SCHEDULE OF VALUES

MOORE COUNTY NORTH CAROLINA

2019 REAPPRAISAL

This document has been prepared in accordance
with Article 19, Section 105-317 Paragraph (b) (1),
of the General Statutes of North Carolina.

"In preparation for each revaluation of real property required by General Statutes 105-286, it shall be the duty of the assessor to see that: Uniform schedules of value, standards and rules to be used in appraising real property at its true value and its present-use value are prepared and are sufficiently detailed to enable those making appraisals to adhere to them in appraising real property"

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STATUTORY REQUIREMENTS

G.S. 105-286. Time for general reappraisal of real property.

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

(1) Schedule of Initial Reappraisals. -
Division One - 1977: --MOORE

Moore County last conducted a countywide reappraisal in 2015. The 'Division One' cycle established reappraisals to be done at least in the years 1987 1995, 2003, 2007 and 2015. The next reappraisal, per cycle, would be in 2019: the effective date of 'this reappraisal.

G.S. 105-296. Powers and duties of assessor:

(b) Within budgeted appropriations, he shall employ listers, appraisers, and clerical assistants necessary to carry out the listing, appraisal, assessing, and billing functions required by law. The assessor may allocate responsibility among such employees by territory, by subject matter, or on any other reasonable basis. Each person employed by the assessor as a real property appraiser or personal property appraiser shall during the first year of employment and at least every other year thereafter attend a course of instruction in his area of work. At the end of the first year of their employment, such persons shall also achieve a passing score on a comprehensive examination in property tax administration conducted by the Department of Revenue.

GS 105-299. Employment of experts:

The board of county commissioners may employ appraisal firms, mapping firms or other persons or firms having expertise in one or more of the duties of the assessor to assist him or her in the performance of such duties. The county may make available to such persons any information it has that will facilitate the performance of a contract entered into pursuant to this section. Persons receiving such information shall be subject to the provisions of G.S. 105-289(e) and G.S. 105-259 regarding the use and disclosure of information provided to them by the county. Any person employed by an appraisal firm whose duties include the appraisal of property for the county shall be required to demonstrate that he or she is qualified to carry out such duties by achieving a passing grade on a comprehensive examination in the appraisal of property administered by the Department of Revenue. In the employment of such firms, primary consideration shall be given to the firms registered with the Department of Revenue pursuant to the provisions of G.S. 105-289(i). A copy of the specifications to be submitted to potential bidders and a copy of the proposed contract may be sent by the board to the Department of Revenue for review before the invitation or acceptance of any bids. Contracts for the employment of such firms or persons shall be deemed to be contracts for personal services and shall not be subject to the provisions of Article 8, Chapter 143, of the General Statutes. (1939, c. 310, s. 408; 1971, c. 806, s.1; 1973, c.

476, s. 193; 1975, c 508, s 2; 1983, c 813, s 4; 1985, c. 601, s. 2; 1989, c. 79; 2002-184, s. 7; 2003-416, s.9)

G.S. 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 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 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 there from 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.

G.S. 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.

§ 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.)

Note: The Machinery Act of North Carolina is considered an integral part of these Uniform Schedules of Value, Standards, and Rules. Any applicable law or standard not recited within this text is hereafter included by reference as part of the schedules.

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Appraisal Theory

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 s/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 were 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 that 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. It’s 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 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
	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 interest

In addition to selecting valid market transactions, it is equally important to select properties that are truly comparable to the property under appraisement. 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:

Value = 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 reinvest 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 (value=net income divided by 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 equal the weighted rate. The sum of the weighted rates equals the weighted average.

	PORTION	**RATE**		**WEIGHTED RATE**
Mortgage loan (principle interest)	70%	.1492	=	.1044
Equity (down payment)	30%	.18	=	.0540
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

.199108		70%		.0425	=	.0059
(% of loan paid in 10 yrs.)	x	(loan rate)	x	(sinking fund 18% for 10 yrs.)		

Resulting Net Rate = .1525

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 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 there to 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 farmland.

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:

	Selling Price of Property
–	*Estimated Depreciated Value of Building*
=	*Indication of Land Value*

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 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 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 this 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 for 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 PRODUCTMTY INDEX

CROP	(1) Average Yield (Per Acre)	(2) Base Yield (Index-100)	(3) Relative Yield (1)(2)	(4) Acreage Ratio	(5) Cost Contribution (3)x(4)
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

(1) Soil Acreage Index	(2) Mapping Productivity (3)x(4)	(3) Soil Contribution	(4) Soil	(5) Unit (from Soil Map)
Stable	**68 A0**	**14**	**150**	**2100**
Denny	**45 A0**	**2**	**110**	**220**
Muscatine	**41 A0**	**17**	**160**	**2720**
Tams	**36 C2**	**7**	**130**	**910**
Totals	**-**	**40**	**-**	**5950**

Tract Productivity Index =Sum of (5) /Sum of (3) = 5950/14 = 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.

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, 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 farmland, 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 farmland 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:

(Total Land Value / Total Property Value) x 100%= % 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
(20% x $100,000 to 24% x 150,000)	
Narrowest Indicated Range of Lot Values	$24,000 to $30,000
(24% x $85,000 to 20% x $105,000)	

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;
- 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 proper 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 affecting 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 lister 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 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.

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.

Replacement Costs

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

The seven 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 S Buildings generally having an superior 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 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 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.

Grade	++	+	Grade Only	-	--
S	360%	340%	310%	280%	265%
X	250%	230%	210%	190%	185%
A	180%	170%	155%	145%	140%
B	135%	130%	125%	120%	115%
C	110%	105%	100%	95%	92%
D	90%	85%	80%	75%	70%
E	60%	55%	50%	40%	30%

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.

Residential

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 two classes above and two classes 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 C+ +	Above Average Quality	110%
Grade C+	Above Average Quality	105%
Grade C	Average Quality	100%
Grade C-	Below Average Quality	95%
Grade C--	Below Average Quality	92%

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 between each grade is based upon the use of better grade materials and higher quality workmanship. For example, Grade 'B' dwellings are found to have better individual features and interior finish, which reflects approximately 25% higher costs than Grade 'C.' Likewise, the Grade 'D' dwelling would be constructed of approximately 15% 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, four additional classes of dwellings above the base grade dwelling must be considered along with two grade classes of dwelling below the base grade.

The four base grades above are:

Grade S	Superior Quality	310%
Grade X	Excellent Quality	210%
Grade A	Very Good Quality	155%
Grade B	Good Quality	125%

The ‘S’, 'X' and 'A' Grade dwellings incorporate the best quality of materials and workmanship. Construction costs of some Grade S dwellings can run as high as 360% 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 can run as high as 35% 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 40-80% 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 seven (7) 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 S, 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 230%. Thus, once you have priced this house to the base level of 'C,' a multiplier of 230% 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 55%. Thus, once you have priced this house to the base level of 'C,' a multiplier of 55% 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 S 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.

Grade X Quality Dwellings

These homes are unique, architecturally designed and custom built by contractors who specialize in excellent quality construction, Extensive detail is given to ornamentation with the use of excellent 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 excellent 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 excellent 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.

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.

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.

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.

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.

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 are 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.

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 potentia1 owners.

One-and One-Half, and One-and Three Quarter Story

The one-and-one-half and One-and three quarter 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 and Above

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 are removed, and placed upon a permanent foundation as required by the Moore 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 on 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 fifteen hundred (1500) square feet, two full baths (eight fixtures), central heating system and a crawl space. All adjustments from base specifications are included in the following schedules.

DWELLING PRICING SCHEDULE

The 'Dwelling Pricing Schedule' is to be used for computing the replacement cost new of all single-family dwellings, and certain multiple-family dwellings not exceeding four living units. 'C' Grade base prices are provided for 1story, 1.5 story, 1.75 story, 2 story, 2.5 story, 2.75 story and 3story dwellings off frame exterior wall construction, along with tables of base price adjustments, additions and other features.

General Application

The general application of the pricing schedule is to select the base price that is most representative of the subject dwelling, and to adjust that base price to account for any variations between the subject dwelling and the model. The procedure is as follows:

To calculate the proper base price on the basis of exterior wall construction, story height, and ground floor area of the main portion of the dwelling, the following formula applies:

a) (Base Area of Subject x 0.00043) + 0.34 + (square root of base sqft x .00044) = Area Factor

Example: Base Price for 1600 square feet

(1600 x .00043) + .34 + (Square root of 1600 x .00044) = 1.04

b) Base Price x Area Factor = Base Replacement Cost

Example: $125,000 x 1.04 = $130,575

Make the necessary base price adjustments to account for the following variations from the base specifications:

a) Basement - The base price includes a slab or crawl space. A adjustment must be made if the dwelling is constructed on pier/post supports only. An additional adjustment must be made for a dwelling with a basement. The additional adjustment for basement utility will differ depending upon whether the dwelling has a full or partial basement.

b) Heating and Air Conditioning -The base price includes a central HVAC system. Adjustments must be made for any non-central systems.

c) Plumbing - The base price includes two three-fixture bathrooms, a kitchen sink, and a water heater. An addition or deduction must be made for variations in the number of plumbing fixtures.

d) Attic - The base price does not include an attic. An additional adjustment must be made for unfinished or finished attic area based upon the percentage of such area in relation to the GFLA.

	RESIDENTIAL DWELLING PRICE SCHEDULES			
Model	Factor Name	Variable Costed	Description	Rate for Valuation
1	AIRCODE	4	CENTRAL A/C	1
1	AREA	COEFF	AREA FACTOR=AREA*COEF1+CONST	0.00043
1	AREA	CONST	AREA FACTOR=AREA*COEFF+CONST	0.34
1	AREA	SQRT	SQRT FACTOR	0.00044
1	ATTIC	1	NONE	
1	ATTIC	2	UNFINISHED	6200
1	ATTIC	3	20% ATTIC GFA	14640
1	ATTIC	4	30% ATTIC GFA	21960
1	ATTIC	5	40% ATTIC GFA	29280
1	ATTIC	6	55% ATTIC GFA	40260
1	ATTIC	7	65% ATTIC GFA	47580
1	ATTIC	8	85% ATTIC GFA	62220
1	ATTIC	9	95% ATTIC GFA	69540
1	ATTICSF	1	NO ATTIC	
1	ATTICSF	2	NO ATTIC SF	
1	ATTICSF	3	20% ATTIC SFLA	0.2
1	ATTICSF	4	30% ATTIC SFLA	0.3
1	ATTICSF	5	40% ATTIC SFLA	0.4
1	ATTICSF	6	55% ATTIC SFLA	0.55
1	ATTICSF	7	65% ATTIC SFLA	0.65
1	ATTICSF	8	85% ATTIC SFLA	0.85
1	ATTICSF	9	95% ATTIC SFLA	0.95
1	BGAR	0	NO BASEMENT GARAGE	0
1	BGAR	1	1 CAR BASEMENT GARAGE	2130
1	BGAR	2	2 CAR BASEMENT GARAGE	3050
1	BGAR	3	3 CAR BASEMENT GARAGE	4000
1	BSMT	1	NONE	-4175
1	BSMT	2	CRAWL	0
1	BSMT	3	PART	5500
1	BSMT	4	FULL	11000
1	COMAREA	A	ATTIC AREA ADJ	0.4
1	COMLVL	C	CRAWL SPACE ADJ	0.2
1	COMLVL	E	ENCLOSURE ADJ	0
1	COST	BASE	BASE COST VALUE	125000
1	COST	VALYR	VALUATION YEAR	2019
1	EXTWALL	1	WOOD FRAME	
1	EXTWALL	10	CONC.FIBER BD	0
1	EXTWALL	2	BLOCK	0
1	EXTWALL	3	STUCCO	
1	EXTWALL	4	ALUM/VINYL/STEEL	0
1	EXTWALL	5	CONCRETE	
1	EXTWALL	6	LOG	0
1	EXTWALL	7	BRICK	2

	RESIDENTIAL DWELLING PRICE SCHEDULES			
Model	Factor Name	Variable Costed	Description	Rate for Valuation
1	EXTWALL	8	STONE	2
1	EXTWALL	9	MASONRY/FRAME	1
1	FUEL	1	GAS	1
1	FUEL	2	ELEC	1
1	FUEL	3	OIL	1
1	FUEL	4	COAL	1
1	FUEL	5	SOLAR	1
1	FUEL	6	NONE	1
1	GRADE	A	HIGH QUALITY A	1.55
1	GRADE	A+	HIGH QUALITY A+	1.7
1	GRADE	A++	HIGH QUALITY A++	1.8
1	GRADE	A-	HIGH QUALITY A-	1.45
1	GRADE	A--	HIGH QUALITY A- -	1.4
1	GRADE	B	GOOD B	1.25
1	GRADE	B+	GOOD B+	1.3
1	GRADE	B++	GOOD B++	1.35
1	GRADE	B-	GOOD B-	1.2
1	GRADE	B--	GOOD B- -	1.15
1	GRADE	C	AVERAGE C	1
1	GRADE	C+	AVERAGE C+	1.05
1	GRADE	C++	AVERAGE C++	1.1
1	GRADE	C-	AVERAGE C-	0.95
1	GRADE	C--	AVERAGE C--	0.92
1	GRADE	CA	HIGH QUALITY A	1.55
1	GRADE	CA+	HIGH QUALITY A+	1.67
1	GRADE	CA-	HIGH QUALITY A-	1.45
1	GRADE	CB	GOOD B	1.26
1	GRADE	CB+	GOOD B+	1.35
1	GRADE	CB-	GOOD B-	1.17
1	GRADE	CC	AVERAGE C	1
1	GRADE	CC+	AVERAGE C+	1.08
1	GRADE	CC-	AVERAGE C-	0.92
1	GRADE	CD	BELOW AVERAGE D	0.78
1	GRADE	CD+	BELOW AVERAGE D+	0.85
1	GRADE	CD-	BELOW AVERAGE D-	0.7
1	GRADE	CE	POOR	0.5
1	GRADE	CE+	POOR E+	0.6
1	GRADE	CE-	POOR E-	0.4
1	GRADE	CX	EXCEPTIONAL X	2.1
1	GRADE	CX+	EXCEPTIONAL X+	2.5
1	GRADE	CX-	EXCEPTIONAL X-	1.85
1	GRADE	D	BELOW AVERAGE D	0.8
1	GRADE	D+	BELOW AVERAGE D+	0.85

	RESIDENTIAL DWELLING PRICE SCHEDULES			
Model	Factor Name	Variable Costed	Description	Rate for Valuation
1	GRADE	D++	BELOW AVERAGE D++	0.9
1	GRADE	D-	BELOW AVERAGE D-	0.75
1	GRADE	D--	BELOW AVERAGE D-	0.7
1	GRADE	E	POOR	0.5
1	GRADE	E+	POOR E+	0.55
1	GRADE	E++	POOR E++	0.6
1	GRADE	E-	POOR E-	0.4
1	GRADE	E--	POOR E--	0.3
1	GRADE	M	MOBILE HOME M	0.55
1	GRADE	M+	MOBILE HOME M+	0.65
1	GRADE	M++	MOBILE HOME M++	0.75
1	GRADE	M-	MOBILE HOME M-	0.45
1	GRADE	M--	MOBILE HOME M--	0.4
1	GRADE	S	SUPERIOR S	3.1
1	GRADE	S+	SUPERIOR S+	3.4
1	GRADE	S++	SUPERIOR S++	3.6
1	GRADE	S-	SUPERIOR S-	2.8
1	GRADE	S--	SUPERIOR S- -	2.65
1	GRADE	X	EXCEPTIONAL X	2.1
1	GRADE	X+	EXCEPTIONAL X+	2.3
1	GRADE	X++	EXCEPTIONAL X++	2.5
1	GRADE	X-	EXCEPTIONAL X-	1.9
1	GRADE	X--	EXCEPTIONAL X- -	1.85
1	HEAT	1	NO HEAT, NO AC	-5000
1	HEAT	2	NON-CENTRAL	-2700
1	HEAT	3	CENTRAL HEAT	-1500
1	HEAT	4	CENTRAL HEAT & AC	
1	HEATCODE	1	HEAT ADJ	
1	HEATCODE	2	HEAT ADJ	0
1	HEATCODE	3	HEAT ADJ	0
1	HEATCODE	4	HEAT ADJ	1
1	HEATSYS	1	CENTRAL HEAT / AC	1
1	LEVEL	COM	COMM LEVEL	100
1	LEVEL	OBY	OBY LEVEL	100
1	LEVEL	RES	RES LEVEL	100
1	MISC	E2	ELEVATOR, RES	15000
1	MISC	F1	SINGLE FIREPLACE	3920
1	MISC	F2	DOUBLE FIREPLACE	5600
1	MISC	G1	GAZEBO	1500
1	MISC	H1	HOT TUB / SPA	2500
1	OTH-FEAT	BLIV	FIN-BASEMENT LIVING AREA	34
1	OTH-FEAT	BLIVA	FIN-BASEMENT LIVING AREA	39
1	OTH-FEAT	BREC	FIN-BASEMENT REC ROOM	22

	RESIDENTIAL DWELLING PRICE SCHEDULES			
Model	Factor Name	Variable Costed	Description	Rate for Valuation
1	OTH-FEAT	BRECA	FIN-BASEMENT REC ROOM	27
1	OTH-FEAT	FBPCT	FIN BSMT SFLA %	1
1	OTH-FEAT	METFP	METAL FIREPLACES	2000
1	OTH-FEAT	TRIMB	BRICK TRIM	7.3
1	OTH-FEAT	TRIMS	STONE TRIM	7.3
1	OTH-FEAT	UNFIN	UNFINISHED AREA	-15
1	OTH-FEAT	WBFP1	WBFP-ONE STACK, ONE OPENING	3400
1	OTH-FEAT	WBFP2	ADDITIONAL OPENINGS	1650
1	OTH-FEAT	WHEAT	CENTRAL WOOD HEATING	
1	PLUMB	ADDFX	BASE # FIXTURES	
1	PLUMB	COUNT	NORMAL # FIXTURES	8
1	PLUMB	FIXT	PRICE PER PLUMBING FIXTURE	1250
1	REVEDIT	BLDG	REVIEWERS BLDG %	0
1	REVEDIT	LAND	REVIEWERS LAND %	0
1	ROUND	APRTT	ROUND APR TOTALS	-2
1	SH-BRICK	10	1 STORY MASONRY	0.03
1	SH-BRICK	15	1 1/2 STORY MASONRY	0.0315
1	SH-BRICK	17.5	1.75 STORY MASONRY	0.0325
1	SH-BRICK	20	2 STORY MASONRY	0.035
1	SH-BRICK	25	2 1/2 STORY MASONRY	0.0365
1	SH-BRICK	27.5	2.75 STORY MASONRY	0.0375
1	SH-BRICK	30	3 STORY MASONRY	0.04
1	SH-FACT	10	1 STORY	1
1	SH-FACT	15	1.5 STORY	1.3
1	SH-FACT	17.5	1.75 STORY	1.45
1	SH-FACT	20	2 STORY	1.6
1	SH-FACT	25	2.5 STORY	1.95
1	SH-FACT	27.5	2.75 STORY	2.05
1	SH-FACT	30	3 STORY	2.2
1	STDFIX	2	# ADD FIXTURES	
1	STORYSF	1	1 STORY SFLA FACT	1
1	STORYSF	1.5	1.50 STORY SFLA FACTOR	1.5
1	STORYSF	1.75	1.75 STORY SFLA FACTOR	1.75
1	STORYSF	2	2 STORY SFLA FACT	2
1	STORYSF	2.5	2.50 STORY SFLA FACTOR	2.5
1	STORYSF	2.75	2.75 STORY SFLA FACTOR	2.75
1	STORYSF	3	3 STORY SFLA FACT	3
2	AIRCODE	4	CENTRAL A/C	1
2	AREA	COEFF	AREA FACTOR=AREA*COEF1+CONST	0.00048
2	AREA	CONST	AREA FACTOR=AREA*COEFF+CONST	0.28
2	AREA	SQRT	SQRT FACTOR	
2	ATTIC	1	NONE	
2	ATTIC	2	UNFINISHED	6200

	RESIDENTIAL DWELLING PRICE SCHEDULES			
Model	Factor Name	Variable Costed	Description	Rate for Valuation
2	ATTIC	3	20% ATTIC GFA	14640
2	ATTIC	4	30% ATTIC GFA	21960
2	ATTIC	5	40% ATTIC GFA	29280
2	ATTIC	6	55% ATTIC GFA	40260
2	ATTIC	7	65% ATTIC GFA	47580
2	ATTIC	8	85% ATTIC GFA	62220
2	ATTIC	9	95% ATTIC GFA	69540
2	ATTICSF	1	NO ATTIC	
2	ATTICSF	2	NO ATTIC SF	0
2	ATTICSF	3	20% ATTIC SFLA	0.2
2	ATTICSF	4	30% ATTIC SFLA	0.3
2	ATTICSF	5	40% ATTIC SFLA	0.4
2	ATTICSF	6	55% ATTIC SFLA	0.55
2	ATTICSF	7	65% ATTIC SFLA	0.65
2	ATTICSF	8	85% ATTIC SFLA	0.85
2	ATTICSF	9	95% ATTIC SFLA	0.95
2	BGAR	0	NO BASEMENT GARAGE	0
2	BGAR	1	1 CAR BASEMENT GARAGE	2130
2	BGAR	2	2 CAR BASEMENT GARAGE	3050
2	BGAR	3	3 CAR BASEMENT GARAGE	4000
2	BSMT	1	NONE/VINYL/METAL	-3360
2	BSMT	2	CRAWL/BRICK/BLOCK	0
2	BSMT	3	PART	5500
2	BSMT	4	FULL	11000
2	COMAREA	A	ATTIC AREA ADJ	0.4
2	COMLVL	C	CRAWL SPACE ADJ	0.2
2	COMLVL	E	ENCLOSURE ADJ	0
2	COST	BASE	BASE COST VALUE	122000
2	COST	VALYR	VALUATION YEAR	2019
2	DEPRT	01	DEPRECIATION TABLE	1
2	EXTWALL	1	WOOD FRAME	
2	EXTWALL	2	BLOCK	0
2	EXTWALL	3	STUCCO	
2	EXTWALL	4	ALUM/VINYL/STEEL	0
2	EXTWALL	5	CONCRETE	
2	EXTWALL	6	LOG	0
2	EXTWALL	7	BRICK	2
2	EXTWALL	8	STONE	2
2	EXTWALL	9	MASONRY/FRAME	1
2	FUEL	1	GAS	1
2	FUEL	2	ELEC	1
2	FUEL	3	OIL	1
2	FUEL	4	COAL	1

	RESIDENTIAL DWELLING PRICE SCHEDULES			
Model	Factor Name	Variable Costed	Description	Rate for Valuation
2	FUEL	5	SOLAR	1
2	FUEL	6	NONE	1
2	GRADE	A	HIGH QUALITY A	1.55
2	GRADE	A+	HIGH QUALITY A+	1.7
2	GRADE	A++	HIGH QUALITY A++	1.8
2	GRADE	A-	HIGH QUALITY A-	1.45
2	GRADE	A--	HIGH QUALITY A- -	1.4
2	GRADE	B	GOOD B	1.25
2	GRADE	B+	GOOD B+	1.3
2	GRADE	B++	GOOD B++	1.35
2	GRADE	B-	GOOD B-	1.2
2	GRADE	B--	GOOD B- -	1.15
2	GRADE	C	AVERAGE C	1
2	GRADE	C+	AVERAGE C+	1.05
2	GRADE	C++	AVERAGE C++	1.1
2	GRADE	C-	AVERAGE C-	0.95
2	GRADE	C--	AVERAGE C--	0.92
2	GRADE	CA	HIGH QUALITY A	1.55
2	GRADE	CA+	HIGH QUALITY A+	1.67
2	GRADE	CA-	HIGH QUALITY A-	1.45
2	GRADE	CB	GOOD B	1.26
2	GRADE	CB+	GOOD B+	1.35
2	GRADE	CB-	GOOD B-	1.17
2	GRADE	CC	AVERAGE C	1
2	GRADE	CC+	AVERAGE C+	1.08
2	GRADE	CC-	AVERAGE C-	0.92
2	GRADE	CD	BELOW AVERAGE D	0.78
2	GRADE	CD+	BELOW AVERAGE D+	0.85
2	GRADE	CD-	BELOW AVERAGE D-	0.7
2	GRADE	CE	POOR	0.5
2	GRADE	CE+	POOR E+	0.6
2	GRADE	CE-	POOR E-	0.4
2	GRADE	CX	EXCEPTIONAL X	2.1
2	GRADE	CX+	EXCEPTIONAL X+	2.5
2	GRADE	CX-	EXCEPTIONAL X-	1.85
2	GRADE	D	BELOW AVERAGE D	0.8
2	GRADE	D+	BELOW AVERAGE D+	0.85
2	GRADE	D++	BELOW AVERAGE D++	0.9
2	GRADE	D-	BELOW AVERAGE D-	0.75
2	GRADE	D--	BELOW AVERAGE D--	0.7
2	GRADE	E	POOR	0.5
2	GRADE	E+	POOR E+	0.55
2	GRADE	E++	POOR E++	0.6

	RESIDENTIAL DWELLING PRICE SCHEDULES			
Model	Factor Name	Variable Costed	Description	Rate for Valuation
2	GRADE	E-	POOR E-	0.4
2	GRADE	E--	POOR E--	0.3
2	GRADE	M	MOBILE HOME M	0.7
2	GRADE	M+	MOBILE HOME M+	0.78
2	GRADE	M++	MOBILE HOME M++	0.85
2	GRADE	M-	MOBILE HOME M-	0.6
2	GRADE	M--	MOBILE HOME M--	0.5
2	GRADE	S	SUPERIOR S	3.1
2	GRADE	S+	SUPERIOR S+	3.4
2	GRADE	S++	SUPERIOR S++	3.6
2	GRADE	S-	SUPERIOR S-	2.8
2	GRADE	S--	SUPERIOR S- -	2.65
2	GRADE	X	EXCEPTIONAL X	2.1
2	GRADE	X+	EXCEPTIONAL X+	2.3
2	GRADE	X++	EXCEPTIONAL X++	2.5
2	GRADE	X-	EXCEPTIONAL X-	1.9
2	GRADE	X--	EXCEPTIONAL X- -	1.85
2	HEAT	1	NO HEAT, NO AC	-5000
2	HEAT	2	NON-CENTRAL	-2700
2	HEAT	3	CENTRAL HEAT	-1500
2	HEAT	4	CENTRAL HEAT & AC	
2	HEATCODE	1	HEAT ADJ	
2	HEATCODE	2	HEAT ADJ	0
2	HEATCODE	3	HEAT ADJ	0
2	HEATCODE	4	HEAT ADJ	1
2	HEATSYS	1	CENTRAL HEAT / AC	1
2	LEVEL	COM	COMM LEVEL	100
2	LEVEL	OBY	OBY LEVEL	100
2	LEVEL	RES	RES LEVEL	100
2	MISC	E2	ELEVATOR, RES	15000
2	MISC	F1	SINGLE FIREPLACE	3920
2	MISC	F2	DOUBLE FIREPLACE	5600
2	MISC	G1	GAZEBO	1500
2	MISC	H1	HOT TUB / SPA	2500
2	OTH-FEAT	BLIV	FIN-BASEMENT LIVING AREA	34
2	OTH-FEAT	BLIVA	FIN-BASEMENT LIVING AREA	39
2	OTH-FEAT	BREC	FIN-BASEMENT REC ROOM	22
2	OTH-FEAT	BRECA	FIN-BASEMENT REC ROOM	27
2	OTH-FEAT	FBPCT	FIN BSMT SFLA %	1
2	OTH-FEAT	METFP	METAL FIREPLACES	2000
2	OTH-FEAT	TRIMB	BRICK TRIM	7.3
2	OTH-FEAT	TRIMS	STONE TRIM	7.3
2	OTH-FEAT	UNFIN	UNFINISHED AREA	-15

	RESIDENTIAL DWELLING PRICE SCHEDULES			
Model	Factor Name	Variable Costed	Description	Rate for Valuation
2	OTH-FEAT	WBFP1	WBFP-ONE STACK, ONE OPENING	3400
2	OTH-FEAT	WBFP2	ADDITIONAL OPENINGS	1650
2	OTH-FEAT	WHEAT	CENTRAL WOOD HEATING	
2	PLUMB	ADDFX	BASE # FIXTURES	
2	PLUMB	COUNT	NORMAL # FIXTURES	8
2	PLUMB	FIXT	PRICE PER PLUMBING FIXTURE	1250
2	REVEDIT	BLDG	REVIEWERS BLDG %	0
2	REVEDIT	LAND	REVIEWERS LAND %	0
2	ROUND	APRTT	ROUND APR TOTALS	-2
2	SH-BRICK	10	1 STORY MASONRY	0.03
2	SH-BRICK	15	1 1/2 STORY MASONRY	0.0315
2	SH-BRICK	17.5	1.75 STORY MASONRY	0.0325
2	SH-BRICK	20	2 STORY MASONRY	0.035
2	SH-BRICK	25	2 1/2 STORY MASONRY	0.0365
2	SH-BRICK	27.5	2.75 STORY MASONRY	0.0375
2	SH-BRICK	30	3 STORY MASONRY	0.04
2	SH-FACT	10	1 STORY	1
2	SH-FACT	15	1.5 STORY	1.3
2	SH-FACT	17.5	1.75 STORY	1.45
2	SH-FACT	20	2 STORY	1.6
2	SH-FACT	25	2.5 STORY	1.95
2	SH-FACT	27.5	2.75 STORY	2.05
2	SH-FACT	30	3 STORY	2.2
2	STDFIX	2	# ADD FIXTURES	
2	STORYSF	1	1 STORY SFLA FACT	1
2	STORYSF	1.50	1.50 STORY SFLA FACTOR	1.5
2	STORYSF	1.75	1.75 STORY SFLA FACTOR	1.75
2	STORYSF	2	2 STORY SFLA FACT	2
2	STORYSF	2.50	2.75 STORY SFLA FACTOR	2.75
2	STORYSF	3	3 STORY SFLA FACT	3

RESIDENTIAL ADDITION TABLE

Addn Code	Description	Flr Adj	Low	1st	2nd	3rd	Ac Adj	1st Const	1st Rate	1st Sqrt	Up Const	Up Rate	Up Sqrt	Part Sfla	Area %
10	1S FRAME	Y	N	Y	Y	Y	3	500	48	110		31.6	110	1	
10D	1S FRAME UPPER-DET.	Y	N	Y	Y	Y	3	100	20	115	100	10	115		
10U	1S FRAME UPPER	Y	N	Y	Y	Y	3		48.8			48.8		1	
11	OPEN FR PORCH	Y	Y	Y	Y	Y	0	60	20	105	60	20	105		
12	ENCLS FR PORCH	Y	Y	Y	Y	Y		300	34.5	100	300	23	100		
13	ATCH FR GARAGE	Y	Y	Y	N	N	0		8.35	350		8.35	350		
14	FR UTILITY BLD	Y	Y	Y	Y	N	0		5	150		4	150		
15	FR BAY	Y	Y	Y	Y	Y			30			30			
16	FR OVERHANG	Y	N	Y	Y	Y	3		50			50		1	
17	ATTIC-FINISHED-75%	Y	N	Y	Y	Y	3		36.6			36.6		0.8	
18	ATTIC-UNFNSHED	N	Y	Y	Y	Y	0		4			4			
19	ATTIC-FINISHED-40%	N	Y	Y	Y	Y	3		19.4			19.36		0.4	
20	1S MASONRY	Y	Y	Y	Y	Y	3	550	50.8	110	450	33.4	110	1	
20U	1S MASONRY UPPER	Y	Y	Y	Y	Y	3	450	51.7			51.7		1	
21	OPEN MSN PORCH	Y	Y	Y	Y	Y	0	60	21	105	60	21	105		
22	ENCLS MSN PORC	Y	Y	Y	Y	Y	0	300	35.5	100	300	35.5	100		
23	ATCH MSN GARAG	Y	Y	Y	N	N		200	14	325	200	14	325		
24	MSN UTLY BLDG	Y	Y	Y	Y	Y	0		5.5	150		4.5	150		
25	MSN BAY	Y	Y	Y	Y	Y			30			30			
26	MSN OVERHANG	Y	N	Y	Y	Y	3		50			50		1	
27	ATTIC-FIN.MASONRY-75%	Y	N	Y	Y	Y	3		38.6			38.6		0.8	
30	CARPORT	N	Y	Y	N	N	0	0	4.3	200		4.3	200		
31	WOOD DECKS	N	Y	Y	Y	Y		400	4.5	110	400	4.5	110		
32	CANOPY	N	Y	Y	Y	Y	0		3	150		3	150		
33	CRT/BRIK PATIO	N	Y	Y	Y	Y			4.5	12		4.5	12		
34	FGST/TILE PATI	N	Y	Y	Y	Y	0		4.5	12		4.5	12		
35	MSN STOOP/TERR	N	Y	Y	Y	Y	0		6.5	12		6.5	12		
36	ATCH GREENHSE/SOLAR RM	Y	Y	Y	Y	Y	0	800	27	120	500	20	120		
37	FR.GAR EXT/SHOP	N	Y	Y	Y	Y	0		4	300		4	300		
38	BR.GAR EXT/SHOP	N	Y	Y	N	N	0		4.24	300		4.24	300		
39	STABLE	N	Y	Y	N	N	0		19	525		19	525		
40	ATTIC-FINISHED-55%	N	Y	Y	Y	Y	3		26.8			26.84		0.6	
50	BASEMENT-UNF	N	Y	N	N	N	0		27						
55	BASEMENT-FIN	N	Y	N	N	N	3		39					1	
55B	BASEMENT-FIN @ $37	N	Y	N	N	N			39					1	
99	MISC BLDG TOTA	N	Y	Y	Y	Y	0		0			0			
10	1S FRAME	Y	N	Y	Y	Y	3	500	48	110		31.6	110	1	
10D	1S FRAME UPPER-DET.	Y	N	Y	Y	Y	3	100	20	115	100	10	115		
10U	1S FRAME UPPER	Y	N	Y	Y	Y	3		48.8			48.8		1	
11	OPEN FR PORCH	Y	Y	Y	Y	Y	0	60	20	105	60	20	105		
12	ENCLS FR PORCH	Y	Y	Y	Y	Y	0	300	34.5	100	300	23	100		
13	ATCH FR GARAGE	Y	Y	Y	N	N	0		8.35	350		8.35	350		
14	FR UTILITY BLD	Y	Y	Y	Y	N	0		5	150		4	150		
15	FR BAY WINDOW	Y	Y	Y	Y	Y			30			30			
16	FR OVERHANG	Y	N	Y	Y	Y	3		50			50		1	

RESIDENTIAL ADDITION TABLE

17	ATTIC-FINISHED-75%	Y	N	Y	Y	Y	3		36.6			36.6		0.8	
18	ATTIC-UNFNSHED	N	Y	Y	Y	Y	0		4			4			
19	ATTIC-FINISHED-40%	N	Y	Y	Y	Y	3		19.4			19.36		0.4	
20	1S MASONRY	Y	Y	Y	Y	Y	3	550	50.8	110	450	33.4	110	1	
20U	1S MASONRY UPPER	Y	Y	Y	Y	Y	3	450	51.7			51.7		1	
21	OPEN MSN PORCH	Y	Y	Y	Y	Y		60	21	105	60	21	105		
22	ENCLS MSN PORC	Y	Y	Y	Y	Y	0	300	35.5	100	300	35.5	100		
23	ATCH MSN GARAG	Y	Y	Y	N	N		200	14	325	200	14	325		
24	MSN UTLY BLDG	Y	Y	Y	Y	Y	0		5.5	150		4.5	150		
25	MSN BAY	Y	Y	Y	Y	Y			30			30			
26	MSN OVERHANG	Y	N	Y	Y	Y	3		50			50		1	
27	ATTIC-FIN.MASONRY-75%	Y	N	Y	Y	Y	3		38.6			38.6		0.8	
30	CARPORT	N	Y	Y	N	N	0		4.3	200		4.3	200		
31	WOOD DECKS	N	Y	Y	Y	Y	0	400	4.5	110	400	4.5	110		
32	CANOPY	N	Y	Y	Y	Y	0		3	150		3	150		
33	CRT/BRIK PATIO	N	Y	Y	N	N	0		4.5	12		4.5	12		
34	FGST/TILE PATI	N	Y	Y	Y	Y	0		4.5	12		4.5	12		
35	MSN STOOP/TERR	N	Y	Y	Y	Y	0		6.5	12		6.5	12		
36	ATCH GREENHOUS	Y	Y	Y	Y	Y	0	800	27	120	500	20	120		
37	FR.GAR EXT/SHOP	N	Y	Y	Y	Y	0		4	300		4	300		
38	BR.GAR EXT/SHOP	N	Y	Y	N	N			4.24	300		4.24	300		
39	STABLE	N	Y	Y	N	N	0		19	525		19	525		
40	ATTIC-FINISHED-55%	N	Y	Y	Y	Y	3		26.8			26.84		0.6	
50	BASEMENT-UNF	N	Y	N	N	N	0		27						
55	BASEMENT-FIN	N	Y	N	N	N	3		39					1	
55B	BASEMENT-FIN @ $37	N	Y	N	N	N			39					1	
99	MISC BLDG TOTA	N	Y	Y	Y	Y	0		0			0			

Commercial & Industrial

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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 pre-engineered 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.

COMMERCIAL BASE RATE TABLE

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. This table is also 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 Commercial Interior Rate Table or the Base Structure Codes Tables.

> *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 fireproof structural steel building, the fireproofing may be masonry, poured concrete, plaster, sprayed asbestos, or any similar material, which yields a high fire resistant rating.

Pre-engineered steel construction refers to a prefabricated steel structural frame and roof components. This type of construction usually consists of concrete foundation and flooring.

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 X Buildings generally having an outstanding architectural style and design, constructed with the finest quality materials and workmanship. Superior quality interior finish, built-in features, heating system, and very good grade plumbing and lighting fixtures.

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.

QUALITY GRADE FACTORS

X+	2.50	B+	1.35	D+	0.85
X	2.10	B	1.26	D	0.78
X-	1.85	B-	1.17	D-	0.70
A+	1.67	C+	1.08	E+	0.60
A	1.55	C	1.00	E	0.50
A-	1.45	C-	0.92	E-	0.40

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.

COMMERCIAL / INDUSTRIAL / EXEMPT / INSTITUTIONAL BUILDINGS

There are four distinct divisions of the form to be completed:

1. General Building Data
2. Interior / Exterior Data
3. Building Other Features & Attached Improvements
4. Yard Improvements & Secondary Buildings

A building is broken down into sections. Building sections are separate due to differing story height or major differences in type or quality of construction. A section can share a common wall or part of a common wall with another section or sections, but otherwise could stand alone as a separate building.

Building sections are broken down into interior/exterior lines. An interior/exterior line is defined as that portion of a building section having all identical characteristics found in the interior/exterior data category of the data collection form. In other words, an interior/exterior section line consists of those stories in a building section having the following identical characteristics:

1. Dimensions (width x length, or square feet)
2. Perimeter
3. Use Type Code
4. Wall Height
5. Exterior Wall Material
6. Construction Type
7. Interior Finish Percent
8. Partitions
9. Heating System Type
10. Air Conditioning Type
11. Plumbing
12. Physical Condition
13. Functional Utility

GENERAL BUILDING DATA

The information for the general building data portion of the form must be completed for every building structure type described.

Building
Space is provided to enter a three-digit number denoting the 'building code' to be described. All character positions must be filled in (using leading zeros, if necessary).

Year Built
Space is provided to enter the year in which the building structure began.

> Note: If the owner does not know the actual year, the best estimate possible should be entered based upon known years of similar properties in the immediate area or using aerial photography. A 'year built' must be entered for each structure type.

Number of Units
Space is provided to enter a two-digit number denoting a distinctive type of measurable unit to describe certain structure type codes. All character positions must be filled in. Use leading zeros if necessary.

Structure Type Codes
Space is provided to enter the three-digit numeric structure type code that denotes the purpose of construction. See the following page for three-digit numeric codes that should be utilized.

> Note: When a building has been constructed for multiple purposes of use, the predominant structure type code should be chosen.

Grade
This field will be completed during the value review phase of the project.

Number of Identical Units
Space is provided to enter the total number of identical buildings and structure type units. Enter 01 - 99.

■

MAIN BUILDING STRUCTURE TYPE CODE TABLE

COST VERSION	STRUCTURE CODE	STRUCTURE DESCRIPTION	BASE STRUCTURE CODE	EXPECTED LIFE CODE 1 & 4	EXPECTED LIFE CODE 2 & 3	DEPR TABLE
19	101	RESIDENTIAL 1 FAMILY	10	40	40	1
19	102	RESIDENTIAL 2 FAMILY	10	40	40	1
19	103	RESIDENTIAL 3 FAMILY	10	40	40	1
19	104	RESIDENTIAL 4 FAMILY	10	40	40	1
19	105	MIXED RESD / COMM	10	40	40	1
19	106	CONDO / COMMON ELEV	10	40	40	1
19	107	CONDO FEE SIMPLE	10	40	40	1
19	201	RES STRCT ON APT VAL	10	40	40	1
19	211	GARDEN APARTMENT	2	40	50	1
19	212	HIGH RISE APARTMENT	1	50	50	1
19	301	RES ON COMM LAND	10	40	40	1
19	314	HIGH RISE HOTEL/MOTEL	1	50	50	1
19	315	LO RISE HOTEL/MOTEL	2	30	40	1
19	316	NURSING HOME	2	40	50	1
19	318	BOARDING/ ROOMING HSE	10	40	50	1
19	319	MIXED RESD / COMM	3	40	50	1
19	321	RESTAURANT	3	40	50	1
19	323	FOOD STAND	3	30	30	1
19	325	FRANCHISE FOOD	9	30	30	1
19	327	BAR / LOUNGE	3	40	50	1
19	328	NIGHT CLUB / DINNER THTR	3	40	50	1
19	331	AUTO DEALER / FULL SERV	5	40	50	1
19	332	AUTO SERVICE GARAGE	4	40	50	1
19	333	SERVICE STATION FULL	3	20	20	1
19	334	SERVICE STATION SELF	3	20	20	1
19	335	TRUCK STOP	4	40	50	1
19	336	CAR WASH MANUAL	7	20	20	1
19	337	CAR WASH AUTOMATIC	4	20	30	1
19	338	PARKING GARAGE / DECK	4	40	40	1
19	340	SUPER REGIONAL MALL	3	40	50	1
19	341	REGIONAL SHOPPING MALL	3	40	50	1
19	342	COMM SHOPPING CENTER	3	40	50	1
19	343	NBHD SHOPPING CENTER	3	40	50	1
19	344	STRIP SHOPPING CENTER	3	40	50	1
19	345	DISCOUNT DEPT STORE	3	40	50	1
19	346	DEPARTMENT STORE	3	40	50	1
19	347	SUPERMARKET	3	40	50	1
19	348	CONVENIENCE FOOD MKT	3	40	50	1
19	349	MEDICAL OFFICE BLDG	5	40	50	1
19	351	BANK	5	50	60	1
19	352	SAVINGS INSTITUTION	5	50	60	1
19	353	LO RISE OFFICE 1-4 STRY	5	40	50	1
19	354	HI RISE OFFICE 5+ STRY	8	60	60	1
19	355	OFFICE CONDO	5	40	50	1
19	356	RETAIL CONDO	5	40	50	1
19	359	MEGA WHSE	9	40	50	1

MAIN BUILDING STRUCTURE TYPE CODE TABLE

COST VERSION	STRUCTURE CODE	STRUCTURE DESCRIPTION	BASE STRUCTURE CODE	EXPECTED LIFE CODE 1 & 4	EXPECTED LIFE CODE 1 & 4	DEPR CODE
19	361	FUNERAL HOME	10	40	50	1
19	362	VETERINARY CLINIC	3	30	40	1
19	363	LEGITIMATE THEATER	6	50	50	1
19	364	MOTION PICTURE THEATER	6	40	50	1
19	365	CINEMA THEATER	6	40	50	1
19	366	RADIO/TV/MIN PIC STUDIO	5	40	50	1
19	367	SOCIAL/FRATERNIAL HALL	3	30	40	1
19	368	HANGAR	4	30	40	1
19	369	DAY CARE CENTER	3	30	40	1
19	370	GREENHOUSE / FLORIST	3	30	40	1
19	371	DOWNTOWN ROW TYPE	3	40	50	1
19	373	RETAIL SINGLE OCCUP	3	40	50	1
19	374	RETAIL MULTI OCCUPANTCY	3	40	50	1
19	375	RETAIL DRIVE-UP	3	40	50	1
19	381	BOWLING ALLEY	4	30	40	1
19	382	SKATING RINK	4	30	40	1
19	383	HEALTH SPA	5	40	50	1
19	384	SWIMMING POOL INDOOR	4	20	30	1
19	385	TENNIS CLUB INDOOR	4	30	40	1
19	386	RACQUET CLUB INDOOR	3	30	40	1
19	387	COUNTRY CLUB	5	40	50	1
19	388	CLUB HOUSE	3	40	50	1
19	389	COUNTRY CLUB W/COURSE	5	40	50	1
19	391	COLD STORAGE	4	30	40	1
19	392	LUMBER STORAGE	7	20	30	1
19	395	TRUCK TERMINAL	4	40	50	1
19	396	MINI WAREHOUSE	4	30	30	1
19	397	OFFICE / WAREHOUSE	4	40	50	1
19	398	WAREHOUSE	4	30	40	1
19	399	PREFAB WAREHOUSE	7	30	30	1
19	401	MFG / PROCESSING	4	40	50	1
19	405	RESEARCH AND DEVELOP	5	40	50	1
19	610	RECREATIONAL / HEALTH	5	40	50	1
19	611	LIBRARY	5	50	60	1
19	612	SCHOOL	5	50	60	1
19	613	COLLEGES & UNIVERSITY	5	50	60	1
19	620	RELIGIOUS	5	50	60	1
19	630	AUDITORIUM	6	50	60	1
19	640	HOSPITAL	5	50	60	1
19	660	POLICE/FIRE STATION	5	50	60	1
19	670	CORRECTIONAL	5	50	60	1
19	680	CULTURAL FACILITY	5	50	60	1
19	690	RAIL/BUS/AIR TERMINAL	5	50	60	1
19	710	TELEPHONE EQUIP BLDG	4	50	60	1
19	715	TELEPHONE SERV GAR FAC	4	40	50	1
19	720	RADIO/TV TRANSMTR BLDG	4	40	50	1

INTERIOR / EXTERIOR DATA

In describing the various portions of a building section, the concept of interior / exterior lines should be used. For example, a portion of a building section several stories high is considered to be an interior / exterior line if all of the following variables have the same content:

Dimensions (width x length, or square feet)
Partitions
Perimeter
Heating System Type
Use Type
Air Conditioning Type
Wall Height
Plumbing
Exterior Wall Material
Physical Condition
Construction Type
Functional Utility
Interior Finish Percent

Section Number
Space is provided to enter a two-digit number denoting the 'section number' of the building being described. Section numbers should begin with ' 1 ' and a sequential order followed.

Levels (From & To)
Space is provided to enter a two-digit alpha/numeric code. This field may be used in conjunction with the next field for interior / exterior lines consisting of several stories.

Enter B1 to indicate first basement
Enter 01-01 to indicate first story
Enter 02-99 to indicate second through ninety-ninth story.

Size
Enter either the dimensions (width and length) or square footage area by traversing the perimeter of the exterior walls as measured.

Use Type
Space is provided to enter a three-digit numeric code denoting the current use of the interior/exterior line. *The current use may differ from the structure type.*

COMMERCIAL EXTERIOR RATE TABLE

EXTERIOR WALL TYPE	EXTERIOR WALL DESCRIPTION	COST BY BASIC STRUCTURE CODE									
		1	2	3	4	5	6	7	8	9	10
0	NONE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	BRICK VENEER	20.00	18.00	20.00	19.00	21.00	21.00	17.00	20.00	0.00	20.00
2	FRAME	16.50	15.50	17.00	16.50	17.00	15.00	18.00	17.00	0.00	16.50
3	CONCRETE BLOCK	18.50	18.00	18.50	18.00	19.00	19.00	15.50	19.00	0.00	19.00
4	BRICK ON BLOCK	19.00	18.50	19.00	19.00	20.00	20.00	17.00	20.00	0.00	19.00
5	TILE TILT UP PANELS	22.50	22.00	22.50	21.50	22.00	22.00	16.50	22.00	0.00	22.00
6	MASONRY & FRAME	18.50	18.00	18.50	18.50	19.00	19.00	16.50	19.00	0.00	18.50
7	LIGHT METAL	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	0.00	6.50
8	METAL SANDWICH	20.00	18.00	20.00	19.50	20.00	20.00	17.50	19.50	0.00	20.00
9	CONCRETE LOAD BEARING	19.50	19.00	19.50	19.00	21.50	21.50	17.50	21.50	0.00	20.50
10	CONC NON-LOAD BEARING	19.00	18.00	19.00	19.00	20.50	20.50	17.00	20.50	0.00	19.50
11	GLASS	25.00	24.00	25.00	24.00	26.00	26.00	21.50	26.00	0.00	25.00
12	GLASS & MASONRY	24.00	23.00	24.00	23.00	25.00	25.00	20.50	20.50	0.00	19.50
13	ENCLOSURE	0.00	0.00	0.00	2.20	0.00	0.00	2.30	0.00	0.00	0.00
14	CONCRETE TILT UP	23.00	22.00	23.00	22.00	24.00	24.00	19.50	24.00	0.00	23.00
15	SOLAR GLASS	23.00	22.00	23.00	22.00	24.00	24.00	19.50	24.00	0.00	23.00
16	CORRUGAED ASBESTOS	15.50	14.50	15.50	15.00	15.50	15.50	13.50	16.00	0.00	15.00
17	NATIVE STONE	22.00	20.00	22.00	21.00	23.00	23.00	19.00	22.00	0.00	22.00
18	MASONRY & METAL	19.00	17.00	19.00	19.50	19.00	19.50	17.50	19.50	0.00	19.50
19	STUCCO	18.50	17.50	18.50	18.00	19.50	19.50	16.50	19.50	0.00	18.50
20	WOOD SHINGLES	22.00	20.00	22.00	21.00	23.00	23.00	19.00	22.00	0.00	22.00

COMMERCIAL INTERIOR RATES

USE	DESCR	BASE	INTFIN	PART0	PART1	PART2	PART3	HEAT0	HEAT1	HEAT2	HEAT3	AC0	AC1	AC2	AC3	PLUMB0	PLUMB1	PLUMB2	PLUMB3	SUMPCT
11	APT.-011	48	-3.95	-7.6	-0.8	0	0.85	-1.6	0	0	-1.1	-2.45	0			-2.8	-0.65	0	0.75	100
12	HOTEL-12	56	-3.6	-11.4	-1.3	0	1.6	-1.8	0	0	-1.25	-2.7	0	-1		-4.8	-1.2	0	1.55	100
21	MOTEL-21	50	-3.35	-10.6	-1.3	0	1.6	-1.7	0	0	-1.25	-2.7	0	-1		-4.5	-1.15	0	1.55	100
23	DORMITORY-023	51	-3.6	-11.6	-1.3	0	1.55	-1.8	0	0	-1.25	-2.55	0	-1		-4.65	-1.2	0	1.65	100
24	DUPLEX/TRIPLEX-024	38	-3.95	-7.35	-1.25	0	1.6	-1.7	0	0	-1.25	-2.55	0	-1		-2.8	-0.85	0	1.2	100
25	DWG CONV-OFF-025	55	-3.95	-7.35	-1.25	0	1.6	-1.7	0	0	-1.25	-2.55	0	-1		-2.8	-0.85	0	1.2	100
26	DWG CONV-SALES	34	-3.95	-7.35	-1.25	0	1.6	-1.7	0	0	-1.25	-2.55	0	-1		-2.8	-0.85	0	1.2	100
27	DWG CON-027	41.5	-3.95	-7.35	-1.25	0	1.6	-1.7	0	0	-1.25	-2.55	0	-1		-2.8	-0.85	0	1.2	100
30	DRUGSTORE-030	45.5	-4.45	-1.95	-0.65	0	0.8	-1.9	0	0	-1.1	-3	0	-2		-1.25	-0.55	0	0.8	100
31	RESTAURANT-031	66	-5	-9.8	-3.4	0	6.85	-1.9	0	0	-1.1	-6.55	0	-2		-5.65	-1.9	0	2.75	100
32	DEPART.STORE-032	41.5	-4.45	-4.3	-0.95	0	1.25	-1.9	0	0	-1.1	-3	0	-2		-2.2	-1.95	0	0.7	100
33	DISC.STR/MKT/BIG BOX-033	28	-4.45	-1.5	-0.15	0	0.25	-1.9	0	0	-1.1	-3	0	-2		-1.3	-0.35	0	1.3	100
34	RETAIL STORE-034	41.5	-4.45	-1.95	-0.65	0	0.8	-1.9	0	0	-1.1	-3	0	-2		-1.25	-0.55	0	0.8	100
35	TAVERN/BAR-035	59	-4.45	-6.4	-2.15	0	3.5	-1.9	0	0	-1.1	-3	0	-2		-5.65	-1.9	0	2.75	100
36	BAR LOUNGE-036	59	-4.45	-6.4	-2.15	0	3.5	-1.9	0	0	-1.1	-3	0	-2		-5.65	-1.9	0	2.75	100
37	CAFETERIA-037	73.5	-3.65	-3.35	-1.2	0	1.8	-1.3	0	0	-0.9	-3	0	-2		-3.65	-1.25	0	1.8	100
38	CONV.STORE-038	47.25	-4.45	-1.95	-0.65	0	0.8	-1.9	0	0	-1.1	-3	0	-2		-1.25	-0.5	0	0.8	100
39	NHBD SHOP.CTR-039	48	-4.9	-1.95	-0.65	0	0.8	-1.9	0	0	-1.1	-3	0	-2		-1.25	-0.5	0	0.8	100
40	DIST.WAREHOUSE-040	11.5	-1	-0.7	-0.55	0	0.7	-1.8	0	0	-0.95	0	3	1.3		-0.85	-0.7	0	0.75	100
41	MINI-WAREHOUSE-041	10.5	-0.75	-0.7	-0.55	0	0.7	-1.8	0	0	-0.95	0	3	1.3		-0.85	-0.7	0	0.75	100
42	HANGAR-042	17.75	-0.75	-0.55	-0.15	0	0.25	-1.8	0	0	-0.95	0	3	1.3		-0.85	-0.7	0	0.85	100
43	MANUFACTURING	38.25	-0.75	-0.9	-0.35	0	0.7	-1.8	0	0	-0.95	0	3	1.3		-0.95	-0.35	0	0.55	100
44	LIGHT MANUFACTURING	13	-0.75	-0.9	-0.35	0	0.7	-1.8	0	0	-0.95	0	3	1.3		-0.95	-0.35	0	0.55	100
45	WAREHOUSE	5.25	-0.75	-0.7	-0.55	0	0.7	-1.8	0	0	-0.95	0	3	1.3		-0.85	-0.7	0	0.75	100
46	AUTO SHOWROOM/OFFICE	54.25	-4.05	-3	-0.8	0	1.15	-1.8	0	0	-0.95	-2.75	0	-1		-2.05	-0.65	0	0.8	100
47	AUTO PARTS/SERVICE	34.25	-0.75	-0.9	-0.35	0	0.55	-1.8	0	0	-0.95	-2.75	0	-1		-1.15	-0.55	0	0.75	100
48	TENNIS CLUB	49	-0.75	-3	-0.35	0	0.55	-1.8	0	0	-0.95	-2.75	0	-1		-2.05	-0.55	0	0.8	100
49	RACQUET BALL COURT	55.25	-1.65	-15	-1.5	0	4.35	-1.5	0	0	-0.65	-2.2	0	-1		-1.5	-0.4	0	1.5	100
50	SKATE RINK ICE/ROLL	48.25	-2.05	-1.9	-0.65	0	0.8	-1.7	0	0	-0.95	-2.95	0	-2		-1.25	-0.55	0	0.75	100
51	BANK/SAVINGS INST	119.5	-7.7	-16.5	-2.55	0	2.95	-2.6	0	0	-1.9	-3.35	0	-2		-3.5	-1.25	0	1.9	100
52	MEDICAL CENTER	93.75	-7.7	-17.6	-2.6	0	3	-2.6	0	0	-1.9	-3.35	0	-2		-5.25	-1.95	0	2.7	100
53	OFFICES	66.75	-7.7	-12.9	-2.8	0	3.65	-2.6	0	0	-1.9	-3.35	0	-2		-1.7	-0.25	0	2.15	100
54	NURSING HOMES	85.75	-7.7	-13.4	-2.15	0	2.6	-2.6	0	0	-1.9	-3.35	0	-2		-5.55	-1.6	0	2.15	100
55	SCHOOL	91.75	-7.7	-12.9	-0.55	0	2.15	-2.6	0	0	-1.9	-3.35	0	-2		-3.6	-1.2	0	1.7	100
56	HOSPITAL	163.3	-7.7	-24.5	-2.2	0	2.45	-2.6	0	0	-1.9	-3.35	0	-2		-8.8	-2.1	0	2.85	100
57	LIBRARY	92	-7.7	-12.9	-1.65	0	1.95	-2.6	0	0	-1.9	-3.35	0	-2		-2.9	-1.1	0	1.6	100
58	FUNERAL HOME	71	-4.05	-10.7	-2.6	0	3.35	-2.55	0	0	-1.8	-3.35	0	-2		-2.45	-0.95	0	1.5	100
59	MEGA WAREHOUSE STORE	46.25		-1.5				-1.9				-3				-1.3				100
60	COMM SHOP.CTR-060	43.5	-4.9	-1.95	-0.65	0	0.8	-1.9	0	0	-1.1	-3	0	-2		-1.25	-0.5	0	0.8	100
61	AUDITORIUM/THEATER	80.25	-3.8	-10.5	-1.95	0	2.9	-2.95	0	0	-2.15	-3.35	0	-1		-3.6	-0.85	0	1.15	100
62	CINEMA	62.25	-3.8	-10.5	-2.45	0	3.1	-2.95	0	0	-2.15	-3.35	0	-1		-2.6	-0.65	0	0.8	100
63	RELIGIOUS INST	88	-3.8	-11	-2.55	0	3.35	-2.95	0	0	-2.15	-3.35	0	-1		-2.75	-0.95	0	1.5	100
64	SOCIAL/FRATERNAL HLL	81.5	-3.8	-9.5	-1.8	0	2.1	-2.95	0	0	-2.15	-3.35	0	-1		-2.9	-1.1	0	1.6	100
65	COUNTRY CLUB	91.25	-3.8	-9.5	-1.8	0	2.1	-2.95	0	0	-2.15	-3.35	0	-1		-2.9	-1.1	0	1.6	100
66	FITNESS CTR/SPA-066	94.5	-3.8	-9.5	-1.8	0	2.1	-2.95	0	0	-2.15	-3.35	0	-1		-2.9	-1.1	0	1.6	100

COMMERCIAL INTERIOR RATES

USE	DESCR	BASE	INTFIN	PART0	PART1	PART2	PART3	HEAT0	HEAT1	HEAT2	HEAT3	AC0	AC1	AC2	AC3	PLUMB0	PLUMB1	PLUMB2	PLUMB3	SUMPCT
70	SRVC STATION W/BAYS	33.75	-0.75	-6.55	-0.8	0	0.9	-1.65	0	0	-0.25	0	3	1.3		-4.75	-1.6	0	0.9	100
71	SRVC STN-CONV RETAIL	33.75	-0.75	-6.55	-0.8	0	0.9	-1.65	0	0	-0.25	0	3	1.3		-4.75	-1.6	0	0.9	100
72	SRVC STN-CONV STORAG	26.75	-0.75	-6.55	-0.8	0	0.9	-1.65	0	0	-0.25	0	3	1.3		-4.75	-1.6	0	0.9	100
73	SRVC STATION W/O BAY	36.75	-0.75	-6.55	-0.8	0	0.9	-1.65	0	0	-0.25	0	3	1.3		-12.85	-6.55	0	2.45	100
74	CAR WASH MANUAL-074	32.75	-1.65	-0.8	-0.25	0	0.35	-1.7	0	0	-0.95	0	3	1.2		-0.8	-0.25	0	0.35	100
75	CAR WASH AUTOMATIC	76	-1.65	-0.8	-0.25	0	0.35	-1.7	0	0	-0.95	0	3	1.2		-0.8	-0.25	0	0.35	100
76	SUPERMARKET/GROCERY	44.5	-4.45	-1.5				-1.9				-3				-1.3				100
80	WAREHOUSE OFF.-080	22.25	-1.95	-10.7	-2.6	0	3.35	-2.55	0	0	-1.8	-3.3	0	-2		-2.45	-0.95	0	1.5	100
81	MLT.USE.APTS-081	43.25	-3.1	-7.85	-0.8	0	0.9	-1.6	0	0	-1.15	-2.4	0	-1		-2.45	-0.7	0	0.8	100
82	MULTI-USE OFFICE	66.75	-4.05	-10.7	-2.6	0	3.35	-2.55	0	0	-1.8	-3.3	0	-2		-2.45	-0.95	0	1.5	100
83	MULTI-USE SALES	37.25	-2.05	-1.9	-0.65	0	0.8	-1.7	0	0	-0.95	-2.95	0	-2		-1.25	-0.55	0	0.75	100
84	MLT.USE STOR.-084	15.25	-1.65	-0.8	-0.25	0	0.35	-1.7	0	0	-0.95	0	3	1.2		-0.8	-0.25	0	0.35	100
85	ENCLOSURE	22.25	-4	-7.35	-1.25	0	1.6	-1.7	0	0	-1.25	-2.55	0	-1		-2.8	-0.85	0	1.2	100
86	SUPPORT AREA-086	10.75	-1.65	-0.8	-0.25	0	0.35	-1.7	0	0	-0.95	0	3	1.2		-0.8	-0.25	0	0.35	100
87	DAYCARE-087	78.25	-4.05	-10.7	-2.6	0	3.35	-2.55	0	0	-1.8	-3.35	0	-2		-2.45	-0.95	0	1.5	100
88	MULTI USE RR/LOCKER	45.25	-1.65	-0.8	-0.25	0	0.35	-1.7	0	0	-0.95	0	3	1.2		-0.8	-0.25	0	0.35	100
90	PARKING GARAGE	16.75	0	-0.7	-0.55	0	0.7	0	0	0	0	0	0	0		0	0	0	0	100
91	UNFIN RES BSMT	17	-1.65	-0.8	-0.25	0	0.4	0	1.7	1.7	0.95	0	3	1.3		-0.8	-0.25	0	0.4	100
95	CVRD.MALL/REG.SHOP CTR-095	46.5	-4.45	-0.8	-0.25	0	0.35	-1.9	0	0	-1.1	-3	0	-2		0	0	0	0	100
96	ENG/RESRCH/DEVELOP-096	28.75	-4.45	-0.7	-0.55	0	0.7	-1.8	0	0	-0.95	0	3	1.3		-0.85	-0.7	0	0.75	100
100	FOOD FRANCHISE	125	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	100
101	IND.FLEX.BLD-101	26.75	-0.75	-0.9	-0.35	0	0.7	-1.8	0	0	-0.95	0	3	1.3		-0.95	-0.35	0	0.55	100
990	PARK GAR UP LVL	9.25	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	100

MAIN BUILDING CONSTRUCTION TYPE COST TABLE

BASIC STRUCTURE CODE	BASEMENT				FIRST FLOOR				UPPER FLOOR			
	WOOD	Fire Res. STEEL	Fire Proof CONC	Pre LIGHT STEEL	WOOD	Fire Res. STEEL	Fire Proof CONC	Pre LIGHT STEEL	WOOD	Fire Res. STEEL	Fire Proof CONC	Pre LIGHT STEEL
1	20.00	21.00	21.00	0.00	18.00	21.00	25.00	0.00	16.60	19.50	24.00	0.00
2	16.00	17.50	17.50	0.00	17.00	19.50	24.00	0.00	16.00	18.00	23.00	0.00
3	20.50	21.50	21.50	20.50	18.00	29.00	26.00	19.00	17.00	21.00	24.50	18.00
4	18.00	19.00	19.00	17.00	18.00	19.00	21.50	17.00	17.00	18.00	20.50	16.50
5	18.00	22.00	22.00	19.50	20.50	25.00	29.00	19.00	19.00	23.50	28.00	19.00
6	20.00	22.50	22.50	19.00	20.00	26.00	32.00	20.00	19.00	25.00	29.50	19.00
7	18.00	19.50	19.50	17.00	17.50	18.00	21.00	16.50	16.50	17.00	19.00	15.00
8	22.00	23.50	23.50	0.00	21.00	27.00	32.00	0.00	19.00	25.50	28.50	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	12.00	13.50	0.00	0.00	17.00	18.00	0.00	0.00	16.00	17.00	0.00	0.00

Wall Height

Space is provided to enter a two-digit number denoting the height of an interior/exterior line story to the nearest foot. Both character positions must be filled in. Use leading zeros if necessary. This measurement should be made from floor to floor and *not* from floor to ceiling.

Note 1: Parapets should not be included in this measurement.
Note 2: Gable-type roofs should be measured to the eaves. Other roof types, such as shed or saw-tooth, should be averaged to compute the wall height to the roofline.

Exterior Wall Material

Space is provided to enter a two-digit numeric code denoting the exterior wall material of an interior / exterior line. Enter 01 - 18

Enter 01 **Brick Veneer** to indicate a brick or stone veneer
Enter 02 **Frame** to indicate an exterior wall of wood, aluminum siding, composition siding, or shingles on siding
Enter 03 **Concrete Block** to indicate a masonry wall consisting of concrete compressed into the shape of a block and allowed to harden
Enter 04 **Brick /Concrete Block** to indicate that at least one-third of the exterior walls are of a brick or concrete material, and the rest of the exterior walls are of the other material
Enter 05 **Tile** to indicate a hard earthenware block that has been hard burned and molded, such as terra cotta
Enter 06 **Masonry and Frame** to indicate at least one-third of the exterior walls are of a frame or masonry (brick or stone) material, and the remainder of the exterior walls are of the other material
Enter 07 **Metal (Light)** to indicate walls constructed of metal panels on wood or steel frame
Enter 08 **Metal (Heavy)** to indicate walls constructed of a core of insulation covered on both sides by metal panels

Enter 09 **Concrete, Load-Bearing** to indicate concrete walls which support a part of the building; usually a floor or roof

Enter 10 **Concrete, Non Load-Bearing** to indicate a concrete curtain wall that does not support the roof or floor

Enter 11 **Glass** to indicate walls of non-supporting glass panels set in metal frame

Enter 12 **Glass & Masonry** to indicate walls of non-supporting glass set in brick or concrete back-up

Enter 13 **Enclosure** to indicate a wood stud or concrete block office or sales enclosure wall within the interior of a building

Enter 14 **Concrete Tilt-Up** to indicate concrete wall sections that are cast horizontally and tilted or lifted into position

Enter 15 **Solar Glass** to indicate a high quality tinted, heat-absorbent glass set in metal frame

Enter 16 **Asbestos Corrugated Rigid** to indicate a rigid corrugated asbestos sheet on wood or steel frame

Enter 17 **Masonry and Metal** to indicate that at least one-third of the exterior walls are of a masonry (brick or stone) material and the remainder are of the other material.

Enter 18 **Native Stone** to indicate a locally quarried stone used as a load-bearing wall. The stone can be irregular shaped rubble or cut blocks set in place with mortar.

Construction Type

Space is provided to enter a one-digit numeric code denoting the type of construction of an interior/exterior line.

Enter 1 **Wood Frame I Joist / Beam** to indicate construction that incorporates wood stud, balloon or platform framing or wood post and beam framing (mill construction). This category also includes masonry structures that incorporate wood joist or plank floor systems, or wood joist, truss or rafter roof systems.

Enter 2 **Fire Resistant** to indicate buildings with exposed structural steel, or reinforced concrete columns and beams. Multiple story structures will have steel floor joists with concrete plank or a reinforced concrete floor system. Exterior walls will typically be masonry or metal and glass panels.

Enter 3 **Fireproof** to indicate typically high-rise buildings with fabricated, heavy structural steel column and beam framing which has been enveloped in a fireproof material such as concrete or gypsum. Floors will be reinforced concrete or pre-cast concrete plank on steel joists protected by a gypsum-vermiculite plaster on metal lath ceiling. Exterior walls will be masonry or metal and glass panels.

Enter 4 **Pre-Engineered Steel** to indicate buildings framed with prefabricated steel members. The structure will incorporate metal beams, girders, columns and purlins, or light-gauge steel joists manufactured from cold-formed shapes of steel or strip steel. Multiple story buildings may have floors of wood, steel or concrete. Exterior walls will typically be pre-finished metal siding or sandwich panels.

Interior Finish Percent
Space is provided to enter the extent of interior finish expressed in percent of the base floor area. Consideration should be given to the floors, ceilings and walls. All character positions must be filled in. Use leading zeros if necessary.

Note: Consideration should be given to the structure type code previously entered. For example, you would not expect to find the same extent of interior finish in a warehouse that you would find in a professional building.

Partitions
Space is provided to enter a one-digit numeric code denoting the extent or partitioning of walls within the interior / exterior building line.

Enter 0 **None** to indicate no partitions.
Enter 1 **Below Normal** to indicate that only a few partitions have been constructed and that most similar structures feature more partitions than the subject.
Enter 2 **Normal** to indicate that subject structure has about the same extent of partitioning that is found in similar structures.

Enter 3 **Above Normal** to indicate that the subject structure has rather extensive partitioning when compared to similar structures having the same purpose or utility.

Note: The extent of partitioning should always be compared to what could be considered normal for structures having the same use. The use type code should be considered. For example, a structure that was constructed as a hotel but is now used as an office building will probably have more extensive partitions (3 -Above Normal) than a structure built as an office building and used as an office building.

Note: Partitions should be recorded based upon whether the amount of partitioning is normal or not normal for the particular section use type. In the event that partitioning for a particular use type is considered above or below normal, all the data collector needs to do is record the difference by use of a code symbol indicating the above or below status. The pricing tables are set up to appropriately cost out 'normal,' 'below normal,' 'above normal,' or 'none' for each use type. Normal partitions for a retail store would be one partition separating the sales area from the storage area and one small office. In the event that there were more partitions, the data collector would record 'above normal.'

Heating System Type
Space is provided to enter a one-digit numeric code denoting the predominant heating system type utilized within the interior/exterior line.

Enter 0 to indicate **NONE**.
Enter 1 to indicate **BELOW NORMAL FOR BUILDING TYPE**
Enter 2 to indicate **NORMAL FOR BUILDING TYPE**
Enter 3 to indicate **ABOVE NORMAL FOR BUIDING TYPE**

Air Conditioning Type
Space is provided to enter a one-digit numeric code denoting the type of air conditioning existing within the interior/exterior line.

Enter 0	to indicate **NONE**
Enter 1	to indicate **CENTRAL**
Enter 2	to indicate **UNIT** (real property)

Note: Window air conditioners are not considered real property and should be considered as '0 -None.'

Plumbing
Space is provided to enter a one-digit numeric code denoting the extent and adequacy of the plumbing and piping system within the interior/exterior line.

Enter 0	to indicate **NONE**
Enter 1	to indicate **BELOW NORMAL**
Enter 2	to indicate **NORMAL**
Enter 3	to indicate **ABOVE NORMAL**

Note: Consideration must be given to the structural use. For example, motels naturally have more extensive plumbing systems than retail stores.

Physical Condition / Functional Condition
Space is provided to enter an alphabetical code denoting the physical condition of the interior/exterior line in relation to its age of completion. Consideration should include foundation, frame, exterior walls, roof, heating, air conditioning, lighting, electrical systems, plumbing, internal walls and floor finish.

Enter U	**UNSOUND**, building is unsound and practically unfit for use. Cost to cure is not practical.
Enter P	**POOR**, definite deterioration is obvious, undesirable and barely useable.
Enter F	**FAIR**, marked wear and deterioration but the property is usable for commercial or industrial purposes; could be characterized as "needing work."
Enter A	**AVERAGE**, shows only minor signs of physical deterioration due to normal wear and tear. There are few indications of deferred maintenance and no significant repairs or replacements necessary.
Enter G	**GOOD**, shows new or 'like new' condition. There are no deficiencies in material or construction, and no signs of deferred maintenance.
Enter E	**EXCELLENT**, building is in perfect condition. Very attractive and highly desirable.

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 cost 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, post 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

OUTBUILDINGS, YARD IMPROVEMENTS & SECONDARY BUILDINGS

There are numerous types of yard improvements and secondary buildings which may be encountered on commercial and industrial properties. All of these have been coded and included in the schedule of values.

Structure Code
Space is provided to enter a three-digit alpha/numeric structure code denoting the type of yard improvement or secondary improvement being described (see following pages).

Size
Enter either the dimensions (width and length) or square footage area of the item being described. To enter the dimensions, character positions are provided for eight characters: three numeric characters denoting the width, one multiplication (x) symbol, and four *t* numeric characters denoting the length. The multiplication symbol must always be entered in the fourth character position from the left (within the two vertical hash marks). All character positions must be filled in. Use leading zeros if necessary.

To enter the square footage of an area, character positions are provided to enter eight numeric characters (up to 99,999,999 square feet). Utilize the character positions to the right. Leading zeros are not necessary.

Number Identical Units
Space is provided to enter the total number of identical yard improvements or secondary buildings. Both character positions must be filled in (use leading zeros if necessary).

Physical / Functional Condition
Space is provided to enter an alphabetic code denoting the physical/ functional condition of the yard improvement or secondary building being described.

Enter U	**UNSOUND**, building is unsound and practically unfit for use. Cost to cure is not practical.
Enter P	**POOR**, definite deterioration is obvious, undesirable and barely useable.
Enter F	**FAIR**, marked wear and deterioration but the property is usable for commercial or industrial purposes; could be characterized as "needing work."
Enter A	**AVERAGE**, shows only minor signs of physical deterioration due to normal wear and tear. There are few indications of deferred maintenance and no significant repairs or replacements necessary.
Enter G	**GOOD**, shows new or 'like new' condition. There are no deficiencies in material or construction, and no signs of deferred maintenance.
Enter E	**EXCELLENT**, building is in perfect condition. Very attractive and highly desirable.

Year Built or Installed
Space is provided to enter the four-digit year in which the yard improvement or secondary building was constructed or installed.

Percent Good

Optional entry; space is provided to enter the appraiser's judgment of remaining percent good for the yard improvement or secondary building being described. Percent good and depreciation are complements of each other. Therefore, an improvement that is estimated to have 35% depreciation as of a given time is said to be

65% good (condition). In this way, the calculated percent good can be overridden by entering the appraiser's
estimate of the percent good. However, the year built, physical condition, and the functional utility factors must still be entered.

The purpose of this entry is for override use only.

OBY COST TABLE

CODE	DESCRIB	NAM	MINSIZE	MAXSIZE	UNITS	R1	R2	R3	R9	DEPRT	CDUTBLE	GRADEA	GRADEB	GRADEC	GRADED	GRADEE	PCT	LOCMULTCD
AB1	BANK BARN	BANK BARN	250	15000	1	500	115	18	0	T1	TR	1.55	1.25	1	0.85	0.65		
AB2	FLAT BARN	FLAT BARN	250	15000	1	500	115	17	0	T2	TR	1.55	1.25	1	0.85	0.65		
AB3	HORSE STABLE	STABLE	250	15000	1	0	525	25	1	T1	TR	1.55	1.25	1	0.85	0.65		
AB4	EQUESTRIAN BARN	EQUESBARN	250	15000	1	0	525	25	1	T1	TR	1.55	1.25	1	0.85	0.65		
AC1	CRNCRBWDB	CRNCRBWDB	35	2000	1	0	116.05	7	0	T5	TR	1	1	1	1	1		
AC2	CRNCRBWWR	CRNCRBWWR	35	2000	1	0	105.9	6.4	0	T5	TR	1	1	1	1	1		
AC3	35D5GWRCB	35D5GWRCB	750	20000	3	459	3.8	1.92	0	T5	TR	1	1	1	1	1		
AC4	45D5GWRCB	45D5GWRCB	750	20000	3	459	3.8	1.92	0	T5	TR	1	1	1	1	1		
AC5	35D2GWRCB	35D2GWRCB	750	20000	3	459	3.8	1.92	0	T5	TR	1	1	1	1	1		
AC6	45D2GWRCB	45D2GWRCB	750	20000	3	459	4.9	3.22	0	T5	TR	1	1	1	1	1		
AD1	DAIRYBRN	DAIRYBRN	64	22000	1	0	395	21.3	1	T1	TR	1.55	1.25	1	0.85	0.65		
AF1	CN FEDBNK	CN FEDBNK	5	500	2	0	0		0	T4	TR	1	1	1	1	1		
AF2	PSTPLKBNK	PSTPLKBNK	5	500	2	0	0		0	T4	TR	1	1	1	1	1		
AF3	CNFNCBUNK	CNFNCBUNK	5	500	2	0	0		0	T4	TR	1	1	1	1	1		
AF4	PSTPLKBNK	PSTPLKBNK	5	500	2	0	0		0	T4	TR	1	1	1	1	1		
AG1	STGB NODB	STGB NODB	1000	275000	6	3742	0.64	0	0	T5	TR	1	1	1	1	1		
AG2	SGRBN WDB	SGRBN WDB	1000	275000	6	3742	0.64	6.26	0	T5	TR	1	1	1	1	1		
AH1	1S FR PH	1S FR PH	150	30000	1	500	167	9.3	1	T5	TR	1.55	1.25	1	0.85	0.65		
AH2	2S FRM PH	2S FRM PH	150	30000	1	500	167	16.2	0	T3	TR	1.55	1.25	1	0.85	0.65		
AH3	FRM PH	FRM PH	150	30000	1	500	167	9.3	0	T3	TR	1.55	1.25	1	0.85	0.65		
AH4	1S CHICKEN HOUSE CB	1S CB PYH	150	30000	1	500	167	9.3	1	T3	TR	1.55	1.25	1	0.85	0.65		
AH5	2S CB PYH	2S CB PYH	150	30000	1	500	167	16.2	0	T3	TR	1.55	1.25	1	0.85	0.65		
AH6	MAS P4	MAS P4	150	30000	1	1900	309.5	14.6	0	T3	TR	1.55	1.25	1	0.85	0.65		
AH8	EGG HSE-CAGE ENCLSD	EGG HOUSE	50	30000	1	500	167	12	0	T3	TR	1	1	1	1	1		
AK1	BUNKWR SILO-ABV.GROUND	BUNKR SILO	8	3000	5	70	8.9	0	0	T5	TR	1	1	1	1	1		
AL1	1S LEANTO	1S LEANTO	10	5000	1	0	0	5	1	T4	TR	1.55	1.25	1	0.85	0.6		
AM1	ATT CB MH	ATT CB MH	50	2000	1	2250	232.5	16.75	0	T2	TR	1.55	1.25	1	0.85	0.65		
AM2	ATT GT MH	ATT GT MH	50	2000	1	1610	94.5	26.5	0	T2	TR	1.55	1.25	1	0.85	0.65		
AM3	DET CB MH	DET CB MH	50	2000	1	2750	277.75	18.25	0	T2	TR	1.55	1.25	1	0.85	0.65		
AM4	DET GT MH	DET GT MH	50	2000	1	1850	161.15	26.9	0	T2	TR	1.55	1.25	1	0.85	0.65		
AM5	CB MILPAR	CB MILPAR	50	2000	1	2870	180.5	18.3	0	T2	TR	1.55	1.25	1	0.85	0.65		
AM6	GT MILPAR	GT MILPAR	50	2000	1	1190	409.28	17.4	0	T2	TR	1.55	1.25	1	0.85	0.65		
AO1	POT ST UG	POT ST UG	500	25000	1	0	43.2	6.7	0	T3	TR	1	1	1	1	1		
AO2	POT ST AG	POT ST AG	500	25000	1	0	450.5	7.45	0	T3	TR	1	1	1	1	1		
AO3	TOBAC BRN	TOBAC BRN	150	15000	1	0	264.5	4.9	0	T3	TR	1	1	1	0.85	0.65		
AO4	BULK BARN	BULK BARN	75	1000	1	0	264.5	4.8	0	T3	TR	1.55	1.25	1	0.85	0.65		
AO5	PACK HSE	PACK HSE	75	1500	1	0	264.5	4.8	0	T3	TR	1.55	1.25	1	0.85	0.65		
AP1	4 SIDE CLSD MTL SIDED POLE	4SCL MTPL	100	25000	1	500	25	5.25	1	T4	TR	1.55	1.25	1	0.85	0.65		
AP2	4 SIDE CLSD WOOD SIDED POLE	4SCL WDPL	150	25000	1	500	25	5.5	1	T4	TR	1.55	1.25	1	0.85	0.65		
AP3	1 SIDE OPEN MTL SIDED POLE	1SOP MTPL	36	25000	1	500	25	4	1	T4	TR	1.55	1.25	1	0.85	0.65		
AP4	1 SIDE OPEN WOOD SIDED POLE	1SOP WDPL	25	25000	1	500	25	4.5	1	T4	TR	1.55	1.25	1	0.85	0.65		

OBY COST TABLE

CODE	DESCRIB	NAM	MINSIZE	MAXSIZE	UNITS	R1	R2	R3	R9	DEPRT	CDUTBLE	GRADEA	GRADEB	GRADEC	GRADED	GRADEE	PCT	LOCMULTCD
AP5	4 SIDE OPEN MTL POLE	4SOP MTPL	200	25000	1	500	25	3	1	T4	TR	1.55	1.25	1	0.85	0.65		
AP6	4 SIDE OPEN WOOD POLE	4SOP WDPL	50	25000	1	500	25	3.25	1	T4	TR	1.55	1.25	1	0.85	0.65		
AP7	4 SIDE OPEN HVY STL FRM SHLTR	4SOP	200	25000	1		100	5.5	1	T4	TR	1.55	1.25	1	0.85	0.65		
AQ1	QUONSET/HT	QUONSETHT	250	20000	1	350	50	6.5	1	T4	TR	1.55	1.25	1	0.85	0.65		
AR1	GRANARY	GRANARY	200	5000	1	1400	105.53	5.15	0	T4A	TR	1	1	1	1	1		
AS1	SILO CONC W/ ROOF	SILOCONWR	1500	750000	3		38.5	1.5	0	T2	TR	1	1	1	1	1		
AS2	SILO CONC NO ROOF	SILOCONNR	1500	75000	3		35.5	1.5	0	T2	TR	1	1	1	1	1		
AS3	SILO-LMS	SILO-LMS	1500	100000	3	0	27.1	21.7	0	T3	TR	1	1	1	1	1		
AS4	SILO PORC(HARVESTORE TYPE)	SILO PORC	3000	200000	3	3000	52	44	0	T3	TR	1	1	1	1	1		
AS5	SILO-PREFAB.GRN BIN	SIL-PRF.GB	1500	100000	8	500	65	0.65	0	T3	TR	1	1	1	1	1		
AS6	SILO/HMPRF	SILOHMPRF	1500	100000	3	710.7	17.31	3.55	0	T3	TR	1	1	1	1	1		
AS7	SILO STL.GRAIN BIN	SILO STLBN	1500	100000	8	500	200	0.8	0	T3	TR	1.2	1.1	1	0.9	0.8		
AS8	CONC.GRAIN ELEV.W/OUT ANNEX	GRN.ELEV	1500	750000	8	100	1400	3	0	T2	TR	1	1	1	1	1		
AS9	CONC.GRAIN ANNEX	GRN.ANNEX	1500	750000	8		780	1.87	0	T2	TR	1	1	1	1	1		
AT1	CNPLTSILO	CNPLTSILO	10	3000	5	55.1	6.6	0	0	T5	TR	1	1	1	1	1		
AT2	DIRT TRENCH SILO	DT TR SILO	10	3000	5	32.4	1.6	0	0	T5	TR	1	1	1	1	1		
AV1	SWINE FARROWING BARN	SWINE FAR	200	20000	1	1500	115	21	0	T4	TR	1	1	1	1	1		
AW1	SWINE FINISHING	SWINE FIN.	200	20000	1	1250	115	14.2	0	T4	TR	1	1	1	1	1		
AW2	SWINE CONFINEMENT SHED	HOG CONFIN	200	20000	1	1000	115	9.5	0	T4	TR	1	1	1	1	1		
AX1	PREFAB ST	PREFAB ST	200	50000	1	100		9.5	1	T4	TR	1.55	1.25	1	0.85	0.65		
AY1	SLURRY TANK- GLASS LINED	SLRY GLASS	2000	500000	8	2500	330	0.18	0	T3	TR	1	1	1	1	1		
AY2	SLURRY TANK-CONCRETE	SLRY CONC	200	500000	8	2500	310	0.18	0	T3	TR	1	1	1	1	1		
C	STRUCTURE HAS NO VALUE		0	999999	7	0	0	0	0		TC	1	1	1	1	1		
CAB1	BANK BARN	BANK BARN	1	99999	1	500	115	18	0	T20	TC	1	1	1	1	1		
CAB2	FLAT BARN	FLAT BARN	1	99999	1	500	115	17	0	T20	TC	1	1	1	1	1		
CAB4	EQUEST BARN	EQUEST BAR	1	99999	1		525	25	0	T30	TC	1	1	1	1	1		
CAC1	CENTRAL A/C	CENTRAL A/	1	9999	1			3.6	0	C15	TC	1	1	1	1	1		
CAC2	UNIT A/C	UNIT A/C	1	9999	1			1.8	0	C15	TC	1	1	1	1	1		
CAD1	HORSE BARN	HORSE BARN	1	99999	1			48	0	T20	TC	1	1	1	1	1		
CAH1	POULTRY HOUSE	POULTRY HO	1	99999	1	500	167	9.3	0	T20	TC	1	1	1	1	1		
CAL1	1 STORY LEAN/TO	1 STORY LE	1	99999	1			5	0	T20	TC	1	1	1	1	1		
CAP1	FNC, CHN-LNK	FNC CH-8'	1	999999	2	18			0	C15A	TC	1	1	1	1	1		
CAP2	FNC, PICKETT 36 INCH	FN-PKT 36	1	9999	2	16.4			0	C15	TC	1	1	1	1	1		
CAP3	FNC STOCKADE 6' HALF POLE	FN-STK 6'	1	99999	2	17			0	C15	TC	1	1	1	1	1		
CAP4	FNC, POST & RAIL 36 INCH	FN P&R 36	1	99999	2	12.5			0	C15	TC	1	1	1	1	1		
CAP5	FNC, BSKTWEAVE	FNC BSKTWV	1	99999	2	23.5			0	C15	TC	1	1	1	1	1		
CAP6	FNC, BRCK/STONE WALL	FNC, BRCK/	1	99999	2	19			0	C15	TC	1	1	1	1	1		
CAV1	SWINE FARROWING BARN	SWINE FARR	1	99999	1	1500	115	21	0	T20	TC	1	1	1	1	1		
CAW1	SWINE FINISHING BARN	SWINE FIN	1	99999	1	1250	115	14.2	0	C15	TC	1	1	1	1	1		
CAW2	SWINE CONFINEMENT SHED	SWINE CONF	1	99999	1	1000	115	9.5	0	C15	TC	1	1	1	1	1		

OBY COST TABLE

CODE	DESCRIB	NAM	MINSIZE	MAXSIZE	UNITS	R1	R2	R3	R9	DEPRT	CDUTBLE	GRADEA	GRADEB	GRADEC	GRADED	GRADEE	PCT	LOCMULTCD
CAX1	COMM.PREFAB ST	PREFAB ST	250	50000	1	500	40	18	1	T4	TR	1.55	1.25	1	0.85	0.65		
CBC1	BANK CANOPY-DRIVEIN	BANK CANOP	1	9999	1			48	0	T30	TC	1	1	1	1	1		
CBD1	BOAT DOCK, WOOD TIMBER	BOAT DOCK	1	15000	1	0	0	39	0	T6	TC	1.55	1.25	1	0.85	0.65		
CBE9	BANK DV-IN TELLBOOTH	BANK DV-IN	1	9999	1			79.5	0	T30	TC	1	1	1	1	1		
CBK1	BULKHEAD	BULKHEAD	1	9999	2	180			0	C15	TC	1	1	1	1	1		
CCP5	CANOPY ONLY	CANOPY ONL	1	9999	1			12	0	T20	TC	1	1	1	1	1		
CCP6	CANOPY, ROOF/SLAB	CANOPY, RO	1	9999	1			15.5	0	T20	TC	1	1	1	1	1		
CCP7	CANOPY RF-ECONOMY	CANOPY RF-	1	9999	1			20.75	0	T20	TC	1	1	1	1	1		
CCP8	CANOPY RF-AVERAGE	CANOPY RF-	1	9999	1			26.7	0	T20	TC	1	1	1	1	1		
CCP9	CANOPY RF-GOOD	CANOPY RF-	1	9999	1			34.3	0	T20	TC	1	1	1	1	1		
CCS1	GOLF CART STORAGE-FRAME	CART STOR.	1	15000	1		500	17	0	T30	TC	1.55	1.25	1	0.85	0.65		
CGB1	GUARD/STARTER BOOTH	GD/STR BTH	1	15000	1		195	40	0	T30	TC	1.55	1.25	1	0.85	0.65		
CGC1	GOLF COURSE IMP SP	GOLF COURS	1	9999	4	900000			0	T60	TC	1	1	1	1	1		
CGC2	GOLF COURSE IMP EX	GOLF COURS	1	9999	4	350000			0	T60	TC	1	1	1	1	1		
CGC3	GOLF COURSE IMP VG	GOLF COURS	1	9999	4	250000			0	T60	TC	1	1	1	1	1		
CGC4	GOLF COURSE IMP GD	GOLF COURS	1	9999	4	150000			0	T60	TC	1	1	1	1	1		
CGC5	GOLF COURSE IMP AV	GOLF COURS	1	9999	4	100000			0	T50	TC	1	1	1	1	1		
CGC6	GOLF COURSE IMP FR	GOLF COURS	1	9999	4	75000			0	T40	TC	1	1	1	1	1		
CGC7	GOLF COURSE 9 HOLE	GOLF COURS	1	9999	4	75000			0	C15	TC	1	1	1	1	1		
CGC8	GOLF COURSE PAR 3	GOLF COURS	1	9999	4	50000			0	C15	TC	1	1	1	1	1		
CGH1	GRNHS STR.WALL LOW COST	GRHS SW LC	1	25000	1		95	2.9	0	T20	TC	1	1	1	1	1		
CGH2	GRNHSE STR.WALL-AVG.	GRHS SW AV	1	25000	1		200	6.2	0	T20	TC	1	1	1	1	1		
CGH3	GRNHSE STR.WALL-GOOD	GRHS SW GD	1	25000	1		430	13	0	T20	TC	1	1	1	1	1		
CGS3	GAS STAT ATTND BOOTH	GAS STAT A	1	9999	1			175	0	T20	TC	1	1	1	1	1		
CGS4	GAS STAT ATTND BOOTH	GAS STAT A	1	9999	1			150	0	T20	TC	1	1	1	1	1		
CH1	FR CLUBHS	FR CLUBHS	100	4000	1	0	0	47	0	T1	TR	1.55	1.25	1	0.85	0.65		
CH2	BR CLUBHS	BR CLUBHS	100	4000	1	0	0	50	0	T1	TR	1.55	1.25	1	0.85	0.65		
CI1	ASP PAVNG	ASP PAVNG	50	7500	1	0	0	2.5	0	T6	TR	1	1	1	1	1		
CI2	CON PAVNG	CON PAVNG	50	7500	1	0	0	3.6	0	T6	TR	1	1	1	1	1		
CKF1	KIOSK	KIOSK	1	9999	1			165	0	T20	TC	1	1	1	1	1		
CLT1	LGHT, MER-WL-MTD-FLD	LT MER-WL	1	9999	4	855			0	C15	TC	1	1	1	1	1		
CLT2	LGHT, INC-WL-MTD-FLD	LT INC-WL	1	9999	4	385			0	C15	TC	1	1	1	1	1		
CLT3	LGHT, FLO-POLE & BRK	LT FLO-POL	1	9999	4	1820			0	C15	TC	1	1	1	1	1		
CLT4	LGHT, INCN-POLE & BRK	LT INC-POL	1	9999	4	1385			0	C15	TC	1	1	1	1	1		
CLT5	LGHT, MER-POLE & BRK	LT MER-POL	1	9999	4	1855			0	C15	TC	1	1	1	1	1		
CMH1	M H PARK IMPS EXCELLENT	MH PRK EXC	1	9999	4	8000			0	T30	TC	1	1	1	1	1		
CMH2	M H PARK IMPS GOOD	MH PRK GD	1	9999	4	6500			0	T30	TC	1	1	1	1	1		
CMH3	M H PARK IMPS AVERAGE	MH PRK AVG	1	9999	4	5000			0	T30	TC	1	1	1	1	1		
CMH4	M H PARK IMPS FAIR	MH PRK FR	1	9999	4	3500			0	T30	TC	1	1	1	1	1		

OBY COST TABLE

CODE	DESCRIB	NAM	MINSIZE	MAXSIZE	UNITS	R1	R2	R3	R9	DEPRT	CDUTBLE	GRADEA	GRADEB	GRADEC	GRADED	GRADEE	PCT	LOCMULTCD
CMH6	M H PARK IMP RV	MH PRK RV	1	9999	4	1200			0	T30	TC	1	1	1	1	1		
CMS1	MISCELLANEOUS	MISCELLANE	1	9999	4			5	0	T20	TC	1	1	1	1	1		
CMSA	MISC AG BLDGS	MISC AG BL	1	9999	4			5	0	T20	TC	1	1	1	1	1		
CMSR	MISC RES BLDGS	MISC RES B	1	9999	4			5	0	T20	TC	1	1	1	1	1		
CPA1	PAVING-ASPHALT PARK	PAVING-ASP	1	999999	1		55	3	0	C15A	TC	1	1	1	1	1		
CPA2	PAVING-ASP/CONC-S.S.	PAVING-ASP	1	9999	1		55	3.5	0	C15	TC	1	1	1	1	1		
CPB1	PLUMBING FIXTURES	PLUMBING F	1	9999	4	1250			0	T20	TC	1	1	1	1	1		
CPC1	PAVING CONCRETE - AV	PAVING CON	1	99999999	1			4	0	C15	TC	1	1	1	1	1		
RS1	FRAME UTILITY SHED	FR UT SHD	16	1800	1	0	75	10.5	1	T4	TR	1.55	1.25	1	0.85	0.65		
RS2	MAS SHED	MAS SHED	16	3500	1	0	75	12.5	1	T4	TR	1.55	1.25	1	0.85	0.65		
RS5	SHOP	SHOP	50	5000	1	0	0	32	1	T4	TR	1.55	1.25	1	0.85	0.65		
SM0	MS STOOP/PATIO	STOOP/PAT.	1	9999	1	0	0	6	1	T4	TR	1.55	1.25	1	0.85	0.65		
SM0P	MS STOOP	MS STOOP	1	9999	1	0	0	6	1	T15	TR	1.55	1.25	1	0.85	0.65		
SM1	OPEN PRCH	OPEN PRCH	1	9999	1	0	0	22	1	T4	TR	1.55	1.25	1	0.85	0.65		
SM1P	OPEN PRCH	OPEN PRCH	1	9999	1	0	0	22	1	T15	TR	1.55	1.25	1	0.85	0.65		
SM2	ENCL PRCH	ENCL PRCH	1	9999	1	0	0	28	1	T4	TR	1.55	1.25	1	0.85	0.65		
SM2P	ENCL PRCH	ENCL PRCH	1	9999	1	0	0	28	1	T15	TR	1.55	1.25	1	0.85	0.65		
SM3	CPT/CNPY	CPT/CNPY	1	9999	1	0	0	9	1	T4	TR	1.55	1.25	1	0.85	0.65		
SM3P	CPT/CNPY	CPT/CNPY	1	9999	1	0	0	9	1	T15	TR	1.55	1.25	1	0.85	0.65		
SM4	SKIRTING	SKIRTING	1	9999	2	7.4			1	T4	TR	1.55	1.25	1	0.85	0.65		
SM4P	SKIRTING	SKIRTING	1	9999	2	7.6			1	T15	TR	1.55	1.25	1	0.85	0.65		
SM5	WD DECK	WD DECK	1	9999	1	0	0	15	1	T4	TR	1.55	1.25	1	0.85	0.65		
SM5P	WD DECK	WD DECK	1	9999	1	0	0	15	1	T15	TR	1.55	1.25	1	0.85	0.65		
SM6	1S ADDN	1S ADDN	1	99999	1	0	0	35	1	T4	TR	1.55	1.25	1	0.85	0.65		
SM6P	1S ADDN	1S ADDN	1	99999	1	0	0	35	1	T15	TR	1.55	1.25	1	0.85	0.65		
SM7	MH OFP	MH OFP	1	9999	1	0	0	22	1	T4	TR	1.55	1.25	1	0.85	0.65		
SM7P	MH OFP	MH OFP	1	9999	1	0	0	22	1	T15	TR	1.55	1.25	1	0.85	0.65		
SM8	BASEMENT	BASEMENT	1	99999	1	0	0	6	1	T4	TR	1.55	1.25	1	0.85	0.65		
SM8P	BASEMENT	BASEMENT	1	99999	1	0	0	6	1	T15	TR	1.55	1.25	1	0.85	0.65		
SM9	FOUNDTN	FOUNDTN	80	9999	2	20	0		1	T4	TR	1.55	1.25	1	0.85	0.65		
SM9P	FOUNDTN	FOUNDTN	80	9999	2	20	0		1	T15	TR	1.55	1.25	1	0.85	0.65		
TC1	TENNIS CT ASPHALT	TEN.CT ASP	1	50	4	25600	0	0	0	T6	TR	1	1	1	1	1		
TC1C	TENNIS CT ASPHALT	TENNIS AS	1	50	4	28400	0	0	0	T5	TR	1	1	1	1	1		
TC2	TENNIS CONCRETE	TEN.CT CON	1	50	4	31200	0	0	0	T6	TR	1	1	1	1	1		
TC3	TENNIS CT.CLAY	TEN.CT CLY	1	50	4	25500	0	0	0	T6	TR	1	1	1	1	1		
CPC2	PAVING CONC-HEAVY DT	PAVING CON	1	9999	1			5	0	C15	TC	1	1	1	1	1		
CPC3	PAVING CONC MAT/SLAB	PAVING CON	1	9999	1			6.55	0	C15	TC	1	1	1	1	1		
CRC1	CARPORT	CARPORT	1	9999	1			16	0	T20	TC	1	1	1	1	1		
CRG4	GARAGE, DETACHED FRM	GARAGE, DE	1	9999	1			21	0	T40	TC	1	1	1	1	1		
CRG5	GARAGE, DETACHED MAS	GARAGE, DE	1	9999	1			26.1	0	T40	TC	1	1	1	1	1		

OBY COST TABLE

CODE	DESCRIB	NAM	MINSIZE	MAXSIZE	UNITS	R1	R2	R3	R9	DEPRT	CDUTBLE	GRADEA	GRADEB	GRADEC	GRADED	GRADEE	PCT	LOCMULTCD
CRM1	COMM.SINGLE WIDE	SINGLE WID	1	9999	1			22	0	C15	TC	1	1	1	1	1	1	
CRM2	DOUBLE WIDE	DOUBLE WID	1	9999	1			31.5	0	C15	TC	1	1	1	1	1	1	
CRR1	TRACK, RAIL RD 40#	RAIL RD#40	1	9999	2	74			0	T20	TC	1	1	1	1	1	1	
CRR2	TRACK, RAIL RD#60 4.25X4.25	RAIL RD#60	1	9999	2	94			0	T20	TC	1	1	1	1	1	1	
CRR3	TRACK, RAIL RD#80 5X5	RAIL RD#80	1	9999	2	109			0	T20	TC	1	1	1	1	1	1	
CRR4	TRACK, RAIL RD#130 6X6	RL RD#130	1	9999	2	146			0	T20	TC	1	1	1	1	1	1	
CRS1	UTILITY BLDG-FRAME	UTILITY BL	1	9999	1			13	0	T20	TC	1	1	1	1	1	1	
CRS2	UTILITY BLDG-METAL	UTILITY BL	1	9999	1			17.1	0	T20	TC	1	1	1	1	1	1	
CRS3	UTILITY BLDG-BRK/STN	UTILITY BL	1	9999	1			18.5	0	T20	TC	1	1	1	1	1	1	
CS1	MISC COMM	MISC COMM	100	10000	1	0	0	30	0	T20	TR	1	1	1	0.85	0.65		
CSC1	SWIMMING POOL-COMM.	SWIMMING P	1	9999	1			60.75	0	T20	TC	1	1	1	1	1	1	
CSH1	SHED, MACHINERY-FRM	SHED, MACH	1	9999	1			11.85	0	T30	TC	1	1	1	1	1	1	
CSH2	SHED, ALUMINUM	SHED, ALUM	1	9999	1			14.4	0	T30	TC	1	1	1	1	1	1	
CSH3	SHED, FINISHED METAL	SHED, FINI	1	9999	1			20.7	0	T30	TC	1	1	1	1	1	1	
CSH4	SHED, QUONSET	SHED, QUON	1	9999	1			14.25	0	T30	TC	1	1	1	1	1	1	
CSH5	LUMB SHED 1 SIDE OPEN	LMBR.1SO	1	9999	1		120	8	0	T20	TC	1	1	1	1	1	1	
CSH6	LUMB/MATERIAL SHLT. 4 SIDE OPEN	LMBR.4SO	1	9999	1		140	5.5	0	T20	TC	1	1	1	1	1	1	
CSH7	LMBR/MATER.BLDG 4SIDE CLSD	LMBR.BLDG	1	9999	1		130	14.5	0	T20	TC	1	1	1	1	1	1	
CSK2	SKATING RINK OUTDOOR	SKATING RI	1	9999	1			24	0	T20	TC	1	1	1	1	1	1	
CSM4	MTL PINNING	MTL PINNIN	1	9999	2	9			0	C15	TC	1	1	1	1	1	1	
CSM9	BRK PINNING	BRK PINNIN	1	9999	2	11			0	C15	TC	1	1	1	1	1	1	
CSS1	SPRINKLER SYS WET	SPRINKLER	1	9999	1			2.5	0	T20	TC	1	1	1	1	1	1	
CSS2	SPRINKLER SYS DRY	SPRINKLER	1	9999	1			3	0	T20	TC	1	1	1	1	1	1	
CTC1	ASPHALT TENNIS CT	ASPHALT TE	1	9999	4	33870			0	C15	TC	1	1	1	1	1	1	
CTC2	CONCRETE TENNIS CT	CONCRETE T	1	9999	4	39650			0	C15	TC	1	1	1	1	1	1	
CTC3	CLAY TENNIS CT	CLAY TENNI	1	9999	4	31150			0	C15	TC	1	1	1	1	1	1	
CTR1	RESTRM STR/FRM-CB	RESTRM STR	1	9999	1			103	0	T30	TC	1	1	1	1	1	1	
CTR2	RESTRM STR/BRK-STN	RESTRM STR	1	9999	1			106	0	T40	TC	1	1	1	1	1	1	
CTS1	TRUCK SCALES	TRUCK SCAL	1	9999	1			900	0	T30	TC	1	1	1	1	1	1	
EA1	AUDITORIUM	AUDITORM	500	999999	1	0	0	117	0	T1	TR	1.55	1.25	1	0.85	0.65		
EA2	ARMORY	ARMORY	500	999999	1	0	0	58.85	0	T1	TR	1.55	1.25	1	0.85	0.65		
EC1	CHURCH	CHURCH	500	999999	1	0	0	124	0	T1	TR	1.55	1.25	1	0.85	0.65		
EC2	COURTHS	COURTHS	500	999999	1	0	0	94.5	0	T1	TR	1.55	1.25	1	0.85	0.65		
ED1	DORMITORY	DORMITORY	500	999999	1	0	0	77.2	0	T1	TR	1.55	1.25	1	0.85	0.65		
EF1	FIRESTATN	FIRESTATN	500	999999	1	0	0	75.5	0	T1	TR	1.55	1.25	1	0.85	0.65		
EG1	SCHOOLGYM	SCHOOLGYM	500	999999	1	0	0	73.9	0	T1	TR	1.55	1.25	1	0.85	0.65		
EG2	COLL GYM	COLL GYM	500	999999	1	0	0	116.8	0	T1	TR	1.55	1.25	1	0.85	0.65		
EH1	HOSPITAL	HOSPITAL	500	999999	1	0	0	139	0	T1	TR	1.55	1.25	1	0.85	0.65		
EJ1	JAIL	JAIL	500	999999	1	0	0	125.5	0	T1	TR	1.55	1.25	1	0.85	0.65		

OBY COST TABLE

CODE	DESCRIB	NAM	MINSIZE	MAXSIZE	UNITS	R1	R2	R3	R9	DEPRT	CDUTBLE	GRADEA	GRADEB	GRADEC	GRADED	GRADEE	PCT	LOCMULTCD
EL1	LIBRARY	LIBRARY	500	999999	1	0	0	86.2	0	T1	TR	1.55	1.25	1	0.85	0.65		
EN1	NURSING	NURSING	500	999999	1	0	0	88.55	0	T1	TR	1.55	1.25	1	0.85	0.65		
EP1	POSTOFFIC	POSTOFFIC	500	999999	1	0	0	78	0	T1	TR	1.55	1.25	1	0.85	0.65		
ES1	SCHOOL	SCHOOL	500	999999	1	0	0	126	0	T1	TR	1.55	1.25	1	0.85	0.65		
ES2	COLL CLSR	COLL CLSR	500	999999	1	0	0	102	0	T1	TR	1.55	1.25	1	0.85	0.65		
FP1	OUTDOOR FIREPLACE-FREESTANDIN	FIREPLACE	16	1800	1	2500			1	T1	TR	1.55	1.25	1	0.85	0.65		
GH1	GRNHSE-HOOP-WD.FRAME	GRHS HP FR	50	25000	1		88	2.38	1	T5	TR	1.55	1.25	1	0.85	0.65		
GH2	GRNHSE-HOOP-MTL.PIPE	GRHS HP MT	50	25000	1		95	2.9	1	T5	TR	1.55	1.25	1	0.85	0.65		
GH3	GRNHSE-HOOP-PLASTIC FR	GRHS HP PL	50	25000	1		42	2	1	T5	TR	1.55	1.25	1	0.85	0.65		
GZ1	GAZEBO	GAZEBO	50	8000	1	0	75	8.75	0	T5	TR	1.55	1.25	1	0.85	0.65		
HA1	ARENA OPEN	ARENA OPEN	50	30000	1	0	90	10	1	T5	TR	1.65	1.3	1	0.85	0.65		
HA2	ARENA CLOSED	ARENA CLSD	50	30000	1	0	100	16.5	1	T5	TR	1.95	1.3	1	0.85	0.65		
HT1	HOT TUB	HOT TUB	50	8000	1	3000			0	T5	TR	1.55	1.25	1	0.85	0.65		
MC1	METAL CANOPY W/CONC	MTL CANOPY	50	2500	1	0	18	2	1	T4	TR	1.55	1.25	1	0.85	0.65		
MH1	MH SITE EXCELLENT	MH SITE EX	1	50	4	10000	0	0	0	T30	TR	1.2	1.1	1	0.9	0.8		
MH2	MH SITE GOOD	MH SITE GD	1	50	4	7500	0	0	0	T30	TR	1.2	1.1	1	0.9	0.8		
MH3	MH SITE AVG	MH STE AV	1	50	4	5300	0	0	0	T30	TR	1.2	1.1	1	0.9	0.8		
MH4	MH SITE FAIR	MH SITE FR	1	50	4	3750	0	0	0	T30	TR	1.2	1.1	1	0.9	0.8		
MH5	MH SITE PR	MH SITE PR	1	50	4	2400	0	0	0	T30	TR	1.2	1.1	1	0.9	0.8		
MH6	MH SITE RV SITE	RV SITE	1	50	4	1500	0	0	0	T30	TR	1.2	1.1	1	0.9	0.8		
MSCF	MISC FLAT VALUE	MSCF	1	9999	7				0	T5	TR	1	1	1	1	1	100	1
PE1	POOL ENCLOS.LIGHT FRAME	POOL ENCLO	20	10000	1	0	30	8	1	T4	TR	1.55	1.25	1	0.85	0.65		
PE2	POOL ENCL.MED FR	POOL ENCLO	20	10000	1	0	30	16	1	T4	TR	1.55	1.25	1	0.85	0.65		
PE3	POOL ENCL.GOOD FR	POOL ENCLO	20	10000	1	0	30	22	1	T4	TR	1.55	1.25	1	0.85	0.65		
PH1	POOL HSE	POOL HSE	50	1500	1	0	0	32	0	T1	TR	1.55	1.25	1	0.85	0.65		
RA1	ATT FR GR	ATT FR GR	150	5000	1	1000	0	26.75	0	T1	TR	1.55	1.25	1	0.85	0.65		
RA2	ATT MASGR	ATT MASGR	150	5000	1	1200	0	28.35	0	T1	TR	1.55	1.25	1	0.85	0.65		
RB1	CB BT HSE	CB BT HSE	0	5000	1	0	0	18	0	T4	TR	1.55	1.25	1	0.85	0.65		
RB2	MS BT HSE	MS BT HSE	150	5000	1	0	0	21	0	T4	TR	1.55	1.25	1	0.85	0.65		
RC1	CARPORT	CARPORT	100	2500	1	0	200	5	1	T4	TR	1.55	1.25	1	0.85	0.65		
RC2	CANOPY/NO CONC	CANOPY	20	10000	1	0	150	4	1	T4	TR	1.55	1.25	1	0.85	0.65		
RD1	DOCK LITE	DOCK LITE	50	3500	1	0	0	30	1	T6	TR	1.3	1.15	1	0.85	0.7		
RD2	DOCK MEDM	DOCK MEDM	100	3500	1	0	0	45	1	T6	TR	1.3	1.15	1	0.85	0.7		
RD3	DOCK HEVY	DOCK HEVY	100	3500	1	0	0	65	0	T5	TR	1.2	1.1	1	0.9	0.8		
RG1	DET FR GR	DET FR GR	100	2500	1		420	9.75	1	T1	TR	1.55	1.25	1	0.85	0.65		
RG2	DET BR GR	DET BR GR	100	2500	1		500	12	1	T1	TR	1.55	1.25	1	0.85	0.65		
RG8	GAR W/ BNS(BNS RM 50%)	GAR W/ BNS	100	2500	1	0	670	29.5	1	T1	TR	1.55	1.25	1	0.85	0.65		

OBY COST TABLE

CODE	DESCRIB	NAM	MINSIZE	MAXSIZE	UNITS	R1	R2	R3	R9	DEPRT	CDUTBLE	GRADEA	GRADEB	GRADEC	GRADED	GRADEE	PCT	LOCMULTCD
RG9	GAR APT(FIN.LVG.AREA 75%)	GAR APT	100	2500	1	0	670	29.5	1	T1	TR	1.55	1.25	1	0.85	0.65		
RM1	MH (8'-16')	MH (8-16)	180	1600	1		1000	13.5	1	T4	TR	1.55	1.25	1	0.85	0.65		
RM2	MH(20-28)	MH(20-28)	480	2500	1	7700	165	29.25	1	T3	TR	1.55	1.25	1	0.85	0.65		
RMP	MH (PERS)	MH (PERS)	0	5000	1	0	0	0	0	T15	TR	1.55	1.26	1	1	0.78		
RMQ	QUAD-WIDE MOBILE HOME	4W MOHO	480	10000	1	7700	165	29.25	1	T3	TR	1.55	1.25	1	0.85	0.65		
RP1	PL.LIN PL	PL.LIN PL	100	5000	1	3000	290	4	1	T6	TR	1.5	1.25	1	0.85	0.65		
RP2	VINYL PL	VINYL PL	100	5000	1	3000	290	4	1	T6	TR	1.5	1.25	1	0.85	0.65		
RP3	CONC POOL	CONC POOL	100	5000	1	5000	290	10	1	T6	TR	1.5	1.25	1	0.85	0.65		
RP4	FBRGLS PL	FBRGLS PL	100	5000	1	3500	290	7.5	1	T6	TR	1.5	1.25	1	0.85	0.65		
RP5	GUNITE PL	GUNITE PL	100	5000	1	5000	290	10	1	T6	TR	1.5	1.25	1	0.85	0.65		

OBY COST MODIFIERS

Code	Mod Code	Description	Rate	Value
AB1	1	Wood Loft Floor	2.35	
AB1	2	Gambrel/Arch Roof	1.65	
AB1	3	Tie Stalls/Excess. Part	0.5	
AB1	4	Earth Floor	0	
AB1	5	No Lighting	0	
AB2	1	Wood Loft Floor	2.35	
AB2	2	Gambrel/Arch Roof	1.65	
AB2	3	Tie Stalls/Excess. Part	0.5	
AB2	4	Earth Floor	0	
AB2	5	No Lighting	0	
AB3	1	Wood Loft Floor	3.57	
AB3	2	Gambrel/Arch Roof	1.6	
AB3	3	Tie Stalls/Excess. Part	0.5	
AB3	4	Earth Floor	-1.8	
AB3	5	No Lighting	-1.5	
AB4	1	Wood Loft Floor	3.57	
AB4	2	Gambrel/Arch Roof	1.65	
AB4	3	Tie Stalls/Excess. Part	0.5	
AB4	4	Earth Floor	-1.8	
AB4	5	No Lighting	-1.5	
AC1	1	Wood Stor. Bin Over	3.2	
AC1	2	Wire Stor. Bin Over	2.05	
AC1	3	Lighting	0.75	
AC2	1	Wood Stor. Bin Over	3.2	
AC2	2	Wire Stor. Bin Over	2.05	
AC2	3	Lighting	0.75	
AC3	1	No Concrete Slab		-470
AC3	2	No Roof #5 g Wire		-470
AC3	3	No Roof, #2 g Wire		-630
AC4	1	No Concrete Slab		-470
AC4	2	No Roof #5 g Wire		-470
AC4	3	No Roof, #2 g Wire		-630
AC5	1	No Concrete Slab		-470
AC5	2	No Roof #5 g Wire		-470
AC5	3	No Roof, #2 g Wire		-630
AC6	1	No Concrete Slab		-470
AC6	2	No Roof #5 g Wire		-470
AC6	3	No Roof, #2 g Wire		-630
AD1	1	Earth floor	-1.84	
AD1	2	No Lighting	-0.5	
AG1	1	Conical Hopper Floor	0.29	
AH1	1	Insulation: First Floor	0	
AH1	2	Insulation: Second Fl.	0	
AH1	3	Insulation: Third Floor	0	

OBY COST MODIFIERS

Code	Mod Code	Description	Rate	Value
AH1	4	Earth Floor	0	
AH1	5	Single Pitch Roof	-0.46	
AH2	1	Insulation: First Floor	0	
AH2	2	Insulation: Second Fl.	0	
AH2	3	Insulation: Third Floor	0	
AH2	4	Earth Floor	0	
AH2	5	Single Pitch Roof	-0.46	
AH3	1	Insulation: First Floor	0	
AH3	2	Insulation: Second Fl.	0	
AH3	3	Insulation: Third Floor	0	
AH3	4	Earth Floor	0	
AH3	5	Single Pitch Roof	-0.46	
AH4	1	Insulation: First Floor	0	
AH4	2	Insulation: Second Fl.	0	
AH4	3	Insulation: Third Floor	0	
AH4	4	Earth Floor	0	
AH4	5	Single Pitch Roof	-0.46	
AH5	1	Insulation: First Floor	0	
AH5	2	Insulation: Second Fl.	0	
AH5	3	Insulation: Third Floor	0	
AH5	4	Earth Floor	0	
AH5	5	Single Pitch Roof	-0.46	
AH6	1	Insulation: First Floor	0	
AH6	2	Insulation: Second Fl.	0	
AH6	3	Insulation: Third Floor	0	
AH6	4	Earth Floor	0	
AH6	5	Single Pitch Roof	-0.46	
AH8	1	INSULATION: FIRST FLOOR	0	
AH8	2	INSULATION: SECOND FLR	0	
AH8	3	INSULATION: THIRD FLOOR	0	
AH8	4	EARTH FLOOR	0	
AH8	5	SINGLE PITCH FLOOR	-0.46	
AM1	1	Metal Roof	0.86	
AM1	2	Wood Shingle Roof	0.75	
AM1	3	Composition Roof	-0.75	
AM1	4	No Heating	-2.47	
AM2	1	Metal Roof	0.86	
AM2	2	Wood Shingle Roof	0.75	
AM2	3	Composition Roof	-0.75	
AM2	4	No Heating	-2.47	
AM3	1	Metal Roof	0.86	
AM3	2	Wood Shingle Roof	0.75	
AM3	3	Composition Roof	-0.75	
AM3	4	No Heating	-2.47	

OBY COST MODIFIERS

Code	Mod Code	Description	Rate	Value
AM4	1	Metal Roof	0.86	
AM4	2	Wood Shingle Roof	0.75	
AM4	3	Composition Roof	-0.75	
AM4	4	No Heating	-2.47	
AM5	1	Metal Roof	0.86	
AM5	2	Wood Shingle Roof	0.75	
AM5	3	Composition Roof	-0.75	
AM5	4	No Heating	-2.47	
AM6	1	Metal Roof	0.86	
AM6	2	Wood Shingle Roof	0.75	
AM6	3	Composition Roof	-0.75	
AM6	4	No Heating	-2.47	
AO1	1	No Lighting	-0.75	
AO1	2	Concrete Floor	1.78	
AO2	1	No Lighting	-0.75	
AO2	2	Concrete Floor	1.78	
AO3	1	No Lighting	-0.75	
AO3	2	Concrete Floor	1.78	
AO4	1	No Lighting	-0.75	
AO4	2	Concrete Floor	1.78	
AO5	1	No Lighting	-0.75	
AO5	2	Concrete Floor	1.78	
AP1	1	Trus Span to 50'	0.35	
AP1	2	Concrete Floor	2.55	
AP1	3	Insulation	0.35	
AP1	4	Wood Lining	1	
AP2	1	Trus Span to 50'	0.35	
AP2	2	Concrete Floor	2.55	
AP2	3	Insulation	0.35	
AP2	4	Wood Lining	1	
AP3	1	Trus Span to 50'	0.35	
AP3	2	Concrete Floor	2.55	
AP3	3	Insulation	0.35	
AP3	4	Wood Lining	1	
AP4	1	Trus Span to 50'	0.35	
AP4	2	Concrete Floor	2.55	
AP4	3	Insulation	0.35	
AP4	4	Wood Lining	1	
AP5	1	Trus Span to 50'	0.35	
AP5	2	Concrete Floor	2.55	
AP5	3	Insulation	0.35	
AP5	4	Wood Lining	1	
AP6	1	Trus Span to 50'	0.35	
AP6	2	Concrete Floor	2.55	

OBY COST MODIFIERS

Code	Mod Code	Description	Rate	Value
AP6	3	Insulation	0.35	
AP6	4	Wood Lining	1	
AQ1	1	Lighting	0.81	
AQ1	2	Asphalt Floor	0.81	
AQ1	3	Lighting	1.78	
AQ1	4	CONCRETE	2.5	
AR1	1	Wood Storage Bins	3.22	
AR1	2	Metal Walls	0.75	
AR1	3	Metal Roof	0.23	
AR1	4	Wood Vent. Ducts	1.61	
AR1	5	No Lighting	-0.75	
AR1	6	Pier Foundation	-1.21	
AS1	1	17' Automatic Unloader		14000
AS1	2	20' Automatic Unloader		14200
AS1	3	25' Automatic Unloader		19900
AS1	4	17' Raised Arm Auger		5000
AS1	5	20' Raised Arm Auger		5400
AS1	6	25' Raised Arm Auger		5750
AS2	1	17' Automatic Unloader		14000
AS2	2	20' Automatic Unloader		14200
AS2	3	25' Automatic Unloader		19900
AS2	4	17' Raised Arm Auger		5000
AS2	5	20' Raised Arm Auger		5400
AS2	6	25' Raised Arm Auger		3750
AS3	1	17' Automatic Unloader		14000
AS3	2	20' Automatic Unloader		14200
AS3	3	25' Automatic Unloader		19900
AS3	4	17' Raised Arm Auger		5000
AS3	5	20' Raised Arm Auger		5400
AS3	6	25' Raised Arm Auger		5750
AS4	1	17' Automatic Unloader		14000
AS4	2	20' Automatic Unloader		14200
AS4	3	25' Automatic Unloader		19900
AS4	4	17' Raised Arm Auger		5000
AS4	5	20' Raised Arm Auger		5400
AS4	6	25' Raised Arm Auger		5750
AS5	1	17' Automatic Unloader		14000
AS5	2	20' Automatic Unloader		14200
AS5	3	25' Automatic Unloader		19900
AS5	4	17' Raised Arm Auger		5000
AS5	5	20' Raised Arm Auger		5400
AS5	6	25' Raised Arm Auger		5750
AS6	1	17' Automatic Unloader		14000
AS6	2	20' Automatic Unloader		14200

OBY COST MODIFIERS

Code	Mod Code	Description	Rate	Value
AS6	3	25' Automatic Unloader		19900
AS6	4	17' Raised Arm Auger		5000
AS6	5	20' Raised Arm Auger		5400
AS6	6	25' Raised Arm Auger		5750
AV1	1	25% Conc Pit Area	2.36	
AV1	2	100% Conc Pit Area	4.95	
AW1	1	25% Conc Pit Area	2.36	
AW1	2	100% Conc Pit Area	4.95	
AW2	1	25% Conc Pit Area	2.36	
AW2	2	100% Conc Pit Area	4.95	
AX1	1	NO ELECTRICAL	-0.8	
AX1	2	Asphalt Floor	-1	
AX1	3	Earth Floor	-2.5	
AX1	4	Slanted Side Walls	-0.98	
AX1	5	< 10" Ft. Height	-0.78	
AX1	6	16-20 Ft. Height	0.78	
CAP1	1	ADD FOR 3 STRD.BARB.WIRE	3.5	
CAP1	2	ADD FOR BARBED COIL	10.5	
CAX1	1	NO ELECTRICAL	-0.8	
CAX1	2	Asphalt Floor	-1.5	
CAX1	3	Earth Floor	-3	
CAX1	4	Slanted Side Walls	-0.98	
CAX1	5	< 10"" Ft. Height	-0.78	
CAX1	6	16-20 Ft. Height	0.78	
CRR1	1	ADD FOR SWITCH&TURNOUT		25000
CRR2	1	ADD FOR SWITCH&TURNOUT		31000
CRR3	1	ADD FOR SWITCH&TURNOUT		35000
CRR4	1	ADD FOR SWITCH&TURNOUT		46000
EA1	1		53.13	
EA1	2		14.15	
EA2	1		32.8	
EA2	2		8.7	
EC1	1		43.3	
EC1	2		12	
EC2	1		55.3	
EC2	2		15.5	
ED1	1		38.1	
ED1	2		10.4	
EF1	1		42.6	
EF1	2		12.3	
EG1	1		35.3	
EG1	2		9.4	
EG2	1		47.3	
EG2	2		12.6	

OBY COST MODIFIERS

Code	Mod Code	Description	Rate	Value
EH1	1		65.7	
EH1	2		19	
EJ1	1		78.7	
EJ1	2		22.1	
EL1	1		44.9	
EL1	2		12	
EN1	1		48.4	
EN1	2		13.9	
EP1	1		43.3	
EP1	2		12	
ES1	1		41.4	
ES1	2		12	
ES2	1		55.3	
ES2	2		15.5	
RG1	1	Unfinished Interior	-3.05	
RG1	2	Attic Above	4	
RG1	3	1/2 Story Above	8	
RG1	4	Full Story Above	14	
RG2	1	Unfinished Interior	-3.05	
RG2	2	Attic Above	4	
RG2	3	1/2 Story Above	8	
RG2	4	Full Story Above	14	
RG8	1	Unfinished Interior	-3.05	
RG8	2	Attic Above-MINIMAL/LOW PITCH	-5	
RG8	3	1/2 Story Above-BASE/HGH PITCH	0	
RG8	4	Full Story Above	8	
RG9	1	Unfinished Interior	-3.05	
RG9	2	Attic Above-MINIMAL/LOW PITCH	-5	
RG9	3	1/2 Story Above-BASE/HGH PITCH	0	
RG9	4	Full Story Above	8	
RM1	1	Central Air Cond.	2.5	
RM1	2	Metal Fireplace		1600
RM1	3	Slide Out/Rollout Room		2170
RM1	4	Tip-Out Room		1450
RM2	1	Central Air Cond.	2	
RM2	2	Metal Fireplace		1450
RM2	3	Slide Out/Rollout Room		2170
RM2	4	Tip-Out Room		1450
RP1	1	No Filter		-1360
RP1	2	Gas/Propane Heat B/I Circ Sys		500
RP1	3	Electric Heating		500
RP1	4	Diving Board		0
RP1	5	Chrome or Steel Ladder		0
RP1	6	Underwater Lighting		0

OBY COST MODIFIERS

Code	Mod Code	Description	Rate	Value
RP2	1	No Filter		-1360
RP2	2	Gas/Propane Heat B/I Circ Sys		500
RP2	3	Electric Heating		500
RP2	4	Diving Board		0
RP2	5	Chrome or Steel Ladder		0
RP2	6	Underwater Lighting		0
RP3	1	No Filter		-1360
RP3	2	Gas/Propane Heat B/I Circ Sys		500
RP3	3	Electric Heating		500
RP3	4	Diving Board		0
RP3	5	Chrome or Steel Ladder		0
RP3	6	Underwater Lighting		0
RP4	1	No Filter		-1360
RP4	2	Gas/Propane Heat B/I Circ Sys		500
RP4	3	Electric Heating		500
RP4	4	Diving Board		0
RP4	5	Chrome or Steel Ladder		0
RP4	6	Underwater Lighting		0
RP5	1	No Filter		-1360
RP5	2	Gas/Propane Heat B/I Circ Sys		500
RP5	3	Electric Heating		500
RP5	4	Diving Board		0
RP5	5	Chrome or Steel Ladder		0
RP5	6	Underwater Lighting		0

ELEVATOR COST TABLE

Code	Min Speed	Max Speed	Capacity	Rate	Per Stop/Ft	Name	Description
EL1	1	1	1500	37440	6500	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	1	1	2000	37940	7000	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	1	1	2500	38440	7500	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	1	1	3000	38940		ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	1	1	3500	39430	7900	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	1	1	4000	78000	8200	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	50	50	3500	75000	7900		ELEVATOR ELECTRIC FREIGHT
EL1	100	100	1500	70000	6500	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	100	100	2000	75000	7000	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	100	100	2500	80000	7500	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	100	100	3000	81500	7700	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	100	100	3500	83500	7900	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	100	100	4000	85000	8200	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	100	100	10000	101000	10300		ELEVATOR ELECTRIC FREIGHT
EL1	150	150	2000	82500	7000	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	150	150	2500	85000	7500	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	150	150	3000	87500	7700	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	150	150	3500	90000	7900	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	150	150	4000	93000	8200	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	200	200	2000	88000	7000	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	200	200	2500	90500	7500	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	200	200	3000	93000	7700	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	200	200	3500	96000	7900	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	200	200	4000	98500	8200	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	250	250	2000	94000	7000	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	250	250	2500	96000	7500	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	250	250	3000	99000	7700	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	250	250	3500	102000	7900	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	250	250	4000	104000	8200	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	300	300	2000	100000	7000	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	300	300	2500	103000	7500	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	300	300	3000	107000	7700	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	300	300	3500	111000	7900	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	300	300	4000	114000	8200	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	350	350	2000	107000	7000	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	350	350	2500	110000	7500	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	350	350	3000	114000	7700	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	350	350	3500	117000	7900	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	350	350	4000	121000	8200	ELEVATOR	ELEVATOR ELECTRIC FREIGHT
EL1	4500	4500	1	274490	7550		ELEVATOR ELECTRIC FREIGHT
EL2	1	1	1	14150	5150		ELEVATOR - ELECTRIC PASSENGER
EL2	1	1	2	14160	5150		ELEVATOR - ELECTRIC PASSENGER
EL2	1	1	1500	70000	5900	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	1	1	2000	80750	6000	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	1	1	2500	90000	6000	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	1	1	3000	98500	6200	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER

Cont'd

ELEVATOR COST TABLE

Code	Min Speed	Max Speed	Capacity	Rate	Per Stop/Ft	Name	Description
EL2	1	1	3500	113000	6300	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	1	1	4000	113000	6300	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	1	1	5000	127000	6400	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	6	6	6	14680	5150		ELEVATOR - ELECTRIC PASSENGER
EL2	10	10	8	15070	5150		ELEVATOR - ELECTRIC PASSENGER
EL2	100	100	1500	70000	5900	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	100	100	2000	80750	6000	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	100	100	2500	90000	6000	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	100	100	3000	98500	6200	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	100	100	3500	113000	6300	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	100	100	4000	113000	6300	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	100	100	5000	127000	6400	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	150	150	1500	80750	5900	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	150	150	2000	92250	6000	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	150	150	2500	102000	6000	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	150	150	3000	111000	6200	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	150	150	3500	127000	6300	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	150	150	4000	127000	6300	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	150	150	5000	141000	6400	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	200	200	1500	89250	5900	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	200	200	2000	101000	6000	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	200	200	2500	111000	6000	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	200	200	3000	122000	6200	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	200	200	3500	137000	6300	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	200	200	4000	137000	6300	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	200	200	5000	151000	6400	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	250	250	1500	96250	5900	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	250	250	2000	109000	6000	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	250	250	2500	120000	6000	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	250	250	3000	129000	6200	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	250	250	3500	145000	6300	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	250	250	4000	145000	6300	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	250	250	5000	161000	6400	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	300	300	1500	103000	5900	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	300	300	2000	116000	6000		ELEVATOR - ELECTRIC PASSENGER
EL2	300	300	2500	126000	6000		ELEVATOR - ELECTRIC PASSENGER
EL2	300	300	3000	137000	6200	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	300	300	3500	153000	6300		ELEVATOR - ELECTRIC PASSENGER
EL2	300	300	4000	153000	6300	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	300	300	5000	167000	6400	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	325	325	2500	133000	6000		ELEVATOR - ELECTRIC PASSENGER
EL2	350	350	1500	108000	5900	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	350	350	2000	122000	6000	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	350	350	2500	133000	6000	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	350	350	3000	143000	6200	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	350	350	3500	160000	6300	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER

Cont'd

ELEVATOR COST TABLE

Code	Min Speed	Max Speed	Capacity	Rate	Per Stop/Ft	Name	Description
EL2	350	350	4000	160000	6300	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	350	350	5000	174000	6400	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	400	400	1500	113000	5900	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	400	400	2000	127000	6000		ELEVATOR - ELECTRIC PASSENGER
EL2	400	400	2500	139000	6000		ELEVATOR - ELECTRIC PASSENGER
EL2	400	400	3000	148000	6200	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	400	400	3500	165000	6300	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	400	400	4000	165000	6300	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL2	400	400	5000	181000	6400	ELEV EL PASS	ELEVATOR - ELECTRIC PASSENGER
EL3	1	1	1	4210	7550		HYDRAULIC FREIGHT
EL3	1	1	1500	7960	7550	ELEVATOR	HYDRAULIC FREIGHT
EL3	1	1	2000	9250	7350	ELEVATOR	HYDRAULIC FREIGHT
EL3	1	1	2500	10540	7550	ELEVATOR	HYDRAULIC FREIGHT
EL3	1	1	3000	11830	7800	ELEVATOR	HYDRAULIC FREIGHT
EL3	1	1	3500	13120	8000	ELEVATOR	HYDRAULIC FREIGHT
EL3	1	1	4000	14400	8250	ELEVATOR	HYDRAULIC FREIGHT
EL3	50	50	1500	24000	7550	ELEVATOR	HYDRAULIC FREIGHT
EL3	50	50	2000	26800	7350	ELEVATOR	HYDRAULIC FREIGHT
EL3	50	50	2500	28500	7550	ELEVATOR	HYDRAULIC FREIGHT
EL3	50	50	3000	30900	7800	ELEVATOR	HYDRAULIC FREIGHT
EL3	50	50	3500	32000	8000	ELEVATOR	HYDRAULIC FREIGHT
EL3	50	50	4000	33300	8250	ELEVATOR	HYDRAULIC FREIGHT
EL3	100	100	1500	33000	7550	ELEVATOR	HYDRAULIC FREIGHT
EL3	100	100	2000	35700	7350	ELEVATOR	HYDRAULIC FREIGHT
EL3	100	100	2500	37700	7550	ELEVATOR	HYDRAULIC FREIGHT
EL3	100	100	3000	39700	7800	ELEVATOR	HYDRAULIC FREIGHT
EL3	100	100	3500	41000	8000	ELEVATOR	HYDRAULIC FREIGHT
EL3	100	100	4000	42100	8250	ELEVATOR	HYDRAULIC FREIGHT
EL3	125	125	1500	38000	7550	ELEVATOR	HYDRAULIC FREIGHT
EL3	125	125	2000	40800	7350	ELEVATOR	HYDRAULIC FREIGHT
EL3	125	125	2500	42500	7550	ELEVATOR	HYDRAULIC FREIGHT
EL3	125	125	3000	44100	7800	ELEVATOR	HYDRAULIC FREIGHT
EL3	125	125	3500	45500	8000	ELEVATOR	HYDRAULIC FREIGHT
EL3	125	125	4000	47300	8250	ELEVATOR	HYDRAULIC FREIGHT
EL3	150	150	1500	44000	7550	ELEVATOR	HYDRAULIC FREIGHT
EL3	150	150	2000	46000	7350	ELEVATOR	HYDRAULIC FREIGHT
EL3	150	150	2500	48000	7550	ELEVATOR	HYDRAULIC FREIGHT
EL3	150	150	3000	50000	7800	ELEVATOR	HYDRAULIC FREIGHT
EL3	150	150	3500	51500	8000	ELEVATOR	HYDRAULIC FREIGHT
EL3	150	150	4000	53000	8250	ELEVATOR	HYDRAULIC FREIGHT
EL4	1	500	10	4500	9400		HYDRAULIC PASSENGER
EL4	1	1	1500	10530	10800	ELEVATOR	HYDRAULIC PASSENGER
EL4	1	1	2000	12870	11300	ELEVATOR	HYDRAULIC PASSENGER
EL4	1	1	2500	15210	12100	ELEVATOR	HYDRAULIC PASSENGER
EL4	2	2	2500	15490	12100		HYDRAULIC PASSENGER
EL4	50	50	1500	26100	10800	ELEVATOR	HYDRAULIC PASSENGER

Cont'd

ELEVATOR COST TABLE

Code	Min Speed	Max Speed	Capacity	Rate	Per Stop/Ft	Name	Description
EL4	50	50	2000	32000	11300	ELEVATOR	HYDRAULIC PASSENGER
EL4	50	50	2500	37300	12100	ELEVATOR	HYDRAULIC PASSENGER
EL4	50	50	3000	42100	12600	ELEVATOR	HYDRAULIC PASSENGER
EL4	50	50	4000	50750	13100	ELEVATOR	HYDRAULIC PASSENGER
EL4	50	50	5000	59250	14100	ELEVATOR	HYDRAULIC PASSENGER
EL4	75	75	1500	32900	10800	ELEVATOR	HYDRAULIC PASSENGER
EL4	75	75	2000	39200	11300	ELEVATOR	HYDRAULIC PASSENGER
EL4	75	75	2500	45200	12100	ELEVATOR	HYDRAULIC PASSENGER
EL4	75	75	3000	50000	12600	ELEVATOR	HYDRAULIC PASSENGER
EL4	75	75	4000	60000	13100	ELEVATOR	HYDRAULIC PASSENGER
EL4	75	75	5000	68750	14100	ELEVATOR	HYDRAULIC PASSENGER
EL4	100	100	1500	38900	10800	ELEVATOR	HYDRAULIC PASSENGER
EL4	100	100	2000	45200	11300	ELEVATOR	HYDRAULIC PASSENGER
EL4	100	100	2500	53250	12100	ELEVATOR	HYDRAULIC PASSENGER
EL4	100	100	3000	57500	12600	ELEVATOR	HYDRAULIC PASSENGER
EL4	100	100	4000	67750	13100	ELEVATOR	HYDRAULIC PASSENGER
EL4	100	100	5000	77250	14100	ELEVATOR	HYDRAULIC PASSENGER
EL4	125	125	1500	43700	10800	ELEVATOR	HYDRAULIC PASSENGER
EL4	125	125	2000	50750	11300	ELEVATOR	HYDRAULIC PASSENGER
EL4	125	125	2500	58000	12100	ELEVATOR	HYDRAULIC PASSENGER
EL4	125	125	3000	63250	12600	ELEVATOR	HYDRAULIC PASSENGER
EL4	125	125	4000	74000	13100	ELEVATOR	HYDRAULIC PASSENGER
EL4	125	125	5000	84000	14100	ELEVATOR	HYDRAULIC PASSENGER
EL4	150	150	1500	48100	10800	ELEVATOR	HYDRAULIC PASSENGER
EL4	150	150	2000	55750	11300	ELEVATOR	HYDRAULIC PASSENGER
EL4	150	150	2500	62750	12100	ELEVATOR	HYDRAULIC PASSENGER
EL4	150	150	3000	69250	12600	ELEVATOR	HYDRAULIC PASSENGER
EL4	150	150	4000	80250	13100	ELEVATOR	HYDRAULIC PASSENGER
EL4	150	150	5000	90000	14100	ELEVATOR	HYDRAULIC PASSENGER
EL4	200	200	1500	55750	10800		HYDRAULIC PASSENGER
EL4	200	200	2000	64750	11300		HYDRAULIC PASSENGER
EL4	200	200	2500	71750	12100		HYDRAULIC PASSENGER
EL4	200	200	3000	78750	12600		HYDRAULIC PASSENGER
EL4	200	200	4000	90000	13100		HYDRAULIC PASSENGER
EL4	200	200	5000	101000	14100		HYDRAULIC PASSENGER
EL5	1	1		147000	1350	ESCAL 32 IN	ESCALATOR - 32 IN WIDE 10'' HT
EL6	1	1		160000	1700	ESCAL 48IN	ESCALATOR- 48 IN WIDE 10'' HT
EL7	1	1		15000	2000	ELEVATOR	APMT/PLATFORM TYPE

Cont'd

SPECIFIC COMMERCIAL STUDIES

FRANCHISE FOOD RESTAURANTS

Franchise Food restaurants have become a common place 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.

Two restaurants showing no marked difference in size and construction quality may show a considerable difference in cost due to the difference in design, and décor. 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 cost of franchise food restaurants. The proper use of this 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; reinforced concrete floor slab on a granular base; roof and exterior wall construction, interior finish; 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.

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.

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 four grades of parks; the general specifications are as follows:

MH1 Excellent quality and excellently planned mobile home parks designed to accommodate the largest tractor-drawn mobile homes or on-site erected mobile homes, featuring attractive landscaping, off street parking, and a variety of recreational facilities. (Grade A)

MH2 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. (Grade B)

MH3 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. (Grade C)

MH4 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. (Grade D)

MH5 Poor quality trailer parks designed to accommodate transient type trailers, and to provide the user with the minimum required facilities. (Grade E)

MH6 Is a code reserved for recreational vehicle parks, where space rents are more for short term basis.

Application of the pricing schedule involves determining the code 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, hook up charges, sewage disposal systems, or any off-site connections to trunk lines.

Water: includes on-site mains and site services, 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, or any off-site connections.

Gas: includes on-site piping, and site and building connections, or 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 MH2 park might exhibit "other features" more representative of a MH3 park, such as entrance decor, landscaping, and recreational facilities. Similarly, a park may be MH4 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 and the upkeep of maintenance. 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 an ongoing and profitable park, the actual rate of physical deterioration is affected 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, should be followed. 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 good condition for its age, the effective age will be somewhat more than the actual age.

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 obsolescence.

MOBILE HOME PARK REPLACEMENT COSTS

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 on site improvements include enough grading to allow adequate site preparation, drainage, and leveling, minimal on site electrical service, on site well and septic service, on site public or private water and 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

MH 1	$10000
MH 2	$7500
MH 3	$5300
MH 4	$3750
MH 5	$2400
MH 6 (RV)	$1500

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:

GC1 Superior championship 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.

GC2 Excellent golf course designed for private or public play consisting of 18 holes designed for championship, professional, advanced or competitive play with a par rating 71 to 72 and yardage of 6,000 – 7,300 yards. Terrain is generally rolling with wide fairways and made-man or natural hazards, well maintained landscaping, tees, greens and fairways of very good quality.

GC3 Very Good course consisting of 18 holes designed for all classes of golfers with a par rating of 70 to 72 and yardage ranging from 5,500 to 7,300 yards. Terrain is generally rolling with narrow to wide fairways, several natural hazards and some made-man hazards, well maintained landscaping with tees, greens and fairways of very good quality.

GC4 Good quality public or semi-private golf course; 18 holes designed for the average or occasional golfer with a par rating of 68 to 72 and yardage ranging from 5,500 to 7,000 yards. Terrain is generally flat with varying widths and few natural or man-made hazards, mostly natural landscaping with some maintenance, tees, greens ate fair to average quality.

GC5 Average or simple designed golf course consisting of 9 to 18 holes designed for recreational or occasional golfers; with a par rating of 68 to 72 and yardage ranging from 5,500 to 7,000 yards. Terrain is generally flat with narrow fairways little maintenance, very few hazards, tees, and greens are fair to average quality.

GC6 Fair or minimal golf course quality simply developed on open natural or flat terrain, few bunkers, small tees and greens.

GC7 Nine holes non-regulation golf course consisting of fewer than 18 holes designed mostly for recreational golfers. Golf holes of varying length with par ranging from 3 to 5 for each hole. The greens, tees and fairways are of average size and condition and there are few man-made and natural hazards.

GC8 Par 3 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.

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.

Tee Boxes includes the building and care of the tees.

Bunkers include the building and care of the bunkers.

Service and Cart Roads include base preparation, paving, and bridges over hazards.

Architect's Fees include all plans and supervision during construction.

GOLF COURSE PRICING

GC1 **REPLACEMENT COST $350,000 - $900,000 PER HOLE**
Superior championship 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.

GC2 **REPLACEMENT COST $250,000 - $350,000 PER HOLE**
Excellent golf course designed for private or public play consisting of 18 holes designed for championship, professional, advanced or competitive play with a par rating 71 to 72 and yardage of 6,000 – 7,300 yards. Terrain is generally rolling with wide fairways and made-man or natural hazards, well maintained landscaping, tees, greens and fairways of very good quality.

GC3 **REPLACEMENT COST $150,000 - $250,000 PER HOLE**
Very Good course consisting of 18 holes designed for all classes of golfers with a par rating of 70 to 72 and yardage ranging from 5,500 to 7,300 yards. Terrain is generally rolling with narrow to wide fairways, several natural hazards and some made-man hazards, well maintained landscaping with tees, greens and fairways of very good quality

GC4 **REPLACEMENT COST $100,000 - $150,000 PER HOLE**
Good quality public or semi-private golf course; 18 holes designed for the average or occasional golfer with a par rating of 68 to 72 and yardage ranging from 5,500 to 7,000 yards. Terrain is generally flat with varying widths and few natural or man-made hazards, mostly natural landscaping with some maintenance, tees, greens are fair to average quality.

GC5 **REPLACEMENT COST $75,000 - $100,000 PER HOLE**
Average or simple designed golf course consisting of 9 to 18 holes designed for recreational or occasional golfers; with a par rating of 68 to 72 and yardage ranging from 5,500 to 7,000 yards. Terrain is generally flat with narrow fairways little maintenance, very few hazards, tees, and greens are fair to average quality.

GC6 **REPLACEMENT COST $50,000 - $75,000 PER HOLE**
Fair or minimal golf course quality simply developed on open natural or flat terrain, few bunkers, small tees and greens.

GC7 **REPLACEMENT COST $50,000 - $75,000 PER HOLE**
Nine hole non-regulation golf course consisting of fewer than 18 holes designed mostly for recreational golfers. Golf holes of varying length with par ranging from 3 to 5 for each hole. The greens, tees and fairways are of average size and condition and there are few man-made and natural hazards

GC8 **REPLACEMENT COST $25,000 - $50,000 PER HOLE**
Par 3 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 COURSES

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 Moore County, based on the Income Approach.

Stabilized # Rounds (SNR) x Stabilized Daily Rate (SDR) = Golf Income Revenue (GIR) x Golf Income Multiplier (GIM) = Indicated Value

EXAMPLE

Moore County Golf Club - an 18 hole, regulation size golf course, with a stabilized number of rounds of 23,000 per year and a stabilized daily rate of $50:

23,000 x $50 = $1,150,000 x 1.5 = $1,725,500 or $95,833 per hole.
(SNR) x (SDR) = (GIR) x (GIM) = Indicated Value

EXAMPLES OF 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	2.0-2.5
Class II	20,000-25,000	$ 75 - $100	$65 - $90	2.0-2.5
Class III	20,000-25,000	$ 50 - $75	$40 - $65	2.5-3.0
Class IV	20,000-30,000	$ 35 - $50	$30 - $45	2.5-3.0
Class V	20,000-30,000	$ 25 - $40	$20 - $25	3.0-3.5
Class VI	20,000-30,000	$ 15 - $25	$10 - $20	3.0-3.5

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.

Moore County used 22,000-25,000 as the SNR = 23,000 Stabilized Number of Rounds and a GIM of 1.20-1.80 that equates to a 1.50 average. Using these factors and applying the stabilized daily rate to each golf course will result in the income model of valuation for each golf course. Each course will then be assigned a GC Rating and reviewed using the cost model and adjusted within percent % good guidelines. After applying all three approaches (Market, Income and Cost) to each golf course the appraiser will finalize the value for each course.

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 Moore County when the data is available. 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, 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

Income	Expense Ratios			Capitalization	
Economic Rent per Site	Vacancy	Mgmt.	Expenses	Cap Rate	GRM
More than $250 per Month	5-10%	5-10%	20-40%	.07-.15	6-7
$150 - $250 per Month	5-10%	5-10%	20-40%	.07-.10	6-7
$100 - $149 per Month	5-10%	5-10%	25-40%	.07-.11	5-6
$60 - $99 per Month	10-15%	10-15%	25-50%	.07-.12	4-5
Less than $60 per Month	10-20%	10-15%	25-50%	.07-.13	4-5

MOTELS / HOTELS

Income	Expense Ratios			Capitalization	
Effective Daily Room Rate	Vacancy	Mgmt.	Expenses	Cap Rate	GRM
$200 - up per Night	15-50%	10-15%	20-40%	.07-.11	1-3
$125 - $200 per Night	15-50%	10-15%	20-40%	.07-.11	1-3
$75 - $125 per Night	15-50%	10-15%	20-50%	.08-.12	1-3
$50 - $75 per Night	20-50%	10-15%	20-50%	.08-.13	1-3
Less than $50 per Night	25-50%	10-15%	25-60%	.08-.14	1-3

SELF-STORAGE

Income	Expense Ratios			Capitalization	
Economic Rent per Unit	Vacancy	Mgmt.	Expenses	Cap Rate	GRM
$100 - up per Month	10-25%	5-10%	10-20%	.07-.11	5-7
$75 - $99 per Month	10-30%	5-10%	10-20%	.07-.11	5-7
$50 - $74 per Month	10-35%	5-10%	10-25%	.07-.11	5-7
Less than $50 per Month	10-40%	5-10%	10-30%	.07-.11	5-7

SERVICE GARAGE

Income	Expense Ratios			Capitalization	
Annual Square Foot Rent	Vacancy	Mgmt.	Expenses	Cap Rate	GRM
$10 - up per Sq Ft	10-20%	5-10%	15-25%	.09-.10	8-9
$7.50 - $9.99 per Sq Ft	10-20%	5-10%	15-25%	.09-.10	8-9
$5.00 - $7.49 per Sq Ft	10-20%	5-10%	25-40%	.10-.11	7-8
Less than $5.00 per Sq Ft	10-20%	5-10%	25-40%	.10-.11	7-8

APARTMENTS

Monthly Rental Rate				Expense Ratios			Capitalization	
1BR	2BR	3BR	4BR	Vacancy	Mgmt.	Expenses	Cap Rate	GRM
$750-up	$800-up	$850-up	$1000-up	3-10%	3-10%	10-40%	.06-09	7-9
$650-749	$700-799	$750-849	$800-999	3-10%	3-10%	10-40%	.06-.09	7-8
$550-649	$600-699	$650-749	$700-799	3-10%	3-10%	10-40%	.06-.09	7-8
$450-549	$500-599	$550-649	$600-699	3-10%	3-10%	10-40%	.06-.09	6-7
$350-449	$400-499	$450-549	$500-599	5-15%	3-10%	10-40%	.06-.10	6-7
$0-$349	$0-$399	$0-$449	$0-$499	10-15%	3-10%	10-40%	.06-.10	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	3-5%	3-10%	10-15%	.06-.10	7-8
$15.00 - $24.99 per Square Foot	3-10%	3-10%	10-25%	.06-.10	7-8
$10.00 - $14.99 per Square Foot	3-10%	3-10%	15-30%	.07-.11	6-7
$5.00 - $9.99 per Square Foot	5–15%	3-10%	25-40%	.07-.11	6-7
Less than $5.00 per Square Foot	10-25%	3-10%	30-50%	.07-.13	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	3-5%	5-10%	10-15%	.05-.11	7-8
$15.00 - $24.99 per Square Foot	3-5%	5-10%	10-25%	.05-.11	7-8
$12.00 - $14.99 per Square Foot	5-10%	5-10%	15-30%	.06 -.12	6-7
$10.00 - $11.99 per Square Foot	5-10%	5-10%	25-40%	.06 -.12	6-7
Less than $10.00 per Square Foot	5 -15%	5-10%	30-50%	.07-.13	5-6

RESIDENTIAL SINGLE FAMILY HOUSING

For Single Family Residential Housing, use Gross Rent Modifier (GRM) between 6 and 8. Typical expenses and vacancy rates should be utilized when applicable.

CONVENIENCE STORES

Income	Expense Ratios			Capitalization	
Economic Rent per Year	Vacancy	Mgmt.	Expenses	Cap Rate	GRM
$10.00 – more than $25.00	0-5%	5-10%	10-20%	.05 - .11	N/A

RESTAURANTS / FRANCHISE RESTAURANTS

Income	Expense Ratios			Capitalization	
Effective Annual Rent	Vacancy	Mgmt.	Expenses	Cap Rate	GRM
$1 to more than $40 per Sq Ft	0-15%	5-10%	10-20%	.05 - .11	N/A

MANUFACTURING / WAREHOUSE

Income	Expense Ratios			Capitalization	
Economic Rent per Year	Vacancy	Mgmt.	Expenses	Cap Rate	GRM
More than $4 per Sq Ft	15-30%	5-10%	20-30%	.06-.12	6-7
$2.50 - $3.99 per Sq Ft	15-30%	5-10%	25-40%	.06-.12	6-7
$1.50 - $2.49 per Sq Ft	15-30%	5-10%	25-40%	.07-.13	5-6
Less than $1.50 per Sq Ft	15-30%	5-10%	25-50%	.07-.13	5-6

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Land Schedules

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LAND VALUATION GUIDELINES

Land values across Moore 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.

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 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 (ETJ) 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.

Lakefront areas either adjoin or have easy access to area lakes. 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
Gross Lot/Value
Acreage
Units/Single Lot

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" 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, subsurface rock ledge, potential erosion, and flood plain areas.

The following is presented as a guide:

TOPOGRAPHY INFLUENCE FACTOR GUIDE

	CONDITION	FACTOR
Normal	Problem corrected or not significant	**0%**
Slight	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	**10% - 25%**
Severe	Problem is significant but correctable in that it prevents the development of the lot until the topography problem is corrected	**25% - 75%**
Unbuildable	The topography problem is so severe it is not economically feasible to develop the lot. Example: a lot that cannot pass health and safety perk tests	**75% - 90%**

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
Normal	Shape or size is no significant detriment to the presumed utilization of the parcel	**0%**
Minor	The lot is buildable and/or economically usable for the presumed utilization but irregular shape or insufficient size preludes the full utilization of the parcel	**10% - 25%**

Major	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 underutilization of the parcel	**25% - 75%**
Unbuildable	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	**75% - 90%**

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
Normal	No significant restriction to the property	**0%**
Minor	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	**10% - 25%**

Major	A restriction of major significance - legal or physical -exists which causes the property to be restricted to a less than 100% 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	**25% - 75%**
Unbuildable	*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	**75% - 90%**

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
Normal	The property is unimproved (no major structures present) or the existing structure is consistent with the economical utilization of the land	**0%**
Minor	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	**25% - 50%**
Major	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	**50% - 75%**

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 comer 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
Normal	The presence of a corner or alley has no significant enhancement or impact to the property	**0%**

Minor	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	**+10%-25%**
Major	The lot value is significantly enhanced by the presence of corner or alley exposure. Example: the intersection of two major arterial streets	**+25%-150%**

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
Normal	The view is considered common to the area, and market evidence indicates no actual value enhancement exists	**0%**
Minor	The subject property has a moderate enhancement due to an appealing view, and market evidence supports value enhancement	**+10% to 25%**
Major	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	**+25% to 150%**
Negative	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	**-10% to -75%**

Ingress/Egress

Base land rates include consideration for normal or easy entrance and exit to all properties in a given area or neighborhood.

The following is a guide:

Ingress/Egress Factor Guide:

	CONDITION	FACTOR
Normal	Property has ready entrance and exit with little or no restriction. May have multiple entrances.	**None**
Minor	Entrance to property may be limited by having a single entrance/exit located near an obstruction.	**-10% -25%**
Major	Entrance may be limited by a median strip or barricade which limits ingress/egress to traffic on one side of a street or highway.	**-25% -90%**

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 Moore 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 Moore County Tax Office in the appraisal of any property encumbered by a conservation easement.

GS 105-317. Appraisal of real: 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 as 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.

The following is presented as a guide for adjusting Conservation Easements

Property Rights Given in Easement	Factor
Right to Subdivide	30%
Right to Sell	25%
Limited Market	20%
Right to Build	20%
Right to Recreation	15%
Right to Harvest Timber	10%

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 CEMETERY OR BURIAL GROUND PROPERTY

Moore County has numerous private cemeteries that date to the late eighteen 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 Moore 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 Moore 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 Moore County Tax Department shall consider an area not to exceed one tenth (.l0) acres in size to attribute to said cemetery or burial ground.

Note: Moore County Tax Office will add or delete parcels from the cemetery grouping as necessary

MINERALS

Any substance obtained by mining or fracking that occurs in nature, usually comprising inorganic substances, such as quartz, feldspar, etc. as well as certain natural products of organic origin such as asphalt, coal, gas, natural gas and oil. Mining refers to the excavation made in the earth for the purpose of extracting ores, coal, and precious stones, etc. either by excavation or washing the soil. Fracking refers to the procedure of using naturally created fractures or by creating fractures in rocks and rock formations by injecting fluid into cracks to force openings to allow flow out of the formation. These natural substances of commercial value, such as iron ore, coal, quartz, feldspar, asphalt, gas, natural gas and oil, etc. that is obtained by mining, quarrying, drilling or fracking shall be valued at market value and applied to the owner for ad-valorem taxation by this schedule. Market value as far as practicable is appraised or valued at its true value in money by using at least one of the three common appraisal methods, cost approach, market approach or income approach.

All rights and interest in minerals associated in underlying land, whether owned by the land owner or created by or arising under deed, lease, reservation of rights, or otherwise, which rights or interest are owned by a person other than the owner of the land, shall be assessed and taxed separately to the owner of such rights or interest in the same manner as other real estate. The taxes on separate rights or interest in real property owned by one other than the owner of the land, whether or not listed separately from the land shall be a lien on both the separate rights and on the land.

When land is owned by one party and improvements thereon or special rights (such as mineral, timber, quarry, waterpower, or similar tights) therein are owned by another party, the parties shall list their interest 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.

Commercial Sites

Sites that are used for commercial purposes are valued as commercial sites. Included in that category are cell tower sites and solar farms that are owned or leased for the purpose of locating a cell tower or solar farm on the property. The cell tower sites are valued at $100,000.00 per site and usually cover from ¼ acre to 1.0 acre depending on the tower and the primary and secondary land used to service the tower. Solar farms are valued up to $100,000.00 per acre depending on the location and size of the tract. Both cell tower and solar farm sites will be valued at Market Value as far as practicable using at least one of the three approaches to value cost, income and sales.

LAND TABLES

ACREAGE

TYPE Al	5000 – 1,000,000	RESIDENTIAL PRIMARY SITE
TYPE A2	5000 – 1,500,000	COMMERCIAL SITE
TYPE A3	5000 – 1,500,000	WATERFRONT, GOLF FRONT
TYPE A4	1000 - 500,000	RESIDUAL
TYPE A5	1000 – 500,000	WOODLAND
TYPE A6	1000 – 500,000	OPEN
TYPE A7	100 – 20,000	WASTELAND
TYPE A8	2500 – 900,000	UNDEVELOPED
TYPE A9	4000 – 500,000	INDUSTRIAL SITE
TYPE AO	4000 - 900,000	SECONDARY SITE

GROSS

TYPE Gl	100 - 100,000	IRREGULAR
TYPE G2	100 – 100,000	SITE VALUE
TYPE G3	100 - 100,000	COMMON AREA
TYPE G4	100 - 100,000	RESIDUAL
TYPE G5	100 - 100,000	PARTIAL INTEREST

NOTE: Property used in connection with condominium or subdivision common areas may have a zero land value because its value is assessed to the condominium or property owners who have usage of these areas.

SQUARE FOOTAGE

TYPE SI	. 10 – 100.00	PRIMARY SITE
TYPE S2	. 10 – 25.50	SECONDARY SITE
TYPE S3	.05 – 30.00	RESIDUAL
TYPE S4	. 10 –100.00	COMMERCIAL
TYPE S5	. 10 – 40.00	INDUSTRIAL
TYPE S6	. 05 - 30.00	UNDEVELOPED

LOTS

TYPE LI	2500 – 1,000,000	PRIMARY SITE
TYPE L2	2500 – 500,000	SECONDARY SITE
TYPE L3	500 – 150,000	RESIDUAL
TYPE L4	5000 – 1,000,000	WATERFRONT
TYPE L5	5000 – 1,000,000	GOLF FRONT
TYPE L6	4000 – 500,000	UNDEVELOPED

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Depreciation

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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:

Total Replacement Cost New x Depreciation Factor x Condition Factor = Value

Effective age of a property is its age as compared with other properties performing like functions. 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.

ADDENDUM 1

DEPRECIATION TABLES

IAS BASE COST TABLES
CDU PERCENT GOOD (CA44) 2019

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	00	1	100	100	100	100	85	75	65	55	40	25
		2	100	100	99	98	84	74	64	54	39	24
		3	100	100	99	96	83	73	63	53	38	23
		4	100	100	98	94	82	72	62	52	37	22
		5	100	99	98	92	81	71	61	51	36	21
		6	100	99	97	91	80	70	60	50	35	20
		7	100	98	96	90	79	69	59	49	34	19
		8	99	98	95	89	78	68	58	48	33	18
		9	99	97	94	88	77	67	57	47	32	17
		10	99	97	93	87	76	66	56	46	31	16
		11	98	96	92	86	75	65	55	45	30	15
		12	98	95	91	85	74	64	54	43	29	14
		13	97	95	90	84	73	63	53	42	28	13
		14	97	95	89	83	72	62	52	41	28	12
		15	97	94	88	82	71	62	51	40	27	11
		16	96	93	87	81	70	61	51	40	27	10
		17	96	92	86	80	70	61	50	39	26	9
		18	96	92	85	79	69	60	50	39	26	8
		19	95	91	85	78	69	60	49	38	25	7
		20	95	91	84	77	68	59	49	38	25	6
		21	95	90	84	76	68	59	48	37	24	5
		22	94	90	83	75	67	58	48	37	24	5
		23	94	89	83	74	67	58	47	36	23	5
		24	94	89	82	74	66	57	47	36	23	5
		25	93	88	82	73	66	57	46	35	22	5
		26	93	88	81	73	65	56	46	35	22	5
		27	92	87	81	72	65	56	45	34	21	5
		28	92	87	80	72	64	55	45	34	21	5
		29	91	86	80	71	64	55	44	33	20	5
		30	91	86	79	71	63	54	44	33	20	5
		31	90	85	79	70	63	54	43	32	19	5
		32	90	85	78	69	62	53	43	32	19	5
		33	89	84	78	69	62	53	42	31	18	5
		34	89	84	77	68	61	52	42	31	18	5
		35	88	83	77	68	61	52	41	30	17	5
		36	88	83	76	67	60	51	41	30	17	5
		37	87	82	76	67	60	51	40	29	17	5
		38	87	82	75	66	59	50	40	29	16	5
		39	86	81	75	66	59	50	39	28	16	5
		40	86	81	74	65	58	49	39	28	16	5
		41	85	80	74	65	58	49	38	27	15	5
		42	85	80	73	64	57	48	38	27	15	5
		43	84	79	73	64	57	48	37	26	15	5
		44	84	79	72	63	56	47	37	26	14	5
		45	83	78	72	63	56	47	36	25	14	5
		46	83	78	71	62	55	46	36	25	14	5
		47	82	77	71	62	55	46	35	25	13	5
		48	82	77	70	61	54	45	35	24	13	5

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	00	49	81	76	70	61	54	45	34	24	13	5
		50	81	76	69	60	53	44	34	24	12	5
		51	80	75	69	60	53	44	33	23	12	5
		52	80	75	68	59	52	43	33	23	12	5
		53	79	74	68	59	52	43	32	23	11	5
		54	79	74	67	58	51	42	32	22	11	5
		55	78	73	67	58	51	42	31	22	11	5
		56	78	73	66	57	50	41	31	22	11	5
		57	77	72	66	57	50	41	30	21	10	5
		58	77	72	65	56	49	40	30	21	10	5
		59	76	71	65	56	49	40	30	21	10	5
		60	76	71	64	55	48	39	30	20	10	5
		999	75	70	64	55	48	39	30	20	10	5

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	01	3	100	100	100	96	90	75	60	50	40	30
		7	98	95	92	88	80	65	53	45	35	25
		11	95	92	86	81	70	55	45	35	30	20
		16	90	86	82	74	60	48	38	30	25	15
		21	85	83	75	64	53	40	33	25	20	10
		25	80	75	65	56	45	35	28	20	15	5
		30	75	67	57	47	37	30	22	15	10	2
		999	70	60	50	40	30	25	18	10	5	1

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	C15	1	100	100	99	98	95	90	85	75	50	25
		2	99	99	98	96	94	88	83	74	49	20
		3	98	98	95	94	92	86	80	73	48	15
		4	97	97	94	93	90	83	77	72	47	10
		5	96	96	93	91	85	80	75	70	46	5
		6	95	95	90	88	80	75	70	65	45	5
		7	94	90	88	85	75	70	65	60	44	5
		8	93	88	85	80	70	65	60	55	43	5
		9	92	85	80	75	65	60	55	50	42	5
		10	91	80	75	70	60	55	50	45	40	5
		11	85	75	70	65	55	50	45	40	35	5
		12	80	70	65	60	50	45	40	35	30	5
		13	75	65	60	55	45	40	35	30	25	5
		14	70	60	55	50	40	35	30	25	20	5
		15	65	55	50	45	35	30	25	20	15	5
		20	55	50	45	40	30	25	20	15	10	5
		999	50	45	40	35	30	25	20	15	10	5

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	C15A	1	100	100	100	100	100	100	100	100	100	100
		2	97	97	96	96	96	95	94	94	93	93
		3	94	93	93	92	91	90	89	87	87	86
		4	90	90	89	88	87	85	83	81	80	80
		5	87	87	86	84	83	80	77	74	74	73
		6	84	83	82	80	79	75	71	68	67	66
		7	81	80	79	76	74	70	66	61	61	59
		8	77	76	75	72	70	65	60	55	54	52
		9	74	73	71	69	66	60	54	49	47	46
		10	71	70	68	65	61	55	49	42	41	39
		11	68	66	64	61	57	50	43	36	34	32
		12	65	63	61	57	53	45	37	29	28	25
		13	61	60	57	53	49	40	31	23	21	19
		14	58	56	54	49	44	35	26	16	15	12
		15	55	53	50	45	40	30	20	10	10	5

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	C20	1	100	99	98	97	96	95	93	91	50	25
		2	96	95	94	93	92	91	90	89	49	20
		3	93	92	91	90	89	88	87	86	48	15
		4	89	88	87	86	85	84	83	82	47	10
		5	85	84	83	82	81	80	79	78	46	5
		6	81	80	79	78	77	76	75	74	45	5
		7	77	76	75	74	73	72	71	70	44	5
		8	73	72	71	70	69	68	67	66	43	5
		9	68	67	66	65	64	63	62	61	42	5
		10	63	62	61	60	59	58	57	56	41	5
		11	58	57	56	55	54	53	52	51	40	5
		12	53	52	51	50	49	48	47	46	39	5
		13	48	47	46	45	44	43	42	41	38	5
		14	43	42	41	40	39	38	37	36	35	5
		15	38	37	36	35	34	33	32	31	30	5
		16	34	33	32	31	30	29	28	27	26	5
		17	30	29	28	27	26	25	24	23	22	5
		18	27	26	25	24	23	22	21	20	19	5
		19	25	24	23	22	21	20	19	18	17	5
		20	24	23	22	21	20	19	18	17	15	5
		25	22	21	21	20	19	18	17	16	10	5
		999	20	20	20	20	18	15	15	15	10	5

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	C30	0	100	100	99	98	97	95	93	75	50	25
		1	100	100	99	98	97	95	93	75	50	25
		2	99	99	98	97	96	94	92	74	48	23
		3	97	97	96	95	94	93	91	73	46	21
		4	94	94	94	93	92	90	88	72	44	19
		5	94	93	92	91	90	88	86	71	42	17
		6	92	91	90	89	88	87	85	70	40	15
		7	89	88	87	86	87	86	84	69	38	13
		8	87	86	85	84	83	82	80	67	36	11
		9	85	84	83	82	81	80	78	65	34	10
		10	82	81	80	79	78	77	75	62	32	10
		11	79	78	77	76	75	74	72	60	30	5
		12	77	76	75	74	73	72	71	58	29	5
		13	74	73	72	71	70	69	67	55	28	5
		14	71	70	69	68	67	66	63	50	27	5
		15	68	67	66	65	64	63	60	48	26	5
		16	64	63	62	61	60	59	57	45	25	5
		17	61	60	59	58	57	56	53	40	24	5
		18	57	56	55	54	53	52	51	39	23	5
		19	54	53	52	51	50	49	48	35	22	5
		20	50	49	48	47	46	45	44	33	21	5
		21	46	45	44	43	42	41	40	30	20	5
		22	43	42	41	40	39	38	37	29	19	5
		23	40	39	38	37	36	35	34	27	18	5
		24	37	36	35	34	33	32	31	26	17	5
		25	34	33	32	31	30	29	28	25	16	5
		26	31	30	29	28	27	26	25	24	15	5
		27	28	27	26	25	24	23	22	20	14	5
		28	26	25	24	23	22	21	20	19	13	5
		29	25	24	23	22	21	20	19	18	12	5
		30	24	23	22	21	20	19	18	17	10	5
		35	23	22	21	20	19	18	17	16	10	5
		999	20	20	20	20	18	17	15	15	10	5

IAS BASE COST TABLES
CDU PERCENT GOOD (CA44) 2019

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	C40	0	100	100	100	99	98	94	90	85	50	25
		1	100	100	100	99	98	94	90	85	50	25
		2	100	100	99	98	97	93	89	83	49	24
		3	100	99	98	97	96	92	88	82	48	23
		4	99	98	97	96	95	91	87	81	47	22
		5	98	97	96	95	94	90	86	80	46	21
		6	97	96	95	94	93	89	85	79	45	20
		7	96	95	94	93	92	88	84	78	44	19
		8	95	94	93	92	91	87	83	77	43	18
		9	93	92	91	90	89	86	82	76	42	17
		10	92	91	90	89	88	85	80	75	41	16
		11	90	89	88	87	87	83	78	73	40	15
		12	89	88	87	86	85	82	77	72	39	14
		13	87	86	85	84	83	81	76	71	38	13
		14	85	84	83	82	81	78	75	70	37	12
		15	83	82	81	80	79	76	73	68	36	11
		16	81	80	79	78	77	75	71	66	35	10
		17	79	78	77	76	75	73	70	65	34	9
		18	77	76	75	74	73	70	68	63	33	8
		19	75	74	73	72	71	68	66	61	32	7
		20	73	72	71	70	69	66	64	60	31	6
		21	71	70	69	68	67	64	61	58	30	5
		22	68	67	66	65	64	61	59	56	29	5
		23	66	65	64	63	62	59	56	54	28	5
		24	63	62	61	60	59	56	55	52	27	5
		25	60	59	58	57	56	55	53	50	26	5
		26	59	58	57	56	55	50	48	45	25	5
		27	54	53	52	51	50	47	45	42	24	5
		28	51	50	49	48	47	45	42	40	23	5
		29	49	48	47	46	45	42	40	37	22	5
		30	46	45	44	43	42	40	37	33	21	5
		31	44	43	42	41	40	37	33	31	20	5
		32	41	40	39	38	37	33	31	29	19	5
		33	37	36	35	34	33	31	29	28	18	5
		34	35	34	33	32	31	29	28	25	17	5
		35	33	32	31	30	29	28	25	23	16	5
		36	30	29	28	27	28	24	23	21	15	5
		37	28	27	26	25	24	22	21	20	14	5
		38	26	25	24	23	22	21	20	19	13	5
		39	25	24	23	22	21	20	19	18	12	5
		40	24	22	21	21	20	19	18	17	11	5
		50	23	21	21	20	19	18	16	16	10	5
		999	20	20	20	19	18	17	15	15	10	5

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	C50	0	100	100	100	100	97	95	90	85	50	25
		1	100	100	100	100	97	95	90	85	50	25
		2	100	100	99	99	96	94	89	84	49	24
		3	100	99	99	99	95	93	88	83	48	23
		4	99	99	98	98	94	92	87	82	47	22
		5	99	98	97	97	93	91	86	81	46	21
		6	99	97	97	97	92	90	85	80	45	20
		7	99	97	96	96	91	89	84	79	44	19
		8	98	96	95	95	90	88	83	78	43	18
		9	98	96	95	95	89	87	82	77	42	17
		10	97	95	94	94	88	86	81	76	41	16
		11	97	94	93	93	87	85	80	75	40	15
		12	96	93	92	92	86	84	79	74	39	14
		13	95	92	91	91	85	83	78	73	38	13
		14	94	92	91	90	84	81	76	71	37	12
		15	93	91	90	89	82	79	74	69	36	11
		16	93	90	89	88	81	78	73	68	35	10
		17	92	89	88	87	80	77	72	67	34	9
		18	92	88	87	86	79	76	71	66	33	8
		19	90	87	86	84	78	75	70	65	32	7
		20	89	85	84	83	76	73	68	63	31	6
		21	88	84	83	82	75	71	66	61	30	5
		22	86	82	81	80	74	70	65	60	29	5
		23	85	81	80	79	73	69	64	59	28	5
		24	83	79	78	77	71	67	62	57	27	5
		25	82	77	76	75	70	65	60	55	26	5
		26	80	75	74	73	69	64	59	54	25	5
		27	79	74	73	72	68	63	58	53	24	5
		28	76	72	71	70	67	62	57	52	23	5
		29	72	70	69	68	66	61	56	51	22	5
		30	70	68	67	66	64	59	54	49	21	5
		31	68	67	66	65	63	58	53	48	20	5
		32	66	64	63	62	60	56	51	46	19	5
		33	63	61	60	59	58	54	49	44	18	5
		34	61	59	58	57	56	52	47	42	17	5
		35	59	57	56	55	53	50	45	40	16	5
		36	57	54	53	52	50	48	43	38	15	5
		37	54	52	51	50	48	46	41	36	14	5
		38	52	49	48	47	45	44	39	34	13	5
		39	50	46	45	44	42	40	37	32	12	5
		40	48	43	42	41	39	38	35	30	11	5
		41	46	40	39	38	36	34	33	29	10	5
		42	44	37	36	35	33	31	30	28	10	5
		43	42	35	34	33	30	28	27	26	10	5
		44	40	32	31	30	29	27	26	25	10	5
		45	38	31	30	29	26	24	23	22	10	5
		46	36	28	27	26	25	23	22	21	10	5
		47	34	27	26	25	23	21	20	19	10	5

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	C50	48	32	25	24	23	22	19	19	18	10	5
		49	30	24	23	22	21	17	18	17	10	5
		50	28	23	22	21	20	16	17	16	10	5
		60	26	22	19	18	17	15	15	15	10	5
		999	24	20	15	15	15	15	15	15	10	5

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	C60	0	100	100	100	100	99	98	90	85	50	25
		1	100	100	100	100	99	98	90	85	50	25
		2	100	100	100	99	98	96	89	83	49	24
		3	100	100	99	98	97	95	88	82	49	23
		4	100	99	98	97	96	94	87	81	48	22
		5	99	98	97	96	95	92	86	80	48	21
		6	98	97	96	95	94	91	85	79	47	20
		7	97	96	95	94	93	89	84	78	47	19
		8	96	95	94	93	92	87	83	77	46	18
		9	95	94	93	92	91	85	82	76	46	17
		10	94	93	92	91	90	83	80	75	45	16
		11	93	92	91	90	89	81	79	74	45	15
		12	92	91	90	89	88	79	78	73	44	14
		13	91	90	89	88	87	78	77	72	44	13
		14	90	89	88	87	86	77	76	71	43	12
		15	89	88	87	86	85	76	75	70	43	11
		16	88	87	86	85	84	74	73	69	42	10
		17	87	86	85	84	83	72	71	68	42	10
		18	86	85	84	83	82	70	69	67	41	10
		19	85	84	83	82	81	69	67	66	41	10
		20	84	83	82	81	80	67	65	64	40	10
		21	83	82	81	80	79	65	64	63	39	10
		22	82	81	80	79	78	64	63	62	39	10
		23	81	80	79	78	77	63	62	61	38	10
		24	80	79	78	77	76	62	61	60	38	10
		25	79	78	77	76	75	61	60	59	37	10
		26	78	77	76	75	74	60	59	58	37	10
		27	77	76	75	74	73	59	58	57	36	10
		28	76	75	74	73	72	58	57	56	36	10
		29	75	74	73	72	71	57	56	55	35	10
		30	74	73	72	71	70	56	55	54	36	10
		31	73	72	71	70	69	55	54	53	34	10
		32	72	71	70	69	68	54	53	52	34	10
		33	71	70	69	68	67	53	52	51	33	10
		34	70	69	68	67	66	52	51	50	33	10
		35	69	68	67	66	65	51	50	49	32	10
		36	68	67	66	65	64	50	49	48	32	10
		37	67	66	65	64	63	49	48	47	31	10
		38	66	65	64	63	62	48	47	46	31	10
		39	65	64	63	62	61	47	46	45	30	10
		40	64	63	62	61	60	46	45	44	30	10
		41	63	62	61	60	59	45	44	43	30	10
		42	62	61	60	59	58	44	43	42	30	10
		43	61	60	59	58	57	43	42	41	30	10
		44	60	59	58	57	56	42	41	40	30	10
		45	59	58	57	56	55	41	40	39	25	10
		46	58	57	56	55	54	40	39	38	25	10
		47	57	56	55	54	53	39	38	37	25	10

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	C60	48	56	55	54	53	52	38	37	36	25	10
		49	55	54	51	50	49	37	36	35	25	10
		50	54	52	49	48	47	36	35	34	25	10
		51	52	49	47	46	45	35	34	33	24	10
		52	49	47	45	44	43	34	33	32	23	10
		53	47	43	41	40	39	33	32	31	22	10
		54	43	41	39	38	37	32	31	30	21	10
		55	41	39	37	36	35	31	30	29	20	10
		56	39	37	35	34	33	30	29	28	19	10
		57	37	35	33	32	31	29	28	27	18	10
		58	35	33	31	30	29	28	27	26	17	10
		59	33	31	30	29	28	27	26	25	16	10
		60	31	30	29	28	27	26	25	25	15	5
		70	30	29	27	26	25	25	25	20	10	5
		999	29	28	26	25	25	25	25	20	10	5

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	T1	1	98	98	98	98	88	88	88	88	88	49
		2	96	96	96	96	86	86	86	86	86	48
		3	94	94	94	94	85	85	85	85	85	47
		4	93	93	92	92	83	83	83	83	83	46
		5	91	91	91	90	81	81	81	81	81	45
		6	89	89	89	89	80	79	79	79	79	45
		7	88	88	87	87	78	78	78	78	78	44
		8	86	86	86	85	77	76	76	76	76	43
		9	85	85	84	84	75	74	74	74	74	42
		10	83	83	83	82	74	73	73	73	73	42
		11	82	82	81	80	72	71	71	71	71	41
		12	81	81	80	79	71	69	69	69	69	40
		13	79	79	78	77	69	68	68	68	68	40
		14	78	78	77	76	68	66	66	66	66	39
		15	77	77	76	74	67	65	65	65	65	38
		16	76	76	74	73	65	63	63	63	63	38
		17	75	75	73	72	64	62	62	62	62	37
		18	74	74	72	70	63	60	60	60	60	37
		19	72	72	71	69	62	59	59	59	59	36
		20	71	71	70	68	60	58	58	58	58	36
		21	70	70	69	66	59	56	56	56	56	35
		22	69	69	67	65	58	55	55	55	55	35
		23	68	68	66	64	57	54	54	54	54	34
		24	68	68	65	63	56	53	53	53	53	34
		25	67	67	64	62	55	51	51	51	51	33
		26	66	66	63	60	54	50	50	50	50	33
		27	65	65	62	59	53	49	49	49	49	32
		28	64	64	61	58	52	48	48	48	48	32
		29	63	63	60	57	51	47	47	47	47	32
		30	63	63	60	56	50	46	46	46	46	31
		31	62	62	59	55	49	45	45	45	45	31
		32	61	61	58	54	48	44	44	44	44	30
		33	60	60	57	53	47	43	43	43	43	30
		34	60	60	56	52	46	42	42	42	42	30
		35	59	59	55	51	45	41	41	41	41	29
		36	58	58	54	51	45	40	40	40	40	29
		37	57	57	54	50	44	39	39	39	39	29
		38	57	57	53	49	43	39	39	39	39	28
		39	56	56	52	48	42	38	38	38	38	28
		40	56	56	51	47	42	37	37	37	37	28
		41	55	55	51	46	41	36	36	36	36	27
		42	54	54	50	46	40	35	35	35	35	27
		43	54	54	49	45	39	35	35	35	35	27
		44	53	53	49	44	39	34	34	34	34	27
		45	53	53	48	43	38	33	33	33	33	26
		46	52	52	47	43	37	33	33	33	33	26
		47	52	52	47	42	37	32	32	32	32	26
		48	51	51	46	41	36	31	31	31	31	26

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	T1	49	51	51	46	41	36	31	31	31	31	25
		50	50	50	45	40	35	30	30	30	30	25

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	T15	1	94	94	94	94	93	93	93	93	93	91
		2	88	88	88	88	86	84	84	84	84	78
		3	83	83	83	82	80	76	76	76	76	66
		4	79	79	78	77	73	68	68	68	68	54
		5	75	75	74	72	68	60	60	60	60	45
		6	71	71	70	68	62	53	53	53	53	37
		7	68	68	66	63	57	47	47	47	47	31
		8	65	65	63	60	52	42	42	42	42	26
		9	63	63	60	56	48	37	37	37	37	22
		10	60	60	57	53	44	33	33	33	33	19
		11	58	58	54	50	41	30	30	30	30	17
		12	56	56	51	47	38	27	27	27	27	14
		13	54	54	49	45	35	24	24	24	24	13
		14	52	52	47	42	32	22	22	22	22	11
		15	50	50	45	40	30	20	20	20	20	10

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	T2	1	98	98	98	98	88	88	88	88	88	49
		2	96	96	96	96	86	86	86	86	86	48
		3	94	94	94	94	85	84	84	84	84	47
		4	92	92	92	92	83	83	83	83	83	46
		5	91	91	90	90	81	81	81	81	81	45
		6	89	89	89	88	79	79	79	79	79	44
		7	87	87	87	86	78	77	77	77	77	43
		8	86	86	85	85	76	75	75	75	75	43
		9	84	84	84	83	74	73	73	73	73	42
		10	83	83	82	81	73	71	71	71	71	41
		11	81	81	80	79	71	69	69	69	69	40
		12	80	80	79	78	69	68	68	68	68	39
		13	78	78	77	76	68	66	66	66	66	39
		14	77	77	76	74	66	64	64	64	64	38
		15	76	76	74	73	65	62	62	62	62	37
		16	74	74	73	71	63	61	61	61	61	36
		17	73	73	72	69	62	59	59	59	59	36
		18	72	72	70	68	60	57	57	57	57	35
		19	71	71	69	66	59	56	56	56	56	34
		20	70	70	68	65	58	54	54	54	54	34
		21	69	69	66	64	56	53	53	53	53	33
		22	67	67	65	62	55	51	51	51	51	33
		23	66	66	64	61	54	50	50	50	50	32
		24	65	65	63	60	53	49	49	49	49	31
		25	64	64	62	58	51	47	47	47	47	31
		26	63	63	60	57	50	46	46	46	46	30
		27	62	62	59	56	49	45	45	45	45	30
		28	61	61	58	55	48	44	44	44	44	29
		29	60	60	57	54	47	42	42	42	42	29
		30	60	60	56	52	46	41	41	41	41	28
		31	59	59	55	51	45	40	40	40	40	28
		32	58	58	54	50	44	39	39	39	39	27
		33	57	57	53	49	43	38	38	38	38	27
		34	56	56	52	48	42	37	37	37	37	26
		35	55	55	51	47	41	36	36	36	36	26
		36	54	54	51	46	40	35	35	35	35	25
		37	54	54	50	45	39	34	34	34	34	25
		38	53	53	49	44	39	34	34	34	34	24
		39	52	52	48	43	38	33	33	33	33	24
		40	51	51	47	43	37	32	32	32	32	24
		41	51	51	46	42	36	31	31	31	31	23
		42	50	50	46	41	35	30	30	30	30	23
		43	49	49	45	40	35	30	30	30	30	22
		44	49	49	44	39	34	29	29	29	29	22
		45	48	48	43	39	33	28	28	28	28	22
		46	47	47	43	38	33	27	27	27	27	21
		47	47	47	42	37	32	27	27	27	27	21
		48	46	46	41	36	31	26	26	26	26	21

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	T2	49	46	46	41	36	31	26	26	26	26	20
		50	45	45	40	35	30	25	25	25	25	20

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	T20	0	100	100	100	100	100	100	100	100	100	100
		1	98	98	97	97	97	96	96	95	95	95
		2	95	95	95	94	94	93	92	91	91	90
		3	93	93	92	92	91	89	88	86	86	86
		4	91	90	90	89	88	86	84	82	81	81
		5	89	88	87	86	85	82	80	77	77	76
		6	86	86	85	83	82	79	76	73	72	71
		7	84	83	82	81	79	75	72	68	68	67
		8	82	81	80	78	76	72	68	64	63	62
		9	80	79	77	75	73	68	64	59	58	57
		10	77	76	75	72	70	65	60	55	54	52
		11	75	74	72	70	67	61	56	50	49	48
		12	73	71	70	67	64	58	52	46	44	43
		13	71	69	67	64	61	54	48	41	40	38
		14	68	67	65	61	58	51	44	37	35	33
		15	66	64	63	59	55	47	40	32	31	29
		16	64	62	60	56	52	44	36	28	26	24
		17	62	60	58	53	49	40	32	23	21	19
		18	59	57	55	50	46	37	28	19	17	14
		19	57	55	52	48	43	33	24	14	12	10
		20	55	52.5	50	45	40	30	20	10	7.5	5

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	T3	1	98	98	98	97	88	88	88	88	88	49
		2	95	95	95	95	85	85	85	85	85	47
		3	93	93	93	92	83	83	83	83	83	46
		4	90	90	90	90	81	80	80	80	80	45
		5	88	88	88	87	78	77	77	77	77	44
		6	86	86	86	85	76	75	75	75	75	42
		7	84	84	83	82	74	72	72	72	72	41
		8	82	82	81	80	71	69	69	69	69	40
		9	80	80	79	77	69	67	67	67	67	39
		10	78	78	77	75	67	64	64	64	64	38
		11	76	76	75	73	64	61	61	61	61	36
		12	74	74	73	70	62	59	59	59	59	35
		13	73	73	71	68	60	57	57	57	57	34
		14	71	71	69	66	58	54	54	54	54	33
		15	69	69	67	64	56	52	52	52	52	32
		16	68	68	65	62	54	50	50	50	50	31
		17	66	66	63	60	53	48	48	48	48	30
		18	64	64	62	58	51	46	46	46	46	29
		19	63	63	60	56	49	44	44	44	44	28
		20	62	62	58	55	47	42	42	42	42	27
		21	60	60	57	53	46	41	41	41	41	26
		22	59	59	55	51	44	39	39	39	39	26
		23	57	57	54	50	43	37	37	37	37	25
		24	56	56	52	48	41	36	36	36	36	24
		25	55	55	51	47	40	35	35	35	35	23
		26	54	54	50	45	39	33	33	33	33	23
		27	53	53	48	44	37	32	32	32	32	22
		28	51	51	47	42	36	31	31	31	31	21
		29	50	50	46	41	35	30	30	30	30	21
		30	49	49	45	40	34	29	29	29	29	20
		31	48	48	44	39	33	27	27	27	27	19
		32	47	47	43	38	32	26	26	26	26	19
		33	46	46	42	37	31	26	26	26	26	18
		34	45	45	40	36	30	25	25	25	25	18
		35	44	44	40	35	29	24	24	24	24	17
		36	43	43	39	34	28	23	23	23	23	17
		37	43	43	38	33	27	22	22	22	22	16
		38	42	42	37	32	27	21	21	21	21	16
		39	41	41	36	31	26	21	21	21	21	15
		40	40	40	35	30	25	20	20	20	20	15

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	T30	0	100	100	100	100	100	100	100	100	100	100
		1	98	98	98	98	98	98	97	97	97	97
		2	97	97	97	96	96	95	95	94	94	94
		3	95	95	95	94	94	93	92	91	91	90
		4	94	94	93	93	92	91	89	88	88	87
		5	92	92	92	91	90	88	87	85	85	84
		6	91	90	90	89	88	86	84	82	81	81
		7	89	89	88	87	86	84	81	79	78	78
		8	88	87	87	85	84	81	79	76	75	75
		9	86	86	85	83	82	79	76	73	72	71
		10	85	84	83	82	80	77	73	70	69	68
		11	83	83	82	80	78	74	71	67	66	65
		12	82	81	80	78	76	72	68	64	63	62
		13	80	79	78	76	74	70	65	61	60	59
		14	79	78	77	74	72	67	63	58	57	56
		15	77	76	75	72	70	65	60	55	54	52
		16	76	75	73	71	68	63	57	52	51	49
		17	74	73	72	69	66	60	55	49	48	46
		18	73	71	70	67	64	58	52	46	44	43
		19	71	70	68	65	62	56	49	43	41	40
		20	70	68	67	63	60	53	47	40	38	37
		21	68	67	65	61	58	51	44	37	35	33
		22	67	65	63	60	56	49	41	34	32	30
		23	65	64	62	58	54	46	39	31	29	27
		24	64	62	60	56	52	44	36	28	26	24
		25	62	60	58	54	50	42	33	25	23	21
		26	61	59	57	52	48	39	31	22	20	18
		27	59	57	55	50	46	37	28	19	17	14
		28	58	56	53	49	44	35	25	16	14	11
		29	56	54	52	47	42	32	23	13	11	8
		30	55	52.5	50	45	40	30	20	10	7.5	5

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	T4	1	97	97	97	97	87	87	87	87	87	48
		2	93	93	93	93	84	83	83	83	83	46
		3	90	90	90	89	80	79	79	79	79	44
		4	87	87	86	86	76	75	75	75	75	42
		5	84	84	83	82	73	70	70	70	70	40
		6	81	81	80	78	69	66	66	66	66	38
		7	78	78	77	75	66	62	62	62	62	36
		8	75	75	73	71	62	58	58	58	58	34
		9	73	73	70	68	59	54	54	54	54	32
		10	70	70	68	64	56	51	51	51	51	30
		11	67	67	65	61	53	47	47	47	47	28
		12	65	65	62	58	50	44	44	44	44	27
		13	63	63	59	55	47	41	41	41	41	25
		14	60	60	57	53	45	38	38	38	38	24
		15	58	58	55	50	42	36	36	36	36	22
		16	56	56	52	48	40	34	34	34	34	21
		17	54	54	50	45	38	32	32	32	32	20
		18	52	52	48	43	36	30	30	30	30	19
		19	51	51	46	41	34	28	28	28	28	18
		20	49	49	44	39	32	26	26	26	26	17
		21	47	47	42	37	31	25	25	25	25	16
		22	46	46	41	36	29	23	23	23	23	15
		23	44	44	39	34	28	22	22	22	22	14
		24	43	43	38	32	26	21	21	21	21	13
		25	41	41	36	31	25	20	20	20	20	13
		26	40	40	35	30	24	18	18	18	18	12
		27	39	39	34	28	23	18	18	18	18	12
		28	37	37	32	27	22	17	17	17	17	11
		29	36	36	31	26	21	16	16	16	16	10
		30	35	35	30	25	20	15	15	15	15	10

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COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	T40	0	100	100	100	100	100	100	100	100	100	100
		1	99	99	99	99	98	98	98	98	98	98
		2	98	98	97	97	97	96	96	95	95	95
		3	97	96	96	96	95	95	94	93	93	93
		4	95	95	95	94	94	93	92	91	91	90
		5	94	94	94	93	92	91	90	89	88	88
		6	93	93	92	92	91	89	88	86	86	86
		7	92	92	91	90	89	88	86	84	84	83
		8	91	90	90	89	88	86	84	82	81	81
		9	90	89	89	88	86	84	82	80	79	79
		10	89	88	87	86	85	82	80	77	77	76
		11	88	87	86	85	83	81	78	75	75	74
		12	86	86	85	83	82	79	76	73	72	71
		13	85	85	84	82	80	77	74	71	70	69
		14	84	83	82	81	79	75	72	68	68	67
		15	83	82	81	79	77	74	70	66	65	64
		16	82	81	80	78	76	72	68	64	63	62
		17	81	80	79	77	74	70	66	62	61	60
		18	80	79	77	75	73	68	64	59	58	57
		19	79	77	76	74	71	67	62	57	56	55
		20	77	76	75	72	70	65	60	55	54	52
		21	76	75	74	71	68	63	58	53	51	50
		22	75	74	72	70	67	61	56	50	49	48
		23	74	73	71	68	65	60	54	48	47	45
		24	73	71	70	67	64	58	52	46	44	43
		25	72	70	69	66	62	56	50	44	42	41
		26	71	69	67	64	61	54	48	41	40	38
		27	70	68	66	63	59	53	46	39	38	36
		28	68	67	65	61	58	51	44	37	35	33
		29	67	66	64	60	56	49	42	35	33	31
		30	66	64	62	59	55	47	40	32	31	29
		31	65	63	61	57	53	46	38	30	28	26
		32	64	62	60	56	52	44	36	28	26	24
		33	63	61	59	55	50	42	34	26	24	22
		34	62	60	57	53	49	40	32	23	21	19
		35	61	58	56	52	47	39	30	21	19	17
		36	59	57	55	50	46	37	28	19	17	14
		37	58	56	54	49	44	35	26	17	14	12
		38	57	55	52	48	43	33	24	14	12	10
		39	56	54	51	46	41	32	22	12	10	7
		40	55	52.5	50	45	40	30	20	10	7.5	5

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	T4A	0	100	100	100	100	90	90	90	90	90	50
		1	97	97	97	97	87	87	87	87	87	48
		2	94	94	93	93	84	83	83	83	83	45
		3	90	90	90	89	80	79	79	79	79	42
		4	88	88	86	86	76	75	75	75	75	39
		5	85	85	83	82	73	70	70	70	70	36
		6	82	82	80	78	69	66	66	66	66	33
		7	79	79	77	75	66	62	62	62	62	30
		8	77	77	73	71	62	58	58	58	58	27
		9	74	74	70	68	59	54	54	54	54	25
		10	72	72	68	64	56	51	51	51	51	23
		11	70	70	65	61	53	47	47	47	47	20
		12	68	68	62	58	50	44	44	44	44	19
		13	65	65	59	55	47	41	41	41	41	17
		14	63	63	57	53	45	38	38	38	38	16
		15	62	62	55	50	42	36	36	36	36	14
		16	60	60	52	48	40	34	34	34	34	13
		17	58	58	50	45	38	32	32	32	32	12
		18	56	56	48	43	36	30	30	30	30	11
		19	55	55	46	41	34	28	28	28	28	10
		20	53	53	44	39	32	26	26	26	26	10
		21	51	51	42	37	31	25	25	25	25	9
		22	50	50	41	36	29	23	23	23	23	8
		23	49	49	39	34	28	22	22	22	22	8
		24	47	47	38	32	26	21	21	21	21	7
		25	46	46	36	31	25	20	20	20	20	7
		26	45	45	35	30	24	18	18	18	18	6
		27	43	43	34	28	23	18	18	18	18	6
		28	42	42	32	27	22	17	17	17	17	6
		29	41	41	31	26	21	16	16	16	16	5
		30	40	40	30	25	20	15	15	15	15	5

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	T4R	0	100	100	100	100	90	90	90	90	90	50
		1	97	97	97	97	87	87	87	87	87	48
		2	94	94	94	94	84	84	84	84	84	46
		3	91	91	91	90	81	80	80	80	80	44
		4	88	88	88	88	78	76	76	76	76	42
		5	86	86	85	85	75	73	73	73	73	40
		6	83	83	83	82	73	69	69	69	69	38
		7	81	81	80	79	70	66	66	66	66	36
		8	79	79	78	77	67	62	62	62	62	34
		9	77	77	76	74	65	59	59	59	59	32
		10	75	75	74	72	62	56	56	56	56	30
		11	73	73	72	70	60	53	53	53	53	28
		12	71	71	70	68	58	50	50	50	50	27
		13	70	70	68	65	56	47	47	47	47	25
		14	68	68	66	63	53	45	45	45	45	24
		15	67	67	64	62	51	42	42	42	42	22
		16	65	65	63	60	50	40	40	40	40	21
		17	64	64	61	58	48	38	38	38	38	20
		18	63	63	60	56	46	36	36	36	36	19
		19	61	61	58	55	44	34	34	34	34	18
		20	60	60	57	53	43	32	32	32	32	17
		21	59	59	55	51	41	31	31	31	31	16
		22	58	58	54	50	40	29	29	29	29	15
		23	57	57	53	49	38	28	28	28	28	14
		24	56	56	51	47	37	26	26	26	26	13
		25	55	55	50	46	36	25	25	25	25	13
		26	54	54	49	45	34	24	24	24	24	12
		27	53	53	48	43	33	23	23	23	23	12
		28	52	52	47	42	32	22	22	22	22	11
		29	51	51	46	41	31	21	21	21	21	10
		30	50	50	45	40	30	20	20	20	20	10

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	T4X	0	100	100	100	90	90	90	90	90	90	50
		1	97	97	97	86	87	86	86	86	86	48
		2	93	93	93	83	83	82	82	82	82	45
		3	90	90	89	80	79	77	77	77	77	42
		4	86	86	86	76	75	72	72	72	72	39
		5	83	83	82	72	70	66	66	66	66	36
		6	80	80	78	69	66	61	61	61	61	33
		7	77	77	75	65	62	56	56	56	56	30
		8	73	73	71	62	58	51	51	51	51	27
		9	70	70	68	59	54	47	47	47	47	25
		10	68	68	64	55	51	43	43	43	43	23
		11	65	65	61	52	47	39	39	39	39	20
		12	62	62	58	50	44	36	36	36	36	19
		13	59	59	55	47	41	33	33	33	33	17
		14	57	57	53	44	38	30	30	30	30	16
		15	55	55	50	42	36	28	28	28	28	14
		16	52	52	48	40	34	26	26	26	26	13
		17	50	50	45	37	32	24	24	24	24	12
		18	48	48	43	36	30	22	22	22	22	11
		19	46	46	41	34	28	20	20	20	20	10
		20	44	44	39	32	26	19	19	19	19	10
		21	42	42	37	30	25	18	18	18	18	9
		22	41	41	36	29	23	16	16	16	16	8
		23	39	39	34	27	22	15	15	15	15	8
		24	38	38	32	26	21	14	14	14	14	7
		25	36	36	31	25	20	13	13	13	13	7
		26	35	35	30	24	18	13	13	13	13	6
		27	34	34	28	22	18	12	12	12	12	6
		28	32	32	27	21	17	11	11	11	11	6
		29	31	31	26	20	16	11	11	11	11	5
		30	30	30	25	20	15	10	10	10	10	5

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	T5	1	96	96	96	96	86	86	86	86	86	47
		2	92	92	92	91	81	80	80	80	80	44
		3	88	88	87	86	76	74	74	74	74	40
		4	84	84	83	81	71	67	67	67	67	37
		5	80	80	78	76	66	61	61	61	61	33
		6	76	76	74	71	61	55	55	55	55	29
		7	72	72	70	66	56	49	49	49	49	26
		8	69	69	66	61	52	44	44	44	44	23
		9	65	65	62	57	48	40	40	40	40	21
		10	62	62	58	53	44	36	36	36	36	19
		11	59	59	55	49	41	32	32	32	32	17
		12	56	56	52	46	37	29	29	29	29	15
		13	53	53	49	43	35	26	26	26	26	14
		14	51	51	46	40	32	24	24	24	24	12
		15	48	48	43	37	30	22	22	22	22	11
		16	46	46	41	35	27	20	20	20	20	10
		17	44	44	38	33	25	18	18	18	18	9
		18	41	41	36	31	24	17	17	17	17	9
		19	40	40	34	29	22	16	16	16	16	8
		20	38	38	32	27	21	14	14	14	14	7
		21	36	36	31	25	19	13	13	13	13	7
		22	34	34	29	24	18	12	12	12	12	6
		23	33	33	28	22	17	11	11	11	11	6
		24	31	31	26	21	16	11	11	11	11	5
		25	30	30	25	20	15	10	10	10	10	5

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	T50	0	100	100	100	100	100	100	100	100	100	100
		1	99	99	99	99	99	99	98	98	98	98
		2	98	98	98	98	98	97	97	96	96	96
		3	97	97	97	97	96	96	95	95	94	94
		4	96	96	96	96	95	94	94	93	93	92
		5	95	95	95	94	94	93	92	91	91	90
		6	95	94	94	93	93	92	90	89	89	89
		7	94	93	93	92	92	90	89	87	87	87
		8	93	92	92	91	90	89	87	86	85	85
		9	92	91	91	90	89	87	86	84	83	83
		10	91	90	90	89	88	86	84	82	81	81
		11	90	90	89	88	87	85	82	80	80	79
		12	89	89	88	87	86	83	81	78	78	77
		13	88	88	87	86	84	82	79	77	76	75
		14	87	87	86	85	83	80	78	75	74	73
		15	86	86	85	83	82	79	76	73	72	71
		16	86	85	84	82	81	78	74	71	70	70
		17	85	84	83	81	80	76	73	69	69	68
		18	84	83	82	80	78	75	71	68	67	66
		19	83	82	81	79	77	73	70	66	65	64
		20	82	81	80	78	76	72	68	64	63	62
		21	81	80	79	77	75	71	66	62	61	60
		22	80	79	78	76	74	69	65	60	59	58
		23	79	78	77	75	72	68	63	59	57	56
		24	78	77	76	74	71	66	62	57	56	54
		25	77	76	75	72	70	65	60	55	54	52
		26	77	75	74	71	69	64	58	53	52	51
		27	76	74	73	70	68	62	57	51	50	49
		28	75	73	72	69	66	61	55	50	48	47
		29	74	72	71	68	65	59	54	48	46	45
		30	73	71	70	67	64	58	52	46	44	43
		31	72	71	69	66	63	57	50	44	43	41
		32	71	70	68	65	62	55	49	42	41	39
		33	70	69	67	64	60	54	47	41	39	37
		34	69	68	66	63	59	52	46	39	37	35
		35	68	67	65	61	58	51	44	37	35	33
		36	68	66	64	60	57	50	42	35	33	32
		37	67	65	63	59	56	48	41	33	32	30
		38	66	64	62	58	54	47	39	32	30	28
		39	65	63	61	57	53	45	38	30	28	26
		40	64	62	60	56	52	44	36	28	26	24
		41	63	61	59	55	51	43	34	26	24	22
		42	62	60	58	54	50	41	33	24	22	20
		43	61	59	57	53	48	40	31	23	20	18
		44	60	58	56	52	47	38	30	21	19	16
		45	59	57	55	50	46	37	28	19	17	14
		46	59	56	54	49	45	36	26	17	15	13
		47	58	55	53	48	44	34	25	15	13	11

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	T50	48	57	54	52	47	42	33	23	14	11	9
		49	56	53	51	46	41	31	22	12	9	7
		50	55	52.5	50	45	40	30	20	10	7.5	5

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	T5A	1	96	96	96	96	86	86	86	86	86	48
		2	93	93	92	91	82	81	81	81	81	45
		3	89	89	89	87	78	77	77	77	77	43
		4	86	86	85	83	74	73	73	73	73	41
		5	82	82	81	79	70	69	69	69	69	39
		6	79	79	77	74	66	64	64	64	64	36
		7	75	75	74	70	62	60	60	60	60	34
		8	72	72	70	66	58	56	56	56	56	32
		9	68	68	66	62	54	52	52	52	52	30
		10	65	65	62	57	50	47	47	47	47	27
		11	61	61	59	53	46	43	43	43	43	25
		12	58	58	55	49	42	39	39	39	39	23
		13	54	54	51	45	38	35	35	35	35	21
		14	51	51	47	40	34	30	30	30	30	18
		15	47	47	44	36	30	26	26	26	26	16
		16	44	44	40	32	26	22	22	22	22	14
		17	40	40	36	28	22	18	18	18	18	12
		18	37	37	32	23	18	13	13	13	13	9
		19	33	33	29	19	14	9	9	9	9	7
		20	30	30	25	15	10	5	5	5	5	5

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	T6	1	93	93	93	92	82	82	82	82	82	45
		2	86	86	84	82	72	72	72	72	72	39
		3	78	78	76	72	61	61	61	61	61	33
		4	71	71	68	63	51	51	51	51	51	27
		5	64	64	60	54	43	43	43	43	43	23
		6	58	58	53	47	36	36	36	36	36	19
		7	53	53	47	40	30	30	30	30	30	16
		8	48	48	42	35	26	26	26	26	26	13
		9	43	43	37	30	22	22	22	22	22	11
		10	39	39	33	27	19	19	19	19	19	10
		11	36	36	30	24	16	16	16	16	16	8
		12	32	32	27	21	14	14	14	14	14	7
		13	30	30	24	19	13	13	13	13	13	6
		14	27	27	22	17	11	11	11	11	11	6
		15	25	25	20	15	10	10	10	10	10	5

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	T60	0	100	100	100	100	100	100	100	100	100	100
		1	99	99	99	99	99	99	99	98	98	98
		2	98	98	98	98	98	98	97	97	97	97
		3	98	98	97	97	97	96	96	95	95	95
		4	97	97	97	96	96	95	95	94	94	94
		5	96	96	96	95	95	94	93	92	92	92
		6	95	95	95	94	94	93	92	91	91	90
		7	95	94	94	94	93	92	91	89	89	89
		8	94	94	93	93	92	91	89	88	88	87
		9	93	93	92	92	91	89	88	86	86	86
		10	92	92	92	91	90	88	87	85	85	84
		11	92	91	91	90	89	87	85	83	83	83
		12	91	90	90	89	88	86	84	82	81	81
		13	90	90	89	88	87	85	83	80	80	79
		14	89	89	88	87	86	84	81	79	78	78
		15	89	88	87	86	85	82	80	77	77	76
		16	88	87	87	85	84	81	79	76	75	75
		17	87	87	86	84	83	80	77	74	74	73
		18	86	86	85	83	82	79	76	73	72	71
		19	86	85	84	83	81	78	75	71	71	70
		20	85	84	83	82	80	77	73	70	69	68
		21	84	83	82	81	79	75	72	68	68	67
		22	83	83	82	80	78	74	71	67	66	65
		23	83	82	81	79	77	73	69	65	65	64
		24	82	81	80	78	76	72	68	64	63	62
		25	81	80	79	77	75	71	67	62	61	60
		26	80	79	78	76	74	70	65	61	60	59
		27	80	79	77	75	73	68	64	59	58	57
		28	79	78	77	74	72	67	63	58	57	56
		29	78	77	76	73	71	66	61	56	55	54
		30	77	76	75	72	70	65	60	55	54	52
		31	77	75	74	72	69	64	59	53	52	51
		32	76	75	73	71	68	63	57	52	51	49
		33	75	74	72	70	67	61	56	50	49	48
		34	74	73	72	69	66	60	55	49	48	46
		35	74	72	71	68	65	59	53	47	46	45
		36	73	71	70	67	64	58	52	46	44	43
		37	72	71	69	66	63	57	51	44	43	41
		38	71	70	68	65	62	56	49	43	41	40
		39	71	69	67	64	61	54	48	41	40	38
		40	70	68	67	63	60	53	47	40	38	37
		41	69	68	66	62	59	52	45	38	37	35
		42	68	67	65	61	58	51	44	37	35	33
		43	68	66	64	61	57	50	43	35	34	32
		44	67	65	63	60	56	49	41	34	32	30
		45	66	64	62	59	55	47	40	32	31	29
		46	65	64	62	58	54	46	39	31	29	27
		47	65	63	61	57	53	45	37	29	28	26

COUNTY: 063

VER	TBL	AGE	EXCELLENT	VERY GOOD	GOOD	AVERAGE	FAIR	POOR	P-	VERY POOR	V-	UNSOUND
19	T60	48	64	62	60	56	52	44	36	28	26	24
		49	63	61	59	55	51	43	35	26	24	22
		50	62	60	58	54	50	42	33	25	23	21
		51	62	60	57	53	49	40	32	23	21	19
		52	61	59	57	52	48	39	31	22	20	18
		53	60	58	56	51	47	38	29	20	18	16
		54	59	57	55	50	46	37	28	19	17	14
		55	59	56	54	50	45	36	27	17	15	13
		56	58	56	53	49	44	35	25	16	14	11
		57	57	55	52	48	43	33	24	14	12	10
		58	56	54	52	47	42	32	23	13	11	8
		59	56	53	51	46	41	31	21	11	9	7
		60	55	52.5	50	45	40	30	20	10	7.5	5

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-Utility) 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, a 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

	Definition
• *Excellent*	*Building is in perfect condition; very attractive and highly desirable.*
• *Very Good*	*Slight evidence of deterioration; still attractive and quite desirable.*
• *Good*	*Minor deterioration visible; slightly less attractive and desirable, but useful.*
• *Average*	*Normal wear and tear is apparent; average attractiveness and desirability.*
• *Fair*	*Marked deterioration, but quite usable; rather unattractive and undesirable.*
• *Poor*	*Definite deterioration is obvious; definitely undesirable, and barely usable.*
• *Very Poor*	*Condition approaches unsoundness; extremely undesirable and barely usable.*
• *Unsound*	*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. *Utility* is a measure of the usefulness of the structure for the purpose for which it is intended to 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 utility for its age and its type, reference to the Appropriate Depreciation 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 *utility*- for its age and type. The following four actual cases illustrate this convenient and practical method of determining percent good in houses (refer to the residential depreciation table).

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 88% 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 96% Good is indicated.

Case Three: This century-old Colonial style frame house is located in a rural North Carolina community with 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, we find 64% 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, we find 36% Good is indicated.

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/her 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

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.

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Labor & Material Rates

SUPPLEMENTAL SOURCES

Services offered by Marshall & Swift have been used as supplemental sources where primary data in the Moore 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, 2019.

DESCRIPTIONS

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 underlayment 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 12" 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 ductwork, 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 BTU.

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 hvac casing for re-heating. The ductwork 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 headroom 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' x 1.5 = 12 x 12 x 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 ductwork 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 horsepower of the compressor motor is approximately equal to

the ton capacity of the cooling unit. Using the same ductwork as the forced air heating system, central air conditioning may run 20' to 30' more if separate ductwork 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 modem 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.

Guesthouses 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 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 modem 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 workstations.

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 workspace 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 and 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 constitutes 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-thru 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, labs, 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 medial 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.

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

FOUNDATION ONLY.	10%
SUBFLOOR.	05%
FRAMING IN PLACE.	10%
ROOF.	05%
WINDOWS	04%
PLUMBING ROUGHED	03%
ELECTRICAL ROUGHED.	03%
HEATING ROUGHED	04%
INSIDE WALLS COVERED.	10%
EXTERIOR WALLS COVERED.	10%
INTERIOR TRIM & CABINETS.	07%
INTERIOR PAINTING.	04%
PLUMBING FINISHED.	03%
ELECTRICAL FINISHED.	03%
HEATING FINISHED.	03%
FLOORS COVERED OR FINISHED.	09%
BASEMENT*.	04%
WELL & SEPTIC TANK*.	03%
TOTAL.	100%

***Adjust in other disbursements if not needed.**

SPECIFIC REVIEW PROCEDURES

When appraising or inspecting properties, please fill out the data entry card in its entirety and make sure your work is legible. Key things to remember include the following:

- Include appraiser number & date.
- Give movement measurements and make sure everything closes.
- Commercial Buildings – Be sure to give height, construction, heat/air, lights & plumbing on additions.
- Be sure to list year built on additions
- If a home appears to have an upper story and/or basement, make arrangements to verify such data; do not make assumptions or judgments regarding an upper story or basement.
- Give age, grade & cdu on outbuildings.

- Always refer to the building permit for the age of mobile homes because they are not all new.

- When picking up additions or outbuildings, be sure to verify all information on the property record card. Don't assume the data collector measured the home correctly. Also, remember that when you sign off on your work that you are signing off that everything about the property is correct.
- Grade & CDU – The appraiser has the ability to change the grade & cdu on CA21 to see how it will affect the value. You can enter in any grade and cdu to see how it will value but **DO NOT SAVE ANY CHANGES! This is to be completed by the Property Valuation Specialist. Please keep grades of similar homes in a neighborhood uniform!!**
- All field work should be turned in ASAP to the Property Valuation Specialist to be keyed.
- Home site versus MH1
    - If its picked up as real – include in home site
    - If its picked up as personal – include in MH1
    - Always verify the number of home sites and/or MH1s listed currently on the property record card for accuracy. Sometimes your home will be replacing another and we may not need to add an additional site.

Real versus Personal Property

Business personal property is typically identified as all property used in connection with the production of income that has not been classified as real property. Frequently, it is difficult to draw a fine line between what is treated as real property and what is treated as personal property for property tax purposes. In many cases, the appraiser must rely on the owner's statement of intent. Items that may appear to be permanently attached to realty may not be appraised as realty and should be classified as personal. A good rule of thumb is to classify

all property and investments necessary for the operation of the machinery and equipment as personal.

Examples of items that may appear to be realty but should be considered personal property in certain situations are:

1. Wiring
2. Venting
3. Flooring
4. Special climate control (Heating and air conditioning systems associated with particular equipment or product)
5. Conveyors
6. Boilers and furnaces
7. Shelving and displays
8. Leasehold improvements (owned by lessee)

When trying to determine if something should be considered Real or Personal Property an appraiser should ask themselves **"is there for the benefit of the process or for the benefit of the employees or the building."**
Generally, business personal property includes, but is not limited to, the following categories:

1. Inventories
- A. Raw materials
- B. Goods in process of manufacturing
- C. Finished goods
- D. Supplies (office, maintenance, janitorial, manufacturing)
- E. Packaging materials
- F. Fuels
- G. Spare parts

2. Depreciable Assets (Fixed Assets)
- A. Machinery and equipment
- B. Office furniture, fixtures, and equipment
- C. Construction work in progress (including interest during construction)
- D. Leasehold improvements
- E. Software packages (tangible)
- F. Tools, dies, molds
- G. Motor vehicles (including mounted equipment)
- H. Pallets and containers

3. Intangible Personal
- A. Leasehold interest in exempt real property

It is most important that all taxable property be assessed only once as either real or personal, and that property is classified as either real or personal uniformly throughout each county. Of slightly lesser importance is whether the property is classified as real or personal property. In

other words, however property is classified, the assessor must ensure that all taxable property is uniformly assessed.

1) Property used as part of a process, or in place for the equipment is generally considered personal property. Special wiring, foundations, and process piping are examples of this and are typically not appraised as real property in the Schedule of Values.
2) Property used for the building, or for the comfort of employees is generally considered real property. A building appraised as a refrigerated warehouse will include property that helps keep the interior cool. It is helpful to determine what additional property is included in the refrigerated warehouse schedule.
3) The owner's intent is important to consider. If the owner intends property to be permanently attached to the real estate, then that should be taken into account. Paving will not typically be removed and is not intended to be removed; therefore it is almost always a real property improvement. A bank vault is usually permanently affixed, even if it is in a leased space. Even in these cases, it should be clearly noted in the schedule of values.

CLASSIFICATION OF SELECTED ITEMS AS REAL OR PERSONAL

In general, machinery and equipment used primarily as part of a manufacturing process (process equipment) is considered Personal Property. Machinery and equipment, which is part of the land or building improvement is considered Real Property. The following table is a guide to help establish what is Real Property versus what is Personal Property and may not include all property types.

Description	Real	Personal
AIR CONDITIONING – BUILDING	XX	
AIR CONDITIONING - MANUFACTURING/PRODUCT		XX
AIR CONDITIONING - WINDOW UNITS		XX
AIRPLANES		XX
ASPHALT PLANTS		XX
ATM - ALL EQUIP. & SELF STANDING BOOTHS		XX
AUTO EXHAUST SYSTEMS FOR BUILDING	XX	
AUTO EXHAUST SYSTEMS FOR EQUIPMENT		XX
AWNINGS		XX
BALERS (PAPER, CARDBOARD, ETC.)		XX
BANK TELLER COUNTERS - SERVICE AREA & RELATED		XX
BANK TELLER LOCKERS - MOVEABLE OR BUILT-IN		XX
BAR AND BAR EQUIPMENT - MOVEABLE OR BUILT-IN		XX
BULK BARNS		XX
BILLBOARDS		XX
BOATS AND MOTORS – ALL		XX
BOILER - FOR SERVICE OF BUILDING	XX	
BOILER - PRIMARILY FOR PROCESS		XX
BOOK CASES - MOVEABLE OR BUILT-IN		XX
BOWLING ALLEY LANES		XX
BROADCASTING EQUIPMENT		XX
CABINETS		XX
CABLE TV DISTRIBUTION SYSTEMS		XX
CABLE TV EQUIPMENT & WIRING		XX
CABLE TV SUBSCRIBER CONNECTIONS		XX
CAMERA EQUIPMENT		XX
CANOPIES - FABRIC, VINYL, PLASTIC		XX
CANOPIES – GENERALLY	XX	
CANOPY LIGHTING	XX	
CAR WASH - ALL EQUIPMENT, FILTERS & TANKS		XX
CARPET – INSTALLED	XX	
CATWALKS		XX
CEMENT PLANTS		XX
CHAIRS - ALL TYPES		XX
C-I-P EQUIPMENT		XX
CLOSED CIRCUIT TV		XX
COLD STORAGE - EQUIPMENT, ROOMS, PARTITIONS		XX
COMPRESSED AIR OR GAS SYSTEMS (OTHER THAN BLDG HEAT)		XX
COMPUTER ROOM A/C		XX
COMPUTER ROOM RAISED FLOOR		XX
COMPUTER SCANNING EQUIP.		XX
COMPUTERS AND DATA LINES		XX
CONCRETE PLANTS		XX
CONSTRUCTION AND GRADING EQUIPMENT		XX
CONTROL SYSTEMS - BUILDING AND EQUIPMENT		XX
CONVEYOR & MATERIAL HANDLING SYSTEMS		XX
COOLERS - WALK-IN OR SELF-STANDING		XX
COOLING TOWERS - PRIMARY USE FOR BUILDING	XX	
COOLING TOWERS - PRIMARY USE IN MANUFACTURE		XX
COUNTERS/RECEPTION DESKS - MOVEABLE OR BUILT-IN		XX

Description	Real	Personal
DAIRY PROCESSING PLANTS - ALL PROCESS ITEMS, BINS, TANKS		XX
DANCE FLOORS		XX
DATA PROCESSING EQUIPMENT - ALL ITEMS		XX
DELI EQUIPMENT		XX
DESK – ALL		XX
DIAGNOSTIC CENTER EQUIPMENT - MOVEABLE OR BUILT-IN		XX
DISPLAY CASES - MOVEABLE OR BUILT-IN		XX
DOCK LEVELERS		XX
DRAPES & CURTAINS, BLINDS, ETC		XX
DRINKING FOUNTAINS		XX
DRIVE-THRU WINDOWS – ALL		XX
DRYING SYSTEMS - PROCESS OR PRODUCT		XX
DUMPSTERS		XX
DUST CATCHERS, CONTROL SYSTEMS, ETC		XX
ELECTRONIC CONTROL SYSTEMS		XX
ELEVATORS	XX	
ESCALATORS	XX	
FARM EQUIPMENT – ALL		XX
FENCING – INSIDE		XX
FENCING – OUTSIDE	XX	
FIRE ALARM SYSTEMS & WIRING - (REQUIRED BY CODE)	XX	
FIRE ALARM SYSTEMS & WIRING - (SPECIAL PURPOSE ROOMS)		XX
FLAGPOLE		XX
FOUNDATIONS FOR MACHINERY AND EQUIP.		XX
FREIGHT CHARGES		XX
FUELS - NOT FOR SALE (LIST AS SUPPLIES)		XX
FURNACES - STEEL MILL PROCESS, ETC.		XX
FURNITURE AND FIXTURES		XX
GAZEBOS	XX	
GOLF COURSE AND IMPROVEMENTS (DRAINAGE/IRRIGATION)	XX	
GRAIN BINS		XX
GREASE TRAPS	XX	
GREENHOUSE BENCHES, HEATING SYSTEM, ETC.		XX
GREENHOUSES - STRUCTURE IF PERM. AFFIXED	XX	
HANDRAILS - IF USED FOR DIVIDING AREAS OR DECORATIVE		XX
HEATING SYSTEMS, PROCESS		XX
HOPPERS - METAL BIN TYPE		XX
HOSPITAL SYSTEMS, EQUIPMENT & PIPING		XX
HOT AIR BALLOONS		XX
HOTEL/MOTEL TELEVISIONS & WIRING		XX
HUMIDIFIERS – PROCESS		XX
INCINERATORS - EQUIPMENT AND/OR MOVEABLE		XX
INDUSTRIAL PIPING – PROCESS		XX
INSTALLATION COST		XX
IRRIGATION EQUIPMENT - IN-GROUND	XX	
IRRIGATION EQUIPMENT – PORTABLE		XX
KILN HEATING SYSTEM		XX
KILNS - METAL TUNNEL OR MOVEABLE		XX
LABORATORY EQUIPMENT		XX
LAGOONS/SETTLING PONDS		XX
LAUNDRY BINS		XX

Description	Real	Personal
LAW & PROFESSIONAL LIBRARIES		XX
LEASED EQUIPMENT - LESSOR OR LESSEE POSSESSION		XX
LEASEHOLD IMPROVEMENTS (LIST IN DETAIL YEARLY)	XX	XX
LIFTS - OTHER THAN ELEVATOR		XX
LIGHTING - PORTABLE, MOVEABLE, SPECIAL		XX
LIGHTING - YARD LIGHTING		XX
MACHINERY AND EQUIPMENT		XX
MEDICAL EQUIPMENT		XX
MEZZANINES - FOR PARTS OR STORAGE (Metal Racking)		XX
MILK HANDLING - MILKING, COOLING, PIPING, STORAGE		XX
MILLWORK		XX
MINERAL RIGHTS	XX	
MIRRORS (OTHER THAN BATHROOM)		XX
MOLDS		XX
MONITORING SYSTEMS BUILDING OR EQUIPMENT		XX
NEWSPAPER STANDS		XX
NIGHT DEPOSITORY		XX
OFFICE EQUIPMENT - ALL		XX
OFFICE SUPPLIES (LIST AS SUPPLIES)		XX
OIL COMPANY EQUIPMENT - PUMPS, SUPPLIES, ETC.		XX
OVENS - PROCESSING/MANUFACTURING		XX
OVERHEAD CONVEYOR SYSTEM		XX
PACKAGE AND LABELING EQUIPMENT		XX
PAGING SYSTEMS		XX
PAINT SPRAY BOOTHS		XX
PAINTING - NO ADDED VALUE		
PARTITIONS - MOVEABLE		XX
PAVING	XX	
PIPING SYSTEMS - PROCESS PIPING		XX
PLAYGROUND EQUIPMENT - ALL		XX
PNEUMATIC TUBE SYSTEMS		XX
PORTABLE BUILDINGS		XX
POULTRY / HOG HOUSES - BUILDING	XX	
POULTRY / HOG HOUSES - EQUIPMENT		XX
POWER GENERATOR SYSTEMS (AUXILIARY, EMERGENCY, ETC.)		XX
POWER TRANSFORMERS - EQUIPMENT		XX
PUBLIC ADDRESS SYSTEMS (INTERCOM, MUSIC, ETC.)		XX
RAILROAD SIDINGS (OTHER THAN RAILROAD-OWNED)	XX	
REFRIGERATION SYSTEMS - COMPRESSORS, ETC.		XX
REPAIRS – BUILDING	XX	
REPAIRS - EQUIPMENT		XX
RESTAURANT FURNITURE (INCL. ATTACHED FLOOR OR BLDG.)		XX
RESTAURANT/KITCHEN EQUIP. VENT HOODS, SINKS, ETC. (COMMERCIAL)		XX
RETURNABLE CONTAINERS		XX
ROLL-UP DOORS (INSIDE WALL)		XX
ROLL-UP DOORS (OUTSIDE WALL)	XX	
ROOFING	XX	
ROOMS SELF-CONTAINED OR SPECIAL PURPOSE (WALLS, CEILING, FLOOR)		XX
SAFES WALL OR SELF-STANDING		XX
SALES / USE TAX		XX
SATELLITE DISHES (ALL WIRING & INSTALLATION TO TV & EQUIP.)		XX
SCALE HOUSES (UNLESS MOVEABLE)	XX	

Description	Real	Personal
SCALES	XX	XX
SECURITY ALARM SYSTEMS & WIRING		XX
SERVICE STATIONS EQUIPMENT - PUMPS, TANKS, LIFTS & RELATED		XX
SEWER SYSTEMS	XX	
SHELVING - MOVEABLE OR BUILT-IN		XX
SIGNS ALL TYPES INCLUDING ATTACHED TO BUILDING		XX
SINKS – BATHROOM	XX	
SINKS – ALL OTHER		XX
SOFTWARE – CAPITALIZED		XX
SOUND SYSTEMS & PROJECTION EQUIPMENT		XX
SPARE PARTS - LIST AS SUPPLIES		XX
SPEAKERS - BUILT-IN OR FREESTANDING		XX
SPRAY BOOTHS		XX
SPRINKLER SYSTEM - ATTACHED TO PRODUCT STORAGE RACKS		XX
SPRINKLER SYSTEM – BUILDING	XX	
SUPPLIES (OFFICE & OTHER)		XX
SWIMMING POOL IN GROUND FILTRATION EQUIPMENT	XX	
SWIMMING POOL ABOVE GROUND FILTRATION EQUIPMENT		XX
SWIMMING POOL IN GOUND OR ABOVE GROUND HEATER EQUIPMENT		XX
SWIMMING POOL IN GOUND	XX	
SWIMMING POOL ABOVE GOUND		XX
TANKS (ALL-ABOVE & BELOW GROUND)		XX
TELEPHONE SYSTEMS & WIRING – PRIVATE		XX
THEATRE SCREENS – INDOOR		XX
THEATRE SEATS		XX
TOOLING, DIES, MOLDS		XX
TOWERS - MICROWAVE, EQUIPMENT, WIRING, FOUNDATION, BUILDING & FENCING		XX
TOWERS - TV, RADIO, CATV, TWO-WAY RADIO, WIRING & FDN		XX
TRAILERS - DESIGNED TO BE PULLED BEHIND VEHICLE		XX
TRAILERS - OFFICE OR HOUSE TYPE		XX
TRANSPORTATION COST – ALL		XX
TUNNELS - PART OF THE PROCESS SYSTEM		XX
UPGRADES TO EQUIPMENT		XX
VACUUM SYSTEM, PROCESS		XX
VAULT	XX	
VAULT DOOR, INNER GATES, VENTS & EQUIP.		XX
VENDING MACHINES		XX
VENT FANS		XX
VENTILATION SYSTEMS - GEN'L BUILDING	XX	
VENTILATION SYSTEMS - NEEDED FOR MANUFACTURING, PROCESS		XX
VIDEO TAPES/MOVIES/REEL MOVIES		XX
WALL COVERING	XX	
WALLS - PARTITIONS, MOVEABLE & ROOM DIVIDERS		XX
WATER COOLERS – ALL		XX
WATER LINES - FOR PROCESS ABOVE OR BELOW GROUND		XX
WATER SYSTEM - RESIDENTIAL OR GENERAL BUILDING	XX	
WATER TANKS & SYSTEM - FOR PROCESS EQUIPMENT		XX
WATER WELLS - IF USED FOR IRRIGATION ONLY	XX	
WHIRLPOOL/JACUZZI/HOT TUBS		XX
WIRING - POWER WIRING FOR MACHINERY AND EQUIP.		XX

ASSESSMENT STANDARDS

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."

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 precedes a direct equalization factor, or multiplier, and therefore may be more easily understood 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	2018 Sales	95% - 100%
	2017 Sales	95% - 100%
	2016 Sales	90% - 100%
	2015 Sales	90% - 100%

Remember our primary concern is to have equalization and consistency for all property.

Appraisal Date - Target date is January 1, 2019.

All sales data, building ages, depreciation, etc. are to be measured from January 1, 2019.

Sales Analysis Spreadsheets - Sales sheets will be maintained by neighborhood number and class of property (i.e., residential, commercial, etc.).

New Construction Encountered on Review - It is the responsibility of the reviewer to complete a "Construction Progress Report" for any incomplete construction, major addition or alteration. This report will be attached to the field work and filed. Appraisers will measure and list all residential new construction encountered during the review phase.

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.

Dwelling in Commercial Area - You are requested not to 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.

ADDENDUM 2

USPAP STANDARDS 5 & 6

ADDENDUM 2

USPAP STANDARDS 5 & 6

STANDARD 5: MASS APPRAISAL, DEVELOPMENT

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.

See also FAQ 117-241

Comment: STANDARD 5 applies to all mass appraisals of real or personal property regardless of the purpose or use of such appraisals.[53] STANDARD 5 is directed toward the substantive aspects of developing credible analyses, opinions, and conclusions in the mass appraisal of properties. The reporting and jurisdictional exceptions applicable to public mass appraisals prepared for ad valorem taxation do not apply to mass appraisals prepared for other purposes.

A mass appraisal includes:

1) identifying properties to be appraised;
2) defining market area of consistent behavior that applies to properties;
3) identifying characteristics (supply and demand) that affect the creation of value in that market area;
4) developing a model structure that reflects the relationship among the characteristics affecting value in the market area;
5) calibrating the model structure to determine the contribution of the individual characteristics affecting value;
6) applying the conclusions reflected in the model to the characteristics of the property(s) being appraised; and
7) reviewing the mass appraisal results.

The JURISDICTIONAL EXCEPTION RULE may apply to several sections of STANDARD 5 because ad valorem tax administration is subject to various state, county, and municipal laws.

STANDARDS RULE 5-1

In developing a mass appraisal, an appraiser must:

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

Comment: Mass appraisal provides for a systematic approach and uniform application of appraisal methods and techniques to obtain estimates of value that allow for statistical review and analysis of results.

This requirement recognizes that the principle of change continues to affect the manner in which appraisers perform mass appraisals. Changes and developments in the real property and personal property fields have a substantial impact on the appraisal profession.

To keep abreast of these changes and developments, the appraisal profession is constantly reviewing and revising appraisal methods and techniques and devising new methods and techniques to meet new circumstances. For this reason, it is not sufficient for appraisers to simply maintain the skills and the knowledge they possess when they become appraisers. Each appraiser must continuously improve his or her skills to remain proficient in mass appraisal.

(b) not commit a substantial error of omission or commission that significantly affects a mass appraisal; and

Comment: An appraiser must use sufficient care to avoid errors that would significantly affect his or her opinions and conclusions. Diligence is required to identify and analyze the factors, conditions, data, and other information that would have a significant effect on the credibility of the assignment results.

53 See Advisory Opinion 32, *Ad Valorem Property Tax Appraisal and Mass Appraisal Assignments.*

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(c) not render a mass appraisal in a careless or negligent manner.

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

STANDARDS RULE S-2

In developing a mass appraisal, an appraiser must:

(a) identify the client and other intended users;[54]

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

(b) identify the intended use of the appraisal;[55]

Comment: An appraiser must not allow the intended use of an assignment or a client's objectives to cause the assignment results to be biased.

(c) identify the type and definition of value, and, if the value opinion to be developed is market value, ascertain whether the value is to be the most probable price:

(i) in terms of cash; or

(ii) in terms of financial arrangements equivalent to cash; or

(iii) in such other terms as may be precisely defined; and

(iv) if the opinion of value is based on non-market financing or financing with unusual conditions or incentives, the terms of such financing must be clearly identified and the appraiser's opinion of their contributions to or negative influence on value must be developed by analysis of relevant market data;

(d) identify the effective date of the appraisal;[56]

(e) identify the characteristics of the properties that are relevant to the type and definition of value and intended use,[57] including:

(i) the group with which a property is identified according to similar market influence;

(ii) the appropriate market area and time frame relative to the property being valued; and

(iii) their location and physical, legal, and economic characteristics;

Comment: The properties must be identified in general terms, and each individual property in the universe must be identified, with the information on its identity stored or referenced in its property record.

When appraising proposed improvements, an appraiser must examine and have available for future examination, plans, specifications, or other documentation sufficient to identify the extent and character of the proposed improvements.[58]

Ordinarily, proposed improvements are not appraised for ad valorem tax purposes. Appraisers, however, are sometimes asked to provide opinions of value of proposed improvements so that developers can estimate future property tax burdens. Sometimes units in condominiums and planned unit developments are sold with an interest in un-built community property, the pro rata value of which, if any, must be considered in the analysis of sales data.

54 See Advisory Opinion *36,1dentification and Disclosure of Client, Intended Use, and Intended Users.*
55 See Advisory Opinion 36. *Identification and Disclosure of Client, Intended Use, and Intended Users.*
56 See Advisory Opinion 34, *Retrospective and Prospective Value Opinions.*
57 *See* Advisory Opinion 23, *Identifying the Relevant Characteristics of the Subject Property of a Real Property Appraisal Assignment,* if applicable.
58 See Advisory Opinion 17,*Appraisals of Real Property with Proposed Improvements,* if applicable.

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(f) identify the characteristics of the market that are relevant to the purpose and intended use of the mass appraisal including:

(i) location of the market area;

(ii) physical, legal, and economic attributes;

(iii) time frame of market activity; and

(iv) property interests reflected in the market;

(g) in appraising real property or personal property:

(i) Identify the appropriate market area and time frame relative to the property being valued;

(ii) when the subject is real property, identify and consider any personal property trade fixtures, or intangibles that are not real property but are included in the appraisal;

(iii) when the subject is personal property, identify and consider any real property or intangibles that are not personal property but are Included in the appraisal;

(iv) identify known easements, restrictions, encumbrances, leases, reservations, covenants, contracts, declarations, special assessments, ordinances, or other items of similar nature; and

(v) identify and analyze whether an appraised fractional interest, physical segment or partial holding contributes pro rata to the value of the whole;

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

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

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

Comment: An extraordinary assumption may be used in an assignment only if:

- it is required to properly develop credible opinions and conclusions;
- the appraiser has a reasonable basis for the extraordinary assumption;
- use of the extraordinary assumption results in a credible analysis; and
- the appraiser complies with the disclosure requirements set forth in USPAP for extraordinary assumptions.

A hypothetical condition may be used in an assignment only if:

- use of the hypothetical condition is clearly required for legal purpose for purposes of reasonable analysis, or for purposes of comparison;
- use of the hypothetical condition results in a credible analysis; and
- the appraiser complies with the disclosure requirements set forth in USPAP for hypothetical conditions.

(j) determine the scope of work necessary to produce credible assignment results in accordance with the SCOPE OF WORK RULE.[59]

59 See Advisory Opinion 28, Scope of *Work Decision, Performance, and Disclosure,* and Advisory Opinion 29, *An Acceptable* Scope *of Work.*

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STANDARDS RULE 5-3

When necessary for credible assignment results, an appraiser must:

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

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

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

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

STANDARDS RULE 5-4

In developing a mass appraisal, an appraiser must:

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

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

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

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

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

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

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STANDARDS RULE 5-5

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

(a) collect, verify, and analyze such data as are necessary and appropriate to develop:

(i) the cost new of the improvements;

(ii) depreciation;

(iii) value of the land by sales of comparable properties;

(iv) value of the property by sales of comparable properties;

(v) value by capitalization of income or potential earnings (i.e., rentals, expenses, interest rates, capitalization rates, and vacancy data);

Comment: This Standards Rule requires appraisers engaged in mass appraisal to take reasonable steps to ensure that the quantity and quality of the factual data that are collected are sufficient to produce credible appraisals. For example, in real property, where applicable and feasible, systems for routinely collecting and maintaining ownership, geographic, sales, income and expense, cost, and property characteristics data must be established. Geographic data must be contained in as complete a set of cadastral maps as possible, compiled according to current standards of detail and accuracy. Sales data must be collected, confirmed, screened, adjusted, and filed according to current standards of practice. The sales file must contain, for each sale, property characteristics data that are contemporaneous with the date of sale. Property characteristics data must be appropriate and relevant to the mass appraisal models being used. The property characteristics data file must contain data contemporaneous with the date of appraisal including historical data on sales, where appropriate and available The data collection program must incorporate a quality control program. including checks and audits of the data to ensure current and consistent records.

(b) bass 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; [60]

Comment: This requirement calls for an appraiser, in developing income and expense statements and cash flow projections, to weigh historical information and trends, current market factors affecting such trends, and reasonably anticipated events, such as competition from developments either planned or under construction.

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

(d) identify the need for and extent of any physical inspection.[61]

STANDARDS RULE 5-6

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

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

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

(c) when developing the value of a leased fee estate or a leasehold estate, analyze the effect on value, if any, of the terms and conditions of the lease;

60 See Advisory Opinion 33, *Discounted Cash Flow Analysis.*
61 See Advisory Opinion 2. *Inspection of Subject Property.*

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Comment: In ad valorem taxation the appraiser may be required by rules or law to appraise the property as if in fee simple, as though unencumbered by existing leases. In such cases, market rent would be used in the appraisal, ignoring the effect of the individual, actual contract rents.

(d) analyze the effect on value, if any, of the assemblage of the various parcels, divided interests, or component parts of a property; the value of the whole must not be developed by adding together the individual values of the various parcels, divided interests, or component parts; and

Comment: When the value of the whole has been established and the appraiser seeks to value a part, the value of any such part must be tested by reference to appropriate market data and supported by an appropriate analysis of such data.

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

STANDARDS RULE S-7

In reconciling a mass appraisal an appraiser must:

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

(b) employ recognized mass appraisal testing procedures and techniques to ensure that standards of accuracy are maintained.

Comment: It is implicit in mass appraisal that even when properly specified and calibrated mass appraisal models are used, some individual value conclusions will not meet standards of reasonableness, consistency, and accuracy. However, appraisers engaged in mass appraisal have a professional responsibility to ensure that, on an overall basis, models produce value conclusions that meet attainable standards of accuracy. This responsibility requires appraisers to evaluate the performance of models, using techniques that may include but are not limited to, goodness-of-fit statistics, and model performance statistics such as appraisal-to-sale ratio studies, evaluation of hold-out samples, or analysis of residuals.

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STANDARD 6: MASS APPRAISAL, REPORTING

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

See also FAQ 242-304

Comment: STANDARD 6 addresses the content and level of information required in a report that communicates the results of a mass appraisal.

STANDARD 6 does not dictate the form, format, or style of mass appraisal reports. The form, format, and style of a report are functions of the needs of intended users and appraisers. The substantive content of a report determines its compliance.

STANDARDS RULE 6-1

Each written report of a mass appraisal must:

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

(b) contain sufficient information to enable the intended users of the appraisal to understand the report properly and

Comment: Documentation for a mass appraisal for ad valorem taxation may be in the form of (1) property records, (2) sales ratios and other statistical studies, (3) appraisal manuals and documentation, (4) market studies, (5) model building documentation, (6) regulations, (7) statutes, and (8) other acceptable forms.

(c) clearly and accurately disclose all assumptions, extraordinary assumptions, hypothetical conditions and limiting conditions used in the assignment.

Comment: The report must clearly and conspicuously:

- state all extraordinary assumptions and hypothetical conditions; and
- state that their use might have affected the assignment results.

STANDARDS RULE 6-2

Each written report of a mass appraisal must:

(a) state the identity of the client, unless the client has specifically requested otherwise; state the identity of any intended users by name or type;[62]

Comment: An appraiser must use care when identifying the client to avoid violations of the confidentiality section of the ETHICS RULE. If a client requests that the client's identity be withheld from the report, the appraiser may comply with this request. In these instances, the appraiser must document the identity of the client in the work file and must state in the report that the identity of the client has been withheld at the client's request.

(b) state the intended use of the appraisal;[63]

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

(d) state the effective date of the appraisal and the date of the report;

Comment: In ad valorem taxation the effective date of the appraisal may be prescribed by law. If no effective date is prescribed by law, the effective date of the appraisal, if not stated, is presumed to be contemporaneous with the data and appraisal conclusions.

62 See Advisory Opinion 36, *Identification and Disclosure of Client, Intended Use, and Intended Users.*
63 See Advisory Opinion 36, *Identification and Disclosure of Client, Intended Use, and Intended Users.*

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The effective date of the appraisal establishes the context for the value opinion, while the date of the report indicates whether the perspective of the appraiser on the market and property as of the effective date of the appraisal was prospective, current, or retrospective.[64]

(e) state the type and definition of value and cite the source of the definition;

Comment: Stating the type and definition of value also requires any comments needed to clearly indicate to intended users how the definition is being applied.[65]

When reporting an opinion of market value, state whether the opinion of value is:

- In terms of cash or of financing terms equivalent to cash; or
- Based on non-market financing with unusual conditions or incentives.

When an opinion of market value is not in terms of cash or based on financing terms equivalent to cash, summarize the terms of such financing and explain their contributions to or negative influence on value.

(f) state the properties appraised including the property rights;

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

(g) summarize the scope of work used to develop the appraisal;[66] exclusion of the sales comparison approach, cost approach, or income approach must be explained;

Comment: Because intended users' reliance on an appraisal may be affected by the scope of work, the report must enable them to be properly informed and not misled. Sufficient information includes disclosure of research and analyses performed and might also include disclosure of research and analyses not performed.

When any portion of the work involves significant mass appraisal assistance, the appraiser must describe the extent of that assistance. The signing appraiser must also state the name(s) of those providing the significant mass appraisal assistance in the certification in accordance with Standards Rule 6-3.[67]

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

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

(i) **summarize the procedure for collecting, validating, and reporting data;**

Comment: The report must summarize the sources of data and the data collection and validation processes. Reference to detailed data collection manuals or electronic records must be made, as appropriate, including where they may be found for inspection.

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

64 See Advisory Opinion 34, *Retrospective and Prospective Value Opinions*.
65 See Advisory Opinion 34, *Retrospective and Prospective Value Opinions*.
66 See Advisory Opinion 28, *Scope of Work Decision, Performance, and Disclosure* and Advisory Opinion 29, *An Acceptable Scope of Work.*
67 See Advisory Opinion 31, *Assignments Involving More than One Appraiser.*

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(k) when an opinion of highest and best use, or the appropriate market or market level was developed, summarize how that opinion was determined;

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

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

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

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

STANDARDS RULE 6-3

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

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

the statements of fact contained in this report are true and correct.
the reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, impartial and unbiased professional analyses, opinions, and conclusions.
I have no (or the specified) present or prospective interest in the property that is the subject of this report, and I have no (or the specified) personal interest with respect to the parties involved.
I have performed no (or the specified) services, as an appraiser or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
I have no bias with respect to any property that is the subject of this report or to the parties involved with this assignment.
my engagement in this assignment was not contingent upon developing or reporting predetermined results.
my compensation for completing this assignment is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
my analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the *Uniform Standards of Professional Appraisal Practice.*
I have (or have not) made a personal inspection of the properties that are the subject of this report (If more than one person signs the report, this certification must clearly specify which individuals did and which individuals did not make a personal inspection of the appraised property.)[68]
no one provided significant mass appraisal assistance to the person signing this certification. (If there are exceptions the name of each individual providing significant mass appraisal assistance must be stated.)

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

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

68 See Advisory Opinion 2, *Inspection of Subject Property.*

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

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

The names of individuals providing significant mass appraisal assistance who do not sign a certification must be stated in the certification. It is not required that the description of their assistance be contained in the certification, but disclosure of their assistance is required in accordance with Standards Rule 6-2(g).[69]

69 See Advisory Opinion 31, *Assignments Involving More than One Appraiser*.

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2019 USE-VALUE SCHEDULE

In order to comply with the procedures of North Carolina General Statutes 105-317© "1" and "2" and 105-277.6©, Moore County is required to develop and adopt a land use schedule of values for agricultural, horticultural and forest lands. The purpose of this schedule is to provide a uniform method of valuation based upon the present "value in use" for qualifying properties.

After careful consideration of available cash rent statistics, promulgated rates for the two Major Land Resources Areas (136-Piedmont, and 137-Sandhills) encompassing Moore County, and the updates to the ***2019 Use-Value Manual for Agricultural, Horticultural and Forest Land*** prepared by the North Carolina Use Value Advisory Board (May 2018), the following schedule of values shall be utilized as the standard for present use taxation for the 2019 Reappraisal program:

FORESTRY: Land Qualifying for Use Value status under the Forestry Statutes will be valued at $350.00 per acre.

AGRICULTURAL AND HORTICULTURAL:

CAPITALIZATION RATE: A Capitalization rate of 6.5% will be applied to the average land rent as determined by the soil classification in order to obtain a per-acre value of qualifying land. The capitalization rate listed above is the mid-point of the range in the proposed legislation being considered by the North Carolina Use Value Advisory Board.

SOIL CLASSIFICATION: Soil types will be included in 3 different categories based on the Classification type as determined by the Piedmont Soil Survey. The table below shows the relationship between Moore County categories and Piedmont classes and Corresponds to a specific value per acre. Original soil classes were broken down into 6 classes of soils and now have been combined into 3 classes; therefore, Class # 1 soils remain the same and Class #2 & #3 now equal Class #2 and Class #4, #5 and #6 equals Class #3.

Qualifying Use Type	Value in Use Per Acre
FORESTRY	All Classes= $350.00
AGRICULTURAL	Class #1 = $1000.00 Class #2 = $695.00 Class #3 = $465.00 Class #4 = $40.00
HORTICULTURAL	Class #1 = $1325.00 Class #2 = $880.00 Class #3 = $600.00 Class #4 = $40.00

OVERALL VALUE PER ACRE:

The Overall value per acre will be determined by totaling the value of acres in each category, and dividing that figure by the total number of qualifying acres.

USE VALUE ASSESSMENT:
The Use Value Assessment will be the taxable value of the qualifying use value acres for a specific parcel of land. It is calculated by multiplying the Overall Value per Acre by the total number of qualifying acres.

ADDENDUM 3

2019 PRESENT USE-VALUE MANUAL

2019 USE-VALUE MANUAL

FOR AGRICULTURAL, HORTICULTURAL

AND

FOREST LAND

May 2018

North Carolina Use-Value Advisory Board
North Carolina Department of Revenue
Raleigh, North Carolina

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Foreword

When originally enacted in 1973, the objective of the present-use value program was to keep "the family farm in the hands of the farming family." By the early 1970's, North Carolina had become a prime site for industrial and commercial companies to relocate because of its plentiful and reliable work force. With this growth came other improvements to the State's infrastructure to accommodate this growth, such as new and larger road systems, more residential subdivisions, and new industrial and commercial developments. The land on which to build these improvements came primarily from one source: farmland. As the demand for this land skyrocketed, so did its price as well as its assessed value, as counties changed from a fractional assessment to a market value system. Farmers who owned land near these sites soon could not afford the increase in property values and sought relief from the General Assembly.

In response, the General Assembly passed legislation known as the Present-Use Value program. As originally enacted, the basic tenets of this program were that only individuals who lived on the land for which they were applying could immediately qualify and that the land had to have a highest and best use as agriculture, horticulture or forest land. Land might also have qualified if the farmer owned it for seven years. Passage of this law eased the financial burden of most farmers and eliminated to some degree the "sticker shock" of the new property tax values. From that time until the mid-1980's, the present-use value schedules were based on farmer-to-farmer sales, and quite often the market value schedules were very similar to the present use schedules, especially in the more rural areas.

Virtually every session of the General Assembly has seen new changes to the law, causing a constant rethinking as to how the law is to be administered. The mid-1980's saw several court cases that aided in this transformation. Among the legislative changes that resulted from these cases were the use of soil productivity to determine value, the use of a 9% capitalization rate, and the utilization of the "unit concept" to bring smaller tracts under the present use value guidelines.

Through the years the General Assembly has expanded the present-use value program to include new types of ownership such as business entities, tenants in common, trusts, and testamentary trusts. Legislation also expanded the definition of a relative. More recent legislation has established cash rents as the basis for determining present-use value for agricultural and horticultural land, while retaining the net income basis for determining present-use value for forestland.

This Use-Value Advisory Board Manual is published yearly to communicate the UVAB recommended present-use value rates and to explain the methodology used in establishing the recommended rates.

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USE-VALUE ADVISORY BOARD MANUAL

Following are explanations of the major components of this manual.

I. Cash Rents

Beginning in 1985, the basis for determining present-use value for agricultural land was based on the soil productivity for growing corn and soybeans. At that time, corn and soybeans were considered the predominant crops in the state. Over time, fewer and fewer acres went into the production of corn and soybeans and the land used for these crops tended to be lower quality. As a result, both the productivity and value of these crops plummeted, thus resulting in lower present-use values. A viable alternative was sought to replace corn and soybeans as the basis for present-use value. Following a 1998 study by North Carolina State University, cash rents for agricultural and horticultural land were determined to be the preferred alternative. Cash rents are a very good indicator of net income, which can be converted into a value using an appropriate capitalization rate.

The General Assembly passed legislation that established cash rents as the required method for determining the recommended present-use values for agricultural and horticultural land. The cash rents data from the NCSU study served as the basis for determining present-use value for the 2004-2007 UVAB manuals. However, starting in 2006, funding became available for the North Carolina Department of Agriculture to perform an extensive statewide cash rents survey on a yearly basis. The 2006 survey became the basis for the 2008 UVAB recommended values, and this process will

continue forward until changes dictate otherwise (i.e. the 2007 survey is used to establish the 2009 UVAB values, etc).

Forestland does not lend itself well to cash rents analysis and continues to be valued using the net income from actual production.

II. Soil Types and Soil Classification

The 1985 legislation divided the state using the six Major Land Resource Areas (MLRAs). Five different classes of productive soils and one non-productive soil class for each MLRA were determined. Each class was identified by its net income according to type: agriculture, horticulture and forestry. The net income was then divided by a 9% capitalization rate to determine the present-use value. For 2004 and forward, the following change has taken place. For agricultural and horticultural classifications, the five different soil classes have been reduced to three soil classes and one non-productive soil class. Forestland present-use value has kept the five soil classes and one non-productive soil class. The use of the six MLRAs has been retained.

The six MLRAs are as follows:

MLRA 130	Mountains
MLRA 133A	Upper Coastal Plain
MLRA 136	Piedmont
MLRA 137	Sandhills
MLRA 153A	Lower Coastal Plains
MLRA 153B	Tidewater

The soils are listed in this manual according to the MLRA in which they occur. They are then further broken down into their productivity for each of the three types of use: agriculture, horticulture and forestry. Every soil listed in each of the MLRAs is ranked by its productivity into four classes (with the exception of forestry which retained its previous six classes). The classes for agricultural and horticultural land are as follows:

CLASS I	Best Soils
CLASS II	Average Soils
CLASS III	Fair Soils
CLASS IV	Non-Productive Soils

It should be noted that, in some soil types, all the various slopes of that soil have the same productivity class for each of the usages, and therefore for the sake of brevity, the word "ALL" is listed to combine these soils. Each of the classes set up by the UVAB soils subcommittee corresponds to a cash rent income established by the most recent cash rents survey conducted by the North Carolina Department of Agriculture. This rent income is then capitalized by a rate established each year by the UVAB (see below). The criteria for establishing present-use value for forestry have remained basically unchanged from previous years due to the quantity and quality of information already available.

III. Capitalization Rate

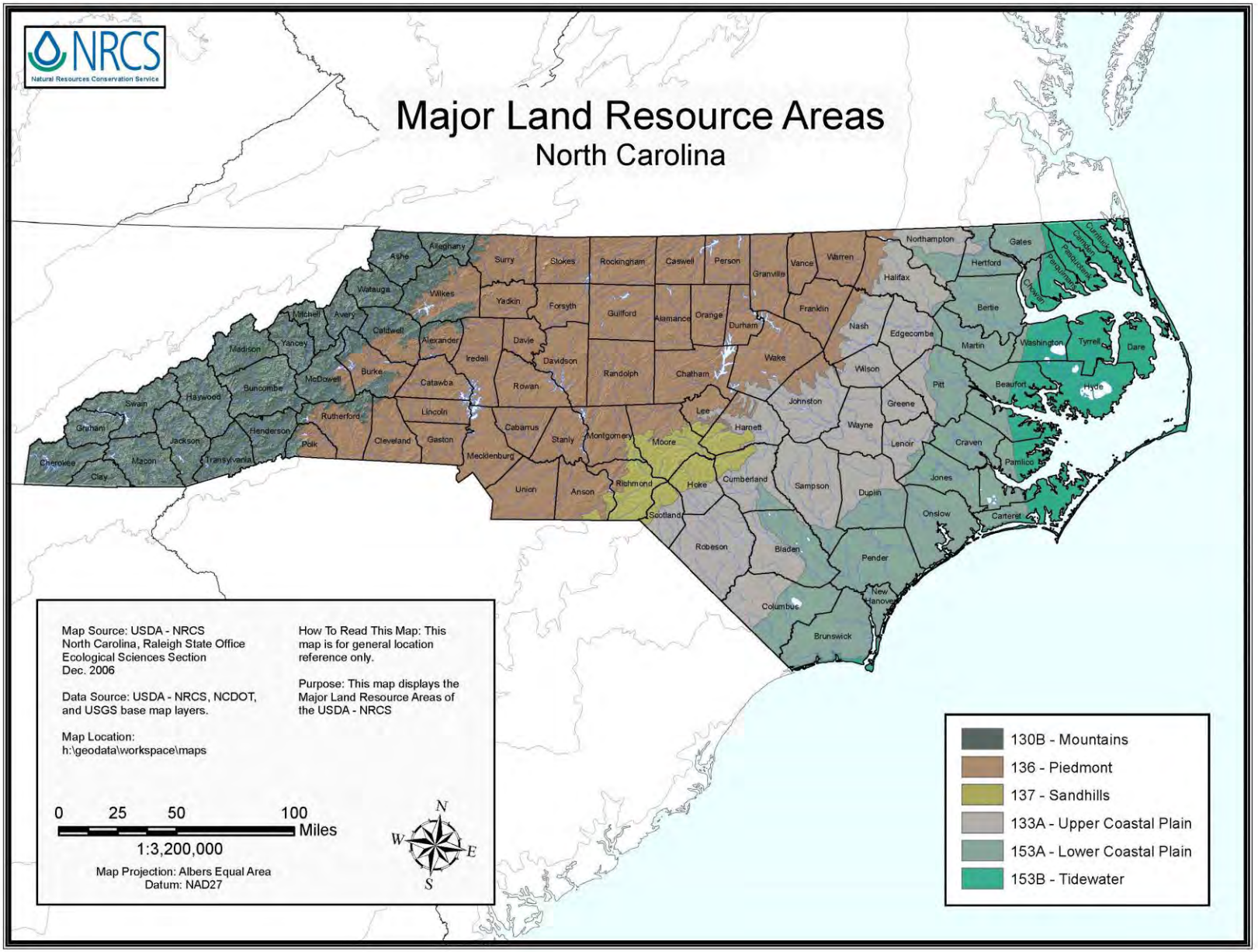
The capitalization rate mandated by the 1985 legislation for all types of present-use value land was 9%. The 1998 study by NCSU strongly indicated that a lower capitalization rate for agricultural and horticultural land was more in line with current sales and rental information. The 2002 legislation mandated a rate between 6%-7% for agricultural and horticultural land.

For the year 2004 and the subsequent years, the UVAB has set the capitalization rate at 6.5% for agricultural and horticultural land.

The capitalization rate for forestland continues to be fixed at 9% as mandated by the statutes.

IV. Other Issues

The value for the best agricultural land can be no higher than $1,200 an acre for any MLRA.


NRCS
Natural Resources Conservation Service
Major Land Resource Areas
North Carolina
Ashe
Alleghany
Surry
Stokes
Rockingham
Caswell
Person
Granville
Vance
Warren
Northampton
Gates
Watauga
Wilkes
Yadkin
Forsyth
Guilford
Alamance
Orange
Durham
Franklin
Halifax
Hertford
Currituck
Camden
Pasquotank
Perquimans
Chowan
Mitchell
Avery
Caldwell
Alexander
Davie
Iredell
Davidson
Randolph
Chatham
Wake
Nash
Edgecombe
Bertie
Martin
Washington
Tyrrell
Dare
Madison
Yancey
McDowell
Burke
Catawba
Rowan
Wilson
Pitt
Beaufort
Hyde
Buncombe
Haywood
Swain
Graham
Jackson
Macon
Cherokee
Clay
Transylvania
Henderson
Rutherford
Polk
Cleveland
Gaston
Lincoln
Cabarrus
Stanly
Mecklenburg
Union
Anson
Montgomery
Moore
Lee
Harnett
Johnston
Greene
Wayne
Lenoir
Craven
Pamlico
Jones
Onslow
Carteret
Richmond
Hoke
Cumberland
Sampson
Duplin
Scotland
Robeson
Bladen
Pender
New Hanover
Columbus
Brunswick
Map Source: USDA - NRCS
North Carolina, Raleigh State Office
Ecological Sciences Section
Dec. 2006
Data Source: USDA - NRCS, NCDOT, and USGS base map layers.
Map Location:
h:\geodata\workspace\maps
How To Read This Map: This map is for general location reference only.
Purpose: This map displays the Major Land Resource Areas of the USDA - NRCS
0 25 50 100 Miles
1:3,200,000
Map Projection: Albers Equal Area
Datum: NAD27
N
W
E
S
130B - Mountains
136 - Piedmont
137 - Sandhills
133A - Upper Coastal Plain
153A - Lower Coastal Plain
153B - Tidewater

PRESENT-USE VALUE SCHEDULES

AGRICULTURAL RENTS

MLRA	BEST	AVERAGE	FAIR
130	90.30	54.30	35.50
133A	82.15	58.30	43.65
136	61.80	42.10	27.35
137	67.50	47.30	32.20
153A	77.10	56.10	42.20
153B	103.95	70.70	53.00

AGRICULTURAL SCHEDULE

MLRA	CLASS I	CLASS II	CLASS III
130	$1,200*	$835	$545
133A	$1,200*	$895	$670
136	$950	$645	$420
137	$1,035	$725	$495
153A	$1,185	$860	$645
153B	$1,200*	$1,085	$815

--NOTE: All Class 4 or Non-Productive Land will be appraised at $40.00 per acre.
--For 2019, rents were increased 10% to more accurately represent the current cash rents and then divided by a capitalization rate of 6.5% to produce the Agricultural Schedule.
* As required by statute, agricultural values cannot exceed $1,200.

HORTICULTURAL SCHEDULE

All horticultural crops requiring more than one growing season between planting or setting out and harvest, such as Christmas trees, ornamental shrubs and nursery stock, apple and peach orchards, grapes, blueberries, strawberries, sod and other similar horticultural crops should be classified as horticulture regardless of location in the state.

HORTICULTURAL RENTS

MLRA	BEST	AVERAGE	FAIR
130	161.70	111.10	72.90
133A	99.10	68.40	52.25
136	89.20	58.05	40.15
137	84.35	56.85	37.70
153A	93.80	58.15	44.40
153B	122.40	92.80	84.35

HORTICULTURAL SCHEDULE

MLRA	CLASS I	CLASS II	CLASS III
130	$2,485	$1,705	$1,120
133A	$1,520	$1,050	$803
136	$1,370	$890	$615
137	$1,295	$870	$580
153A	$1,440	$890	$680
153B	$1,880	$1,425	$1,295

--NOTE: All Class 4 or Non-Productive Land will be appraised at $40.00 per acre.

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

FORESTLAND NET PRESENT VALUES

MLRA	Class I	Class II	Class III	Class IV	Class V
130	$29.99	$18.86	$6.91	$4.74	$3.26
133A	$27.99	$21.13	$18.14	$7.08	$4.79
136	$32.51	$23.29	$22.57	$14.53	$10.42
137	$34.35	$22.72	$22.57	$7.68	$2.95
153A	$27.99	$21.13	$18.14	$7.08	$4.79
153B	$22.56	$18.14	$17.18	$7.08	$4.79

FORESTLAND SCHEDULE

MLRA	Class I	Class II	Class III	Class IV	Class V
130	$330	$205	$75	$50	$40
133A	$310	$230	$200	$75	$50
136	$360	$255	$250	$160	$115
137	$380	$250	$250	$85	$40
153A	$310	$230	$200	$75	$50
153B	$250	$200	$190	$75	$50

--NOTE: All Class VI or Non-Productive Land will be appraised at $40.00/Acre. Exception: For MLRA 130 use 80 % of the lowest valued productive land.

--Net Present Values were divided by a capitalization rate of 9.00% to produce the Forestland Schedule.

2009 Cash Rent Study

INTRODUCTION

The National Agricultural Statistics Service in cooperation with the North Carolina Department of Agricultural and Consumer Services collected cash rents data on the 2009 County Estimates Survey. North Carolina farmers were surveyed to obtain cash rent values per acre for three land types: Agricultural, horticultural, and Christmas tree land. Supporting funds for this project were provided by the North Carolina Legislature. Appreciation is expressed to all survey participants who provided the data on which this report is based.

THE SURVEY

The survey was conducted by mail with telephone follow-up during September through February. Values relate to the data collection time period when the respondent completed the survey.

THE DATA

This report includes the most current number of responses and average rental rate per acre. Producers were asked to provide their best estimate of cash rent values in their county by land quality. The data published here are simple averages of the best estimate of the cash rent value per acre. These averages are not official estimates of actual sales.

Reported data that did not represent agricultural usage were removed in order to give a more accurate reflection of agricultural rents and values. To ensure respondent confidentiality and provide more statistical reliability, counties and districts with fewer than 10 reports are not published individually, but are included in aggregate totals. Published values in this report should never be used as the only factor to establish rental arrangements.

Data were collected for three land types: Agricultural, horticultural, and Christmas tree land. Agricultural land includes land used to produce row crops such as soybeans, corn, peanuts, and small grains, pasture land, and hay. Agricultural land also includes any land on which livestock are grown. Horticultural land includes commercial production or growing of fruits or vegetables or nursery or floral products such as apple orchards, blueberries, cucumbers, tomatoes, potted plants, flowers, shrubs, sod, and turfgrass. Christmas tree land includes any land to produce Christmas trees, including cut and balled Christmas trees.

2009 Average Cash Rents for Resource Area = 130 Mountains

County	Agricultural High Productivity		Agricultural Medium Productivity		Agricultural Low Productivity		Horticultural High Productivity		Horticultural Medium Productivity		Horticultural Low Productivity		Christmas Trees High Productivity		Christmas Trees Medium Productivity		Christmas Trees Low Productivity	
	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average
ALLEGHANY	22	89.80	21	55.50	21	33.30												
ASHE	17	76.50	15	43.50	15	28.30							12	162.50				
AVERY																		
BUNCOMBE	37	100.70	31	53.90	27	33.80												
BURKE	25	55.20	22	33.20	19	26.60												
CALDWELL	13	35.40	11	23.20	10	16.70												
CHEROKEE	16	88.10	11	48.60	10	29.50												
CLAY	15	68.70	14	39.10	13	25.20												
GRAHAM																		
HAYWOOD	41	117.90	28	73.80	29	43.50												
HENDERSON	24	83.50	18	57.60	18	36.90												
JACKSON																		
MACDOWELL																		
MACON	11	73.20	12	43.30														
MADISON	26	116.50	22	63.20	23	40.50												
MITCHELL																		
POLK																		
SWAIN																		
TRANSYLVANIA	14	93.60											11	181.36				
WATAUGA	27	79.10	18	49.70	14	32.50												
WILKES	79	57.30	71	39.30	59	27.00												
YANCEY	17	117.90	13	72.30	13	48.85												
AREA TOTAL	**422**	**82.10**	**349**	**49.40**	**317**	**32.30**	**78**	**147.00**	**47**	**101.10**	**41**	**66.30**	**69**	**153.60**	**47**	**93.60**	**38**	**61.30**

2009 Average Cash Rents for Resource Area = 133A Upper Coastal Plain

County	Agricultural High Productivity		Agricultural Medium Productivity		Agricultural Low Productivity		Horticultural High Productivity		Horticultural Medium Productivity		Horticultural Low Productivity		Christmas Trees High Productivity		Christmas Trees Medium Productivity		Christmas Trees Low Productivity	
	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average
BLADEN	36	63.10	32	49.20	25	33.80												
COLUMBUS	77	60.80	58	45.80	51	34.60												
CUMBERLAND	36	66.40	29	44.70	25	30.40												
DUPLIN	142	69.30	113	50.80	90	39.70												
EDGECOMBE	36	77.10	29	57.20	22	43.60												
GREENE	61	79.70	40	55.00	36	41.30												
HALIFAX	28	83.30	18	64.20	14	42.10												
HARNETT	58	74.50	52	51.70	39	36.40												
JOHNSTON	103	71.90	84	49.90	63	33.40	13	93.90	10	53.00								
LENOIR	60	81.60	45	58.70	33	42.10												
NASH	51	77.80	39	52.70	31	43.10												
NORTHAMPTON	23	102.60	17	73.80	13	57.30												
ROBESON	53	49.60	52	38.90	28	32.40												
SAMPSON	128	81.60	109	56.40	87	41.80	10	95.00										
SCOTLAND	10	44.50																
WAYNE	96	89.70	64	62.30	65	47.00												
WILSON	40	82.80	30	61.50	27	48.20												
AREA TOTAL	**1038**	**74.70**	**819**	**53.00**	**655**	**39.70**	**61**	**90.10**	**46**	**62.20**	**35**	**47.50**						

2009 Average Cash Rents for Resource Area = 136 Piedmont

County	Agricultural High Productivity		Agricultural Medium Productivity		Agricultural Low Productivity		Horticultural High Productivity		Horticultural Medium Productivity		Horticultural Low Productivity		Christmas Trees High Productivity		Christmas Trees Medium Productivity		Christmas Trees Low Productivity	
	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average
ALAMANCE	63	52.30	51	32.90	50	20.70												
ALEXANDER	35	49.10	28	33.40	29	20.00												
ANSON	35	50.10	31	41.30	25	28.40												
BURKE	25	55.20	22	33.20	19	26.60												
CABARRUS	20	42.20	16	37.80	13	23.90												
CALDWELL	13	35.40	11	23.50	10	16.70												
CASWELL	54	49.90	41	30.90	44	19.20												
CATAWBA	32	39.20	29	28.60	31	19.20												
CHATHAM	47	48.80	48	34.70	37	23.10												
CLEVELAND	44	36.50	39	29.20	34	21.20												
DAVIDSON	50	45.60	43	32.90	40	21.40												
DAVIE	38	60.70	27	39.30	24	21.30												
DURHAM	15	36.50	12	27.50	13	21.50												
FORSYTH	26	63.60	16	48.80	18	23.30												
FRANKLIN	41	59.20	38	37.10	35	21.90												
GASTON	17	33.50	15	27.30	15	18.80												
GRANVILLE	58	53.00	45	31.60	43	17.80												
GUILFORD	46	41.20	39	27.00	34	17.60												
HALIFAX	28	83.30	18	64.20	14	42.10												
IREDELL	52	53.90	49	43.40	43	27.90												
JOHNSTON	103	71.90	84	49.90	63	33.40	13	93.90	10	53.00								
LEE	25	72.40	20	45.40	16	33.10												
LINCOLN	16	35.60	14	21.80	12	15.60												
MECKLENBURG	11	61.40																
MONTGOMERY	16	41.60	16	39.10	14	20.00												
MOORE	37	56.50	33	37.30	25	23.90												
NASH	51	77.80	39	52.70	31	43.10												
ORANGE	31	37.60	26	31.80	25	19.40												
PERSON	38	60.70	26	40.60	22	23.30												
POLK																		
RANDOLPH	96	48.20	81	33.80	73	21.90												
RICHMOND	21	32.60	15	23.30	18	19.30												
ROCKINGHAM	55	55.10	41	30.30	40	16.60												
ROWAN	47	48.80	36	34.70	33	23.50												
RUTHERFORD	21	37.40	16	27.60	14	19.30												
STANLY	34	52.50	30	40.30	29	27.90												
STOKES	54	74.20	39	47.10	34	28.10												
SURRY	73	83.00	57	53.90	53	35.30												
UNION	55	66.30	50	47.80	40	40.30												
VANCE	32	55.00	22	29.30	23	17.20												
WAKE	55	61.20	46	36.20	39	26.20												
WARREN	24	40.90	15	25.30	20	17.80												
WILKES	79	57.30	71	39.30	59	27.00												
YADKIN	79	67.00	60	47.80	58	31.50												
AREA TOTAL	**1798**	**56.20**	**1468**	**38.30**	**1324**	**24.90**	**125**	**81.10**	**101**	**52.80**	**89**	**36.50**	**46**	**77.90**	**43**	**52.90**	**41**	**35.00**

2009 Average Cash Rents for Resource Area = 137 Sandhills

County	Agricultural High Productivity		Agricultural Medium Productivity		Agricultural Low Productivity		Horticultural High Productivity		Horticultural Medium Productivity		Horticultural Low Productivity		Christmas Trees High Productivity		Christmas Trees Medium Productivity		Christmas Trees Low Productivity	
	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average
HARNETT	58	74.50	52	51.70	39	36.40												
HOKE	17	56.50	11	45.00	11	29.10												
LEE	25	72.40	20	45.40	16	33.10												
MOORE	37	56.50	33	37.30	25	23.90												
RICHMOND	21	32.60	15	23.30	18	19.30												
SCOTLAND	10	44.50																
AREA TOTAL	**168**	**61.40**	**139**	**43.00**	**115**	**29.30**	*	**76.70**	*	**51.70**	*	**34.30**						

An * indicates the data is published even though there are less than 10 reports.

2009 Average Cash Rents for Resource Area = 153A Lower Coastal Plain

County	Agricultural High Productivity		Agricultural Medium Productivity		Agricultural Low Productivity		Horticultural High Productivity		Horticultural Medium Productivity		Horticultural Low Productivity		Christmas Trees High Productivity		Christmas Trees Medium Productivity		Christmas Trees Low Productivity	
	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average
BEAUFORT	30	83.70	23	52.00	21	37.10												
BERTIE	41	75.00	23	60.10	21	44.50												
BLADEN	36	63.10	32	49.20	25	33.80												
BRUNSWICK	23	44.40	15	38.00	13	30.00												
CARTERET																		
CHOWAN	20	87.00	13	58.90	12	51.70												
COLUMBUS	77	60.80	58	45.80	51	34.60												
CRAVEN	32	60.60	29	47.80	21	35.20												
DUPLIN	142	69.30	113	50.80	90	39.70												
EDGECOMBE	36	77.10	29	57.20	22	43.60												
GATES	13	81.20	11	62.30														
HERTFORD	15	73.00	11	49.60														
JONES	25	64.40	22	49.80	20	41.30												
MARTIN	46	80.70	33	53.20	29	40.50												
NEW HANOVER																		
ONSLOW	34	55.40	24	42.80	23	34.80												
PAMLICO	13	70.40	13	51.20	13	36.50												
PENDER	24	67.10	21	45.50	19	33.70												
PITT	45	73.70	39	56.20	33	40.50												
WASHINGTON	12	128.80	10	61.00														
AREA TOTAL	**672**	**70.10**	**525**	**51.00**	**442**	**38.40**	**30**	**85.30**	**19**	**52.90**	**13**	**40.40**						

2009 Average Cash Rents for Resource Area = 153B Tidewater

County	Agricultural High Productivity		Agricultural Medium Productivity		Agricultural Low Productivity		Horticultural High Productivity		Horticultural Medium Productivity		Horticultural Low Productivity		Christmas Trees High Productivity		Christmas Trees Medium Productivity		Christmas Trees Low Productivity	
	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average
BEAUFORT	30	83.70	23	52.00	21	37.10												
CAMDEN																		
CARTERET																		
CHOWAN	20	87.00	13	58.40	12	51.70												
CURRITUCK	10	88.00																
DARE																		
HYDE																		
PAMLICO	13	70.40	13	51.20	13	36.50												
PASQUOTANK	19	105.30	11	73.20	10	60.00												
PERQUIMANS	24	101.90	21	78.10	18	58.90												
TYRRELL	10	109.50																
WASHINGTON	12	128.80	10	61.00														
AREA TOTAL	**163**	**94.50**	**117**	**64.30**	**111**	**48.20**	**12**	**111.30**	*	**84.40**	*	**76.70**						

An * indicates the data is published even though there are less than 10 reports.

2009 Average Cash Rents - State Total

County	Agricultural High Productivity		Agricultural Medium Productivity		Agricultural Low Productivity		Horticultural High Productivity		Horticultural Medium Productivity		Horticultural Low Productivity		Christmas Trees High Productivity		Christmas Trees Medium Productivity		Christmas Trees Low Productivity	
	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average	No. of reports	Average
STATE TOTAL	**3431**	**66.90**	**2743**	**45.60**	**2414**	**31.50**	**254**	**103.20**	**184**	**67.70**	**155**	**46.90**	**114**	**121.50**	**93**	**75.30**	**80**	**49.40**

Christmas Tree Guidelines

This information replaces a previous memorandum issued by our office dated December 12, 1989. The 1989 General Assembly enacted an "in-lieu of income" provision allowing land previously qualified as horticulture to continue to receive benefits of the present-use value program when the crop being produced changed from any horticultural product to Christmas trees. It also directed the Department of Revenue to establish a separate gross income requirement different from the $1,000 gross income requirement for horticultural land, when the crop being grown was evergreens intended for use as Christmas trees. N.C.G.S. 105-289(a)(6) directs the Department of Revenue:

> **"To establish requirements for horticultural land, used to produce evergreens intended for use as Christmas trees, in lieu of a gross income requirement until evergreens are harvested from the land, and to establish a gross income requirement for this type of horticultural land, that differs from the income requirement for other horticultural land, when evergreens are harvested from the land."**

It should be noted that horticultural land used to produce evergreens intended for use as Christmas trees is the only use allowed benefit of the present-use value program without first having met a gross income requirement. The trade-off for this exception is a different gross income requirement in recognition of the potential for greater income than would normally be associated with other horticultural or agricultural commodities.

While the majority of Christmas tree production occurs in the western mountain counties (MLRA 130), surveys as far back as 1996 indicate that there are approximately 135 Christmas tree operations in non-mountain counties (MLRAs 136, 137, 133A, 153A & 153B). They include such counties in the piedmont and coastal plain as Craven, Halifax, Robeson, Wake, and Warren. For this reason we have prepared separate in-lieu of income requirements and gross income requirements for these two areas of the State. The different requirements recognize the difference in species, growing practices, markets, and resulting gross income potential.

After consulting with cooperative extension agents, the regional Christmas tree/horticultural specialist at the Western North Carolina Experimental Research Station, and various landowners/growers, we have determined the standards in the following attachments to be reasonable guidelines for compliance with G.S. 105-289(a)(6). Please note these requirements are subject to the whims of weather and other conditions that can have a significant impact. The combined effect of recent hurricanes, spring freezes, and ice storms across some parts of the State should be taken into consideration when appropriate within each county. As with other aspects of the present-use value program, owners of Christmas tree land should not be held accountable for conditions such as adverse weather or disease outbreak beyond their control.

We encourage every county to contact their local Cooperative Extension Service Office to obtain the appropriate local data and expertise to support particular situations in each county.

I. Gross Income Requirement for Christmas Trees

For MLRA 130, the gross income requirement for horticultural land used to grow evergreens intended for use as Christmas trees is $2,000 per acre.

For all other MLRAs, the gross income requirement for horticultural land used to grow evergreens intended for use as Christmas trees is $1,500 per acre.

II. In-Lieu of Income Requirement

MLRA 130 – Mountains

The in-lieu of income requirement is for acreage in production but not yet undergoing harvest, and will be determined by sound management practices, best evidenced by the following:

1. Sites prepared by controlling problem weeds and saplings, taking soil samples, and applying fertilizer and/or lime as appropriate.

2. Generally, a 5' x 5' spacing producing approximately 1,750 potential trees per acre. Spacing must allow for adequate air movement around the trees. (There is very little 4' x 4' or 4.5' x 4.5' spacing. Some experimentation has occurred with 5' x 6' spacing, primarily aimed at producing a 6' tree in 5 years. All of the preceding examples should be acceptable.)

3. A program for insect and weed control.

4. Generally, an eight-to-ten year setting to harvest cycle. (Most leases are for 10 years, which allows for a replanting of non-established or dying seedlings up through the second year.)

The gross income requirement for acres undergoing Christmas tree harvest in the mountain region of North Carolina (MLRA 130) is $2,000 per acre. Once Christmas trees are harvested from specific acreage, the requirement for those harvested acres will revert to the in-lieu of income requirement.

As an example, if the total amount of acres devoted to Christmas tree production is six acres, three of which are undergoing harvest and three of which have yet to reach maturity, the gross income requirement would be $6,000.

MLRA 136 – Piedmont, MLRA 137 – Sandhills, MLRA 133A – Upper Coastal Plain, MLRA 153A – Lower Coastal Plain, and MLRA 153B – Tidewater.

The in-lieu of income requirement is for acreage in production but not yet undergoing harvest, and will be determined by sound management practices, best evidenced by the following:

1. Sites prepared by controlling problem weeds and saplings, taking soil samples, and applying fertilizer and/or lime as appropriate.

2. Generally, a 7' x 7' spacing producing approximately 900 potential trees per acre. Spacing must allow for adequate air movement around the trees. (There may be variations in the spacing dependent on the species being grown, most likely Virginia Pine, White Pine, Eastern Red Cedar, and Leyland Cypress. All reasonable spacing practices should be acceptable.)

3. A program for insect and weed control.

4. Generally a five-to-six year setting to harvest cycle. (Due to the species being grown, soil conditions and growing practices, most operations are capable of producing trees for market in the five-to-six year range. However, the combined effect of adverse weather and disease outbreak may force greater replanting of damaged trees thereby lengthening the current cycle beyond that considered typical.)

The gross income requirement for acres undergoing Christmas tree harvest in the non-mountain regions of North Carolina (MLRAs 136, 137, 133A, 153A, and 153B) is $1,500 per acre. Once Christmas trees are harvested from specific acreage, the requirement for those harvested acres will revert to the in-lieu of income requirement.

As an example, if the total amount of acres devoted to Christmas tree production is six acres, three of which are undergoing harvest and three of which have yet to reach maturity, the gross income requirement would be $4,500.

Procedure for Forestry Schedules

The charge to the Forestry Group is to develop five net income per-acre ranges for each MLRA based on the ability of the soils to produce timber income. The task is confounded by variable species and stand type; management level, costs and opportunities; markets and stumpage prices; topographies; and landowner objectives across North Carolina.

In an attempt to develop realistic net income per acre in each MLRA, the Forestry Group considered the following items by area:

1. soil productivity and indicator tree species (or stand type);
2. average stand establishment and annual management costs;
3. average rotation length and timber yield; and
4. average timber stumpage prices.

Having selected the appropriate combinations above, the harvest value (gross income) from a managed rotation on a given soil productivity level can be calculated, netted of costs and amortized to arrive at the net income per acre per year soil expectation value. The ensuing discussion introduces users of this manual to the procedure, literature and software citations and decisions leading to the five forest land classes for each MLRA. Column numbers beside sub-headings refer to columns in the Forestry Net Present Values Table.

Soil Productivity/Indicator Species Selection (Col. 1). Soil productivity in forestry is measured by site index (SI). Site index is the height to which trees of a given species will grow on a given soil/site over a designed period of time (usually 50 or 25 years, depending on species, site or age

of site table). The Forestry Group identified key indicator species (or stand types) for each MLRA and then assigned site index ranges for the indicator species that captured the management opportunities for that region. The site index ranges became the productivity class basis for further calculations of timber yield and generally can be correlated to Natural Resource Conservation Service (NRCS) cubic foot per acre productivity classes for most stand types. By MLRA, the following site index ranges and species/stand types cover the overwhelming majority of soils/sites and management opportunities.

MLRA 153A, 153B, 137, 136, 133A:

Species/Stand Type	SI Range (50 yr. basis)
Loblolly pine	86-104
Loblolly pine	66-85
Loblolly pine	60-65
Mixed hardwoods	Mixed species and site indices on coves, river bottoms, bottomlands
Pond and/or longleaf pine	50-55
Upland hardwoods (MLRA 136)	40-68 (Upland oak)

MLRA 130:

Species/Stand Type	SI Range (50 yr. basis)
White pine	70-89
White pine	55-69
Shortleaf/mixed hardwoods	Mixed species/sites (SI 42-58 shortleaf)
Bottomland/cove hardwoods	Mixed species/site indices on coves and bottoms
Upland oak ridges	40-68

The site index ranges above, in most cases, can be correlated to individual soil series (and series' phases) according to NRCS cubic foot per acre productivity classes. An exception will be the cove, bottomland, riverbottom, and other hardwood sites where topographic position must also be

considered. The Soils Group is responsible for assigning soil series to the appropriate class for agriculture, horticulture and forestry.

Stand Establishment and Annual Management Costs (Columns 2 and 3). Stand establishment costs include site preparation and tree planting costs. Costs vary from $0 to over $200 per acre depending on soils, species, and management objectives. No cost would be incurred for natural regeneration (as practiced for hardwoods) with costs increasing as pine plantations are intensively managed on highly productive sites. The second column in the Forestry Net Present Values Table contains average establishment costs for the past ten years as reported by the N.C. Forest Service for site classes in each MLRA.

Annual management may include costs of pine release, timber stand improvement activities, prescribed burning, boundary line maintenance, consultant fees and other contractual services. Cost may vary from $0 on typical floodplain or bottomland stands to as high as $6 per acre per year on intensively managed pine plantations. Annual management costs in Forestry Net Present Values Table are the best estimates under average stand management regimes by site class.

Rotation Length and Timber Yields (Columns 4, 5, 6). Sawtimber rotations are recommended on all sites in North Carolina. This decision is based on the market situation throughout the state, particularly the scarce markets for low quality and small-diameter pine and hardwood, which normally would be used for pulpwood. Timber thinnings are not available to most woodlot managers and, therefore, rotations are assumed to proceed unthinned until the optimum economic product mix is achieved.

Timber yields are based on the most current yield models developed at the N.C. State University School of Forest Resources for loblolly pine. (Hafley, Smith, and Buford, 1982) and natural hardwood stands (Gardner et al. 1982). White pine yields, mountain mixed stand yields, and upland oak yields are derived from U.S. Forest Service yield models developed by Vimmerstedt (1962) and McClure and Knight. Longleaf and pond pine yields are from Schumacher and Coile (1960).

Timber Stumpage Prices (Columns 7 and 8). Cost of forestry operations are derived from the past five year regional data (provided by the NC DFR). For timber, stumpage prices (prices paid for standing timber to landowners) are derived over the same 5-year period from regional Forest2Market reports, a timber price reporting system.

Harvest Values (Column 9). Multiplication of timber yields (columns 5 and 6) times the respective timber stumpage prices (columns 7 and 8) gives the gross harvest value of one rotation.

Annualized Net Present Value (NPV) (Column 10). Harvest values (column 9) are discounted to present value at a 4 percent discount rate, which is consistent with rates used and documented by the U.S. Forest Service, forestry industry and forestry economists. This rate approximates the long-term measures of the opportunity cost of capital in the private sector of the U. S. economy (Row et al. 1981; Gunter and Haney, 1984). The respective establishment costs and the present value of annual management costs are subtracted from the present value of the income to obtain the net

present value of the timber stand. This is then amortized over the life of the rotation to arrive at the annualized net present value (or annual net income) figure.

Forestry Net Present Values

Indicator Species or Stand Types, Lengths of Rotation, Costs, Yields, Price and Annualized Net Present Value per Acre of Land by Site Index Ranges in Each Major Land Resource Are, North Carolina

(1) Species/Stand Type	(2) Est. Cost	(3) Mgmt. Cost	(4) Rot. Lgth.	(5) Yield	(6) Yield	(7) Price /mbf	(8) Price /cd	(9) Harvest Value	(10) Annualized NPV
UP LCP	($)	($)	(yrs)	(MBF)	(cds)	($)	($)	($)	($)
MLRAs 153A and 133A									
LOWER & UPPER CP									
Mixed hardwoods	$0.00	$0.00	50	11.5	44	$225.00	$14.52	$3,226.38	$21.13
Loblolly pine (86-104)	$364.00	$3.00	30	12	14.4	$207.00	$30.20	$2,918.88	$27.99
Loblolly pine (66-85)	$255.00	$2.00	30	7	16.8	$207.00	$30.20	$1,956.36	$18.14
Loblolly pine (60-65)	$127.00	$1.00	40	4.8	12.7	$207.00	$30.20	$1,377.14	$7.08
Pond pine (50-55)	$50.00	$0.50	50	2.7	20	$207.00	$30.20	$1,162.90	$4.79
Longleaf pine	$50.00	$0.50	50	3.2	8	$207.00	$30.20	$904.00	$3.94
MLRA 153B									
TIDEWATER									
Mixed hardwoods	$0.00	$0.00	50	8.43	44	$235.39	$14.52	$2,623.24	$17.18
Loblolly pine (86-104)	$458.00	$3.00	30	12	14.4	$207.00	$30.20	$2,918.88	$22.56
Loblolly pine (66-85)	$255.00	$2.00	30	7	16.8	$207.00	$30.20	$1,956.36	$18.14
Loblolly pine (60-65)	$127.00	$1.00	40	4.8	12.7	$207.00	$30.20	$1,377.14	$7.08
Pond pine	$50.00	$0.50	50	2.7	20	$207.00	$30.20	$1,162.90	$4.79
MLRA 137									
SANDHILLS									
Mixed hardwoods	$0.00	$0.00	50	11.9	46	$235.39	$14.50	$3,468.14	$22.72
Loblolly pine (86-104)	$265.20	$3.00	30	12	15.6	$207.00	$30.20	$2,955.12	$34.35
Loblolly pine (66-85)	$141.00	$2.00	30	6.4	16.9	$207.00	$30.20	$1,835.18	$22.57
Loblolly pine (60-65)	$53.00	$1.00	50	7.2	7	$207.00	$30.20	$1,701.80	$7.68
Longleaf pine (50-55)	$53.00	$0.50	50	3.2	8	$207.00	$30.20	$904.00	$2.95

Forestry Net Present Values

Indicator Species or Stand Types, Lengths of Rotation, Costs, Yields, Price and Annualized Net Present Value per Acre of Land by Site Index Ranges in Each Major Land Resource Are, North Carolina

(1) Species/Stand Type	(2) Est. Cost	(3) Mgmt. Cost	(4) Rot. Lgth.	(5) Yield	(6) Yield	(7) Price /mbf	(8) Price /cd	(9) Harvest Value	(10) Annualized NPV
UP LCP	($)	($)	(yrs)	(MBF)	(cds)	($)	($)	($)	($)
MLRA 136									
PIEDMONT									
Mixed hardwoods	$0.00	$0.00	50	11.9	46	$235.39	$16.40	$3,555.54	$23.29
Loblolly pine (86-104)	$265.20	$3.00	30	11.5	15.6	$207.00	$30.20	$2,851.62	$32.51
Loblolly pine (66-85)	$141.00	$2.00	30	6.4	16.9	$207.00	$30.20	$1,835.18	$22.57
Loblolly pine (60-65)	$55.00	$0.50	40	4.1	15	$207.00	$30.20	$1,301.70	$10.42
Upland hardwoods	$0.00	$0.00	50	6.05	32	$207.00	$30.20	$2,218.75	$14.53
MLRA 130									
WESTERN									
Mixed hardwoods	$0.00	$0.00	50	10.95	0	$263.00	$18.50	$2,879.85	$18.86
White pine (70-89)	$270.00	$2.00	30	17.8	0	$150.00	$18.50	$2,670.00	$29.99
White pine (55-69)	$175.40	$1.00	35	8.5	0	$150.00	$18.50	$1,275.00	$6.91
Shortleaf/mixed hwd.	$0.00	$0.00	60	6	0	$188.00	$18.50	$1,128.00	$4.74
Upland oak ridge (40-68)	$0.00	$0.00	70	5.32	0	$223.00	$18.50	$1,186.36	$3.26

Map Unit Name	Agri	For	Hort
Alluvial land, wet	IV	II	IV
Arents, loamy	IV	II	IV
Arkaqua loam, 0 to 2 percent slopes, frequently flooded	IV	II	IV
Arkaqua loam, 0 to 2 percent slopes, occasionally flooded	II	III	II
Arkaqua loam, 0 to 2 percent slopes, rarely flooded	II	III	II
Ashe and Edneyville soils, 6 to 15 percent slopes	IV	I	III
Ashe and Edneyville soils, 15 to 25 percent slopes	IV	I	III
Ashe and Edneyville soils, 25 to 45 percent slopes	IV	I	IV
Ashe fine sandy loam, 6 to 15 percent slopes	IV	III	III
Ashe fine sandy loam, 10 to 25 percent slopes	IV	III	III
Ashe fine sandy loam, 15 to 25 percent slopes	IV	III	III
Ashe fine sandy loam, 25 to 45 percent slopes	IV	III	IV
Ashe gravelly fine sandy loam, 25 to 65 percent slopes	IV	III	IV
Ashe stony fine sandy loam, ALL	IV	III	IV
Ashe stony sandy loam, ALL	IV	III	IV
Ashe-Chestnut-Buladean complex, very stony, ALL	IV	III	IV
Ashe-Cleveland complex, stony, ALL	IV	IV	IV
Ashe-Cleveland-Rock outcrop complex, ALL	IV	IV	IV
Ashe-Rock outcrop complex, 15 to 70 percent slopes	IV	VI	IV
Augusta fine sandy loam, cool variant, 1 to 4 percent slopes (Delanco)	II	I	II
Balsam, ALL	IV	VI	IV
Balsam-Rubble land complex, windswept, ALL	IV	VI	IV
Balsam-Tanasee complex, extremely bouldery, ALL	IV	VI	IV
Bandana sandy loam, 0 to 3 percent slopes, occasionally flooded	II	II	II
Bandana-Ostin complex, 0 to 3 percent slopes, occasionally flooded	III	II	III
Biltmore, ALL	IV	II	IV
Braddock and Hayesville clay loams, eroded, ALL	III	I	III
Braddock clay loam, 2 to 6 percent slopes, eroded	II	I	III
Braddock clay loam, 2 to 8 percent slopes, eroded	II	I	III
Braddock clay loam, 6 to 15 percent slopes, eroded	II	I	III
Braddock clay loam, 8 to 15 percent slopes, eroded	II	I	III
Braddock clay loam, eroded, ALL OTHER	IV	I	III
Braddock clay loam, 15 to 30 percent slopes, eroded, stony	IV	I	IV
Braddock fine sandy loam, 15 to 30 percent slopes	III	I	III
Braddock gravelly loam, 2 to 8 percent slopes	I	I	I
Braddock gravelly loam, 8 to 15 percent slopes	II	I	I
Braddock loam, 2 to 8 percent slopes	I	I	I
Braddock loam, 8 to 15 percent slopes	II	I	I
Braddock-Urban land complex, ALL	IV	I	IV
Bradson gravelly loam, ALL	II	I	I
Brandywine stony soils, ALL	IV	IV	IV
Brasstown-Junaluska complex, 8 to 15 percent slopes	III	IV	III
Brasstown-Junaluska complex, 15 to 30 percent slopes	IV	IV	III
Brasstown-Junaluska complex, ALL OTHER	IV	IV	IV
Brevard fine sandy loam, 1 to 6 percent slopes, rarely flooded	I	I	I
Brevard loam, 2 to 6 percent slopes	I	I	I
Brevard loam, 6 to 10 percent slopes	II	I	I
Brevard loam, 7 to 15 percent slopes	II	I	I
Brevard loam, 10 to 25 percent slopes	IV	I	I
Brevard loam, 15 to 25 percent slopes	IV	I	I
Brevard loam, 25 to 45 percent slopes	IV	I	II
Brevard sandy loam, 8 to 15 percent slopes	II	I	I

Map Unit Name	Agri	For	Hort
Brevard-Greenlee complex, extremely bouldery, ALL	IV	I	IV
Buladean-Chestnut complex, 15 to 30 percent slopes, stony	IV	I	III
Buladean-Chestnut complex, stony, ALL OTHER	IV	I	IV
Burton stony loam, ALL	IV	V	IV
Burton-Craggey complex, windswept, ALL	IV	VI	IV
Burton-Craggey-Rock outcrop complex, windswept, ALL	IV	VI	IV
Burton-Wayah complex, windswept, ALL	IV	VI	IV
Cashiers fine sandy loam, 2 to 8 percent slopes	II	I	I
Cashiers fine sandy loam, 8 to 15 percent slopes	II	I	II
Cashiers fine sandy loam, 15 to 30 percent slopes, stony	IV	I	II
Cashiers fine sandy loam, 30 to 50 percent slopes, stony	IV	I	III
Cashiers fine sandy loam, 50 to 95 percent slopes, stony	IV	I	IV
Cashiers gravelly fine sandy loam, 8 to 15 percent slopes	II	I	II
Cashiers gravelly fine sandy loam, 15 to 30 percent slopes	IV	I	II
Cashiers gravelly fine sandy loam, 30 to 50 percent slopes	IV	I	III
Cashiers gravelly fine sandy loam, 50 to 95 percent slopes	IV	I	IV
Cashiers sandy loam, 8 to 15 percent slopes, stony	II	I	II
Cashiers sandy loam, 15 to 30 percent slopes, stony	IV	I	II
Cashiers sandy loam, 30 to 50 percent slopes, stony	IV	I	III
Cashiers sandy loam, 50 to 95 percent slopes, stony	IV	I	IV
Cataska-Rock outcrop complex, 30 to 95 percent slopes	IV	VI	IV
Cataska-Sylco complex, 50 to 95 percent slopes	IV	VI	IV
Chandler and Fannin soils, 25 to 45 percent slopes	IV	I	IV
Chandler gravelly fine sandy loam, 8 to 15 percent slopes	IV	III	II
Chandler gravelly fine sandy loam, 15 to 30 percent slopes	IV	III	II
Chandler gravelly fine sandy loam, 30 to 50 percent slopes	IV	III	III
Chandler gravelly fine sandy loam, ALL OTHER	IV	III	IV
Chandler gravelly fine sandy loam, windswept, ALL	IV	VI	IV
Chandler loam, 2 to 8 percent slopes	III	III	II
Chandler loam, 8 to 15 percent slopes	IV	III	II
Chandler loam, 15 to 25 percent slopes	IV	III	III
Chandler loam, 25 to 65 percent slopes	IV	III	IV
Chandler silt loam, 10 to 25 percent slopes	IV	III	II
Chandler silt loam, 25 to 45 percent slopes	IV	III	III
Chandler stony loam, 45 to 70 percent slopes	IV	III	IV
Chandler stony silt loam, ALL	IV	III	IV
Chandler-Micaville complex, 8 to 15 percent slopes	IV	III	II
Chandler-Micaville complex, 15 to 30 percent slopes, stony	IV	III	II
Chandler-Micaville complex, 30 to 50 percent slopes, stony	IV	III	III
Chandler-Micaville complex, 50 to 95 percent slopes, stony	IV	III	IV
Cheoah channery loam, ALL	IV	I	IV
Cheoah channery loam, stony, ALL	IV	I	IV
Cheoah channery loam, windswept, stony	IV	VI	IV
Chester clay loam, 15 to 45 percent slopes, eroded (Evard)	IV	I	III
Chester fine sandy loam, 6 to 15 percent slopes (Evard)	II	I	I
Chester fine sandy loam, 15 to 25 percent slopes (Evard)	II	I	III
Chester fine sandy loam, 25 to 45 percent slopes (Evard)	IV	I	III
Chester loam, 2 to 6 percent slopes	II	I	I
Chester loam, 6 to 10 percent slopes	III	I	I
Chester loam, 10 to 25 percent slopes	IV	I	II
Chester loam, 25 to 45 percent slopes	IV	I	III
Chester stony loam, 10 to 15 percent slopes (Evard)	III	I	III

Map Unit Name	Agri	For	Hort
Chester stony loam, (Evard), ALL OTHER	IV	I	IV
Chestnut and Edneyville soils, 15 to 25 percent slopes	IV	I	II
Chestnut and Edneyville soils, 25 to 50 percent slopes	IV	I	III
Chestnut gravelly loam, 50 to 80 percent slopes	IV	III	IV
Chestnut-Ashe complex, ALL	IV	III	IV
Chestnut-Buladean complex, 8 to 15 percent slopes, rocky	III	III	III
Chestnut-Buladean complex, stony, ALL	IV	III	IV
Chestnut-Cleveland-Rock outcrop complex, windswept, ALL	IV	VI	IV
Chestnut-Edneyville complex, 8 to 25 percent slopes, stony	IV	III	III
Chestnut-Edneyville complex, 25 to 60 percent slopes, stony	IV	III	IV
Chestnut-Edneyville complex, windswept, stony, ALL	IV	VI	IV
Chestoa-Ditney-Rock outcrop complex, 30 to 95 percent slopes, very bouldery	IV	VI	IV
Cleveland-Chestnut-Rock outcrop complex, windswept, ALL	IV	VI	IV
Cleveland-Rock outcrop complex, 8 to 90 percent slopes	IV	VI	IV
Cliffield-Cowee complex, 15 to 30 percent slopes, very stony	IV	V	IV
Cliffield-Fairview complex, 15 to 25 percent slopes	IV	V	IV
Cliffield-Pigeonroost complex, very stony, ALL	IV	V	IV
Cliffield-Rhodhiss complex, 25 to 60 percent slopes, very stony	IV	V	IV
Cliffield-Rock outcrop complex, 50 to 95 percent slopes	IV	VI	IV
Cliffield-Woolwine complex, 8 to 15 percent slopes	IV	V	IV
Clifton (Evard) stony loam, ALL	IV	I	IV
Clifton clay loam, 8 to 15 percent slopes, eroded	III	I	III
Clifton clay loam, 15 to 30 percent slopes, eroded	IV	I	III
Clifton clay loam, 30 to 50 percent slopes, eroded	IV	I	IIII
Clifton loam, 2 to 8 percent slopes	II	I	I
Clifton loam, 6 to 10 percent slopes	II	I	I
Clifton loam, 8 to 15 percent slopes	II	I	II
Clifton loam, 10 to 25 percent slopes	IV	I	II
Clifton loam, 15 to 25 percent slopes	IV	I	II
Clifton loam, 25 to 45 percent slopes	IV	I	III
Clifton stony loam, 15 to 45 percent slopes	IV	I	IV
Clingman-Craggey-Rock outcrop complex, windswept, 15 to 95 percent slopes, extremely bouldery	IV	VI	IV
Codorus, ALL	II	II	III
Colvard, ALL	I	II	III
Comus, ALL	I	II	III
Cowee gravelly loam, stony, ALL	IV	V	IV
Cowee-Evard-Urban land complex, 15 to 30 percent slopes	IV	III	IV
Cowee-Saluda complex, stony, ALL	IV	V	IV
Craggey-Rock outcrop complex, 40 to 90 percent slopes	IV	VI	IV
Craggey-Rock outcrop-Clingman complex, windswept, rubbly, ALL	IV	VI	IV
Crossnore-Jeffrey complex, very stony, ALL	IV	I	IV
Cullasaja cobbly fine sandy loam, 8 to 30 percent slopes, very bouldery	IV	II	IV
Cullasaja cobbly loam, extremely bouldery, ALL	IV	II	IV
Cullasaja very cobbly fine sandy loam, extremely bouldery, ALL	IV	II	IV
Cullasaja very cobbly loam, extremely bouldery, ALL	IV	II	IV
Cullasaja very cobbly sandy loam, extremely bouldery, ALL	IV	II	IV
Cullasaja-Tuckasegee complex, 8 to 15 percent slopes, stony	IV	II	II
Cullasaja-Tuckasegee complex, 15 to 30 percent slopes, stony	IV	II	II
Cullasaja-Tuckasegee complex, 30 to 50 percent slopes, stony	IV	II	III
Cullasaja-Tuckasegee complex, 50 to 90 percent slopes, stony	IV	II	IV
Cullasaja-Tuckasegee complex, 50 to 95 percent slopes, stony	IV	II	IV

Map Unit Name	Agri	For	Hort
Cullasaja-Tusquitee complex, 10 to 45 percent slopes	IV	II	III
Cullowhee fine sandy loam, 0 to 2 percent slopes, occasionally flooded	II	II	II
Cullowhee, frequently flooded, ALL	IV	II	IV
Cullowhee-Nikwasi complex, 0 to 2 percent slopes, frequently flooded	IV	II	IV
Delanco (Dillard) loam, ALL	I	I	I
Delanco fine sandy loam, 2 to 6 percent slopes	II	I	I
Dellwood gravelly fine sandy loam, 0 to 5 percent slopes, frequently flooded	IV	II	IV
Dellwood, occasionally flooded, ALL	III	II	III
Dellwood-Reddies complex, 0 to 3 percent slopes, occasionally flooded	III	II	III
Dellwood-Urban land complex, 0 to 3 percent slopes, occasionally flooded	IV	II	IV
Dillard, ALL	I	I	I
Dillsboro clay loam, 2 to 8 percent slopes	I	I	I
Dillsboro clay loam, 8 to 15 percent slopes, rarely flooded	II	I	II
Dillsboro clay loam, 8 to 15 percent slopes, stony	III	I	II
Dillsboro clay loam, 15 to 30 percent slopes, stony	IV	I	II
Dillsboro loam, 2 to 8 percent slopes	I	I	I
Dillsboro loam, 8 to 15 percent slopes	II	I	II
Dillsboro-Urban land complex, 2 to 15 percent slopes	IV	I	IV
Ditney-Unicoi complex, very stony, ALL	IV	VI	IV
Ditney-Unicoi complex, 50 to 95 percent slopes, very rocky	IV	VI	IV
Ditney-Unicoi-Rock outcrop complex, ALL	IV	VI	IV
Edneytown gravelly sandy loam, 8 to 25 percent slopes	IV	I	III
Edneytown-Chestnut complex, 30 to 50 percent slopes, stony	IV	I	III
Edneytown-Chestnut complex, 50 to 80 percent slopes, stony	IV	I	IV
Edneytown-Pigeonroost complex, 8 to 15 percent slopes, stony	III	I	III
Edneytown-Pigeonroost complex, 15 to 30 percent slopes, stony	IV	I	III
Edneytown-Pigeonroost complex, 30 to 50 percent slopes, stony	IV	I	IV
Edneyville (Edneytown) fine sandy loam, 7 to 15 percent slopes	III	I	III
Edneyville (Edneytown) fine sandy loam, 15 to 25 percent slopes	IV	I	IV
Edneyville (Edneytown) fine sandy loam, 25 to 45 percent slopes	IV	I	IV
Edneyville loam, 15 to 25 percent slopes	IV	I	II
Edneyville loam, 25 to 45 percent slopes	IV	I	III
Edneyville stony loam, 45 to 70 percent slopes	IV	I	IV
Edneyville-Chestnut complex, 2 to 8 percent slopes, stony	III	I	III
Edneyville-Chestnut complex, 8 to 15 percent slopes, stony	IV	I	III
Edneyville-Chestnut complex, 10 to 25 percent slopes, stony	IV	I	III
Edneyville-Chestnut complex, 15 to 30 percent slopes, stony	IV	I	III
Edneyville-Chestnut complex, ALL OTHER	IV	I	IV
Edneyville-Chestnut-Urban land complex, ALL	IV	I	IV
Ellijay silty clay loam, 2 to 8 percent slopes, eroded	III	I	I
Ellijay silty clay loam, 8 to 15 percent slopes, eroded	IV	I	I
Ellijay silty clay loam, eroded, ALL OTHER	IV	I	II
Elsinboro loam, ALL	I	I	I
Eutrochrepts, mined, 30 to 50 percent slopes, very stony	IV	VI	IV
Evard and Saluda fine sandy loams, 25 to 60 percent slopes	IV	I	IV
Evard fine sandy loam, 7 to 15 percent slopes	III	I	II
Evard fine sandy loam, 15 to 25 percent slopes	IV	I	II
Evard fine sandy loam, 25 to 50 percent slopes	IV	I	III
Evard gravelly sandy loam, 6 to 15 percent slopes	III	I	II
Evard gravelly sandy loam, 15 to 25 percent slopes	IV	I	III
Evard loam, ALL	IV	I	IV
Evard soils, 15 to 25 percent slopes	IV	I	III

Map Unit Name	Agri	For	Hort
Evard soils, ALL OTHER	IV	I	IV
Evard stony loam, 25 to 60 percent slopes	IV	I	IV
Evard-Cowee complex, 2 to 8 percent slopes	III	I	II
Evard-Cowee complex, 8 to 15 percent slopes	III	I	II
Evard-Cowee complex, 8 to 15 percent slopes, eroded	III	I	II
Evard-Cowee complex, 8 to 25 percent slopes, stony	IV	I	III
Evard-Cowee complex, ALL OTHER	IV	I	IV
Evard-Cowee-Urban land complex, ALL	IV	I	IV
Fannin fine sandy loam, 8 to 15 percent slopes	III	I	I
Fannin fine sandy loam, 15 to 30 percent slopes	IV	I	II
Fannin fine sandy loam, 15 to 30 percent slopes, stony	IV	I	II
Fannin fine sandy loam, 30 to 50 percent slopes	IV	I	II
Fannin fine sandy loam, 30 to 50 percent slopes, stony	IV	I	III
Fannin fine sandy loam, 50 to 95 percent slopes	IV	I	III
Fannin loam, 8 to 15 percent slopes	III	I	II
Fannin loam, 15 to 25 percent slopes	IV	I	III
Fannin loam, 25 to 45 percent slopes	IV	I	III
Fannin loam, 30 to 50 percent slopes, eroded	IV	I	III
Fannin loam, 45 to 70 percent slopes	IV	I	IV
Fannin sandy clay loam, 8 to 15 percent slopes, eroded	III	I	II
Fannin sandy clay loam, eroded, ALL OTHER	IV	I	III
Fannin silt loam, 6 to 10 percent slopes, eroded	III	I	II
Fannin silt loam, 7 to 15 percent slopes	III	I	II
Fannin silt loam, 10 to 25 percent slopes, eroded	IV	I	III
Fannin silt loam, 15 to 25 percent slopes	IV	I	III
Fannin silt loam, 25 to 45 percent slopes	IV	I	III
Fannin silty clay loam, 15 to 45 percent slopes, eroded	IV	I	IV
Fannin-Chestnut complex, 50 to 85 percent slopes, rocky	IV	I	IV
Fannin-Cowee complex, 15 to 30 percent slopes, stony	IV	I	III
Fannin-Cowee complex, stony, ALL OTHER	IV	I	IV
Fannin-Urban land complex, 2 to 15 percent slopes	IV	I	IV
Fletcher and Fannin soils, 6 to 15 percent slopes	III	I	II
Fletcher and Fannin soils, 15 to 25 percent slopes	IV	I	II
Fluvaquents-Udifluvents complex, occasionally flooded, ALL	III	II	IV
Fontaflora-Ostin complex	IV	II	IV
French fine sandy loam, 0 to 3 percent slopes, frequently flooded	IV	II	IV
Greenlee ALL	IV	I	IV
Greenlee-Ostin complex, 3 to 40 percent slopes, very stony	IV	I	IV
Greenlee-Tate complex, ALL	IV	I	IV
Greenlee-Tate-Ostin complex, 1 to 15 percent slopes, extremely stony	IV	I	IV
Gullied land	IV	VI	IV
Harmiller-Shinbone complex, 15 to 30 percent slopes, stony	IV	III	III
Harmiller-Shinbone complex, 30 to 50 percent slopes, stony	IV	III	III
Hatboro loam	IV	II	IV
Hayesville channery fine sandy loam, 8 to 15 percent slopes, very stony	IV	I	II
Hayesville channery fine sandy loam, 15 to 25 percent slopes, very stony	IV	I	III
Hayesville channery fine sandy loam, 25 to 60 percent slopes, very stony	IV	I	IV
Hayesville clay loam, 2 to 8 percent slopes, eroded	III	I	II
Hayesville clay loam, 6 to 15 percent slopes, eroded	IV	I	II
Hayesville clay loam, 8 to 15 percent slopes, eroded	IV	I	II
Hayesville clay loam, 10 to 25 percent slopes, severely eroded	IV	I	III
Hayesville clay loam, 15 to 30 percent slopes, eroded	IV	I	III

Map Unit Name	Agri	For	Hort
Hayesville fine sandy loam, 6 to 15 percent slopes	III	I	I
Hayesville fine sandy loam, 8 to 15 percent slopes	III	I	I
Hayesville fine sandy loam, 15 to 25 percent slopes	III	I	II
Hayesville fine sandy loam, 15 to 30 percent slopes	III	I	II
Hayesville fine sandy loam, 25 to 50 percent slopes	IV	I	III
Hayesville loam, 2 to 7 percent slopes	II	I	I
Hayesville loam, 2 to 8 percent slopes	II	I	I
Hayesville loam, 6 to 10 percent slopes	II	I	I
Hayesville loam, 6 to 15 percent slopes	III	I	I
Hayesville loam, 7 to 15 percent slopes	III	I	I
Hayesville loam, 8 to 15 percent slopes	III	I	I
Hayesville loam, 10 to 25 percent slopes	III	I	II
Hayesville loam, 15 to 25 percent slopes	III	I	II
Hayesville loam, 15 to 30 percent slopes	III	I	II
Hayesville sandy clay loam, 15 to 30 percent slopes, eroded	IV	I	III
Hayesville sandy clay loam, eroded, ALL OTHER	III	I	II
Hayesville-Evard complex, 15 to 25 percent slopes	III	I	II
Hayesville-Evard-Urban land complex, 15 to 25 percent slopes	IV	I	IV
Hayesville-Sauratown complex, 2 to 8 percent slopes	II	I	II
Hayesville-Sauratown complex, 8 to 15 percent slopes	III	I	II
Hayesville-Sauratown complex, 15 to 25 percent slopes	III	I	III
Hayesville-Sauratown complex, 25 to 60 percent slopes	IV	I	III
Hayesville-Urban land complex, ALL	IV	I	IV
Haywood stony loam, 15 to 25 percent slopes	IV	I	III
Haywood stony loam, 25 to 50 percent slopes	IV	I	IV
Hemphill, rarely flooded, ALL	IV	II	IV
Humaquepts, loamy, 2 to 8 percent slopes, stony	IV	II	IV
Huntdale clay loam, 8 to 15 percent slopes, stony	III	I	II
Huntdale clay loam, 15 to 30 percent slopes, stony	IV	I	II
Huntdale clay loam, 30 to 50 percent slopes, stony	IV	I	III
Huntdale silty clay loam, 15 to 30 percent slopes, stony	IV	I	II
Huntdale silty clay loam, 30 to 50 percent slopes, very stony	IV	I	III
Huntdale silty clay loam, 50 to 95 percent slopes, very stony	IV	I	IV
Iotla sandy loam, 0 to 2 percent slopes, occasionally flooded	II	II	III
Junaluska-Brasstown complex, 6 to 25 percent slopes	IV	IV	II
Junaluska-Brasstown complex, 15 to 30 percent slopes	IV	IV	III
Junaluska-Brasstown complex, 25 to 60 percent slopes	IV	IV	III
Junaluska-Brasstown complex, 30 to 50 percent slopes	IV	IV	IV
Junaluska-Tsali complex, ALL	IV	IV	IV
Keener-Lostcove complex, 15 to 30 percent slopes, very stony	IV	I	III
Keener-Lostcove complex, 30 to 50 percent slopes, very stony	IV	I	IV
Kinkora loam	IV	I	III
Lonon loam, 2 to 8 percent slopes	I	I	I
Lonon loam, 8 to 15 percent slopes	II	I	I
Lonon loam, 15 to 30 percent slopes	IV	I	II
Lonon-Northcove complex, 6 to 15 percent slopes	IV	I	III
Maymead fine sandy loam, ALL	IV	I	II
Maymead-Greenlee-Potomac complex, 3 to 25 percent slopes	IV	I	IV
Nikwasi, ALL	IV	II	IV
Northcove very cobbly loam, ALL	IV	I	IV
Northcove-Maymead complex, extremely stony, ALL	IV	I	IV
Oconaluftee channery loam, ALL	IV	VI	IV

Map Unit Name	Agri	For	Hort
Oconaluftee channery loam, windswept, ALL	IV	VI	IV
Ostin, occasionally flooded, ALL	IV	II	IV
Pigeonroost-Edneytown complex, stony, ALL	IV	I	III
Pineola gravelly loam, 2 to 8 percent slopes	IV	I	II
Pineola gravelly loam, 8 to 15 percent slopes, stony	IV	I	II
Pineola gravelly loam, 15 to 30 percent slopes, stony	IV	I	III
Pits, ALL	IV	VI	IV
Plott fine sandy loam, 8 to 15 percent slopes, stony	III	I	II
Plott fine sandy loam, 15 to 30 percent slopes, stony	IV	I	II
Plott fine sandy loam, 30 to 50 percent slopes, stony	IV	I	III
Plott fine sandy loam, 50 to 95 percent slopes, stony	IV	I	IV
Plott loam, 15 to 30 percent slopes, stony	IV	I	II
Plott loam, 30 to 50 percent slopes, stony	IV	I	III
Plott loam, 50 to 95 percent slopes, stony	IV	I	IV
Ponzer muck, cool variant	IV	VI	IV
Porters gravelly loam, 8 to 15 percent slopes, stony	III	I	II
Porters gravelly loam, 15 to 30 percent slopes, stony	IV	I	II
Porters gravelly loam, 30 to 50 percent slopes, stony	IV	I	III
Porters gravelly loam, 50 to 80 percent slopes, stony	IV	I	IV
Porters loam, 25 to 45 percent slopes	IV	I	III
Porters loam, 25 to 80 percent slopes, stony	IV	I	IV
Porters loam, 30 to 50 percent slopes, stony	IV	I	IV
Porters loam, ALL OTHER	IV	I	II
Porters stony loam, 10 to 25 percent slopes	IV	I	II
Porters stony loam, 15 to 25 percent slopes	IV	I	II
Porters stony loam, 15 to 45 percent slopes	IV	I	II
Porters stony loam, 25 to 45 percent slopes	IV	I	III
Porters stony loam, ALL OTHER	IV	I	IV
Porters-Unaka complex, 8 to 15 percent slopes, stony	IV	I	II
Porters-Unaka complex, 15 to 30 percent slopes, stony	IV	I	II
Porters-Unaka complex, 30 to 50 percent slopes, stony	IV	I	III
Porters-Unaka complex, 50 to 95 percent slopes, rocky	IV	I	IV
Potomac, frequently flooded, ALL	IV	II	IV
Potomac-Iotla complex, 0 to 3 percent slopes, mounded, frequently flooded	IV	II	IV
Rabun loam, 6 to 25 percent slopes	IV	I	II
Rabun loam, 25 to 50 percent slopes	IV	I	III
Reddies, occasionally flooded	II	II	II
Reddies, frequently flooded, ALL	IV	II	IV
Rock outcrop	IV	VI	IV
Rock outcrop-Ashe complex, ALL	IV	VI	IV
Rock outcrop-Ashe-Cleveland complex, ALL	IV	VI	IV
Rock outcrop-Cataska complex, ALL	IV	VI	IV
Rock outcrop-Cleveland complex, ALL	IV	VI	IV
Rock outcrop-Cleveland complex, windswept, ALL	IV	VI	IV
Rock outcrop-Craggey complex, windswept, ALL	IV	VI	IV
Rosman, frequently flooded, ALL	IV	II	IV
Rosman, ALL OTHER	I	II	I
Rosman-Reddies complex, 0 to 3 percent slopes, occasionally flooded	I	II	I
Saunook gravelly loam, 2 to 8 percent slopes	I	I	I
Saunook gravelly loam, 8 to 15 percent slopes	I	I	I
Saunook gravelly loam, 8 to 15 percent slopes, stony	II	I	II
Saunook gravelly loam, 15 to 30 percent slopes	IV	I	II

Map Unit Name	Agri	For	Hort
Saunook gravelly loam, 15 to 30 percent slopes, stony	IV	I	II
Saunook gravelly loam, 30 to 50 percent slopes, stony	IV	I	III
Saunook loam, 2 to 8 percent slopes	I	I	I
Saunook loam, 8 to 15 percent slopes	I	I	I
Saunook loam, 8 to 15 percent slopes, stony	II	I	II
Saunook loam, 15 to 30 percent slopes, stony	IV	I	II
Saunook loam, 15 to 30 percent slopes, very stony	IV	I	III
Saunook loam, 30 to 50 percent slopes, very stony	IV	I	IV
Saunook sandy loam, 2 to 8 percent slopes	I	I	I
Saunook sandy loam, 8 to 15 percent slopes, stony	II	I	II
Saunook silt loam, 2 to 8 percent slopes	I	I	I
Saunook silt loam, 8 to 15 percent slopes, stony	II	I	II
Saunook-Nikwasi complex, 2 to 15 percent slopes	IV	I	III
Saunook-Thunder complex, ALL	IV	I	III
Saunook-Urban land complex, 2 to 15 percent slopes	IV	I	IV
Sauratown channery fine sandy loam, 8 to 15 percent slopes	IV	V	III
Sauratown channery fine sandy loam, 8 to 15 percent slopes, very stony	IV	V	III
Sauratown channery fine sandy loam, ALL OTHER	IV	V	IV
Soco-Cataska-Rock outcrop complex, 50 to 95 percent slopes	IV	VI	IV
Soco-Ditney complex, 6 to 25 percent slopes, stony	IV	III	III
Soco-Ditney complex, 8 to 15 percent slopes, very stony	IV	III	III
Soco-Ditney complex, 15 to 30 percent slopes, very stony	IV	III	III
Soco-Ditney complex, ALL OTHER	IV	III	IV
Soco-Stecoah complex, 8 to 15 percent slopes, stony	IV	III	II
Soco-Stecoah complex, 15 to 30 percent slopes	IV	III	III
Soco-Stecoah complex, 15 to 30 percent slopes, stony	IV	III	III
Soco-Stecoah complex, ALL OTHER	IV	III	IV
Soco-Stecoah complex, windswept, 30 to 50 percent slopes	IV	VI	IV
Spivey cobbly loam, extremely bouldery, ALL	IV	I	IV
Spivey stony loam, 10 to 40 percent slopes	IV	I	IV
Spivey-Santeetlah complex, 8 to 15 percent slopes, stony	IV	I	III
Spivey-Santeetlah complex, 15 to 30 percent slopes, stony	IV	I	III
Spivey-Santeetlah complex, stony, ALL OTHER	IV	I	IV
Spivey-Whiteoak complex, ALL	IV	I	IV
Statler, rarely flooded, ALL	I	I	I
Stecoah-Soco complex, 15 to 30 percent slopes, stony	IV	I	III
Stecoah-Soco complex, 30 to 50 percent slopes, stony	IV	I	III
Stecoah-Soco complex, 50 to 80 percent slopes, stony	IV	I	IV
Stony colluvial land	IV	II	IV
Stony land	IV	VI	IV
Stony steep land	IV	VI	IV
Suncook loamy sand, ALL	IV	II	II
Sylco-Cataska complex, ALL	IV	IV	IV
Sylco-Rock outcrop complex, 50 to 95 percent slopes	IV	IV	IV
Sylco-Soco complex, 10 to 30 percent slopes, stony	IV	IV	IV
Sylva-Whiteside complex, ALL	IV	I	II
Talladega, ALL	IV	IV	IV
Tanasee-Balsam complex, ALL	IV	VI	IV
Tate fine sandy loam, 2 to 6 percent slopes	I	I	I
Tate fine sandy loam, 2 to 7 percent slopes	I	I	I
Tate fine sandy loam, 2 to 8 percent slopes	I	I	I
Tate fine sandy loam, 2 to 8 percent slopes, very stony	IV	I	II

Map Unit Name	Agri	For	Hort
Tate fine sandy loam, 6 to 15 percent slopes	II	I	I
Tate fine sandy loam, 7 to 15 percent slopes	II	I	I
Tate fine sandy loam, 8 to 15 percent slopes	II	I	I
Tate fine sandy loam, 8 to 25 percent slopes	IV	I	II
Tate fine sandy loam, 15 to 25 percent slopes	IV	I	II
Tate gravelly loam, 8 to 15 percent slopes	II	I	I
Tate gravelly loam, 8 to 15 percent slopes, stony	II	I	II
Tate gravelly loam, 15 to 30 percent slopes, stony	IV	I	II
Tate loam, 2 to 6 percent slopes	I	I	I
Tate loam, 2 to 8 percent slopes	I	I	I
Tate loam, 6 to 10 percent slopes	II	I	I
Tate loam, 6 to 15 percent slopes	II	I	I
Tate loam, 8 to 15 percent slopes	II	I	I
Tate loam, 10 to 15 percent slopes	II	I	I
Tate loam, 15 to 25 percent slopes	IV	I	II
Tate loam, 15 to 30 percent slopes	IV	I	II
Tate-Cullowhee complex, 0 to 25 percent slopes	IV	I	II
Tate-French complex, 2 to 10 percent slopes	II	I	II
Tate-Greenlee complex, ALL	IV	I	IV
Thunder-Saunook complex, ALL	IV	II	IV
Toecane-Tusquitee complex, ALL	IV	II	III
Toxaway, ALL	IV	II	IV
Transylvania silt loam	I	II	II
Trimont gravelly loam, ALL	IV	I	IV
Tuckasegee-Cullasaja complex, 8 to 15 percent slopes, stony	IV	II	III
Tuckasegee-Cullasaja complex, 15 to 30 percent slopes, very stony	IV	II	IV
Tuckasegee-Cullasaja complex, 30 to 50 percent slopes, extremely stony	IV	II	IV
Tuckasegee-Whiteside complex, 2 to 8 percent slopes	I	II	I
Tuckasegee-Whiteside complex, 8 to 15 percent slopes	II	II	I
Tusquitee and Spivey stony soils, ALL	IV	I	IV
Tusquitee loam, 6 to 10 percent slopes	I	I	I
Tusquitee loam, 6 to 15 percent slopes	II	I	I
Tusquitee loam, 7 to 15 percent slopes	II	I	I
Tusquitee loam, 8 to 15 percent slopes	II	I	I
Tusquitee loam, 10 to 15 percent slopes	II	I	I
Tusquitee loam, 15 to 25 percent slopes	IV	I	II
Tusquitee stony loam, 25 to 45 percent slopes	IV	I	IV
Tusquitee stony loam, ALL OTHER	IV	I	III
Udifluvents, frequently flooded, ALL	IV	II	IV
Udorthents, loamy, ALL	IV	V	IV
Udorthents-Pits complex, mounded, 0 to 2 percent slopes, occasionally flooded	IV	V	IV
Udorthents-Urban land complex, ALL	IV	V	IV
Unaka-Porters complex, very rocky, ALL	IV	V	IV
Unaka-Rock outcrop complex, 50 to 95 percent slopes, very bouldery	IV	VI	IV
Unicoi-Rock outcrop complex, 30 to 95 percent slopes, extremely bouldery	IV	V	IV
Unison fine sandy loam, 2 to 8 percent slopes	I	I	I
Unison fine sandy loam, 8 to 15 percent slopes	II	I	I
Unison fine sandy loam, 15 to 25 percent slopes	IV	I	II
Unison loam, 2 to 8 percent slopes	I	I	I
Unison loam, 8 to 15 percent slopes	II	I	I
Unison loam, 15 to 30 percent slopes	IV	I	II
Urban land	IV	VI	II

Map Unit Name	Agri	For	Hort
Watauga loam, 6 to 10 percent slopes	III	I	II
Watauga loam, 6 to 15 percent slopes	III	I	II
Watauga loam, 8 to 15 percent slopes	III	I	II
Watauga loam, ALL OTHER	IV	I	III
Watauga sandy loam, 8 to 15 percent slopes, stony	III	I	II
Watauga sandy loam, 15 to 30 percent slopes, stony	IV	I	II
Watauga sandy loam, 30 to 50 percent slopes, stony	IV	I	III
Watauga stony loam, 15 to 45 percent slopes	IV	I	IV
Wayah loam, windswept, eroded, stony, ALL	IV	VI	IV
Wayah sandy loam, stony, ALL	IV	V	IV
Wayah sandy loam, windswept, stony, ALL	IV	VI	IV
Wayah-Burton complex, 15 to 30 percent slopes, bouldery	IV	V	IV
Wayah-Burton complex, 30 to 50 percent slopes, bouldery	IV	V	IV
Wayah-Burton complex, 50 to 95 percent slopes, very rocky	IV	V	IV
Wayah-Burton complex, windswept, ALL	IV	V	IV
Whiteoak cobbly loam, 8 to 15 percent slopes, stony	II	I	II
Whiteoak cobbly loam, 15 to 30 percent slopes, stony	IV	I	III
Whiteoak fine sandy loam, 2 to 8 percent slopes	I	I	I
Whiteoak fine sandy loam, 8 to 15 percent slopes, stony	II	I	II
Whiteoak fine sandy loam, 15 to 30 percent slopes, very stony	IV	I	III
Whiteside-Tuckasegee complex, 2 to 8 percent slopes	I	I	I

Map Unit Name	Agri	For	Hort
Alluvial land, wet	III	III	III
Alpin, ALL	IV	II	IV
Altavista. ALL	I	I	I
Altavista-Urban land complex, 0 to 3 percent slopes, rarely flooded	IV	I	IV
Augusta, ALL	I	I	I
Autryville loamy sand, ALL	III	II	III
Autryville, ALL OTHER	IV	II	IV
Autryville-Urban land complex, 0 to 6 percent slopes	IV	II	IV
Aycock very fine sandy loam, 2 to 6 percent slopes, eroded	II	II	II
Aycock, ALL OTHER	I	II	I
Ballahack fine sandy loam	I	I	I
Barclay very fine sandy loam	I	I	I
Bethera loam, 0 to 1 percent slopes	II	I	II
Bibb and Johnston soils, frequently flooded	IV	III	IV
Bibb, ALL	IV	III	IV
Blaney, ALL	IV	II	IV
Blanton, ALL	IV	V	IV
Bojac loamy fine sand, 0 to 3 percent slopes	III	II	III
Bonneau loamy fine sand, 0 to 4 percent slopes	II	II	II
Bonneau loamy sand, 0 to 4 percent slopes	II	II	II
Bonneau loamy sand, 0 to 6 percent slopes	II	II	II
Bonneau loamy sand, 6 to 12 percent slopes	III	II	III
Bonneau sand, 0 to 3 percent slopes	II	II	II
Butters fine sand, 0 to 2 percent slopes	II	II	II
Butters loamy sand, 0 to 2 percent slopes	II	II	II
Byars loam	II	I	II
Candor sand, 1 to 8 percent slopes	IV	V	IV
Candor sand, 8 to 15 percent slopes	IV	V	IV
Cape Fear loam	I	I	I
Caroline sandy loam, 0 to 2 percent slopes	II	II	II
Caroline sandy loam, 2 to 6 percent slopes	II	II	II
Centenary sand	IV	II	IV
Chastain and Bibb soils, 0 to 1 percent slopes, frequently flooded	IV	III	IV
Chastain silt loam, frequently flooded	IV	III	IV
Chewacla and Chastain soils, frequently flooded	IV	III	IV
Chewacla and Congaree loams, frequently flooded	III	III	III
Chewacla and Wehadkee soils, 0 to 1 percent slopes, frequently flooded	IV	III	IV
Chewacla loam	II	III	II
Chewacla loam, 0 to 1 percent slopes, occasionally flooded	II	III	II
Chewacla loam, frequently flooded	IV	III	IV
Chewacla silt loam	II	III	II
Chipley loamy sand (Pactolus)	IV	II	IV
Chipley sand, 0 to 2 percent slopes	IV	II	IV
Conetoe loamy sand, ALL	III	II	III
Congaree silt loam	I	III	I
Congaree silt loam, frequently flooded	I	III	I
Cowarts loamy sand, 2 to 6 percent slopes	II	I	II
Cowarts loamy sand, 6 to 10 percent slopes	III	I	III
Cowarts sandy loam, 6 to 12 percent slopes, eroded	IV	I	IV
Coxville loam	II	I	II
Coxville sandy loam	II	I	II
Craven fine sandy loam, 0 to 1 percent slopes	II	I	II

Map Unit Name	Agri	For	Hort
Craven fine sandy loam, 1 to 4 percent slopes	II	I	II
Craven fine sandy loam, 4 to 10 percent slopes	III	I	III
Craven loam, 1 to 4 percent slopes	II	I	II
Craven sandy clay loam, 1 to 4 percent slopes, eroded	II	I	II
Craven sandy loam, 2 to 6 percent slopes, eroded	II	I	II
Craven sandy loam, 2 to 6 percent slopes, eroded (Gritney)	II	I	II
Craven sandy loam, 6 to 10 percent slopes, eroded (Gritney)	III	I	III
Craven-Urban land complex, 0 to 4 percent slopes	IV	I	IV
Croatan muck	I	V	I
Deloss loam	I	III	I
Dogue, ALL	II	I	II
Dothan loamy sand, 2 to 6 percent slopes	II	I	II
Dothan, ALL OTHER	I	I	I
Dragston loamy sand	I	III	I
Dunbar, ALL	II	I	II
Duplin, ALL	II	I	II
Duplin-Urban land complex, 0 to 5 percent slopes	IV	I	IV
Dystrochrepts, steep	IV	II	IV
Emporia, ALL	II	II	II
Emporia-Urban land complex, 0 to 6 percent slopes	IV	II	IV
Emporia-Wedowee complex, 2 to 6 percent slopes	II	II	II
Eustis, ALL	IV	II	IV
Exum, ALL	I	II	I
Faceville fine sandy loam, ALL	II	II	II
Faceville loamy sand, 6 to 10 percent slopes, eroded	IV	II	IV
Faceville loamy sand, ALL OTHER	II	II	II
Faceville sandy loam, 0 to 2 percent slopes	II	II	II
Faceville sandy loam, 2 to 6 percent slopes	II	II	II
Faceville sandy loam, 2 to 6 percent slopes, eroded	III	II	III
Faceville sandy loam, 6 to 10 percent slopes, eroded	IV	II	IV
Faceville-Urban land complex, 0 to 6 percent slopes	IV	II	IV
Foreston loamy sand, ALL	II	II	II
Fuquay, ALL	IV	II	IV
Gilead loamy sand, 0 to 2 percent slopes	III	II	III
Gilead loamy sand, 10 to 15 percent slopes	IV	II	IV
Gilead loamy sand, 2 to 6 percent slopes	IV	II	IV
Gilead loamy sand, 2 to 6 percent slopes, eroded	III	II	III
Gilead loamy sand, 6 to 10 percent slopes	IV	II	IV
Gilead loamy sand, 6 to 10 percent slopes, eroded	IV	II	IV
Gilead sandy loam, 2 to 8 percent slopes	III	II	III
Gilead sandy loam, 8 to 15 percent slopes	IV	II	IV
Goldsboro, ALL	I	I	I
Goldsboro-Urban land complex, ALL	IV	I	IV
Grantham, ALL	I	I	I
Grantham-Urban land complex	IV	I	IV
Grifton-Meggett complex, occasionally flooded	IV	I	IV
Gritney fine sandy loam, 2 to 6 percent slopes	II	II	II
Gritney fine sandy loam, 2 to 7 percent slopes	II	II	II
Gritney fine sandy loam, 4 to 8 percent slopes	III	II	III
Gritney fine sandy loam, 5 to 12 percent slopes, eroded	IV	II	IV
Gritney fine sandy loam, 6 to 10 percent slopes	III	II	III
Gritney fine sandy loam, 7 to 15 percent slopes	IV	II	IV

Map Unit Name	Agri	For	Hort
Gritney fine sandy loam, 10 to 15 percent slopes	IV	II	IV
Gritney loamy fine sand, 2 to 7 percent slopes	II	II	II
Gritney sandy clay loam, ALL	III	II	III
Gritney sandy loam, 2 to 5 percent slopes, eroded	III	II	III
Gritney sandy loam, 2 to 6 percent slopes	II	II	II
Gritney sandy loam, 5 to 12 percent slopes, eroded	IV	II	IV
Gritney sandy loam, 6 to 10 percent slopes	III	II	III
Gritney-Urban land complex, 2 to 12 percent slopes	IV	II	IV
Hoffman loamy sand, 6 to 10 percent slopes, eroded (Gilead)	IV	II	IV
Hoffman loamy sand, 10 to 20 percent slopes (Gilead)	III	II	III
Johns, ALL	II	I	II
Johnston, ALL	IV	III	IV
Kalmia loamy sand, 0 to 2 percent slopes	II	II	II
Kalmia loamy sand, 0 to 3 percent slopes	II	II	II
Kalmia loamy sand, 2 to 6 percent slopes	II	II	II
Kalmia loamy sand, 10 to 15 percent slopes	III	II	III
Kalmia loamy sand, 15 to 25 percent slopes	IV	II	IV
Kenansville, ALL	III	II	III
Kinston, ALL	IV	III	IV
Kureb sand, 1 to 8 percent slopes	IV	V	IV
Lakeland, ALL	IV	V	IV
Leaf loam	III	I	III
Lenoir loam	III	I	III
Leon sand, ALL	IV	V	IV
Liddell very fine sandy loam	I	I	I
Lillington-Turbeville complex, 8 to 15 percent slopes	III	II	III
Lucy loamy sand	II	II	II
Lumbee, ALL	II	I	II
Lynchburg, ALL	I	I	I
Lynchburg-Urban land complex	IV	I	IV
Lynn Haven and Torhunta soils	II	II	II
Mantachie soils, local alluvium	II	III	II
Marlboro, ALL	II	II	II
Marlboro-Cecil complex, 2 to 8 percent slopes	II	II	II
Marvyn and Gritney soils. 6 to 15 percent slopes	IV	I	IV
Marvyn loamy sand, 6 to 12 percent slopes	IV	I	IV
Maxton loamy sand, 0 to 2 percent slopes	II	II	II
McColl loam	III	II	III
McQueen loam, 1 to 6 percent slopes	II	II	II
Meggett, ALL	IV	I	IV
Muckalee, ALL	IV	III	IV
Myatt very fine sandy loam	II	I	II
Nahunta, ALL	I	I	I
Nankin ,ALL	II	II	II
Nixonton very fine sandy loam	I	I	I
Norfolk and Faceville soils, 6 to 10 percent slopes	II	II	II
Norfolk loamy fine sand, ALL	I	II	I
Norfolk loamy sand, 0 to 2 percent slopes	I	II	I
Norfolk loamy sand, 2 to 6 percent slopes	I	II	I
Norfolk loamy sand, 2 to 6 percent slopes, eroded	II	II	II
Norfolk loamy sand, 6 to 10 percent slopes	II	II	II
Norfolk loamy sand, 6 to 10 percent slopes, eroded	III	II	III

Map Unit Name	Agri	For	Hort
Norfolk sandy loam, 0 to 2 percent slopes	I	II	I
Norfolk sandy loam, 2 to 6 percent slopes	I	II	I
Norfolk sandy loam, 2 to 6 percent slopes, eroded	II	II	II
Norfolk sandy loam, 6 to 10 percent slopes	II	II	II
Norfolk, Georgeville, and Faceville soils, 2 to 8 percent slopes	II	II	II
Norfolk-Urban land complex, 0 to 3 percent slopes	IV	II	IV
Norfolk-Wedowee complex, 2 to 6 percent slopes	II	II	II
Ocilla, ALL	III	II	III
Okenee loam (Paxville)	II	III	II
Orangeburg loamy sand, eroded, ALL	II	II	II
Orangeburg loamy sand, ALL OTHER	I	II	I
Pactolus, ALL	IV	II	IV
Pamlico muck	III	V	III
Pantego, ALL	I	I	I
Paxville fine sandy loam	II	III	II
Paxville loam	II	III	II
Peawick, ALL	II	II	II
Pits-Tarboro complex	IV	VI	IV
Plummer and Osier soils	IV	I	IV
Plummer, ALL	IV	V	IV
Pocalla loamy sand, 0 to 3 percent slopes	III	II	III
Polawana loamy sand, frequently flooded	IV	III	IV
Ponzer muck, siliceous subsoil variant	I	V	I
Portsmouth, ALL	I	I	I
Rains, ALL	I	I	I
Rains-Toisnot complex, 0 to 2 percent slopes	IV	I	IV
Rains-Urban land complex, ALL	IV	I	IV
Rimini sand	IV	V	IV
Riverview loam, 0 to 1 percent slopes, occasionally flooded	I	III	I
Roanoke and Wahee loams	II	III	II
Roanoke, ALL	II	III	II
Roanoke-Urban land complex	IV	III	IV
Ruston loamy sand, ALL	III	II	III
Ruston sandy loam, 2 to 6 percent slopes, eroded	IV	II	IV
Rutlege loamy sand	IV	V	IV
Seabrook loamy sand, rarely flooded	IV	II	IV
Smoothed sandy land	IV	VI	IV
St. Lucie sand (Kureb)	IV	V	IV
Stallings, ALL	II	II	II
State, ALL	I	I	I
Swamp	IV	III	IV
Tarboro, ALL	IV	II	IV
Toisnot, ALL	IV	II	IV
Tomahawk sand	III	II	III
Tomotley, ALL	I	I	I
Torhunta and Lynn Haven soils	II	I	II
Torhunta, ALL	I	I	I
Trebloc loam	I	I	I
Troup sand	IV	II	IV
Turbeville fine sandy loam, 2 to 6 percent slopes	I	II	I
Turbeville gravelly sandy loam, 2 to 8 percent slopes	II	II	II
Turbeville loamy sand, 0 to 2 percent slopes	I	II	I

Map Unit Name	Agri	For	Hort
Turbeville loamy sand, 2 to 6 percent slopes	I	II	I
Turbeville sandy clay loam, 2 to 6 percent slopes, eroded	II	II	II
Turbeville sandy loam, 0 to 2 percent slopes	I	II	I
Turbeville sandy loam, 2 to 6 percent slopes	I	II	I
Turbeville sandy loam, 2 to 8 percent slopes	I	II	I
Turbeville sandy loam, 6 to 12 percent slopes	II	II	II
Turbeville-Urban land complex, 0 to 8 percent slopes	IV	II	IV
Uchee, ALL	III	V	III
Udorthents, loamy	IV	VI	IV
Urban land	IV	VI	IV
Varina, ALL	II	II	II
Vaucluse loamy sand, 10 to 15 percent slopes	IV	II	IV
Vaucluse loamy sand, 10 to 15 percent slopes, eroded	IV	II	IV
Vaucluse loamy sand, 2 to 6 percent slopes	III	II	III
Vaucluse loamy sand, 2 to 6 percent slopes, eroded	III	II	III
Vaucluse loamy sand, 6 to 10 percent slopes	III	II	III
Vaucluse loamy sand, 6 to 10 percent slopes, eroded	III	II	III
Wagram fine sand, 0 to 6 percent slopes	II	II	II
Wagram loamy sand, 0 to 2 percent slopes	II	II	II
Wagram loamy sand, 0 to 6 percent slopes	II	II	II
Wagram loamy sand, 2 to 6 percent slopes	II	II	II
Wagram loamy sand, 6 to 10 percent slopes	III	II	III
Wagram loamy sand, 10 to 15 percent slopes	III	II	III
Wagram sand, thick surface, 0 to 6 percent slopes	II	II	II
Wagram sand, thick surface, 6 to 10 percent slopes	III	II	III
Wagram sand, thick surface, 10 to 15 percent slopes	III	II	III
Wagram-Troup sands, 0 to 4 percent slopes	IV	II	IV
Wagram-Urban land complex, ALL	IV	II	IV
Wahee, ALL	I	I	I
Wakulla, ALL	IV	V	IV
Wehadkee and Chewacla loams	IV	III	IV
Wehadkee, ALL	IV	III	IV
Wehadkee-Chastain association, frequently flooded	IV	III	IV
Weston loamy sand	III	I	III
Wickham fine sandy loam, 6 to 15 percent slopes, rarely flooded	II	I	II
Wickham fine sandy loam, ALL OTHER	I	I	I
Wickham loamy sandy, ALL	I	I	I
Wickham sandy loam, 0 to 4 percent slopes	I	I	I
Wickham sandy loam, 2 to 6 percent slopes, eroded	II	I	II
Wickham-Urban land complex, 1 to 6 percent slopes	IV	I	IV
Wilbanks loam, frequently flooded	IV	III	IV
Wilbanks silt loam	IV	III	IV
Winton fine sandy loam, ALL	IV	I	IV
Woodington loamy sand	II	II	II

Map Unit Name	Agri	For	Hort
Ailey-Appling complex, 2 to 8 percent slopes	II	II	II
Ailey-Appling complex, 8 to 15 percent slopes, bouldery	IV	II	III
Alamance silt loam, gently sloping phase	II	II	II
Alamance variant gravelly loam, ALL	IV	II	II
Altavista fine sandy loam, 2 to 6 percent slopes, eroded	II	I	I
Altavista fine sandy loam, 7 to 10 percent slopes	II	I	I
Altavista fine sandy loam, 0 to 2 percent slopes occasionally flooded	I	I	II
Altavista fine sandy loam, ALL OTHER	I	I	I
Altavista fine sandy loam, clayey variant	I	I	I
Altavista loam, 0 to 3 percent slopes, rarely flooded	I	I	I
Altavista sandy loam, ALL	I	I	I
Altavista silt loam, ALL	I	I	I
Appling coarse sandy loam, eroded gently sloping phase	II	II	II
Appling coarse sandy loam, eroded sloping phase	II	II	II
Appling coarse sandy loam, ALL OTHER	II	II	I
Appling fine sandy loam, 2 to 6 percent slopes	II	II	I
Appling fine sandy loam, 2 to 6 percent slopes, eroded	II	II	II
Appling fine sandy loam, 2 to 7 percent slopes	II	II	I
Appling fine sandy loam, 2 to 7 percent slopes, eroded	II	II	II
Appling fine sandy loam, 6 to 10 percent slopes	II	II	I
Appling fine sandy loam, 6 to 10 percent slopes, eroded	II	II	II
Appling fine sandy loam, 7 to 10 percent slopes(Wedowee)	II	II	I
Appling fine sandy loam, 7 to 10 percent slopes, eroded (Wedowee)	II	II	II
Appling fine sandy loam, 10 to 14 percent slopes (Wedowee)	III	II	II
Appling fine sandy loam, 10 to 14 percent slopes, eroded (Wedowee)	III	II	II
Appling fine sandy loam, (Wedowee), ALL OTHER	IV	II	II
Appling gravelly sandy loam, 2 to 6 percent slopes	II	II	I
Appling gravelly sandy loam, 2 to 6 percent slopes, eroded	II	II	II
Appling gravelly sandy loam, 6 to 10 percent slopes	II	II	I
Appling gravelly sandy loam, 6 to 10 percent slopes, eroded	II	II	II
Appling loamy sand, 2 to 6 percent slopes	II	II	I
Appling sandy clay loam, 6 to 10 percent slopes, severely eroded	III	II	II
Appling sandy clay loam, 10 to 15 percent slopes, severely eroded	IV	II	II
Appling sandy clay loam, severely eroded sloping phase	III	II	III
Appling sandy loam, 1 to 6 percent slopes	II	II	I
Appling sandy loam, 2 to 6 percent slopes	II	II	I
Appling sandy loam, 2 to 6 percent slopes, eroded	II	II	II
Appling sandy loam, 2 to 8 percent slopes	II	II	I
Appling sandy loam, 6 to 10 percent slopes	II	II	I
Appling sandy loam, 6 to 10 percent slopes, eroded	II	II	II
Appling sandy loam, 6 to 12 percent slopes	II	II	II
Appling sandy loam, 8 to 15 percent slopes	II	II	II
Appling sandy loam, 10 to 15 percent slopes	III	II	II
Appling sandy loam, 10 to 15 percent slopes, eroded	III	II	II
Appling sandy loam, 10 to 25 percent slopes, eroded (Wedowee)	IV	II	II
Appling sandy loam, 15 to 25 percent slopes (Wedowee)	IV	II	II
Appling sandy loam, 15 to 25 percent slopes, eroded (Wedowee)	IV	II	II
Appling sandy loam, eroded gently sloping phase	II	II	II
Appling sandy loam, eroded sloping phase	II	II	II
Appling sandy loam, eroded strongly sloping phase	III	II	II
Appling sandy loam, gently sloping phase	II	II	I
Appling sandy loam, moderately steep phase (Wedowee)	III	II	II

Map Unit Name	Agri	For	Hort
Appling sandy loam, sloping phase	II	II	II
Appling sandy loam, strongly sloping phase	II	II	II
Appling-Marlboro complex, 1 to 6 percent slopes	II	II	II
Appling-Urban land complex, ALL	IV	II	IV
Armenia, ALL	IV	III	III
Ashlar-Rock outcrop complex, ALL	IV	V	IV
Augusta, ALL	III	I	II
Ayersville gravelly loam, ALL	IV	V	II
Badin channery loam, 8 to 15 percent slopes	III	II	II
Badin channery silt loam, 2 to 8 percent slopes	III	II	II
Badin channery silt loam, 8 to 15 percent slopes	III	II	II
Badin channery silt loam, ALL OTHER	IV	II	II
Badin channery silty clay loam, eroded, ALL	III	II	II
Badin silty clay loam, 2 to 8 percent slopes, moderately eroded	III	II	II
Badin silty clay loam, 8 to 15 percent slopes, moderately eroded	IV	II	II
Badin-Goldston complex, 2 to 8 percent slopes	III	II	II
Badin-Goldston complex, 8 to 15 percent slopes	IV	II	III
Badin-Goldston complex, 15 to 25 percent slopes	IV	II	IV
Badin-Nanford complex, 15 to 30 percent slopes	IV	II	IV
Badin-Tarrus complex, 2 to 8 percent slopes	II	II	I
Badin-Tarrus complex, 2 to 8 percent slopes, moderately eroded	III	II	I
Badin-Tarrus complex, 8 to 15 percent slopes	III	II	II
Badin-Tarrus complex, 8 to 15 percent slopes, moderately eroded	IV	II	II
Badin-Tarrus complex, 15 to 25 percent slopes	IV	II	II
Badin-Tarrus complex, 25 to 45 percent slopes	IV	II	IV
Badin-Urban land complex, ALL	IV	II	IV
Banister loam, 1 to 6 percent slopes, rarely flooded	II	I	I
Bethlehem gravelly sandy loam, 2 to 8 percent slopes	III	II	II
Bethlehem gravelly sandy loam, 8 to 15 percent slopes	IV	II	II
Bethlehem-Hibriten complex, 6 to 15 percent slopes	IV	II	III
Bethlehem-Urban land complex, 2 to 15 percent slopes	IV	II	IV
Buncombe, ALL	IV	III	IV
Callison-Lignum complex, 2 to 6 percent slopes	III	II	II
Callison-Misenheimer complex, 6 to 10 percent slopes	III	II	II
Carbonton-Brickhaven complex, ALL	IV	II	IV
Cartecay and Chewacla soils	II	III	III
Cecil clay loam, 2 to 6 percent slopes, eroded	III	II	II
Cecil clay loam, 2 to 6 percent slopes, severely eroded	III	II	II
Cecil clay loam, 2 to 7 percent slopes, severely eroded	III	II	II
Cecil clay loam, 2 to 8 percent slopes, eroded	III	II	II
Cecil clay loam, 6 to 10 percent slopes, eroded	III	II	II
Cecil clay loam, 6 to 10 percent slopes, severely eroded	IV	II	II
Cecil clay loam, ALL OTHER	IV	II	II
Cecil fine sandy loam, 2 to 6 percent slopes	II	II	I
Cecil fine sandy loam, 2 to 6 percent slopes, eroded	II	II	II
Cecil fine sandy loam, 2 to 7 percent slopes	II	II	I
Cecil fine sandy loam, 2 to 7 percent slopes, eroded	II	II	II
Cecil fine sandy loam, 2 to 8 percent slopes	II	II	I
Cecil fine sandy loam, 6 to 10 percent slopes	III	II	II
Cecil fine sandy loam, 6 to 10 percent slopes, eroded	III	II	II
Cecil fine sandy loam, 7 to 10 percent slopes (Pacolet)	III	II	II
Cecil fine sandy loam, 7 to 10 percent slopes, eroded (Pacolet)	III	II	II

Map Unit Name	Agri	For	Hort
Cecil fine sandy loam, 8 to 15 percent slopes	III	II	II
Cecil fine sandy loam, 10 to 14 percent slopes (Pacolet)	III	II	II
Cecil fine sandy loam, 10 to 14 percent slopes, eroded (Pacolet)	III	II	II
Cecil fine sandy loam, 10 to 15 percent slopes	III	II	II
Cecil fine sandy loam, 10 to 15 percent slopes (Pacolet)	III	II	II
Cecil fine sandy loam, 10 to 15 percent slopes, eroded (Pacolet)	III	II	II
Cecil fine sandy loam, 14 to 25 percent slopes (Pacolet)	IV	II	II
Cecil fine sandy loam, 14 to 25 percent slopes, eroded (Pacolet)	IV	II	II
Cecil fine sandy loam, 25 to 40 percent slopes (Pacolet)	IV	II	III
Cecil fine sandy loam, 25 to 40 percent slopes, eroded (Pacolet)	IV	II	III
Cecil fine sandy loam, eroded gently sloping phase	II	II	II
Cecil fine sandy loam, eroded sloping phase	II	II	II
Cecil fine sandy loam, eroded strongly sloping phase	III	II	II
Cecil fine sandy loam, gently sloping phase	II	II	I
Cecil fine sandy loam, moderately steep phase	III	II	II
Cecil fine sandy loam, sloping phase	III	II	II
Cecil fine sandy loam, strongly sloping phase	III	II	II
Cecil gravelly fine sandy loam, 2 to 6 percent slopes	II	II	I
Cecil gravelly fine sandy loam, 2 to 6 percent slopes, eroded	II	II	II
Cecil gravelly fine sandy loam, 2 to 7 percent slopes	II	II	I
Cecil gravelly fine sandy loam, 2 to 7 percent slopes, eroded	III	II	II
Cecil gravelly fine sandy loam, 6 to 10 percent slopes	III	II	II
Cecil gravelly fine sandy loam, 6 to 10 percent slopes, eroded	III	II	II
Cecil gravelly fine sandy loam, 7 to 10 percent slopes	III	II	II
Cecil gravelly fine sandy loam, 7 to 10 percent slopes, eroded (Pacolet)	III	II	II
Cecil gravelly fine sandy loam, 10 to 14 percent slopes (Pacolet)	III	II	II
Cecil gravelly fine sandy loam, 10 to 14 percent slopes, eroded (Pacolet)	III	II	II
Cecil gravelly fine sandy loam, 10 to 15 percent slopes	III	II	II
Cecil gravelly fine sandy loam, 10 to 15 percent, eroded (Pacolet)	III	II	II
Cecil gravelly fine sandy loam, ALL OTHER	IV	II	II
Cecil gravelly sandy clay loam, 2 to 8 percent slopes, eroded	III	II	II
Cecil gravelly sandy clay loam, 8 to 15 percent slopes, eroded	IV	II	II
Cecil gravelly sandy loam, 2 to 6 percent slopes	II	II	I
Cecil gravelly sandy loam, 2 to 6 percent slopes, eroded	II	II	I
Cecil gravelly sandy loam, 6 to 10 percent slopes	III	II	II
Cecil gravelly sandy loam, 6 to 10 percent slopes, eroded	III	II	II
Cecil gravelly sandy loam, 10 to 15 percent slopes	IV	II	IV
Cecil loam, 2 to 6 percent slopes	II	II	I
Cecil loam, ALL OTHER	III	II	II
Cecil sandy clay loam, 8 to 15 percent slopes, eroded	IV	II	II
Cecil sandy clay loam, 8 to 15 percent slopes, moderately eroded	IV	II	II
Cecil sandy clay loam, ALL OTHER	III	II	II
Cecil sandy loam, 2 to 6 percent slopes	II	II	I
Cecil sandy loam, 2 to 6 percent slopes, eroded	III	II	II
Cecil sandy loam, 2 to 8 percent slopes	II	II	I
Cecil sandy loam, 2 to 8 percent slopes, eroded	III	II	II
Cecil sandy loam, 6 to 10 percent slopes	III	II	I
Cecil sandy loam, 6 to 10 percent slopes, eroded	III	II	II
Cecil sandy loam, 8 to 15 percent slopes	III	II	II
Cecil sandy loam, 8 to 15 percent slopes, eroded	IV	II	II
Cecil sandy loam, 10 to 15 percent slopes	III	II	II
Cecil sandy loam, 10 to 15 percent slopes, eroded	III	II	II

Map Unit Name	Agri	For	Hort
Cecil sandy loam, 10 to 15 percent slopes, eroded (Pacolet)	III	II	II
Cecil sandy loam, 15 to 45 percent slopes (Pacolet)	IV	II	II
Cecil sandy loam, eroded gently sloping phase	III	II	II
Cecil sandy loam, eroded sloping phase	III	II	II
Cecil sandy loam, gently sloping phase	II	II	I
Cecil sandy loam, sloping phase	III	II	I
Cecil soils, (Pacolet), ALL	IV	II	II
Cecil stony fine sandy loam, (Uwharrie), ALL	IV	II	II
Cecil-Urban land complex, ALL	IV	II	IV
Chastain silty clay loam	IV	III	III
Chenneby silt loam, 0 to 2 percent slopes, frequently flooded	III	III	III
Chewacla and Chastain soils, 0 to 2 percent slopes, frequently flooded	IV	III	III
Chewacla and Wehadkee, ALL	IV	III	III
Chewacla silt loam, frequently flooded	III	III	III
Chewacla, ALL OTHER	II	III	III
Cid, ALL	III	II	II
Cid-Lignum complex, 1 to 6 percent slopes	II	II	II
Cid-Misenheimer complex, 0 to 4 percent slopes	III	II	II
Cid-Urban land complex, 1 to 5 percent slopes	IV	II	IV
Meadowfield-Fairview complex, 15 to 25 percent slopes	IV	IV	IV
Meadowfield-Rhodhiss complex, 25 to 60 percent slopes, very stony	IV	IV	IV
Meadowfield-Woolwine complex, 8 to 15 percent slopes	IV	IV	IV
Claycreek fine sandy loam, 0 to 2 percent slopes	III	I	II
Colfax sandy loam, ALL	III	II	II
Colvard sandy loam, 0 to 3 percent slopes, occasionally flooded	I	III	III
Colfax silt loam	III	II	II
Congaree, frequently flooded	II	III	III
Congaree, ALL OTHER	I	III	III
Coronaca clay loam, ALL	II	II	I
Coronaca-Urban land complex, 2 to 10 percent slopes	IV	II	IV
Creedmoor coarse sandy loam, ALL	III	I	II
Creedmoor fine sandy loam, 8 to 15 percent slopes	IV	I	II
Creedmoor fine sandy loam, ALL OTHER	III	I	II
Creedmoor loam, 2 to 8 percent slopes	III	I	II
Creedmoor sandy loam, 10 to 15 percent slopes	IV	I	II
Creedmoor sandy loam, 10 to 20 percent slopes	IV	I	II
Creedmoor sandy loam, ALL OTHER	III	I	II
Creedmoor silt loam, ALL	III	I	II
Cullen clay loam, ALL	II	II	II
Cullen-Wynott complex, 15 to 35 percent slopes	IV	II	III
Cut and fill land	IV	VI	IV
Davidson clay, severely eroded strongly sloping phase	III	I	II
Davidson sandy clay loam, 15 to 25 percent slopes	III	I	I
Davidson, ALL OTHER	II	I	I
Dillard fine sandy loam, 2 to 8 percent slopes, rarely flooded	I	III	I
Dogue, ALL	II	I	I
Dogue-Roanoke complex, 0 to 6 percent slopes, rarely flooded	II	I	III
Durham coarse sandy loam, gently sloping phase	II	I	I
Durham coarse sandy loam, sloping phase	III	I	I
Durham loamy sand, 6 to 10 percent slopes, eroded	III	I	I
Durham loamy sand, ALL OTHER	II	I	I
Durham sandy loam, eroded sloping phase	II	I	I

Map Unit Name	Agri	For	Hort
Durham sandy loam, ALL OTHER	III	I	I
Efland silt loam, eroded gently sloping phase (Badin)	II	II	II
Efland silt loam, eroded sloping phase (Badin)	III	II	II
Efland silt loam, gently sloping phase (Badin)	II	II	II
Efland silt loam, sloping phase (Badin)	II	II	II
Efland silt loam, strongly sloping phase (Badin)	III	II	II
Efland silty clay loam severely eroded strongly sloping phase (Badin)	III	II	II
Efland silty clay loam, severely eroded sloping phase (Badin)	III	II	II
Enon clay loam, 2 to 6 percent slopes, eroded	III	II	II
Enon clay loam, 6 to 10 percent slopes, eroded	III	II	II
Enon clay loam, 10 to 15 percent slopes, eroded	IV	II	II
Enon clay loam, severely eroded sloping phase	III	II	II
Enon clay loam, severely eroded strongly sloping phase	IV	II	II
Enon cobbly loam, 2 to 8 percent slopes	II	II	II
Enon cobbly loam, 8 to 15 percent slopes	III	II	II
Enon complex, gullied	IV	II	IV
Enon fine sandy loam, 2 to 15 percent slopes, very stony	IV	II	II
Enon fine sandy loam, 2 to 6 percent slopes	II	II	II
Enon fine sandy loam, 2 to 6 percent slopes, eroded	III	II	II
Enon fine sandy loam, 2 to 8 percent slopes	II	II	II
Enon fine sandy loam, 6 to 10 percent slopes	III	II	II
Enon fine sandy loam, 6 to 10 percent slopes, eroded	III	II	II
Enon fine sandy loam, 8 to 15 percent slopes	III	II	II
Enon fine sandy loam, 10 to 15 percent slopes	III	II	II
Enon fine sandy loam, 10 to 15 percent slopes, eroded	III	II	II
Enon fine sandy loam, eroded gently sloping phase	II	II	II
Enon fine sandy loam, eroded sloping phase	III	II	II
Enon fine sandy loam, gently sloping phase	II	II	II
Enon fine sandy loam, sloping phase	III	II	II
Enon gravelly loam, 2 to 8 percent slopes	II	II	II
Enon gravelly loam, 8 to 15 percent slopes	III	II	II
Enon loam, 2 to 6 percent slopes	II	II	II
Enon loam, 6 to 10 percent slopes	II	II	II
Enon loam, 6 to 12 percent slopes	III	II	II
Enon loam, eroded gently sloping phase	II	II	II
Enon loam, eroded sloping phase	III	II	II
Enon loam, eroded strongly sloping phase	III	II	II
Enon loam, gently sloping phase	II	II	II
Enon loam, sloping phase	III	II	II
Enon loam, strongly sloping phase	III	II	II
Enon sandy loam, 2 to 8 percent slopes	II	II	II
Enon sandy loam, 8 to 15 percent slopes	III	II	II
Enon very cobbly loam, very stony, ALL	IV	II	IV
Enon very stony loam, ALL	IV	II	IV
Enon-Mayodan complex, 15 to 35 percent slopes, very stony	IV	II	III
Enon-Urban land complex, ALL	IV	II	IV
Enon-Wynott complex, 2 to 8 percent slopes	II	II	II
Enon-Wynott complex, 4 to 15 percent slopes, very bouldery	IV	II	IV
Fairview sandy clay loam, 2 to 8 percent slopes, moderately eroded	II	II	II
Fairview sandy clay loam, 8 to 15 percent slopes, moderately eroded	III	II	II
Fairview sandy clay loam, 15 to 25 percent slopes, moderately eroded	IV	II	II
Fairview-Urban land complex, ALL	IV	II	IV

Map Unit Name	Agri	For	Hort
Fluvaquents-Udifluvents complex, 0 to 3 percent slopes, mounded, occasionally flooded	IV	VI	IV
Gaston clay loam, 2 to 8 percent slopes, eroded	II	II	II
Gaston clay loam, 8 to 15 percent slopes, eroded	III	II	II
Gaston loam, 15 to 25 percent slopes	III	II	II
Gaston sandy clay loam, 2 to 8 percent slopes, eroded	II	II	II
Gaston sandy clay loam, 8 to 15 percent slopes, eroded	III	II	II
Georgeville clay loam, 2 to 6 percent slopes, eroded	II	I	II
Georgeville clay loam, 2 to 8 percent slopes, eroded	II	I	II
Georgeville clay loam, 8 to 15 percent slopes, eroded	III	I	II
Georgeville gravelly loam, 2 to 6 percent slopes	II	I	I
Georgeville gravelly loam, 2 to 8 percent slopes, stony	III	I	II
Georgeville gravelly loam, 6 to 10 percent slopes	II	I	I
Georgeville gravelly loam, 10 to 25 percent slopes	IV	I	II
Georgeville gravelly silt loam, 2 to 8 percent slopes	II	I	I
Georgeville gravelly silt loam, 8 to 15 percent slopes	III	I	II
Georgeville loam, 2 to 6 percent slopes	II	I	I
Georgeville loam, 2 to 8 percent slopes	II	I	I
Georgeville loam, 6 to 10 percent slopes	II	I	I
Georgeville loam, 8 to 15 percent slopes	III	I	I
Georgeville loam, ALL OTHER	IV	I	II
Georgeville silt loam, 2 to 6 percent slopes	II	I	I
Georgeville silt loam, 2 to 6 percent slopes, eroded	III	I	II
Georgeville silt loam, 2 to 8 percent slopes	II	I	I
Georgeville silt loam, 2 to 10 percent slopes, eroded	III	I	II
Georgeville silt loam, 4 to 15 percent slopes, extremely stony	IV	I	IV
Georgeville silt loam, 6 to 10 percent slopes	II	I	I
Georgeville silt loam, 6 to 10 percent slopes, eroded	III	I	II
Georgeville silt loam, 8 to 15 percent slopes	III	I	I
Georgeville silt loam, 10 to 15 percent slopes	III	I	I
Georgeville silt loam, 10 to 15 percent slopes, eroded	III	I	II
Georgeville silt loam, 10 to 25 percent slopes	IV	I	II
Georgeville silt loam, 15 to 45 percent slopes, extremely bouldery	IV	I	IV
Georgeville silt loam, eroded gently sloping phase	II	I	II
Georgeville silt loam, eroded sloping phase	III	I	II
Georgeville silt loam, eroded strongly sloping phase	III	I	II
Georgeville silt loam, gently sloping phase	II	I	I
Georgeville silt loam, moderately steep phase	III	I	II
Georgeville silt loam, sloping phase	II	I	I
Georgeville silt loam, strongly sloping phase	III	I	I
Georgeville silty clay loam, 2 to 6 percent slopes, moderately eroded	II	I	II
Georgeville silty clay loam, 2 to 8 percent slopes	II	I	II
Georgeville silty clay loam, 2 to 8 percent slopes, eroded	II	I	II
Georgeville silty clay loam, 2 to 8 percent slopes, moderately eroded	II	I	II
Georgeville silty clay loam, 6 to 10 percent slopes, moderately eroded	III	I	II
Georgeville silty clay loam, 8 to 15 percent slopes, eroded	IV	I	II
Georgeville silty clay loam, 8 to 15 percent slopes, moderately eroded	IV	I	II
Georgeville silty clay loam, severely eroded gently sloping phase	III	I	II
Georgeville silty clay loam, severely eroded moderately steep phase	IV	I	III
Georgeville silty clay loam, severely eroded sloping phase	III	I	III
Georgeville silty clay loam, severely eroded strongly sloping phase	IV	I	III
Georgeville-Badin complex, ALL	IV	I	II
Georgeville-Montonia complex, very stony ALL	IV	I	III

Map Unit Name	Agri	For	Hort
Georgeville-Urban land complex, ALL	IV	I	IV
Goldston, ALL	IV	II	III
Goldston-Badin complex, ALL	IV	II	III
Granville gravelly sandy loam, 2 to 8 percent slopes	II	II	I
Granville sandy loam, 2 to 6 percent slopes	II	II	I
Granville sandy loam, 2 to 6 percent slopes, eroded	II	II	I
Granville sandy loam, 2 to 8 percent slopes	II	II	I
Granville sandy loam, 6 to 10 percent slopes	III	II	I
Granville sandy loam, 6 to 10 percent slopes, eroded	III	II	I
Granville sandy loam, 10 to 15 percent slopes	IV	II	I
Grover, ALL	IV	II	III
Gullied land, ALL	IV	VI	IV
Halewood stony sandy loam, (Edneyville), ALL	IV	III	II
Hatboro sandy loam, 0 to 2 percent slopes, frequently flooded	IV	III	IV
Hayesville and Cecil clay loams, 7 to 14 percent slopes, severely eroded (Cecil and Cecil)	II	II	II
Hayesville and Cecil clay loams, 7 to 14 percent slopes, severely eroded (Cecil and Cecil)	III	II	II
Hayesville and Cecil clay loams, 14 to 25 percent slopes, severely eroded (Pacolet and Pacolet)	IV	II	II
Hayesville and Cecil fine sandy loam, eroded, ALL	IV	II	II
Helena clay loam, severely eroded sloping phase	IV	II	II
Helena coarse sandy loam, sloping phase	IV	II	II
Helena coarse sandy loam, ALL OTHER	III	II	II
Helena fine sandy loam, 2 to 8 percent slopes	III	II	II
Helena sandy loam, 10 to 15 percent slopes	IV	II	II
Helena sandy loam, ALL OTHER	III	II	II
Helena-Sedgefield sandy loams, ALL	III	II	II
Helena-Urban land complex, ALL	IV	II	IV
Helena-Worsham complex, 1 to 6 percent slopes	IV	II	III
Herndon loam, 2 to 6 percent slopes	II	II	I
Herndon loam, 6 to 10 percent slopes	II	II	I
Herndon silt loam, 2 to 6 percent slopes	II	II	I
Herndon silt loam, 2 to 6 percent slopes, eroded	II	II	II
Herndon silt loam, 2 to 8 percent slopes	II	II	I
Herndon silt loam, 6 to 10 percent slopes	III	II	I
Herndon silt loam, 6 to 10 percent slopes, eroded	III	II	II
Herndon silt loam, 8 to 15 percent slopes	III	II	I
Herndon silt loam, 10 to 15 percent slopes, eroded	III	II	II
Herndon silt loam, 15 to 25 percent slopes	III	II	I
Herndon silt loam, eroded gently sloping phase	II	II	II
Herndon silt loam, eroded sloping phase	III	II	II
Herndon silt loam, eroded strongly sloping phase	III	II	II
Herndon silt loam, gently sloping phase	II	II	I
Herndon silt loam, moderately steep phase	III	II	I
Herndon silt loam, sloping phase	II	II	I
Herndon silt loam, strongly sloping phase	III	II	I
Herndon silty clay loam, ALL	IV	II	II
Herndon stony silt loam, 2 to 10 percent slopes	III	II	II
Hibriten very cobbly sandy loam, ALL	IV	V	III
Hiwassee clay loam, 8 to 15 percent slopes, eroded	III	II	II
Hiwassee clay loam, 8 to 15 percent slopes, moderately eroded	III	II	II
Hiwassee clay loam, 10 to 15 percent slopes, eroded	III	II	II

Map Unit Name	Agri	For	Hort
Hiwassee clay loam, 15 to 30 percent slopes, moderately eroded	IV	II	II
Hiwassee clay loam, ALL OTHER	II	II	II
Hiwassee gravelly loam, 2 to 8 percent slopes	II	II	I
Hiwassee gravelly loam, 8 to 15 percent slopes	II	II	II
Hiwassee loam, 2 to 6 percent slopes	II	II	I
Hiwassee loam, 2 to 6 percent slopes, eroded	II	II	II
Hiwassee loam, 2 to 7 percent slopes, eroded	II	II	II
Hiwassee loam, 2 to 8 percent slopes	II	II	I
Hiwassee loam, 6 to 10 percent slopes	II	II	I
Hiwassee loam, 6 to 10 percent slopes, eroded	II	II	II
Hiwassee loam, 8 to 15 percent slopes	II	II	I
Hiwassee loam, 10 to 15 percent slopes	II	II	I
Hiwassee loam, 10 to 15 percent slopes, eroded	III	II	II
Hiwassee loam, 15 to 25 percent slopes	IV	II	II
Hornsboro, ALL	I	I	I
Hulett, ALL	IV	II	II
Hulett-Saw complex, 4 to 15 percent slopes, very rocky	IV	II	III
Hulett-Urban Land complex, 2 to 8 percent slopes	IV	II	IV
Iotla sandy loam, 0 to 2 percent slopes, occasionally flooded	II	III	III
Iredell clay loam, 2 to 6 percent slopes	III	II	III
Iredell fine sandy loam, 10 to 14 percent slopes (Wilkes)	IV	II	III
Iredell fine sandy loam, 10 to 14 percent slopes, eroded (Wilkes)	IV	II	III
Iredell fine sandy loam, ALL OTHER	III	II	III
Iredell gravelly loam, 1 to 4 percent slopes	III	II	III
Iredell loam, ALL	III	II	III
Iredell sandy loam, ALL	III	II	III
Iredell very stony loam, gently sloping phase (Enon)	IV	II	IV
Iredell-Urban land complex, ALL	IV	II	IV
Iredell-Urban land-Picture complex, 0 to 10 percent slopes	IV	II	IV
Kirksey silt loam, ALL	II	II	II
Kirksey-Cid complex, 2 to 6 percent slopes	III	II	II
Leaksville silt loam, 0 to 4 percent slopes	III	III	III
Leaksville-Urban land complex, 0 to 4 percent slopes	IV	III	IV
Leveled clayey land	IV	VI	IV
Lignum gravelly silt loam, 2 to 8 percent slopes	II	III	II
Lignum loam, 2 to 6 percent slopes	II	III	II
Lignum silt loam, 7 to 12 percent slopes	III	III	II
Lignum silt loam, ALL OTHER	II	III	II
Lloyd clay loam, 2 to 6 percent slopes, severely eroded (Gaston)	II	II	II
Lloyd clay loam, 2 to 10 percent slopes, severely eroded (Pacolet)	II	II	II
Lloyd clay loam, 6 to 10 percent slopes, severely eroded (Gaston)	II	II	II
Lloyd clay loam, 10 to 14 percent slopes, severely eroded (Pacolet)	III	II	III
Lloyd clay loam, 10 to 15 percent slopes, severely eroded (Gaston)	III	II	III
Lloyd clay loam, 14 to 25 percent slopes, severely eroded (Pacolet)	IV	II	IV
Lloyd clay loam, 15 to 25 percent slopes, severely eroded (Gaston)	IV	II	IV
Lloyd clay loam, severely eroded gently sloping phase (Gaston)	II	II	II
Lloyd clay loam, severely eroded sloping phase (Gaston)	II	II	II
Lloyd clay loam, severely eroded strongly sloping phase (Gaston)	III	II	III
Lloyd clay loam, severely eroded, moderately steep phase (Cecil)	IV	II	III
Lloyd fine sandy loam, 2 to 6 percent slopes (Cecil)	II	II	II
Lloyd fine sandy loam, 2 to 6 percent slopes, eroded (Cecil)	II	II	II
Lloyd fine sandy loam, 6 to 10 percent slopes (Cecil)	III	II	II

Map Unit Name	Agri	For	Hort
Lloyd fine sandy loam, 6 to 10 percent slopes, eroded (Cecil)	III	II	II
Lloyd fine sandy loam, 10 to 15 percent slopes (Pacolet)	II	II	II
Lloyd fine sandy loam, 10 to 15 percent slopes, eroded (Pacolet)	III	II	II
Lloyd fine sandy loam, 15 to 25 percent slopes (Pacolet)	IV	II	II
Lloyd fine sandy loam, 15 to 25 percent slopes, eroded (Pacolet)	IV	II	III
Lloyd loam, 2 to 6 percent slopes (Gaston)	II	II	I
Lloyd loam, 2 to 6 percent slopes, eroded (Davidson)	II	II	II
Lloyd loam, 2 to 6 percent slopes, eroded (Gaston)	II	II	I
Lloyd loam, 2 to 7 percent slopes (Pacolet)	II	II	I
Lloyd loam, 2 to 7 percent slopes, eroded (Pacolet)	II	II	II
Lloyd loam, 6 to 10 percent slopes (Cecil)	III	II	II
Lloyd loam, 6 to 10 percent slopes, eroded (Cecil)	III	II	II
Lloyd loam, 6 to 10 percent slopes, eroded (Davidson)	II	II	II
Lloyd loam, 7 to 10 percent slopes (Pacolet)	III	II	II
Lloyd loam, 7 to 10 percent slopes, eroded (Pacolet)	III	II	II
Lloyd loam, 10 to 14 percent slopes (Pacolet)	IV	II	II
Lloyd loam, 10 to 14 percent slopes, eroded (Pacolet)	IV	II	III
Lloyd loam, 10 to 15 percent slopes (Cecil)	IV	II	II
Lloyd loam, 10 to 15 percent slopes, eroded (Davidson)	II	II	III
Lloyd loam, 10 to 15 percent slopes, eroded (Pacolet)	III	II	III
Lloyd loam, 14 to 25 percent slopes (Pacolet)	IV	II	II
Lloyd loam, 14 to 25 percent slopes, eroded (Pacolet)	IV	II	III
Lloyd loam, 15 to 25 percent slopes (Pacolet)	IV	II	II
Lloyd loam, 15 to 25 percent slopes, eroded (Pacolet)	IV	II	III
Lloyd loam, 25 to 40 percent slopes (Pacolet)	IV	II	IV
Lloyd loam, eroded gently sloping phase (Gaston)	III	II	II
Lloyd loam, eroded sloping phase (Cecil)	III	II	II
Lloyd loam, eroded strongly sloping phase (Cecil)	IV	II	II
Lloyd loam, gently sloping phase (Gaston)	II	II	I
Lloyd loam, level phase (Gaston)	II	II	I
Lloyd loam, moderately steep phase (Cecil)	II	II	II
Lloyd loam, sloping phase (Cecil)	II	II	II
Lloyd loam, strongly sloping phase (Cecil)	IV	II	II
Local alluvial land, ALL	IV	III	III
Louisa fine sandy loam, 25 to 45 percent slopes	IV	II	III
Louisa sandy loam, 25 to 45 percent slopes	IV	II	III
Louisburg and Louisa soils, 25 to 55 percent slopes	IV	II	II
Louisburg and Louisa soils, ALL OTHER	IV	II	III
Louisburg coarse sandy loam, ALL	IV	II	II
Louisburg loamy coarse sand, ALL	IV	II	IV
Louisburg loamy sand, 2 to 6 percent slopes	III	II	II
Louisburg loamy sand, 6 to 10 percent slopes	III	II	II
Louisburg loamy sand, 6 to 15 percent slopes	IV	II	II
Louisburg loamy sand, 10 to 15 percent slopes	IV	II	II
Louisburg loamy sand, 15 to 45 percent slopes	IV	II	III
Louisburg sandy loam, ALL	IV	II	II
Louisburg-Wedowee complex, 15 to 25 percent slopes	IV	II	II
Louisburg-Wedowee complex, ALL OTHER	III	II	II
Made land	IV	VI	IV
Madison clay loam, 2 to 6 percent slopes, eroded	III	II	II
Madison clay loam, 6 to 10 percent slopes, eroded	III	II	II
Madison clay loam, eroded, ALL OTHER	IV	II	II

Map Unit Name	Agri	For	Hort
Madison complex, gullied	IV	II	IV
Madison fine sandy loam, 2 to 6 percent slopes	II	II	II
Madison fine sandy loam, 2 to 7 percent slopes	II	II	II
Madison fine sandy loam, 2 to 7 percent slopes, eroded	II	II	II
Madison fine sandy loam, 6 to 10 percent slopes	III	II	II
Madison fine sandy loam, 7 to 10 percent slopes	III	II	II
Madison fine sandy loam, 7 to 10 percent slopes, eroded	III	II	II
Madison fine sandy loam, 10 to 14 percent slopes	III	II	II
Madison fine sandy loam, 10 to 14 percent slopes, eroded	IV	II	II
Madison fine sandy loam, 10 to 15 percent slopes	III	II	II
Madison fine sandy loam, 14 to 25 percent slopes	IV	II	II
Madison fine sandy loam, 15 to 45 percent slopes	IV	II	II
Madison gravelly fine sandy loam, 2 to 6 percent slopes	II	II	II
Madison gravelly fine sandy loam, 2 to 6 percent slopes, eroded	II	II	II
Madison gravelly fine sandy loam, 6 to 10 percent slopes	III	II	II
Madison gravelly fine sandy loam, 6 to 10 percent slopes, eroded	III	II	II
Madison gravelly fine sandy loam, 7 to 10 percent slopes	III	II	II
Madison gravelly fine sandy loam, 10 to 14 percent slopes	III	II	II
Madison gravelly fine sandy loam, 10 to 15 percent slopes	III	II	II
Madison gravelly fine sandy loam, ALL OTHER	IV	II	II
Madison gravelly sandy clay loam, 2 to 8 percent slopes, moderately eroded	III	II	II
Madison gravelly sandy clay loam, 8 to 15 percent slopes, moderately eroded	IV	II	II
Madison gravelly sandy loam, 10 to 25 percent slopes, eroded	IV	II	II
Madison gravelly sandy loam, ALL OTHER	III	II	II
Madison sandy clay loam, 2 to 8 percent slopes, eroded	III	II	II
Madison sandy clay loam, 8 to 15 percent slopes, eroded	IV	II	II
Madison sandy clay loam, 15 to 25 percent slopes, eroded	IV	II	II
Madison sandy loam, 2 to 6 percent slopes	II	II	II
Madison sandy loam, 2 to 6 percent slopes, eroded	II	II	II
Madison sandy loam, 6 to 10 percent slopes	II	II	II
Madison sandy loam, 6 to 10 percent slopes, eroded	III	II	II
Madison sandy loam, 8 to 15 percent slopes	III	II	II
Madison sandy loam, 10 to 15 percent slopes	III	II	II
Madison sandy loam, ALL OTHER	IV	II	II
Madison-Bethlehem complex, 2 to 8 percent slopes, stony, moderately eroded	III	II	II
Madison-Bethlehem complex, 8 to 15 percent slopes, very stony, moderately eroded	IV	II	III
Madison-Bethlehem-Urban Land complex, 2 to 8 percent slopes	IV	II	IV
Madison-Udorthents complex, 2 to 15 percent slopes, gullied	IV	II	IV
Madison-Urban land complex, 2 to 10 percent slopes	IV	II	IV
Mantachie soils	III	III	II
Masada fine sandy loam, ALL	I	II	I
Masada gravelly sandy clay loam, eroded, ALL	II	II	I
Masada loam, 2 to 8 percent slopes	I	II	I
Masada loam, 8 to 15 percent slopes	II	II	I
Masada sandy clay loam, eroded ALL	II	II	I
Masada sandy loam, 2 to 8 percent slopes	I	II	I
Masada sandy loam, 8 to 15 percent slopes	II	II	I
Masada sandy loam, 15 to 25 percent slopes	IV	II	II
Masada-Urban land complex, 2 to 15 percent slopes	IV	II	IV
Mayodan fine sandy loam, 2 to 6 percent slopes	II	I	I
Mayodan fine sandy loam, 2 to 6 percent slopes, eroded	II	I	I
Mayodan fine sandy loam, 2 to 7 percent slopes	II	I	I

Map Unit Name	Agri	For	Hort
Mayodan fine sandy loam, 2 to 8 percent slopes	II	I	I
Mayodan fine sandy loam, 6 to 10 percent slopes	III	I	I
Mayodan fine sandy loam, 7 to 10 percent slopes	III	I	I
Mayodan fine sandy loam, 7 to 10 percent slopes, eroded	III	I	I
Mayodan fine sandy loam, 8 to 15 percent slopes	III	I	I
Mayodan fine sandy loam, 10 to 14 percent slopes	III	I	I
Mayodan fine sandy loam, 10 to 14 percent slopes, eroded	III	I	II
Mayodan fine sandy loam, ALL OTHER	IV	I	II
Mayodan gravelly sandy loam, 2 to 6 percent slopes	II	I	I
Mayodan gravelly sandy loam, 2 to 6 percent slopes, eroded	II	I	I
Mayodan gravelly sandy loam, 2 to 8 percent slopes	II	I	I
Mayodan gravelly sandy loam, 6 to 10 percent slopes	III	I	I
Mayodan gravelly sandy loam, 6 to 10 percent slopes, eroded	IV	I	I
Mayodan gravelly sandy loam, 8 to 15 percent slopes	III	I	II
Mayodan gravelly sandy loam, 10 to 15 percent slopes	III	I	II
Mayodan gravelly sandy loam, 15 to 25 percent slopes	IV	I	II
Mayodan sandy clay loam, 2 to 8 percent slopes, eroded	II	I	II
Mayodan sandy clay loam, 8 to 15 percent slopes, eroded	III	I	II
Mayodan sandy clay loam, 15 to 25 percent slopes, eroded	IV	I	II
Mayodan sandy loam, 2 to 6 percent slopes	II	I	I
Mayodan sandy loam, 2 to 6 percent slopes, eroded	II	I	I
Mayodan sandy loam, 2 to 8 percent slopes	II	I	I
Mayodan sandy loam, 6 to 10 percent slopes	III	I	I
Mayodan sandy loam, 6 to 10 percent slopes, eroded	III	I	I
Mayodan sandy loam, 8 to 15 percent slopes	III	I	II
Mayodan sandy loam, 10 to 15 percent slopes	III	I	II
Mayodan sandy loam, 10 to 15 percent slopes, eroded	IV	I	II
Mayodan sandy loam, 15 to 25 percent slopes	IV	I	II
Mayodan sandy loam, 15 to 25 percent slopes, stony	IV	I	IV
Mayodan silt loam, 2 to 8 percent slopes	II	I	I
Mayodan silt loam, 8 to 15 percent slopes	III	I	II
Mayodan silt loam, 15 to 25 percent slopes	IV	I	II
Mayodan silt loam, 25 to 45 percent slopes	IV	I	III
Mayodan silt loam, thin, ALL	III	I	II
Mayodan silty clay loam, 2 to 8 percent slopes, eroded	III	I	II
Mayodan silty clay loam, 8 to 15 percent slopes, eroded	IV	I	II
Mayodan-Brickhaven complex, 15 to 30 percent slopes	IV	I	III
Mayodan-Exway complex, eroded, ALL	III	I	II
Mayodan-Pinkston complex, 25 to 45 percent slopes	IV	I	III
Mayodan-Urban land complex, ALL	IV	I	IV
McQueen loam, 1 to 6 percent slopes	II	II	II
Mecklenburg clay loam, 2 to 8 percent slopes, eroded	II	II	II
Mecklenburg clay loam, 2 to 8 percent slopes, moderately eroded	II	II	II
Mecklenburg clay loam, 6 to 15 percent slopes, severely eroded	IV	II	II
Mecklenburg clay loam, 8 to 15 percent slopes, eroded	III	II	II
Mecklenburg clay loam, 8 to 15 percent slopes, moderately eroded	III	II	II
Mecklenburg clay loam, severely eroded sloping phase	IV	II	II
Mecklenburg fine sandy loam, 2 to 6 percent slopes	II	II	I
Mecklenburg fine sandy loam, 2 to 8 percent slopes	II	II	II
Mecklenburg fine sandy loam, 8 to 15 percent slopes	III	II	II
Mecklenburg loam, 2 to 6 percent slopes	II	II	I
Mecklenburg loam, 2 to 6 percent slopes, eroded	II	II	II

Map Unit Name	Agri	For	Hort
Mecklenburg loam, 2 to 7 percent slopes, eroded	II	II	II
Mecklenburg loam, 2 to 8 percent slopes	II	II	I
Mecklenburg loam, 6 to 10 percent slopes	II	II	II
Mecklenburg loam, 6 to 10 percent slopes, eroded	II	II	II
Mecklenburg loam, 7 to 14 percent slopes, eroded	III	II	II
Mecklenburg loam, 8 to 15 percent slopes	III	II	II
Mecklenburg loam, 10 to 15 percent slopes, eroded	III	II	II
Mecklenburg loam, ALL OTHER	IV	II	II
Mecklenburg loam, dark surface variant, 2 to 6 percent slopes	II	II	I
Mecklenburg loam, dark surface variant, 6 to 10 percent slopes	II	II	II
Mecklenburg loam, dark surface variant, 10 to 15 percent slopes	III	II	II
Mecklenburg loam, eroded gently sloping phase	II	II	II
Mecklenburg loam, eroded sloping phase	II	II	II
Mecklenburg loam, eroded strongly sloping phase	III	II	II
Mecklenburg sandy clay loam, eroded, ALL	III	II	II
Mecklenburg-Urban land complex, ALL	IV	II	IV
Miscellaneous water	IV	VI	IV
Misenheimer channery silt loam, 0 to 4 percent slopes	IV	V	III
Misenheimer-Callison complex, 0 to 3 percent slopes	IV	V	III
Misenheimer-Cid complex, 0 to 3 percent slopes	IV	V	III
Misenheimer-Kirksey complex, 0 to 5 percent slopes	IV	V	III
Mixed alluvial land, ALL	IV	III	III
Mocksville sandy loam, 2 to 8 percent slopes	II	II	II
Mocksville sandy loam, 8 to 15 percent slopes	III	II	II
Mocksville sandy loam, 15 to 45 percent slopes	IV	II	III
Moderately gullied land, ALL	IV	VI	IV
Monacan and Arents soils	I	III	IV
Monacan loam	I	III	III
Montonia very channery silt loam, 25 to 60 percent slopes, very stony	IV	V	IV
Mooshaunee-Hallison complex, 2 to 8 percent slopes	III	II	II
Mooshaunee-Hallison complex, 8 to 15 percent slopes	IV	II	III
Mooshaunee-Hallison complex, 15 to 25 percent slopes	IV	II	IV
Mooshaunee-Hallison complex, ALL OTHER	IV	II	IV
Nanford gravelly fine sandy loam, 8 to 15 percent slopes	III	II	II
Nanford silt loam, 2 to 6 percent slopes	II	II	I
Nanford silt loam, 2 to 8 percent slopes	II	II	I
Nanford silt loam, 8 to 15 percent slopes	III	II	II
Nanford silty clay loam, 2 to 6 percent slopes, moderately eroded	III	II	II
Nanford-Badin complex, 6 to 10 percent slopes	III	II	II
Nanford-Badin complex, 10 to 15 percent slopes	IV	II	II
Nanford-Emporia complex, 2 to 8 percent slopes	II	II	I
Nason gravelly loam, 2 to 6 percent slopes	III	II	I
Nason gravelly loam, 6 to 10 percent slopes	III	II	II
Nason gravelly loam, 10 to 25 percent slopes	IV	II	II
Nason gravelly loam, 25 to 50 percent slopes	IV	II	III
Nason gravelly silt loam, 2 to 8 percent slopes	II	II	I
Nason gravelly silt loam, 8 to 15 percent slopes	III	II	II
Nason loam, 2 to 6 percent slopes	II	II	I
Nason loam, 6 to 10 percent slopes	III	II	I
Nason silt loam, 2 to 6 percent slopes	II	II	I
Nason silt loam, 2 to 8 percent slopes	II	II	I
Nason silt loam, 6 to 12 percent slopes	III	II	I

Map Unit Name	Agri	For	Hort
Nason silt loam, 8 to 15 percent slopes	III	II	I
Nason silt loam, 10 to 15 percent slopes	III	II	I
Nason silt loam, 15 to 25 percent slopes	IV	II	II
Nason stony silt loam, 10 to 15 percent slopes (Uwharrie)	IV	II	IV
Oakboro silt loam, ALL	III	III	III
Orange gravelly loam, 2 to 7 percent slopes	II	II	II
Orange loam, 0 to 2 percent slopes	II	II	II
Orange silt loam, 0 to 3 percent slopes	II	II	II
Orange silt loam, eroded gently sloping moderately well drained variant	III	II	II
Orange silt loam, eroded gently sloping phase	III	II	II
Orange silt loam, eroded sloping moderately well drained variant	III	II	II
Orange silt loam, gently sloping moderately well drained variant	III	II	II
Orange silt loam, gently sloping phase	II	II	II
Orange silt loam, nearly level phase	II	II	II
Orange silt loam, sloping moderately well drained variant	III	II	II
Pacolet clay loam, 2 to 6 percent slopes, eroded	II	II	II
Pacolet clay loam, 2 to 8 percent slopes, moderately eroded	II	II	II
Pacolet clay loam, 6 to 10 percent slopes, eroded	III	II	II
Pacolet clay loam, 6 to 10 percent slopes, severely eroded	III	II	II
Pacolet clay loam, 8 to 15 percent slopes, moderately eroded	III	II	II
Pacolet clay loam, 10 to 15 percent slopes, eroded	III	II	II
Pacolet clay loam, 15 to 45 percent slopes, eroded	IV	II	II
Pacolet complex, 10 to 25 percent slopes, severely eroded	IV	II	III
Pacolet fine sandy loam, 2 to 6 percent slopes	II	II	I
Pacolet fine sandy loam, 6 to 10 percent slopes	III	II	I
Pacolet fine sandy loam, 8 to 15 percent slopes	III	II	II
Pacolet fine sandy loam, 10 to 15 percent slopes	III	II	II
Pacolet fine sandy loam, ALL OTHER	IV	II	II
Pacolet gravelly fine sandy loam, 2 to 6 percent slopes	II	II	I
Pacolet gravelly fine sandy loam, 6 to 10 percent slopes	III	II	II
Pacolet gravelly fine sandy loam, 8 to 15 percent slopes	III	II	II
Pacolet gravelly fine sandy loam, 15 to 25 percent slopes	IV	II	II
Pacolet gravelly sandy clay loam, 15 to 30 percent slopes, eroded	IV	II	II
Pacolet gravelly sandy loam, 2 to 8 percent slopes	II	II	I
Pacolet gravelly sandy loam, 8 to 15 percent slopes	III	II	II
Pacolet gravelly sandy loam, ALL OTHER	IV	II	II
Pacolet loam, 10 to 15 percent slopes	III	II	II
Pacolet loam, 15 to 25 percent slopes	IV	II	II
Pacolet sandy clay loam, 2 to 6 percent slopes, eroded	II	II	II
Pacolet sandy clay loam, 2 to 6 percent slopes, moderately eroded	II	II	II
Pacolet sandy clay loam, 2 to 8 percent slopes, eroded	II	II	II
Pacolet sandy clay loam, 6 to 10 percent slopes, moderately eroded	III	II	II
Pacolet sandy clay loam, 8 to 15 percent slopes, eroded	III	II	II
Pacolet sandy clay loam, 8 to 15 percent slopes, moderately eroded	III	II	II
Pacolet sandy clay loam, 10 to 15 percent slopes, moderately eroded	III	II	II
Pacolet sandy clay loam, ALL OTHER	IV	II	II
Pacolet sandy loam, 2 to 6 percent slopes	II	II	I
Pacolet sandy loam, 2 to 8 percent slopes	II	II	I
Pacolet sandy loam, 6 to 10 percent slopes	III	II	II
Pacolet sandy loam, 8 to 15 percent slopes	III	II	II
Pacolet sandy loam, 10 to 15 percent slopes	III	II	II
Pacolet sandy loam, ALL OTHER	IV	II	II

Map Unit Name	Agri	For	Hort
Pacolet soils, 10 to 25 percent slopes	IV	II	III
Pacolet-Bethlehem complex, 2 to 8 percent slopes, eroded	III	II	II
Pacolet-Bethlehem complex, 2 to 8 percent slopes, moderately eroded	III	II	II
Pacolet-Bethlehem complex, ALL OTHER	IV	II	II
Pacolet-Bethlehem complex, 15 to 25 percent slopes, stony	IV	II	III
Pacolet-Bethlehem-Urban Land complex, ALL	IV	II	IV
Pacolet-Madison-Urban land complex, ALL	IV	II	IV
Pacolet-Saw complex, 2 to 8 percent slopes, eroded	III	II	II
Pacolet-Saw complex, 2 to 8 percent slopes, moderately eroded	III	II	II
Pacolet-Saw complex, ALL OTHER	IV	II	II
Pacolet-Udorthents complex, gullied, ALL	IV	II	IV
Pacolet-Urban land complex, ALL	IV	II	IV
Pacolet-Wilkes complex, 8 to 15 percent slopes	III	II	II
Pacolet-Wilkes complex, 15 to 25 percent slopes	IV	II	II
Picture loam, 0 to 3 percent slopes	IV	II	III
Pinkston, ALL	IV	II	III
Pinoka, ALL	IV	II	III
Pinoka-Carbonton complex, 2 to 8 percent slopes	IV	II	III
Pits, ALL	IV	VI	IV
Poindexter and Zion sandy loams, 2 to 8 percent slopes	III	II	II
Poindexter and Zion sandy loams, 8 to 15 percent slopes	IV	II	II
Poindexter and Zion sandy loams, ALL OTHER	IV	II	III
Poindexter fine sandy loam, 25 to 60 percent slopes	IV	II	III
Poindexter loam, 2 to 8 percent slopes	III	II	II
Poindexter loam, 8 to 15 percent slopes	IV	II	II
Poindexter loam, 15 to 45 percent slopes	IV	II	III
Poindexter-Mocksville complex, 2 to 8 percent slopes	IV	II	II
Poindexter-Mocksville complex, 8 to 15 percent slopes	IV	II	II
Poindexter-Mocksville complex, ALL OTHER	IV	II	III
Poindexter-Zion-Urban land complex, 2 to 15 percent slopes	IV	II	IV
Polkton-White Store complex, 2 to 8 percent slopes, severely eroded	III	II	III
Polkton-White Store complex, ALL OTHER	IV	II	III
Quarry, ALL	IV	VI	IV
Rhodhiss, ALL	IV	II	II
Rhodhiss-Bannertown complex, 25 to 50 percent slopes	IV	II	III
Rion fine sandy loam, 2 to 8 percent slopes	III	II	II
Rion fine sandy loam, 8 to 15 percent slopes	IV	II	II
Rion fine sandy loam, 15 to 25 percent slopes	IV	II	II
Rion fine sandy loam, 25 to 60 percent slopes	IV	II	III
Rion loamy sand, 8 to 15 percent slopes	IV	II	II
Rion loamy sand, 15 to 25 percent slopes	IV	II	III
Rion sandy loam, 2 to 8 percent slopes	III	II	II
Rion sandy loam, 8 to 15 percent slopes	III	II	II
Rion sandy loam, 15 to 25 percent slopes	IV	II	II
Rion sandy loam, 15 to 30 percent slopes	IV	II	II
Rion sandy loam, ALL OTHER	IV	II	III
Rion, Pacolet, and Wateree soils, 25 to 60 percent slopes	IV	II	IV
Rion-Ashlar complex, 15 to 35 percent slopes, stony	IV	II	III
Rion-Ashlar complex, 25 to 60 percent slopes, rocky	IV	II	IV
Rion-Ashlar-Rock outcrop complex, 45 to 70 percent slopes	IV	II	IV
Rion-Cliffside complex, 25 to 60 percent slopes, very stony	IV	II	IV
Rion-Hibriten complex, 25 to 45 percent slopes, very stony	IV	II	IV

Map Unit Name	Agri	For	Hort
Rion-Urban land complex, 2 to 10 percent slopes	IV	II	IV
Rion-Wateree-Wedowee complex, 8 to 15 percent slopes	IV	II	III
Rion-Wedowee complex, ALL	III	II	II
Rion-Wedowee-Ashlar complex, ALL	IV	II	III
Riverview and Buncombe soils, 0 to 3 percent slopes, frequently flooded	II	III	III
Riverview and Toccoa soils, 0 to 4 percent slopes, occasionally flooded	II	III	III
Riverview, frequently flooded, ALL	II	III	III
Riverview, occasionally flooded, ALL	I	III	III
Roanoke, ALL	II	III	III
Roanoke-Wahee complex, 0 to 3 percent slopes, occasionally flooded	II	III	III
Rock outcrop	IV	VI	IV
Rock outcrop-Ashlar complex, 2 to 15 percent slopes	IV	VI	IV
Rock outcrop-Wake complex, ALL	IV	VI	IV
Sauratown channery fine sandy loam, 25 to 60 percent slopes, very stony	IV	IV	IV
Saw-Pacolet complex, ALL	IV	II	II
Saw-Wake Complex, very rocky, ALL	IV	II	IV
Secrest-Cid complex, 0 to 3 percent slopes	III	II	II
Sedgefield fine sandy loam, 1 to 4 percent slopes	II	II	II
Sedgefield fine sandy loam, 1 to 6 percent slopes	III	II	II
Sedgefield sandy loam, 1 to 6 percent slopes	III	II	II
Sedgefield sandy loam, 2 to 8 percent slopes	III	II	II
Severely gullied land, ALL	IV	VI	IV
Shellbluff loam, 0 to 2 percent slopes, occasionally flooded	II	III	III
Shellbluff silt loam, 0 to 2 percent slopes, frequently flooded	IV	III	III
Skyuka clay loam, 2 to 8 percent slopes, eroded	II	I	II
Skyuka loam, 2 to 8 percent slopes	I	I	II
Spray loam, 0 to 5 percent slopes	IV	II	III
Spray-Urban land complex, 0 to 5 percent slopes	IV	II	IV
Starr loam, ALL	II	I	III
State, ALL	I	I	I
Stoneville loam, 2 to 8 percent slopes	II	II	I
Stoneville loam, 8 to 15 percent slopes	III	II	I
Stoneville loam, 15 to 25 percent slopes	IV	II	II
Stoneville-Urban land complex, 2 to 10 percent slopes	IV	II	IV
Stony land	IV	VI	IV
Swamp	IV	III	IV
Tallapoosa fine sandy loam, ALL	IV	II	III
Tarrus gravelly silt loam, 2 to 8 percent slopes	II	II	I
Tarrus-Georgeville complex, 8 to 15 percent slopes	II	II	I
Tatum and Nason channery silt loams, 15 to 25 percent slopes	IV	II	II
Tatum channery silt loam, ALL	III	II	I
Tatum channery silty clay loam, ALL	III	II	II
Tatum gravelly loam, 2 to 8 percent slopes	II	II	I
Tatum gravelly loam, 8 to 15 percent slopes	III	II	I
Tatum gravelly loam, ALL OTHER	IV	II	II
Tatum gravelly silt loam, 2 to 8 percent slopes	II	II	I
Tatum gravelly silt loam, 8 to 15 percent slopes	III	II	I
Tatum gravelly silt loam, ALL OTHER	IV	II	II
Tatum gravelly silty clay loam, eroded, ALL	III	II	II
Tatum loam, 2 to 6 percent slopes	II	II	I
Tatum loam, 10 to 15 percent slopes	III	II	II
Tatum loam, ALL OTHER	IV	II	II

Map Unit Name	Agri	For	Hort
Tatum silt loam, 2 to 8 percent slopes	II	II	I
Tatum silt loam, 8 to 15 percent slopes	III	II	I
Tatum silt loam, ALL OTHER	IV	II	II
Tatum silty clay loam, eroded, ALL	III	II	II
Tatum-Badin complex, 2 to 8 percent slopes	III	II	I
Tatum-Badin complex, 2 to 8 percent slopes, eroded	III	II	II
Tatum-Badin complex, 8 to 15 percent slopes	III	II	II
Tatum-Montonia complex, 15 to 30 percent slopes	IV	II	II
Tatum-Montonia complex, ALL OTHER	III	II	II
Tatum-Urban land complex, 2 to 8 percent slopes	IV	II	IV
Tetotum fine sandy loam, 1 to 4 percent slopes	I	I	I
Tetotum silt loam, 0 to 3 percent slopes	I	I	I
Tirzah silt loam, eroded gently sloping phase (Tatum)	III	II	I
Tirzah silt loam, eroded sloping phase (Tatum)	II	II	I
Tirzah silt loam, eroded strongly sloping phase (Tatum)	III	II	II
Tirzah silt loam, gently sloping phase (Stoneville)	II	II	II
Tirzah silt loam, sloping phase (Stoneville)	III	II	II
Tirzah silt loam, strongly sloping phase (Stoneville)	III	II	II
Tirzah silty clay loam, severely eroded gently sloping phase (Tatum)	III	II	II
Tirzah silty clay loam, severely eroded sloping phase (Tatum)	III	II	II
Tirzah silty clay loam, severely eroded strongly sloping phase (Tatum)	IV	II	II
Toast sandy loam, 2 to 8 percent slopes	II	I	I
Toast sandy loam, 8 to 15 percent slopes	III	I	II
Toccoa, ALL	I	III	III
Turbeville fine sandy loam, 0 to 3 percent slopes	I	II	I
Udorthents, ALL	IV	VI	IV
Udorthents-Pits complex, mounded, 0 to 2 percent slopes, occasionally flooded	IV	VI	IV
Udorthents-Urban land complex, ALL	IV	VI	IV
Urban land, ALL	IV	VI	IV
Urban land-Arents complex, occasionally flooded	IV	III	IV
Urban land-Iredell-Creedmoor complex, 2 to 10 percent slopes	IV	II	IV
Urban land-Masada complex, 2 to 15 percent slopes	IV	II	IV
Uwharrie clay loam, 2 to 8 percent slopes, eroded	III	II	III
Uwharrie clay loam, 8 to 15 percent slopes, eroded	IV	II	III
Uwharrie loam, 15 to 25 percent slopes	IV	II	III
Uwharrie loam, very stony, ALL	IV	II	III
Uwharrie silt loam, 2 to 8 percent slopes	II	II	I
Uwharrie silty clay loam, 2 to 8 percent slopes, eroded	III	II	II
Uwharrie silty clay loam, 2 to 8 percent slopes, moderately eroded	III	II	II
Uwharrie silty clay loam, 8 to 15 percent slopes, eroded	IV	II	II
Uwharrie stony loam, ALL	IV	II	III
Uwharrie stony loam, very bouldery, ALL	IV	II	IV
Uwharrie-Badin complex, ALL	IV	II	III
Uwharrie-Tatum complex, 8 to 15 percent slopes	III	II	III
Uwharrie-Tatum complex, 8 to 15 percent slopes, moderately eroded	IV	II	III
Uwharrie-Urban Land, 2 to 8 percent slopes	IV	II	IV
Vance clay loam, severely eroded sloping phase	IV	II	II
Vance coarse sandy loam, 2 to 8 percent slopes	II	II	II
Vance coarse sandy loam, eroded gently sloping phase	III	II	II
Vance coarse sandy loam, eroded sloping phase	III	II	II
Vance coarse sandy loam, gently sloping phase	II	II	II

Map Unit Name	Agri	For	Hort
Vance sandy clay loam, ALL	III	II	II
Vance sandy loam, 2 to 6 percent slopes	II	II	II
Vance sandy loam, 2 to 6 percent slopes, eroded	III	II	II
Vance sandy loam, 2 to 8 percent slopes	II	II	II
Vance sandy loam, 6 to 10 percent slopes	III	II	II
Vance sandy loam, 6 to 10 percent slopes, eroded	III	II	II
Vance sandy loam, 8 to 15 percent slopes	III	II	II
Vance sandy loam, 10 to 15 percent slopes	III	II	II
Vance sandy loam, eroded gently sloping phase	III	II	II
Vance sandy loam, eroded moderately sloping phase	III	II	II
Vance sandy loam, eroded strongly sloping phase	IV	II	II
Vance sandy loam, gently sloping phase	II	II	II
Vance-Urban land complex, 2 to 10 percent slopes	IV	II	IV
Wadesboro clay loam, 2 to 8 percent slopes, moderately eroded	II	I	II
Wadesboro clay loam, 8 to 15 percent slopes, moderately eroded	III	I	II
Wadesboro fine sandy loam, 2 to 7 percent slopes (Mayodan)	II	I	II
Wadesboro fine sandy loam, 2 to 7 percent slopes, eroded (Mayodan)	II	I	II
Wadesboro fine sandy loam, 7 to 10 percent slopes (Mayodan)	III	I	II
Wadesboro fine sandy loam, 7 to 10 percent slopes, eroded (Mayodan)	III	I	II
Wadesboro fine sandy loam, 10 to 14 percent slopes (Mayodan)	III	I	II
Wadesboro fine sandy loam, 10 to 14 percent slopes, eroded (Mayodan)	IV	I	II
Wadesboro fine sandy loam, 14 to 30 percent slopes (Mayodan)	IV	I	II
Wahee, ALL	II	III	I
Wake soils, ALL	IV	II	III
Wake-Saw-Wedowee complex, 2 to 8 percent slopes, rocky	IV	II	III
Wake-Wateree complex, 15 to 30 percent slopes, very rocky	IV	II	III
Wake-Wateree-Wedowee complex, 8 to 15 percent slopes, rocky	IV	II	III
Warne and Roanoke fine sandy loams (Dogue)	IV	III	II
Wateree fine sandy loam, ALL	IV	II	II
Wateree-Rion complex, 40 to 95 percent slopes	IV	II	III
Wateree-Rion-Wedowee complex, 15 to 30 percent slopes	IV	II	III
Wedowee coarse sandy loam, 2 to 6 percent slopes	II	I	I
Wedowee coarse sandy loam, 6 to 10 percent slopes	III	I	II
Wedowee loam, 2 to 8 percent slopes	II	I	I
Wedowee loam, 8 to 15 percent slopes	III	I	II
Wedowee loam, 15 to 25 percent slopes	IV	I	II
Wedowee sandy clay loam, 8 to 15 percent slopes, eroded	IV	I	II
Wedowee sandy loam, 2 to 10 percent slopes, extremely bouldery	IV	I	IV
Wedowee sandy loam, 2 to 15 percent slopes, bouldery	IV	I	III
Wedowee sandy loam, 2 to 6 percent slopes	II	I	I
Wedowee sandy loam, 2 to 6 percent slopes, eroded	II	I	II
Wedowee sandy loam, 2 to 8 percent slopes	II	I	I
Wedowee sandy loam, 6 to 10 percent slopes	III	I	II
Wedowee sandy loam, 6 to 10 percent slopes, eroded	III	I	II
Wedowee sandy loam, 6 to 15 percent slopes	III	I	II
Wedowee sandy loam, 8 to 15 percent slopes	III	I	II
Wedowee sandy loam, 10 to 15 percent slopes	III	I	II
Wedowee sandy loam, 10 to 15 percent slopes, eroded	III	I	II
Wedowee sandy loam, 10 to 25 percent slopes	III	I	II
Wedowee sandy loam, 15 to 25 percent slopes	IV	I	II
Wedowee sandy loam, 15 to 35 percent slopes, bouldery	IV	I	III
Wedowee sandy loam, 15 to 40 percent slopes	IV	I	II

Map Unit Name	Agri	For	Hort
Wedowee-Louisburg complex, 2 to 6 percent slopes	II	I	II
Wedowee-Louisburg complex, ALL OTHER	III	I	III
Wedowee-Urban land-Udorthents complex, 2 to 10 percent slopes	IV	I	IV
Wehadkee and Bibb soils	IV	III	III
Wehadkee, ALL	IV	III	III
White Store clay loam, ALL	IV	II	III
White Store fine sandy loam, moderately eroded, ALL	IV	II	III
White Store loam, 8 to 15 percent slopes	IV	II	III
White Store loam, ALL OTHER	III	II	III
White Store sandy loam, 2 to 6 percent slopes	III	II	III
White Store sandy loam, ALL OTHER	IV	II	III
White Store silt loam, 8 to 15 percent slopes	IV	II	III
White Store silt loam, ALL OTHER	III	II	III
White Store-Polkton complex, ALL	IV	II	III
White Store-Urban land complex, ALL	IV	II	IV
Wickham fine sandy loam, 0 to 3 percent slopes, rarely flooded	I	I	I
Wickham fine sandy loam, 2 to 6 percent slopes	I	I	I
Wickham fine sandy loam, 2 to 6 percent slopes, eroded	II	I	I
Wickham fine sandy loam, 2 to 7 percent slopes, eroded	II	I	I
Wickham fine sandy loam, 2 to 8 percent slopes	II	I	I
Wickham fine sandy loam, 6 to 10 percent slopes	II	I	I
Wickham fine sandy loam, 6 to 10 percent slopes, eroded	III	I	II
Wickham fine sandy loam, 7 to 14 percent slopes, eroded	III	I	II
Wickham fine sandy loam, 10 to 15 percent slopes	III	I	II
Wickham sandy loam, ALL	I	I	I
Wilkes, ALL	IV	II	III
Wilkes-Poindexter-Wynott complex, ALL	IV	II	III
Wilkes-Urban land complex, 8 to 15 percent slopes	IV	II	IV
Winnsboro fine sandy loam, 2 to 8 percent slopes	II	II	I
Winnsboro loam, 2 to 8 percent slopes	III	II	I
Winnsboro loam, 8 to 15 percent slopes	IV	II	II
Winnsboro-Wilkes complex, 2 to 8 percent slopes	III	II	II
Winnsboro-Wilkes complex, ALL OTHER	IV	II	III
Woolwine-Fairview complex, 2 to 8 percent slopes, moderately eroded	III	II	II
Woolwine-Fairview complex, moderately eroded, ALL OTHER	IV	II	II
Woolwine-Fairview-Urban land complex, ALL	IV	II	IV
Worsham, ALL	IV	III	III
Wynott cobbly loam, 2 to 10 percent slopes, extremely stony	IV	II	IV
Wynott loam, 2 to 8 percent slopes	III	II	II
Wynott-Enon complex, 2 to 8 percent slopes	II	II	II
Wynott-Enon complex, 2 to 8 percent slopes, moderately eroded	II	II	II
Wynott-Enon complex, 8 to 15 percent slopes	II	II	II
Wynott-Enon complex, 8 to 15 percent slopes, moderately eroded	III	II	II
Wynott-Enon complex, 15 to 25 percent slopes	IV	II	II
Wynott-Enon complex, extremely bouldery, ALL	IV	II	IV
Wynott-Wilkes-Poindexter complex, 2 to 8 percent slopes	IV	II	II
Wynott-Winnsboro complex, 2 to 8 percent slopes	II	II	II
Wynott-Winnsboro complex, 8 to 15 percent slopes	II	II	II
Wynott-Winnsboro complex, 15 to 25 percent slopes	IV	II	II
Zion gravelly loam, 2 to 8 percent slopes	III	II	II
Zion gravelly loam, 8 to 15 percent slopes	IV	II	II
Zion-Enon complex, 2 to 8 percent slopes	III	II	III

Map Unit Name	Agri	For	Hort
Zion-Enon complex, 8 to 15 percent slopes	IV	II	II
Zion-Mocksville complex, 25 to 45 percent slopes	IV	II	III
Zion-Wilkes complex, 8 to 15 percent slopes	IV	II	II
Zion-Winnsboro-Mocksville complex, ALL	IV	II	II

Map Unit Name	Agri	For	Hort
Ailey gravelly loamy sand, 8 to 15 percent slopes	III	V	III
Ailey gravelly loamy sand, 15 to 25 percent slopes	IV	V	IV
Ailey loamy sand, ALL	III	V	III
Ailey sand, moderately wet, 0 to 6 percent slopes	II	V	II
Ailey-Urban land complex, ALL	IV	V	IV
Bibb loam, 0 to 2 percent slopes, frequently flooded	IV	III	IV
Blaney loamy sand, 2 to 8 percent slopes	II	II	II
Blaney loamy sand, 8 to 15 percent slopes	III	II	III
Blaney-Urban land complex, ALL	IV	II	IV
Bragg sandy loam, 1 to 4 percent slopes	IV	V	IV
Candor and Wakulla soils, 8 to 15 percent slopes	IV	V	IV
Candor sand, ALL	IV	V	IV
Candor-Urban land complex, 2 to 12 percent slopes	IV	V	IV
Dothan gravelly loamy sand, 0 to 6 percent slopes	I	II	I
Dothan loamy sand, ALL	I	II	I
Emporia loamy sand, ALL	II	II	II
Faceville sandy clay loam, 2 to 6 percent slopes, eroded	II	II	II
Fuquay, ALL	II	II	II
Fuquay-Urban land complex, 0 to 6 percent slopes	IV	II	IV
Gilead loamy sand, ALL	II	II	II
Johns fine sandy loam, 0 to 2 percent slopes	I	I	I
Johnston, ALL	IV	III	IV
Kalmia sandy loam, wet substratum, 0 to 2 percent slopes	I	II	I
Kenansville loamy sand, 0 to 4 percent slopes	II	I	II
Lakeland, ALL	IV	V	IV
Lakeland-Urban land complex, 1 to 8 percent slopes	IV	V	IV
Lillington gravelly sandy loam, 2 to 8 percent slopes	III	II	III
Lillington gravelly sandy loam, 8 to 15 percent slopes	IV	II	IV
Lillington gravelly sandy loam, 15 to 25 percent slopes	IV	II	IV
Pactolus sand, 0 to 3 percent slopes	IV	II	IV
Paxville fine sandy loam, 0 to 2 percent slopes	I	III	I
Pelion loamy sand, 0 to 2 percent slopes	II	II	II
Pelion loamy sand, 1 to 4 percent slopes	IV	II	IV
Pelion loamy sand, 2 to 8 percent slopes	III	II	III
Pelion loamy sand, 8 to 15 percent slopes	IV	II	IV
Pelion-Urban land complex, ALL	IV	II	IV
Pelion-Urban land complex, 8 to 15 percent slopes	IV	II	IV
Pocalla loamy sand, 0 to 6 percent slopes	II	II	II
Rains fine sandy loam, 0 to 2 percent slopes	III	I	III
Tetotum silt loam, 0 to 3 percent slopes, rarely flooded	I	I	I
Udorthents, ALL	IV	VI	IV
Urban land, ALL	IV	VI	IV
Vaucluse gravelly loamy sand, 2 to 8 percent slopes	III	II	III
Vaucluse gravelly loamy sand, 8 to 15 percent slopes	IV	II	IV
Vaucluse gravelly loamy sand, 15 to 25 percent slopes	IV	II	IV
Vaucluse gravelly sandy loam, ALL	III	II	III
Vaucluse gravelly sandy loam, 8 to 15 percent slopes	III	II	III
Vaucluse gravelly sandy loam, 15 to 25 percent slopes	III	II	III
Vaucluse loamy sand, 2 to 8 percent slopes	II	II	II
Vaucluse loamy sand, 8 to 15 percent slopes	III	II	III
Vaucluse loamy sand, 15 to 25 percent slopes	IV	II	IV
Vaucluse very gravelly loamy sand, ALL	IV	II	IV

Map Unit Name	Agri	For	Hort
Vaucluse-Gilead loamy sands, 15 to 25 percent slopes	IV	II	IV
Vaucluse-Urban land complex, ALL	IV	II	IV
Wakulla and Candor soils, 0 to 8 percent slopes	IV	V	IV
Wakulla sand, ALL	IV	V	IV
Wakulla-Candor-Urban land complex, 0 to 10 percent slopes	IV	V	IV
Wehadkee fine sandy loam	IV	III	IV
Wehadkee loam, 0 to 2 percent slopes, frequently flooded	IV	III	IV

Map Unit Name	Agri	For	Hort
Alaga, ALL	IV	II	IV
Alpin, ALL	IV	II	IV
Altavista, ALL	I	I	I
Altavista-Urban land complex, 0 to 2 percent slopes	IV	I	IV
Arapahoe fine sandy loam	II	I	II
Augusta, ALL	II	I	II
Autryville fine sand, 1 to 4 percent slopes	IV	II	IV
Autryville, ALL OTHER	III	II	III
Aycock, ALL ERODED	II	I	II
Aycock, ALL OTHER	I	I	I
Ballahack loam, 0 to 2 percent slopes, occasionally flooded	I	I	I
Bayboro, ALL	I	I	I
Baymeade and Marvyn soils, 6 to 12 percent slopes	IV	V	IV
Baymeade fine sand, ALL	IV	V	IV
Baymeade-Urban land complex, 0 to 6 percent slopes	IV	V	IV
Bethera, ALL	II	I	II
Bibb and Johnston loams, frequently flooded	IV	III	IV
Bibb, ALL	IV	III	IV
Bladen, ALL	III	I	III
Blanton, ALL	IV	V	IV
Bohicket, ALL	IV	VI	IV
Bonneau loamy fine sand, 0 to 6 percent slopes	II	II	II
Bonneau loamy sand, 0 to 4 percent slopes	II	II	II
Bonneau loamy sand, 0 to 6 percent slopes	II	II	II
Bonneau loamy sand, 6 to 10 percent slopes	III	II	III
Bonneau loamy sand, 6 to 12 percent slopes	III	II	III
Borrow pits	IV	VI	IV
Bragg, ALL	IV	VI	IV
Brookman loam, frequently flooded	IV	III	IV
Butters loamy fine sand, 0 to 3 percent slopes	III	II	III
Byars loam	II	III	II
Cainhoy, ALL	IV	V	IV
Cape Fear loam, ALL	I	I	I
Caroline fine sandy loam, ALL	II	II	II
Carteret, ALL	IV	VI	IV
Centenary fine sand	IV	II	IV
Chastain and Chenneby soils, frequently flooded	IV	III	IV
Chastain silt loam, frequently flooded	IV	III	IV
Chewacla and Chastain soils, frequently flooded	IV	III	IV
Chewacla loam, frequently flooded	IV	III	IV
Chipley sand	IV	II	IV
Chowan silt loam	IV	III	IV
Conetoe, ALL	III	II	III
Congaree silt loam, 0 to 4 percent slopes, occasionally flooded	I	III	I
Corolla fine sand	IV	VI	IV
Coxville, ALL	II	I	II
Craven clay loam, 4 to 12 percent slopes, eroded	IV	I	IV
Craven fine sandy loam, 0 to 1 percent slopes	II	I	II
Craven fine sandy loam, 1 to 4 percent slopes	II	I	II
Craven fine sandy loam, 1 to 6 percent slopes, eroded	III	I	III
Craven fine sandy loam, 4 to 8 percent slopes	III	I	III
Craven fine sandy loam, 4 to 8 percent slopes, eroded	IV	I	IV

Map Unit Name	Agri	For	Hort
Craven fine sandy loam, 6 to 10 percent slopes	IV	I	IV
Craven fine sandy loam, 8 to 12 percent slopes, eroded	IV	I	IV
Craven loam, 1 to 4 percent slopes	II	I	II
Craven loam, 1 to 4 percent slopes, eroded	III	I	III
Craven silt loam, 1 to 4 percent slopes	II	I	II
Craven very fine sandy loam, 1 to 4 percent slopes	II	I	II
Craven very fine sandy loam, 4 to 8 percent slopes	IV	I	IV
Craven-Urban land complex, 0 to 2 percent slopes	IV	I	IV
Croatan muck, frequently flooded	III	V	III
Croatan muck, ALL OTHER	II	V	II
Dogue sandy loam, 0 to 2 percent slopes	II	I	II
Dogue sandy loam, 2 to 6 percent slopes	III	I	III
Dogue sandy loam, 6 to 12 percent slopes	IV	I	IV
Dorovan, ALL	IV	V	IV
Duckston fine sand	IV	VI	IV
Echaw, ALL	IV	V	IV
Exum fine sandy loam, 0 to 1 percent slopes	I	II	I
Exum fine sandy loam, 1 to 6 percent slopes	II	II	II
Exum loam, 0 to 2 percent slopes	I	II	I
Exum silt loam, 0 to 2 percent slopes	I	II	I
Exum very fine sandy loam, 0 to 2 percent slopes	I	II	I
Exum very fine sandy loam, 2 to 5 percent slopes	II	II	II
Exum-Urban land complex, 0 to 2 percent slopes	IV	II	IV
Foreston loamy fine sand, ALL	II	II	II
Goldsboro sandy loam, 1 to 6 percent slopes	I	I	I
Goldsboro, ALL OTHER	I	I	I
Goldsboro-Urban land complex, ALL	IV	I	IV
Grantham, ALL	I	I	I
Grifton, ALL	II	I	II
Hobonny muck	IV	VI	IV
Icaria fine sandy loam, ALL	II	I	II
Invershiel-Pender complex, 0 to 2 percent slopes	I	II	I
Johns, ALL	II	I	II
Johnston and Pamlico soils, 0 to 1 percent slopes, frequently flooded	IV	III	IV
Johnston soils	IV	III	IV
Kalmia, ALL	II	II	II
Kenansville, ALL	III	II	III
Kinston loam, frequently flooded	IV	III	IV
Kureb, ALL	IV	V	IV
Lafitte muck	IV	VI	IV
Lakeland sand, 0 to 6 percent slopes	IV	V	IV
Leaf, ALL	III	I	III
Lenoir, ALL	III	I	III
Leon, ALL	IV	V	III
Leon-Urban land complex	IV	V	IV
Liddell silt loam	II	I	II
Lucy loamy sand, 0 to 6 percent slopes	II	II	II
Lumbee, ALL	II	I	II
Lynchburg, ALL	II	I	II
Lynchburg-Urban land complex	IV	I	IV
Lynn Haven sand	IV	II	IV
Mandarin, ALL	IV	V	IV

Map Unit Name	Agri	For	Hort
Mandarin-Urban land complex	IV	V	IV
Marvyn and Craven soils, 6 to 12 percent slopes	IV	I	IV
Marvyn, ALL	IV	I	IV
Masada sandy loam, 0 to 4 percent slopes	I	II	I
Masontown, ALL	IV	III	IV
Masontown mucky fine sandy loam and Muckalee sandy loam, frequently flooded	IV	III	IV
Meggett fine sandy loam, frequently flooded	IV	III	IV
Meggett, ALL OTHER	III	I	III
Mine pits	IV	VI	IV
Muckalee loam, ALL	IV	III	IV
Murville, ALL	IV	V	IV
Nahunta, ALL	I	I	I
Nakina fine sandy loam	I	I	I
Nawney loam, 0 to 2 percent slopes, frequently flooded	IV	III	IV
Newhan, ALL	IV	VI	IV
Newhan-Corolla complex, 0 to 30 percent slopes	IV	VI	IV
Newhan-Corolla-Urban land complex, 0 to 30 percent slopes	IV	VI	IV
Noboco fine sandy loam, 0 to 2 percent slopes	I	I	I
Noboco fine sandy loam, 2 to 6 percent slopes	II	I	II
Norfolk, ALL	II	II	II
Norfolk-Urban land complex, 0 to 6 percent slopes	IV	II	IV
Ocilla loamy fine sand, 0 to 4 percent slopes	IV	II	IV
Olustee loamy sand, sandy subsoil variant (Murville)	IV	II	IV
Onslow, ALL	II	II	II
Osier loamy sand, loamy substratum	IV	I	IV
Pactolus, ALL	IV	II	IV
Pamlico muck, frequently flooded	IV	V	IV
Pamlico muck, ALL OTHER	III	V	III
Pantego, ALL	I	I	I
Paxville sandy loam	II	III	II
Pender fine sandy loam	II	I	II
Pender-Urban land complex	IV	I	IV
Pits, ALL	IV	VI	IV
Pocalla loamy sand, 0 to 6 percent slopes	III	II	III
Rains, ALL	I	I	I
Rains-Urban land complex	IV	I	IV
Rimini sand 1 to 6 percent slopes	IV	V	IV
Roanoke, frequently flooded	IV	III	IV
Roanoke, ALL OTHER	II	III	II
Rumford, ALL	III	II	III
Rutlege mucky loamy fine sand	IV	V	IV
Seabrook, ALL	IV	II	IV
Seabrook-Urban land complex	IV	II	IV
Stallings, ALL	II	II	II
State fine sandy loam, 0 to 2 percent slopes	I	I	I
State fine sandy loam, 2 to 6 percent slopes	II	I	II
State loamy sand, 0 to 2 percent slopes	I	I	I
Stockade fine sandy loam	I	I	I
Suffolk loamy sand, 10 to 30 percent slopes	I	II	I
Swamp	IV	III	IV
Tarboro, ALL	IV	II	IV
Tarboro-Urban land complex, 0 to 6 percent slopes	IV	II	IV

Map Unit Name	Agri	For	Hort
Tomahawk fine sand, 0 to 3 percent slopes	IV	II	IV
Tomahawk loamy fine sand	IV	II	IV
Tomahawk loamy fine sand	IV	II	IV
Tomahawk loamy sand, 0 to 3 percent slopes	III	II	III
Tomotley, ALL	I	I	I
Torhunta, ALL	II	I	II
Torhunta-Urban land complex	IV	I	IV
Tuckerman fine sandy loam	II	II	II
Udorthents, ALL	IV	VI	IV
Udults, steep	IV	VI	IV
Umbric Ochraqualfs	IV	VI	IV
Urban land	IV	VI	IV
Valhalla fine sand, 0 to 6 percent slopes	III	II	III
Wagram loamy fine sand, 0 to 6 percent slopes	II	II	II
Wagram loamy sand, 6 to 10 percent slopes	III	II	III
Wagram loamy sand, 0 to 6 percent slopes	II	II	II
Wagram loamy sand, 10 to 15 percent slopes	IV	II	IV
Wahee, ALL	II	I	II
Wando fine sand, 0 to 6 percent slopes	IV	II	IV
Wando-Urban land complex, 0 to 6 percent slopes	IV	II	IV
Wakulla sand, ALL	IV	V	IV
Wasda muck	I	I	I
Wehadkee silt loam	IV	III	IV
Wickham fine sandy loam, 0 to 2 percent slopes	I	I	I
Wickham fine sandy loam, 2 to 6 percent slopes	II	I	II
Wickham fine sandy loam, 6 to 10 percent slopes	II	I	II
Wickham loamy sand, 1 to 6 percent slopes	II	I	II
Wickham sandy loam, 0 to 2 percent slopes	I	I	I
Wickham sandy loam, 0 to 6 percent slopes	II	I	II
Wickham sandy loam, 0 to 6 percent slopes, rarely flooded	II	I	II
Wickham sandy loam, 2 to 6 percent slopes	II	I	II
Wickham-Urban land complex, 2 to 10 percent slopes	IV	I	IV
Wilbanks, ALL	IV	III	IV
Winton, ALL	IV	I	IV
Woodington, ALL	II	II	II
Wrightsboro fine sandy loam 0 to 2 percent slopes	I	I	I
Yaupon silty clay loam, 0 to 3 percent slopes	III	VI	III

Map Unit Name	Agri	For	Hort
Acredale silt loam, 0 to 2 percent slopes, rarely flooded	I	I	I
Altavista ,ALL	I	I	I
Altavista-Urban land complex, 0 to 2 percent slopes	IV	I	IV
Arapahoe, ALL	I	I	I
Argent, ALL	II	I	II
Augusta ,ALL	II	I	II
Augusta-Urban land complex	IV	I	IV
Backbay mucky peat, 0 to 1 percent slopes, very frequently flooded	IV	VI	IV
Ballahack fine sandy loam, occasionally flooded	I	I	I
Barclay very fine sandy loam	I	I	I
Bayboro, ALL	I	I	I
Baymeade ,ALL	IV	V	IV
Baymeade-Urban land complex 1 to 6 percent slopes	IV	V	IV
Beaches, ALL	IV	VI	IV
Beaches-Newhan association	IV	VI	IV
Beaches-Newhan complex, ALL	IV	VI	IV
Belhaven muck, 0 to 2 percent slopes, frequently flooded	IV	V	IV
Belhaven muck, ALL OTHER	II	V	II
Bertie ,ALL	II	I	II
Bibb soils	IV	III	IV
Bladen ,ALL	III	I	III
Bohicket silty clay loam	IV	VI	IV
Bojac, ALL	III	II	III
Bolling loamy fine sand, 0 to 3 percent slopes, rarely flooded	II	I	II
Borrow pits	IV	VI	IV
Brookman loam, 0 to 2 percent slopes, rarely flooded	II	I	II
Brookman mucky loam, frequently flooded	IV	III	IV
Brookman mucky silt loam	I	I	I
Cape Fear, ALL	I	I	I
Carteret, ALL	IV	VI	IV
Chapanoke silt loam, ALL	I	I	I
Charleston loamy fine sand	III	II	III
Chowan, ALL	IV	III	IV
Conaby muck, ALL	II	I	II
Conetoe, ALL	III	II	III
Corolla, ALL	IV	VI	IV
Corolla-Duckston complex, ALL	IV	VI	IV
Corolla-Urban land complex	IV	VI	IV
Currituck, ALL	IV	VI	IV
Dare muck	IV	V	IV
Deloss fine sandy loam	I	III	I
Deloss mucky loam, frequently flooded	IV	III	IV
Delway muck, 0 to 1 percent slopes, very frequently flooded	IV	VI	IV
Dogue, ALL	II	I	II
Dorovan, ALL	IV	V	IV
Dragston, ALL	II	I	II
Duckston, ALL	IV	VI	IV
Duckston-Corolla complex, 0 to 6 percent slopes, rarely flooded	IV	VI	IV
Dune land, ALL	IV	VI	IV
Dune land-Newhan complex, 2 to 40 percent slopes	IV	VI	IV
Elkton, ALL	II	I	II
Engelhard loamy very fine sand, 0 to 2 percent slopes, frequently flooded	IV	III	IV

Map Unit Name	Agri	For	Hort
Engelhard loamy very fine sand, 0 to 2 percent slopes, rarely flooded	II	III	II
Fallsington fine sandy loam	IV	I	IV
Fork fine sandy loam, 0 to 2 percent slopes, rarely flooded	I	I	I
Fork loamy fine sand	II	I	II
Fortescue, ALL	I	III	I
Fripp fine sand, 2 to 30 percent slopes	IV	VI	IV
Galestown loamy fine sand	IV	II	IV
Gullrock muck, 0 to 2 percent slopes, rarely flooded	II	I	II
Hobonny muck, 0 to 1 percent slopes, frequently flooded	IV	VI	IV
Hobucken, ALL	IV	VI	IV
Hyde, ALL	I	I	I
Hydeland silt loam, 0 to 2 percent slopes, rarely flooded	I	I	I
Icaria loamy fine sand, 0 to 2 percent slopes, rarely flooded	II	I	II
Johns loamy sand, 0 to 2 percent slopes	II	I	II
Klej loamy fine sand	IV	II	IV
Kureb sand 1 to 8 percent slopes	IV	V	IV
Kureb-Urban land complex 1 to 8 percent slopes	IV	V	IV
Lafitte muck, ALL	IV	VI	IV
Lakeland sand 1 to 8 percent slopes	IV	V	IV
Leaf silt loam	III	I	III
Lenoir, ALL	III	I	III
Leon fine sand, 0 to 2 percent slopes, rarely flooded	IV	V	III
Leon sand	IV	V	III
Longshoal mucky peat, 0 to 1 percent slopes, very frequently flooded	IV	VI	IV
Lynn Haven, ALL	IV	II	IV
Made land and dumps	IV	VI	IV
Masontown mucky fine sandy loam	IV	III	IV
Matapeake fine and very fine sandy loams	I	II	I
Mattapex, ALL	II	I	II
Munden, ALL	II	I	II
Newhan, ALL	IV	VI	IV
Newhan-Beaches complex,	IV	VI	IV
Newhan-Corolla complex, ALL	IV	VI	IV
Newhan-Corolla-Urban land complex, 0 to 30 percent slopes	IV	VI	IV
Newhan-Urban land complex, ALL	IV	VI	IV
Newholland mucky loamy sand, 0 to 2 percent slopes, frequently flooded	IV	V	IV
Newholland mucky loamy sand, 0 to 2 percent slopes, rarely flooded	I	V	I
Nimmo, ALL	II	I	II
Nixonton very fine sandy loam	I	I	I
Osier fine sand, ALL	IV	I	IV
Othello, ALL	I	II	I
Ousley fine sand, ALL	IV	V	IV
Pactolus fine sand	IV	II	IV
Pasquotank, ALL	I	I	I
Paxville mucky fine sandy loam	II	III	II
Perquimans, ALL	I	I	I
Pettigrew muck, ALL	II	I	II
Pits, mine	IV	VI	IV
Pocomoke, ALL	II	I	II
Ponzer, ALL	II	V	II
Portsmouth, ALL	I	I	I
Psamments, 0 to 6 percent slopes	IV	VI	IV

Map Unit Name	Agri	For	Hort
Pungo muck, ALL	III	V	III
Roanoke, ALL	II	I	II
Roper muck, ALL	I	I	I
Sassafras loamy fine sand	II	I	II
Scuppernong muck, ALL	II	V	II
Seabrook, ALL	IV	II	IV
Seabrook-Urban land complex	IV	II	IV
Seagate fine sand	IV	II	IV
Seagate-Urban land complex	IV	II	IV
State fine sandy loam, ALL	I	I	I
State loamy fine sand, ALL	II	I	II
State sandy loam, ALL	I	I	I
State-Urban land complex, 0 to 2 percent slopes	IV	I	IV
Stockade loamy fine sand	I	III	I
Stockade mucky loam, ALL	IV	III	IV
Stono, ALL	I	I	I
Tarboro sand, ALL	IV	II	IV
Tidal marsh	IV	VI	IV
Tomotley fine sandy loam, ALL	I	I	I
Udorthents, ALL	IV	VI	IV
Urban land ALL	IV	VI	IV
Wahee, ALL	II	I	II
Wakulla sand, ALL	IV	V	IV
Wando, ALL	IV	II	IV
Wasda muck ALL	I	I	I
Weeksville loam, 0 to 2 percent slopes, frequently flooded	IV	I	IV
Weeksville, ALL OTHER	I	I	I
Wickham loamy sand, 0 to 4 percent slopes	II	I	II
Woodstown fine sandy loam	I	I	I
Wysocking very fine sandy loam, 0 to 3 percent slopes, rarely flooded	I	III	I
Yaupon fine sandy loam, 0 to 3 percent slopes	III	VI	III
Yeopim loam, 0 to 2 percent slopes	I	I	I
Yeopim loam, 2 to 6 percent slopes	II	I	II
Yeopim silt loam, ALL	I	I	I
Yonges, ALL	I	I	I