LAND VALUATION

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LAND VALUATION

- Intro
- Units of Comparison
- Front Foot Lot Sizing
- Valuing Land
- Sales Ratio / Mass Appraisal of Land
  - Vacant vs Improved
  - Adjustments
- Question/Answer

LAND VALUATION

- LAND
  - Ground, soil & everything attached to it both by nature and by man
  - Encompasses everything from the core of the earth
  - Includes minerals, rocks, oil, gas, water or any other substance found in the earth.

LAND VALUATION

- Accurate Land Values are crucial to an effective assessment system
  - Contributes to the accuracy of improved parcels to ensure owners pay their fair share in taxes.
  - Outdated land values contribute to inefficient growth

LAND VALUATION

- FIVE ATTRIBUTES OF LAND
  - Supply is fixed
  - Lasting
  - Unique
  - Physically immobile
  - Has use therefore has value

LAND VALUATION

- Improvements **to** land
  - Improvements that prepare land for development
  - Streets, sidewalks, streetlights
  - Landscaping, grading, driveways, utilities
- Improvements **on** land
  - Improvements that have been constructed on the parcel
  - Structures

LAND VALUATION

- Excess Land
  - Land remaining after improvements are in place that can be developed later or split.
- Surplus Land
  - Land that cannot be used or sold off due to limitations of size or other physical characteristics.

LAND VALUATION

EXCESS LAND

SURPLUS LAND

LAND VALUATION

EXCESS LAND

SURPLUS LAND IF USING ENTIRE AREA

LAND VALUATION

- Assemblage
  - When two parcels are combined into one parcel
  - The value remains the same
- Plottage
  - When two parcels are combined into one parcel
  - Increases the value or demand

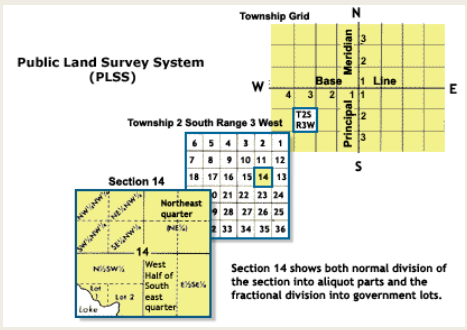
LAND VALUATION

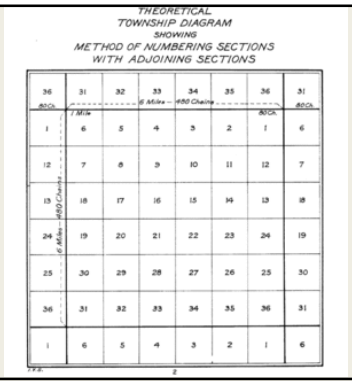
DESCRIBING LAND

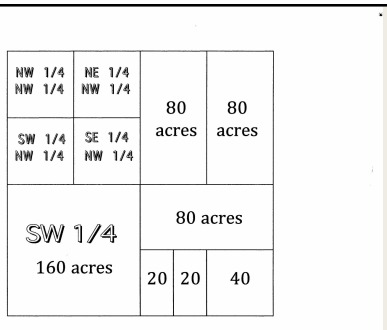
We must first locate and describe land before we can value it

LAND VALUATION

- Rectangular Land Survey
- Metes and Bounds
- Lots & Blocks



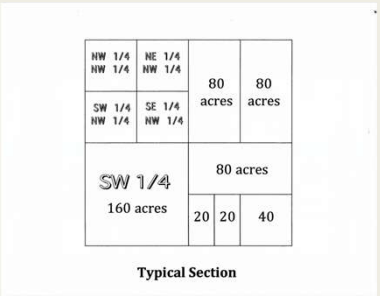




Typical Section

LAND VALUATION

- SW
- SW NW
- W1/2 NE
- N1/2 SE



Typical Section

LAND VALUATION

- **Metes and Bounds**
  - a system or method of describing land
  - The system has been used in England for many centuries
  - It was applied in the original Thirteen Colonies
  - Typically the system uses physical features along with directions and distances, to define and describe the boundaries of a parcel of land.
  - The boundaries are described working around the parcel in sequence, from a point of beginning, returning to the same point.
  - It may include references to other adjoining parcels (and their owners), and could also be referred to in later surveys.
  - At the time the description is compiled, it may have been marked on the ground with permanent monuments placed where there were no suitable natural monuments.

LAND VALUATION

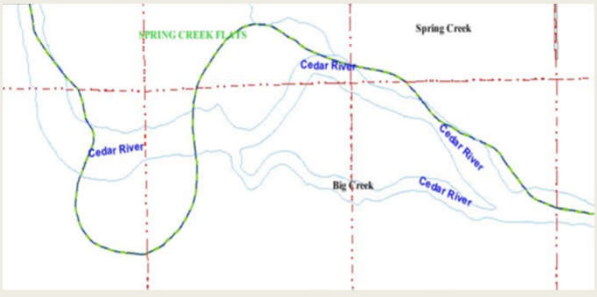
- **Metes.** Refers to a boundary defined by the measurement of each straight run, specified by a distance between points and an orientation or direction. A direction may be a simple compass bearing or a precise orientation determined by accurate survey methods.
- **Bounds.** Refers to a more general boundary description, such as along a certain watercourse, a stone wall, an adjoining public road way, or an existing building.
- The system is often used to define larger pieces of property (farms), and political subdivisions (town boundaries) where precise definition is not required or would be far too expensive
  - Previously designated boundaries can be incorporated into the description.

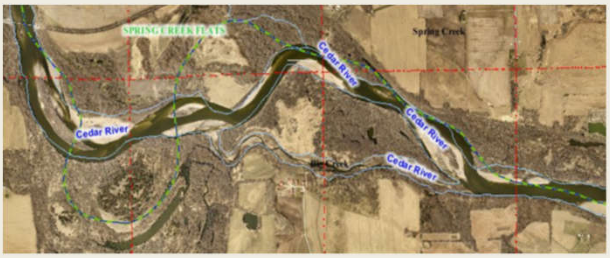
LAND VALUATION

- Meets and Bounds descriptions have evolved to use Degrees and Minutes
  - This has the advantage of providing the same degree measure regardless of which direction a particular boundary is being followed; the boundary can be traversed in the opposite direction simply by exchanging N for S and E for W. In other words, "N 42° 35' W" describes the same boundary as "S 42° 35' E", but is traversed in the opposite direction.

LAND VALUATION

- Original Metes & Bounds using Rods and Chains were surprisingly accurate.
- However difficulties have arisen over the years.
  - Man-made features such as roads, waterways, walls, markers or stakes used to mark corners and determine the line of the boundaries may have moved.
  - In the metes and bounds system, corners, distance, direction, monuments and bounds are always carried back to the original **Intent** regardless of where they are now.
  - Court cases are sometimes required to settle the matter when it is suspected the corner markers may have been moved.





LAND VALUATION

- Lot and Block
  - The most recent of the three main survey systems.
  - It began to be widely employed in the United States in the 19th century when cities began to expand into the surrounding farmland. The owners of a large tract of land would create a plat and subdivide the tract into a series of smaller lots to be sold to buyers.
  - This subdivision survey plan would then be recorded.
  - The officially recorded map then became the legal description of all the lots in the subdivision.
  - The method became widespread after the post World War II expansion into the suburbs when formerly rural areas became heavily populated and large tracts of rural land were divided into smaller lots.

LAND VALUATION

- Lot and Block
  - A survey is conducted to divide the original tract into smaller lots and a plat map is created.
  - Usually this subdivision survey employs a metes and bounds system to delineate individual lots within the main tract.
  - Each lot on the plat map is assigned an identifier, usually a number or letter.
  - This map becomes the legal description of all the lots in the subdivision.
  - A type of the Lot and Block system is frequently used for tax identification purposes. This designation is often called a Tax Identification Number or **Parcel Number**, is not directly based on the legal description of the property.

LAND VALUATION

- Units of Comparison
  - Square Foot
  - Site and Excess
  - Acre
  - Site
  - Front Foot

LAND VALUATION

- Square Foot
  - Best used for lots with irregular shaped sites and where frontage is not a dominate factor in value.
  - Multi-Family, Commercial and small industrial sites
  - Assumes the consumer will pay the same rate for the entire lot

Basis Type: Sq.Ft x Rate SF: **79,505.00** Acres: **1.825**

	Square-Feet	Acres	Land Table	Rate $
SF x Rate	79,505.00	1.825	50	0.55

Values	
Lot w/o Adj	$43,728
Lot with Adj	$43,728
Lot Total (RND)	$43,730
Total Land	$43,730

LAND VALUATION

- Site and Excess
  - Used mainly in Rural Residential land valuation.
  - Used to add value for utilities such as septic tanks, wells and electricity
  - Assumes the consumer will pay more for the first acre than the excess

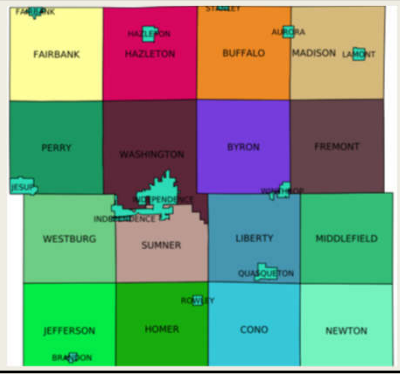
Basis Type: Site-Excess SF: **112,820.40** Acres: **2.590**

Site and Excess	Acres	Quality	Value $
Site	1.000	Very Good	50,000.00
Excess 1	1.590	Above Normal	6,360.00
Excess 2	0.000	None	0.00

Values	
Lot w/o Adj	$56,360
Lot with Adj	$56,360
Lot Total (RND)	$56,360
Total Land	$56,360

LAND VALUATION

- Site & Excess
  - Rates can be different by Township, Paved Road vs Gravel Road, etc.....



SITE

Area	Excellent	Very Good	Above Normal	Normal	Below Normal	Poor	Very Poor
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05	37800.00	31750.00	25650.00	19550.00	12700.00	8750.00	5850.00
0.10	39000.00	32700.00	26400.00	20100.00	13100.00	9100.00	6050.00
0.15	40150.00	33650.00	27150.00	20650.00	13500.00	9400.00	6300.00
0.20	41300.00	34600.00	27900.00	21200.00	13850.00	9750.00	6500.00
0.25	42500.00	35600.00	28700.00	21750.00	14250.00	10050.00	6700.00
0.30	43650.00	36550.00	29450.00	22300.00	14650.00	10400.00	6950.00
0.35	44850.00	37500.00	30200.00	22850.00	15000.00	10750.00	7150.00
0.40	46000.00	38450.00	30950.00	23400.00	15400.00	11050.00	7400.00
0.45	47150.00	39450.00	31700.00	23950.00	15800.00	11400.00	7600.00
0.50	48350.00	40400.00	32450.00	24500.00	16150.00	11700.00	7800.00
0.55	49500.00	41350.00	33200.00	25050.00	16550.00	12050.00	8050.00
0.60	50650.00	42300.00	33950.00	25600.00	16950.00	12400.00	8250.00
0.65	51850.00	43300.00	34750.00	26150.00	17350.00	12700.00	8500.00
0.70	53000.00	44250.00	35500.00	26700.00	17700.00	13050.00	8700.00
0.75	54200.00	45200.00	36250.00	27250.00	18100.00	13350.00	8900.00
0.80	55350.00	46150.00	37000.00	27800.00	18500.00	13700.00	9150.00
0.85	56500.00	47150.00	37750.00	28350.00	18850.00	14050.00	9350.00
0.90	57700.00	48100.00	38500.00	28900.00	19250.00	14350.00	9600.00
0.95	58850.00	49050.00	39250.00	29450.00	19650.00	14700.00	9800.00
1.00	60000.00	50000.00	40000.00	30000.00	20000.00	15000.00	10000.00
1.00	60000.00	50000.00	40000.00	30000.00	20000.00	15000.00	10000.00
1.00	60000.00	50000.00	40000.00	30000.00	20000.00	15000.00	10000.00
1.00	60000.00	50000.00	40000.00	30000.00	20000.00	15000.00	10000.00

EXCESS

Area	Excellent	Very Good	Above Normal	Normal	Below Normal	Poor	Very Poor
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.02	100.00	90.00	80.00	70.00	60.00	50.00	40.00
0.04	200.00	180.00	160.00	140.00	120.00	100.00	80.00
0.06	300.00	270.00	240.00	210.00	180.00	150.00	120.00
0.08	400.00	360.00	320.00	280.00	240.00	200.00	160.00
0.10	500.00	450.00	400.00	350.00	300.00	250.00	200.00
0.12	600.00	540.00	480.00	420.00	360.00	300.00	240.00
0.14	700.00	630.00	560.00	490.00	420.00	350.00	280.00
0.16	800.00	720.00	640.00	560.00	480.00	400.00	320.00
0.18	900.00	810.00	720.00	630.00	540.00	450.00	360.00
0.20	1000.00	900.00	800.00	700.00	600.00	500.00	400.00
0.22	1100.00	990.00	880.00	770.00	660.00	550.00	440.00
0.24	1200.00	1080.00	960.00	840.00	720.00	600.00	480.00
0.26	1300.00	1170.00	1040.00	910.00	780.00	650.00	520.00
0.28	1400.00	1260.00	1120.00	980.00	840.00	700.00	560.00
0.30	1500.00	1350.00	1200.00	1050.00	900.00	750.00	600.00
0.32	1600.00	1440.00	1280.00	1120.00	960.00	800.00	640.00
0.34	1700.00	1530.00	1360.00	1190.00	1020.00	850.00	680.00
0.36	1800.00	1620.00	1440.00	1260.00	1080.00	900.00	720.00
0.38	1900.00	1710.00	1520.00	1330.00	1140.00	950.00	760.00
0.40	2000.00	1800.00	1600.00	1400.00	1200.00	1000.00	800.00
0.42	2100.00	1890.00	1680.00	1470.00	1260.00	1050.00	840.00
0.44	2200.00	1980.00	1760.00	1540.00	1320.00	1100.00	880.00
0.46	2300.00	2070.00	1840.00	1610.00	1380.00	1150.00	920.00
0.48	2400.00	2160.00	1920.00	1680.00	1440.00	1200.00	960.00
0.50	2500.00	2250.00	2000.00	1750.00	1500.00	1250.00	1000.00

LAND VALUATION

- Acre X Rate
  - Acre X Rate is best used when valuing large parcels. These can be Industrial sites, large retail

LAND VALUATION

- Acre X Rate
  - Set standards for your office to consistently value based on Acre X Rate vs SF X Rate.
  - Greater than 1 Acre use Acre X Rate?
  - Less than 1 Acre use SF X Rate?

LAND VALUATION

Basis Type: Acre x Rate | SF: 147,232.80 | Acres: 3.380

	Acres	Square-Feet	Land Table	Rate $
Acre x Rate	3.380	147,232.80	C-7	2,500.00

3.380 Acres X $2,500 = $8,450

Values	
Lot w/o Adj	$8,450
Lot with Adj	$8,450
Lot Total (RND)	$8,450
Total Land	$8,450

LAND VALUATION

- Site
  - The Site method is used when the marketplace does not indicate a significant difference in lot value even when there is a difference in lot size.

LAND CONVERSION CHART

If more than one land unit of comparison is used in an area, the following chart should be used to maintain equity.

10,000/AC	=	$0.25/S.F.	=	$50/F.F.
12,500/AC	=	$0.30/S.F.	=	$60/F.F.
15,000/AC	=	$0.40/S.F.	=	$75/F.F.
20,000/AC	=	$0.50/S.F.	=	$100/F.F.
25,000/AC	=	$0.60/S.F.	=	$125/F.F.
30,000/AC	=	$0.75/S.F.	=	$150/F.F.
40,000/AC	=	$1.00/S.F.	=	$200/F.F.
50,000/AC	=	$1.25/S.F.	=	$250/F.F.
60,000/AC	=	$1.50/S.F.	=	$300/F.F.
75,000/AC	=	$1.75/S.F.	=	$350/F.F.
80,000/AC	=	$2.00/S.F.	=	$400/F.F.
100,000/AC	=	$2.50/S.F.	=	$500/F.F.
125,000/AC	=	$3.00/S.F.	=	$600/F.F.
150,000/AC	=	$3.50/S.F.	=	$700/F.F.
175,000/AC	=	$4.00/S.F.	=	$800/F.F.
200,000/AC	=	$5.00/S.F.	=	$900/F.F.
225,000/AC	=	$5.50/S.F.	=	$1,000/F.F.
250,000/AC	=	$6.00/S.F.	=	$1,100/F.F.
275,000/AC	=	$6.50/S.F.	=	$1,200/F.F.

300,000/AC =	$7.00/S.F. =	$1,300/F.F.
350,000/AC =	$8.00/S.F. =	$1,600/F.F.
400,000/AC =	$10.00/S.F. =	$1,800/F.F.
450,000/AC =	$11.00/S.F. =	$2,000/F.F.
500,000/AC =	$12.00/S.F. =	$2,500/F.F.
600,000/AC =	$15.00/S.F. =	$3,000/F.F.
800,000/AC =	$20.00/S.F. =	$4,000/F.F.

LAND VALUATION

- Front Foot
  - Useful in Residential where lots are more uniform.
  - Downtown Commercial
  - Assumes the frontage of a lot is worth more than the rear
  - Used in Mass Appraisal to establish Uniformity

LAND VALUATION

- Front Foot pricing procedure
  - Determine proper depth chart
  - Lot Size
  - Establish front foot prices
  - Adjustment factors

LAND VALUATION

- Determining Proper Depth Charts
  - Depth charts are selected based on the most common depth within the City or County. If the "original town" was laid-off in 150' deep lots then you would chose the 150' depth chart.
  - Selecting the appropriate chart is not due to value but in the calculation process
  - The more lots that can be calculated at 100% the better
  - Depth charts can be different per map areas
  - It is best to keep charts as consistent as possible

LAND DEPTH CHART

150' STANDARD DEPTH

FEET	PERCENT	FEET	PERCENT
1	1	65	63
2	2	66	64
3	3	67 - 68	65
4	5	69	66
5	6	70 - 71	67
6	7	72	68
7	8	73 - 74	69
8	9	75	70
9	10	76 - 77	71
10	11	78	72
11	13	79 - 80	73
12	14	81	74
13	15	82 - 83	75
14	16	84 - 85	76
15	17	86	77
16	18	87 - 88	78
17	19	89 - 90	79
18	20	91	80
19	21	92 - 93	81
20	22	94 - 95	82
21	24	96 - 97	83
22	25	98 - 99	84
23	26	100 - 101	85
24	27	102 - 104	86
25	28	105 - 106	87
26	29	107 - 108	88
27	30	109 - 111	89
28	31	112 - 114	90
29	32	115 - 117	91
30	33	118 - 120	92
31	34	121 - 123	93
32	35	124 - 126	94
33	36	127 - 129	95
34	37	130 - 133	96
35	38	134 - 138	97
36	39	139 - 142	98
37	40	143 - 147	99
38 - 39	41	148 - 153	100
40	42	154 - 158	101
41	43	159 - 163	102
42	44	164 - 168	103
43	45	169 - 173	104
44	46	174 - 179	105
45	47	180 - 184	106
46	48	185 - 190	107
47 - 48	49	191 - 197	108
49	50	198 - 205	109
50	51	206 - 213	110
51	52	214 - 220	111
52	53	221 - 229	112
53 - 54	54	230 - 238	113
55	55	239 - 248	114
56	56	249 - 258	115
57	57	259 - 268	116
58 - 59	58	269 - 285	117
60	59	286 - 300	118
61	60		

LAND VALUATION

Basis Type: Front Foot SF: 7,650.00 Acres: 0.176

Front Foot	Frontage	Rear	Side 1	Side 2	Rear Lot	Adj FF	D Factor	EFF	Land Table	Rate $
Main Lot	51.00	51.00	150.00	150.00	0.00	51.00	1.00	51.00	R-40	40.00
Sub Lot2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NO VALUE	0.00
Sub Lot3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NO VALUE	0.00
Sub Lot4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NO VALUE	0.00

Values

Lot w/o Adj	$2,040
Lot with Adj	$2,040
Lot Total (RND)	$2,040
Total Land	$2,040

EFF 51.00 X $40.00 = $2040

LAND VALUATION

Front Foot	Frontage	Rear	Side 1	Side 2	Rear Lot	Adj FF	D Factor	EFF	Land Table	Rate $
Main Lot	52.00	52.00	140.00	140.00	0.00	52.00	0.98	50.96	R-100	100.00
Sub Lot2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NO VALUE	0.00
Sub Lot3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NO VALUE	0.00
Sub Lot4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NO VALUE	0.00

Values

Lot w/o Adj	$5,096
Lot with Adj	$5,096
Lot Total (RND)	$5,100
Total Land	$5,100

Because the lot is less than 150' deep a Depth Factor of .98 is used

52' frontage X .98 = 50.96 EFF
50.96 EFF X $100 = $5,096

LAND VALUATION

Front Foot	Frontage	Rear	Side 1	Side 2	Rear Lot	Adj FF	D Factor	EFF	Land Table	Rate $
Main Lot	52.00	52.00	182.00	182.00	0.00	52.00	1.06	55.12	R-100	100.00
Sub Lot2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NO VALUE	0.00
Sub Lot3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NO VALUE	0.00
Sub Lot4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NO VALUE	0.00

Values

Lot w/o Adj	$5,512
Lot with Adj	$5,512
Lot Total (RND)	$5,510
Total Land	$5,510

Because the lot is greater than 150' deep a Depth Factor of 1.06 is used

52' frontage X 1.06 = 55.12 EFF
55.12 EFF X $100 = $5,512

LAND VALUATION

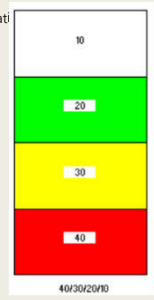
- A common argument against Front Foot valuation is that a consumer may actually be paying for the backyard or the rear of the lot or that the consumer is paying the same price for the entire lot equally.
- Without Access from the **Front** the consumer wouldn't be able to use the rear lot.
- For Mass Appraisal purposes, Front Foot is more equitable.

FRONT FOOT LOT SIZING

- Nearly all lots can be made to fall into two configurations
  - Rectangles
  - Triangles
- You may exchange ***rear land*** for ***rear land*** and ***front land*** for ***front land***

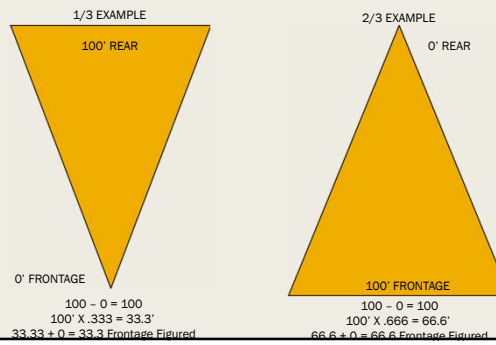
LAND VALUATION

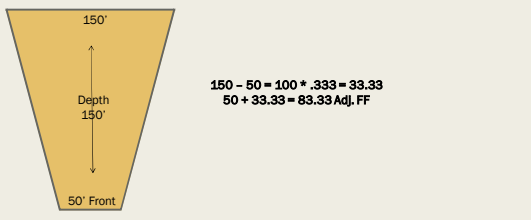
- Nearly all lots can be made to fall into two configurati
  - Rectangles
  - Triangles



LAND VALUATION

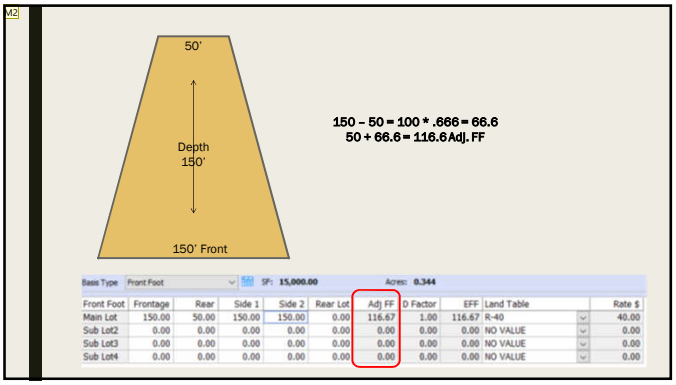
- Front Foot Pricing uses **two** theories
  - 1/3 - 2/3 Rule
  - If the front measurement of a lot is larger then the rear measurement you use the 2/3 rule.
  - If the rear measurement of a lot is larger then the front measurement of a lot then you use the 1/3 rule.
  - This is also known as the 35-65 rule.
  - Simply a Mathematical formula to arrive at "frontage figured"





Basis Type: Front Foot | SF: 15,000.00 | Acres: 0.344

Front Foot	Frontage	Rear	Side 1	Side 2	Rear Lot	Adj FF	D Factor	EFF	Land Table	Rate $
Main Lot	50.00	150.00	150.00	150.00	0.00	83.33	1.00	83.33	R-40	40.00
Sub Lot2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NO VALUE	0.00
Sub Lot3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NO VALUE	0.00
Sub Lot4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NO VALUE	0.00

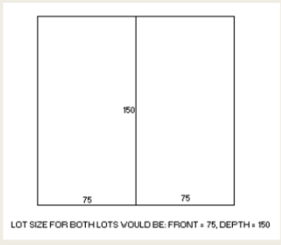


LOT SIZING

- The Front is the distance along a street (by address), river, lake or golf course
- If an address isn't given on an improved or vacant lot and it is the corner, front the lot on the **shortest side**, unless there are notes that state to the contrary. (Could vary by jurisdiction)

LOT SIZING

- The depth of a lot is the measurement from the front to the rear of the lot and is ALWAYS perpendicular to the front and/or rear. There must always be a 90°.

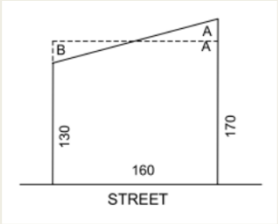


Slide 58

M2 Mike, 10/30/2017

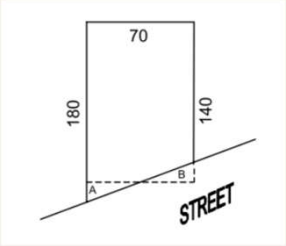
LOT SIZING

- When lots have sides that are parallel but not equal depth we much exchange rear land for rear land by averaging the sides. This lot is now 160' X 150"



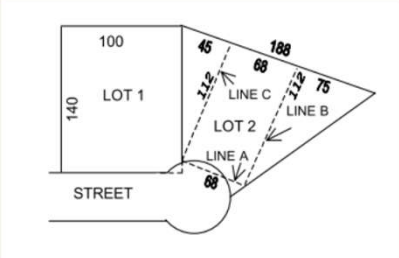
LOT SIZING

- The same theory applies when the front of a lot runs a long a diagonal line. We will exchange front land for front land.



LOT SIZING

- Cul-de-Sacs can be a little more complex. In the below example we must exchange front land for front land and then establish sides.



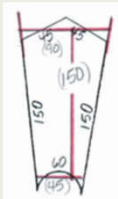
LOT SIZING

- The previous lot would be entered into a CAMA system as follows

Front Foot	Frontage	Rear	Side 1	Side 2	Rear Lot	Adj FF	D Factor	EFF	Land Table	Rate $
Main Lot	60.00	188.00	112.00	112.00	0.00	102.67	0.90	92.40	R-500	500.00
Sub Lot2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NO VALUE	0.00
Sub Lot3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NO VALUE	0.00
Sub Lot4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NO VALUE	0.00

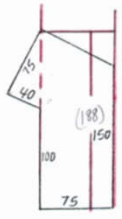
188 – 60 = 128
128 x .333 = 42.62
60 + 42.62 = 102.62
102.62 x .90 = 92.36
92.36 x $500 = $46,180

LOT SIZING



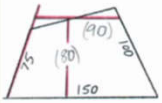
You will need to make an exchange on the front and rear to make them parallel. Scale front, rear and depth.
Lot size will be: F = 45 R = 90 D = 150

LOT SIZING



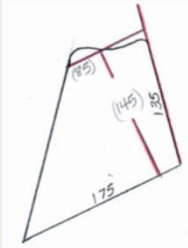
In this situation you will exchange rear for rear when you straighten the sides. Scale depth. Lot size will be: F = 75 D = 188 or 75 X 188.

LOT SIZING



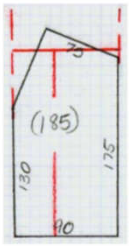
Exchange rear for rear to make the rear parallel with the front. Scale front. Lot size will be:
F = 150 R = 90 D = 80.

LOT SIZING



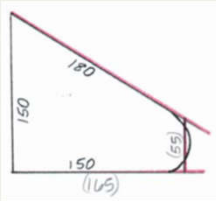
Exchange front for front, parallel to the rear. Scale front and depth.
Lot size will be: F = 85 R = 175 D = 145

LOT SIZING



Exchange rear for rear to make parallel with front.
Lot size will be: 90 X 185.

LOT SIZING



Exchange side for side. Scale side 2. Lot size will be:
F = 165 S1= 150 S2 = 55

WE SHOULD NOT ENTER 4 DIFFERENT DIMENSIONS AT LEAST TWO OF THE SIDES, (FRONT & REAR) OR (SIDES) NEED TO BE THE SAME. IN THIS EXAMPLE WE WILL AVERAGE THE FRONT AND REAR.

LOT SIZING

Basis Type: Front Foot | SP: 16,912.50 | Acres: 0.388

Front Foot	Frontage	Rear	Side 1	Side 2	Rear Lot	D Factor	EFF	Land Table	Rate $
Main Lot	165.00	165.00	150.00	55.00	0.00	0.92	151.80	R-500	500.00
Sub Lot2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NO VALUE	0.00
Sub Lot3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NO VALUE	0.00
Sub Lot4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	NO VALUE	0.00

CAMA IS AVERAGING THE SIDES TO FIND THE DEPTH FACOTR FOR YOU

USING THE 130' DEPTH CHART, 150 + 55 = 205; 205/2 = 102.5

95	-	96	89
97	-	98	90
99	-	101	91
102	-	104	92
105	-	107	93
108	-	110	94
111	-	113	95

Values	
Lot w/o Adj	$75,900
Lot with Adj	$75,900
Lot Total (RND)	$75,900
Total Land	$75,900

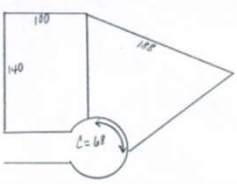
165 X .92 = 151.80 EFF
151.80 X $500/FF = $75,900

LOT SIZING TRIAGULAR SHAPED LOTS

- We must use the 1/3 2/3 rule to calculate the Frontage or the Rear
- The "2/3 rule" applies when the front is greater than the rear. Whereas the "1/3 rule" applies when the rear is greater than the front.
- The 1/3 2/3 rule would apply to the difference between the front measurements and the rear measurement and the result would be added to the smaller measurement.

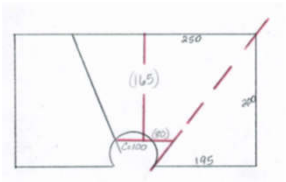
LOT SIZING

Cul-de-sacs usually will need to have an exchange of front for front or rear for rear and will often be two or more lot sizes. You may not have more frontage than the measurement that is shown on the map for the front.



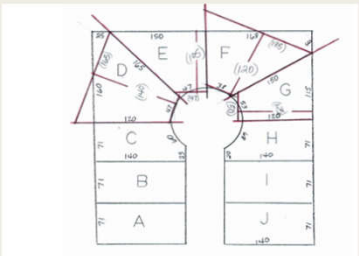
LOT SIZING

When lot sizing around a cul-de-sac, it is preferable to use a trapezoid rather than two triangles and rectangle. If you must break the lot into a triangle, use the smaller area for the right triangle.



Lot size for this lot will be:
F=80 R=250 D=165
F=0 R=200 D=195

LOT SIZING



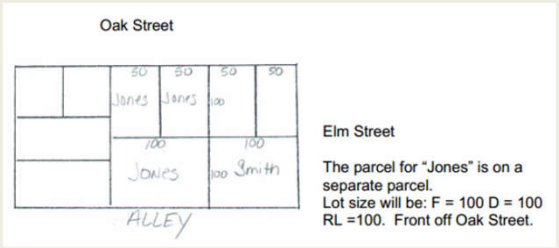
Lot D: F=47 R=165 D=140
Lot E: F=47 R=150 D=105
Lot F: F=38 R=185 D=120
Lot G: F=50 R=115 D=125

LOT SIZING

- Rear Land
  - Rear land is when a parcel does not actually have street frontage because of a property owned by another between it and the street.
    - Rear land by access if another adjoining lot has the same owner.
    - Rear land according to address
    - Otherwise, rear land from the closest street

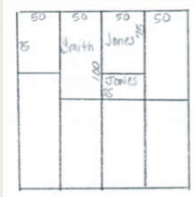
LOT SIZING

- You may have rear land if the lots are not contiguous.



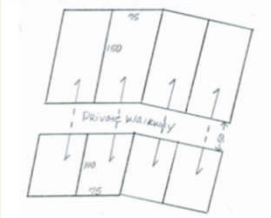
The parcel for "Jones" is on a separate parcel.
Lot size will be: F = 100 D = 100 RL =100. Front off Oak Street.

LOT SIZING



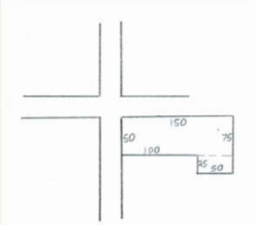
Lot size for "Jones": F=50 D=25 RL=75.
Mr. Jones two lots can be no more valuable than Mr. Smith's lot of 50 x 100.

LOT SIZING

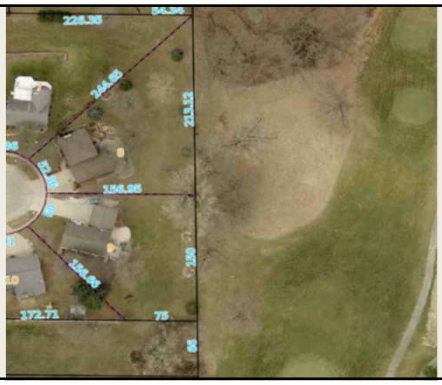


Lot size will be: F=75 D=150 and F=75 D=100 RL=200.

LOT SIZING



Lot size will be: F=50 D=150 and F=25 D= 50 RL=100.



LAND VALUATION

LAND VALUATION

- Land and improvements are often valued separately.
  - Land is non-wasting
  - Improvements are wasting
- Steps in Land Valuation
  - Identify
  - Describe
  - Analyze
  - Classify

LAND VALUATION

- Land can be Unimproved or Improved
  - Raw land is unimproved land
  - Developed land is Improved land

LAND VALUATION

- **TOTAL VALUE / SALE PRICE SHOULD BE VERY CLOSE TO 100%**
- **LAND VALUE + BUILDING VALUE = TOTAL VALUE**
- **SALE PRICE – LAND VALUE = BUILDING VALUE**
- **RCN – DEPRECIATION = BUILDING VALUE**

LAND VALUATION

- 6 ACCEPTABLE METHODS OF ESTABLISHING LAND VALUES
  - Sales Comparison
  - Allocation
  - Abstraction
  - Capitalization of Ground Rent
  - Land Residual Capitalization
  - Land Build-up method

LAND VALUATION

- Sales Comparison
  - Most accurate
  - Used when sales are available

LAND VALUATION

- Vacant Lot Study
  - Determine if sales are arms-length
  - Find common unit of comparison
  - Make adjustments

LAND VALUATION

- Typical adjustments to Vacant Land Sales
  - Financing*
  - Time
  - Location
  - Shape
  - Size
  - Topography

LAND VALUATION

Lot Type	Frontage	EFF	Sale Price	Vacancy	Adj Value	$/FF
Front Foot	149	137.08	$15,000	25%		
Front Foot	83	101.05	$15,000	25%		
Front Foot	120	124.8	$15,000	25%		

LAND VALUATION

Lot Type	Frontage	EFF	Sale Price	Vacancy	Adj Value	$/FF
Front Foot	149	137.08	$15,000	25%	$20000	$146
Front Foot	83	101.05	$15,000	25%	$20000	$198
Front Foot	120	124.8	$15,000	25%	$20000	$160

LAND VALUATION

- Allocation Method
  - Helpful when no vacant land sales are available
  - Based on the *principal of balance*
    - A typical ratio of land to building value is developed
    - A percentage of the total sale price of the property is allocated to the land
    - Based on knowledge of the market for the class being appraised
    - Determine site values using available vacant lot sales from multiple years
    - Can have different land to building ratios between neighborhoods or cities
    - Analyze sales of new construction

LAND VALUATION

- Allocation Method
  - Your analysis determines that the site represents 20% of the total property value got a given single family neighborhood.
  - $125,000 X 20% = $25,000 Land Value

LAND VALUATION

Land Type	Sale Price	LV 20% Resi Adj	Front Foot	EFF	Depth Factor	Land $/FF
Front Foot	$123,000		90	80.01		
Front Foot	$125,000		100	89		
Front Foot	$130,000		95	85		

LAND VALUATION

Land Type	Sale Price	LV 20% Resi Adj	Front Foot	EFF	Depth Factor	Land $/FF
Front Foot	$123,000	$24,600	90	80.01	0.89	$307
Front Foot	$125,000	$25,000	100	89	0.89	$280
Front Foot	$130,000	$32,500	95	85	0.89	$382

LAND VALUATION

- Abstraction Method
  - This method extracts the improved value of property from the sale price
  - Sale Price – Building Value = Land Value
  - Assumes the Building Value is correct
    - RCN-Depreciation = Building Value

LAND VALUATION

- Abstraction Method
  - Assumes the Building Value has not been over-inflated to reach sale price
  - Assumes all Building Values have been entered consistently
  - Assumes all Building characteristics have been collected consistently

LAND VALUATION

Sale Price		$200,000
RCN	$225,000	
Depreciation	30%	
Functional Obso	0%	
Economic Obso	0%	
Building Value		$157,500
Indicated Land Value		$42,500

LAND VALUATION

- Abstraction method is not as desirable or accurate as the sales comparison method and should only be used when vacant lot sales are not available and there is a high confidence in improvement data.

LAND VALUATION

- Capitalization of Ground Rent
  - Converts rent or leases of land into value by capitalizing the net income
  - Used when income from the property is completely independent of any improvements
  - Most applicable to Commercial or Agricultural Land

LAND VALUATION

- Land Residual Capitalization
  - Land residual capitalization is used when the income stream is dependent upon land & improvements.

LAND VALUATION

- Land Residual Capitalization
  - Is used to estimate value when
    - Depreciated improvement value can be accurately estimated
    - Annual NOI is know
    - Both land and improvement capitalization rates can be extracted from the market
    - Example:
      - Due to the large amount of leasehold land in Hawaii, local appraisers frequently employ this technique to convert ground lease rents into land values.

LAND VALUATION

- Land Build-up Method
  - Most applicable to newly subdivided land or land ready to be subdivided
  - Calculates an indicated value for land based on projected sales after deducting all development costs
  - This method is seldom used under normal conditions and should only be considered only as a last resort

LAND VALUATION

A developer purchases five acres of raw land and then plats the land into 15 lots.

Land Purchase	
Street	**$80,000**
Curbs	**$109,500**
Storm Sewer & Inlets	**$24,900**
Sanitary Sewer	**$44,500**
Sidewalk	**$12,000**
Engineering Fees	**$9,000**
total	**$279,900**
Developers Profit 20%	**$55,980**
Total Vaue	**$335,880**
Avg Lot Price (Total/#lots)	

LAND VALUATION

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Sidewalk	**$12,000**
Engineering Fees	**$9,000**
total	**$279,900**
Developers Profit 20%	**$55,980**
Total Value	**$335,880**
Avg Lot Price (Total/#lots)	**$22,387/Lot**

LAND VALUATION

- Unimproved vs Improved Sites
  - Land that is undeveloped is unimproved
  - Land that has been developed to the extent it is ready to be built upon is considered a site
  - Off-Site improvements which make undeveloped land a site include streets and utilities
  - Other site improvements include grading, topsoil, landscaping, trees, shrubs, etc…

LAND VALUATION

- For assessment/mass appraisal purposes land should be valued as if improved
- Therefore unimproved adjustment factors should be determined and applied to unimproved land.

LAND VALUATION

- Determining and unimproved adjustment factor
- From the Analyzed Unit Cost section of the Iowa Manual find costs for typical improvements made to land.

ADJUSTMENTS TO LAND

ADJUSTMENTS TO LAND

- Unimproved/Vacancy
- Excess
- Shape
  - Can affect the Utility
- Topography
- Economic?
- Other

ADJUSTMENTS TO LAND

- What is the cost to improve land.

LAND VALUATION

TYPICAL LOT IS 75X150	
GRADING & TOPSOIL ($0.21/SF)	$2,363
TREES (2@ $100.00/EACH)	$200
SHRUBS (3@ $25.00/EACH)	$75
SEEDING ($.02/SF)	$225
TOTAL IMPROVED SITE COST	$2,863
ROUNDED	$3,000

LAND VALUATION

- Land values for the improved sites in this subdivision should be the sale price of unimproved sites plus the site improvement costs. If the vacant sites are selling for $15,000 per lot the land value for the subdivision should be $18,000. ($15,000 + $3,000)
- The adjustment for unimproved lots in this subdivision should be 15%
  - $3,000 / $18,000 = 16.66%

LAND VALUATION

- Regardless of which unit of comparison being used the unimproved adjustment factor would remain at 15%.

- Keep in mind costs to land can vary greatly.
- They can vary by city/town or even by subdivision within a city/town.
- Some higher quality neighborhoods could also have more landscaping
- Some soil types can influence how buildable a lot can be
- Utilities are also improvements to the land.
  - *Septic systems and wells*
  - *Connecting to City water and sewer.*
  - *Bringing electricity to the improvements.*

VACANCY RATES (Based on $50 / FF Vacancy Factor)

FRONT FOOT PRICE	VACANCY RATE TO BE USED
60	85%
75	65%
100	50%
125	40%
150	35%
175	30%
200	25%
225	20%
250	20%
275	20%
300	15%
325	15%
350	15%
375	15%
400	10%
425	10%
450	10%
475	10%
500	10%
525	10%
550	10%
575	10%
600	10%

EXCESS

- Example Excess Frontage
- Standard Lot = 66 foot of frontage
- Actual Lot is 100 foot of frontage.
- 100 – 66 = 34
- 34 ÷ 2 = 17
- 17 ÷ 100 = .17 or 17%
- Try to have adjustments end in zero or five.

SHAPE

- When do you adjust?
  - Does the shape affect the Utility of the lot?
  - What other issues would affect the value of a lot?

TOPOGRAPHY

- Lay of the land

ECONOMIC

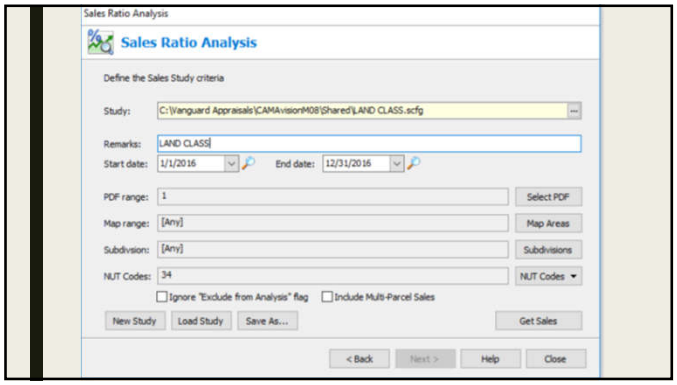
- Should land receive an economic obso?
- Why not change the Rate?

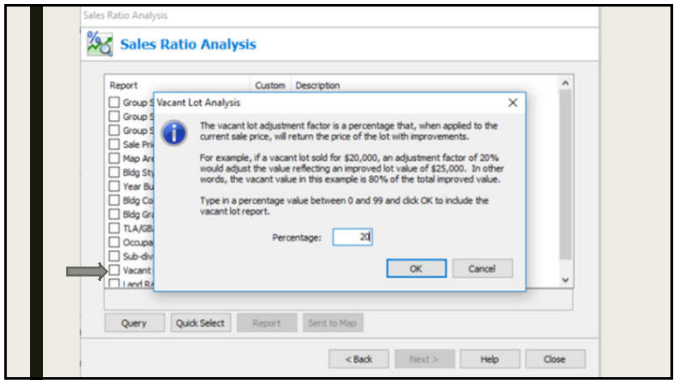
EXERCISE #5

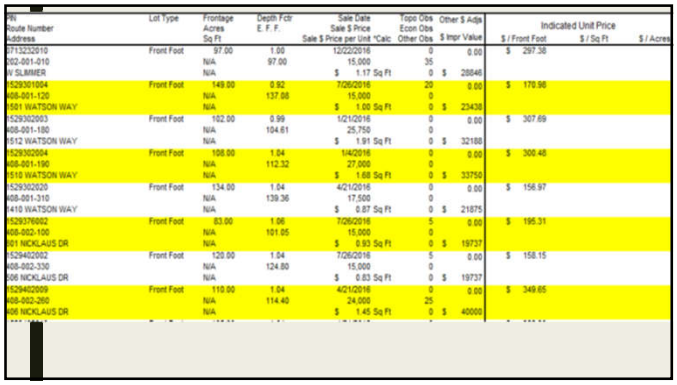
SALES RATIO/MASS APPRAISAL OF LAND

SALES RATIO OF LAND

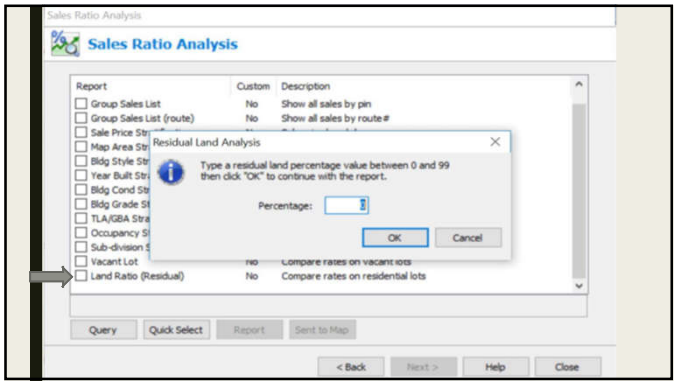
- First we must analyze the vacant lot sales in our jurisdiction
- Second we must then use the land to building ratio to verify vacant land rates
- We must verify land types being used
- Verify land rates being used
- Make necessary changes to land rates

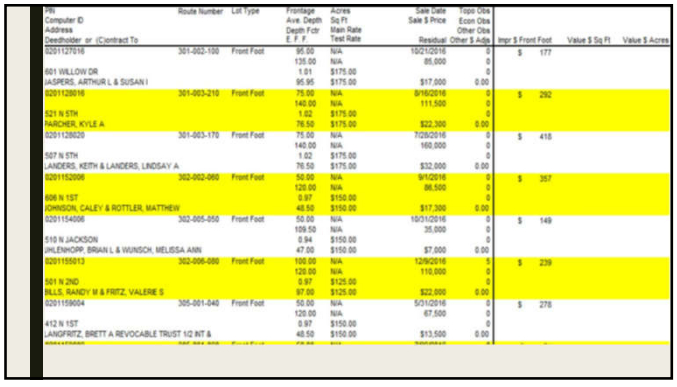




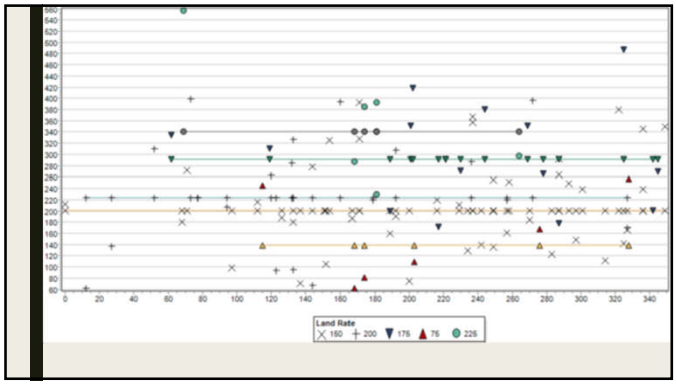


PIN Route Number Address	Lot Type	Frontage Acres Sq Ft	Depth Fctr E. F. F.	Sale Date Sale $ Price Sale $ Price per Unit *Calc	Topo Obs Econ Obs Other Obs	Other $ Adjs $ Impr Value	Indicated Unit Price $ / Front Foot	$ / Sq Ft	$ / Acres
0713232010	Front Foot	97.00	1.00	12/22/2016	0	0.00	$ 297.38		
302-001-010		N/A	97.00	15,000	35				
W SUMMER		N/A		$ 1.17 Sq Ft	0	$ 28846			
0529301004	Front Foot	149.00	0.92	7/26/2016	20	0.00	$ 170.96		
408-001-120		N/A	137.08	15,000	0				
1501 WATSON WAY		N/A		$ 1.00 Sq Ft	0	$ 23438			
0529302003	Front Foot	102.00	0.99	1/21/2016	0	0.00	$ 307.69		
408-001-180		N/A	104.61	25,750	0				
1512 WATSON WAY		N/A		$ 1.91 Sq Ft	0	$ 32188			
0529302004	Front Foot	108.00	1.04	1/4/2016	0	0.00	$ 308.48		
408-001-190		N/A	112.32	27,000	0				
1510 WATSON WAY		N/A		$ 1.68 Sq Ft	0	$ 33750			
0529302020	Front Foot	134.00	1.04	4/21/2016	0	0.00	$ 156.97		
408-001-310		N/A	139.36	17,500	0				
1410 WATSON WAY		N/A		$ 0.87 Sq Ft	0	$ 21875			
0529376002	Front Foot	83.00	1.06	7/26/2016	5	0.00	$ 195.31		
408-002-100		N/A	101.05	15,000	0				
501 NICKLAUS DR		N/A		$ 0.93 Sq Ft	0	$ 19737			
0529402002	Front Foot	120.00	1.04	7/26/2016	5	0.00	$ 158.15		
408-002-330		N/A	124.80	15,000	0				
506 NICKLAUS DR		N/A		$ 0.83 Sq Ft	0	$ 19737			
0529402009	Front Foot	110.00	1.04	4/21/2016	0	0.00	$ 349.65		
408-002-260		N/A	114.40	24,000	25				
406 NICKLAUS DR		N/A		$ 1.45 Sq Ft	0	$ 40000			





PIN Computer ID Address Deedholder or (C)ontract To	Route Number	Lot Type	Frontage Ave. Depth Depth Fctr E. F. F.	Acres Sq Ft Main Rate Test Rate	Sale Date Sale $ Price Residual	Topo Obs Econ Obs Other Obs Other $ Adjs	Impr $ Front Foot	Value $ Sq Ft	Value $ Acres
0201127016	301-002-100	Front Foot	95.00	N/A	10/21/2016	0	$ 177		
			135.00	N/A	85,000	0			
601 WILLOW DR			1.01	$175.00		0			
JASPERS, ARTHUR L & SUSAN I			95.95	$175.00	$17,000	0.00			
0201128016	301-003-210	Front Foot	75.00	N/A	9/16/2016	0	$ 292		
			140.00	N/A	111,500	0			
521 N 5TH			1.02	$175.00		0			
HARCHER, KYLE A			76.50	$175.00	$22,300	0.00			
0201128020	301-003-170	Front Foot	75.00	N/A	7/28/2016	0	$ 418		
			140.00	N/A	160,000	0			
507 N 5TH			1.02	$175.00		0			
LANDERS, KEITH & LANDERS, LINDSAY A			76.50	$175.00	$32,000	0.00			
0201152006	302-002-060	Front Foot	50.00	N/A	9/1/2016	0	$ 357		
			120.00	N/A	86,500	0			
606 N 1ST			0.97	$150.00		0			
JOHNSON, CALEY & ROTTLER, MATTHEW			48.50	$150.00	$17,300	0.00			
0201154006	302-005-050	Front Foot	50.00	N/A	10/31/2016	0	$ 149		
			109.50	N/A	35,000	0			
510 N JACKSON			0.94	$150.00		0			
UHLENHOPP, BRIAN L & WUNSCH, MELISSA ANN			47.00	$150.00	$7,000	0.00			
0201155013	302-006-080	Front Foot	100.00	N/A	12/9/2016	5	$ 239		
			120.00	N/A	110,000	0			
501 N 2ND			0.97	$125.00		0			
BILLS, RANDY M & FRITZ, VALERIE S			97.00	$125.00	$22,000	0.00			
0201159004	305-001-040	Front Foot	50.00	N/A	5/31/2016	0	$ 278		
			120.00	N/A	67,500	0			
412 N 1ST			0.97	$150.00		0			
LANGFRITZ, BRETT A REVOCABLE TRUST 1/2 INT &			48.50	$150.00	$13,500	0.00			



Query Layout SQL Preview

Parcel_Number	PDF_Number	PDF_Name	Map_Number	MapName	Lot_Basis	Front_Foot1_Rate
0625204006	0	Urban Residential	0	ALLISON	1	150.00
0625205005	0	Urban Residential	0	ALLISON	1	150.00
0625205006	0	Urban Residential	0	ALLISON	1	150.00
0625205007	0	Urban Residential	0	ALLISON	1	150.00
0625205008	0	Urban Residential	0	ALLISON	1	150.00
0625206001	0	Urban Residential	0	ALLISON	1	150.00
0625206002	0	Urban Residential	0	ALLISON	1	150.00
0625206003	0	Urban Residential	0	ALLISON	1	150.00
0625206004	0	Urban Residential	0	ALLISON	1	150.00
0625206005	0	Urban Residential	0	ALLISON	1	150.00
0625206006	0	Urban Residential	0	ALLISON	1	150.00
0625206007	0	Urban Residential	0	ALLISON	1	150.00
0625206008	0	Urban Residential	0	ALLISON	1	150.00
0625206009	0	Urban Residential	0	ALLISON	1	150.00
0625207001	0	Urban Residential	0	ALLISON	1	150.00
0625207002	0	Urban Residential	0	ALLISON	1	150.00
0625207003	0	Urban Residential	0	ALLISON	1	150.00
0625207004	0	Urban Residential	0	ALLISON	1	150.00
0625207005	0	Urban Residential	0	ALLISON	1	150.00
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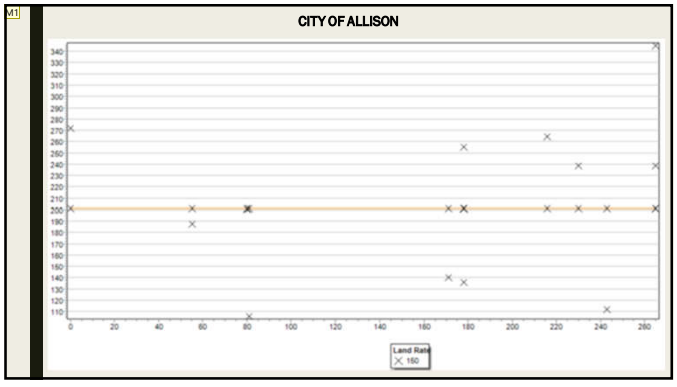
0625208004	0	Urban Residential	0	ALLISON	1	150.00



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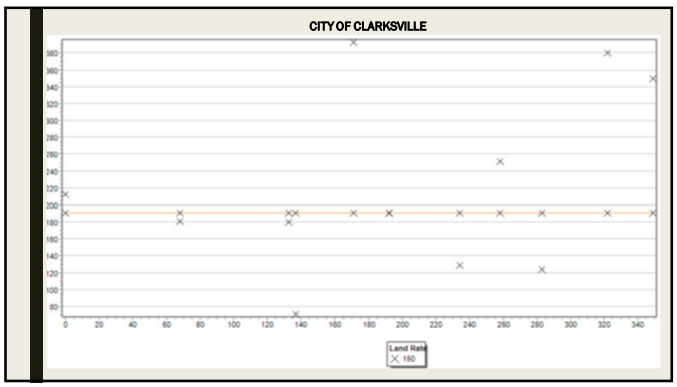
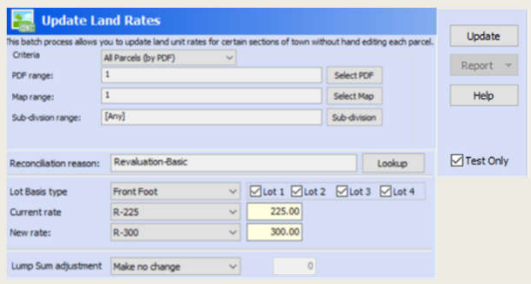
M1 Mike, 9/8/2017

Query Layout SQL Preview

Parcel_Number	PDF_Number	PDF_Name	Map_Number	MapName	Lot_Basis	Front_Foot1_Rate
0818133009	0	Urban Residential	4	CLARKSVILLE	1	150.00
0818331010	0	Urban Residential	4	CLARKSVILLE	1	150.00
0818386002	0	Urban Residential	4	CLARKSVILLE	1	150.00
0818162006	0	Urban Residential	4	CLARKSVILLE	1	160.00
0713228003	0	Urban Residential	4	CLARKSVILLE	1	175.00
0713228004	0	Urban Residential	4	CLARKSVILLE	1	175.00
0713228007	0	Urban Residential	4	CLARKSVILLE	1	175.00
0713228009	0	Urban Residential	4	CLARKSVILLE	1	175.00
0713228010	0	Urban Residential	4	CLARKSVILLE	1	175.00
0713229006	0	Urban Residential	4	CLARKSVILLE	1	175.00
0713229012	0	Urban Residential	4	CLARKSVILLE	1	175.00
0713229013	0	Urban Residential	4	CLARKSVILLE	1	175.00
0713229016	0	Urban Residential	4	CLARKSVILLE	1	175.00
0713229018	0	Urban Residential	4	CLARKSVILLE	1	175.00



UPDATE LAND



LAND UPDATE

Log [TEST MODE]

PDF	Pin	Map_Area	Subdivision	Old_Value	New_Value	Percent_Chg
1	1530156002	PARKERSBURG	[NONE]	11320	17790	57.1555
1	1530156003	PARKERSBURG	[NONE]	16980	26680	57.126
1	1530156009	PARKERSBURG	[NONE]	10290	16170	57.1429
1	1530156010	PARKERSBURG	[NONE]	7030	11050	57.1835
1	1530156015	PARKERSBURG	[NONE]	10810	16980	57.0768
1	1530157007	PARKERSBURG	[NONE]	10190	16010	57.1148
1	1530157009	PARKERSBURG	[NONE]	6790	10670	57.1429
1	1530157027	PARKERSBURG	[NONE]	10190	16010	57.1148
1	1530180010	PARKERSBURG	[NONE]	11900	18700	57.1429
1	1530180011	PARKERSBURG	[NONE]	11900	18700	57.1429
1	1530180012	PARKERSBURG	[NONE]	11900	18700	57.1429
1	1530180013	PARKERSBURG	[NONE]	11900	18700	57.1429
1	1530180014	PARKERSBURG	[NONE]	11900	18700	57.1429
1	1530180015	PARKERSBURG	[NONE]	11900	18700	57.1429
1	1530181002	PARKERSBURG	[NONE]	17350	27270	57.1758
1	1530181003	PARKERSBURG	[NONE]	16780	26370	57.1514
1	1530181004	PARKERSBURG	[NONE]	11780	18510	57.1307
1	1530181005	PARKERSBURG	[NONE]	7000	11000	57.1429

RUN COMPLETE ANALYSIS AFTER LAND IS SET CORRECTLY

- Poor land values can affect the Coefficient of Dispersion within a jurisdiction

REVIEW

TEST