula for appraising farm land, but only a method of establishing unit values based upon a soil productivity index. Soil productivity is but one value-influencing factor to be considered, and depending upon the area in which the farm land is located, it may or may not have significant bearing upon the market value of the property.

In the final analysis, each farm appraisal must stand the test of comparison with competing properties. Intelligent buyers may be assumed to know of the existence of similar properties as well as the bidding prices or asking prices for such properties. It is also reasonable to assume that well informed buyers of competing properties have examined the characteristics of the property, in a practical, if not scientific way before establishing the value of the property to them as investors.

Similarly, the appraiser must rely heavily upon the comparison process in determining the relationship of a farm property of unknown value, but of known characteristics (subject farm) to comparable farms of known value as well as known characteristics (bench-mark farms). Each value-influencing factor must be analyzed in order to determine its individual contribution to the overall value. In the process, consideration must be given to such factors as the time and condition of the sale, the size of the property, the suitability and productivity of the soil, the value of the buildings, the location of the property in relation to market accessibility, and the location of the property in relation to its suitability for higher land uses.

Only after determining the contribution value of each of these factors can the appraiser determine the proper basis or criteria for establishing unit land values which will accurately reflect the action of the market.

## THE LAND RESIDUAL TECHNIQUE

In the absence of sufficient market data, income-producing land may be valued by determining the portion of the net income attributable to the land and capitalizing the net income into an indication of value. The procedure is as follows:

1. Determine the highest and best use of the land, which may be either its present use or hypothetical use.
2. Estimate the net income which the property can be expected to yield.
3. Estimate the replacement cost new of the improvements.
4. If the case involves the present use, estimate the proper allowance for depreciation, and deduct that amount from the replacement cost new of the improvements to arrive at an estimate of their depreciated value.
5. Develop appropriate capitalization rates.
6. Calculate the income requirements of the improvements, and deduct the amount from the total net income to derive that portion of the income that can be said to be attributable to the land.
7. Capitalize the residual income attributable to the land to an indication of value.

## RATIO METHOD

A technique useful for establishing broad indications of land values is a “typical” allocation or ratio method. In this technique, the ratio of the land value to the total value of improved properties is observed in situations where there is good market and/or cost evidence to support both the land values and total values. This market abstracted ratio is then applied to similar properties where the total values are known, but the allocation of values between land and improvements are not known. The ratio is usually expressed as a percentage that represents the portion of the total improved value that is land value, or as a formula:

$$\text{(Total Land Value / Total Property Value)} \times 100\% = \% \text{ Land Is of Total Property Value}$$

This technique can be used on most types of improved properties, with important exceptions being farms and recreational facilities, provided that the necessary market and/or cost information is available. In actual practice, available market information limits this technique primarily to residential properties, and to a much lesser extent, commercial and industrial properties such as apartments, offices, shopping centers, and warehouses. The ratio technique cannot give exact indications of land values. It is nevertheless useful, especially when used in conjunction with other techniques of estimating land values because it provides an indication of the reasonableness of the final estimate of land value.

The ratio should be extracted from available market information and applied to closely similar properties. It should be noted that any factor that affects the value could also affect the ratio of values. Zoning is particularly important because it may require more or less improvements be made to the land, or may require a larger or smaller minimum size. This tends to have a bearing on the land values, and may influence the ratio of values considerably, from community to community.

The following is an example of a residential land valuation situation:

*Market information derived from an active new subdivision:*

Typical Lot Sale Price (most lots equivalent)	\$30,000
Improved Lot Sales (range)	\$125,000 to \$150,000

**Indicated Ratio:**       $\frac{30,000}{150,000}$  to  $\frac{30,000}{125,000}$  x 100%      =      **20% to 24%**

Similar subdivision, but 100% developed:

Typical Lot Sale Price (most lots equivalent)	Unavailable
Improved Lot Sales (range)	\$100,000 to \$150,000
Broadest Indicated Range of Lot Values	\$20,000 to \$36,000
	<i>(20% x \$100,000 to 24% x 150,000)</i>
Narrowest Indicated Range of Lot Values	\$24,000 to \$30,000
	<i>(24% x \$85,000 to 20% x \$105,000)</i>

If both lots and improvements vary considerably, the broadest range is most appropriate. If most lots vary little and are judged equivalent but the improvements vary somewhat, the narrowest range is appropriate. Most subdivisions exhibit a combination of the two ranges, showing a narrow typical range, but a wider actual range of land values.

**MASS APPRAISING**

In preceding sections, we have outlined the fundamental concepts, principles, and valuation techniques underlying the Appraisal Process. We will now approach the problem at hand: the reappraisal of certain specified real property within a total taxing jurisdiction, be it an entire county or any subdivision thereof, and to structure a systematic mass appraisal program to effect the appraisal of said properties in such a way as to yield valid, accurate, and equitable property valuations at a reasonable cost dictated by budgetary limitations, and within a time span totally compatible with assessing administration needs.

The key elements of the program are validity, accuracy, equity, economy, and efficiency. To be effective, the program must:

- incorporate the application of proven and professionally acceptable techniques and procedures;
- provide for the compilation of complete and accurate data and the processing of that data into an indication of value approximating the prices actually being paid in the market place;
- provide the necessary standardization measures and quality controls essential to promoting and maintaining uniformity throughout the jurisdiction;
- provide the appropriate production controls necessary to execute each phase of the operation in accordance with a carefully planned budget and work schedule; *and* -
- provide techniques especially designed to streamline each phase of the operation, eliminating superfluous functions, and reducing the complexities inherent in the Appraisal Process to more simplified but equally effective procedures.

In summary, the objective of an individual appraisal is to arrive at an opinion of value, the key elements being the validity of the approach and the accuracy of the estimate. The objective of a mass appraisal for tax purposes is essentially the same. However, in addition to being valid and accurate, the value of each property must be equitable to that of each other property, and what's more, these valid, accurate, and equitable valuations must be generated as economically and efficiently as possible.

## **OVERVIEW**

The prime objective of mass appraisals for tax purposes is to equalize property values. Not only must the value of one residential property be equalized with another, but it must also be equalized with each agricultural, commercial, and industrial property within the political unit.

The common denominator or the basis for equalization is market value; that price which an informed and intelligent person, fully aware of the existence of competing properties and not being compelled to act, is justified in paying for a particular property.

The job of the appraiser is to arrive at a reasonable estimate of that justified price. To accomplish this, the coordination of approaches to the valuation of the various classes of property must be made so that they are related one to another in such a way as to reflect the motives of the prospective purchasers of each type of property.

A prospective purchaser of a residential property is primarily interested in its capacity to render service to the family as a place to live. Its location, size, quality, design, age, condition, desirability and usefulness are the primary factors to be considered in making a selection. By relying heavily upon powers of observation and inherent intelligence, knowing what could be afforded and simply comparing what is available, one property will eventually stand out to be more appealing than another. So it is likewise the job of the appraisers to evaluate the relative degree of appeal of one property to another for tax purposes.

The prospective purchaser of agricultural property will be motivated somewhat differently. The primary interest will be in the productive capabilities of the land. It is reasonable to assume that the purchaser will be familiar, at least in a general way, with the productive capacity of the farm. It might be expected that the prudent investor will have compared one farm's capabilities against another. Accordingly, the appraiser for local tax equalization purposes must rely heavily upon prices being paid for comparable farmland in the community.

The prospective purchaser of commercial property is primarily interested in the potential net return and tax shelter the property will provide. That price which is justified to pay for the property is a measure of the prospects for a net return from the investment. Real estate, as an investment then, must not only compete with other real estate, but also with stocks, bonds, annuities, and other similar investment areas. The commercial appraiser must explore the rental market and compare the income-producing capabilities of one property to another.

The prospective purchaser of industrial property is primarily interested in the overall utility value of the property. Of course, in evaluating the overall utility, individual consideration must be given to the land and each improvement thereon. Industrial buildings are generally of special purpose design, and as such, cannot readily be divorced from the operation for which they were built. As long as the operation remains effective, the building will hold its value; if the operation becomes obsolete, the building likewise becomes obsolete. The upper limit of its value is its replacement cost new, and its present day value is some measure of its present day usefulness in relation to the purpose for which it was originally designed.

Any effective approach to valuations for tax purposes must be patterned in such a way as to reflect the "modus operandi" of buyers in the market place. As indicated above, the motives influencing prospective buyers tend to differ depending upon the type of property involved. It follows that the appraiser's approach to value must differ accordingly.

The residential appraiser must rely heavily upon the market data approach to value, analyzing the selling prices of comparable properties and considering the very same factors of location, size, quality, design, age, condition, desirability, and usefulness, which were considered by the buyer.

The commercial appraiser will find that since commercial property is not bought and sold as frequently as is residential property, the sales market cannot be readily established. By relying heavily on the income approach to value, the net economic rent that the property is capable of yielding can be determined, and the amount of investment required to effect that net return at a rate commensurate with that normally expected by investors could also be determined. This can only be achieved through a comprehensive study of the income-producing capabilities of comparable properties and an analysis of present-day investment practices.

The industrial appraiser will not be able to rely on the market data approach because of the absence of comparable sales, each sale generally reflecting different circumstances and conditions. Also, it is not possible to rely upon the income approach because of the absence

of comparable investments, and because of the inability to accurately determine the contribution of each unit of production to the overall income produced. Therefore, by relying heavily on the cost approach to value, a determination must be made of the upper limit or replacement cost new of each improvement and the subsequent loss of value resulting overall from physical, functional and economic factors.

The fact that there are different approaches to value, some of which are more applicable to one class of property than to another, does not, by any means, preclude equalization between classes. The objective in each approach is to arrive at a price which an informed and intelligent person, fully aware of the existence of competing properties and not being compelled to act, is justified in paying for any one particular property. Underlying, and fundamental, to each of the approaches is the *comparison* process. Regardless of whether the principal criteria are actual selling prices, income-producing capabilities, or functional usefulness, like properties must be treated alike. **The primary objective is equalization.** The various approaches to value, although valid in themselves, must nevertheless be coordinated one to the other in such a way as to produce values that are not only valid and accurate, but are also equitable. The same “yardstick” of values must be applied to all properties, and must be applied by systematic and uniform procedures.

It is obvious that sales on all properties are not required to effectively apply the market data approach. The same is true regarding any other approach. What is needed is a comprehensive record of all the significant physical and economic characteristics of each property in order to compare the properties of “unknown” values with the properties of “known” values. All significant differences between properties must in some measure, either positively or negatively, be reflected in the final estimate of value.

Each property must be given individual treatment, but the treatment must be uniform and standardized, and essentially no different than that given to any other property. All the factors affecting value must be analyzed and evaluated for each and every property within the entire political unit. It is only by doing this that equalization between properties and between classes of properties can be ultimately affected.

All this, at best, is an oversimplification of the equalization process underlying the entire mass appraisal program. The program itself consists of various operational phases, and its success depends primarily upon the systematic coordination of collecting and recording data, analyzing the data, and processing the data to an indication of value.

## **DATA INVENTORY**

Basic to the appraisal process is the collecting and recording of pertinent data. The data will consist of general supporting data, referring to the data required to develop the elements essential to the valuation process; neighborhood data, referring to information regarding pre-delineated neighborhood units; and specific property data, referring to the data compiled for each parcel of property to be processed into an indication of value by the cost, market and/or income approach.

The data must be comprehensive enough to allow for the adequate consideration of all factors that significantly affect property values. In keeping with the economics of a mass appraisal program, it is costly and impractical to collect, maintain, and process data of no or marginal contribution to the desired objectives. The axiom “too much data is better than insufficient data” does not apply. What does apply is the proper amount of data, no more or no less, which is necessary to provide the database necessary to generate the desired output.

**Cost data** must be sufficient enough to develop or select and validate the pricing schedules and cost tables required to compute the replacement cost new of improvements needed to apply the cost approach to value.

All data pertaining to the cost of total buildings in place should include the parcel identification number, property address, date of completion, construction costs, name of builder, source of information, structural characteristics, and other information pertinent to analysis.

Cost information may be recorded on the same form (unassigned property record card) used to record specific property data.

The principal sources for obtaining cost data are builders, suppliers, and developers, and it is generally advisable to collect cost data in conjunction with new construction pick-ups.

**Sales data** must be sufficient enough to provide a representative sampling of comparable sales needed to apply the market data approach, to derive unit land values and depreciation indicators needed to apply the cost approach, and to derive gross rent multipliers and elements of the capitalization rate needed to apply the income approach.

All sales data should include the parcel identification number, property qualification code, month and year of sale, selling price, source of information, i.e., buyer, seller, agent, or fee, and a reliable judgment as to whether or not the sale is representative of a true arm’s length transaction.

Sales data should be recorded on the same form (assigned property record card) used to record specific property data, and verified during the property-listing phase.

The principal source for obtaining sales data is the County Register of Deeds Office, MLS, sales letters, fee appraisers and the real estate transfer returns. Other sources may include developers, Realtors, lending institutions, and individual owners during the listing phase of the operation.

**Income and expense data** must be sufficient enough to derive capitalization rates and accurate estimates of net income needed to apply the income

approach. Income and expense data should include both general data regarding existing financial attitudes and practices, and specific data regarding the actual incomes and expenses realized by specific properties.

The general data should include such information as equity return expectations, gross rentals, vacancy and operating cost expectations and trends, prevailing property management costs, and prevailing mortgage costs.

Specific data should include the parcel identification number, property address (or building ID), source of information, the amount of equity, the mortgage and lease terms, and itemized account of the annual gross income, vacancy loss, and operating expenses for the most recent two-year period.

The general data should be documented in conjunction with the development of capitalization procedural guidelines. The specific data, since it is often considered confidential and not subject to public access, should be recorded on special forms, designed in such a way as to accommodate the property owner or agent thereof in submitting the required information. The forms should also have space reserved for the appraiser's analysis and calculations.

The principal sources for obtaining the general financial data are investors, lending institutions, fee appraisers and property managers. The primary sources for obtaining specific data are the individual property owners and/or tenants during the listing phase of the operation.

***Neighborhood data.*** At the earliest feasible time during the data inventory phase of the operation, and after a thorough consideration of the living environment and economic characteristics of the overall county, or any political subdivision thereof, the appraisal staff should delineate the larger jurisdictions into smaller "neighborhood units," each exhibiting a high degree of homogeneity in residential amenities, land use, economic trends, and housing characteristics such as structural quality, age, and condition. The neighborhood delineation should be outlined on an index (or comparable) map and each assigned an arbitrary Neighborhood Identification Code, which when combined with the parcel identification numbering system, will serve to uniquely identify it from other neighborhoods.

Neighborhood data must be comprehensive enough to permit the adequate consideration of value-influencing factors to determine the variations in selling prices and income yields attributable to benefits arising from the location of one specific property as compared to another. The data should include the taxing district, the school district, the neighborhood identification code, special reasons for delineation (other than obvious physical and economic boundaries), and various neighborhood characteristics such as the type (urban, suburban, etc.), the predominant class (residential, commercial, etc.), the trend (whether it is declining, improving, or relatively stable), its

accessibility to the central business district, shopping centers, interstate highways and primary transportation terminals, its housing characteristics, the estimated range of selling prices for residentially-improved properties, and a rating of its relative durability.

All neighborhood data should be recorded on a specially designed form during the delineation phase.

*Specific property data* must be comprehensive enough to provide the data base needed to process each parcel of property to an indication of value, to generate the tax roll requirements, to generate other specified output, and to provide the assessing officials with a permanent record to facilitate maintenance functions and to administer taxpayer assistance and grievance proceedings.

The data should include the parcel identification number, ownership and mailing address, legal description, property address, property classification code, local zoning code, neighborhood identification code, site characteristics, and structural characteristics.

All the data should be recorded on a single, specially-designed property record card customized to meet individual assessing needs. Each card should be designed and formatted in such a way as to accommodate the listing of information and to facilitate data processing. In addition to the property data items noted above, space must be provided for a building sketch, land and building computations, summarization, and memoranda. In keeping with the economy and efficiency of a mass appraisal program, the card should be formatted to minimize writing by including a sufficient amount of site and structural descriptive data that can be checked and/or circled. The descriptive data should be comprehensive enough to be suitable for listing any type of land and improvement data regardless of class, with the possible exception of large industrial, institutional, and utility complexes that require lengthy descriptions. In these cases, it will generally be necessary to use a specially-designed supplemental property record document, keyed and indexed to the corresponding property record card. The property record card should be made a permanent part of the assessing system, and used not only in conjunction with the revaluation, but also to update the property records for subsequent assessments.

The specific property data should be compiled from existing assessing records and field inspections. The parcel identification number, ownership, mailing address, and legal description may be obtained from existing tax rolls. Property classification codes may also be obtained from existing tax records (whenever available) and verified in the field. Local zoning codes may be obtained from existing zoning maps. Neighborhood identification codes may be obtained from the neighborhood delineation maps. Lot sizes

and acreage may be obtained from existing tax maps. The property address and the site and structural characteristics may be obtained by making a physical inspection of each property.

In transferring lot sizes from the tax maps to the property record cards, the personnel performing the tasks must be specially trained in the use of standardized lot sizing techniques and depth tables, which may be used to adjust irregular shaped lots and abnormal depths to account for variations from predetermined norms. In regard to acreage, the total acreage may be transferred, but the acreage breakdowns required effecting the valuation of agricultural, residential, forestry, commercial, and industrial properties must be obtained in the field from the property owner and verified by personal observation and aerial photographs, if available.

**Field inspections** must be conducted by qualified listers under the close supervision of the appraisal staff. During this phase of the operation, the lister must visit each property and attempt personal contact with the occupant. In the course of the inspection, the following procedures must be adhered to:

Identification of the property.

Recording the property address.

Interviewing the occupant of the building and recording all pertinent data.

Inspection, when possible, of the interior of the building and recording of all pertinent physical data.

Measuring and inspecting the exterior of the building, as well as all other improvements on the property, and recording the story height, and the dimensions and/or size of each.

Recording a sketch of the principal building(s), consisting of a plan view showing the main portion of the structure along with any significant attached exterior features, such as porches, etc. All components must be identified and the exterior dimensions shown for each.

Selection of and recording the proper quality grade of the improvement.

Selection of and recording the proper adjustments for all field-priced items.

Reviewing the property record card for completeness and accuracy.

After the field inspection is completed, the property record cards must be submitted to clerical personnel to review the cards for completeness, calculate the areas, and make any necessary mathematical extensions.

Complete and accurate data are essential to the program. Definite standardized data collection and recording procedures must be followed if these objectives are to be met.

## **PROCESSING THE DATA**

This phase of the operation involves the analysis of data compiled during the data inventory phase and the processing of that data to an indication of value through the use of the cost, market, and income approaches to value.

During the analytical phase, it will be necessary to analyze cost, market, and income data in order to provide a basis for validating the appropriate cost schedules and tables required to compute the replacement cost new of all buildings and structures; for establishing comparative unit land values for each class of property; for establishing the appropriate depreciation tables and guidelines for each class of property; and for developing gross rent multipliers, economic rent and operating expense norms, capitalization rate tables and other related standards and norms required to effect the mass appraisal of all the property within an entire political unit on an equitable basis.

After establishing the appropriate standards and norms, it remains to analyze the specific data compiled for each property by giving due consideration to the factors influencing the value of that particular property as compared to another, and then to process the data into an indication of value by employing the techniques described in the section of the manual dealing with the application of the traditional approaches to value.

Any one, or all three of the approaches, if applied properly, should lead to an indication of market value. Of primary concern is applying the approaches on an equitable basis. This will require the coordinated effort of a number of individual appraisers, each appraiser acting as a member of a team, with the team effort directed toward a valid, accurate and equitable appraisal of each property within the political unit. Each property must be physically reviewed, during which time the following procedures must be adhered to:

- Verification of the characteristics recorded on the property record card.
- Certification that the proper schedules and cost tables were used in computing the replacement cost of each building and structure.
- Determination of the proper quality grade and design factor to be applied to each building to account for variations from the base specifications.

- Making a judgment of the overall condition, desirability, and usefulness of each improvement in order to arrive at a sound allowance for depreciation.
- Capitalization of net income capabilities into an indication of value in order to determine to loss of value attributable to functional and economic obsolescence.
- Addition of the depreciated value of all improvements to the land value, and reviewing the total property value in relation to the value of comparable properties.

At the completion of the review phase, the property record cards must be, once again, submitted to clerical personnel for final mathematical calculations and extensions, as well as a final check for completeness and accuracy.

Once the final values have been established for each property, the entire program should be evaluated in terms of its primary objectives: Do the values approximate a satisfactory level of market value? Are the values equitable? Satisfactory answers to these questions can best be obtained through a statistical analysis of recent sales in an appraisal-to-sale ratio study, if sufficient sales are available.

To perform the study, it is necessary to take a representative sampling of recent valid sales and compute the appraisal-to-sale ratio for each of the sales. If the sample is representative, the computed median appraisal-to-sale ratio will give an indication of how close the appraisals within each district approximate market value. This is providing, of course, that the sales included represent true market transactions. It is then necessary to determine the deviation of each individual appraisal-to-sale ratio from the median ratio, and to compute either the average or the standard deviation, which will give an indication of the degree of equity within each individual district. What remains then is to compare the statistical measures across property classes in order to determine those areas, if any, which need to be further investigated, revising the appraisal, if necessary, to attain a satisfactory level of value and equity throughout the entire jurisdiction.

The techniques and procedures set forth herein, if applied skillfully, should yield highly accurate and equitable property valuations, and should provide a sound property tax base. It should be noted, however, that no program, regardless of how skillfully administered, can ever be expected to be error-free. The appraisal must be fine-tuned and this can best be done by giving the taxpayer an opportunity to question the value placed upon his property and to produce evidence that the value is inaccurate or inequitable. During this time, the significant errors will be brought to light, and taking the proper corrective action will serve to further the objectives of the program. What's important in the final analysis is to use all these measures as well as any other resources available to affect the highest degree of accuracy and equity possible.

## Schedule of Values, Standards, and Rules

### Section 4 Replacement Costs



Bladen County, North Carolina

Effective January 1, 2015

## ESTIMATING REPLACEMENT COST NEW

The informed buyer is not justified in paying anything more for a property than what it would cost him to acquire an equally desirable substitute property. Likewise, the upper limit of value of most improvements is the cost of reproducing an equally desirable substitute improvement. It follows, then, that a uniform starting point for an Equalization Program is to determine the Replacement Cost New of each and every improvement.

### REPLACEMENT COST

Replacement Cost is the current cost of producing an improvement of equal utility to the subject property; it may or may not be the cost of reproducing a replica property. The distinction being drawn is one between *replacement* cost, which refers to a substitute property of equal utility, as opposed to *reproduction* cost, which refers to a substitute replica property.

The replacement cost of an improvement includes the total cost of construction incurred by the builder, whether preliminary to, during the course of, or after completion of its construction. Among these are materials, labor, all subcontracts, builder's overhead and profit, architectural and engineering fees, consultation fees, survey and permit fees, legal fees, taxes, insurance and the cost of interim financing.

### PRICING SCHEDULES

Pricing schedules and related cost tables are included in this manual to assist the appraiser in arriving at accurate estimation of Replacement Cost New. They have been developed by applying unit-in-place costs to the construction of specified hypothetical or model buildings. Application of the schedules involves the selection of the model which most nearly resembles the subject building and adjusting its price to compensate for all significant variations.

Pricing schedules are included for various types of Residential, Agricultural, Institutional, Commercial and Industrial structures.

Cost adjustments for the variations which are most frequently encountered in a particular type building are included. Adjustments for other variations may be made by using either the 'Adjustments to Base Rates' tables or other appropriate schedules.

### SELECTING THE PROPER QUALITY GRADE

The quality of materials and workmanship is the one most significant variable to be considered in estimating the replacement cost of a structure. Two buildings may be built from the same general plan, each offering exactly the same facilities and with the same

specific features, but with widely different costs due entirely to the quality of materials and workmanship used in their construction. For instance, the cost of a dwelling constructed of high quality materials and with the best of workmanship throughout can be more than twice that of one built from the same floor plan, but with inferior materials and workmanship.

The schedules included in this manual have been developed to provide the appraiser with a range of grades comprehensive enough to distinguish all significant variations in the quality of materials and workmanship which may be encountered. The basic specifications for each grade as to the type of facility furnished remain relatively consistent throughout, and the primary criterion for establishing the grade being the overall quality of materials and workmanship.

The majority of buildings erected fall within a definite class of construction, involving the use of average quality of materials with average quality of workmanship. This type of construction being the most common, it can readily be distinguished by the layman as well as the professional appraiser. Consequently, better or inferior quality of construction can be comparatively observed. The quality grading system and pricing schedules in this manual are keyed to this obvious condition; the basic grade being representative of that cost of construction using average quality of materials with average quality workmanship. The principal Quality Grade classifications are as follows:

Grade X	Superior Quality
Grade A	Very Good Quality
Grade B	Good Quality
Grade C	Average Quality
Grade D	Fair Quality
Grade E	Inferior Quality

The six grades listed above will cover the entire range of construction quality, from the poorest to the finest quality.

The general quality specifications for each grade are as follows:

- Grade X** Buildings generally having an exceptional architectural style and design, constructed with excellent quality materials and custom workmanship. Superior quality interior finish, built-in features, deluxe heating system, plumbing, and lighting fixtures.
- Grade A** Architecturally attractive buildings constructed with excellent quality materials and workmanship throughout, featuring very good quality interior finish and built-in features. Deluxe grade heating and cooling systems, and very good grade plumbing and lighting fixtures.
- Grade B** Buildings constructed with good quality materials and above average workmanship throughout, having moderate architectural treatment.

- Good quality interior finish and built-in features. Good grade heating, plumbing, and lighting fixtures.
- Grade C** Buildings constructed with average quality materials and workmanship throughout, conforming to the base specifications used to develop the pricing schedule. Minimal architectural treatment, with average quality interior finish and built-in features. Standard grade heating, plumbing, and lighting fixtures.
- Grade D** Buildings constructed with inexpensive quality materials and little or no attention to detail. Void of architectural treatment. Fair quality interior finish and built-in features, with low-grade heating, plumbing, and lighting fixtures.
- Grade E** Buildings constructed with a substandard grade of materials, usually “culls” and “seconds” and very poor quality workmanship resulting from unskilled, inexperienced, “do-it-yourself”-type labor. Low-grade heating, plumbing, and lighting fixtures.

In order to facilitate using this grading system, and again to promote and maintain uniformity in approach, the value relationship of grade to grade as just described has been incorporated into the development of the base specifications relating to each schedule used in the manual.

**Note:** The appraiser must exercise extreme caution not to confuse the concepts of “quality” and “condition” when selecting the proper grade. This is especially applicable to older buildings, wherein a deteriorated condition can have a noticeable effect on physical appearance. A building will always retain its initial grade of construction, regardless of its existing deteriorated condition. The Quality Grade ultimately selected must reflect that original built-in quality and the selection of that grade cannot be influenced in any way by the physical condition of the building.

## **APPLYING THE PROPER GRADE FACTOR**

Grading would be a relatively simple process if all buildings were built to conform to the quality grade specifications outlined above. The fact is, however, that this ideal condition does not exist. It is not unusual for any conventional building to be built incorporating construction qualities that fall between the established grade levels. The grading system in this manual has been designed in such a way as to provide the appraiser with a method for accounting for such variations by establishing intermediate grades.

If the Subject building is judged to be of a better or inferior quality than the actual grade levels, a grade factor of plus (+) or minus (-) should be applied, i.e., C+ would be better than a straight “C” Grade, B-, poorer than a straight “B” Grade, etc.

There is rarely a clear-cut designation of a specific grade factor. The appraiser will generally select a range, such as C+ to B-, and then weigh the various quality factors exhibited in the construction in order to select the proper factor.

Following the above procedures results in the full range of Quality Grade Factors, examples of these factors are listed below.

X+	250%	B+	140%	D+	85%
<b>X</b>	225%	<b>B</b>	130%	<b>D</b>	80%
X-	200%	B-	120%	D-	75%
A+	175%	C+	110%	E+	70%
<b>A</b>	160%	<b>C</b>	<b>100%</b>	<b>E</b>	60%
A-	150%	C-	90%	E-	50%

Note: the quality factor ultimately selected should represent a composite judgment of the overall Quality Grade. Generally, the quality of materials and workmanship is fairly consistent throughout the construction of a specific building; however, since this is not always the case, it is frequently necessary to weight the quality of each major component in order to arrive at the proper “overall” Quality Grade. Equal consideration must also be given to any “Additions” which are constructed of materials and workmanship inconsistent with the quality of the main building.

**PRICING SCHEDULES AND COST TABLES**

The Pricing Schedules and Cost Tables in this manual are provided to assist the appraiser in arriving at accurate and uniform valuations. Used properly, they should prove to be an invaluable tool. Quality valuations, however, are not the product of schedules and tables themselves, but rather of the appraiser’s ability to use them effectively. In order to bring this about, a thorough understanding of the make-up and the capabilities and limitations of each schedule is essential. The appraiser must know the specifications, from which the base prices were derived, the composition of the prices, and the proper techniques and procedures for applying the prices. What’s more important, the appraiser must be able to exercise good common sense and sound judgment in selecting and using them.

It should also be noted that the schedules and tables in the manual have been developed primarily for mass appraisal and tax equalization purposes. They have, therefore, been designed to provide the appraiser with an uncomplicated, fast, and effective method of arriving at an accurate estimate of replacement costs. In order to maintain simplicity in the schedules, techniques, and procedures, it is often necessary to make certain compromises

from a strictly technical and engineering point of view. Extensive effort has been made in developing the schedules to minimize these compromises and limit them to variables that have minimal influence on the final value of the building. The schedules have been designed to reflect actual building costs and practices. Field tests have proven them to be both accurate and reliable, and when applied properly, highly effective in arriving at realistic replacement costs.

## Schedule of Values, Standards, and Rules

# Section 5 Residential Classification Standards



Bladen County, North Carolina

Effective January 1, 2015

## RESIDENTIAL CLASSIFICATION STANDARDS

### QUALITY GRADE OR CLASS

The quality grade of materials and workmanship is the one most significant variable to be considered in estimating the replacement cost of a structure. Two buildings may be built from the same general plan, each offering exactly the same facilities and with the same specific features, but with widely different cost due entirely to the quality of materials and workmanship used in their construction. For instance, the cost of a dwelling constructed of high quality materials and with the best of workmanship throughout can be more than twice that of one built from the same floor plan, but with inferior materials and workmanship prevailing.

The following schedule has been developed to distinguish between variations in cost. This schedule represents the full range of conventional dwelling construction. The basic specifications for each grade as to type of facilities furnished is relatively constant; that is, each has a specific type of heating system, two bathrooms, kitchen unit, and other typical living facilities, but with variable quality of materials and workmanship prevailing.

The basic grade represents cost of construction using average quality materials, with average workmanship. The majority of dwellings erected fall within one class above and one class below the base grade of 'C.' The layman or professional appraiser can readily distinguish between these classes. The three classes of grade of quality for this group of dwelling have been established as follows:

Grade B	Above Average Quality	130%
Grade C	Average Quality	100%
Grade D	Below Average Quality	80%

In order to justify variation in cost, maintain uniformity and retain complete control throughout the cost range, we have established these base grades. The pricing spread of 25%+ between each grade is based upon the use of better grade materials and higher quality workmanship from Grade 'C' to Grade 'B.' Grade 'B' dwellings are found to have better individual features and interior finish, which reflects approximately 30% higher costs than Grade 'C.' Likewise, the Grade 'D' dwelling would be constructed of approximately 20% less cost than Grade 'C,' due to the type of materials used and workmanship. Consequently, better quality of construction or construction of cheaper quality can be comparatively observed.

To cover the entire range of dwelling construction, two additional classes of dwellings above the base grade dwelling must be considered along with one grade classes of dwelling below the base grade.

The two base grades above are:

Grade X	Superior Quality	225%
Grade A	Very Good Quality	160%

The 'X' and 'A' Grade dwellings incorporate the best quality of materials and workmanship. Construction costs of some Grade X dwellings can run as high as 300% and higher than the cost of Grade C dwellings. The prestige-type and the mansion, or country estate-type homes, are usually in this classification. Grade B dwellings boast moderate architectural style and design, generally include the custom-built homes, and are 30% higher in overall construction costs than the Grade C dwellings. The Grade A dwellings having outstanding architectural style and design are generally custom-built homes and are 50-75% better in overall construction than the Grade C dwellings.

The dwelling of the cheapest quality construction built of inferior grade materials and workmanship is the Grade E Quality.

These six (6) established base grades or classes of quality will cover the entire range of dwelling construction, from the cheapest to the finest in quality.

### **USE OF INTERMEDIATE GRADES**

As stated earlier, the grading method is based on Grade C as the base standard of quality and design. A factor of the highest grade level to the lowest grade level is established by means of grade factor multipliers. Since not all dwellings are constructed to fall into one of the precise grade levels with no adjustments, it becomes necessary to further refine our grading system. It is not unusual for conventional houses to be built incorporating qualities that fall above or below these established grades. If the house that is being appraised does not fall exactly on a specific grade, but should be classified within that grade, the use of Grade Factor Symbols (+ or -) will accomplish this adjustment in the Grade X, A, B, C, D and E classes.

For a grading increase in the Grade X category, a plus factor can be used, which will result in each factor being higher than the last.

For example: Grade X dwelling with outstanding architectural style and design, constructed with the finest quality materials and workmanship throughout, and featuring superior quality interior finish with extensive built-in features, a deluxe heating system and high-grade lighting and plumbing fixtures may be graded X+. The X+ grade places this house in the superior quality range. The '+' part of the X+ grade places this house a level above the standard Grade X category. Grade X+ homes have a multiplier of 250%. Thus, once you have priced this house to the base level of 'C,' a multiplier of 250% would be applied to adjust the Grade C base level up to the X+ grade level you desired.

The same approach would apply should you have a house constructed with a very cheap grade of materials, usually culls and seconds, and very poor quality workmanship resulting from unskilled, inexperienced, “do-it-yourself”-type labor. Minimal code, low-grade mechanical features and fixtures may be graded ‘E.’ The E Grade places this house in the inferior quality range. Grade E has a multiplier of 60%. Thus, once you have priced this house to the base level of ‘C,’ a multiplier of 60% would be applied to adjust the ‘C’ grade base level down to the Grade E level you intended.

NOTE: The quality factor ultimately selected is to represent a composite judgment of the overall Quality Grade. Generally, the quality of materials and workmanship is fairly consistent throughout the construction of a specific building; however, since this is not always the case, it is frequently necessary to weigh the quality of each major component in order to arrive at the proper overall Quality Grade. Equal consideration must also be given to any additions which are constructed of materials and workmanship inconsistent with the quality of the main building.

The appraiser must use extreme caution not to confuse Quality and Condition when establishing grades for older houses in which a deteriorated condition may have a noticeable effect on their appearance. Grades should be based on the initial quality when new, and not influenced by physical condition. Proper grading must reflect replacement cost of new buildings. A house should always retain its initial grade of construction, regardless of its present deteriorated condition.

**Grade X Quality Dwellings**

These homes are unique, architecturally designed and custom built by contractors who specialize in superior quality construction. Extensive detail is given to ornamentation with the use of superior grade materials and skilled craftsmanship. Homes of this type are located in areas that are specifically developed for this level of quality. They are not typically found in conventional subdivisions.

**BASE SPECIFICATIONS**

**FOUNDATION:** Brick or reinforced concrete foundation walls on concrete footings with interior piers.

**EXTERIOR WALLS:** Stone, brick veneer, stucco, log, or frame siding. All exterior walls will be of superior quality and constructed with much detail and workmanship. Ample insulation and adequate openings for windows and doors is typical.

**ROOF:** Slate, tile, cedar shake, or architecture asphalt shingles on quality sheathing with well braced rafters having various slopes and ridges.

**INTERIOR FINISH:** The interior of these homes is of the highest custom design and superior construction with much attention given to fine detail and craftsmanship.

**FLOORS:** Heavy construction utilizing wood or steel joists and sub floor with the best quality combination of hardwoods, ceramic tile, terrazzo, marble or granite tile, vinyl, or luxurious carpeting.

**PLUMBING:** A combination of high quality fixtures, good quality materials, and skilled workmanship. Generally, the number of fixtures considered typical and adequate for the type of construction is in excess of twelve.

**CLIMATE CONTROL:** A heating system equal to forced air with ample capacity and insulated ductwork throughout. Air conditioning is included as a part of the specifications.

**ELECTRICAL:** Good quality wiring, maximum electrical outlets and expensive light fixtures.

Residential: Quality Grade 'X'



Residential: Quality Grade 'X'

Residential: Quality Grade 'X'



**Grade A Quality Dwellings**

These homes are architecturally designed and custom built by contractors who specialize in very good quality construction. Extensive detail is given to ornamentation with the use of good grade materials and skilled craftsmanship. Homes of this type are located in areas that are specifically developed for this level of quality, including more exclusive neighborhoods.

**BASE SPECIFICATIONS**

**FOUNDATION:** Brick or reinforced concrete foundation walls on concrete footings with interior piers.

**EXTERIOR WALLS:** Stone, brick veneer, stucco, log, or frame siding. All exterior walls will be of superior quality and constructed with detail and workmanship. Ample insulation and adequate openings for windows and doors is typical.

**ROOF:** Slate, tile, cedar shake, or architecture asphalt shingles on quality sheathing with well braced rafters having various slopes and ridges.

**INTERIOR FINISH:** The interior of these homes is of good design and good construction with much attention given to detail and good quality craftsmanship.

**FLOORS:** Heavy construction utilizing wood or steel joists and sub floor with a good quality combination of hardwoods, ceramic tile, terrazzo, marble or granite tile, vinyl, or luxurious carpeting.

**PLUMBING:** A combination of good quality fixtures, good quality materials, and skilled workmanship. Generally, the number of fixtures considered typical and adequate for the type of construction is in excess of twelve.

**CLIMATE CONTROL:** A heating system equal to forced air with ample capacity and insulated ductwork throughout. Air conditioning is included as a part of the specifications.

**ELECTRICAL:** Good quality wiring, maximum electrical outlets and expensive light fixtures.

Residential: Quality Grade 'A'



Residential: Quality Grade 'A'

Residential: Quality Grade 'A'



**Grade B Quality Dwellings**

These homes are architecturally designed and built by contractors who specialize in good quality construction. Much detail is given to ornamentation with the use of good grade materials and skilled workmanship. Custom-built homes normally fall into this category.

**BASE SPECIFICATIONS**

**FOUNDATION:** Brick or reinforced concrete foundation walls on concrete footings with interior piers.

**EXTERIOR WALLS:** Stone, brick veneer, stucco, log, or frame siding. All exterior walls will be of good quality and constructed with good detail and workmanship. Ample insulation and adequate openings for windows and doors is typical.

**ROOF:** Slate, tile, cedar shake, or architecture asphalt shingles on quality sheathing with well braced rafters having various slopes and ridges.

**INTERIOR FINISH:** The interior of these homes is of good design and good construction and good quality workmanship.

**FLOORS:** Moderate construction utilizing wood or steel joists and sub floor with a good combination of hardwoods, ceramic tile, vinyl, or good quality carpeting.

**PLUMBING:** A combination of good quality fixtures and materials, with skilled workmanship; generally not exceeding a total of twelve fixtures.

**CLIMATE CONTROL:** A heating system equal to forced air with ample capacity and insulated ductwork throughout. Air conditioning is included as a part of the specifications.

**ELECTRICAL:** Good quality wiring, maximum electrical outlets and good light fixtures.

Residential: Quality Grade 'B'



Residential: Quality Grade 'B'

Residential: Quality Grade 'B'



**Grade C Quality Dwellings**

These homes are designed and built by contractors who specialize in average quality construction. Adequate detail is given to ornamentation with the use of average grade materials and typical workmanship. Homes of this type are generally located in areas that are specifically developed for this level of quality. These homes represent the prevalent quality.

**BASE SPECIFICATIONS**

**FOUNDATION:** Brick or reinforced concrete foundation walls on concrete footings with interior piers.

**EXTERIOR WALLS:** Stone, brick veneer, stucco, log, or frame siding. All exterior walls will be average quality and constructed with average detail and workmanship. Ample insulation and adequate openings for windows and doors is typical.

**ROOF:** Tile, cedar shake, or asphalt shingles on average quality sheathing with frame trusses and having typical slopes.

**INTERIOR FINISH:** The interior of these homes is of average design and average construction with adequate attention given to detail and average quality workmanship.

**FLOORS:** Moderate construction utilizing wood or steel joists and sub floor with an average combination of hardwoods, ceramic tile, vinyl, or average quality carpeting.

**PLUMBING:** A combination of average quality fixtures, average quality materials, and workmanship. Generally there are no more than twelve fixtures for this type of construction.

**CLIMATE CONTROL:** A heating system equal to forced air with ample capacity and insulated ductwork throughout. Air conditioning is included as a part of the specifications.

**ELECTRICAL:** Average quality wiring, adequate electrical outlets and average light fixtures.

Residential: Quality Grade 'C'



Residential: Quality Grade 'C'

Residential: Quality Grade 'C'



**Grade D Quality Dwellings**

These homes are usually mass produced and built of lower quality materials with expense-saving construction. Limited detail is given to ornamentation with the use of below-average materials and workmanship. Economy built homes would normally fall into this classification.

**BASE SPECIFICATIONS**

**FOUNDATION:** Brick or concrete block walls on concrete footings.

**EXTERIOR WALLS:** Stone, brick veneer, stucco, log, or frame siding. All exterior walls are average quality or less and constructed with minimal detail and workmanship. Insulation is minimal and openings for windows and doors are typical.

**ROOF:** Lightweight asphalt shingles on adequate sheathing and frame trusses with minimal slope.

**INTERIOR FINISH:** The interior of these homes is below average design and construction with limited attention given to detail and quality workmanship.

**FLOORS:** Low cost construction utilizing wood or steel joists and sub floor with some hardwoods, vinyl, and/or low quality carpeting.

**PLUMBING:** A combination of fair quality fixtures and typical quality materials and workmanship. Considered typical and adequate for this type of construction, normally has eight fixtures or less.

**CLIMATE CONTROL:** A heating system equal to forced air with minimal capacity and ductwork throughout. Air conditioning is considered to be a part of the specifications.

**ELECTRICAL:** Adequate quality wiring, minimal electrical outlets and low cost light fixtures.

Residential: Quality Grade 'D'



Residential: Quality Grade 'D'

Residential: Quality Grade 'D'



**Grade E Quality Dwellings**

These homes are constructed of low quality materials and usually designed not to exceed minimal building code. Little detail is given to interior or exterior finish. They are usually built for functional use only. Homes of this type are not specifically located within developments, but may be built as in-fill housing.

**BASE SPECIFICATIONS**

**FOUNDATION:** Brick or concrete block foundation walls on concrete footings, piers, or concrete slab.

**EXTERIOR WALLS:** Stone, brick veneer, stucco, log, frame siding, or concrete block. All walls are cheaply constructed with minimal detail and workmanship. Little or no insulation and minimal windows and doors are typical.

**ROOF:** Light weight asphalt shingles, roll roofing, or metal on plywood sheathing and frame trusses with minimal slope.

**INTERIOR FINISH:** The interior of these homes is of inferior design and construction with low cost materials. Little attention is given to detail and quality workmanship.

**FLOORS:** Low cost construction utilizing wood or steel joists and sub floor with some hardwoods, vinyl, and/or low quality carpeting.

**PLUMBING:** A combination of inferior quality fixtures, typical quality materials, and workmanship. A total of five fixtures is generally considered adequate for this type of construction.

**CLIMATE CONTROL:** A heating system equal to forced air with minimal capacity and ductwork throughout. Air conditioning is a part of the specifications.

**ELECTRICAL:** Minimal quality wiring, with limited electrical outlets and inexpensive lighting.

Residential: Quality Grade 'E'



Residential: Quality Grade 'E'

Residential: Quality Grade 'E'



## **Story Heights**

### **One-Story**

The one-story dwelling has all regular living space on one level. These structures may have basement and/or attic areas depending on location and preference of prospective owners.

Some advantages of the one-story dwellings include: the ability to add patios, porches and decks to virtually any room; the absence of stairs where no basement or attic exists; the easy maintenance of usually low-pitched roofs and short exterior walls. Most one-story dwellings have a low and long appearance which is pleasing to a large number of potential owners.

### **One-and-One-Half-Story**

The one-and-one-half-story dwelling is essentially one-story with a steeper roof allowing for expansion of the attic. Dormers are usually added to provide additional interior wall height, light and ventilation. This has two distinct advantages: economy in cost per unit of habitable living space and built-in expandability.

### **Two-Story**

The two-story dwelling is the most economically built of the basic residential structure styles. The structure may be built with or without basement and/or attic areas. It requires smaller site space and has a smaller roof and foundation. Heating and cooling the two-story dwelling is simple and comparatively economical.

The desirability of the two-story dwelling increases as cost and availability of land becomes more of a concern.

### **Split-Level / Bi-Level**

The split-level dwelling is a variation of the one-story dwelling with basement area. It was designed for the sloping or hilly site and takes advantage of what might otherwise be a troublesome difference in elevation.

The split-level makes efficient use of space. The general arrangement of the structure separates sleeping, living and recreation areas on different levels.

The bi-level with the split-foyer dwelling is a popular variation of the split-level and is generally constructed with full basement area.

### **Manufactured Housing**

While many site-built homes are constructed according to a specific building code to ensure proper design and safety, all manufactured homes are constructed in accordance with the Federal Manufactured Home Construction and Safety Standards, in effect since June 15, 1976. This building code, administered by the United States Department of Housing and Urban Development (HUD) and known as the HUD Code, regulates manufactured home design and construction, strength and durability, fire resistance, and energy efficiency. In the early 1990s, this building code was revised to enhance energy efficiency and ventilation standards and to improve the wind resistance of manufactured homes in areas prone to winds of hurricane force. Every manufactured home has a red and silver label certifying that it was built and inspected in compliance with the HUD Code. No manufactured home may be shipped from the factory unless it complies with the HUD Code and receives the certification label from an independent, third-party inspection agency.

### **Manufactured Home Classification Standards**

Any manufactured home will be considered *real property* and will be valued in accordance with the schedule of values if the owner of the land and the owner of home placed upon the land are the same, the towing hitch and axle assembly removed, and placed upon a permanent foundation as required by the Bladen County Building Department.

If the owner of the manufactured home does not own the land it occupies, the home will be considered *personal property*. If the manufactured home is considered a personal item, it will be noted within the miscellaneous items section of the property record card.

## **RESIDENTIAL COST SCHEDULES**

The Cost Approach to value lends itself best to property valuation for tax purposes for two principle reasons:

- 1) Appraisals for Ad Valorem purposes require separate land value estimates.
- 2) The Cost Approach can be applied to all classes of property.

The use of one approach to the exclusion of others is contrary to the appraisal process. The approach outlined in this manual includes cost schedules which have been developed and are supported through analysis and incorporation of economic factors indicated by all three approaches to value: Cost, Income and Market.

The following Cost Schedules are based on a model residence constructed using typical components, average quality workmanship and materials, consisting of sixteen hundred (1,600) square feet (representing the median home size within the county), eight fixtures, central heating and cooling systems and crawl space.

All adjustments from base specifications are included in the following schedules.

**SINGLE FAMILY DWELLINGS (MA 01)****BASE PRICE:** \$62.00 to \$103.50 per square foot**BASE SPECIFICATIONS**

FOUNDATION (FN): Continuous Wall (01, 02, 03 or 04)

FRAME TYPE (FT): Wood Frame (01)

EXTERIOR WALLS (EW): Wood Frame (01), or  
Aluminum/Vinyl Siding (02)

ROOF STRUCTURE (RS): Wood Frame (01)

ROOF COVER (RC): Composition Shingles (02), or  
Asphalt Shingles (08), or  
Fiberglass Shingles (11)

ROOF TYPE (RT): Gable (03)

FLOOR COVER (FC): Carpet (06) / Vinyl (05)\*

INTERIOR FINISH: Average\*

CABINET / MILLWORK: Average\*

ELECTRICAL: Average\*

PLUMBING (PL): 8 Fixtures (2 Full Bathrooms)

HEATING / COOLING: Heat Pump

**BASE ADDITIONS:** Add for fireplaces, garages, porches, basement areas, additional plumbing fixtures, etc.

*\* Note: While not priced as independent components, interior features such as finish, millwork and floor coverings are integral identifiers (in conjunction with exterior characteristics) in distinguishing grade differences in residential improvements.*

**A complete listing of Main Area and Addition base prices begins on Page 144.  
A list of Outbuilding and Yard Item pricing begins at Page 157.**

**DUPLEX / TRIPLEX DWELLINGS (MA 22 / 23)****BASE PRICE:** \$46.50 to \$77.50 per square foot**BASE SPECIFICATIONS**

FOUNDATION (FN): Continuous Wall (01, 02, 03 or 04)

FRAME TYPE (FT): Wood Frame (01)

EXTERIOR WALLS (EW): Wood Frame (01), or  
Aluminum/Vinyl Siding (02)

ROOF STRUCTURE (RS): Wood Frame (01)

ROOF COVER (RC): Composition Shingles (02), or  
Asphalt Shingles (08), or  
Fiberglass Shingles (11)

ROOF TYPE (RT): Gable (03)

FLOOR COVER (FC): Carpet (06) / Vinyl (05)\*

INTERIOR FINISH: Average\*

CABINET / MILLWORK: Average\*

ELECTRICAL: Average\*

PLUMBING (PL): 8 Fixtures (2 Full Bathrooms)

HEATING / COOLING: Forced Air / Yes

**BASE ADDITIONS:** Add for fireplaces, garages, porches, basement areas, additional plumbing fixtures, etc.

*\* Note: While not priced as independent components, interior features such as finish, millwork and floor coverings are integral identifiers (in conjunction with exterior characteristics) in distinguishing grade differences in residential improvements.*

**A complete listing of Main Area and Addition base prices begins on Page 144.**

**A list of Outbuilding and Yard Item pricing begins at Page 157.**

MAIN AREA (MA) RATES						
MA Code	Occupancy	Rate Range		Wall Height	Dep.	Area / Perimeter
		High	Low			
01	SINGLE-FAMILY RESIDENTIAL	62.00	103.50	H1	R*	RSZ
01W	APARTMENT, FLAT	42.75	71.25	H3	C55	3P
02	SINGLE-FAMILY RESIDENTIAL (ADDITION)	46.50	77.50	H1	R*	RSZ
08W	CAFETERIA	57.00	95.00	H2	C35	2P
09	SINGLE FAMILY RES., EARTH-SHELTERED	63.00	105.00	H1	R	RSZ
09W	CAR WASH (DRIVE-THRU)	47.25	78.75	H4	C25	2P
10	SINGLE-FAMILY RES., GUEST HOUSE	56.00	93.25	H1	R*	RSZ
13	MANUFACTURED HOUSING, SINGLE-SECTION	35.00	58.25	H1	M*	RSW
14	MANUFACTURED HOUSING, DOUBLE-SECTION	33.75	56.25	H1	M*	RDW
15	MANUFACTURED HOUSING, TRIPLE-SECTION	31.25	42.00	H1	M*	RDW
16	SINGLE-FAMILY RESIDENTIAL, MODULAR	54.50	90.75	H1	R*	RSZ
17W	DORMITORY	56.25	93.75	H3	C45	3P
21	APARTMENT, TOWNHOUSE	42.75	71.25	H1	C55	RSZ
22	DUPLEX	46.50	77.50	H1	R*	3P
23	TRIPLEX +	46.50	77.50	H1	R*	3P
24	APARTMENT, GARDEN	42.75	71.25	H1	C55	3P
25	APARTMENT, WALK-UP	53.50	89.00	H1	C50	3P
26	CONDOMINIUM	93.75	156.25	H1	R*	RSZ
26W	LABORATORY	144.50	240.75	H4	C45	2P
29	RESIDENTIAL CONVERSION (OFFICE / RETAIL)	52.75	87.75	H1	R*	RSZ
31	HOTEL, LIMITED SERVICE	55.75	92.75	H3	C50	3P
32	MOTEL	46.50	77.50	H3	C40	3P
33	ASSISTED LIVING	72.75	121.25	H3	C55	3P
34	GROUP CARE HOME	54.75	91.25	H3	C50	3P
35	FUNERAL HOME	68.25	113.75	H3	C45	3P
36	CLUBHOUSE	82.50	137.50	H3	C55	2P
36W	SERVICE STATION	48.75	81.25	H4	C30	2P
37	COUNTRY CLUB	57.75	96.25	H3	C55	3P
38	FITNESS CENTER	50.75	84.75	H4	C45	4P
39	LODGE	57.75	96.25	H2	C40	2P
40	BED AND BREAKFAST / INN	63.75	106.25	H1	R*	3P
41	RESTAURANT	72.75	121.25	H2	C35	2P
42	RESTAURANT, FAST FOOD	78.00	130.00	H2	C30	2P
42W	RETIREMENT HOME	54.75	91.25	H3	C55	3P
43	RESTAURANT, TRUCK STOP	45.00	75.00	H2	C30	2P

MAIN AREA (MA) RATES						
MA Code	Occupancy	Rate Range		Wall Height	Dep.	Area / Perimeter
		High	Low			
44	SUPERMARKET	49.50	82.50	H2	C40	2P
45	MINI-MARKET	75.00	125.00	H2	C35	2P
46	CONVENIENCE STORE	51.00	85.00	H2	C40	2P
47	DAIRY SALES	78.75	131.25	H2	C40	2P
48	FLORIST	48.00	80.00	H2	C40	2P
49	FARMERS MARKET	18.75	31.25	H2	C25	2P
50	DISCOUNT STORE	33.75	56.25	H2	C35	2P
51	DISCOUNT STORE, WAREHOUSE	27.00	45.00	H2	C30	2P
52	RETAIL STORE	44.50	74.00	H2	C45	3P
53	DEPARTMENT STORE	60.75	101.25	H2	C50	2P
53W	SHOP	48.00	80.00	H2	C45	3P
54	BEAUTY / BARBER SHOP	38.25	63.75	H2	C35	2P
55	LAUNDROMAT	42.25	70.25	H2	C35	2P
56	DRYCLEANER / LAUNDRY	45.00	75.00	H2	C35	2P
57	SHOPPING CENTER, NEIGHBORHOOD	54.75	91.25	H2	C40	2P
58	BILLIARD HALL	43.50	72.50	H2	C35	2P
60	INDUSTRIAL, HEAVY	61.50	102.50	H4	C50	2P
60W	PAVILION	44.25	73.75	H3	C35	4P
61	INDUSTRIAL, LIGHT	27.75	46.25	H4	C40	2P
61W	BATH HOUSE	51.00	85.00	H1	R*	RSZ
62	INDUSTRIAL, LABORATORY (R&D)	108.50	180.75	H4	C45	2P
62W	GARAGE APARTMENT	49.50	82.50	H1	R*	S02
63	LOFT BUILDING	39.50	65.75	H4	C40	2P
64	BROADCASTING FACILITY	60.00	100.00	H4	C45	2P
65	ARMORY	56.25	93.75	H4	C60	2P
65W	OFFICE, MODULAR OR PANEL	33.75	56.25	H2	C40	1P
66	POST OFFICE	60.00	100.00	H4	C50	2P
67	WAREHOUSE, DISTRIBUTION	45.00	75.00	H4	C45	2P
68	WAREHOUSE, STORAGE	26.25	43.75	H4	C45	2P
68C	WAREHOUSE, TRANSIT	33.75	56.25	H4	C45	2P
69	COLD STORAGE	37.50	62.50	H4	C45	2P
70	MINI-WAREHOUSE	21.75	36.25	H4	C40	2P
71	SHIPPING DOCK / TERMINAL	20.00	33.25	H4	C30	2P
72	HANGAR	24.75	41.25	H4	C40	2P
73	AUTO DEALERSHIP, SHOWROOM	43.25	72.00	H4	C40	2P

MAIN AREA (MA) RATES						
MA Code	Occupancy	Rate Range		Wall Height	Dep.	Area / Perimeter
		High	Low			
74	AUTO DEALERSHIP, SERVICE	39.75	66.25	H4	C40	2P
75	MINI-LUBE	59.00	98.50	H4	C35	2P
76	GARAGE, SERVICE	32.25	53.75	H4	C35	2P
77	GARAGE, STORAGE	24.75	41.25	H4	C40	2P
80	BANK, BRANCH	93.75	156.25	H2	C50	1P
80M	BANK, MINI	137.75	229.75	H2	C30	1P
81	OFFICE BUILDING	51.00	85.00	H2	C50	1P
81M	OFFICE BUILDING, MEDICAL	78.00	130.00	H2	C50	1P
82	HOSPITAL	120.00	200.00	H2	C45	1P
83	OUTPATIENT / URGENT CARE	75.00	125.00	H2	C40	1P
84	DRUGSTORE	72.00	120.00	H2	C40	2P
85	CONVALESCENT / REST HOME	61.50	102.50	H3	C45	3P
86	VETERINARY HOSPITAL	69.00	115.00	H2	C40	1P
87	KENNEL	46.25	77.00	H2	C40	1P
88	GOVERNMENT BUILDING	52.50	87.50	H2	C60	1P
89	COMMUNITY SERVICE BUILDING	45.00	75.00	H2	C45	1P
89R	COMMUNITY RECREATION BUILDING	45.00	75.00	H2	C45	1P
90F	FIRE / RESCUE STATION	39.00	65.00	H2	C40	1P
90P	POLICE STATION	69.50	116.00	H2	C40	1P
90X	WINERY SHOP	39.50	65.75	H2	C40	2P
91	JAIL / DETENTION CENTER	96.75	161.25	H2	C45	1P
92	LIBRARY	65.75	109.50	H2	C55	1P
93	CHURCH	62.75	104.50	H4	C60	4P
94	FELLOWSHIP HALL	35.25	58.75	H3	C50	4P
95	FRATERNITY HOUSE	65.75	109.50	H1	C50	3P
96	DAY CARE CENTER	63.00	105.00	H3	C30	4P
97	SCHOOL, CLASSROOM BUILDING	65.25	108.75	H3	C45	4P
97A	SCHOOL, ALTERNATIVE	72.00	120.00	H3	C45	4P
97E	SCHOOL, ELEMENTARY	73.50	122.50	H3	C45	4P
97H	SCHOOL, HIGH	72.50	120.75	H3	C45	4P
97M	SCHOOL, MIDDLE	70.25	117.00	H3	C45	4P
97MB	SCHOOL, MAINTENANCE BUILDING	37.25	62.00	H2	C45	2P
97V	SCHOOL, VOCATIONAL	63.00	105.00	H3	C45	4P
98	AUDITORIUM	63.50	105.75	H4	C45	4P
99	GYMNASIUM	60.00	100.00	H3	C40	4P

<b>Rate by Area for Type MA-01 (Single-Family Residential)</b>				
<i>Size Adjustment Table (RSZ)</i>				
<i>Min.</i>	<i>Max.</i>	<i>Size Adj.</i>	<i>Base Rate*</i>	<i>Modified Rate</i>
1	500	125.00%	\$82.75	\$103.44
501	700	121.50%	\$82.75	\$100.54
701	900	114.00%	\$82.75	\$94.34
901	1100	109.25%	\$82.75	\$90.40
1101	1250	104.75%	\$82.75	\$86.68
1251	1350	103.00%	\$82.75	\$85.23
1351	1450	101.50%	\$82.75	\$83.99
1451	1550	100.00%	\$82.75	\$82.75
1551	1650	98.75%	\$82.75	\$81.72
1651	1750	97.50%	\$82.75	\$80.68
1751	1850	96.50%	\$82.75	\$79.85
1851	1950	95.50%	\$82.75	\$79.03
1951	2050	94.50%	\$82.75	\$78.20
2051	2150	93.50%	\$82.75	\$77.37
2151	2250	92.75%	\$82.75	\$76.75
2251	2500	91.00%	\$82.75	\$75.30
2501	2700	89.75%	\$82.75	\$74.27
2701	2900	88.50%	\$82.75	\$73.23
2901	3100	87.25%	\$82.75	\$72.20
3101	3300	86.25%	\$82.75	\$71.37
3301	3500	85.25%	\$82.75	\$70.54
3501	3700	84.25%	\$82.75	\$69.72
3701	3900	83.50%	\$82.75	\$69.10
3901	4100	82.75%	\$82.75	\$68.48
4101	4300	82.00%	\$82.75	\$67.86
4301	4500	81.25%	\$82.75	\$67.23
4501	4700	80.50%	\$82.75	\$66.61
4701	4900	80.00%	\$82.75	\$66.20
4901	5100	79.25%	\$82.75	\$65.58
5101	5300	78.75%	\$82.75	\$65.17
5301	5500	78.25%	\$82.75	\$64.75
5501	6000	77.75%	\$82.75	\$64.34
6001	9999	76.50%	\$82.75	\$63.30

\* The term 'Base Rate' refers to the starting basis for all site-built residential dwellings. This rate assumes a total of two full bathrooms, heat pump, average interior and exterior finish, composition shingles, and a continuous perimeter foundation.

<b>Rate by Area for Type MA-13</b>				
<i>Single-Section Manufactured Residential</i>				
<b>Min.</b>	<b>Max.</b>	<b>Size Adj.</b>	<b>Base Rate*</b>	<b>Modified Rate</b>
1	251	150.00%	\$46.50	\$69.75
252	308	133.50%	\$46.50	\$62.08
309	364	126.50%	\$46.50	\$58.82
365	420	121.25%	\$46.50	\$56.38
421	476	117.00%	\$46.50	\$54.41
477	532	113.50%	\$46.50	\$52.78
533	568	110.50%	\$46.50	\$51.38
569	644	107.75%	\$46.50	\$50.10
645	700	105.50%	\$46.50	\$49.06
701	756	103.50%	\$46.50	\$48.13
757	812	101.75%	\$46.50	\$47.31
813	868	100.00%	\$46.50	\$46.50
869	924	98.50%	\$46.50	\$45.80
925	980	97.25%	\$46.50	\$45.22
981	1036	95.75%	\$46.50	\$44.52
1037	1092	94.75%	\$46.50	\$44.06
1093	1148	93.50%	\$46.50	\$43.48
1149	9999	90.00%	\$46.50	\$41.85
<b>Rate by Area for Type MA-14* &amp; MA-15</b>				
<i>Multiple-Section Manufactured Residential</i>				
<b>Min.</b>	<b>Max.</b>	<b>Size Adj.</b>	<b>Base Rate*</b>	<b>Modified Rate</b>
1	499	175.00%	\$45.00	\$78.75
500	615	150.00%	\$45.00	\$67.50
616	728	138.75%	\$45.00	\$62.44
729	840	130.00%	\$45.00	\$58.50
841	952	122.50%	\$45.00	\$55.13
953	1064	116.50%	\$45.00	\$52.43
1065	1176	111.50%	\$45.00	\$50.18
1177	1288	107.25%	\$45.00	\$48.26
1289	1400	103.50%	\$45.00	\$46.58
1401	1512	100.00%	\$45.00	\$45.00
1513	1624	97.00%	\$45.00	\$43.65
1625	1736	94.25%	\$45.00	\$42.41
1737	1848	92.00%	\$45.00	\$41.40
1849	1960	89.75%	\$45.00	\$40.39
1961	2072	87.75%	\$45.00	\$39.49
2073	2184	85.75%	\$45.00	\$38.59
2185	2296	84.00%	\$45.00	\$37.80
2297	9999	82.00%	\$45.00	\$36.90

**ATTACHMENTS TO MAIN AREA (AC)  
SIZE ADJUSTMENT TABLES**

<b>A1</b>		<b>A2</b>		<b>A3</b>	
<b>Area</b>	<b>Size Adj</b>	<b>Area</b>	<b>Size Adj</b>	<b>Area</b>	<b>Size Adj</b>
1 - 150	110%	1-50	110%	1-150	110%
151 - 200	108%	51-100	105%	151-200	105%
201 - 250	106%	101-150	102%	201-250	102%
251 - 300	104%	151-400	100%	251-400	100%
301 - 350	102%	401-550	98%	401-600	98%
351 - 600	100%	551-700	96%	601-700	96%
601 - 650	98%	701-850	94%	701-800	94%
651 - 700	96%	851-1,000	92%	801-900	92%
701 - 750	94%	1,001 - up	90%	901 - up	90%
751 - 800	92%				
801 - up	90%				

<b>A4</b>		<b>A5</b>		<b>A6</b>	
<b>Area</b>	<b>Size Adj</b>	<b>Area</b>	<b>Size Adj</b>	<b>Area</b>	<b>Size Adj</b>
1 - 40	100%	1 - 20	110%	1-20	110%
41 - 80	98%	21 - 40	106%	21-40	106%
81 - 150	96%	41 - 60	104%	41-60	104%
151 - 300	94%	61 - 80	102%	61-80	102%
301 - up	90%	81 - 200	100%	81-200	100%
		201 - 300	98%	201-300	98%
		301 - 400	96%	301-400	96%
		400 - 500	94%	401-500	94%
		501 - up	90%	501 - up	90%

Note: Table 'RSZ' refers to Residential Size Adjustment illustrated on page 93 (Rate by Area for MA 01)

<b>RESIDENTIAL MAIN AREA ADJUSTMENTS</b>					
<b>Heat &amp; Air Conditioning (AR)</b>			<b>Fireplace (FP)</b>		
<b>Code</b>	<b>Description</b>	<b>Adj.</b>	<b>Code</b>	<b>Description</b>	<b>Adj.</b>
01	No Heat	-5.75	01	None	Base
02	Floor / Wall Furnace	-4.25	02	Woodstove / Flue	750
03	Radiant / Electric BB	-2.75	03	Prefabricated	1,900
04	Radiant / Water	-0.50	04	1 Story Single	3,175
05	Forced Hot Air	-2.50	05	1 Story Double	4,450
06	Unit Heat	-2.75	06	2 Story Single	3,950
07	Packaged Heat / Cool	Base	07	2 Story Double	5,225
08	Heat Pump	Base			
09	Cooling, Ducted	-0.50	<b>Elevator (EL)</b>		
10	Solar	Base	<b>Code</b>	<b>Description</b>	<b>Adj.</b>
<b>Frame Type (FT)</b>			FEE	Freight, Electric	81,250
<b>Code</b>	<b>Description</b>	<b>Adj.</b>	FEEX	Freight, Elec. (stops)	14,550
01	Wood Frame	Base	FEH	Freight, Hydraulic	41,200
02	Fire Resistant	3.00	FEHX	Freight, Hydr. (stops)	14,400
03	Concrete, Reinforced	5.00	PEE	Passenger, Electric	82,500
04	Concrete / Steel	5.00	PEEX	Passenger, El. (stops)	5,750
05	Steel	8.00	PEH	Passenger, Hydraulic	34,250
06	Fireproof Steel	11.00	PEHX	Passenger, H. (stops)	11,000
07	Special	15.00	REE	Elevator, Residential	24,250
08	Rigid Steel Frame	-4.50	REEX	Elevator, Res. (stops)	4,850
09	Masonry	2.50	<b>Basement Area (BA)</b>		
<b>Foundation (FN)</b>			<b>Code</b>	<b>Description</b>	<b>Adj.</b>
<b>Code</b>	<b>Description</b>	<b>Adj.</b>	FBM	Basement, Finished	38.25
01	Earth	-4.75	FDL	Finished, Daylight	45.50
02	Pier / Post	Base	FWO	Finished, Walk-Out	45.50
03	Continuous Slab	-2.50	UBM	Basement, Unf.	15.50
04	Perimeter Footing	Base	UDL	Unfinished, Daylight	22.25
05	Piling	Base	UWO	Unfinished, Walk-Out	22.25
			PBM	Partially Finished	25.00

**EXTERIOR WALLS (EW)**

<u>Code</u>	<u>Description</u>	<u>Rate</u>
01	Brick	+ \$7.50
02	Stone	+ \$8.25
03	Concrete Block	+ \$4.50
04	Stucco	+ \$1.25
05	Log	+ \$8.25
06	Wood Siding	+ \$0.75
07	Asbestos Siding	- \$2.25
08	Aluminum or Vinyl Siding	<i>Base</i>
09	Corrugated Metal	<i>Base</i>
10	Precast Panel	<i>Base</i>
11	Masonite Siding	- \$0.75
12	Hardiboard Siding	+ \$1.75
13	Composite Wallboard Siding	- \$0.75
14	Brick & Frame Combination	+ \$2.50
15	Brick & Vinyl Siding Combination	+ \$2.00
16	Glass	+ \$10.00
17	Board & Batten	<i>Base</i>
18	Cedar / Redwood	+ \$1.50
19	Plywood Siding	<i>Base</i>
20	Tile	<i>Base</i>
21	Composite Roll	<i>Base</i>
22	Wainsboard Siding	- \$0.75

ATTACHMENTS TO MAIN AREA CODES (AC)									
Code	Description	Rate		Size Adj.	Code	Description	Rate		Size Adj.
		Min.	Max.				Min.	Max.	
07	DOCK	\$21.40	\$35.60	A1	112	GAR BLTN-MAS FIN	\$18.60	\$30.90	A1
22	MEZZANINE	\$39.40	\$65.60	A1	113	GAR BLTN-FR UNF	\$15.20	\$25.30	A1
23	OFFICE(EXT) ABOVE AVE	\$75.60	\$125.90	A1	114	GAR BLTN-FR FIN	\$16.70	\$27.80	A1
24	OFFICE(EXT) AVERAGE	\$63.00	\$105.00	A1	121	DECK-WOOD	\$10.90	\$18.10	A5
28	BAY WINDOW	\$48.75	\$81.25	A1	122	DECK-COMP	\$15.00	\$25.00	A5
29	OFFICE(INT) ABOVE AVG	\$44.25	\$73.75	A1	123	PATIO/SLAB	\$4.30	\$7.20	A5
30	OFFICE(INT) AVERAGE	\$35.40	\$59.10	A1	124	TERRACE	\$8.60	\$14.20	A5
31	WAREHOUSE (RIGID STL FRM)	\$13.10	\$21.90	A1	125	BREEZEWAY	\$14.25	\$23.75	A4
32	WAREHOUSE (MASONRY)	\$21.20	\$35.30	A1	126	BALCONY	\$16.90	\$28.10	A4
33	WAREHOUSE (WOOD FRAME)	\$18.60	\$30.90	A1	134	STG ROOM-MAS	\$42.40	\$70.60	A4
41	GARAGE-FR UFIN W/ATTIC	\$26.10	\$43.40	A1	135	STG ROOM-FR	\$38.40	\$64.10	A4
42	GARAGE-FR FIN W/ATTIC	\$35.25	\$58.75	A1	140	STOOP-MAS	\$13.70	\$22.80	A4
43	GARAGE-BR UFIN W/ATTIC	\$29.25	\$48.75	A1	141	PORCH-OPEN-MAS	\$24.90	\$41.60	A4
44	GARAGE-BR FIN W/ATTIC	\$39.60	\$65.90	A1	142	PORCH-OPEN-FR	\$21.00	\$35.00	A4
45	GREENHOUSE/SOLARIUM	\$43.10	\$71.90	A1	143	PORCH-SCR-MAS	\$26.25	\$43.75	A6
47	SHELTER(WOODEN POLE)	\$3.75	\$6.25	A1	144	PORCH-SCR-FR	\$23.40	\$39.10	A6
48	SHELTER(RIGID STL)	\$4.70	\$7.80	A1	145	PORCH-ENCL-MAS	\$29.40	\$49.10	A6
49	SHELTER(RIGID STL) W/SLAB	\$8.25	\$13.75	A1	146	PORCH-ENCL-FR	\$26.40	\$44.10	A6
51	SHELTER (WOOD POLE) W/SLAB	\$7.30	\$12.20	A1	147	SUNROOM/SOLARIUM	\$42.90	\$71.60	A5
53	OVERHANG(LIVING AREA)	\$49.70	\$82.80	A2	148	CANOPY-MAS	\$8.25	\$13.75	A5
101	GAR ATT-MAS UNF	\$19.50	\$32.50	A1	149	CANOPY-FR/MTL	\$7.10	\$11.90	A5
102	GAR ATT-MAS FIN	\$23.60	\$39.40	A1	171	NATATORIUM	\$53.25	\$88.75	A5
103	GAR ATT-FR UNF	\$17.40	\$29.10	A1	182	M/H DECKING	\$8.60	\$14.40	A5
104	GAR ATT-FR FIN	\$21.40	\$35.60	A1	183	M/H PORCH-OPEN	\$15.75	\$26.25	A4
107	CAR BLTN-MAS	\$10.10	\$16.90	A1	184	M/H PORCH-ENCL	\$19.90	\$33.10	A5
108	CAR BLTN-FR/MTL	\$8.60	\$14.40	A3	185	M/H STOOP-MAS	\$10.90	\$18.10	A4
109	CAR ATT-MAS	\$11.80	\$19.70	A3	143H	PORCH-H/SCR-MAS	\$25.90	\$43.10	A6
110	CAR ATT-FR/MTL	\$10.50	\$17.50	A3	144H	PORCH-H/SCR-FR	\$25.10	\$41.90	A6
111	GAR BLTN-MAS UNF	\$16.90	\$28.10	A1	146G	PORCH-ENCL-GL	\$35.80	\$59.70	A6

**RESIDENTIAL IMPROVEMENT VALUE CALCULATION EXAMPLE**

The following parcel data represents no specific location within Bladen County, but is intended to be used for demonstration purposes only as test data to calculate a simulated assessment value. This demonstration will show a manual look-up and application of rates from the Bladen County Schedule of Values, Standards, and Rules.

**Example Information:**

One dwelling classified as a '01' structure type with an added single car garage; the dwelling has brick veneer exterior walls, a central heating system (but no air conditioning), and one bathroom (three *less* plumbing fixtures than our model). This dwelling was built in the year 1984 and is considered an *average* quality dwelling in *good* overall condition.

Main Area = 1,150 Square Feet

Applicable Rate = \$82.75 per Square Foot

Applicable Size Adjustment = 104.75% (from *Residential Size Adjustment* chart)

Attached Unfinished Masonry Garage (101) = 240 Square Feet

Applicable Rate = \$26.00 per Square Foot (from *Residential Attachments* chart)

Applicable Size Adjustment = 106%

The base pricing model for residential structures includes central heating and cooling systems (as 84% of all homes in Bladen County enjoy both), but our example does not include air conditioning. The lack of air conditioning in our test data example would be subtracted as follows:

Main Area = 1,150 Square Feet

Applicable Rate = -\$2.50 per Square Foot (from *Heating System Type* chart)

Applicable Size Adjustment = 104.75%

Exterior Wall = Brick Veneer

Main Area = 1,150 Square Feet

Applicable Rate = \$7.50 per Square Foot (from *Exterior Walls* chart)

Applicable Size Adjustment = 104.75%

The base pricing model for residential structures includes 8 standard plumbing fixtures (including two full bathrooms). The lack of a second, three-fixture bathroom in this example will be reflected in the overall base pricing as follows:

Absent Full Bathroom = 1

Applicable Rate = \$3,500.00 per Each Unit (from *Additional Fixtures* chart)

Calculations:

Component	Code	Description	Units	Rate	Size %	Cost*
AC	101	Attached Masonry Garage	240	\$26.00	106%	\$6,614
MA	01	Residential 1 Story	1150	\$82.75	104.75%	\$99,683
AR	N	Air Conditioning - No	1150	\$2.50	104.75%	(\$3,012)
EW	18	Brick Veneer	1150	\$7.50	104.75%	\$9,035
FBT	N	Full Bathroom	1	\$3500.00	100%	(\$3,500)
<b>REPLACEMENT COST NEW (RCN) - this number is rounded to nearest \$10.00</b>						<b>\$108,820</b>

Quality Grade = C**	100%	\$108,820.00
Depreciation*** - (62% Remaining Good)	38%	(\$ 41,352.00)
Indicated FMV (Fair Market Value)****		\$ 67,468.00
Indicated ASV (Assessed Value) – (This number is rounded to nearest \$10.00)		<b>\$ 67,470.00</b>

\* The term "Cost" is a general one intended to refer to a modified market driven cost figure used to determine an estimation of overall market value for a specified structure within Bladen County, North Carolina. It should not be misconstrued as meaning the cost of materials and labor only, but is a composite figure derived from local market analysis and becoming the product of observed physical data and the application of empirical rates relevant to Bladen County, North Carolina.

\*\* Quality Grade codes and factors can be found in the Residential Construction chapter.

\*\*\* The terms "Depreciation" and "CDU" are discussed in detail within the Residential Depreciation chapter of this manual.

\*\*\*\* "Fair Market Value" is the term used to indicated that the value shown is derived from local market analysis and is not considered a product of cost alone and is defined in the Appendix.

**MISCELLANEOUS BUILDINGS AND OTHER YARD ITEMS**

The miscellaneous buildings and other yard items pricing schedules are provided to calculate the replacement cost new of a variety of types of structures typically associated with residential property.

Base rates and size adjustments are provided for these structures by unique type code to be utilized within the CAMA (Computer Assisted Mass Appraisal) System. The depreciation tables used for these structures and improvements are included as a portion of the tables within this section.

Although the descriptions and rates used in these schedules represent the majority of structures found within Bladen County, it may become necessary to develop additional miscellaneous items during the course of the general reappraisal to equitably assess future structures not covered within the scope of these schedules. Careful consideration will be given this process and will closely follow the methods and procedures utilized in the development of current codes, descriptions, and rates.

It remains the responsibility of the reviewing appraiser to accurately use the miscellaneous schedules to insure fair treatment among properties within Bladen County. The use of a *sound* or *flat* value for miscellaneous items is, however, permissible and is intended to give the reviewing appraiser flexibility when determining a contributory value for miscellaneous buildings and other yard items.

**MISCELLANEOUS BUILDINGS AND OTHER YARD ITEMS DEPRECIATION**

The appraisal of other buildings and yard improvements for both residential and agricultural properties is a difficult task. Other buildings and yard improvements are rarely purchased or sold separately from the balance of the property. The cost of construction of a swimming pool, which is built for the convenience and comfort of a property owner, will rarely add an equivalent amount to the market value of the property. The cost of construction of a farm outbuilding that can be justified by its contribution to the farming operation will again seldom add an equivalent amount to the market value of the property.

In effect, other buildings and yard improvements have value in direct proportion to their degree of utility or usefulness. This is an extension of the principle of contribution, which affirms that the value of any factor in production is dependent upon the amount that it contributes to the overall net return, irrespective of the cost of its construction. Any effective approach to the valuation of these buildings and yard items must reflect the action of investors. Informed farm owners and operators would not invest in buildings which could not pay for themselves by either maintaining or adding to the required level of productivity. Homeowners would not invest in swimming pools, detached garages, etc., which would not supply the degree of comfort and/or convenience they desire. The physical condition of another building or yard item improvement bears a direct relationship on the desirability and usefulness of that improvement.

The appraiser must carefully consider the amount of depreciation necessary to modify the value of the miscellaneous improvement to reflect its contribution to the total value for the parcel.

There are four (4) depreciation tables that will be used for miscellaneous buildings and yard items that are referenced at the end of the miscellaneous codes, descriptions, and rates charts. Any of these tables may be used to assist the reviewing appraiser in determining an appropriate value for all miscellaneous items.

The depreciation tables are based on an age/life approach maximized by a residual percentage. The first table (MPR) considers a reduction of value over a twelve year period with a residual of twenty percent (20%). The second table (MFR) considers a reduction of value over a fifteen year period with a residual of twenty-five percent (25%). The third table (MAV) considers a reduction in value over a twenty-five year period with a residual of thirty-five percent (35%). The fourth table (MGD) considers a reduction in value over a thirty year period with a residual of forty percent (40%).

The reviewing appraiser must indicate both the effective year built for the improvement and the code for the appropriate depreciation table. This information will be entered within the CAMA (Computer Assisted Mass Appraisal) application to recalculate a value for that improvement.

**MISCELLANEOUS STRUCTURES & YARD IMPROVEMENTS (MS)**

<i>Code</i>	<i>Description</i>	<i>Rate</i>		<i>Size Adj.</i>	<i>Dep. Table</i>
		<i>Min.</i>	<i>Max.</i>		
01	PAVING-ASP	\$2.25	\$3.75	MS1	D1
02	BARN-RACK	\$15.00	\$25.00	MS4	D2
03	BARN-BOX	\$15.00	\$25.00	MS4	D2
04	CANOPY-SERV STA	\$13.50	\$22.50	MS2	D2
05	CARPORT-FR/MTL	\$10.50	\$17.50	MS5	D3
06	PAVING-CONC	\$3.20	\$5.30	MS1	D1
07	DOCK-LOADING	\$19.90	\$33.10	MS1	D2
08	EGG HSE	\$10.90	\$18.10	MS5	D2
09	FENCING-CL	\$9.40	\$15.60	N/A	D2
10	GAR-FR/CBL	\$21.40	\$35.60	MS1	D3
11	GAR-BR	\$26.25	\$43.75	MS1	D3
12	GRAIN BIN-STEEL	\$0.60	\$1.10	MS4	D1
13	GRAIN ELEVATOR	\$1.20	\$2.10	MS4	D1
14	GRAIN/CORN CRIB	\$1.90	\$3.10	MS4	D1
15	GREENHSE-COM/RES	\$8.25	\$13.75	MS4	D2
16	HOG HSE-OLD STYLE	\$11.25	\$18.75	MS1	D2
17	SHED IMPL-FR/MTL	\$7.50	\$12.50	MS4	D2
18	BATH HOUSE	\$51.00	\$85.00	MS4	D4
19	LIGHTING-YARD	\$30.00	\$50.00	N/A	D1
20	MILK PARLOR-FR/CBL	\$13.90	\$23.10	MS4	D3
21	POULTRY HSE	\$6.20	\$10.30	MS4	D2
22	R/R SIDING	\$56.25	\$93.75	N/A	D5
23	SHED-FR/MTL	\$7.50	\$12.50	MS4	D2
24	SHOP-BR/FR/CBL	\$12.40	\$20.60	MS1	D2
25	SILO	\$0.00	\$0.00	N/A	D2
26	STABLE	\$15.00	\$25.00	MS4	D3
27	BARN-STOCK/FEED	\$6.75	\$11.25	MS4	D2
28	PACK HSE	\$6.75	\$11.25	MS4	D2
29	STG-UTIL BLDG	\$9.00	\$15.00	MS4	D2
29M	STG-MTL	\$5.25	\$8.75	MS4	D2
30	POOL-CONC	\$31.30	\$52.20	MS1	D1
31	TENNIS COURT	\$2.60	\$4.40	N/A	D1
32	MOBILE HOME (PP)	\$0.00	\$0.00	N/A	N/A
33	DWELLING (SOUND VALUE)	\$0.00		N/A	N/A
34	DECK-FR	\$11.25	\$18.75	MS4	D2
35	MH ATT	\$22.50	\$37.50	MS3	D3
35D	MH ATT-DECK	\$11.25	\$18.75	MS5	D3
35E	MH ATT-ENCL PORCH	\$22.50	\$37.50	MS5	D3
35P	MH ATT-PORCH-FR	\$22.50	\$37.50	MS5	D3
35S	MH ATT-STOOP	\$22.50	\$37.50	MS5	D3

**MISCELLANEOUS STRUCTURES & YARD IMPROVEMENTS (MS)**

Code	Description	Rate		Size Adj.	Dep. Table
		Min.	Max.		
36	BARN-TOB LOG/FR/CBL	\$9.75	\$16.25	MS4	D3
37	WELL	\$1,875.00	\$3,125.00	N/A	N/A
38	SEPTIC TANK	\$1,875.00	\$3,125.00	N/A	N/A
39	TANK-GAS/OIL	\$0.00	\$0.00	N/A	N/A
40	PIER/FLOAT/PLANK	\$16.50	\$27.50	MS3	D2
41	BOAT HSE/SHLTR	\$31.50	\$52.50	MS6	D2
42	TOWER-RADIO/TV	\$0.00	\$0.00	N/A	D2
43	HOOK-UP, MANUFACTURED HOME	\$1,500.00	\$2,500.00	N/A	D5
43C	HOOK-UP, CAMPER	\$1,500.00	\$2,500.00	N/A	D5
43R	HOOK-UP, RV	\$1,500.00	\$2,500.00	N/A	D5
44	BARN-HAY W/LOFT	\$9.38	\$15.63	MS4	D3
45	BARN-MILK W/LOFT	\$12.38	\$20.63	MS4	D3
46	SHED-LOUNGING	\$3.75	\$6.25	MS4	D2
47	BARN-POLE	\$3.75	\$6.25	MS4	D2
48	LEAN-TO/SHLTR	\$3.38	\$5.63	MS4	D2
49	DRIVE-IN THEATRE	\$562.50	\$937.50	MS1	D5
50	POOL-VINYL	\$18.38	\$30.63	MS1	D1
51	SCALES-TRUCK	\$0.00	\$0.00	N/A	N/A
52	TANK-PROP/NITR	\$0.00	\$0.00	N/A	N/A
53	TOBACCO GREENHSE	\$2.63	\$4.38	MS4	D2
54	MH PARK-GOOD	\$7,500.00	\$12,500.00	N/A	N/A
54A	MH PARK-AVG	\$6,000.00	\$10,000.00	N/A	N/A
54B	MH PARK-FAIR	\$4,500.00	\$7,500.00	N/A	N/A
54C	MH PARK-POOR	\$3,000.00	\$5,000.00	N/A	N/A
55	POOL-FIBERGLASS	\$18.38	\$30.63	MS1	D1
56	CONCESSION STAND	\$39.00	\$65.00	MS4	D2
57	OFFICE	\$55.50	\$92.50	MS4	D4
58	GUARD HOUSE	\$57.38	\$95.63	MS4	D4
59	ACTIVITY BLDG	\$45.00	\$75.00	MS4	D4
60	GOLF COURSE	<i>See page XXX for detail</i>			D6
61	GAR-FR W/UNF ATT	\$28.88	\$48.13	MS1	D3
62	GAR-FR W/FIN APT	\$39.75	\$66.25	MS1	D3
63	GAR-BR W/UNF ATT	\$35.44	\$59.06	MS1	D3
64	GAR-BR W/FIN APT	\$47.81	\$79.69	MS1	D3
65	RESERVOIR	\$0.00	\$0.00	N/A	N/A
66	TANK-ELEVATED STL	\$0.00	\$0.00	N/A	D2
67	TANK-STAND PIPE	\$0.00	\$0.00	N/A	D2
68	SMOKE STACK	\$0.00	\$0.00	N/A	D2
69	CAR WASH/SELF-SERV	\$36.75	\$61.25	MS2	D2
70	QUANSET/RSF BLDG	\$11.25	\$18.75	MS4	D3

**MISCELLANEOUS STRUCTURES & YARD IMPROVEMENTS (MS)**

Code	Description	Rate		Size Adj.	Dep. Table
		Min.	Max.		
71	HARVESTOR (SILO)	\$0.00	\$0.00	N/A	N/A
72	WAREHSE-FR/MTL	\$26.25	\$43.75	MS1	D3
73	WAREHSE-BR/CBL	\$30.00	\$50.00	MS1	D3
74	WAREHSE-RIG STL	\$18.75	\$31.25	MS1	D2
75	BREEDING/GEST HSE	\$14.25	\$23.75	MS1	D2
76	FARROWING HSE	\$15.75	\$26.25	MS1	D2
77	FINISHING HSE	\$13.31	\$22.19	MS1	D2
78	NURSERY HSE	\$24.75	\$41.25	MS1	D2
79	FENCING-VINYL	\$13.13	\$21.88	N/A	D2
80	FENCING-WOOD	\$14.25	\$23.75	N/A	D2
81	FENCING-MASONRY	\$7.13	\$11.88	N/A	D2
82	CAR WASH-AUTO	\$50.63	\$84.38	MS2	D2
83	CARPORT-LC	\$1.88	\$3.13	MS5	D1
84	BUMPER-BOAT FACILITY	<i>See page XXX for detail</i>			D2
85	WATER SLIDE	<i>See page XXX for detail</i>			D2
86	WATER SPRAY PK	<i>See page XXX for detail</i>			D2
87	MINI-GOLF	<i>See page XXX for detail</i>			D2
88	GAZEBO	\$4.88	\$8.13	MS3	D3
89	PORCH	\$11.25	\$18.75	MS5	D3
90	PATIO	\$3.75	\$6.25	MS1	D3
91	SHELTER-POLE	\$5.25	\$8.75	MS4	D2
92	UPPER UNF	\$18.75	\$31.25	MS3	D3
93	POOL APRON	\$3.75	\$6.25	MS1	D2
94	POOL HOUSE	\$45.00	\$75.00	MS2	D4
95	BULKHEAD	\$18.75	\$31.25	MS2	D2
96	CABIN	\$37.50	\$62.50	MS2	D4
97	MODULAR CLASSROOM	\$33.75	\$56.25	MS2	D4
98	DINING HALL	\$31.88	\$53.13	MS2	D5
99	MISC OUT BLDG	\$0.00	\$0.00	N/A	N/A



## Schedule of Values, Standards, and Rules

# Section 6 Commercial & Industrial Schedules



**Bladen County, North Carolina**

**Effective January 1, 2015**

## COMMERCIAL & INDUSTRIAL SCHEDULES

Commercial and Industrial pricing schedules are provided for a variety of buildings based on the use of the property. The General Commercial Schedule is to be used as a guide for computing the replacement cost of mercantile type buildings, offices, and similar type structures. The Hotel/Motel/Apartment Schedule is to be used to compute the replacement cost of commercial living accommodations and associated support structures. The Industrial Schedule is to be used for computing the replacement cost of manufacturing and warehouse storage type structures.

The general application of all the schedules is essentially the same; selecting the base price (per square foot) which is most representative of the subject building and adjusting the base price to account for any significant variation.

### SCHEDULE FORMAT FOR BASE PRICES

The schedules designate base prices by use type for a series of perimeter-area ratios and wall types. "C" Grade base prices are provided for various finish types at different floor levels with specified floor-to-floor heights, for fire resistant construction with brick (or equal), frame (or equal), and metal superstructure walls and reinforced concrete basement walls.

Pricing adjustments for variations in both wall height and construction type (i.e., wood joist or reinforced concrete), together with prices for the various exterior walls are included. This makes it possible to select the proper base price which is representative of the actual, floor-to-floor heights of the subject buildings for either: wood joist, fire resistant, fire proof, or light steel construction.

The base prices are determined by selecting the appropriate square foot price for fire resistant steel frame construction by exterior wall type and use, adjusting it for variations in wall height, and making the proper deduction or addition for wood joist or fire proof construction, if necessary.

The base prices for each floor level use type include the exterior walls with normal openings, interior finish, mechanical features, and other features for that particular floor. In addition to these, each respective floor level includes the following features:

First Floor - site preparation and normal foundation construction for a building at grade level, normal parapets and coping, ground floor slab including base and cement finish, normal roof construction consisting of insulation, decking, framing, and utility service.

Basement - excavation and backfill and structural floor (for first floor) construction consisting of sub floor and framing.

*Note: The cost of the basement exterior wall construction and spread footings exclude an allowance for the normal foundation construction included with the first floor.*

Upper Floors - structural floor construction consisting of sub-floor and framing for each respective floor.

Normal partitions, plumbing, and lighting are included for each floor level based on use type. Adjustments may be made for the various base price components, if the quantity or quality of components is greater or less than what is considered normal for the use type.

Example: For general retail, normal is considered a cross partition (separating the sales area from the stock area) and partitions for two toilet rooms. If the store would be divided into several sales areas, an addition for excessive partitions would be applicable.

Stairways (with enclosures in the finished use types) are included in the basement and upper floor prices.

## **BASE PRICE COMPONENTS**

This table is provided to identify the cost associated with the various horizontal components included in the base price components for variations in the construction features of the floor level.

## **BASE PRICE ADJUSTMENTS**

This table is provided to adjust the base price components for variations in the construction features of the floor level. The adjustments are listed for variations most frequently encountered in the particular type buildings included with the schedule. Adjustments for other variations should be made by using the Special Application Tables, Unit-in-Place Cost Tables, or other appropriate schedules.

*Note: In making adjustments for variations, it is important to consider only those items which are significant to value. The replacement cost of a building represents the cost of replacing it with a building of equal utility.*

## CONSTRUCTION TYPES

Wood joist construction refers to non-fire proof structural floor and roof components consisting of wood sub-flooring and decking on wood joists, rafters, or purlins, and supported by either load bearing walls, timber, or steel framing.

Fire resistant construction refers to fire resistive structural floor and roof components consisting of formed concrete on steel framing; or light concrete, metal deck, flexicore, gypsum, and similar materials on steel joists and steel framing.

Fireproof construction refers to fire proof structural floor and roof components consisting of either formed or pre-cast reinforced concrete on either reinforced concrete, or fire proof structural steel framing. In a fire proof structural steel building, the fire proofing may be masonry, poured concrete, plaster, sprayed asbestos, or any similar material which yields a high fire resistant rating.

## QUALITY GRADE SPECIFICATIONS

The base prices are for normal "C" Grade buildings erected with average quality materials and workmanship. A Table of Quality Factors is provided to adjust the "C" Grade prices in order to account for variations in construction quality.

- Grade A** Architecturally attractive buildings constructed with excellent quality materials and workmanship; features high-quality interior finishing, built-in features, heating system, and superior grade plumbing and lighting fixtures.
- Grade B** Buildings constructed with good quality materials and above-average workmanship, with moderate architectural treatment. Good quality interior finish, built-in features, heating, plumbing, and lighting fixtures.
- Grade C** Buildings constructed with average quality materials and workmanship conforming to the base specifications used to develop the pricing schedule. Minimal architectural treatment. Average quality interior finish and built-in features. Standard quality heating system, plumbing, and lighting fixtures.
- Grade D** Buildings constructed with economy quality materials and fair workmanship. Void of architectural treatment. Cheap-quality interior finish and built-in features. Low grade heating, plumbing, and lighting fixtures.
- Grade E** Buildings constructed with a very cheap grade of materials, usually "seconds" and very poor quality workmanship resulting from unskilled, inexperienced, "do-it-yourself"-type labor. Inferior grade heating, plumbing, and lighting fixtures.

*Note: The quality factor selected is to represent a composite judgment of the overall grade. Generally, the quality of materials and workmanship is consistent throughout the construction of a specific building. However, since this is not always the case, it is necessary to weigh the quality of each major component in order to arrive at the proper "overall" quality grade. Particular consideration must be given to "special features" such as elevators and banking features, since variations for quality are already considered in the respective pricing tables. Equal consideration must also be given to those "additions" which are constructed of materials and workmanship inconsistent with the quality of the main building.*

**GENERAL APPLICATION**

The schedules can be effectively applied to either a total building or a portion of the building (i.e., floor section, etc.), as long as the size, construction, and quality are consistent.

It is not uncommon for the first floor of a commercial building to be of a higher quality construction than the upper floors. This situation is especially likely to occur in older buildings where it is not economically feasible to renovate and modernize the upper floors comparable to the first. It is also common for the first floor or lower floor to be larger in area than the upper floors. In either case, it may be advisable to compute the replacement cost of individual floors or groups of floors separately. The individual replacement costs can then be totaled to arrive at a single replacement cost or treated separately; depending upon which procedure would best facilitate the application of depreciation.

The general pricing procedure is as follows:

1. Determine the use-type by floor level.
2. Determine the perimeter-area ratio (perimeter / area x 100).
3. Select the proper base price for each floor level.
4. Subtotal the selected base prices.
5. Make necessary square foot adjustments for variations (air conditioning, plumbing, etc.) to the base prices.
6. Subtotal the square foot price and multiply by the square foot area.
7. Add the cost of “special features” and additions to arrive at the total Grade C replacement cost.
8. Apply the proper Quality Grade Factor to arrive at the replacement cost.

Note: The addition of “special features” (indicated at 7, above) and exterior features or additions of the building, which are not included in the base square foot area or price, should be added in total. Additions can be priced utilizing the same schedule.

**SPECIAL APPLICATION**

Although the General Commercial and Industrial schedules have been designed for use primarily for computing the replacement cost of mercantile-type buildings, offices, commercial apartments, warehouses and manufacturing facilities, the schedules can also be effectively adapted to the pricing of other special purpose buildings. In order to maintain uniformity of the approach in pricing special purpose buildings, specific instructions and procedures have been developed and included in the schedules.

Commercial: Auto Dealership



Commercial: Bank

Commercial: Beauty/Barber Shop



Commercial: Bowling Alley



Commercial: Car Wash

Commercial: Cold Storage



Commercial: Convalescent Home



Commercial: Convenience Store

Commercial: Country Club



Commercial: Day Care Center



Commercial: Discount Store

Commercial: Fitness Center



Commercial: Funeral Home



Commercial: Hangar

Commercial: Motel



Commercial: Industrial



Commercial: Laboratory

Commercial: Laundry/Cleaners



Commercial: Medical Office



Commercial: Mini Warehouse

Commercial: Office Building



Commercial: Office, Condo



Commercial: Office/Warehouse

Commercial: Service Garage



Commercial: Service Station



Commercial: Enclosed Mall

Commercial: Strip Center



Commercial: Skating Rink



Commercial: Supermarket

Commercial: Theater



Commercial: Truck Terminal



Commercial: Warehouse

Commercial: Warehouse, Prefab



**GENERAL COMMERCIAL SCHEDULE****AUTO DEALERSHIP SHOWROOM (73)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>16'</b>	<b>\$43.25-\$72.00</b>	<b>STORY HEIGHT:</b> <b>FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT:</b> <b>CONTINUOUS FOOTING OR</b> <b>POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS:</b> <b>ADEQUATE FOR SEPARATION OF</b> <b>SHOWROOM/OFFICE/STORAGE</b>  <b>FRAMING:</b> <b>WOOD JOIST/STEEL TRUSS</b>  <b>FLOOR COVER/FINISH:</b> <b>VINYL/CARPET</b> <b>FINISHED CONCRETE SLAB</b>  <b>INTERIOR FINISH:</b> <b>PAINTED BLOCK/DRYWALL/PANEL</b>  <b>PLUMBING:</b> <b>8-10 PLUMBING FIXTURES</b>  <b>OTHER FEATURES:</b> <b>GARAGE DOORS/HOSE BIBS/</b> <b>FLOOR DRAINS</b>  <b>ADDED FEATURES:</b> <b>HVAC/SPRINKLER SYSTEM</b> <b>SHOWROOM</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****BANK (80)**

<i><b>WALL HEIGHT</b></i>	<i><b>BASE PRICE</b></i>	<i><b>BASE SPECIFICATIONS</b></i>
<b>12'</b>	<b>\$93.75-\$156.25</b>	<b>STORY HEIGHT:</b> <b>FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT:</b> <b>CONTINUOUS FOOTING OR</b> <b>POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS:</b> <b>ADEQUATE FOR SEPARATION OF</b> <b>OFFICE AREAS</b>  <b>FRAMING:</b> <b>WOOD JOIST/LIGHT STEEL</b>  <b>FLOOR COVER/FINISH:</b> <b>VINYL/CARPET</b>  <b>INTERIOR FINISH:</b> <b>DRYWALL/PANEL</b>  <b>PLUMBING:</b> <b>8-12 FIXTURES</b>  <b>OTHER FEATURES:</b> <b>RECORD/MONEY VAULT</b>  <b>ADDED FEATURES:</b> <b>HVAC/SPRINKLER SYSTEM</b> <b>ELEVATORS</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****BEAUTY/BARBER SHOP (54)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
12'	\$38.25-\$63.75	<b>STORY HEIGHT: FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT: CONTINUOUS FOOTING OR POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS: ADEQUATE</b>  <b>FRAMING: WOOD JOIST</b>  <b>FLOOR COVER/FINISH: WOOD/VINYL/CARPET</b>  <b>INTERIOR FINISH: DRYWALL/PANEL</b>  <b>PLUMBING: 5-10 PLUMBING FIXTURES</b>  <b>ADDED FEATURES: HVAC/SPRINKLER SYSTEM</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****AUTOMATIC CAR WASH (09W)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>16'</b>	<b>\$47.25-\$78.75</b>	<b>STORY HEIGHT: FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT: CONTINUOUS FOOTING OR POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS: ADEQUATE FOR SEPARATION OF BAYS/SALES AREA</b>  <b>FRAMING: WOOD JOIST/LIGHT STEEL</b>  <b>FLOOR COVER/FINISH: VINYL/CONCRETE SLAB</b>  <b>INTERIOR FINISH: EXPOSED BRICK/DRYWALL</b>  <b>PLUMBING: 5-8 PLUMBING FIXTURES</b>  <b>OTHER FEATURES: FLOOR DRAINS</b>  <b>ADDED FEATURES: HVAC/SPRINKLER SYSTEM</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****CLUB HOUSE / COUNTRY CLUB (36 / 37)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>10'</b>	<b>\$57.75-\$110.00</b>	<b>STORY HEIGHT:</b> <b>FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT:</b> <b>CONTINUOUS FOOTING OR</b> <b>POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS:</b> <b>ADEQUATE FOR SEPARATION OF</b> <b>RETAIL/DINING AREA</b>  <b>FRAMING:</b> <b>WOOD JOIST</b>  <b>FLOOR COVER/FINISH:</b> <b>VINYL/LINOLEUM/CARPET</b>  <b>INTERIOR FINISH:</b> <b>DRYWALL/PANEL</b>  <b>PLUMBING:</b> <b>15-20 PLUMBING FIXTURES</b>  <b>OTHER FEATURES:</b> <b>KITCHEN AREA/QUARRY TILE</b> <b>FLOOR DRAINS</b>  <b>ADDED FEATURES:</b> <b>HVAC/SPRINKLER SYSTEM</b> <b>FIREPLACE/STACK</b> <b>FREIGHT/PASSENGER ELEVATORS</b> <b>SUPPORT AREAS</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****DISCOUNT STORE (50)**

<b><i>WALL HEIGHT</i></b>	<b><i>BASE PRICE</i></b>	<b><i>BASE SPECIFICATIONS</i></b>
<b>12'</b>	<b>\$33.75-\$56.25</b>	<b>STORY HEIGHT: FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT: CONTINUOUS FOOTING OR POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS: ADEQUATE FOR SEPARATION OF RETAIL/STORAGE AREA</b>  <b>FRAMING: WOOD JOIST/LIGHT STEEL</b>  <b>FLOOR COVER/FINISH: VINYL/HEAVY LINOLEUM</b>  <b>INTERIOR FINISH: DRYWALL/PANEL/PLASTER PAINTED BLOCK</b>  <b>PLUMBING: 8-12 FIXTURES</b>  <b>OTHER FEATURES: ALUM/GLASS STORE FRONT</b>  <b>ADDED FEATURES: HVAC/SPRINKLER SYSTEM</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****HANGAR (72)**

<b><i>WALL HEIGHT</i></b>	<b><i>BASE PRICE</i></b>	<b><i>BASE SPECIFICATIONS</i></b>
<b>16'</b>	<b>\$24.75-\$41.25</b>	<b>STORY HEIGHT: FIRST FLOOR AREA</b>
		<b>FOUNDATION/BASEMENT: POURED CONCRETE SLAB</b>
		<b>PARTITIONS/COMMON WALLS: MINIMAL</b>
		<b>FRAMING: RIGID STEEL FRAME</b>
		<b>FLOOR COVER/FINISH: CONCRETE SLAB</b>
		<b>INTERIOR FINISH: NONE</b>
		<b>PLUMBING: 1-3 FIXTURES</b>
		<b>OTHER FEATURES: OVERHEAD DOORS</b>
		<b>ADDED FEATURES: HVAC/SPRINKLER SYSTEM OFFICE ENCLOSURES</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****MOTEL (32)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>10'</b>	<b>\$46.50-\$77.50</b>	<b>STORY HEIGHT:</b> <b>FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT:</b> <b>CONTINUOUS FOOTING OR</b> <b>POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS:</b> <b>ADEQUATE FOR SEPARATION OF</b> <b>SERVICE AREA/GUEST ROOMS</b>  <b>FRAMING:</b> <b>WOOD JOIST</b>  <b>FLOOR COVER/FINISH:</b> <b>VINYL/HEAVY LINOLEUM</b> <b>CARPET</b>  <b>INTERIOR FINISH:</b> <b>DRYWALL/PANEL/PLASTER</b> <b>PAINTED BLOCK</b>  <b>PLUMBING:</b> <b>3-5 FIXTURES PER ROOM</b>  <b>OTHER FEATURES:</b> <b>QUARRY TILE/KITCHEN AREA</b>  <b>ADDED FEATURES:</b> <b>HVAC/SPRINKLER SYSTEM</b> <b>PASSENGER ELEVATORS</b> <b>INDOOR POOL</b> <b>SUPPORT AREAS</b> <b>BALCONIES</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****MANUFACTURING/INDUSTRIAL – LIGHT (61)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>16'</b>	<b>\$27.75-\$46.25</b>	<b>STORY HEIGHT:</b> <b>FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT:</b> <b>CONTINUOUS FOOTING OR</b> <b>POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS:</b> <b>SMALL OFFICE AREAS</b>  <b>FRAMING:</b> <b>STEEL FRAME/WOOD JOIST</b>  <b>FLOOR COVER/FINISH:</b> <b>FINISHED CONCRETE/HARDWOOD</b>  <b>INTERIOR FINISH:</b> <b>PAINTED BLOCK/EXPOSED BRICK</b>  <b>PLUMBING:</b> <b>10-15 FIXTURES</b>  <b>OTHER FEATURES:</b> <b>OVERHEAD DOORS</b>  <b>ADDED FEATURES:</b> <b>HVAC (CREATURE COMFORT)</b> <b>SPRINKLER SYSTEM</b> <b>OFFICE ENCLOSURES</b> <b>FREIGHT/PASSENGER ELEVATORS</b> <b>MEZZANINES</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****LABORATORY/RESEARCH AND DEVELOPMENT (62)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>16'</b>	<b>\$108.50-\$180.75</b>	<b>STORY HEIGHT: FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT: CONTINUOUS FOOTING OR POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS: SMALL OFFICE AREAS</b>  <b>FRAMING: REINFORCED CONCRETE</b>  <b>FLOOR COVER/FINISH: FINISHED CONCRETE SLAB</b>  <b>INTERIOR FINISH: PAINTED BLOCK OR EQUAL</b>  <b>PLUMBING: 10-15 FIXTURES</b>  <b>OTHER FEATURES: OVERHEAD DOORS 'CLEAN' ROOMS</b>  <b>ADDED FEATURES: HVAC/SPRINKLER SYSTEM MEZZANINES ELEVATORS</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****LAUNDRY/CLEANERS (55)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
12'	\$42.25-\$70.25	<b>STORY HEIGHT: FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT: CONTINUOUS FOOTING OR POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS: ADEQUATE</b>  <b>FRAMING: WOOD JOIST/LIGHT STEEL</b>  <b>FLOOR COVER/FINISH: WOOD/VINYL/CONCRETE</b>  <b>INTERIOR FINISH: DRYWALL/PAINT/UNFINISHED</b>  <b>PLUMBING: 5-10 PLUMBING FIXTURES</b>  <b>OTHER FEATURES: FLOOR DRAINS</b>  <b>ADDED FEATURES: HVAC/SPRINKLER SYSTEM</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE (cont.)****CONVALESCENT HOME (85)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>10'</b>	<b>\$61.50-102.50</b>	<b>STORY HEIGHT:</b> <b>FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT:</b> <b>CONTINUOUS FOOTING OR</b> <b>POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS:</b> <b>ADEQUATE FOR SEPARATION OF</b> <b>HOUSING/TREATMENT/KITCHEN</b>  <b>FRAMING:</b> <b>WOOD JOIST/LIGHT STEEL</b>  <b>FLOOR COVER/FINISH:</b> <b>VINYL/HEAVY LINOLEUM</b>  <b>INTERIOR FINISH:</b> <b>DRYWALL/PANEL</b> <b>PAINTED BLOCK</b>  <b>PLUMBING:</b> <b>3-5 FIXTURES PER ROOM</b>  <b>OTHER FEATURES:</b> <b>QUARRY TILE/KITCHEN AREA</b> <b>FLOOR DRAINS</b>  <b>ADDED FEATURES:</b> <b>HVAC/SPRINKLER SYSTEM</b> <b>ELEVATORS</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE (cont.)****LOFT (63)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>16'</b>	<b>\$39.50-\$65.75</b>	<b>STORY HEIGHT:</b> <b>FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT:</b> <b>CONTINUOUS FOOTING OR</b> <b>POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS:</b> <b>ADEQUATE</b>  <b>FRAMING:</b> <b>WOOD JOIST</b>  <b>FLOOR COVER/FINISH:</b> <b>WOOD/VINYL/CARPET</b>  <b>INTERIOR FINISH:</b> <b>DRYWALL/PANEL/UNFINISHED</b>  <b>PLUMBING:</b> <b>3-8 PLUMBING FIXTURES</b>  <b>OTHER FEATURES:</b> <b>NONE</b>  <b>ADDED FEATURES:</b> <b>HVAC/SPRINKLER SYSTEM</b> <b>ELEVATORS</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****WAREHOUSE, STORAGE (68)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>18'</b>	<b>\$26.25-\$43.75</b>	<b>STORY HEIGHT: FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT: CONTINUOUS FOOTING OR POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS: ADEQUATE FOR SEPARATION OF OFFICE AREA/SUPPORT AREA</b>  <b>FRAMING: WOOD JOIST/LIGHT STEEL</b>  <b>FLOOR COVER/FINISH: VINYL/CARPET/CONCRETE</b>  <b>INTERIOR FINISH: DRYWALL/PANEL PAINTED BLOCK</b>  <b>PLUMBING: 3-5 FIXTURES PER OFFICE</b>  <b>OTHER FEATURES: GARAGE DOORS</b>  <b>ADDED FEATURES: HVAC/SPRINKLER SYSTEM</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****OFFICE BUILDING (81)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
12'	\$51.00-\$85.00	<b>STORY HEIGHT: FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT: CONTINUOUS FOOTING OR POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS: ADEQUATE FOR SEPARATION OF WORK/STORAGE AREAS</b>  <b>FRAMING: WOOD JOIST/LIGHT STEEL</b>  <b>FLOOR COVER/FINISH: VINYL/CARPET</b>  <b>INTERIOR FINISH: DRYWALL/PANEL</b>  <b>PLUMBING: 8-15 FIXTURES</b>  <b>OTHER FEATURES: NONE</b>  <b>ADDED FEATURES: HVAC/SPRINKLER SYSTEM ELEVATORS</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****RETAIL STORE (52)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
12'	\$44.50-\$74.00	<b>STORY HEIGHT:</b> <b>FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT:</b> <b>CONTINUOUS FOOTING OR</b> <b>POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS:</b> <b>MINIMAL</b>  <b>FRAMING:</b> <b>WOOD JOIST/LIGHT STEEL</b>  <b>FLOOR COVER:</b> <b>CARPET/VINYL</b>  <b>INTERIOR FINISH:</b> <b>DRYWALL/PANEL</b>  <b>PLUMBING:</b> <b>5-8 FIXTURES</b>  <b>OTHER FEATURES:</b> <b>ALUM/PLATE GLASS FRONT</b> <b>AVERAGE DISPLAY AREA</b> <b>GLASS DOORS</b>  <b>ADDED FEATURES:</b> <b>HVAC/SPRINKLER SYSTEM</b> <b>ELEVATORS</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****SERVICE GARAGE (76)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>16'</b>	<b>\$32.25-\$53.75</b>	<b>STORY HEIGHT:</b> <b>FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT:</b> <b>CONTINUOUS FOOTING OR</b> <b>POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS:</b> <b>ADEQUATE FOR SEPARATION OF</b> <b>SERVICE/STORAGE AREA</b>  <b>FRAMING:</b> <b>WOOD JOIST/LIGHT STEEL</b>  <b>FLOOR COVER/FINISH:</b> <b>FINISHED CONCRETE SLAB</b>  <b>INTERIOR FINISH:</b> <b>PAINTED BLOCK</b>  <b>PLUMBING:</b> <b>2-5 FIXTURES</b>  <b>OTHER FEATURES:</b> <b>GARAGE DOORS/HOSE BIBS/</b> <b>FLOOR DRAINS</b>  <b>ADDED FEATURES:</b> <b>HVAC/SPRINKLER SYSTEM</b> <b>OFFICE ENCLOSURES</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****SERVICE STATION (36W)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>16'</b>	<b>\$48.75-\$81.25</b>	<b>STORY HEIGHT:</b> <b>FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT:</b> <b>CONTINUOUS FOOTING OR</b> <b>POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS:</b> <b>ADEQUATE FOR SEPARATION OF</b> <b>OFFICE/SERVICE AREA</b>  <b>FRAMING:</b> <b>WOOD JOIST</b>  <b>FLOOR COVER/FINISH:</b> <b>FINISHED CONCRETE SLAB</b> <b>QUARRY TILE OR EQUAL</b>  <b>INTERIOR FINISH:</b> <b>PAINTED BLOCK</b>  <b>PLUMBING:</b> <b>5-8 FIXTURES</b>  <b>OTHER FEATURES:</b> <b>OVERHEAD DOORS/HOSE BIBS</b> <b>DRAINS/SALES/OFFICE AREA</b> <b>PLATE GLASS WINDOWS</b>  <b>ADDED FEATURES:</b> <b>HVAC/SPRINKLER SYSTEM</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****SUPERMARKETS (44)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>12'</b>	<b>\$49.50-\$82.50</b>	<b>STORY HEIGHT:</b> <b>FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT:</b> <b>CONTINUOUS FOOTING OR</b> <b>POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS:</b> <b>ADEQUATE FOR SEPARATION OF</b> <b>SERVICE/STORAGE AREA</b>  <b>FRAMING:</b> <b>WOOD JOIST/LIGHT STEEL</b>  <b>FLOOR COVER/FINISH:</b> <b>FINISHED CONCRETE SLAB</b> <b>HEAVY VINYL</b>  <b>INTERIOR FINISH:</b> <b>DRYWALL/PANEL</b> <b>PAINTED BLOCK/EXPOSED BRICK</b>  <b>PLUMBING:</b> <b>8-12 FIXTURES</b>  <b>OTHER FEATURES:</b> <b>ALUM/GLASS STORE FRONT</b> <b>ABUNDANT LIGHTING</b>  <b>ADDED FEATURES:</b> <b>HVAC/SPRINKLER SYSTEM</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****WAREHOUSE, DISTRIBUTION (67)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>20'</b>	<b>\$45.00-\$75.00</b>	<b>STORY HEIGHT:</b> <b>FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT:</b> <b>CONTINUOUS FOOTING OR</b> <b>POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS:</b> <b>SMALL OFFICE AREAS</b>  <b>FRAMING:</b> <b>LIGHT STEEL/WOOD</b>  <b>FLOOR COVER/FINISH:</b> <b>FINISHED CONCRETE SLAB</b>  <b>INTERIOR FINISH:</b> <b>PAINTED BLOCK</b>  <b>PLUMBING:</b> <b>0-8 FIXTURES</b>  <b>OTHER FEATURES:</b> <b>OVERHEAD/ROLLING DOORS</b> <b>WOOD OR STEEL</b>  <b>ADDED FEATURES:</b> <b>HVAC/SPRINKLER SYSTEM</b> <b>FREIGHT/PASSENGER ELEVATORS</b> <b>OFFICE ENCLOSURES</b> <b>MEZZANINES</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****CONVENIENCE STORE (46)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>12'</b>	<b>\$51.00-\$85.00</b>	<b>STORY HEIGHT:</b> <b>FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT:</b> <b>CONTINUOUS FOOTING OR</b> <b>POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS:</b> <b>MINIMAL</b>  <b>FRAMING:</b> <b>WOOD JOIST</b>  <b>FLOOR COVER/FINISH:</b> <b>VINYL/HEAVY LINOLEUM</b>  <b>INTERIOR FINISH:</b> <b>DRYWALL/PANEL</b> <b>EXPOSED BRICK</b>  <b>PLUMBING:</b> <b>5 FIXTURES</b>  <b>OTHER FEATURES:</b> <b>ALUM/PLATE GLASS STORE FRONT</b>  <b>ADDED FEATURES:</b> <b>HVAC/SPRINKLER SYSTEM</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****FUNERAL HOME (35)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>10'</b>	<b>\$68.25-\$113.75</b>	<b>STORY HEIGHT:</b> <b>FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT:</b> <b>CONTINUOUS FOOTING OR</b> <b>POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS:</b> <b>ADEQUATE FOR SEPARATION OF</b> <b>SALES AREA/OFFICES/CHAPEL</b> <b>VIEWING/PREPERATION AREA</b>  <b>FRAMING:</b> <b>WOOD JOIST/LIGHT STEEL</b>  <b>FLOOR COVER/FINISH:</b> <b>CARPET/VINYL OR RUBBER TILE</b>  <b>INTERIOR FINISH:</b> <b>DRYWALL/PANEL</b>  <b>PLUMBING:</b> <b>10-15 FIXTURES</b>  <b>OTHER FEATURES:</b> <b>FLOOR DRAINS/QUARRY</b> <b>TILE/PREPARATION AREA</b> <b>GARAGE DOORS</b>  <b>ADDED FEATURES:</b> <b>HVAC/SPRINKLER SYSTEM</b> <b>ELEVATORS/LIFTS</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****BROADCASTING FACILITY (64)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>16'</b>	<b>\$60.00-\$100.00</b>	<b>STORY HEIGHT: FIRST FLOOR AREA</b>  <b>FOUNDATION / BASEMENT: CONTINUOUS FOOTING OR POURED CONCRETE SLAB</b>  <b>PARTITIONS / COMMON WALLS: ADEQUATE TO SEPARATE BROADCAST / OFFICE AREAS</b>  <b>FRAMING: STEEL BAR JOIST</b>  <b>FLOOR COVER / FINISH: CONCRETE SLAB / VINYL</b>  <b>INTERIOR FINISH: PAINTED BLOCK / DRYWALL</b>  <b>PLUMBING: 5-10 FIXTURES</b>  <b>OTHER FEATURES: SOUNDPROOF INSULATION</b>  <b>ADDED FEATURES: HVAC / SPRINKLER SYSTEM</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****MEDICAL OFFICE (81M)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>12'</b>	<b>\$78.00-\$130.00</b>	<b>STORY HEIGHT: FIRST FLOOR AREA</b>  <b>FOUNDATION / BASEMENT: CONTINUOUS FOOTING OR POURED CONCRETE SLAB</b>  <b>PARTITIONS / COMMON WALLS: ABUNDANT FOR SEPARATION OF TREATMENT / EXAM ROOMS</b>  <b>FRAMING: WOOD FRAME</b>  <b>FLOOR COVER / FINISH: VINYL / CARPET</b>  <b>INTERIOR FINISH: DRYWALL / PANEL</b>  <b>PLUMBING: 10-20 FIXTURES</b>  <b>OTHER FEATURES: NONE</b>  <b>ADDED FEATURES: HVAC/SPRINKLER SYSTEM ELEVATORS</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****TRUCK TERMINAL (71)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>16'</b>	<b>\$20.00-\$33.25</b>	<b>STORY HEIGHT:</b> <b>FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT:</b> <b>CONTINUOUS FOOTING OR</b> <b>POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS:</b> <b>OFFICE/LOUNGE AREA</b>  <b>FRAMING:</b> <b>LIGHT STEEL/WOOD</b>  <b>FLOOR COVER/FINISH:</b> <b>CONCRETE SLAB/VINYL</b>  <b>INTERIOR FINISH:</b> <b>PAINTED BLOCK/EXPOSED BRICK</b>  <b>PLUMBING:</b> <b>3-10 FIXTURES</b>  <b>OTHER FEATURES:</b> <b>OVERHEAD DOORS (ABUNDANT)</b> <b>DOCK BUMPERS</b>  <b>ADDED FEATURES:</b> <b>HVAC/SPRINKLER SYSTEM</b> <b>DOCK LEVELERS</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****FITNESS CENTER (38)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>16'</b>	<b>\$50.75-\$84.75</b>	<b>STORY HEIGHT:</b> <b>FIRST FLOOR AREA</b>  <b>FOUNDATION / BASEMENT:</b> <b>CONTINUOUS FOOTING OR</b> <b>POURED CONCRETE SLAB</b>  <b>PARTITIONS / COMMON WALLS:</b> <b>ADEQUATE FOR SEPARATION OF</b> <b>SERVICE / STORAGE AREA</b>  <b>FRAMING:</b> <b>WOOD JOIST/LIGHTSTEEL</b>  <b>FLOOR COVER/FINISH:</b> <b>VINYL/HEAVY LINOLEUM/CARPET</b>  <b>INTERIOR FINISH:</b> <b>PAINTED BLOCK/EXPOSED BRICK</b>  <b>PLUMBING:</b> <b>3-15 FIXTURES</b>  <b>OTHER FEATURES:</b> <b>NONE</b>  <b>ADDED FEATURES:</b> <b>HVAC / SPRINKLER SYSTEM</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****AUTOMOTIVE DEALERSHIP, SERVICE CENTER (74)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>16'</b>	<b>\$39.75-\$66.25</b>	<b>STORY HEIGHT:</b> <b>FIRST FLOOR AREA</b>  <b>FOUNDATION / BASEMENT:</b> <b>CONTINUOUS FOOTING OR</b> <b>POURED CONCRETE SLAB</b>  <b>PARTITIONS / COMMON WALLS:</b> <b>ADEQUATE FOR SEPARATION OF</b> <b>RETAIL / SERVICE AREA</b>  <b>FRAMING:</b> <b>WOOD FRAME / LIGHT STEEL</b>  <b>FLOOR COVER / FINISH:</b> <b>CONCRETE SLAB / VINYL</b>  <b>INTERIOR FINISH:</b> <b>PAINTED BLOCK WALLS</b>  <b>PLUMBING:</b> <b>5-10 FIXTURES</b>  <b>OTHER FEATURES:</b> <b>OVERHEAD DOORS / HOSE BIBS</b> <b>FLOOR DRAINS</b>  <b>ADDED FEATURES:</b> <b>HVAC / SPRINKLER SYSTEM</b> <b>SALES AREA / ENCLOSURES</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****SHOPPING CENTER, NEIGHBORHOOD (57)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
12'	\$54.75-\$91.25	<b>STORY HEIGHT:</b> <b>FIRST FLOOR AREA</b>  <b>FOUNDATION / BASEMENT:</b> <b>CONTINUOUS FOOTING OR</b> <b>POURED CONCRETE SLAB</b>  <b>PARTITIONS / COMMON WALLS:</b> <b>ADEQUATE FOR SEPARATION OF</b> <b>RETAIL STORES</b>  <b>FRAMING:</b> <b>WOOD JOIST / LIGHT STEEL</b>  <b>FLOOR COVER / FINISH:</b> <b>VINYL / HEAVY LINOLEUM</b>  <b>INTERIOR FINISH:</b> <b>DRYWALL / PANEL</b> <b>PAINTED BLOCK</b>  <b>PLUMBING:</b> <b>10-15 FIXTURES</b>  <b>OTHER FEATURES:</b> <b>ALUM / GLASS STORE FRONT</b> <b>AUTOMATIC DOORS</b> <b>FLOURESCENT LIGHTING</b>  <b>ADDED FEATURES:</b> <b>HVAC / SPRINKLER SYSTEM</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****WAREHOUSE, TRANSIT (68C)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
16'	\$33.75-\$56.25	<b>STORY HEIGHT: FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT: CONTINUOUS FOOTING OR POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS: SMALL OFFICE AREAS</b>  <b>FRAMING: LIGHT STEEL</b>  <b>FLOOR COVER/FINISH: CONCRETE SLAB</b>  <b>INTERIOR FINISH: UNFINISHED/PAINTED BLOCK</b>  <b>PLUMBING: 5-10 FIXTURES</b>  <b>OTHER FEATURES: OVERHEAD DOORS</b>  <b>ADDED FEATURES: DOCK LEVELERS HVAC/SPRINKLER OFFICE ENCLOSURES FREIGHT ELEVATORS</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****MINI WAREHOUSE / SELF-STORAGE (70)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
10'	\$21.75-\$36.25	<b>STORY HEIGHT: FIRST FLOOR AREA</b>  <b>FOUNDATION / BASEMENT: POURED CONCRETE SLAB</b>  <b>PARTITIONS / COMMON WALLS: ADEQUATE FOR SEPARATION OF STORAGE UNITS</b>  <b>FRAMING: LIGHT STEEL/WOODFRAME</b> <b>FLOOR COVER/FINISH: CONCRETE SLAB</b>  <b>INTERIOR FINISH: UNFINISHED</b>  <b>PLUMBING: NONE</b>  <b>OTHER FEATURES: OVERHEAD/PEDESTRIAN DOORS METAL/WOOD</b>  <b>ADDED FEATURES: HVAC/SPRINKLER SYSTEM OFFICE AREAS</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****BRANCH / DRIVE THRU BANK (80)**

<b><i>WALL HEIGHT</i></b>	<b><i>BASE PRICE</i></b>	<b><i>BASE SPECIFICATIONS</i></b>
<b>12'</b>	<b>\$93.75-\$156.25</b>	<b>STORY HEIGHT: FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT: CONTINUOUS FOOTING OR POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS: ADEQUATE FOR SEPARATION OF OFFICE AREAS</b>  <b>FRAMING: WOOD JOIST</b>  <b>FLOOR COVER/FINISH: VINYL/CARPET DRYWALL/PANEL</b>  <b>PLUMBING: 8-12 FIXTURES</b>  <b>OTHER FEATURES: DRIVE UP WINDOWS, RECORD VAULT</b>  <b>ADDED FEATURES: HVAC/APRINKLER SYSTEM</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****DAY CARE CENTER (96)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>10'</b>	<b>\$63.00-\$105.00</b>	<b>STORY HEIGHT:</b> <b>FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT:</b> <b>CONTINUOUS FOOTING OR</b> <b>POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS:</b> <b>ADEQUATE TO SEPARATE OFFICE/</b> <b>CLASSROOMS/KITCHEN AREA</b>  <b>FRAMING:</b> <b>WOOD JOIST</b>  <b>FLOOR COVER/FINISH:</b> <b>CONCRETE SLAB/VINYL/CARPET</b>  <b>INTERIOR FINISH:</b> <b>PAINTED BLOCK/DRYWALL</b>  <b>PLUMBING:</b> <b>10-15 FIXTURES</b>  <b>OTHER FEATURES:</b> <b>NONE</b>  <b>ADDED FEATURES:</b> <b>HVAC/SPRINKLER SYSTEM</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****COLD STORAGE FACILITIES (69)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>16'</b>	<b>\$37.50-\$62.50</b>	<b>STORY HEIGHT: FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT: CONTINUOUS FOOTING OR POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS: SMALL OFFICE AREAS</b>  <b>FRAMING: STEEL BAR JOIST</b>  <b>FLOOR COVER/FINISH: CONCRETE SLAB</b>  <b>INTERIOR FINISH: EXPOSED BRICK/PANELS</b>  <b>PLUMBING: 5-10 FIXTURES</b>  <b>OTHER FEATURES: OVERHEAD/ROLLING DOORS METAL/STEEL</b>  <b>ADDED FEATURES: HVAC (CREATURE COMFORT) SPRINKLER SYSTEM DOCK LEVELERS</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****LUMBER YARD (63W)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
16'	\$10.00-\$25.00	<b>STORY HEIGHT: FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT: POURED CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS: MINIMAL</b>  <b>FRAMING: LIGHT STEEL/WOOD FRAME</b>  <b>FLOOR COVER/FINISH: CONCRETE SLAB</b>  <b>INTERIOR FINISH: NONE</b>  <b>PLUMBING: NONE</b>  <b>OTHER FEATURES: OVERHEAD DOORS MINIMAL</b>  <b>ADDED FEATURES: HVAC/SPRINKLER SYSTEM</b>

## **SPECIFIC COMMERCIAL STUDIES**

### **FRANCHISE FOOD RESTAURANTS**

Franchise Food restaurants have become commonplace beginning in the 1950's. The buildings, though they offer similar accommodations, are highly distinctive in architectural style and design. Each operation is readily identifiable with a particular design and motif, and relies heavily on the appearance or "eye appeal" of its buildings to attract, maintain and promote business. The wide range of styles and designs has a direct influence on the replacement costs of the buildings.

The size and quality of materials and workmanship alone are not the prime determining factors. Two restaurants showing no marked difference in size and construction quality may still show a considerable difference in cost due to the difference in design and decor! The replacement cost schedule provided is based upon specifications of size, quality, and design. The schedule is to be used as a guide for estimating replacement costs of franchise food restaurants. The proper use of the schedule, along with experience and sound judgment, should enable the appraiser to establish a reasonable estimate of replacement cost.

### **BASE SPECIFICATIONS**

The Cost Schedule assumes a basic layout which includes a serving area, food preparation area, a small office area, an employee dressing area, two toilet rooms, and depending upon size, a dining area. General construction features include masonry foundation walls on spread footings; 4" reinforced concrete floor slab on a granular base; roof and exterior wall construction, interior finish, and building equipment and fixtures commensurate with the grade; stud and masonry partitioning; unfinished floor and painted masonry or dry wall interior finish in storage areas and mechanical rooms; utility service, heating, fluorescent lighting fixtures in the preparation and office areas, plumbing fixtures and drains.

### **QUALITY GRADE SPECIFICATIONS**

'A' Grade      A unique design featuring elaborate architecture especially in the roof and exterior walls, built of high quality materials and workmanship. A-Frame, Mansard, Gambrel, or Multi-Pitch type roofs with extensive overhangs, and copper, porcelain enamel shingles, wood shakes, slate, or comparable high quality roofing on insulated wood or steel decking and framing, with laminated wood frame or steel frame supporting beams and columns often exposed to project architectural effects. Walls consist of a combination of face brick or ceramic glazed brick, decorative stone or wood and plate glass. High quality interior finish of ceramic or quarry tile flooring, exposed stone and brick or high grade wood or porcelain enamel paneling and ceramic tile wall finish. Porcelain enamel or acoustical tile ceilings, often open to the roof slope: combined heating and air conditioning system, high grade ornamental

lighting fixtures in the dining and service areas; good quality plumbing fixtures for typical toilet room facilities.

- 'B' Grade Conventional design featuring custom architectural styling, built of good quality materials and workmanship. Mansard, Gambrel or Double-Pitch roofs with liberal overhangs, composition tar and gravel, stone chip, or asphalt shingle roofing on insulated wood or steel decking and framing; face brick, ceramic tile and plate glass exterior walls with moderate architectural treatment; good quality interior finish of ceramic or quarry tile flooring, exposed brick or wood paneling and ceramic wall finish; acoustical tile or drywall ceiling; combined heating and air conditioning system, ornamental lighting fixtures in the dining and serving areas, and good quality plumbing fixtures for typical toilet room facilities.
- 'C' Grade Conventional design featuring moderate architectural styling, built of good quality workmanship and materials. Double-Pitch type roofs with normal overhangs, composition tar and gravel or asphalt shingle roofing on insulated wood or steel decking and framing; face brick, wood, or painted concrete block and plate glass exterior walls; good quality interior finish of quarry or vinyl asbestos tile flooring, wood paneling or drywall and part ceramic tile wall finish; drywall or acoustical tile ceiling; combined heating and air conditioning system; fluorescent lighting fixtures in the dining area, and good quality plumbing fixtures for typical toilet room facilities.
- 'D' Grade A simple conventional design void of architectural styling, built of average quality materials and workmanship. Flat or Single Pitch roof with normal overhangs, composition roofing on insulated wood decking and framing; painted concrete block or wood exterior walls with a minimal amount of plate glass; average quality interior finish consisting of asphalt or vinyl asbestos tile flooring; painted concrete block, drywall or paneled wall finish and drywall ceiling; forced-air heating, wall unit air conditioning, fluorescent lighting fixtures, fair quality plumbing fixtures for typical toilet room facilities.
- 'E' Grade Simple design void of architectural styling, built of fair quality materials and workmanship. Single-Pitch roof with normal overhangs, and composition roofing on wood decking and framing; painted concrete block or wood exterior walls with a minimal amount of plate glass; low quality interior finish consisting of asphalt tile flooring and painted concrete block and drywall; unit heaters, no air conditioning, fluorescent lighting fixtures, and fair quality plumbing fixtures for typical toilet room facilities.

**SCHEDULE APPLICATION**

Base prices are included for Average ("C") Grade construction for four typical exterior wall types. Select the base price based upon the structure size and exterior wall construction, and make adjustments for attached improvements, air conditioning and sprinkler systems as required. Apply the proper Quality Grade factor to establish the replacement cost new.

**DEPRECIATION GUIDELINES**

Franchise Food restaurants are special purpose buildings which are not readily adaptable to other uses. They go out of style both functionally and economically at a much faster rate than they deteriorate physically. The business is highly competitive and relies heavily on site location and the physical appearance of its buildings. In order to keep abreast of competition, owners must frequently renovate the structures. Changing consumer habits, traffic patterns, and competition are but a few of the factors that influence the life span of the buildings and must therefore be considered in the evaluation process.

Fast Food Restaurant



Fast Food Restaurant

Fast Food Restaurant



**BASE PRICE FOR COMMERCIAL SCHEDULE****FAST FOOD RESTAURANT (42)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>12'</b>	<b>\$78.00-\$130.00</b>	<b>STORY HEIGHT:</b> <b>FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT:</b> <b>CONTINUOUS FOOTING OR POURED</b> <b>CONCRETE SLAB</b>  <b>EXTERIOR WALLS:</b> <b>FACE BRICK/PLATE GLASS/STUCCO</b>  <b>PARTITIONS/COMMON WALLS:</b> <b>ADEQUATE FOR SEPARATION OF</b> <b>KITCHEN/DINING AREA</b>  <b>FRAMING:</b> <b>WOOD JOIST/LIGHT STEEL</b>  <b>FLOOR COVER/FINISH:</b> <b>VINY/HEAVY LINOLEUM</b> <b>TERRAZZO/QUARRY TILE</b>  <b>INTERIOR FINISH:</b> <b>DRYWALL/PANEL/EXPOSED BRICK</b>  <b>PLUMBING:</b> <b>10-15 FIXTURES</b>  <b>OTHER FEATURES:</b> <b>KITCHEN AREA/ SPRINKLER</b> <b>SYSTEM/ QUARRY TILE FINISH/</b> <b>FLOOR DRAINS</b>  <b>ADDED FEATURES:</b> <b>HVAC/SPRINKLER SYSTEM</b>

## **APARTMENTS**

An apartment is a residential living unit with the same living accommodations normally found in a single family residence. An apartment house is a multifamily residence containing four or more residential living units, and generally providing each unit with a number of common facilities, services and amenities. Two or more apartment buildings operating as a single unit are generally referred to as an apartment complex.

The increased development of multi-family residential housing units since the 1950's has brought the development of both apartment complexes and "high-rise" apartment buildings. Each of these offer complete living accommodations with all the modern conveniences and amenities. In addition, they generally provide a variety of recreational facilities and services for their occupants.

## **VALUATION**

As with other types of property the replacement cost method of valuation is a starting point for the appraiser. There are two types of apartment buildings that must be considered: 1) the walk-up or garden apartment normally found in apartment complexes; and 2) the high-rise or elevator building.

Apartment units found in a given apartment building or complex of buildings vary in size and arrangement. They may be one room efficiency units consisting of a bedroom and kitchenette; two room studio units consisting of a bedroom and living room/den and kitchenette combination; and conventional units consisting of a kitchen, dining area, living room and one or more bedrooms. Each apartment unit has one or more bathrooms, and conventional units often have a separate dining room, den, or family room.

One of the most significant variables in determining the replacement cost of an apartment building is the average size of the individual units. The pricing schedule provided in this section is designed to account for this variation.

## **BASE PRICES - APARTMENTS**

Base square foot prices have been developed for typical average "C" Grade quality construction apartment units, based on average unit sizes at various floor levels for wood joist construction. Adjustments are provided exterior walls construction and story height.

The foundation, roof, and normal built-ins are included with the first floor prices, thus making the schedule applicable to both one story and multi-story buildings.

**APPLICATION**

Application of the pricing schedule involves the selection of the appropriate base price per floor based on the average unit sizes. Adjustments to the base price for air conditioning, central heating, and type of construction should be made to account for any variations between the subject building and the model building.

**SPECIAL APPLICATION**

The Apartment Pricing Schedule is designed for garden/walk-up apartment buildings of four or more units. Two, three, and four family residences should be priced by using the Residential Dwelling Schedule (included in the Residential section of the manual).

High-rise apartment buildings should be priced from the Commercial Schedules (found in the Commercial section of the manual) and adjusted as applicable for special features and variances.

**QUALITY FACTOR**

The schedule prices are for Average ("C") Grade construction quality, erected with average materials and workmanship. A table of Quality Factors is provided to adjust the "C" Grade prices in order to account for variations in construction quality.

**INCOME APPROACH**

Apartment buildings, regardless of the type, are built, bought, and sold as investment or income producing property. The appraisal of apartments utilizing the Capitalization or Income Approach to value follows the same procedures discussed in the Property Valuation section of the manual.

The basic procedure is:

1. Collection of the income generated - including monthly rents for the units, parking, and other receipts, such as laundry facilities.
2. The collection of the expenses associated with the management and maintenance of the property.
3. The capitalization of the net income into an indication of value.

**DEPRECIATION GUIDELINES**

Physical deterioration of the structure should be based on age and condition of the property. Guidelines for normal life estimates are found in the Depreciation section of the manual. Functional and Economic Depreciation allowances must be derived from the income and expense of each apartment project as it relates to other properties of similar utility and condition, and should be expressed as a multiplicative of the base depreciation rates.

Apartment, Garden



Apartment, Highrise

Apartment, Duplex / Triplex



**BASE PRICE FOR COMMERCIAL SCHEDULE (cont.)****GARDEN APARTMENT (24)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>9'</b>	<b>\$42.75-\$71.25</b>	<b>STORY HEIGHT:</b> <b>FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT:</b> <b>CONTINUOUS FOOTING OR POURED</b> <b>CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS:</b> <b>ADEQUATE FOR SEPARATION</b> <b>OF LIVING UNITS</b>  <b>FRAMING:</b> <b>WOOD JOIST</b>  <b>FLOOR COVER/FINISH:</b> <b>VINYL/CARPET</b>  <b>INTERIOR FINISH:</b> <b>DRYWALL/PANEL</b>  <b>PLUMBING:</b> <b>5-8 FIXTURES PER UNIT</b>  <b>OTHER FEATURES:</b> <b>NONE</b>  <b>ADDED FEATURES:</b> <b>HVAC/SPRINKLER SYSTEM</b> <b>PORCHES/DECKS/STORAGE ROOMS</b> <b>FIREPLACES</b>

**BASE PRICE FOR COMMERCIAL SCHEDULE****APARTMENT, WALK-UP (25)**

<b>WALL HEIGHT</b>	<b>BASE PRICE</b>	<b>BASE SPECIFICATIONS</b>
<b>9'</b>	<b>\$53.50-\$89.00</b>	<b>STORY HEIGHT:</b> <b>FIRST FLOOR AREA</b>  <b>FOUNDATION/BASEMENT:</b> <b>CONTINUOUS FOOTING OR POURED</b> <b>CONCRETE SLAB</b>  <b>PARTITIONS/COMMON WALLS:</b> <b>ADEQUATE FOR SEPARATION</b> <b>OF LIVING UNITS</b>  <b>FRAMING:</b> <b>WOOD JOIST</b>  <b>FLOOR COVER/FINISH:</b> <b>VINYL/CARPET</b>  <b>INTERIOR FINISH:</b> <b>DRYWALL/PANEL</b>  <b>PLUMBING:</b> <b>5-8 FIXTURES PER UNIT</b>  <b>OTHER FEATURES:</b> <b>NONE</b>  <b>ADDED FEATURES:</b> <b>HVAC/SPRINKLER SYSTEM</b> <b>PORCHES/DECKS/STORAGE AREAS</b> <b>FIREPLACES/ELEVATORS</b>

**MOBILE HOME PARKS**

The pricing schedule included in this section is provided as a guide to assist the appraiser in arriving at a reasonable and equitable estimate of the cost of developing a variety of commercial mobile home and trailer parks. Typical site costs are given for five grades of parks; the general specifications are as follows:

- Grade A**      Excellent quality and excellently planned mobile home parks designed to accommodate the largest tractor-drawn or on-site erected mobile homes, and to provide the user with the utmost in residential amenities, including spacious lots with extensive and attractive landscaping, ample off-street parking, and a wide variety of recreational facilities. Site areas will generally range from 4,500 to 5,500 sq. ft.
- Grade B**      Good quality and well planned mobile home parks designed to accommodate the larger tractor-drawn mobile homes with room to spare for lawns and gardens, and featuring attractive landscaping, off-street parking, and complete recreational facilities. Site areas will generally range from 3,500 to 4,500 sq. ft.
- Grade C**      Average quality and well planned mobile home parks designed to accommodate mobile homes up to 55' to 60' long, and to provide the user with adequate utility services and facilities, but rather limited recreational facilities and other such amenities. Site areas will generally range from 2,500 to 3,500 sq. ft.
- Grade D**      Fair quality and minimally planned trailer parks intended primarily for semi-permanent occupancy, built to accommodate car-drawn trailers up to 40' to 45' long, and offering only minimal utility and recreational facilities. Site areas will generally range from 1,750 to 2,500 sq. ft.
- Grade E**      Cheap quality trailer parks designed to accommodate transient type trailers, and to provide the user with the minimum required facilities. Site areas will generally range from 1,000 to 1,750 sq. ft.

Application of the pricing schedule involves determining the grade most representative of the subject property, selecting the corresponding base site cost, and adjusting the base site cost to account for any variations between the subject property and the model specifications.

## BASE COST COMPONENTS

The costs per site have been developed to include the cost of basic on-site improvements and do not include the cost of the land, service and recreational buildings, or major recreational structures, such as swimming pools. The base components are as follows:

*Engineering:* includes the design plans and specifications of the park (exclusive of buildings), engineering and surveying fees, and public fees and permits.

*Grading:* includes the normal grading involved in leveling the site for drainage and roughing out roads, but does not include any abnormal site preparation, such as the excavation and terracing required for hill-side sites.

*Street paving:* includes base preparation and paving.

*Patios and walks:* includes all flat work other than street paving.

*Sewer:* includes all on-site lines, but does not include hook up charges, sewage disposal systems, or any off-site connections to trunk lines.

*Water:* includes on-site mains and site services, but does not include wells, pumps, or any off-site connections to source lines.

*Electrical:* includes on-site conduit, electrical and telephone wiring, site outlets, and street and common area lighting commensurate with the Grade, but does not include the cost of any off-site connections.

*Gas:* includes on-site piping, and site and building connections, but does not include any off-site mains.

*Other features:* include the cost of average entrance ornamentation, landscaping, and common area development commensurate with the park Grade. (Note: outdoor recreational facilities, such as swimming pools, tennis courts, etc. are not included and should be computed separately.)

## BASE COST ADJUSTMENTS

Many mobile homes and trailer parks are apt to possess some features which are typical of one Grade and some features which are typical of another. For example, a Grade A park might exhibit "other features" more representative of a Grade B park, such as entrance decor, landscaping, and recreational facilities. Similarly, a park may be Grade C in all respects except for good quality streets. In such cases, the appraiser must analyze each park in terms of its individual components in order to determine the contribution of each component to the overall cost per site. In order to facilitate this, the specifications and

corresponding costs for each component are detailed, thus enabling the appraiser to adjust the base cost either upward or downward to account for any significant variations.

### **PERCENT GOOD GUIDELINES**

Mobile home parks generally can be expected to have a life expectancy of 10 to 30 years, depending on the quality of the park. The components of a mobile home park, as described above, are subject to the same depreciating forces as are any other real estate improvements. Physical deterioration itself is difficult to observe, but is generally directly related to the functional and economic depreciation of the park. In a going and profitable park, the actual rate of physical deterioration is arrested somewhat by regular and normal maintenance. A park that is normally maintained will have components replaced or renewed as they age. As a park goes out of style functionally and economically, maintenance becomes more and more of a cost burden to the owner and is consequently reduced or curtailed completely, allowing the process of deterioration to accelerate.

A 'percent good' guideline table, based upon these factors relative to the effective age of the park, is included in this section. The effective age of the park may or may not be the same as the actual age (or average age if built in several phases) of the park. Generally, if a park is judged to be in average condition for its age, the effective age will be the same as the actual age. If a park is judged to be in poor condition or good condition for its age, the effective age will be somewhat more or somewhat less than the actual age. Similarly, parks judged very poor to unsound or very good to excellent will have effective ages considerably more to considerably less than their actual ages.

The table is provided only as a guide to assist the appraiser in arriving at a reasonable estimate of normal accrued depreciation; consideration must also be given to any abnormal factors causing further loss of value.

**APPLICATION FOR PRICING SCHEDULE**

Site sizes and construction components may or may not be uniform throughout the park. Various portions of the park may have been developed in different years, and designed to accommodate different types of mobile home units. In such cases, it may be necessary to sectionalize the park and to price each section as a separate unit. The procedure listed below would be equally applicable to an entire park or any section thereof.

1. Identify the park (or section thereof) by name, and record the following data on the property record card:

*“Improved” land area (do not include unimproved areas held in reserve for future expansion - note reserve land area if any)*

*Total number of spaces*

*Year of completion (if developed in phases, describe the number of spaces completed each year)*

*Compute the average site size by dividing the total improved land area by the number of sites (if individual sites vary significantly in size, make a note of this and if possible, estimate the range of site sizes within the computed average site size)*

*Width and composition of streets, extent of patios and walks, utilities available to sites.*

2. Analyze the various construction components of the subject property, giving special consideration to the extent of planning, whether or not abnormal grading was required, the extent and quality of the streets, curbing, patios and walks, the quality of utility installation (minimum or good code), the use of private sewage treatment facilities, the source of water (public or private), the electrical service to each site, availability of hydrants and gas at each site, whether electrical conduits and other transmission lines were installed above or below ground, the extent and quality of entrance decor, landscaping, and recreational facilities, and any other characteristics essential to establishing the proper grade level of the park.
3. Determine the quality grade of the park by comparing its components, as analyzed above, with the given specifications for each grade and select the corresponding base cost per site.
4. Note (on the property record card, along with the data recorded in Step No.1) any significant variations between the construction components of the subject property and the base specifications for the selected grade.

5. Adjust the base cost to account for significant variations between the construction components of the subject property and the base specifications for the selected grade, as considered in Step Number 4.
6. Multiply the average replacement cost per site, as derived in Step Number 5, by the total number of sites, to arrive at the total replacement cost.
7. Determine the effective age based on the condition, desirability and usefulness of the park relative to its actual (or average) age. Determine the proper percent good allowance based on the effective age, and apply it to the total replacement cost derived in Step Number 6 to arrive at the depreciated value of the park.
8. Sketch, list, and compute, by using the appropriate pricing schedule, the replacement cost and depreciated value of other improvements not included in the base site costs. This will include all permanent buildings, pools, tennis courts, etc.

The average quality mobile home park is designed to provide the user with adequate utility services and facilities. Recreational amenities are limited or nonexistent with streets and landscaping of minimal planning and construction.

Normal onsite improvements include: low cost concrete or asphalt pads and walks, enough grading to allow adequate site preparation, drainage, leveling, minimal on site electrical service, and onsite well (or public water) and septic (or public sewer) systems.

The value attributed to land, and the cost of any supportive structures, are not included in the base cost site.

Any variation in overall quality from average should be reflected by the appropriate quality grade adjustment.

#### **REPLACEMENT COST PER SITE**

GRADE A	\$12,000
GRADE B	\$10,000
GRADE C	\$ 8,000
GRADE D	\$ 6,000
GRADE E	\$ 4,000

For rural mobile home sites, assign to Grade C classification.

**RECREATIONAL VEHICLE PARKS**

***ECONOMICAL***

Typical sites developed for transient use in outlying rural or resort areas where there is either no building codes or minimal code enforcement. They will be closely spaced, have few facilities beyond the minimum subsistence level, and be designed for smaller trailers and recreational vehicles. The base area per trailer space is 1,600 square feet and the base number of spaces is 50.

**SPECIFICATIONS**

<i>Engineering:</i> Minimum plans, engineering and permits	\$ 245
<i>Grading:</i> Minimum leveling, graded for drainage, cleared	205
<i>Street Paving:</i> Minimum asphalt, natural base, 15' to 20' wide, paved parking area	485
<i>Patios and Walks:</i> Average 135 square feet of small asphalt patio or hardstand, few walks near buildings	270
<i>Sewer:</i> 3" to 4" clay, few traps or vents. Cesspool and septic tanks are included	370
<i>Water:</i> 2" mains, service to common hydrants and buildings, no trailer hookups	295
<i>Gas:</i> None (bottled gas only)	-----
<i>Electrical:</i> Low-amperage circuits, overhead wiring, simple outlets at trailer sites. No telephones or speaker systems	400
<i>Buildings:</i> Restrooms and showers, laundry, office, lowest-cost frame or concrete block, cheap fixtures and partitions	1,080
<i>Miscellaneous:</i> Signboard, minimum landscape and entrance	<u>160</u>
<b>COST PER SPACE (ECONOMICAL PARK)</b>	<b>\$ 3,510</b>

	<b>MODIFIERS</b>									
<b>Number of Spaces</b>	<b>10</b>	<b>20</b>	<b>30</b>	<b>40</b>	<b>50</b>	<b>60</b>	<b>80</b>	<b>100</b>	<b>120</b>	
<i>Multiplier</i>	1.12	1.08	1.05	1.02	1.00	.98	.95	.93	.91	
<b>Gross Area / Space</b>	<b>800</b>	<b>1,000</b>	<b>1,200</b>	<b>1,400</b>	<b>1,600</b>	<b>1,800</b>	<b>2,000</b>	<b>2,400</b>	<b>2,800</b>	
<i>Multiplier</i>	.86	.89	.93	.96	1.00	1.03	1.06	1.12	1.18	

**RECREATIONAL VEHICLE PARKS (Continued)**

**LOW COST**

Typical sites developed for transient or semi-permanent occupancy in seasonal resort areas or near industrial or military areas. These parks are usually designed to hold car-drawn trailers (up to 40 to 45 feet long) and recreational vehicles. The base area per site is 2,400 square feet and the base number of spaces is 80.

**SPECIFICATIONS**

<i>Engineering:</i> Limited plans and specifications, survey of site and permits	\$ 460
<i>Grading:</i> Graded for drainage, roads roughed in, site cleared and minimum site leveling	375
<i>Street Paving:</i> 18' to 22' roadway, 2" asphalt on natural base, no curbs or edging, common parking area	740
<i>Patios and Walks:</i> Average 205 square feet of low-cost concrete or asphalt for hardstand, patio or parking, some walks near buildings	490
<i>Sewer:</i> 4" lines, 6" mains, minimum code, simple layout	540
<i>Water:</i> 3" mains, ¾" service, hydrants every two spaces	490
<i>Gas:</i> None to trailer spaces. Low pressure gas to utility buildings and office	230
<i>Electrical:</i> Overhead wiring, 30 to 80 amperes per space. Some street lights and speaker system. Telephone booth (not included)	720
<i>Buildings:</i> Utility, showers and restrooms, laundry and office	1,435
<i>Miscellaneous:</i> Sign, low-cost landscape, some masonry or concrete work around entrance. Swimming pool costs added separately	<u>380</u>
<b>COST PER SPACE (LOW COST PARK)</b>	<b>\$ 5,860</b>

	<b>MODIFIERS</b>								
<b>Number of Spaces</b>	<b>30</b>	<b>40</b>	<b>50</b>	<b>60</b>	<b>80</b>	<b>100</b>	<b>120</b>	<b>140</b>	<b>160</b>
<i>Multiplier</i>	1.10	1.07	1.05	1.03	1.00	.97	.95	.93	.91
<b>Gross Area / Space</b>	<b>1,200</b>	<b>1,600</b>	<b>2,000</b>	<b>2,200</b>	<b>2,400</b>	<b>2,600</b>	<b>2,800</b>	<b>3,200</b>	<b>3,600</b>
<i>Multiplier</i>	.83	.89	.95	.97	1.00	1.02	1.05	1.09	1.12

**BUMPER-BOAT FACILITY**

The following costs are average cost ranges of complete bumper-boat facilities. Individual facilities can vary greatly depending on the type of pond construction, overall size and amenities. Boat costs are not included (personal property).

<i>Minimal quality</i>	\$ 29,000 - \$ 46,000
Vinyl-lined ponds with filters and wood decks, minimal railing or fence enclosure and lighting, excluding booths and parking lot.	
<i>Average quality</i>	\$ 58,000 - \$ 92,000
Average pond and filters, some freeforming, gunite or fiberglass panel sides, concrete lip and deck, paved waiting/viewing area, adequate handrails, fencing and lighting, excluding all buildings and parking lot.	
<i>Good quality</i>	\$ 79,000 - \$ 125,000
Concrete pond with filters, some rock or waterscape islands, good lighting, railing and fencing, excluding buildings, canopies or parking lots.	
 <b>MINIATURE GOLF COURSE</b>	
<i>Minimal quality</i>	\$1,200 – 3,800 / hole
Eighteen holes, 2,000 to 4,000 square feet on 0.25 acre, simply developed, or prepackaged budget course on flat terrain including lighting, excluding booths and parking lot.	
<i>Average quality</i>	\$4,800 – 15,000 / hole
Eighteen holes, 4,000 to 10,000 square feet, on 0.25 to 0.5 acre, excluding booths, snack bars and parking lot, including course plumbing and lighting, professionally designed and installed.	
<i>Good quality</i>	\$16,000 – 36,000 / hole
Custom course, eighteen holes, 10,000 to 20,000 square feet, 0.5 to 1.0 acre or more, extensive themes with major elevation, rock and waterscape layout, excluding buildings and parking.	

**WATER SLIDE**

The following are typical costs for most common types of elevated water slides in straight, single or double radius configurations and include open fiberglass body flume sections, galvanized steel flume supports, stairs, decking, pump, motor, all necessary piping fittings, installation and designers' fees. All pool and land improvement costs are excluded. Add 15% for enclosed tubular flumes. Add 25% for serpentine configurations. Add 13% to 19% for each foot of flume over 3 feet wide. Deduct 25% to 35% for slides laid on bare earth; under 60', deduct 10% to 20%.

<u>Length</u>	<u>Cost Range</u>	<u>Length</u>	<u>Cost Range</u>
50'	\$ 38,000 - \$ 61,000	250'	\$ 141,000 - \$ 223,000
60'	44,000 - 70,500	300'	166,750 - 258,250
90'	61,500 - 97,500	350'	186,000 - 293,000
100'	66,750 - 106,500	400'	207,500 - 326,250
150'	93,500 - 147,500	500'	248,500 - 390,250
200'	118,250 - 186,250	600'	287,000 - 451,750

*Additive costs* (cost each except as indicated):

Landing pond, per square foot	\$ 49.00 - \$ 69.00
Surge reservoir	7,750 - 12,000
Filtration and chlorination system	24,000 - 33,500

**Large aquatic parks with bath houses, lighting, fences, decks and all the other features in a complete complex will cost \$1,100 to \$3,325 per person of rated capacity.**

## GOLF COURSES

Golf courses are designed and built in a variety of types and sizes. The pricing schedules in this section are provided as a guide to assist the appraiser in arriving at a reasonable and equitable estimate of the cost of developing the various types of courses.

## REGULATION COURSES

A regulation golf course usually consists of 18 holes of varied length. There are generally four short holes, 130 to 200 yards (par 3); ten average holes 350 to 450 yards (par 4); and four long holes 450 to 650 yards (par 5). Average costs per hole are given for six grades of courses; the general specifications are as follows:

- Class I**           Excellent course designed for professional play; rolling terrain; well landscaped with wide tree lined fairways and large, excellent quality greens and tees; numerous natural and man-made hazards; generally 6,800 – 7,200 yards long with a par 72 rating.
- Class II**           Good course design for private club membership; rolling terrain; well landscaped with wide fairways and large good quality greens and tees; natural and some man-made hazards; generally 6,500 – 6,800 yards long with a par 70 to 72 rating.
- Class III**          Average course designed for municipal or general public play; flat terrain; landscaped fairways; average size and quality greens and tees; some natural and few, if any, man-made hazards; generally 6,000 – 6,500 yards long with a par 68 to 70 rating.
- Class IV**          Simply developed course often referred to as a "cow-pasture course"; flat terrain, very little landscaping, small greens and tees, few natural hazards, and generally 5,000 – 6,000 yards long with a par 66 to 68 rating.
- Class V**           Simply designed course; flat terrain, very little landscaping, small greens and tees, narrow fairways, few natural hazards, minimal irrigation system, and generally 2,500 – 5,000 yards long consisting of 9 to 18 holes with a par rating of 32 to 68.
- Class VI**          Non-regulation course with flat terrain; very little landscaping, small greens and tees, few natural hazards, all holes are par 3, improvements range from fair to good quality, maintenance varies based on private or public operation.

**BASE PRICE COMPONENTS**

The costs per hole have been developed to include the cost of normal on course improvements and do not include the cost of land, clubhouse, or any recreational facilities. The base price components are as follows:

*Grading and Clearing* includes the removal of brush and trees from the fairways, greens, or tees; landscaping and the seeding of grass.

*Sprinkler System* includes the water source, pumps, piping, and sprinkler heads.

*Greens* include the building, seeding and care of the greens until the opening of the course.

*Tees* includes the building and care of the trees until the opening of the course.

*Bunkers* include the building and care of the bunkers until the opening of the course.

*Service and Cart Roads* include base preparation, paving, and bridges over hazards.

*Architect's Fees* include all plans and supervision during construction.

**OTHER COURSES**

Miniature Course	The entire course is comprised of a putting surface, which has various obstacles and hazards placed between the tee and the cup.
'Pitch and Putt' Course	The course has greens, bunkers, tees, fairways, and very little, if any, rough area separating the holes. The holes are usually 60 to 120 yards long and the course often has lighting for night play.
Par 3 Course	The course is the same as a regulation course, but on a smaller scale with all the holes rated par 3, 140 to 160 yards long and the course may have lighting for night play.
Executive Course	Also called a par 60 course; the course is the same as a regulation course, but on a smaller scale with the holes 200 to 300 yards long. The holes are mostly par 3 with some par 4 and par 5 ratings.
Driving Range	Consists of a piece of land usually 10 to 15 acres with elevated tees along one side used for practice of hitting tee shots on regulation courses.
Practice Putting Greens	Consists of a large green with numerous cups used for putting practice.

**GENERAL APPLICATION**

The primary variables in golf courses are size, layout, sprinkler system, greens, tees, fairways, and bunkers. Costs of courses may vary from \$25,000 per hole for a course with minimal improvements to \$300,000 per hole for the best championship courses. The costs given are for average courses in each quality grade. Included in the cost per hole are normal clearing and grading, complete sprinkler systems, landscaping, greens, tees, bunkers, service and cart roads, and architect's fees. Costs do not include buildings, swimming pools, parking areas, or any other off-course improvements. Listed below is the procedure to be used for the appraisal of golf courses.

1. Identify the course by name and record the following data on the property record card (preferably in the top portion of the sketch area).
  - a. The type of course (regulation size, pitch and putt, miniature, etc.).
  - b. The year of completion (if developed in phases, describe the number of holes completed each year).
  - c. The number of holes and the amount of land used for the course.
  - d. The course length and par.
  - e. The terrain and topographical features.
  - f. The average size of the greens, tees, and the number of bunkers.
  - g. The type of sprinkler system.
2. Analyze the various components of the subject property, giving special consideration to the extent of planning, the natural contour of the land, clearing and grading of fairways, greens, and tees, the extent and quality of the sprinkler system (whether it is automatic, manual, covers the entire course or only the tees and greens), the average green and tee size, the average number of bunkers per hole, the quality of cart and service roads, and any other characteristics essential to establishing the proper grade level of the course.
3. Determine the Class of the course by comparing its components, as analyzed above, with the given specifications for each grade and select the corresponding base cost per hole. In many instances, the course will exhibit a composite quality which falls somewhere between two grades. In such cases it is necessary to interpolate between the base hole costs.
4. Note (on the property record card, along with the data recorded in Step # 1) any significant variations between the construction components of the subject property and the base specifications for the selected Class.

5. Adjust the base cost to account for significant variations between the construction components of the subject property and the base specifications for the selected Class, as considered in Step #4.

This step is only necessary if the adjustment is not adequately accounted for by "intermediate grading", as described in Step #3.

6. Multiply the average replacement cost per hole, as derived in Step #5, by the total number of holes to arrive at the total replacement cost of the course.
7. Determine the proper depreciation allowance based upon the condition, desirability, and usefulness of the course relative to its age, and apply it to the total replacement cost as derived in Step #6, to arrive at the depreciated value of the course.
8. Sketch, list, and compute by using the appropriate pricing schedule, the replacement cost and depreciated value of all improvements not included in the base cost.

See pricing example on following page.

**GOLF COURSE PRICING EXAMPLE**

Didley Dadburn Golf Course - an 18-hole regulation size course; 6,500 yards long, par 72, located on 120 acres of rolling terrain. The course is 10 years old and has 10,000 square foot greens, (3) 2500 square foot tee locations for each hole, and three (3) bunkers per hole. Fairways and greens have automatic sprinkler system.

This course is judged to be a Class III Course with very good greens and tees, good overall condition, desirability and utility. Land value is estimated at \$7,500 per acre.

Base Cost per Hole (Good Quality)	\$ 100,000
Quality Factor (+10%)	+ \$ 10,000
Replacement Cost per Hole	\$ 110,000
Number of Holes	x 18
Total Replacement Cost	\$ 1,980,000
Less Depreciation (-10%)	- \$ 198,000
Total Value of Course Improvements	\$ 1,782,000
Land Value (120 acres @ \$7500)	\$ 900,000
Total Value	\$ 2,682,000
Value per Hole (Rounded)	\$ 149,000

**GOLF COURSE PRICING****CLASS I - REPLACEMENT COST \$120,000 - \$200,000 PER HOLE**

Excellent golf course consisting of 18 holes designed for championship, professional, advanced, or competitive play with a par rating of 71 to 72 and yardage ranging from 6,800 and up. Terrain is generally rolling with medium to wide fairways, numerous man-made and natural hazards, well maintained landscaping with tees, greens and fairways of excellent quality.

**CLASS II - REPLACEMENT COST \$93,750 - \$156,250 PER HOLE**

Good golf course consisting of 18 holes designed for championship, professional, advanced or competitive play with a par rating of 71 to 72 and yardage ranging from 6000 to 7300 yards. Terrain is generally rolling with wide fairways and many man-made or natural hazards, well maintained landscaping, tees, greens and fairways of very good quality.

**CLASS III - REPLACEMENT COST \$75,000-\$125,000 PER HOLE**

Average golf course consisting of 18 holes designed for all classes of golfers with a par rating of 70 to 72 and yardage ranging from 5500 to 7300 yards. Terrain is generally rolling with narrow to wide fairways, several natural hazards and some man-made hazards, well maintained landscaping with tees, greens and fairways of good quality.

**CLASS IV - REPLACEMENT COST \$56,250-\$93,750 PER HOLE**

Average quality public or semi-private course; 18 holes designed for the average or occasional golfer with a par rating of 68 to 72 and yardage ranging from 5500 to 6900 yards. Terrain is generally flat to rolling with varying fairway widths and few natural or man-made hazards, mostly natural landscaping with some maintenance, tees, and greens are of average to good quality.

**CLASS V - REPLACEMENT COST \$45,000-\$75,000 PER HOLE**

Simply designed golf course consisting of 9 to 18 holes designed for recreational or occasional golfers; with a par rating of 32 to 68 and yardage ranging from 2500 to 5000 yards. Terrain is generally flat with narrow fairways little maintenance, very few hazards, tees and greens are fair to average quality.

**CLASS VI - PAR 3- REPLACEMENT COST \$22,500-\$37,500 PER HOLE**

Non-regulation golf course, consisting of 9 to 18 holes, all holes are par three, terrain is rolling to flat, tees, greens and fairways range from fair quality to good quality, maintenance varies based on private or public play.

## INCOME APPROACH TO GOLF COURSE

The Income Approach is typically the most accurate measure of value for golf courses. It reduces the differences between golf courses to the least common denominator, **Golf Income Revenue (GIR)**. This revenue can be quantified from the market place and analyzed based on actual or anticipated number of rounds played and average daily rates per round.

Following is the formula for estimating the value of golf courses in Bladen County, based on the Income Approach.

$$\text{Stabilized \# Rounds (SNR)} \times \text{Stabilized Daily Rate (SDR)} = \text{Golf Income Revenue (GIR)} \\ \times \text{Golf Income Multiplier (GIM)} = \text{Indicated Value}$$

### EXAMPLE

Didley Dadburn Golf Club – an 18 hole, regulation size golf course, with a stabilized number of rounds of 20,000 per year and a stabilized daily rate of \$50:

$$20,000 \times \$50 = \$1,000,000 \times 2.5 = \$2,500,000 \text{ or } \$139,000 \text{ per hole.} \\ (\text{SNR}) \times (\text{SDR}) = (\text{GIR}) \times (\text{GIM}) = \text{Indicated Value}$$

### GOLF COURSE INCOME MODELS

Quality	Stabilized Number Of Rounds	Rates/Seasonal Averages	Stabilized Daily Rate	GIM
Class I	20,000-25,000	\$100 - \$150	\$ 90 - \$125	1.5-2.5
Class II	20,000-25,000	\$ 75 - \$100	\$ 65 - \$ 90	1.5-2.5
Class III	20,000-25,000	\$ 50 - \$ 75	\$ 40 - \$ 65	2.0-3.0
Class IV	20,000-30,000	\$ 35 - \$ 50	\$ 30 - \$ 45	2.0-3.0
Class V	20,000-30,000	\$ 25 - \$ 40	\$ 20 - \$ 25	2.0-3.5
Class VI	20,000-30,000	\$ 15 - \$ 25	\$ 10 - \$ 20	2.0-3.5

**Note:** Stabilized Daily Rates include cart rental and green fees only. Values generated by this formula are for golf course improvements and the land necessary to support the golf holes. Values for excess land and other buildings will be added based on separate cost or income analysis as outlined within the body of the Schedule of Values.

**EXEMPT / INSTITUTIONAL BUILDINGS**

This section of the Manual includes basic procedures and applications to be utilized to determine the Replacement Cost New for a variety of institutional type structures. Prices are provided based on the structure type and exterior wall material.

**BASE SPECIFICATIONS**

Base prices assume normal construction, mechanical, and other features such as plumbing, heating, air conditioning, interior finish, framing, elevators, etc., according to the designed building structure type.

**SCHEDULE APPLICATION**

Select the structure type which is most representative of the subject building. Establish the Quality Grade of the building, which is contingent upon the exterior wall material of the structure type. Determine the total square feet of floor area and multiply the cost per square foot by the total area to establish the replacement cost.

*Note: separate prices are provided for finished or unfinished basements.*

**PERCENT (%) GOOD GUIDELINES**

Physical deterioration of institutional buildings should be based on the effective age and condition. Structures of this type normally have an expected life which is longer than other types of similar structures. Actual age and life expectancy can be extended through continued maintenance and renovation. When establishing the percent (%) good, the adjustment should be based on anticipated additional life as compared to normal life guidelines.

**AREA / PERIMETER RATIO TABLE  
COMMERCIAL & INDUSTRIAL SIZE ADJUSTMENT**

**TABLE 1**

Code	1APA	1APB	1APC	1APD	1APE	1APF	1APG	1APH	1API	1APJ	1APK	1APL	1APM	1APN	1APO	1APP
Perimeter	150	175	200	250	300	400	500	600	700	800	1000	1200	1400	1600	1800	2000
Sq. Ft.																
1,000	122%	126%	130%	132%												
1,500	111%	115%	119%	123%	126%											
2,000	104%	107%	111%	117%	120%	125%										
2,500	<b>100%</b>	103%	105%	110%	115%	120%	124%									
3,000	97%	<b>100%</b>	102%	106%	110%	119%	120%									
4,000	94%	96%	98%	<b>100%</b>	104%	110%	117%	119%								
5,000	92%	94%	95%	97%	<b>100%</b>	105%	110%	115%								
6,000	91%	92%	93%	95%	98%	102%	106%	110%								
8,000	89%	90%	91%	93%	94%	97%	<b>100%</b>	104%	107%	110%						
10,000			90%	91%	93%	95%	97%	<b>100%</b>	103%	105%	110%	115%				
12,000			89%	90%	91%	93%	95%	97%	<b>100%</b>	102%	106%	110%	115%			
14,000				90%	90%	92%	94%	96%	98%	<b>100%</b>	103%	106%	110%	114%		
16,000						91%	93%	94%	96%	97%	<b>100%</b>	104%	107%	110%		
18,000						90%	92%	93%	95%	96%	99%	102%	104%	107%	110%	
20,000						89%	91%	92%	94%	95%	97%	<b>100%</b>	103%	105%	108%	110%
25,000						88%	90%	91%	92%	93%	95%	97%	99%	101%	103%	105%
30,000						87%	89%	90%	91%	92%	93%	95%	97%	98%	<b>100%</b>	102%
35,000						86%	88%	89%	90%	91%	92%	93%	95%	96%	98%	99%
40,000						85%	87%	88%	89%	90%	91%	92%	94%	95%	96%	98%
50,000								88%	89%	90%	91%	92%	93%	94%	95%	95%
75,000								85%	86%	87%	88%	88%	89%	90%	91%	92%
100,000									84%	84%	85%	86%	87%	88%	89%	90%
200,000											85%	85%	86%	87%	88%	89%

Note: Code '1APQ' results in an adjustment of 100% regardless of perimeter measurements or square footage, and should be utilized for Apartments, Fast Food Restaurants, and Self-Storage Units.

**AREA / PERIMETER RATIO TABLE  
COMMERCIAL & INDUSTRIAL SIZE ADJUSTMENT**

**TABLE 2**

Code	2APA	2APB	2APC	2APD	2APE	2APF	2APG	2APH	2API	2APJ	2APK	2APL	2APM	2APN	2APO	2APP
Perimeter	100	150	200	250	300	350	400	450	500	600	700	800	1000	1200	1400	1600
Sq. Ft.																
500	154%															
750	132%	156%														
1,000	118%	138%	157%	175%												
1,500	104%	118%	132%	145%	157%											
2,000	97%	108%	118%	128%	138%											
2,500	92%	100%	110%	118%	127%	135%										
3,000	89%	97%	104%	112%	118%	125%	132%									
4,000	85%	91%	97%	103%	108%	113%	118%	123%								
5,000		88%	92%	97%	101%	105%	110%	114%	118%							
6,000			89%	93%	97%	100%	104%	108%	112%	118%						
7,000			87%	90%	94%	97%	100%	103%	106%	112%	118%					
8,000				88%	91%	94%	97%	100%	103%	108%	113%	118%				
9,000					89%	92%	94%	97%	99%	104%	109%	113%	123%			
10,000					88%	90%	92%	95%	97%	101%	105%	110%	118%			
12,000						87%	89%	91%	93%	97%	100%	104%	112%	118%		
14,000							87%	89%	90%	94%	97%	100%	106%	112%		
16,000							85%	87%	88%	91%	94%	97%	102%	108%		
18,000								85%	87%	89%	92%	94%	99%	104%	109%	
20,000								84%	85%	88%	90%	92%	97%	101%	105%	110%
25,000									83%	85%	87%	89%	93%	96%	100%	105%
30,000									83%	85%	85%	86%	89%	93%	95%	100%
35,000										83%	83%	85%	87%	90%	92%	95%
40,000											82%	83%	85%	88%	90%	93%
45,000												82%	84%	86%	88%	90%

**AREA / PERIMETER RATIO TABLE  
COMMERCIAL & INDUSTRIAL SIZE ADJUSTMENT**

**TABLE 2 (continued)**

Code	2APQ	2APR	2APS	2APT	2APU	2APV	2APW	2APX	2APY	2APZ	2AP1	2AP2	2AP3	2AP4	2AP5	2AP6
Perimeter	1800	2000	2200	2400	2600	2800	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500
Sq. Ft.																
9,000																
10,000																
12,000																
14,000																
16,000																
18,000																
20,000																
25,000																
30,000																
35,000																
40,000																
45,000	93%															
50,000	91%															
60,000	88%															
70,000	86%	87%														
80,000	84%	85%	87%													
90,000	83%	84%	85%	86%	86%											
100,000	82%	83%	84%	85%	85%	85%										
125,000	80%	81%	82%	83%	83%	84%	85%									
150,000	79%	80%	81%	81%	81%	82%	83%									
175,000	78%	79%	80%	80%	80%	81%	82%									
200,000	77%	78%	79%	79%	79%	80%	81%	82%	83%							
250,000	76%	77%	77%	78%	78%	79%	79%	80%	81%	82%						
300,000		76%	76%	77%	77%	78%	78%	79%	80%	81%	82%	82%	82%	82%		
350,000			75%	76%	76%	77%	77%	78%	79%	80%	81%	81%	82%	82%	83%	
400,000				75%	75%	76%	76%	77%	78%	79%	80%	80%	81%	81%	82%	83%

**AREA / PERIMETER RATIO TABLE  
COMMERCIAL & INDUSTRIAL SIZE ADJUSTMENT**

**TABLE 3**

Code	3APA	3APB	3APC	3APD	3APE	3APF	3APG	3APH	3API	3APJ	3APK	3APL	3APM	3APN	3APO	3APP
Perimeter	150	175	200	250	300	350	400	500	600	700	800	1000	1200	1400	1600	2000
Sq. Ft.																
1,500	110%	113%	117%	125%	133%											
2,000	103%	106%	108%	114%	120%	127%	133%									
2,500	99%	101%	103%	108%	113%	118%	123%	133%								
3,000	97%	98%	100%	104%	108%	112%	117%	125%	133%							
4,000	94%	95%	96%	99%	102%	105%	108%	114%	120%	127%	133%					
5,000		93%	94%	96%	98%	100%	103%	108%	113%	118%	123%	133%				
6,000			92%	94%	96%	98%	100%	104%	108%	112%	117%	125%	133%			
7,000				92%	94%	96%	98%	101%	105%	108%	112%	119%	126%	133%		
8,000				91%	93%	94%	96%	99%	102%	105%	108%	114%	121%	127%	133%	
9,000					92%	93%	95%	97%	100%	103%	106%	111%	117%	122%	127%	
10,000					91%	92%	94%	96%	98%	100%	103%	108%	113%	118%	123%	133%
12,000						91%	92%	94%	96%	98%	100%	104%	108%	112%	117%	125%
14,000							91%	92%	94%	96%	98%	101%	105%	108%	112%	119%
16,000							90%	91%	93%	94%	96%	99%	102%	105%	108%	114%
18,000							89%	90%	92%	93%	95%	97%	100%	103%	106%	111%
20,000							88%	89%	91%	92%	94%	96%	98%	100%	103%	108%
24,000								88%	90%	91%	92%	94%	96%	98%	100%	104%
28,000								87%	89%	90%	91%	92%	94%	96%	98%	101%
32,000									88%	89%	90%	91%	93%	94%	96%	99%
36,000									87%	88%	89%	90%	92%	93%	95%	97%
40,000											88%	89%	91%	92%	94%	96%

**AREA / PERIMETER RATIO TABLE  
COMMERCIAL & INDUSTRIAL SIZE ADJUSTMENT**

**TABLE 4**

Code	4APA	4APB	4APC	4APD	4APE	4APF	4APG	4APH	4API	4APJ	4APK	4APL	4APM	4APN	4APO	4APP
Perimeter	175	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400	1600
Sq. Ft.																
2,000	112%	115%	120%	126%	132%	138%										
3,000	105%	107%	111%	115%	119%	122%										
4,000	102%	103%	106%	109%	112%	115%										
5,000	<b>100%</b>	101%	103%	106%	108%	110%										
6,000		<b>100%</b>	102%	103%	105%	107%	109%									
7,000			<b>100%</b>	102%	103%	105%	106%	108%								
8,000				<b>100%</b>	102%	103%	105%	106%	109%							
9,000					101%	102%	103%	105%	107%	110%						
10,000					<b>100%</b>	101%	102%	103%	106%	108%	110%					
12,000						<b>100%</b>	100%	102%	103%	105%	107%	109%				
14,000						98%	99%	<b>100%</b>	102%	103%	105%	106%				
16,000							98%	99%	101%	102%	103%	105%	106%			
18,000							97%	98%	<b>100%</b>	101%	102%	103%	105%			
20,000								97%	99%	<b>100%</b>	101%	102%	103%	106%		
25,000								95%	97%	98%	99%	<b>100%</b>	101%	103%		
30,000								94%	95%	97%	98%	99%	<b>100%</b>	101%	103%	
35,000								93%	95%	95%	96%	97%	98%	<b>100%</b>	101%	
40,000									94%	95%	95%	96%	97%	99%	<b>100%</b>	101%
45,000									93%	94%	95%	95%	96%	98%	99%	<b>100%</b>
50,000									93%	94%	94%	95%	95%	97%	98%	99%
75,000									92%	92%	93%	93%	94%	94%	95%	96%
100,000									91%	92%	92%	92%	93%	93%	94%	94%

**COMMERCIAL WALL HEIGHT ADJUSTMENT TABLE**

Multiply the base cost by the applicable multiplier for any positive or negative variation in average story height from the base (as indicated in bold).

Height (ft.)	H1	H2	H3	H4
7	100%	85%	92%	72%
8	100%	92%	95%	77%
9	100%	94%	97%	80%
10	100%	96%	<b>100%</b>	83%
11	100%	98%	102%	86%
12	100%	<b>100%</b>	105%	89%
13	100%	102%	108%	92%
14	100%	104%	112%	95%
15	100%	106%	115%	98%
16	100%	108%	118%	<b>100%</b>
17	100%	110%	120%	102%
18	100%	112%	124%	105%
19	100%	114%	127%	108%
20	100%	116%	130%	110%
22	100%	120%	135%	115%
24	100%	125%	140%	120%
26	100%	130%	145%	125%
28	100%	135%	150%	130%
30	100%	140%	155%	135%
32	100%	145%		140%
34	100%	150%		145%
36	100%	155%		150%
38	100%	160%		155%
40	100%			160%
44	100%			165%
48	100%			175%
52	100%			185%
56	100%			195%
60	100%			205%
64	100%			215%
68	100%			225%
72	100%			230%
76	100%			240%
80	100%			250%
90	100%			275%
100	100%			295%
110	100%			315%
120	100%			335%
999	100%			350%

## INCOME MODEL APPROACH

The Income Model Approach includes models for the following property groups:

*Apartments*  
*Hotels/Motels*  
*General Retail/Shopping Center*  
*General Office/Medical Office*  
*Convenience Stores*  
*Restaurant/Franchise Restaurant*  
*Manufacturing/Warehouse*  
*Mobile Home Parks*  
*Self-Storage*  
*Service Shop/Service Garage*  
*Residential Single Family Housing (Rental)*

Income and Expense Models are developed for each property group to cover the range of properties located within Bladen County. Income and expense models are based on typical net lease situations. For triple net and other type leases, expense ratios should be adjusted to reflect actual or typical expenses of the landlord in this type of arrangement.

Economic Income is developed on a gross square foot or unit basis. Potential Gross Income is adjusted for occupancy loss to produce an Effective Gross Income. Income and Occupancy factors may be adjusted for exceptional properties on an individual basis.

Expenses for management and marketing, maintenance, utilities, reserve for replacement, property taxes and other operating expenses are specified as a percentage of Effective Gross Income. Expenses are deducted from Effective Gross Income to generate a Net Income, which is then capitalized using a band of investment technique.

Income Models include associated capitalization parameters:

- a) Typical financing percentage rates and terms.
- b) Cash on cash requirements.

These capitalization parameters may be adjusted for lower or higher risk properties through an override of the Indicated model rates. Capitalization Rates are computed excluding an effective tax rate and applied to the Net Income to generate an indicated value.

**MOBILE HOME PARKS**

<b>Income</b>	<b>Expense Ratios</b>			<b>Capitalization</b>	
<b>Economic Rent per Site</b>	<b>Vacancy</b>	<b>Mgmt.</b>	<b>Expenses</b>	<b>Cap Rate</b>	<b>GRM</b>
More than \$250 per Month	5-20%	5-10%	25-40%	.09 - .12	6-7
\$150 - \$249 per Month	5-20%	5-10%	25-40%	.09 - .13	6-7
\$100 - \$149 per Month	5-20%	5-10%	25-40%	.09 - .14	5-6
\$60 - \$99 per Month	10-25%	5-10%	25-50%	.10 - .15	4-5
Less than \$60 per Month	10-30%	5-10%	25-50%	.10 - .15	4-5

**MOTELS / HOTELS**

<b>Income</b>	<b>Expense Ratios</b>			<b>Capitalization</b>	
<b>Effective Daily Room Rate</b>	<b>Vacancy</b>	<b>Mgmt.</b>	<b>Expenses</b>	<b>Cap Rate</b>	<b>GRM</b>
\$125 - up per Night	25-50%	5-10%	25-50%	.08 - .12	2-4
\$100 - \$124 per Night	25-50%	5-10%	25-50%	.08 - .12	2-4
\$65 - \$99 per Night	25-50%	5-10%	25-50%	.09 - .14	2-4
\$40 - \$64 per Night	30-60%	5-10%	40-50%	.10 - .15	2-4
Less than \$40 per Night	20-60%	5-10%	40-60%	.10 - .15	2-4

**SELF-STORAGE**

<b>Income</b>	<b>Expense Ratios</b>			<b>Capitalization</b>	
<b>Economic Rent per Unit</b>	<b>Vacancy</b>	<b>Mgmt.</b>	<b>Expenses</b>	<b>Cap Rate</b>	<b>GRM</b>
\$100 - up per Month	20-40%	5-10%	15-25%	.08 - .12	5-7
\$75 - \$99 per Month	20-40%	5-10%	15-25%	.08 - .12	5-7
\$50 - \$74 per Month	20-40%	5-10%	20-30%	.09 - .14	5-7
Less than \$50 per Month	20-40%	5-10%	20-30%	.09 - .15	5-7

**SERVICE GARAGE**

<b>Income</b>	<b>Expense Ratios</b>			<b>Capitalization</b>	
<b>Annual Square Foot Rent</b>	<b>Vacancy</b>	<b>Mgmt.</b>	<b>Expenses</b>	<b>Cap Rate</b>	<b>GRM</b>
\$10 - up per Sq Ft	5-15%	5-10%	15-25%	.09 - .12	8-9
\$7.50 - \$9.99 per Sq Ft	5-20%	5-10%	15-35%	.09 - .12	8-9
\$5.00 - \$7.49 per Sq Ft	5-25%	5-10%	25-50%	.10 - .15	7-8
Less than \$5.00 per Sq Ft	10-30%	5-10%	25-50%	.10 - .15	7-8

**APARTMENTS (Market Rents)**

Monthly Rental Rate				Expense Ratios			Capitalization	
1BR	2BR	3BR	4BR	Vacancy	Mgmt.	Expenses	Cap Rate	GRM
\$750-up	\$800-up	\$850-up	\$1000-up	5-10%	3-10%	25-40%	.08-.12	7-9
\$650-749	\$700-799	\$750-849	\$800-999	5-10%	3-10%	25-40%	.08-.12	7-8
\$550-649	\$600-699	\$650-749	\$700-799	5-10%	3-10%	25-40%	.09-.13	7-8
\$450-549	\$500-599	\$550-649	\$600-699	5-10%	3-10%	30-40%	.10-.14	6-7
\$350-449	\$400-499	\$450-549	\$500-599	10-15%	3-10%	30-40%	.10-.14	6-7
\$0-\$349	\$0-\$399	\$0-449	\$0-499	10-15%	3-10%	30-40%	.10-.15	5-6

**GENERAL RETAIL / SHOPPING CENTER**

Income	Expense Ratios			Capitalization	
Annual Rent per Economic Unit	Vacancy	Mgmt.	Expenses	Cap Rate	GRM
\$25 - up per Square Foot	3-10%	3-5%	10-20%	.08-.12	7-8
\$20.00 - \$24.99 per Square Foot	3-10%	3-10%	10-25%	.08-.12	7-8
\$15.00 - \$19.99 per Square Foot	5-10%	3-10%	15-30%	.08-.13	6-7
\$10.00 - \$14.99 per Square Foot	5-10%	3-10%	20-40%	.09-.13	6-7
\$6.00 - \$9.99 per Square Foot	5-15%	3-10%	20-40%	.09-.14	5-6
Less than \$6.00 per Square Foot	5-20%	3-10%	20-40%	.09-.15	5-6

**GENERAL OFFICE / MEDICAL OFFICE**

Income	Expense Ratios			Capitalization	
Annual Rent per Economic Unit	Vacancy	Mgmt.	Expenses	Cap Rate	GRM
\$25 - up per Square Foot	3-10%	3-5%	10-20%	.08-.12	7-8
\$20.00 - \$24.99 per Square Foot	3-10%	3-10%	10-25%	.08-.12	7-8
\$15.00 - \$19.99 per Square Foot	5-10%	3-10%	15-30%	.08-.13	6-7
\$12.00 - \$14.99 per Square Foot	5-10%	3-10%	20-40%	.09-.13	6-7
\$8.00 - \$11.99 per Square Foot	5-20%	3-10%	20-40%	.09-.14	5-6
Less than \$8.00 per Square Foot	5-25%	3-10%	20-40%	.09-.15	5-6

**RESIDENTIAL SINGLE FAMILY HOUSING**

For Single Family Residential Housing, use Gross Rent Modifier (GRM) between 6 and 12. Typical expenses and vacancy rates should be utilized when applicable.

**CONVENIENCE STORES**

<i>Income</i>	<i>Expense Ratios</i>			<i>Capitalization</i>	
<b>Economic Rent per Year</b>	<b>Vacancy</b>	<b>Mgmt.</b>	<b>Expenses</b>	<b>Cap Rate</b>	<b>GRM</b>
More than \$25 per Square Foot	0-5%	5-10%	15-20%	.08 - .12	N/A
\$20.00-\$24.99 per Square Foot	3-7%	5-10%	15-20%	.08 - .12	N/A
\$15.00-\$14.99 per Square Foot	3-10%	5-10%	20-25%	.08 - .13	N/A
\$10.00-\$14.99 per Square Foot	3-10%	5-10%	20-25%	.08 - .14	N/A
Less than \$10 per Square Foot	5-20%	5-10%	25-40%	.09 - .15	N/A

**RESTAURANTS / FRANCHISE RESTAURANTS**

<i>Income</i>	<i>Expense Ratios</i>			<i>Capitalization</i>	
<b>Effective Annual Rent</b>	<b>Vacancy</b>	<b>Mgmt.</b>	<b>Expenses</b>	<b>Cap Rate</b>	<b>GRM</b>
More than \$40 per Sq. Foot	0-5%	5-10%	10-20%	.08 - .12	N/A
\$30.00-\$39.99 per Square Foot	5-10%	5-10%	15-20%	.08 - .12	N/A
\$25.00-\$29.99 per Square Foot	5-10%	5-10%	20-25%	.09 - .13	N/A
\$15.00-\$24.99 per Square Foot	5-10%	5-10%	20-25%	.09 - .13	N/A
\$10.00-\$14.99 per Square Foot	5-10%	5-10%	25-40%	.09 - .14	N/A
Less than \$10 per Sq. Foot	10-15%	5-10%	25-40%	.09 - .15	N/A

**MANUFACTURING / WAREHOUSE**

<i>Income</i>	<i>Expense Ratios</i>			<i>Capitalization</i>	
<b>Economic Rent per Year</b>	<b>Vacancy</b>	<b>Mgmt.</b>	<b>Expenses</b>	<b>Cap Rate</b>	<b>GRM</b>
More than \$4 per Square Foot	5-10%	5-10%	20-30%	.08 - .12	6-7
\$2.50-\$3.99 per Square Foot	10-15%	5-10%	25-40%	.08 - .13	6-7
\$1.50-\$2.49 per Square Foot	10-20%	5-10%	25-40%	.09 - .14	5-6
Less than \$1.50 per Sq. Foot	10-20%	5-10%	25-50%	.10 - up	5-6

## Schedule of Values, Standards, and Rules

### Section 7 Land Schedules



**Bladen County, North Carolina**

**Effective January 1, 2015**

## **LAND VALUATION GUIDELINES**

Land values across Bladen County are as varied as the properties they reflect. The use of a wide range of land types and rates to effectively value these properties is a necessity.

Specific land values are based on typical rates for classes of property and land types within a defined neighborhood or pricing area. Base rates are established to accommodate the majority of land types found within these areas.

Each tract of land is analyzed to determine the necessary land segment types and appropriate rates. Pages 212-213 display the Land Rates tables and the explanation of the Land Segment types available for use within the Bladen County CAMA system.

A separate booklet containing will be produced to reflect the specific land rates per land segment type, by neighborhood, at the conclusion of the revaluation process to coincide with the effective date of the project. This file can be modified to reflect future subdivisions for the live of the Schedule of Values. A separate, printed manual will provide for quick and easy comparisons between neighborhoods and land segment types throughout the county.

## LOCATIONAL CONSIDERATIONS

**Rural** properties are those located within remote or sparsely developed areas of the county where much of the land is being actively farmed or lying idle. Turnover is infrequent and development is generally limited to major highway intersections and rural hamlet communities. Public water may or may not be available. The majority of homes and businesses in rural areas are served by individual wells and septic systems.

The **suburban** classification is intended to identify those properties within the extraterritorial jurisdiction of incorporated municipalities. It is within these suburban areas of the county where most development is occurring, or has reached equilibrium stage. These areas typically include subdivisions and concentrated communities surrounding cities and towns. Pockets of commercial and industrial parcels are also prevalent. Public water is normally available, and in some cases sanitary sewer services exist.

**Urban** districts are those areas within or immediately surrounding cities or towns with a high density of housing, commercial and industrial properties. Land is almost always bought and sold with the intent to develop. Turnover is frequent and development is rapid. Public water and sewer are usually readily available.

**Waterfront** areas either adjoin or have easy access to area waterways. This land is almost always bought and sold with the intent to develop for residential, resort or recreational purposes. Demand is high for both primary and second homes. Turnover is frequent and development is often rapid. Values vary based upon access, depth of water and view. Public water may or may not be available, and in some cases sanitary sewer services exist.

## LAND VALUATION ADJUSTMENTS

The technique of land pricing, as described in other sections of this manual, provides for the development of unit land rates for all classes of real property within a given area or neighborhood. These land rates are developed from verified, recent sales and are expected to reflect market value for various prevalent land types as of the effective valuation date for each given area.

Land rates will be developed for parcels in the following Categories:

*Square Footage*

*Lot*

*Acreage*

It is significant to point out that assigned land rates are based on typical or normal conditions for that class of property and land type within a specific neighborhood or area. It is likely that some number of specific parcels within a neighborhood will have unique factors affecting the value of that land parcel. These "Land Influences Factors" (as illustrated beginning at page 204) may affect the value of a specific parcel beneficially or

detrimentally (i.e., plus or minus compared to the norm for the neighborhood).

Proper appraisal practice indicates that a land rate adjustment or “Land Influence Factor” should be applied by the review appraiser to properly reflect the unique considerations for a parcel with significant physical or economic characteristics, deviating from the normal conditions reflected by the neighborhood land rates.

The primary goal of a Revaluation Program is equalization; it is strongly recommended that users of this manual exercise proper judgment and caution in the application of land influence factors.

**Land Influence Factors***Topography*

This category allows the reviewer's judgment of the degree of difficulty due to poor topography in erecting a suitable improvement on the subject parcel.

Normally if a suitable improvement is present on the subject lot, the topography problem has been corrected. Therefore, an improved lot normally should have no allowance for topography. However, a topography influence may need to be applied in significant cases of unimproved lots or tracts where poor topography represents an actual detriment to the presumed utilization of the parcel.

Topography factors include: irregular land contour, poor drainage, potential subsidence, sub-surface rock ledge, potential erosion, and flood plain areas.

The following is presented as a guide:

**TOPOGRAPHY INFLUENCE FACTOR GUIDE**

	CONDITION	FACTOR
<i>Normal</i>	Problem corrected or not significant	<b>0%</b>
<i>Slight</i>	Problem is a moderate handicap to full utilization of the lot but is correctable. The lot is buildable, but less desirable than typical lots in the area due to topography problem	<b>10% - 25%</b>
<i>Severe</i>	Problem is significant but correctable in that it prevents the development of the lot until the topography problem is corrected	<b>25% - 75%</b>
<i>Unbuildable</i>	The topography problem is so severe it is not economically feasible to develop the lot. Example: a lot that can not pass health and safety perk tests	<b>75% - 90%</b>

*Shape / Size*

The shape/size factor is normally a negative adjustment to account for loss of value due to highly irregular shape or insufficient size for the presumed utilization of the parcel.

Utilizing the shape/size factor is a review judgment and may apply to all land types. The basis for any factor is a negative adjustment reducing the subject lot value to the amount and degree of land utility applicable for the presumed utilization.

The following is presented as a guide:

**SIZE/SHAPE INFLUENCE FACTOR GUIDE**

	CONDITION	FACTOR
<i>Normal</i>	Shape or size is no significant detriment to the presumed utilization of the parcel	<b>0%</b>
<i>Minor</i>	The lot is buildable and/or economically usable for the presumed utilization but irregular shape or insufficient size precludes the full utilization of the parcel	<b>10% - 25%</b>
<i>Major</i>	Irregular shape or insufficient size represents a significant handicap to the presumed utilization and/or development of the land category is restricted to a significant under-improvement or under-utilization of the parcel	<b>25% - 75%</b>
<i>Unbuildable</i>	The shape or size problem is so severe that it renders the land category unusable and/or unbuildable for the presumed utilization. Example: an undersized lot subject to minimum zoning restrictions which effectively prevents any economical utilization	<b>75% - 90%</b>

*Restrictions*

A negative land influence adjustment for restrictions is applicable for cases where the property is subject to a legal or physical restriction to its utilization. Typical examples would include:

*Utility easements, such as power lines and sewer lines*

*Zoning or deed restrictions to the property, limiting the utilization to a less than normal use for typical lots in the neighborhood*

*Physical barriers to the property (bridges, highway medians, fences or abutment)*

The following is presented as a guide:

### **RESTRICTIONS INFLUENCE FACTOR GUIDE**

	CONDITION	FACTOR
<i>Normal</i>	No significant restriction to the property	<b>0%</b>
<i>Minor</i>	A restriction of moderate significance – legal or physical – exists which causes the property to be less desirable than similar lots in the area which are not subject to this restriction but does not prevent utilization of the property for the presumed use	<b>10% - 25%</b>
<i>Major</i>	A restriction of major significance – legal or physical – exists which causes the property to be restricted to a less than full utilization compared to similar lots in the area, which are not subject to this restriction. Example: power lines bisecting a lot which prevent the building of a dwelling but would be suitable for a garage or secondary structure	<b>25% - 75%</b>
<i>Unbuildable</i>	A restriction of very severe impact – legal or physical, exists which causes the property to be rendered virtually unusable for any significant utilization compared to similar lots in the area which are not subject to this restriction. Example: a lot rendered inaccessible by a highway right-of-way	<b>50% - 90%</b>

*Economic Mis-Improvement*

This category is reserved as a reviewer's judgment of the comparative loss of value land (either under-improvement or over-improvement). In essence, this judgment is expressing the appraiser's opinion that the existing structure represents an encumbrance to the full utilization of the land.

The application of a mis-improvement factor for residential/agricultural property is possible but very rare. Most instances occur in commercial or industrial situations where market evidence indicates a different economic utilization of the land than the current utilization. It is important to recognize in the application of economic mis-improvement factors that the land is presumed to be valued on the bases of typical "highest and best" utilization and the existing structure is non-contributory to this most economical utilization. Obviously, vacant tracts are not encumbered by any structure, and are not subject to economic mis-improvement factors. Further, the appraiser should recognize that the economic mis-improvement condition is "curable" (i.e., if the structure is removed, the previously applied economic mis-improvement factor is normally no longer applicable).

Typical examples include:

*Dwellings in areas converting to commercial development*

*An old warehouse located in an area where market evidence indicates modern office complex development*

**MIS-IMPROVEMENT INFLUENCE FACTOR GUIDE**

	CONDITION	FACTOR
<i>Normal</i>	The property is unimproved (no major structures present) or the existing structure is consistent with the economical utilization of the land	<b>0%</b>
<i>Minor</i>	The land is encumbered with a structure that represents an economic mis-improvement, and the structure has an assigned value of 25% to 50% of the land value at highest and best use	<b>25% - 50%</b>
<i>Major</i>	The land is encumbered with a structure that represents an economic mis-improvement and the structure has an assigned value of 50% or more of the land value at the highest and best use	<b>50% - 75%</b>

*Corner and/or Alley Influence*

This category is reserved for the recognition of the enhancement in land value attributable to the potential utilization of a corner lot, over and above the value of an otherwise comparable interior site. The enhancement due to the presence of a rear or side alley is normally common to all lots in a given area or block. Therefore, recommended procedure for enhancement due to alley influence, if any, is to consider this factor in the land rate itself.

The amount of enhancement, if any, to a corner lot must be based on the individual merits of each corner location.

Normally, corner influence is not applicable to residential/agricultural property. Corner influence factors should be applied to only those cases of commercial or industrial property where the corner is an actual enhancement to the land.

The following is presented as a guide:

**CORNER INFLUENCE FACTOR GUIDE**

	CONDITION	FACTOR
<i>Normal</i>	The presence of a corner or alley has no significant enhancement or impact to the property	<b>0%</b>
<i>Minor</i>	The lot value is moderately enhanced by the presence of corner or alley exposure. Example: Intersection of two secondary streets or a major arterial street and a secondary street	<b>+10%-25%</b>
<i>Major</i>	The lot value is significantly enhanced by the presence of corner or alley exposure. Example: the intersection of two major arterial streets	<b>+25%-100%</b>

*View Influence*

This factor is normally a positive adjustment for lots or parcels where the land value is significantly enhanced by the presence of a scenic or waterfront view when compared to similar lots in the area where no significant view is present. This factor also applies to golf course lots.

It is highly recommended that the appraiser exercise due caution in the application of view influence. It is useful to remember that while the subject may have an appealing view, if this condition is common to most parcels in the area, then comparatively there is probably no real view enhancement. The appraiser should also consider the permanency of the view (i.e., the probability of potential obstruction).

The following is presented as a guide:

**VIEW INFLUENCE FACTOR GUIDE**

	CONDITION	FACTOR
<i>Normal</i>	The view is considered common to the area, and market evidence indicates no actual value enhancement exists	<b>0%</b>
<i>Minor</i>	The subject property has a moderate enhancement due to an appealing view, and market evidence supports value enhancement	<b>+10% to 25%</b>
<i>Major</i>	The subject property has a significant enhancement due to an appealing view. Further, the view enhancement is not common to similar lots in the area and there is little or no potential for obstruction of the view by other structures	<b>+25% to 100%</b>
<i>Negative</i>	For properties with less than normal or typical views, the appraiser should apply negative factors to the affected properties as indicated by market analysis and evidence	<b>-10% to 75%</b>

## CONSERVATION EASEMENTS

A conservation easement is a voluntary restriction of one's real property rights in favor of a tax-exempt conservancy organization for the purpose of preserving land from development and for future benefit as scenic areas, wildlife habitat, and open space for a sustainable natural environment.

Due to the uniqueness of both land and property owner, it is necessary to tailor a conservation easement equally as unique. Each conservation easement must be reviewed and analyzed to determine the relinquished rights as well as the allowable exceptions in order to equitably reflect the value for the property.

The Bladen County Tax Office, with the support of the North Carolina Department of Revenue – Property Tax Division, has decided to consider the issue of conservation easements on an individual case basis working through the appraisal process, notifying the property owner of the results of the assessment and allowing an adequate period of time for both discussion and appeal of the valuation.

All pertinent data that might be shared by either the conservation easement grantor or grantee will be considered by the Bladen County Tax Office in the appraisal of any property encumbered by a conservation easement.

§ 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.

**Base Rate Land Valuation Technique**

The Base Rate Land Valuation Technique allows the appraiser to establish land rates using either a price per acre, price per square foot or price per lot for each parcel located within an individual neighborhood unit. This method also allows the appraiser to develop base land sizes for each land segment type within the neighborhood.

Incremental and decremental rates are developed as a percentage of the Base Land Rates to allow for size adjustments for those parcels which are either smaller or larger than the indicated base sizes established for the neighborhood.

**PRIVATE CEMETARY OR BURIAL GROUND PROPERTY**

Bladen County has numerous private cemeteries that date to the late eighteenth century. Denotation and preservation of these cemeteries is an important and on-going effort on the part of many interested individuals and organizations.

According to North Carolina General Statute 105-278.2(a), real property set apart for burial purposes shall be exempt from taxation unless it is owned and held for purposes of sale or rental or sale of burial rights therein.

It is the intention of the Bladen County Tax Department to cooperate with any individual or organization in any attempt to recognize and exclude from taxation acreage that can be identified as a family or community burial ground that may be a portion of a privately owned and otherwise taxable parcel of land. It is not the intention of the Bladen County Tax Department to become involved in any issue of ownership of such property or to attempt to satisfy any disputes that may arise between or among individuals or organizations that may be party to any such contentions.

Private cemeteries or burial grounds shall be listed as a separate land entry on the parcel record for the property where the cemetery or burial ground is located. The area shall be identified as to actual size as accurately as possible. For those cemeteries or burial grounds that cannot be accurately identified, the Bladen County Tax Department shall consider an area not to exceed one tenth (.10) acres in size to attribute to said cemetery or burial ground.

Note: Bladen County Tax Office will add or delete parcels from the cemetery grouping as necessary.

**COMMERCIAL / INDUSTRIAL BASE LAND VALUE RANGES****APARTMENT LAND RATES PER ACRE**

<i>Poor</i>	<i>Fair</i>	<i>Average</i>	<i>Good</i>	<i>Excellent</i>
\$10,000 to \$30,000	\$20,000 to \$40,000	\$30,000 to \$60,000	\$50,000 to \$75,000	\$60,000 to \$150,000

**COMMERCIAL LAND RATES PER ACRE**

<i>Poor</i>	<i>Fair</i>	<i>Average</i>	<i>Good</i>	<i>Excellent</i>
\$5,000 to \$20,000	\$20,000 to \$40,000	\$25,000 to \$100,000	\$50,000 to \$250,000	\$200,000 to \$750,000

**INDUSTRIAL LAND RATES PER ACRE**

<i>Poor</i>	<i>Fair</i>	<i>Average</i>	<i>Good</i>	<i>Excellent</i>
\$5,000 to \$20,000	\$20,000 to \$40,000	\$25,000 to \$100,000	\$50,000 to \$150,000	\$100,000 to \$450,000

**BUSINESS PARK LAND RATES PER ACRE**

<i>Poor</i>	<i>Fair</i>	<i>Average</i>	<i>Good</i>	<i>Excellent</i>
\$10,000 to \$40,000	\$40,000 to \$80,000	\$80,000 to \$150,000	\$150,000 to \$250,000	\$250,000 to \$400,000

**COMMERCIAL / INDUSTRIAL BASE LAND VALUE RANGES  
(CONTINUED)**

**COMMERCIAL LAND RATES PER SQUARE FOOT**

<i>Poor</i>	<i>Fair</i>	<i>Average</i>	<i>Good</i>	<i>Excellent</i>
\$0.10 to \$0.25	\$0.25 to \$0.50	\$0.50 to \$5.00	\$4.50 to \$12.50	\$10.00 to \$20.00

**INDUSTRIAL LAND RATES PER SQUARE FOOT**

<i>Poor</i>	<i>Fair</i>	<i>Average</i>	<i>Good</i>	<i>Excellent</i>
\$0.10 to \$0.25	\$0.25 to \$0.50	\$0.50 to \$1.50	\$1.00 to \$2.50	\$1.75 to \$5.00

**BUSINESS PARK LAND RATES PER SQUARE FOOT**

<i>Poor</i>	<i>Fair</i>	<i>Average</i>	<i>Good</i>	<i>Excellent</i>
\$0.25 to \$0.75	\$0.50 to \$1.50	\$1.00 to \$5.00	\$4.50 to \$12.50	\$10.50 to \$20.00

DEPTH FACTOR TABLES

Depth	FF50	FF75	FF100	FF125	FF150	FF175	FF200	FF225	FF250	FF300	FF400	FF800	Depth
1	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	1
5	0.0500	0.0250	0.0500	0.0400	0.0350	0.0300	0.0250	0.0250	0.0250	0.0250	0.0250	0.0250	5
10	0.1000	0.0500	0.1000	0.0800	0.0700	0.0600	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	10
15	0.2000	0.1375	0.1500	0.1200	0.1050	0.0900	0.0750	0.0750	0.0750	0.1000	0.0750	0.0750	15
20	0.4000	0.2250	0.2000	0.1600	0.1400	0.1200	0.1000	0.1000	0.1000	0.1500	0.1000	0.1000	20
25	0.6000	0.3125	0.2500	0.2000	0.1750	0.1500	0.1250	0.1250	0.1250	0.2000	0.1250	0.1250	25
30	0.7500	0.4000	0.3000	0.2400	0.2100	0.1800	0.1500	0.1500	0.1500	0.2500	0.1500	0.1500	30
35	0.9000	0.5500	0.4000	0.3200	0.2700	0.2250	0.1750	0.1750	0.1750	0.2778	0.2000	0.1750	35
40	0.9500	0.7000	0.5000	0.4000	0.3500	0.3000	0.2188	0.2000	0.2000	0.3056	0.2500	0.2000	40
45	0.9900	0.7500	0.6000	0.4750	0.4400	0.3600	0.2625	0.2250	0.2250	0.3333	0.2708	0.2250	45
50	1.0000	0.8000	0.7000	0.5500	0.5000	0.4000	0.3063	0.2500	0.2500	0.3611	0.2917	0.2500	50
55	1.0100	0.8500	0.7400	0.5900	0.5300	0.4500	0.3500	0.2900	0.3000	0.3889	0.3125	0.2750	55
60	1.0500	0.9000	0.7800	0.6300	0.5600	0.4900	0.4000	0.3300	0.3500	0.4167	0.3333	0.3000	60
65	1.1000	0.9500	0.8200	0.6700	0.6000	0.5300	0.4667	0.3700	0.4000	0.4444	0.3542	0.3250	65
70	1.1500	0.9900	0.8600	0.7100	0.6250	0.5750	0.5333	0.4100	0.4500	0.4722	0.3750	0.3500	70
75	1.2500	1.0000	0.9000	0.7500	0.6500	0.6150	0.6000	0.4500	0.5000	0.5000	0.3958	0.3750	75
80	1.2800	1.0100	0.9200	0.7900	0.6900	0.6500	0.6300	0.4800	0.5200	0.5166	0.4167	0.4000	80
85	1.3100	1.0500	0.9400	0.8300	0.7300	0.6875	0.6600	0.5100	0.5400	0.5333	0.4375	0.4250	85
90	1.3400	1.0900	0.9600	0.8700	0.7700	0.7250	0.6900	0.5400	0.5600	0.5500	0.4583	0.4500	90
95	1.3700	1.1200	0.9800	0.9100	0.8100	0.7625	0.7200	0.5700	0.5800	0.5666	0.4792	0.4750	95
100	1.4000	1.1500	1.0000	0.9500	0.8500	0.8000	0.7500	0.6000	0.6000	0.5833	0.5000	0.5000	100
110	1.4600	1.2000	1.0400	0.9900	0.8900	0.8250	0.7700	0.6300	0.6300	0.6167	0.5250	0.5100	110
120	1.5200	1.2500	1.0800	1.0000	0.9300	0.8500	0.7900	0.6600	0.6600	0.6500	0.5500	0.5200	120
130	1.5800	1.3000	1.1200	1.0000	0.9700	0.8750	0.8100	0.6900	0.6900	0.6833	0.5750	0.5300	130
140	1.6400	1.3500	1.1600	1.0100	0.9900	0.9000	0.8300	0.7200	0.7200	0.7167	0.6000	0.5400	140
150	1.7000	1.4000	1.2000	1.0400	1.0000	0.9500	0.8500	0.7500	0.7500	0.7500	0.6250	0.5500	150
160	1.7600	1.4200	1.2200	1.0750	1.0100	0.9900	0.8800	0.8000	0.7900	0.7722	0.6500	0.5600	160
170	1.8200	1.4400	1.2400	1.1000	1.0250	1.0000	0.9100	0.8500	0.8300	0.7944	0.6750	0.5700	170
180	1.8800	1.4600	1.2600	1.1400	1.0675	1.0000	0.9500	0.9500	0.8700	0.8167	0.7000	0.5800	180
190	1.9400	1.4800	1.2800	1.1900	1.1200	1.0100	0.9900	0.9500	0.9100	0.8389	0.7250	0.5900	190
200	2.0000	1.5000	1.3000	1.2400	1.1600	1.0500	1.0000	0.9800	0.9500	0.8611	0.7500	0.6000	200
220		1.5500	1.3400	1.2750	1.2000	1.1000	1.0100	1.0000	0.9750	0.9055	0.7750	0.6200	220
240		1.6000	1.3800	1.3100	1.2250	1.1500	1.0500	1.0100	1.0000	0.9500	0.8000	0.6400	240
260		1.6500	1.4200	1.3400	1.2500	1.2000	1.0900	1.0300	1.0000	0.9700	0.8250	0.6600	260
280		1.7000	1.4600	1.3700	1.2750	1.2250	1.1300	1.0600	1.0250	0.9900	0.8500	0.6800	280
300		1.7500	1.5000	1.4000	1.3000	1.2500	1.1700	1.0900	1.0500	1.0000	0.8750	0.7000	300
320			1.5200	1.4250	1.3300	1.2700	1.2000	1.1150	1.0750	1.0100	0.9000	0.7200	320
340			1.5400	1.4500	1.3600	1.3000	1.2300	1.1400	1.1000	1.0300	0.9250	0.7400	340
360			1.5600	1.4750	1.3900	1.3667	1.2600	1.1625	1.1250	1.0500	0.9500	0.7600	360
380			1.5800	1.5000	1.4200	1.4333	1.2900	1.1900	1.1500	1.1000	0.9750	0.7800	380
400			1.6000	1.5500	1.4500	1.5000	1.3200	1.2250	1.2000	1.1500	1.0000	0.8000	400
500				1.6000	1.5250	1.5333	1.3900	1.3000	1.2500	1.2000	1.0625	0.8500	500
600					1.6000	1.5667	1.4600	1.3700	1.3000	1.2500	1.1250	0.9000	600
700						1.6000	1.5300	1.4350	1.3500	1.2917	1.1875	0.9500	700
800							1.6000	1.5000	1.4000	1.3333	1.2500	1.0000	800
900								1.5500	1.4500	1.3750	1.2813	1.0500	900
1000									1.5000	1.4167	1.3125	1.1000	1000
1200										1.5000	1.3750	1.1500	1200
1400											1.4375	1.2000	1400
1600											1.5000	1.2500	1600
1800												1.3056	1800
2000												1.3611	2000
2500	2.0000	1.7500	1.6000	1.6000	1.6000	1.6000	1.6000	1.5500	1.5000	1.5000	1.5000	1.5000	2500

### SIZE ADJUSTMENTS FOR RURAL ACREAGE

<u>Acres</u>	<u>%</u>	<u>Acres</u>	<u>%</u>	<u>Acres</u>	<u>%</u>
0.01 – 0.30	250%	4.61 – 4.70	142%	17.01 – 18.00	103%
0.31 – 0.49	250%	4.71 – 4.80	141%	18.01 – 19.00	102%
0.50 – 1.00	250%	4.81 – 4.90	140%	19.01 – 20.00	101%
1.01 – 1.10	240%	4.91 – 5.00	139%	20.01 – 25.00	100%
1.11 – 1.20	230%	5.01 – 5.10	138%	25.01 – 30.00	99%
1.21 – 1.30	220%	5.11 – 5.20	137%	30.01 – 35.00	98%
1.31 – 1.40	210%	5.21 – 5.30	136%	35.01 – 40.00	97%
1.41 – 1.50	200%	5.31 – 5.40	135%	40.01 – 45.00	96%
1.51 – 1.60	195%	5.41 – 5.60	134%	45.01 – 50.00	95%
1.61 – 1.70	190%	5.61 – 5.80	133%	50.01 – 55.00	94%
1.71 – 1.80	186%	5.81 – 6.00	132%	55.01 – 60.00	93%
1.81 – 1.90	183%	6.01 – 6.20	131%	60.01 – 65.00	92%
1.91 – 2.00	180%	6.21 – 6.40	130%	65.01 – 70.00	91%
2.01 – 2.10	178%	6.41 – 6.60	129%	70.01 – 75.00	90%
2.11 – 2.20	176%	6.61 – 6.80	128%	75.01 – 80.00	89%
2.21 – 2.30	174%	6.81 – 7.00	127%	80.01 – 85.00	88%
2.31 – 2.40	172%	7.01 – 7.30	126%	85.01 – 90.00	87%
2.41 – 2.50	170%	7.31 – 7.60	125%	90.01 – 95.00	86%
2.51 – 2.60	168%	7.61 – 7.90	124%	95.01 – 100.00	85%
2.61 – 2.70	166%	7.91 – 8.20	123%	100.01 – 110.00	84%
2.71 – 2.80	164%	8.21 – 8.50	122%	110.01 – 120.00	83%
2.81 – 2.90	162%	8.51 – 8.80	121%	120.01 – 130.00	82%
2.91 – 3.00	160%	8.81 – 9.10	120%	130.01 – 140.00	81%
3.01 – 3.10	158%	9.11 – 9.40	119%	140.01 – 150.00	80%
3.11 – 3.20	157%	9.41 – 9.70	118%	150.01 – 160.00	79%
3.21 – 3.30	156%	9.71 – 10.00	117%	160.01 – 170.00	78%
3.31 – 3.40	155%	10.01 – 10.50	116%	170.01 – 180.00	77%
3.41 – 3.50	154%	10.51 – 11.00	115%	180.01 – 190.00	76%
3.51 – 3.60	153%	11.01 – 11.50	114%	190.01 – 200.00	75%
3.61 – 3.70	152%	11.51 – 12.00	113%	200.01 – 210.00	74%
3.71 – 3.80	151%	12.01 – 12.50	112%	210.01 – 220.00	73%
3.81 – 3.90	150%	12.51 – 13.00	111%	220.01 – 230.00	72%
3.91 – 4.00	149%	13.01 – 13.50	110%	230.01 – 240.00	71%
4.01 – 4.10	148%	13.51 – 14.00	109%	240.01 – 250.00	70%
4.11 – 4.20	147%	14.01 – 14.50	108%	250.01 – 500.00	65%
4.21 – 4.30	146%	14.51 – 15.00	107%	500.01 – 750.00	60%
4.31 – 4.40	145%	15.01 – 15.50	106%	750.01 – 1000.00	55%
4.41 – 4.50	144%	15.51 – 16.00	105%	1000.01 - up	50%
4.51 – 4.60	143%	16.01 – 17.00	104%		

**LAND SIZE ADJUSTMENTS (SITE: ACRES)**

<u>Size</u>	<u>%</u>	<u>Size</u>	<u>%</u>	<u>Size</u>	<u>%</u>
0.001 – 0.050	300	0.331 – 0.350	180	0.731 – 0.750	125
0.051 – 0.080	288	0.351 – 0.380	175	0.751 – 0.780	122
0.081 – 0.100	275	0.381 – 0.400	170	0.781 – 0.800	120
0.101 – 0.130	263	0.401 – 0.430	165	0.801 – 0.830	117
0.131 – 0.150	250	0.431 – 0.450	160	0.831 – 0.850	115
0.151 – 0.180	238	0.451 – 0.480	155	0.851 – 0.880	112
0.181 – 0.200	225	0.481 – 0.500	150	0.881 – 0.900	110
0.201 – 0.231	213	0.501 – 0.550	145	0.901 – 0.930	107
0.231 – 0.250	200	0.551 – 0.600	140	0.931 – 0.950	105
0.251 – 0.280	195	0.601 – 0.650	135	0.951 – 0.980	102
0.281 – 0.300	190	0.651 – 0.700	130	0.981 - up	100
0.301 – 0.330	185	0.701 – 0.730	127		

**LAND SIZE ADJUSTMENTS (LOT)**

<u>Size</u>	<u>%</u>	<u>Size</u>	<u>%</u>	<u>Size</u>	<u>%</u>
0.001 – 0.200	300	0.901 – 1.00	100	3.001 – 3.250	67
0.201 – 0.300	225	1.001 – 1.250	90	3.251 – 3.500	66
0.301 – 0.400	175	1.251 – 1.500	85	3.751 – 3.750	65
0.401 – 0.500	150	1.501 – 1.750	80	4.001 – 4.000	64
0.501 – 0.600	135	1.751 – 2.000	75	4.251 – 4.250	63
0.601 – 0.700	123	2.001 – 2.250	73	4.501 – 4.500	62
0.701 – 0.800	112	2.251 – 2.500	70	4.751 – 4.750	61
0.801 – 0.900	105	2.501 – 2.750	69	4.751 - up	60
		2.751 – 3.000	68		



## Schedule of Values, Standards, and Rules

# Section 8 Depreciation



**Bladen County, North Carolina**

**Effective January 1, 2015**

Depreciation, as discussed in this manual, is the loss of value from any and all reasons. The appraiser is expected to recognize and estimate the extent of this loss for each property that he appraises. There are primarily three factors which contribute to depreciation: physical deterioration, functional obsolescence, and economic obsolescence.

*Physical deterioration* results from the passing of time, the action of the elements, and from general wear and tear. The appraiser must use his judgment in making an opinion of how much loss in value the property has accrued through physical depreciation. Ordinarily, physical depreciation occurs slowly. It begins at the start of construction and continues until the building has no useful life remaining. The physical life of a building depends upon the amount and quality of maintenance, as well as the quality of workmanship and materials used in the construction. Buildings constructed to strict specifications with good quality materials will have a much longer useful life than one built without good workmanship or materials.

*Functional obsolescence* results from the inability of the property to be adequately utilized for the purpose now being employed. Examples of functional depreciation include inadequacy, over-capacity, changes in the artistic design of surrounding properties, architecture, type and sizes of rooms, layout and design, traffic patterns, performance standards, etc. Functional obsolescence results from factors **within** the property itself.

*Economic depreciation* results from the impairment of useful life or desirability arising from sources **outside** the property, such as environmental changes or economic forces which affect supply and demand relationships in the open market. Examples of economic obsolescence include neighborhood changes, zoning changes, encroachments, lack of utilities, and natural hazards.

Depreciation schedules were established on a useful life basis. It is impossible to design tables to meet potential depreciation impacts correlating with each unique improvement. The appraiser should use the tables and schedules found in each section of this manual as a guide in making a decision for each property. The calculation for depreciation is:

$$\text{Total Replacement Cost New} \times \text{Depreciation Factor} \times \text{Condition Factor} = \text{Value}$$

*Effective age* of a property is its age as compared with other properties performing like functions. It is the actual age, less the age which has been taken off by structural reconstruction, correction of functional inadequacies, modernization of equipment, etc. It is an age which reflects a true remaining life for the property, taking into account the typical life expectancy of buildings of its class and usage. Effective age can fluctuate year by year or remain somewhat stable in the absence of any major renewals or excessive deterioration.

**PHYSICAL DEPRECIATION TABLES – RESIDENTIAL****Table ‘A’**

Age	Year Built	QUALITY GRADE					
		X	A	B	C	D	E
0	2015	0%	0%	0%	0%	0%	0%
1	2014	0	0	0	1	1	2
2	2013	1	1	1	2	2	4
3	2012	1	2	2	2	3	5
4	2011	2	2	3	3	4	7
5	2010	2	3	4	4	6	9
6	2009	3	4	4	5	7	11
7	2008	4	5	5	6	8	13
8	2007	4	5	6	7	10	15
9	2006	5	6	7	8	11	17
10	2005	5	7	8	9	13	20
11	2004	6	8	9	10	14	22
12	2003	7	9	10	11	15	24
13	2002	8	10	11	12	17	26
14	2001	8	10	12	13	19	29
15	2000	9	11	12	15	21	32
16	1999	10	12	13	16	23	34
17	1998	10	13	15	17	25	37
18	1997	11	14	16	19	27	40
19	1996	12	15	17	20	28	43
20	1995	13	16	18	21	30	45
21	1994	13	17	19	22	32	48
22	1993	14	17	20	23	34	51
23	1992	15	19	21	24	36	54
24	1991	16	20	23	26	38	57
25	1990	17	21	24	27	40	60
26	1989	18	22	25	29	43	62
27	1988	19	23	26	31	45	65
28	1987	20	24	28	33	47	68
29	1986	21	26	29	34	49	70
30	1985	22	27	31	36	52	71
31	1984	23	28	32	38	54	72
32	1983	24	29	34	40	56	74
33	1982	25	31	35	42	58	75
34	1981	27	32	37	44	60	77
35	1980	28	34	38	45	62	78
36	1979	29	35	40	47	65	79
37	1978	30	37	41	49	67	79
38	1977	32	38	43	51	69	80
39	1976	33	40	45	53	70	-
40	1975	35	41	47	55	72	-
41	1974	36	43	49	57	73	-
42	1973	38	45	51	59	75	-
43	1972	39	47	52	60	76	-

44	1971	41%	48%	54%	62%	77%	-
45	1970	42	50	55	63	78	-
46	1969	44	51	57	65	79	-
47	1968	45	53	59	66	79	-
48	1967	46	54	61	68	80	-
49	1966	47	56	62	69	-	-
50	1965	49	57	64	71	-	-
51	1964	51	58	65	72	-	-
52	1963	52	60	66	73	-	-
53	1962	54	61	68	75	-	-
54	1961	55	63	69	76	-	-
55	1960	57	64	70	77	-	-
56	1959	58	65	71	78	-	-
57	1958	60	66	72	78	-	-
58	1957	61	67	72	79	-	-
59	1956	63	68	73	79	-	-
60	1955	64	69	74	80	-	-
61	1954	65	70	75	-	-	-
62	1953	67	71	76	-	-	-
63	1952	68	72	76	-	-	-
64	1951	70	73	77	-	-	-
65	1950	71	74	78	-	-	-
70	1945	76	78	80	-	-	-
75	1940	80	80	-	-	-	-
999	1800	80	80	80	80	80	80
<b>Age</b>	<b>Year Built</b>	<b>X</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>

The above table is representative of typical depreciation rates for structures in ‘average’ condition for their physical age. Multipliers should be applied to the depreciation rates indicated above on the following basis for other conditions: Excellent = 0.25; Very Good = 0.50; Good = 0.75; Fair = 1.75; Poor = 3.0; Very Poor = 5.0. This difference can also be otherwise achieved by adjusting the effective age of the improvements.

Example A: A 34-year old, Grade B quality home in ‘very good’ condition (resulting in a lower *effective age*) would realize a depreciation rate of 16% (32% x 0.5).

Example B: A 17-year old, Grade D quality home in ‘fair’ condition (resulting in a higher *effective age*) would realize a physical depreciation rate of 30% (17% x 1.75).

Unless the residence is no longer suitable for habitation, physical depreciation will not exceed 80% of Replacement Cost New for the dwelling.

Table 'B' (Manufactured)

Age	Year Built	Quality Grade				
		A	B	C	D	E
0	2015	0%	0%	0%	0%	0%
1	2014	1	1	1	2	3
2	2013	2	2	3	5	6
3	2012	3	3	4	7	9
4	2011	4	4	4	9	12
5	2010	5	5	6	11	15
6	2009	6	7	8	14	18
7	2008	7	8	9	16	21
8	2007	8	9	11	18	24
9	2006	10	11	12	21	27
10	2005	11	13	14	23	30
11	2004	12	14	16	25	33
12	2003	13	16	18	27	36
13	2002	15	17	19	30	39
14	2001	16	19	21	32	42
15	2000	17	20	23	34	45
16	1999	19	22	25	37	48
17	1998	20	23	26	39	51
18	1997	22	25	28	41	54
19	1996	24	27	30	43	57
20	1995	25	29	32	46	60
21	1994	26	30	34	48	63
22	1993	28	33	37	50	66
23	1992	29	34	39	53	69
24	1991	31	36	41	55	72
25	1990	33	39	44	57	75
26	1989	35	41	46	59	78
27	1988	37	43	48	62	81
28	1987	39	45	50	64	84
29	1986	41	47	52	66	87
30	1985	44	49	54	69	90
31	1984	46	51	56	71	-
32	1983	47	53	59	73	-
33	1982	49	55	60	75	-
34	1981	51	57	62	78	-
35	1980	53	58	63	80	-
36	1979	55	60	65	-	-
37	1978	57	62	66	-	-
38	1977	58	63	68	-	-
39	1976	59	64	69	-	-
40	1975	60	65	70	-	-
41	1974	61	66	-	-	-

42	1973	62	67	-	-	-
43	1972	63	68	-	-	-
44	1971	64	69	-	-	-
45	1970	65	70	-	-	-
46	1969	66	-	-	-	-
47	1968	67	-	-	-	-
48	1967	68	-	-	-	-
49	1966	69	-	-	-	-
50	1965	70	70	70	70	70
<b>Age</b>	<b>Year Built</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>

As with Residential Table ‘A,’ the rates expressed above represent typical depreciation for ‘average’ condition dwellings. Multipliers should be applied to the depreciation rates indicated above on the following basis for other conditions: Excellent = 0.25; Very Good = 0.50; Good = 0.75; Fair = 1.75; Poor = 3.0; Very Poor = 5.0. In lieu of these adjustments – and assuming that the appraiser believes that he has sufficient evidence to ascertain the condition of all systems – a change to the improvement’s effective age may be made.

Example A: A ten-year old, Grade ‘D’ manufactured doublewide in ‘fair’ condition would realize a depreciation rate of 35% (20% x 1.75).

Example B: A 20-year old, Grade ‘B’ manufactured doublewide in ‘good’ condition would realize a depreciation rate of 22% (29% x 0.75).

Unless the residence is no longer suitable for habitation, physical depreciation will not exceed 70% of Replacement Cost New for a dwelling graded ‘average’ or above.

**PHYSICAL DEPRECIATION TABLES – COMMERCIAL & INDUSTRIAL****Table ‘C’**

Age	Year	Typical Life Expectancy (in years)									
		70	60	55	50	45	40	35	30	25	20
0	2015	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
1	2014	0	0	0	0	1	1	1	2	2	3
2	2013	0	1	1	1	1	2	2	3	5	7
3	2012	0	1	1	1	2	3	4	5	7	10
4	2011	1	1	1	2	3	4	5	7	10	14
5	2010	1	1	2	3	4	5	6	9	13	18
6	2009	1	2	2	3	4	6	8	11	16	22
7	2008	1	2	3	4	5	7	10	14	19	26
8	2007	1	2	3	5	6	8	11	16	22	30
9	2006	2	3	4	5	7	10	13	18	25	35
10	2005	2	3	4	6	8	11	15	21	29	40
11	2004	2	4	5	7	9	13	17	24	32	45
12	2003	2	4	6	8	10	14	19	26	36	50
13	2002	2	5	6	9	12	16	22	29	40	55
14	2001	3	5	7	10	13	18	24	32	44	60
15	2000	3	6	8	11	14	20	26	35	48	65
16	1999	3	7	9	12	16	22	28	39	52	69
17	1998	4	7	10	13	18	24	31	42	56	73
18	1997	4	8	11	14	19	26	34	46	60	76
19	1996	4	9	12	16	21	28	36	49	64	78
20	1995	5	9	13	17	23	30	39	53	68	79
21	1994	5	10	14	18	25	32	42	57	71	80
22	1993	6	11	15	20	27	35	45	60	73	-
23	1992	6	12	16	21	29	37	48	63	75	-
24	1991	7	13	17	23	31	40	52	66	77	-
25	1990	7	14	19	25	33	43	55	69	79	-
26	1989	8	15	20	27	35	46	58	72	80	-
27	1988	9	16	21	28	37	49	61	75	-	-
28	1987	9	17	23	30	40	52	64	77	-	-
29	1986	10	18	24	32	42	54	68	78	-	-
30	1985	11	20	26	34	45	57	72	79	-	-
32	1983	13	22	30	38	50	62	75	80	-	-
34	1981	15	25	34	43	55	68	77	-	-	-
36	1979	17	28	38	48	61	73	79	-	-	-
38	1977	19	32	42	53	67	77	80	-	-	-
40	1975	21	35	46	59	72	79	-	-	-	-
42	1973	25	39	51	65	75	80	-	-	-	-
44	1971	28	43	56	70	77	-	-	-	-	-
46	1969	31	48	60	74	78	-	-	-	-	-
48	1967	34	53	64	77	79	-	-	-	-	-

50	1965	38%	58%	68%	79%	80%	-	-	-	-	-
55	1960	48	67	75	80	-	-	-	-	-	-
60	1955	57	74	78	-	-	-	-	-	-	-
65	1950	65	78	80	-	-	-	-	-	-	-
70	1945	71	80	-	-	-	-	-	-	-	-
75	1940	75	-	-	-	-	-	-	-	-	-
80	1935	78	-	-	-	-	-	-	-	-	-
<b>Age</b>	<b>Year</b>	<b>70</b>	<b>60</b>	<b>55</b>	<b>50</b>	<b>45</b>	<b>40</b>	<b>35</b>	<b>30</b>	<b>25</b>	<b>20</b>
<b>Typical Life Expectancy (in years)</b>											

The above table is representative of typical depreciation rates for structures in ‘average’ condition for their physical age. Multipliers should be applied to the depreciation rates indicated above on the following basis for other conditions: Excellent = 0.25; Very Good = 0.50; Good = 0.75; Fair = 1.75; Poor = 3.0; Very Poor = 5.0. In lieu of these adjustments – and assuming that the appraiser believes that he has sufficient evidence to ascertain the condition of all systems – a change to the improvement’s effective age may be made.

**Unless the improvement is no longer suitable for utility, physical depreciation will not exceed 80% of Replacement Cost New for the improvement.**

## PERCENT GOOD SCHEDULES AND TABLES

It is often advisable to develop schedules and tables to be used as a guide for the appraiser to determine value. The use of such tables is especially applicable in mass appraisals for tax equalization purposes where it is essential to establish and maintain uniformity. Percent Good tables, however, based on actual age alone are impractical. Remodeling, for instance, has the effect of prolonging the remaining life of a building, thus making its effective age considerably different than its actual age. Consideration must be given to all the factors operating to influence the overall condition, desirability, and degree of usefulness of each structure.

### PERCENT GOOD (DWELLINGS)

#### *CDU RATING SYSTEM*

As houses grow older, they wear out; they become less desirable, less useful. This universal decline in value is called depreciation, and appraisers are required to determine the degree of this loss in each property they examine. If all houses deteriorated at the same rate, this decline in value would be a simple function of the age of the structure - a certain percentage per year. However, houses depreciate at varying rates depending on a score or so of variables.

Every building is acted upon by two value reducing forces. One tends to shorten its physical life; the other shortens its economic life. Both forces act concurrently, overlap, and affect each other. A new house, or any type of structure for that matter, has its greatest value at the moment of completion. Its expectancy of life - both physical and economic - is longest on the day the key is handed over by the builder. The building is then most desirable and most useful. The future benefits which the occupant may expect to enjoy are at the maximum. From that day forward, however, decay and wear and tear act to lessen the value of the structure by curtailing its remaining capacity for use.

At the same time the house is "wearing out," it is also "going out of style." It is becoming less desirable. It is progressively becoming less useful, both from the effect of forces within the property (obsolescence), and outside of it as well (encroachment of undesirable influences such as less desirable property uses).

Neither physical decline nor functional loss is constant in their action. Deterioration is a relatively steady process offset periodically by maintenance. Worn-out elements of the building are repaired or replaced at intervals, depending upon the policy of the owner. Cheaper houses generally deteriorate faster than better ones. Obsolescence and encroachment may come slowly, or happen almost overnight. The forces which cause both deterioration and functional/economic depreciation may act and often do act simultaneously, but they are not necessarily related. A house may decline in physical condition, and yet throughout its entire life remain relatively functional.

Obviously enough, the age of a house remains an important factor in estimating accrued

depreciation. A certain number of houses will receive “normal” maintenance and will experience “average” economic loss due to obsolescence and functional depreciation. These buildings will depreciate at an average rate as they grow older.

Other houses will lose value at lesser or more rapid rates. CDU (Condition-Desirability-Usefulness) Ratings provide a logical reasoning process, by means of which normal age depreciation may be modified according to the appraiser's best determination of the relative loss of value in a structure, as compared with the average loss that might be expected. Thus, the age of a dwelling is an unreliable indicator of the degree of depreciation from its cost new. For houses depreciate not merely because they grow older - but because they wear out and become less desirable and less useful from a variety of causes.

To assist the appraiser in establishing the CDU Ratings of buildings, several simple classifications have been established. These classifications or ratings are entirely natural, and will fit the normal impressions of the appraiser as he examines a building. Following is a tabulation of CDU Ratings, with their accompanying definitions of the observed physical condition of the building, and its degree of desirability and usefulness for its age and for its type.

**CDU RATING GUIDE**

<b>CDU Rating of Dwelling</b>	<b>Definition</b>
<b>Excellent</b>	Building is in perfect condition; very attractive and highly desirable.
<b>Very Good</b>	Slight evidence of deterioration; still attractive and quite desirable.
<b>Good</b>	Minor deterioration visible; slightly less attractive and desirable, but useful.
<b>Average</b>	Normal wear and tear is apparent; average attractiveness and desirability.
<b>Fair</b>	Marked deterioration, but quite usable; rather unattractive and undesirable.
<b>Poor</b>	Definite deterioration is obvious; definitely undesirable, and barely usable.
<b>Very Poor</b>	Condition approaches unsoundness; extremely undesirable and barely usable.
<b>Unsound</b>	Building is definitely unsound and practically unfit for use.

*Age* is reflected as an index of the normal deterioration and obsolescence in a structure which may be expected over the years. *Condition* represents a variable measure of the effects of maintenance and remodeling on a building. *Desirability* is a measure of the degree of appeal a particular building may have to prospective purchasers. *Usefulness* is a measure of the utility value of the structure for the purpose for which it may be used.

*Percent good* is defined as the resultant estimate of the diminishing value of an improvement, after subtracting the amount of estimated depreciation from the Replacement Cost New. For example, a structure which is estimated to be 45 percent depreciated as of a given time has a percent good of 55. Therefore, depreciation and percent good are complements of each other.

Once the CDU Rating of a building has been established through a consideration of its condition, desirability, and usefulness for its age and its type, reference to the Basic Percent

Good Table will indicate the appropriate value percent remaining for a structure possessing these qualities, in the degree observed and noted by the appraiser.

The degree of deterioration and obsolescence, or loss of value from all causes, both within and without the property, is automatically taken into account. This is accomplished by means of a simple rating of the capabilities and qualities of the structure, in precisely the same terms as would a prospective purchaser. Sound valuation theory presupposes the existence of a prospective buyer with intelligence enough to compare the advantages and disadvantages of competing properties, and to rate the property he is examining according to its relative degree of desirability and usefulness.

### **APPLYING THE CDU SYSTEM**

To apply the CDU System, the appraiser rates each house according to his composite impression of its relative *condition*, *desirability*, and *usefulness* - for its **age** and **type**. The following four actual cases illustrate this convenient and practical method of determining percent good in houses (refer to Table on page 84).

**Case One:** A fifteen-year-old single family residence situated in an attractive residential suburb of a typical American community; Grade B with ten fixtures. Minor deterioration is visible: slightly less attractive and desirable than new, but useful. A qualified observer would rate this house above average on the CDU Rating System. Accordingly, our appraiser has assigned it a CDU Rating of "Good." Referring to the table, we find 90% Good would be appropriate.

**Case Two:** A one-story frame house seven years old. Grade C, or, average quality construction; three bedrooms, one and one-half baths. Structure shows normal wear and tear and has average attractiveness and desirability. The appraiser's impression is "for a seven-year-old Grade 'C' house, this would be rated as Average." From the table we find 95% Good is indicated.

**Case Three:** This century-old Colonial style frame house is located in a rural North Carolina community. Grade B, or, good quality construction. Building has been extremely well-maintained and completely modernized with central heating, electric lighting, and plumbing added. The structure is in good physical condition in spite of its age. Building is architecturally attractive and quite desirable. The appraiser's impression is, "for a very old house of Grade B quality, this is an excellent one." From the table 65% Good is indicated.

**Case Four:** A twenty-four-year-old single family residence of Grade C quality; one story and basement, frame construction; three bedrooms with a single bathroom. Structure has had normal maintenance and is average in physical condition. Within the past two years, an elevated six-lane expressway passing over the adjoining lot has been erected. This encroachment has seriously detracted from the attractiveness and desirability of the property. Accordingly, the appraiser has assigned a CDU Rating of "Very Poor." From the table 60% Good is indicated.

**DWELLING PERCENT GOOD**

1. Rate the dwelling in terms of its overall condition, desirability, and usefulness.
2. Select the proper 'percent good' relative to its actual age.

		Age of Structure									
		0-3	4-7	8-12	13-19	20-25	26-32	33-42	43-50	51-55	56+
CDU	EX	100	100	98	96	94	92	90	87	86	85
	VG	100	98	96	94	91	88	85	80	78	75
	GD	100	96	94	90	87	83	78	70	68	65
	AV	98	95	92	87	82	78	72	65	62	60
	FR	95	90	85	80	75	70	60	55	50	45
	PR	90	85	80	75	70	65	55	50	45	40
	VP	80	75	70	65	60	55	45	40	35	30
	US	10	10	10	10	10	10	10	10	5	5

**COMMERCIAL/INDUSTRIAL COMMON CAUSES OF OBSOLESCENCE**

In the final analysis, an estimate of depreciation or value loss represents an opinion of the appraiser as to the degree that the present and future appeal of a property has been diminished by deterioration and obsolescence. The accuracy of the estimate will be a product of the appraiser's experience in recognizing the symptoms of deterioration and obsolescence and his ability to exercise sound judgment in equating his observations to the proper monetary allowance to be deducted from the replacement cost new. The following tables have been provided as guidelines to assist the appraiser in arriving at the resultant estimate of the diminishing value of improvements after subtracting all forms of depreciation. Following is a listing of some of the most common sources of functional and economic obsolescence which should further assist him in arriving at a reasonable estimate of obsolescence.

**Common Causes of Functional Obsolescence**

- Effects of corrosion created by manufacturing, processing, or storing of chemicals
- Poor ratio of land area to building area
- Inadequate parking, and/or truck and railroad loading and unloading facilities
- High maintenance costs resulting from mixed building constructions and/or the use of obsolescent building materials
- Insufficient and inadequate elevator service
- Excessive or deficient floor load capacity
- An unattractive appearance that is inconsistent with present use and surrounding properties
- Foundational and structural failures due to poor soil conditions, poor design, excessive loading, poor maintenance, excessive vibration of building and process equipment
- Inadequate power distribution, heating, ventilation, air condition, or lighting systems
- Inadequate or unsuitable utility space
- Poor proportion of office, rental, or manufacturing, and warehouse space
- Limited use and excessive material and product handling costs caused by irregular and inefficient floor plans, varying floor elevations, inadequate clearance, and cut up interiors with small bays and excessive number of walls, posts and columns

- Multi-story design when single-story would be more efficient and economical

**Common Causes of Economic Obsolescence**

- Zoning laws or other regulations which affect the usage and operation of the property
- Building code requirements which set current acceptable construction standards
- Market acceptability of the product or services for which the property was constructed or is currently used
- Profitability of the operation of the property and the justifiable investment which the business would support
- Termination of the need for the property due to actual or probable changes in economic or social conditions

**COMMERCIAL/INDUSTRIAL PERCENT GOOD GUIDELINES**

1. Determine the building's effective age by observing its condition relative to its actual age.
2. Select the suggested percent good allowance based upon its effective age.

EFFECTIVE AGE FOR CONDITION						PERCENT (%) GOOD ALLOWANCE				
Actual Age	VG	GD	AV	PR	VP	Effective Age	W/W	M/W	F/R	F/P
1	1	1	1	2	2	1	98	99	99	100
2	1	1	2	2	3	2	97	98	98	99
3	1	2	3	4	5	3	95	96	97	99
4	2	3	4	5	6	4	93	94	96	98
5	3	4	5	6	8	5	91	93	95	97
6	4	5	6	8	10	6	89	92	94	97
7	5	6	7	10	12	7	86	90	93	96
8	6	7	8	11	14	8	84	89	92	95
9	7	8	9	12	16	9	82	87	90	94
10	8	9	10	14	18	10	80	85	88	93
12	9	10	12	16	20	12	75	80	85	92
14	10	12	14	19	24	14	70	75	82	90
16	11	13	16	21	26	16	70	75	80	88
18	12	15	18	24	30	18	65	70	80	86
20	13	17	20	27	34	20	60	65	75	83
22	15	18	22	29	36	22	55	65	75	80
24	16	20	24	32	40	24	50	60	70	75
26	17	22	26	35	44	26	50	55	70	75
28	19	23	28	37	46	28	45	50	65	70
30	20	25	30	40	50	30	40	45	60	65
32	21	27	32	43	54	32	35	45	60	65
34	23	28	34	45	56	34	30	40	55	60
36	24	30	36	48	60	36	30	40	55	60
38	25	32	38	51	64	38	25	35	50	55
40	27	33	40	54	66	40	25	35	50	55
42	28	35	42	56	70	42	20	30	45	50
44	29	37	44	59	73	44		25	40	45
46	31	38	46	61	75	46		20	35	40
48	32	40	48	64	80	48			30	35
50	33	42	50	68		50			25	30
55	37	46	55	75		55			20	25
60	40	50	60	80		60				20
65	45	55	65			65				
Over	50	60	70							

The above allowances are for average quality construction, and based upon 30-50 years economic life.

Note: Suggested percent (%) good tables for certain special purpose buildings are provided with their replacement cost pricing schedules.

Legend: Effective Age for Condition (VG = Very good, GD = Good, AV = Average, PR = Poor, VP = Very poor); Percent Good Allowance (W/W = Wood siding with wood joists, M/W = Masonry exterior with wood joists, F/R = Fire resistant, F/P = Fireproof).

### **COMMERCIAL/INDUSTRIAL ECONOMIC LIFE GUIDELINES**

Economic life is an estimate of the normal life expectancy of a component. Suggested guidelines for the average expected life of various commercial/industrial buildings and yard improvements can be found on Tables beginning at page 90 within the *Main Areas* section (column listed as 'dep.') of this manual.

**OTHER BUILDING AND YARD ITEM PERCENT GOOD GUIDELINES**

The appraisal of other buildings and yard improvements for both residential and agricultural properties is a difficult task. Other buildings and yard improvements are rarely purchased or sold separately from the balance of the property. The cost of construction of a swimming pool, which is built for the convenience and comfort of a property owner, will rarely add an equivalent amount to the market value of the property. The cost of construction of a farm outbuilding that can be justified by its contribution to the farming operation will again seldom add an equivalent amount to the market value of the property.

In effect, other buildings and yard improvements have value in direct proportion to their degree of utility or usefulness. This is an extension of the principle of contribution, which affirms that the value of any factor in production is dependent upon the amount which it contributes to the overall net return, irrespective of the cost of its construction. Any effective approach to the valuation of other buildings and yard improvements must reflect the action of investors. Informed farm owners and operators would not invest in buildings which could not pay for themselves by either maintaining or adding to the required level of productivity. Homeowners would not invest in swimming pools, detached garages, etc., which would not supply the degree of comfort and/or convenience they desire.

Three individual Percent Good Tables have been developed to assist the appraiser in valuing the various other building and yard improvements that are normally encountered. They can be found beginning at page 222 within this section of this manual.

**SUPPLEMENTAL SOURCES**

Services offered by Marshall & Swift have been used as supplemental sources where primary data in the Bladen County market could not be obtained. Marshall & Swift has been recognized nationally as a reputable source of valuation relative data to appraisers, assessors, and insurers for over 75 years.

Marshall Valuation Service has been used to help define cost schedules and standards for commercial, industrial, and rural improvements. The Residential Cost Handbook has been used to help define and establish the cost schedules and standards for residential improvements.

Marshall & Swift services will be used to assist with improvement types not covered within the scope of these schedules should the need arise. All such services will be modified to conform to the effective date for these schedules of January 1, 2015.

## Schedule of Values, Standards, and Rules

### Section 9 Descriptions



**Bladen County, North Carolina**

**Effective January 1, 2015**

## **BUILDING COMPONENTS**

### **FOUNDATION**

The foundation of a residence with conventional wood floor construction consists of the footings, foundation wall and interior piers. A solid perimeter foundation wall is generally constructed with 8" concrete blocks; brick-to grade construction has 12" blocks to grade level with the balance being 8" block allowing a 4" brick to rest on the outer edge of the 12" block. Interior piers are generally of the same materials as the foundation wall. Footings are poured concrete and must be a minimum of 8" deep and 3" wider (on each side) than the foundation wall.

With concrete slab floor construction, the floor, foundation walls and footings are poured monolithically. In such case, there are no framing members for the floor structure.

Obviously, the footings and lower levels of the foundation wall cannot be seen. Therefore, unless informed of structural weakness or see evidence of excessive settlement, one must assume that the foundation has been properly constructed.

### **EXTERIOR WALLS**

Exterior wall construction represents one of the most significant components of a residential building. It normally accounts for 25% to 35% of replacement cost new and consists of (1) the Basic Structure - wood framed houses usually have 2" x 4" studs placed directly over floor joists on 16" centers - a 2" x 4" sole plate secures the studs at floor level and a 4" x 4" ceiling plate ties the studs together at the ceiling line (2) Exterior Finish - consists of sheathing, the visible exterior wall cover, trim and painting. The materials used in the basic structure and exterior wall finish will determine the type of construction, i.e., wood framed - brick veneer, etc. (3) Interior Facing & Finish - new construction is generally 1/2" to 5/8" dry wall, taped & painted; older houses may have lath and plaster; 2" to 3 1/2" batt insulation is normally placed between the studs behind the drywall. (4) Window & Door Openings - the size and number of openings will have a significant influence on replacement cost.

### **ROOF**

There are generally six types or styles of roof structures used in residential construction. The typical roof structure consists of 2" x 6" rafters placed on 16" centers and secured at the peak by a 2" x 8" ridge board. Sheathing is typically 3/8" to 1/2" plywood covered with felt under-lament and 235 lb. composition shingles. Ceiling joists, which are often considered part of the composite roof, should be at least 2" x 6" on 16" centers with a maximum span of 14.'

The rafters and ceiling joists are attached to the 4" x 4" ceiling plates at the line of the exterior wall. The span of a roof is the distance between the outer edges of the ceiling plates, typically the width of the house. The rise of the roof is the distance from the level of the ceiling plates to the top of the ridge. The run of a rafter is the horizontal distance from the outside of the ceiling plate to the right angle intersection of the ridge. The slope of a roof is expressed in terms of the rise of the roof in inches per foot of run of rafters. The slope of a roof is typically 5/12 but should not be less than 4/12. Generally better quality construction will be reflected by steeper pitched roofs with more overhangs at the eaves. Pitch is the ratio of the rise of the roof to the span. Therefore, to find the rise of the roof in inches per foot of run of rafters (slope), multiply pitch by 24.

With exception of a trussed frame, 2" x 4" rafters do not meet Minimum Property Standards, and generally denote lower quality construction. With a residential truss roof, rafters and ceiling joists are placed on 24" centers and are constructed with 2" x 4" boards, however, the engineering design of the truss creates structural capacity similar to a conventionally framed roof and results in a savings in construction cost.

### **FLOOR STRUCTURE & FINISH**

Conventional wood floor construction consists of the sill plates, girders, floor joists, bridging, sub floor and finished flooring. The sill plate is the first wood member of a frame structure, and is usually a horizontally laid 2" x 6" board secured to the foundation by 1/2" x 16" anchor bolts. A girder is the main horizontal interior supporting member of the floor structure. It may be steel or wood, but a 3-ply 2" x 10" frame girder is typical. Minimum Property Standards call for no less than 2" x 8" floor joists on 16" centers with a maximum span of 13.5'; and 2" x 10" floor joists on 16" centers if span is between 13.5' and 16'. Better quality construction will have 1" x 3" cross bridging every 8' to 10' span. However, 2" x 6" or 2" x 8" block-bridging is typical of fair and average quality construction. However, diagonally laid 1" x 5" tongue & groove boards are found in some older homes and in high quality new construction. Basically, the finished flooring of a house will be either pine or hardwood. Generally, the kitchen will have an inlaid linoleum cover and the bath will have ceramic or vinyl tile. Wall to wall carpets may be laid over a hardwood finished floor or over 5/8" pressboard (particleboard).

### **INTERIOR FINISH**

Interior construction and finish, as a whole can account for 10% to 30% of replacement cost new, depending on the elaborateness of trim, number and sizes of closets, kitchen cabinets, special wall finishes, etc.

Interior partitions are generally wood framed with 2" x 4" studs on 16" centers. The most common basic interior facing: is 1/2" or 5/8" drywall, taped and painted.

Older houses often have walls and ceilings finished with plaster on wood or gypsum lath. However, due to the wide use and acceptance of drywall in most quality levels, plaster does not necessarily increase value in proportion to cost. The exception occurs in the luxury or mansion type house where plaster is consistent in cost and quality with the entire structure.

The type and quality of materials available for finishing the interior of a house varies greatly. However, the basic wall and ceiling finish will generally conform to the grade of materials and quality of workmanship evidenced by exterior wall finish and design. Special attention should be given to the amount and quality of kitchen cabinets, closets and the finish of special areas such as the bath and den.

### **PLUMBING**

A standard complement of plumbing for an average quality house consists of two 3-fixture bathrooms (with shower over tub), one flat rim kitchen sink with two compartments and one 40 gallon gas or 52 gallon electric water heater. Plumbing represents a relatively fixed cost in building construction. Some nominal additional cost for laterals would be incurred in the larger house, but this would be hardly noticeable in the overall price per square foot. It is pointed out that colored fixtures cost approximately 5 % more than white fixtures. The kitchen sink and each bathroom should be vented with a metal stack extending through the roof. It is also important to determine whether waste is disposed of by public sewer or individual septic system.

### **ELECTRICAL**

In new construction, the typical electrical service consists of 120-240 volt, 3 wire, 200 amp circuit breaker systems for houses with electric heat and 150 amp services for houses with gas heat. Minimum Property Standards requires one wall switch per room with a minimum of 6' between convenience outlets. 220 volt service is required for electric ranges and clothes dryers, whereas 110 volt service is required for convenience outlets. The majority of residential wiring is done with Romex, a non-metallic sheathed cable. More expensive homes have BX or steel armored cable. Conduit wiring is seldom found in residential construction. Older homes may be wired with Knob & Tube or porcelain insulators. Houses with old style fuse boxes, Knob & Tube wiring, or 60 amp service are generally of low quality or will soon need rewiring.

### **HEATING**

The type and adequacy of the heating system is not only a cost important factor, but also one which has a significant influence on the functional utility and value of a building. There are several types and variations of heating systems used depending on location and availability of fuel. The systems described here are those most frequently encountered.

*Floor Furnace* - may be oil or gas fired. This type heating system is normally found in lower quality one story houses with crawl space. There is no duct work, and circulation is by gravity. The unit is generally placed near the center of the house. Its capacity is rated from 30,000 to 50,000 ETU.

*Gravity Furnace* - This system is generally found in the basements of older houses, since it must be below the level of the rooms to be heated. Coal, either stoker or hand-fired, was the main source of fuel. However, many systems still in use have been converted to oil or gas. Heat is provided as the air comes in contact with heated surfaces in the furnace. The warm air rises and flows through inclined leader pipes to supply registers usually installed in the floor or baseboard adjacent to the outside walls of the various rooms. The cooler air is drawn down through large return-air-intakes located in the floor near an outside wall to the bottom of the furnace casing for re-heating. The duct work for a gravity warm-air heating system is quite large and must be slanted in such a way as to permit the natural flow of warm and cool air. This significantly reduces the amount of usable head room in the basement. The gravity warm-air heating system is relatively inexpensive and lacks functional utility when compared to more modern systems. The cost of this type system generally ranges from 15% to 20% less than a forced warm-air system with a comparable BTU rating.

*Forced Warm Air* - May be electric, oil or gas fired. Air is warmed by heated surfaces in the furnace and then distributed to the various rooms through supply ducts by a blower (fan) in the furnace. The blower also draws the room air back to the furnace through return-air intakes which are usually located at the baseboard of inside walls. Adjustable registers or diffusers for the warm air are generally located on the outside wall at the floor level (baseboard), preferably below windows. This system requires less space for the furnace and ducts than the gravity system, and it does not need to be centrally located or below the level of the heated area.

*Electric Radiant Ceiling* - Perhaps one of the most frequently encountered heating systems. Found in many fair to average quality homes. Each room is thermostatically controlled. The heating element (cable) is attached to the ceiling drywall, coated with a layer of plaster and then laminated between a second layer of drywall. The wattage required for each room is determined by factoring ceiling height by 1.5 and multiplying that product times the square feet of floor area. For example, a 12' x 12' room with an 8' ceiling height would require 1728 watts of heating. ( $8' \times 1.5 = 12 \times 12 \times 12 = 1728$  watts).

*Electrical Wall Heaters* - This system follows the same principle as electric ceiling heat but is substantially cheaper, and concentrates all heat from one point in the room. Its size is also measured in wattage per coil or unit stack. The typical unit will range from 1500 watts up to 4000 watts.

*Electric Baseboard Heat* - This is merely a modification of the electric wall heater. However, it distributes the heat over a somewhat wider area, and costs approximately 20% more than electric wall heaters of the same wattage.

*Hot-Water (Gravity System)* - may be coal, oil or gas fired. In this system, hot water serves as the medium for carrying heat to all parts of the building. Circulation in a gravity system is created when the hot water ascends through the flow pipe and then flows down through return pipes which pass successively through radiators on the various floors of the building. Since heat is released as the water passes through each radiator, the ones on the lower floors must be larger. The "two-pipe" system relieves this problem since each radiator has its own individual hot-water feed. A hot water system for residential use is rather uncommon due to the cost of the system (which may run from 40% to 60% more than forced warm-air or radiant ceiling systems) and the bulkiness of the materials.

*Steam Heating* – may be coal, oil or gas fired. In this type system, water in the boiler is converted to steam which rises through the main distribution pipe. From this pipe, the steam moves into the radiators, gives off its heat and condenses. The condensed steam (water) then flows back to the boiler for reheating. In the "two-pipe" system, the steam and the condensate flow in separate pipes. With the two-pipe system, the steam always enters the radiators from the top and subsequently emerges as condensate from the bottom. If the return-flow pipe is situated below the water level of the boiler, it is described as a "wet" condensate return, whereas if it is above the water level, it is a "dry" condensate return. In a single pipe system, the steam and condensate flow in the same pipe and must enter the bottom of the radiator. As with the hot-water system, steam heating is expensive and somewhat cumbersome.

### **MECHANICAL - CENTRAL AIR CONDITIONING**

The majority of residential central air-conditioning is done with "split" refrigerated systems, ranging from one to five ton capacity. The combination heating/cooling or package unit utilizes the same duct work with gas heating and electric cooling. This is a central system for original construction and generally results in some savings (per system capacity) in construction costs.

The split system is usually added to an existing forced warm-air furnace. The fan coil is normally installed in the top of the furnace and the condensing unit (with compressor and condenser in the same cabinet) is located outside the house. The efficiency of this system is equal to that of the package system, although costs may be higher if it is added after original construction.

The heat pump is an electric-powered combination heating and cooling unit which consists of a compressor, condenser, throttle valve and evaporator. It operates on the principle that fluids under high pressure evaporate at a higher temperature than fluids under low pressure. The heat transfer medium is heated under low pressure in the evaporator then transferred by the compressor to the high pressure condenser where the heat is given off and blown through a duct system in the house. The cooling system is activated by thermostatically reversing a four-way valve which reverses the cycle of the unit. The heat pump is somewhat more expensive than the comparable gas-electric package unit described above, and generally requires electric resistance heaters to provide supplementary heat during periods when the

temperature drops below 25°F.

The variation in models, sizes and capacities of central air-conditioning systems is virtually boundless. The only sure way to determine the type, size and capacity of a system is to note the model number and brand name and call the dealer. Generally speaking, however, the horse power of the compressor motor is approximately equal to the ton capacity of the cooling unit. Using the same duct work as the forced air heating system, central air-conditioning may run 20° to 30° more if separate duct work is required.

### **DESIGN**

One of the most significant factors influencing quality classification and cost of construction is design. The design of a house relates not only to the degree of functional efficiency attained in layout, but also to its overall appearance. In this sense, appearance means the refinement of exterior elevations, interior, finish, and perimeter shape. The degree of refinement is usually evident in the complexity of foundation and roof outlines, plus the elaborateness of finishing materials and attention given to details.

Lower quality houses will generally be simple rectangular shaped structures with straight lines on all four walls, and a higher ratio of floor area per linear foot of exterior wall. Higher quality structures will generally have an irregular foundation outline and a lower ratio of floor area per linear foot of exterior wall. In other words, the design of a higher quality house substitutes esthetics for efficiency (economy of construction) but does not sacrifice functional utility. In fact, the integration of areas given to living, dining, food preparation, sleeping, hygiene and storage into a functional or logical whole can best be accomplished when design is not restricted by a rectangular or "boxed" perimeter shape.

An irregular perimeter or foundation outline generally denotes higher quality construction, because replacement cost is increased by a greater amount of exterior wall area plus special floor and roof framing.

## DESCRIPTIONS OF MAIN STRUCTURES

### Residences

**Apartments** are structures housing multiple dwelling units, typically of more than one floor, with kitchen facilities. Better qualities include high-end, owner-occupied condominiums and resort time-share facilities. Although some apartments built as condominiums are required by municipal codes to contain certain items not usually required for rental units, “condominium” is actually a type of ownership - not a category of construction - and the apartment costs are valid.

**Townhouses** are ground-level dwellings situated on a unique site and sharing a common wall with other row-type housing. This includes improvements built for rental or individual ownership (see the description for *Apartments*, above).

Multiple residences, often referred to as **Duplex/Triplex**, are buildings of three or fewer units, each having kitchen and bath utility, and which are designed for other than transient occupancy.

**Single-family residences** constitute a wide range of architectural styles, with insignificant cost variances noted for similar construction quality. The ranch, the rustic, the modern and the one-story conventional house are all variations of the same design, as are the Cape Cod, the Colonial, and the vast number of other variations, by whatever name they are called in each part of the country.

**Guest houses** are second residential living units on a single property, separate from the main residence, and generally of lesser quality.

**Manufactured homes** are factory-produced, residential structures built on steel undercarriages with necessary wheel assemblies to be transported to permanent sites. The wheel assembly is removed after the unit is placed on a permanent foundation, but the steel undercarriage may remain intact if it is a necessary structural component.

**Group Care Homes** are typically smaller, special needs buildings that are more residential in character than convalescent hospitals, and include intermediate-care facilities for the physically-challenged or mentally handicapped, substance abusers, victims of domestic violence and other like groups. Therapy rooms or lounges and administrative rooms corresponding with the quality are included.

**Retirement (continuing care) community complexes** include a mixture of independent and assisted living facilities, including amenities for Alzheimer’s or dementia patients, and skilled nursing units. Included fitness and care facilities correspond with the quality indicated.

**Bath Houses** are small changing or game room structures, usually supporting recreational improvements in a residential setting. The lowest quality is a simple cabana without plumbing, while the better quality includes the well-apportioned entertainment or guest facility.

### **Hotels, Motels & Clubs**

Limited service **Hotels** consist of multiple sleeping units and lobby, of two or more floors, without individual kitchen facilities. They provide little or no space for large groups or formal dining.

**Motels** are multiple sleeping units of two or fewer stories, with or without individual kitchen facilities, and are designed for transient occupancy.

**Lodges** are generally of rustic design with multiple sleeping units and common areas with some additional plumbing and kitchen facilities for additional guests.

**Dormitories** include college and boarding school residence halls, nurses' quarters and armed services accommodations. They generally have a lounge and frequently have common dining facilities and built-ins not typically found in apartments.

**Fraternity Houses** or sorority facilities generally boast kitchen, dining and lounge rooms, and are more residential in character than dormitories.

**Country Clubs** are specialized clubhouses designed primarily for entertainment and have few, if any, sleeping accommodations. Generally, the better clubs will have ballroom, bar, banquet and pro shop facilities, as well as locker and shower rooms.

### **Stores and Commercial Buildings**

**Restaurants** are constructed for the preparation and sale of food and/or beverages. Costs include necessary plumbing, built-in refrigerators and freezers, and electrical connections to provide for these services. Costs do not include fixtures, equipment or signs. **Cafeterias** feature large, open dining rooms for the self-service of large groups, and include commercial as well as institutional facilities. **Truck Stop Restaurants** are of multipurpose design, and include convenience store, food, shower and toilet, game and rest facilities for truckers. **Fast Food** or small, limited-menu restaurants contain limited or no seating in relation to preparation area, including drive-up windows commensurate with the quality. Any site costs (including playground equipment) outside the building line are not included.

**Markets** are typically smaller, retail food stores which often handle limited lines of other merchandise. The costs include built-in refrigerators and/or freezers, cold rooms and ancillary cooling equipment which are usually classified as real estate, but do not include display freezers and coolers or other equipment generally classified as personal property or

trade fixtures. **Supermarkets** are the larger, chain-type food stores. **Convenience Stores** are small food stores with limited interior facilities. The better qualities will include the small specialty or gourmet food, meat and liquor shops. **Mini-mart** food stores are small convenience and service station fueling outlets 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. **Florist Shops** are convenience stores for the sale of cut flowers, with the better shops containing finished display areas for other gift merchandise. **Farmers' Markets** are typically rural structures for the sale of fresh produce, from the simple open stand to the enclosed, full retail market barn with refrigerated storage. **Winery Shops** are designed for the display, tasting and sale of the product directly from the vineyard.

**Drugstores** include both the smaller neighborhood pharmacy and the large chain discount-type store with a variety of merchandise (including convenience foods). Costs include built-in refrigerators, but do not include display freezers and coolers or other trade fixtures considered to be personal property.

**Discount Stores** are typically large, open shells with minor partitioning for offices and storage areas. Often referred to as department stores, the best quality approaches the low-quality department store in cost. This category will also include the large off-price center and furniture- and home-improvement-type shell outlets.

**Retail stores** are buildings designed for retail sales and display, and usually have display and/or decorative fronts. Both one- and two-story stores are included in the averages. They include stores occupied by secondary or junior department stores with limited merchandise lines, specialty shops and commercial buildings designed for general occupancy.

**Department Stores** are buildings of two or more stories, typically found in larger cities and regional shopping centers, and handling multiple lines of merchandise (for which they are subdivided into departments). Mall anchor stores are the modern regional anchors that are a transition between the discount/big box store and the traditional full-line department store.

**Beauty / Barber Shop** costs include sinks, plumbing and electrical fixtures necessary for operation but do not include the mirrors, chairs and barber cabinets, which are usually tenant-owned. Good quality shops include more plumbing associated with numerous work stations.

**Laundromats** are primarily constructed to hold automatic self-service washing machines and dryers. The costs include the plumbing and electrical fixtures necessary for operation, but not the laundry or cleaning equipment, which is usually tenant-owned.

**Laundry / Dry Cleaning** stores are designed for full-service laundry cleaning, and usually include a typical retail storefront and laundry work space commensurate with the quality level.

**Neighborhood Shopping Centers** are buildings designed for a group of commercial enterprises developed as a unit, and are typically comprised of single lines of glazed storefronts with individual service entrances to the rear. These are normally small one-story projects with or without a major anchor. When present, typical anchors are priced separately, include supermarkets, discount stores, large drugstores or bank buildings.

### **Industrials and Warehouses**

Industrial buildings are specifically designed for various levels of utility in support of manufacturing processes. An average amount of office space commensurate with the quality of the building is anticipated. Usually, this is between 4-12% of the total area, whether single-story or stacked. **Light industrials**, at the better qualities - typical of industrial parks - may have 15-25% office area and emulate engineering buildings. **Heavy industrials** are characterized by their heavy frames, walls and floors, which are typical of specialized manufacturing processes and power or utility service plants. The industrial building costs include power leads to the building and industrial sewer and drainage lines, but do not include the power panel, wiring or industrial piping to the fixtures, or the equipment used within the manufacturing processes. **Research & Development** industrial buildings, which have a larger amount of divided and finished space (typically between 20-80%), are listed separately from manufacturing buildings even though they often contain some manufacturing or assembly utility. The best hi-tech, research & development and service center structures will approach good office buildings in cost, with many partitions, high cost mechanical and fine detail.

**Laboratories** include commercial and research facilities exclusive of lab equipment.

**Lofts** are industrial buildings usually designed for occupancy by multiple, relatively small-space users. Because of display areas and extra partitioning and plumbing in the higher qualities, they represent a transition between industrial and office construction. They can also be single tenancy structures with mixed functions under one roof.

**Broadcasting Facilities** costs listed here represent averages for radio and television stations and include all wiring and conduit necessary for operation, but not broadcasting equipment.

**Armories** are buildings designed for military training.

**Post Office** costs are derived from the costs of structures built under lease arrangements with the U.S. Postal Service. Branch offices are small facilities, typically less than 10,000 square feet.

**Warehouses** are designed primarily for storage. An amount of office space corresponding with the quality of the building is included in the cost. Typically, this is between 3% - 12% of the total area.

**Cold Storage** facilities are designed to keep stored commodities at various temperature levels. Some production or process areas are included in the better qualities.

**Mini-warehouses** are warehouses subdivided into a mixture of cubicles of generally small size, designed primarily to be rented for small self storage or noncommercial storage and may include some office-living space.

**Shipping Docks** are roofed structures designed for temporary open storage and segregation and loading of freight.

**Hangars** are buildings designed for aircraft storage and repair maintenance, and normally will have offices and storage space commensurate with the quality and type of services they perform.

Complete auto dealerships include showroom-office and parts-service facilities. Because of the wide range in mix of facilities (15% - 55% showroom), and qualities, it is best to price each area individually, using the appropriate showroom and service garage costs.

**Showrooms** are vehicular salesrooms. Where a salesroom and service garage or warehouse constitute one building, the cost for each portion should be modified by its area-perimeter multiplier, considering the common wall as belonging to half of each of the portions.

**Automotive service centers** are designed for repair parts sales and service and will have showroom-sales area, office, storage and repair space commensurate with the quality.

**Mini-lube** buildings are very small garages designed for quick maintenance lube and oil changes and may have drive-through bays.

**Service Garages** are buildings designed primarily for vehicular repair and maintenance.

### **Offices, Medical and Public Buildings**

**Office Buildings** are buildings designed for general commercial occupancy, including administrative government and corporate uses, and are normally subdivided into relatively small units. If part of an office building has some other occupancy, such as a bank or a store on the first floor, that portion should be priced using its appropriate base cost.

**Banks** include savings and loan and credit union occupancies where the design is of a bank type. Where such uses are made of ordinary store or office buildings, the store or office costs should be used, adding for extra features. Branch banks tend to be a single-purpose, low-rise neighborhood facility. **Mini-banks** are small walk- or drive-up facilities, typically between 500 and 2,000 square feet in size. Costs include vaults, but do not include banking fixtures or equipment, vault doors, or safe deposit boxes. Drive-up windows, night depositories, and surveillance systems commensurate with the quality, are included.

**Medical Office** buildings are designed for medical and/or dental services with examination and outpatient treatment, and include private and public clinics. **Dental Clinics** are small, standalone facilities and will generally have a greater amount of plumbing and partitions.

**General Hospital** costs include fixed equipment, but not equipment groups classified as personal property.

**Outpatient centers** are freestanding, specialty treatment centers for ambulatory outpatient or same-day surgery facilities and include all clinical surgery, diagnostic, lab, administrative and public areas commensurate with the quality level. Operating rooms on average represent 2.5% of the total floor area. Costs include fixed equipment only. This category will also include specialized imaging and radiation treatment, and diagnostic centers for cancer, diabetes, and eye and kidney diseases, etc.

**Convalescent Homes** lack facilities for surgical care and treatment, and include so-called skilled nursing homes, rest homes, sanitariums and like buildings of hospital-type construction, giving full nursing care. Treatment and therapy rooms commensurate with the quality, are included.

**Funeral Homes** or Mortuaries include chapels, stained glass and laboratories commensurate with the general quality. Generally, the better funeral homes may include some living area.

**Veterinary Hospitals** are designed for the medical and surgical care and treatment of small animals. Costs do not include cages and runs or open shelters, which should be priced separately.

**Kennels** have limited examination and treatment facilities and are predominantly for the boarding of small animals. The better qualities include the large public animal control facilities and the high-cost “pet hotels.” Costs include the cages and enclosed runs.

**Government buildings** include major city halls or town centers, courthouses, etc., but do not include typical office or service buildings, which should be priced under the proper category in this manual. **Community Service buildings** are mixed-use structures, typically found in rural communities, and are generally smaller and utilitarian in scope. The lower qualities are generally composed of public safety facilities, volunteer fire, limited office and council meeting rooms and/or small libraries, etc. The better qualities will have a large proportion of well-finished, full-service facilities and will merge into the government occupancy.

**Fire stations** are emergency service buildings designed primarily for engine storage, with minimum office and meeting room facilities commensurate with the quality. The good quality may also include restroom and kitchenette facilities. If part of a station has some other occupancy, such as a library or social hall, that portion should be priced using its appropriate base cost, with each portion modified by its area-perimeter multiplier, considering the common wall as belonging to half of each of the portions, or see community service buildings above.

**Jails**, correctional facilities or detention centers include the jail hardware; i.e., cell blocks and locking equipment, for which average costs are included. The full range of facilities, for minimum to maximum security, is included commensurate with the quality of the entire prison plant. **Police stations** are basically law enforcement facilities with limited numbers of jail holding cells. Sallyport facilities commensurate with the quality are included. Costs do not include any service equipment for kitchen, laundry or recreation.

**Public libraries** or media/resource centers include the basic construction of the building, including most items found in the general contract, but not furnishings and fixtures such as counters, kitchenette, seating or book stacks which are not considered built-in and permanently attached under the general building contract.

### **Churches and Auditoriums**

**Churches** are buildings designed primarily for worship, but in many churches, costs will include some kind of kitchen, social, meeting and office facilities. The costs include special lighting and stained glass consistent with the overall quality of construction, but do not include seating, altars, pews, organs or bells. **Fellowship halls** are multipurpose structures for recreation and social gatherings and include gymnasium-type flooring, stages, kitchens and other miscellaneous rooms commensurate with the quality.

**Auditoriums** are buildings designed for mass seating and visual and voice presentations. Costs include stage or arena, basic floor and necessary lighting but not the special equipment considered personal property.

**Arcade** buildings are designed mainly for coin-operated game entertainment, while the better qualities will include limited food service and lounges typically found at fun centers, miniature golf complexes, etc. Costs exclude all game or food service equipment.

**Bowling centers** may include restaurant, bar, billiard and miscellaneous rooms with necessary plumbing and electrical connections, but do not include any equipment or fixtures such as the alleys, ball returns, kitchen and bar equipment, or other trade fixtures.

**Fitness centers** are complete multisport, commercial, recreational complexes distinguished by large gymnasium/auditorium-type structures, typically 20,000 to 40,000 square feet, with private membership. **Community recreation centers** are large municipal multisport complexes. These multipurpose buildings will include gym-basketball, handball, and other sports courts, running tracks, as well as exercise, craft, game and other social/multipurpose rooms. The number of varied amenities and support facilities (locker room, saunas, snack bars, etc.) will vary with the quality level. Equipment and trade fixtures associated with these amenities are not included. Gymnasiums, small health clubs and clubhouses do not belong in this category and are priced elsewhere.

**Pavilions** are averages of open and enclosed park shelters, gazebos and bandstands.

## **Schools & Classrooms**

**Elementary schools** serve kindergarten/first grade through fifth or sixth grade. They are generally smaller in scope than the secondary schools, with fewer ancillary facilities, and comprise primarily general classrooms.

**Middle schools** or junior highs cover sixth or seventh grade through eighth or ninth grade, are generally larger and can have many varied facilities commensurate with the quality.

**High schools** will encompass ninth or tenth grade through twelfth grade. They are generally the largest of the secondary school plants, with the most varied support and assembly facilities.

**Alternative schools** or continuation high schools are small plants generally serving a limited number of secondary students with few support, assembly or athletic facilities.

**Vocational schools**, including adult education facilities, emphasize trade and technical skills, with a greater proportion of shops and laboratories.

**Day Care Centers** are early childhood; handicapped and adult or senior care or development centers and include so-called kindergartens, nurseries or children's preschools. They have light kitchen facilities, activity rooms and multiple restrooms, and are more residential style in character than schools. Generally, the better centers may have reception, office, conference, lunch, shower and changing facilities, as well as general activity or classrooms.

**Classroom buildings** are buildings subdivided into teaching units and designed primarily for academic work. Costs include built-in bookshelves, cabinets and blackboards commensurate with the quality, but not the movable equipment and furnishings. Costs also include plumbing, although many individually built classrooms will have common restrooms.

**Gymnasiums** include athletic, recreation, health and physical fitness occupancies where the design is of a gymnasium type with a basketball court as the focal point. Shower/dressing, exercise and conditioning rooms and some offices/classrooms are included, commensurate with the quality.

**Restroom buildings** are generally of single-purpose design although the better qualities can include some storage and/or limited snack bar sales area.

**Maintenance buildings** are for the storage and light maintenance of miscellaneous school ground equipment.



## Schedule of Values, Standards, and Rules

### Section 10 Assessment Standards



**Bladen County, North Carolina**

**Effective January 1, 2015**

**ASSESSMENTS**

Assessments are seldom simply the assessor's estimate of property value. In most states, assessments are set at some uniform fractions of appraised value (fractional assessments). In such states, the act of setting assessments is therefore a straightforward factoring of appraised values. In a growing number of states, classified property tax systems have been adopted, wherein different classes of property, e.g., residential or agricultural, are assessed at different levels of value. In such states, it is necessary to determine the class of a property before the assessment can be determined.

At the same time, some properties or some property owners may be eligible for differential assessment, such as agricultural use value assessment or partial exemptions. Others may be eligible for total exemption. Here it is necessary to keep records of exemption applications and to monitor exempt properties to insure that they continue to be eligible for exemption.

The review and appeal of assessment is the final stage of the assessment process. The Assessor's precise responsibilities at this stage are mandated by law. The assessor must, however, attend to such matter as (1) advertising appeal rights and procedures, (2) mailing assessment notices, (3) providing facilities and staff to explain assessments to taxpayers, and (4) assigning staff to present the assessor's case in formal appeals.

## INTRODUCTION TO ASSESSMENT PERFORMANCE MEASUREMENT

The primary responsibility of the assessing office is to estimate the market value of the properties within the jurisdiction. The integrity of the property tax depends in large part on the accuracy and efficiency of these estimates, since they are the basis for assessed values and therefore, in part, for property tax bills. The accuracy of assessments and the efficiency of operations are of considerable importance not only to assessing officers but also to property owners and elected officials. How well these functions are carried out affect local government costs (which are borne by each taxpayer) and the effectiveness of local government in general. Assessment-ratio studies provide a means by which the accuracy of assessments and the performance of assessing officers may be evaluated.

### *Overview of the Basic Components of Assessment-Ratio Study*

An assessment ratio is the ratio of an assessment to a proxy (a substitute) for market value: it expresses a relationship between a property's assessed value and its market value. Market values are elusive figures, which cannot be directly observed: they are usually represented by sales prices, although independent "expert" appraisals are also sometimes used. Sales prices are nothing more than evidence of market value; therefore, some sales are more appropriate in a ratio study than others; similarly, some assessments are of a higher quality than others.

The assessed/sale ratio value is abbreviated as "A/S." For example, a property which was sold for \$60,000 and assessed at \$30,000 would have an assessment ratio of 0.50, or 50 percent (\$30,000 divided by \$60,000). This assessment ratio is often also called a "sales ratio" or "assessment/sale price ratio." For ease of understanding, the term assessment ratio and its abbreviated (A/S) will be used herein.

Some argument has been made for using the sale price divided by the assessed value (S/A ratio) instead of the reverse, because this configuration, which tends to be more "normally" distributed, may have greater analytical applications. Another argument made for the S/A configuration is that a "sale price divided by assessment" ratio proceeds a direct equalization factor, or multiplier, and therefore may be more easily by people unfamiliar with the assessment process. Although this form of assessment ratio may have merit, and its application deserves further research, its significant superiority over the "assessment divided by sales price" ratio has not been conclusively proven. The A/S is undoubtedly the most widely applied configuration, and its use, therefore, facilitates inter-jurisdictional comparisons. Because the A/S ratio is most commonly used and is recommended in the IAAO "Standard on Assessment-Ratio Studies," this review will focus on the A/S ratio.

In every assessment jurisdiction there is a legally mandated, or stated, assessment ratio at which properties should be assessed. How closely the assessments in a jurisdiction come to this ratio is called assessment accuracy, or the degree to which each property is assessed at the appropriate percentage of market value. There are two primary aspects of assessment accuracy: assessment level and assessment uniformity. Assessment level refers to the degree to which the overall ratio of assessed values to market values approximates the legally

mandated ratio for the property class in question. In many jurisdictions (such as North Carolina), this legal ratio is 100 percent of market value, or “full” value. In other states, it is a smaller percent such as 50 percent or 30 percent for example. In still other jurisdictions, the statutory assessment ratio varies according to broad classes of properties – commercial properties are assessed at 40 percent of market value, residential properties at 20 percent, and so forth.

The median level often indicates assessment level. If the legal ratio in the jurisdiction is 50 percent, and the median assessment level in the jurisdiction is 32 percent; for example, the statutory requirements have not been met.

Assessment uniformity refers to the degree to which different properties are assessed at equal percentages of market value, or the degree to which property tax burdens are levied in a proportion to value. Assessment uniformity is often indicated by the coefficient of dispersion (COD). If the COD is 30 percent, for example, the degree of assessment uniformity is low; if it is 5 percent, the uniformity is high.

Assessment level and uniformity, the two essential aspects of assessment accuracy, are evaluated by an assessment-ratio study. An assessment-ratio study is simply a tool for real estate market analysis and assessment performance measurement. It can tell a great deal about how properties are assessed and the way they should be assessed. It is a detailed statistical analysis of the degree of assessment accuracy, indicated by comparing assessment ratios as of a specific date. It must be regarded as the final analysis in the evaluation of assessment accuracy.

An A/S ratio study has five major stages: first, delineation of objectives; second, information about sales; third, information about property characteristics and assessed values; fourth, statistical treatment of the information; and fifth, conclusions drawn from the information. The basic steps generally undertaken in an assessment-ratio study are:

1. Define the problem and clearly state the purpose of the study
2. Evaluate data needs
3. Collect sales data
4. Edit sales data
5. Adjust sales data
6. Match each sale with its corresponding assessed value
7. Compute the assessment ratio
8. Stratify ratios as appropriate
9. Compute descriptive statistics
10. Compute inferential statistics
11. Test hypotheses and analyze results
12. Take the necessary informative and corrective action

The study should be kept as simple as possible yet be in complete accord with its stated purpose. Since the design of the study is almost totally influenced by its purpose, the first

step is the most important one. Obviously, something sequined to do one thing probably will not do another thing well. An assessment/ratio study is merely a tool, and craftsmen should choose their tool with care.

The data requirements of the study, including assessment information, market value estimates, and property characteristics, must be evaluated prior to initiating that study. The purposes of the study will indicate certain data requirements (some of which will be impossible to meet) that will necessitate modification of the study design. Precise results require precise data. For this reason the findings of the study can only be as accurate as the data used. Statistics based on samples of sold properties are used in an A/S study to make inferences about the accuracy of all assessments in a population. A sample chosen for analysis may be smaller than the entire group of usable sales. Therefore, both the population and the sample to be studied must be defined. This is the first step involved in increasing the detail of the study.

It is also important to determine the frequency with which A/S ratio studies should be made. It is widely agreed that assessment/ratio studies should be conducted at regular intervals. They should also be conducted before and after a revaluation. A specific date of analysis should be chosen because a study is undertaken to analyze the indicated relationship as of a particular date. This date is generally the appraisal date of the year to be studied.

The important information contained in assessment/ratio studies is wasted if the studies are not used once they have been performed. They should be used to improve assessment performance and assure property tax equity.

### **IAAO PERFORMANCE STANDARDS**

Standards for assessment ratio measures should be adopted by all jurisdictions. The International Association of Assessing Officers' (IAAO) "Standard on Assessment-Ratio Studies" applies particularly in jurisdictions in which current market value is the basis of assessment. (The IAAO also endorse current market value as the legal basis of assessment. See "Policy Statements: International Association of Assessing Officers," page 8b, adopted January 25, 1983.) These standards presuppose a budget sufficient to hire competent personnel and apply sound assessment procedures as well as the availability of certain basic data, as an adequate sample size.

Among the recommendations made in the IAAO "Standard on Assessment-Ratio Studies" are:

*Assessment Level*

- a. The overall assessment level of a jurisdiction or a stratum should be within ten percent of the legal ratio.

*Assessment Uniformity*

- a. Among strata, the level of assessment in each stratum be within five percent of the overall assessment ratio jurisdiction;
- b. Within single-family residential strata, CODs (coefficient of dispersion) should be less than 15 percent, and for areas of newer and fairly similar residences, less than 10 percent;
- c. Within strata of income-producing property, CODs should be less than 15 percent; and
- d. Within other strata, such as vacant lots, farms, and acreage, CODs should be less than 20 percent.

The standard for assessment level is presumed to have been met if the confidence interval of the overall assessment level at the 95 percent confidence level includes the legal ratio, or if a test of the null hypothesis that the overall level of assessment is within 10 percent of the legal level cannot be rejected at the 95 percent confidence level.

Assessment-ratio studies used both for internal control and inter-jurisdictional assessment equalization should be conducted at least annually. All in all, the average assessment jurisdiction should be able to meet the indicated standards. In all cases, the goals are progressive rather than static in nature. One can always improve – if not overnight, at least over time.

**STANDARD REVIEW PROCEDURES***Instructions for review*

Level of Value – Acceptable Range	2014 Sales	95% -100%
	2013 Sales	95% - 105%
	2012 Sales	90% - 110%
	2011 Sales	85% - 115%

Remember our primary concern is to have equalization and consistency for all property.

Appraisal Date – Target date is January 1, 2015.

All sales data, building ages, depreciation, etc. are to be measured from January 1, 2011.

Sales Analysis Sheets – A sales analysis will be maintained, completed and turned in with each completed map by the reviewer. Sales sheets will be kept by map number and class of property (i.e., residential, commercial, etc.).

Maps – All field maps are to be kept up to date by the reviewer, including street prices, land influences, acreage rates, corner influence, etc. No land models are to be changed without consulting with your supervisor.

New Construction Encountered on Review – It is the responsibility of the reviewer to complete a “sweep ticket” for any incomplete construction, major addition or alteration. This ticket will be attached to the field pack for assignment to the sweep team. Members of the team will measure and list all residential new construction encountered during the review phase. If the improvement cannot be finalized because construction is incomplete, the sweep team member is responsible to:

1. Measure and list what is there at the time.
2. Complete the property record card as far as possible including class, land value, depreciation, etc.
3. Enter notes in the remarks area describing the status of the new construction

Demolished or Razed Building Encountered on Review

Procedure:

1. Delete building sketch and all information on card.
2. Change property use code from Improved to Vacant.
3. Put proper note in sketch area.

Commercial/Industrial Parcels – It is the reviewers’ responsibility to verify any parcel not reviewed due to the presence of a commercial or industrial code. The parcel must fit the definition and not simply be a house similar to those already reviewed, but having a cottage industry in a basement or an addition. Do not interpret this instruction to mean the

residential reviewer should attempt to review *legitimate* commercial or industrial parcels. Always use good judgment through common sense. Direct all questions to your supervisor.

Errors – As a result of several clerical operations, there may be errors of omission or commission that will need correction. *It will be the responsibility of each reviewer to correct and complete any and all card errors.* This may be as simple as completing the property factor checklist or as major as re-measuring and re-listing the property. You are asked to act in a professional manner and do the right thing mainly because you know it needs to be done.

Record Keeping – One of the objectives of the project is to keep paperwork and accounting to a bare minimum. The records you will maintain are important and mandatory for a successful operation. Unless directed otherwise by future policy change, the reviewer is responsible for the following.

1. Individual Production Record – To be maintained on a daily basis.
2. Sales Analysis Sheets – To be maintained, completed and turned in by neighborhood number. Completed packs will not be accepted without a completed sales analysis form.
3. Production Control Form – To be maintained on an ongoing basis per your detailed instructions.

Dwelling in Commercial Area – You are requested to not review those parcels affected by a commercial or industrial land value influence. The main indicator for these should be the land pricing instructions. If the property has entered a residential street price you are to review all parcels on the block except individual commercial or industrial parcels. This usually will be a spot zoning or non-conforming zoning situation. In most of the situations the commercial reviewer will establish a land value based on commercial use and zoning and will treat the dwelling as a mis-improvement to the land. Also remember that a parcel with multiple cards is not considered reviewed if all cards in the sequence, including the land value, are not completed. Any parcel with a dwelling and a valid commercial building on the same parcel should be excluded from the neighborhood parcel pack and set aside for the Commercial Property Reviewer. Do not count these cards as production units.

**NEW CONSTRUCTION  
PERCENTAGE OF COMPLETION GUIDE**

This guide is to be used in estimating the percentage of completion of both residential and commercial buildings under construction.

*PERCENT COMPLETION GUIDE*

<b>FOUNDATION ONLY.....</b>	<b>10%</b>
<b>FRAMING IN PLACE.....</b>	<b>25%</b>
<b>SHELL COMPLETED.....</b>	<b>35%</b>
<b>ROUGH INTERIOR.....</b>	<b>50%</b>
<b>FINISHED INTERIOR.....</b>	<b>75%</b>
<b>INTERIOR &amp; EXTERIOR DECORATION.....</b>	<b>90%</b>
<b>WORKING UTILITIES, BUILDING COMPLETE.....</b>	<b>100%</b>

*SPECIFIC REVIEW PROCEDURES*

1. Take the following materials to the field.
  - a. Neighborhood Parcel Map
  - b. Property Record Cards (PRC)
  - c. Land Pricing Sheets
  - d. Neighborhood Inventory Report
  - e. Sales Analysis Sheets
2. Familiarize yourself with the review area.
3. Review all sales within your map and complete the sales analysis sheet.
4. Property location – Check property location and provide 911 address if missing or incorrect.
5. Check property use code to insure the actual use of the property has been noted.
6. Area – Check for proper neighborhood code and change if incorrect. If you feel there should be major neighborhood changes consult you supervisor.
7. Parcel number – Make sure that you are reviewing the proper dwelling or lot by comparing the parcel I.D. on the card with the parcel I.D. on the map.
8. Land data – Check for accuracy of lot size or land breakdown and correct if necessary. Check for influence factor (i.e. topography or size) and adjust if necessary. Check unit price to be sure that all parcels in neighborhood group are being priced consistently. Do not attempt to change any land rates until you consult your supervisor.
9. Listing data – Review all dwelling and other buildings for accuracy and adequacy of data. Make necessary corrections to sketches or characteristics.
10. Grade – Assign a quality grade to the structure based on project standards.
11. Year built – Confirm or correct actual year built.
12. Depreciation – Assign CDU rating to dwelling based on age and CDU rating.
13. Parcel Summary – Check indicated value and enter estimated value based on changes you make to records.
14. Mapping problems – Complete mapping problem forms, including a detailed description of problems.