

**IREDELL COUNTY Iredell County – 2019 Reappraisal  
Uniform Schedule of Values, Standards, and Rules  
Market Value Schedule**

**CALCULATION OF SYSTEM VALUES**

**PREFACE**

Simple compilation of data is only one part of the system's function. Second is determination of values associated with the varied structural components of each improvement type. The following chapter details how the Computer – Assisted Mass Appraisal (CAMA) system makes its calculations in the derivation of property values.

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## CALCULATION OF SYSTEM VALUES

### CALCULATION OF INDEX VALUES

In order for the user to have a basic understanding of the operation of the CAMA System and the computerized application of the index valuation models, the following step-by-step calculation of a sample parcel is presented. A commercial property is shown to illustrate the various indices. The procedure is identical for single family residences unless otherwise indicated.

The following graph and structural element data will be used for the purpose of example:

#### EXAMPLE

<b>CAN</b>	<b>60</b>	
<b>15</b>	<b>900 S.F.</b>	<b>15</b>
<b>BAS</b>	<b>60</b>	
	<b>3900 S.F.</b>	
<b>65</b>		<b>65</b>
	<b>60</b>	

#### BUILDING SKETCH

##### STEP 1. AREA CALCULATIONS

- A. Determine the square foot area of all the sub areas. As shown on the sample card, the parcel has two sub areas:
  - BAS = 3,900 square feet
  - CAN = 900 square feet
- B. Multiply each gross area by the percentages assigned to it (this percentage is located in the TABLE OF SUB AREA found in Chapter 11 ).

BAS 3900 SQ. FT. X 100%	= 3,900
CAN 900 SQ. FT. X 30%	= <u>270</u>
<b>TOTAL ADJUSTED AREA</b>	<b>4,170</b>

NOTE: All points will be truncated after each application. For instance, if the exterior wall had 2 exterior wall points and when divided it came out 25.5, round to 25.

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#### STEP 2. DETERMINE QUALITY INDEX (Points)

The determination of the quality index is important. It is the discriminator allowing differences and local conditions to be expressed as an index number which, when applied to a general county wide rate for a given type of improvement, will yield an adjusted base rate. This adjusted base rate simulates the per square foot rate which the market would most probably yield should that parcel sell.

A. Select the appropriate valuation mode. In the sample parcel the model is shown as "07", the model for commercial buildings. (see chapter 11)

B. Determine the points associated with the structural element data:

FOUNDATION - Spread (4)	6	points
SUB FLOOR SYSTEM - Slab on Grade (2)	6	points
EXTERIOR WALLS - Concrete Block (11)	20	
Face Brick (21)	25	22.5 points

If the subject had 2 exterior wall types the points would be added together and then divided by two and truncated.

ROOFING STRUCTURE - Bar Joist (09)	10	points
ROOF COVER - Built up Tar & Gravel (04)	4	points
INTERIOR WALL CONSTRUCTION - Drywall (5)	8	points

If the subject has 2 interior wall types, the points would be added together and divided by two and truncated.

INTERIOR FLOORING - Terrazzo (10)	18	points
If the subject had 2 floor types, they would be added together and divided by 2 and truncated.		

HEAT FUEL - Electric (4)	1	point
HEAT TYPE - Heat Pump (10)	6	points
AIR CONDITIONING TYPE - Central (3)	6	points

Note: At this point, if the parcel were a single family residence, the next step would be to locate the table for the "01" model which assigns points for the various combinations of the number of bedrooms to the number of baths. These points are then added to the above and then multiplied by the QUALITY ADJUSTMENT to obtain the QUALITY INDEX.

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COMMERCIAL PLUMBING - 4.0 Restrooms, 8.00 fixtures (8 fixtures divided into 3,900 sq. ft. = 487.55 sq. ft/average or 6 points)	6	points
STRUCTURAL FRAME - Masonry (04)	12	points
CEILING AND INSULATION - Suspended Ceiling and Wall Insulated (03)	7	points

From the preceding figures we have obtained the following:

FOUNDATION	6	points
SUB FLOOR SYSTEM	6	points
EXTERIOR WALL CONSTRUCTION	22.5	points
ROOFING STRUCTURE	10	points
ROOFING COVER	4	points
INTERIOR WALL CONSTRUCTION	8	points
INTERIOR FLOORING	18	points
HEAT FUEL	1	point
HEAT TYPE	6	points
AIR CONDITIONING TYPE	6	points
COMMERCIAL PLUMBING	6	points
STRUCTURAL FRAME	12	points
CEILING AND INSULATING	7	points
<b>TOTAL POINTS</b>	<b>112.5</b>	<b>points</b>

The QUALITY INDEX is the market/design factor x the quality factor x size factor x the total points. Therefore, 1.00 (design) x 1.00 (quality) x 1.06% (size) = 1.06 x 112.5 = 1.26

**STEP 3. DETERMINE EFFECTIVE BASE RATE**

- A. The base rate for a particular model is given. In this example, it is \$32.00 per square foot.
- B. Multiply the base rate times the quality index:  

$$\$32.00 \times 1.26 = \$40.32$$

$$\$40.32 \times 2.45 = \$98.78$$
 \$98.78 is the effective base rate.

**STEP 4. CALCULATE REPLACEMENT COST NEW**

- A. Replacement Cost New is the product of the effective base rate times the total adjusted area calculated earlier. In the sample parcel we have;  

$$\$98.78 \times 4,170 \text{ EFF AREA} = \$411,903$$

**STEP 5. DETERMINE DEPRECIATION AND PERCENT CONDITION OF THE SUBJECT**

- A. Depending on the improvement type one of two methods is used. In the appendix are the appropriate table and at the end of this chapter, a further discussion of their use.
- B. The sample parcel is an improvement type 10 with an effective age of 10 years and is depreciated 10%.
- C. To determine the percent condition, subtract the amount of depreciation from 1.0. In the sample parcel, the percent condition equals  $1.0 - .10 = 0.90$ .

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#### STEP 6. CALCULATE THE DEPRECIATED BUILDING VALUE

- A. The DEPRECIATED BUILDING VALUE is the Replacement Cost New x the Percent Condition in the sample parcel.  
 $\$409,827 \times .90 = \$368,844$  Rounded to \$368,840
- B. To the Depreciated Building Value is added the total Depreciated OB/XF Value and Land Value.
- C. In the same, this is as follows:
- |                  |                               |
|------------------|-------------------------------|
| \$368,840        | Depreciated Building Value    |
| \$8,710          | Total Depreciated OB/XF Value |
| <u>\$377,300</u> | Land value                    |
| \$754,850        | <b>Total</b>                  |

#### DEPRECIATION

External/Economic and/or Functional Obsolescence is added to the depreciation derived from the Depreciation Schedules.\* Therefore if a building has 10% normal depreciation due to its age and 10% Economic Obsolescence is applied due to outside influence, the total depreciation would be 20%.

**EXTERNAL/ECONOMIC OBSOLESCENCE:** a temporary or permanent impairment of the salability or utility of an improvement or property due to negative influences outside the property. (External/Economic Obsolescence may result from adverse market conditions. Because of its fixed location, real estate is subject to external influences that usually cannot be controlled by the property owner, landlord, or tenant.) A percentage is added to the normal depreciation to account for increased depreciation caused by external/economic obsolescence.

**FUNCTIONAL OBSOLESCENCE:** a flaw in the structure, materials, or design that diminishes the function, utility, and value of an improvement. A percentage is added to the normal depreciation to account for increased depreciation caused by functional obsolescence.

\*Depreciation Schedules are listed in Chapter 11.

#### PERCENT CONDITION

The actual total percent condition of the improvement after depreciation reflected by one of the Special Condition Codes. NOTE: To use the Percent Condition, one of the Special Condition Codes must be used. These codes will override the depreciation developed from the normal depreciation, economic obsolescence and functional obsolescence.

SPECIAL CONDITION CODE - AP - Abnormal Physical Depreciation

PD	-	Physically Damaged
RV	-	Residual Value
TE	-	Temporary Economic
UC	-	Under construction