

From the Outskirts to Downtown: Taxes, Land Use & Value in Upper Valley Communities

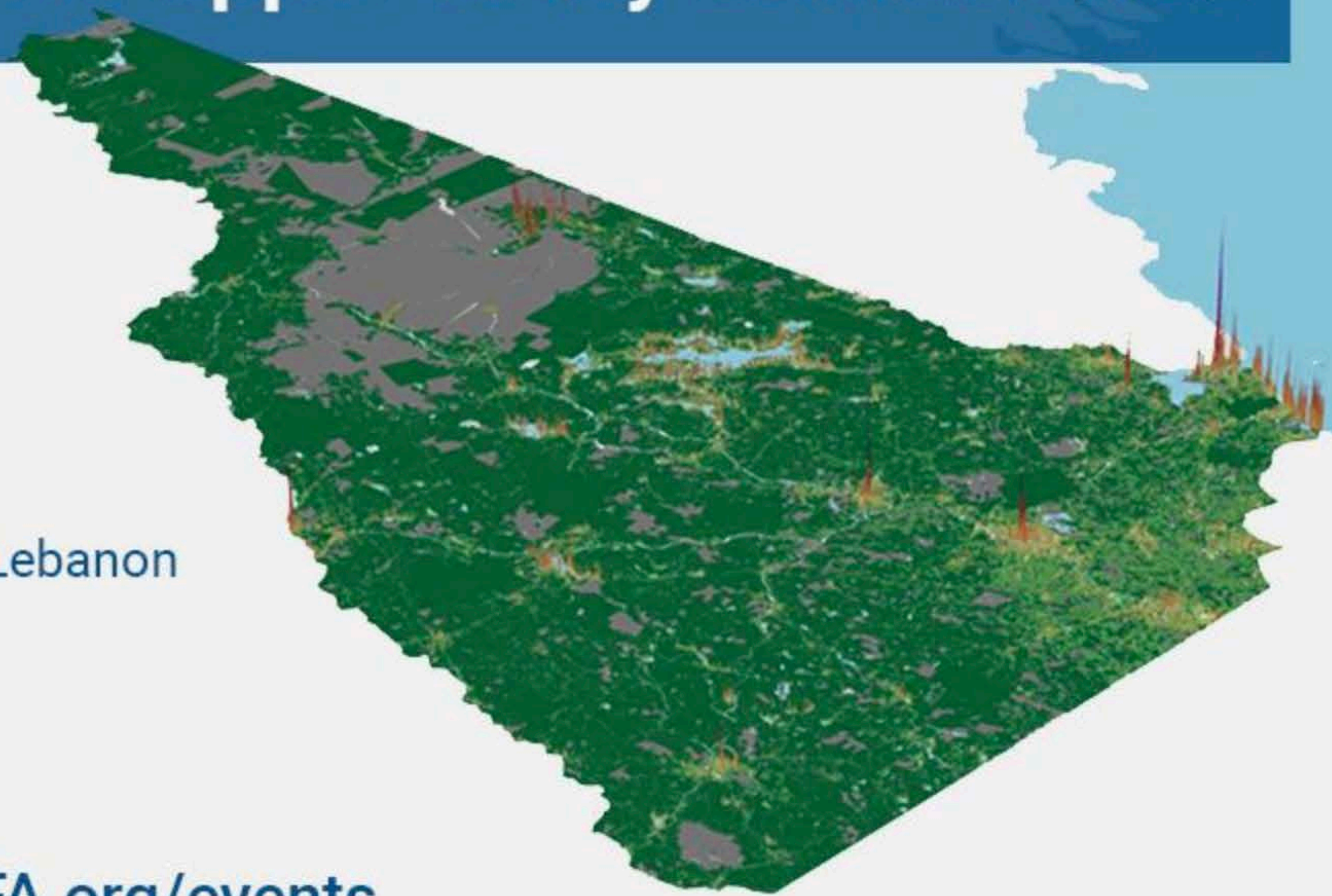
A virtual presentation by
Joe Minicozzi AICP | Urban3
October 29, 2020 at 11 AM

Hosted by

Vital Communities | Claremont | Hanover | Lebanon



NHHFA.org/events



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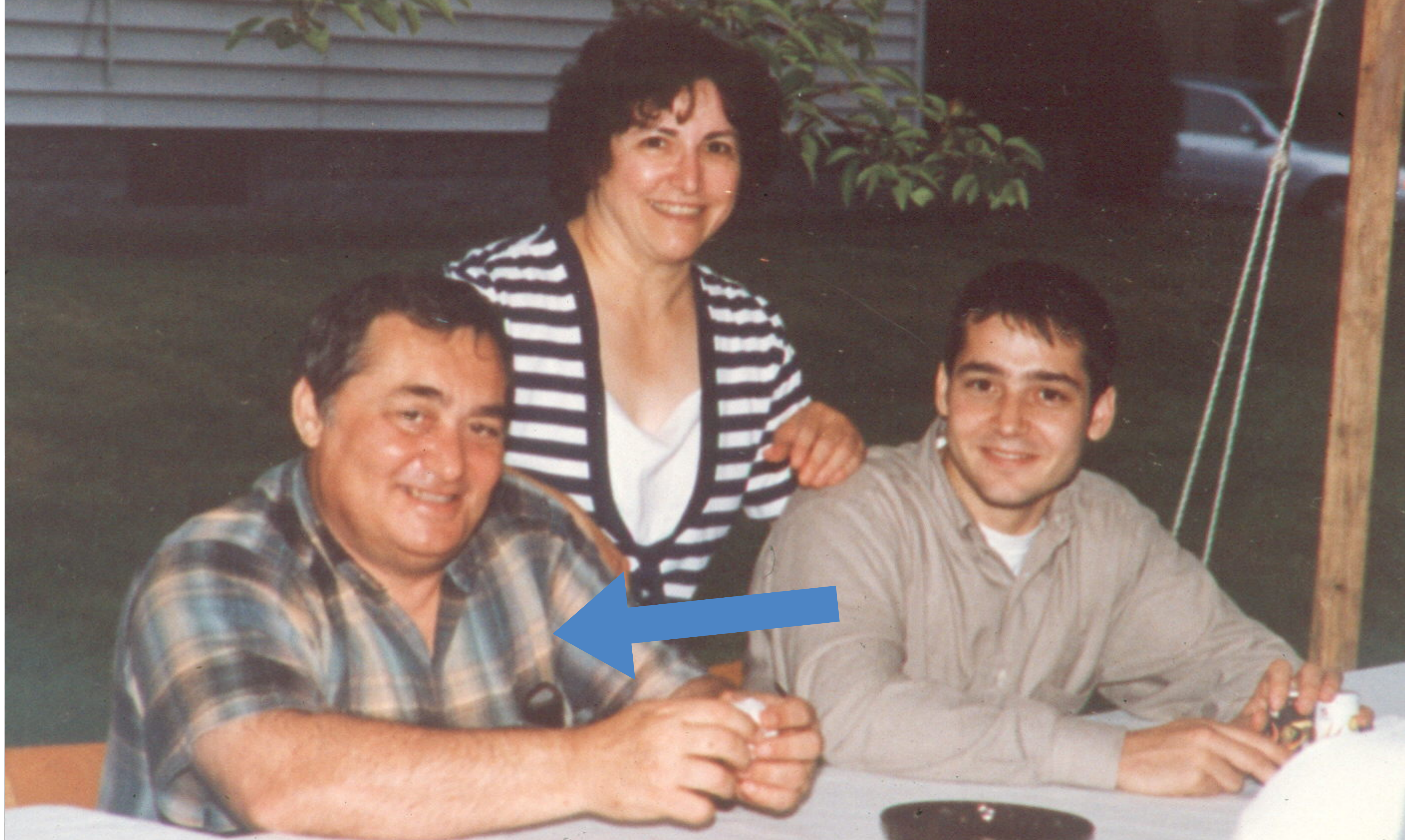
**Our thanks to
all the communities
that supported this study.**

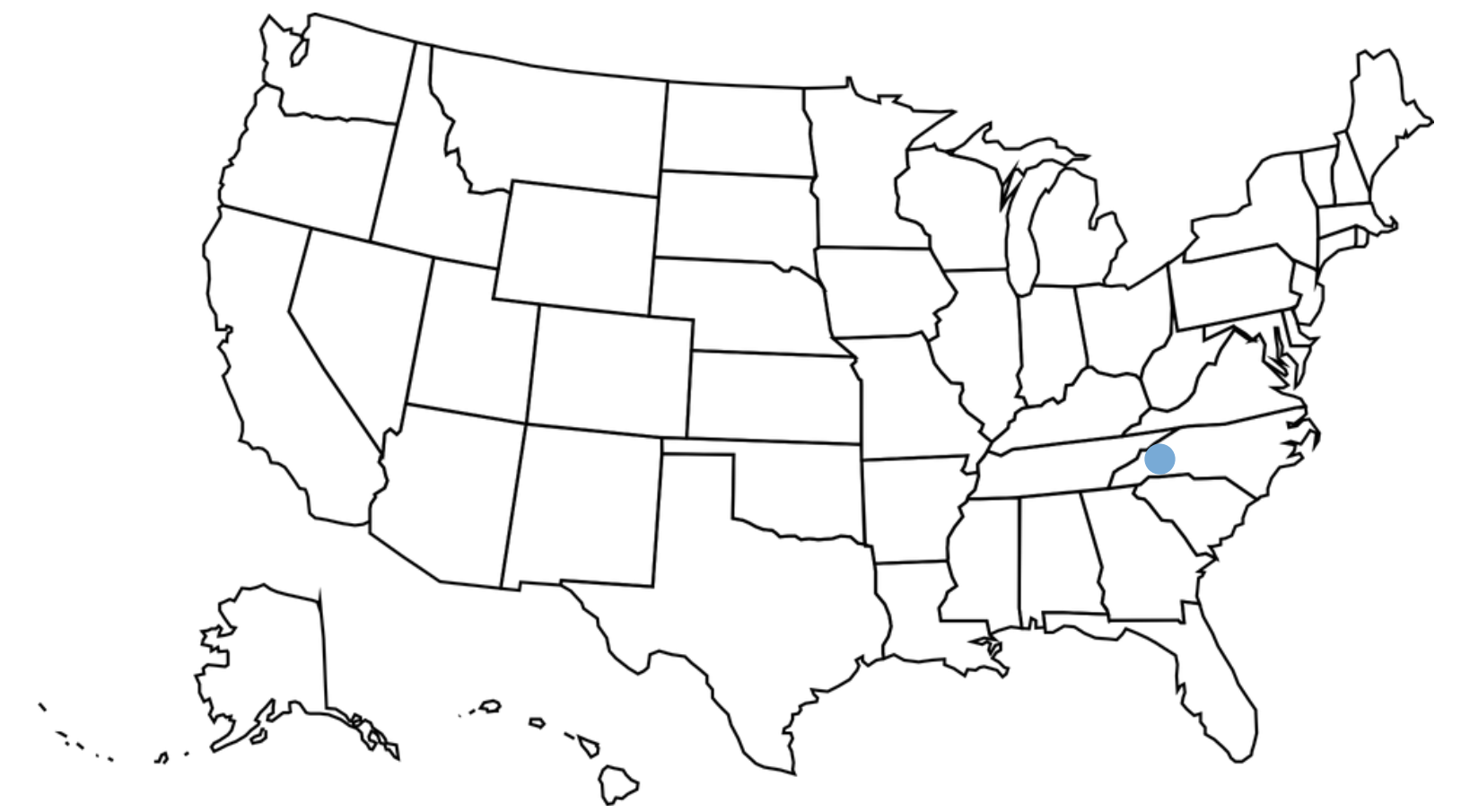


Value per acre map of
Auckland, New Zealand

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Economics of Land Use





Case Study: Economic MRI®

Asheville, North Carolina





In the 70's and 80's
our downtown died.



Asheville's de facto motto was:

"That will never work here - don't even try."



Julian Price

1941 - 11/19/2001



The Alternative Reading Room

The Mountain Xpress

Salsa's & Zambras

City Seeds

Public Interest Projects



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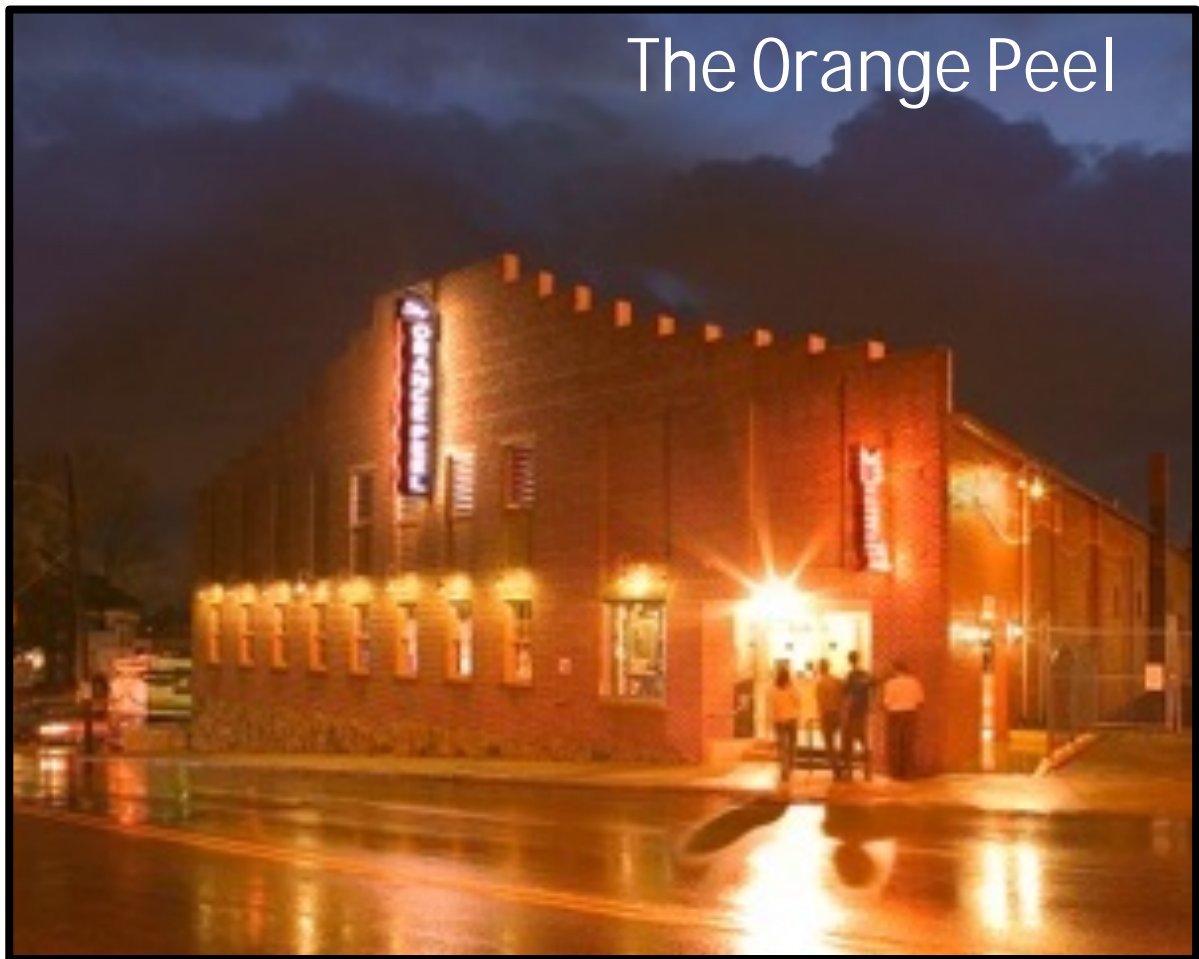
51 Biltmore



The Dogwood Fund



The Orange Peel



Downtown benches

YWCA

The Public Service Building



The Laughing Seed



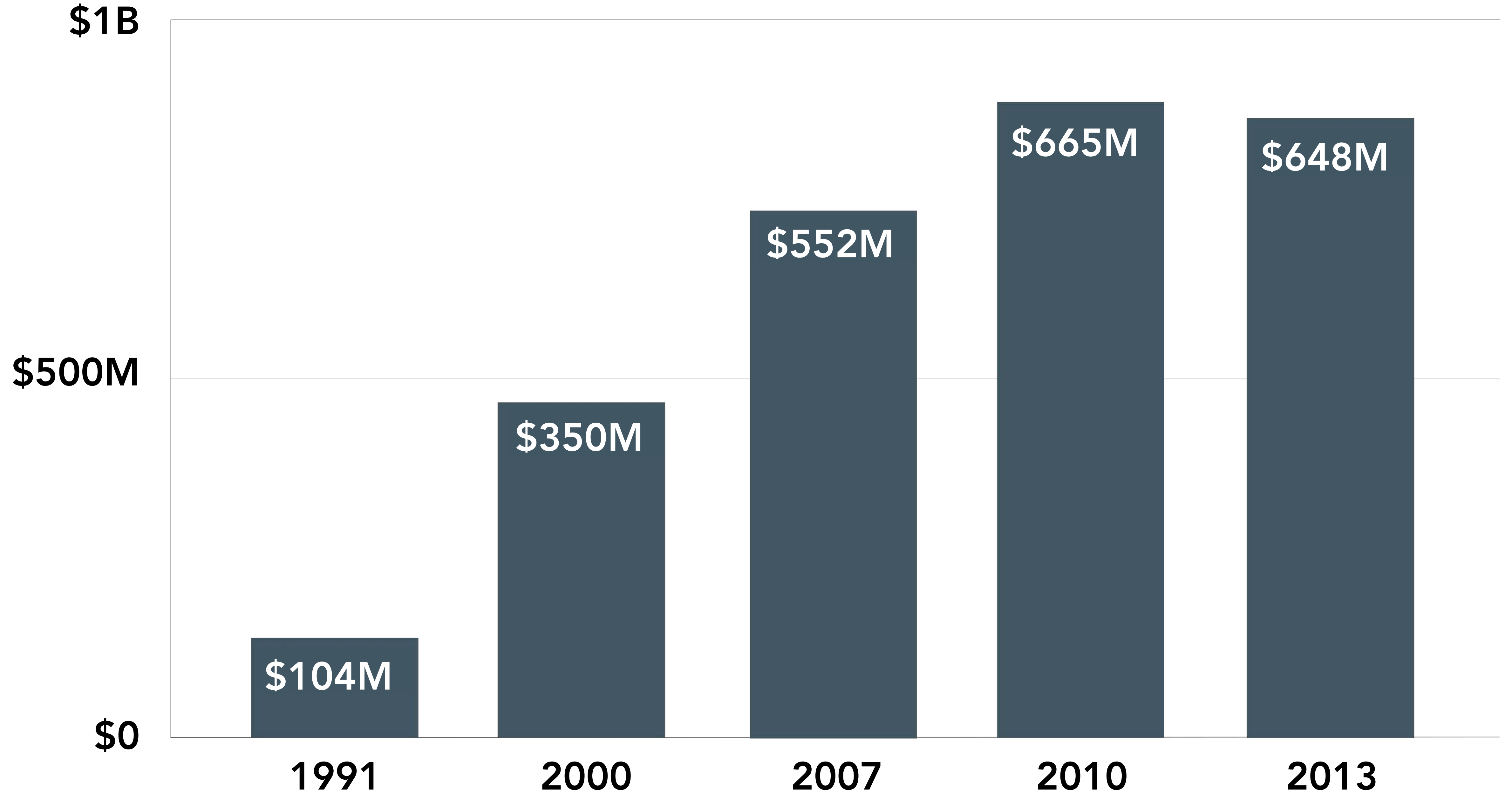


In God we trust;
everyone else,
bring data.

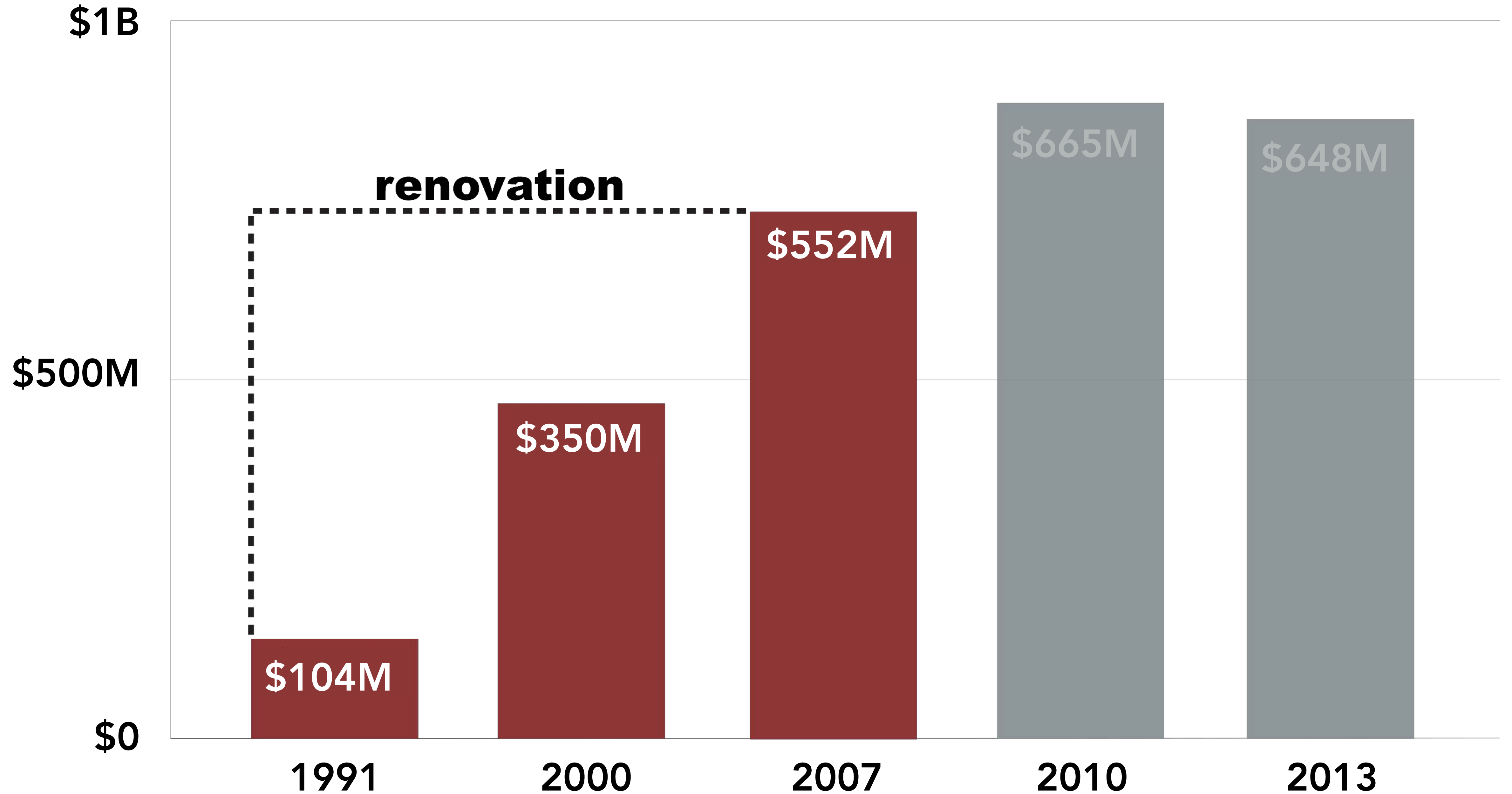
Mayor Michael Bloomberg



Asheville CBD Taxable Value



Asheville CBD Taxable Value



WELCOME TO ASHEVILLE

PAST
COUNCIL
DECISIONS
\$ \$ \$



THE BURDENS OF POOR DECISIONS ARE BECOMING UNBEARABLE!

- Parking Garages 4.5 Million & Climbing
- Pack Square Projects 10.0 Million & Climbing
- Wall Street Project 1.8 Million & Standing Empty
- New Garage for Garbage Trucks 5 Million Plus
- City Hall Beautification Project 4.8 Million
- 26.1 Million & Climbing

In 1990 Asheville City taxes were raised

2 Million Dollars

to help pay for these projects for
Downtown Dignitaries.

These are just a few of the failed policy decisions supported by the Old Council. The taxpayers can no longer afford the policies of the 80's.

Here are your choices on November 5TH
You May Vote For Six

- | | |
|------------------------------------|------------------------------------|
| ■ Gene Ellison - 2 year Incumbent | ■ Bill Moore - 2 year Incumbent |
| ■ Chris Peterson - Fresh New Ideas | ■ Carr Swicegood - Fresh New Ideas |
| ■ Charles Worley - Fresh New Ideas | ■ Barbara Field - Fresh New Ideas |
| Norma Price - 14 years Incumbent | |

SHOW YOUR SUPPORT FOR A NEW CITY COUNCIL.
DISPLAY THIS POSTER IN YOUR CAR, YOUR WINDOW, OR YOUR YARD.

PAID FOR BY: CITIZENS FOR A NEW CITY GOVERNMENT, DOROTHY F. WORLEY, TREASURER

BLUEPRINT OF CITY HALL

THE INCUMBENTS: WHY SHOULD WE VOTE AGAINST THEM?

The decade of the 80's was controlled by the incumbents
Bratton, Frank, Price, and Michalove.

During their tenure, we have witnessed the following:

1. Personal income has decreased.
2. Property taxes are at an all time high. In 1990 these four council members voted for a 16% increase in personal property taxes.
3. In 1981 water was at the top of their list of priorities. In 1991 water remains at the top of their list.
4. Increased crime rate. Inadequate police protection due to massive annexation during the past 10 years.
5. Downtown development for bureaucrats instead of water, sewer, and streets for our citizens.
6. Fewer jobs for our residents. We have lost good sound industries such as Burlington, Sayles, Kellwood, Girmes and Stencil, not to mention 3000 jobs at Enka.
7. Enormous waste of city tax dollar and manpower within the fire department (i.e.: fire trucks being routed to fender benders, etc.).
8. Downtown parking fiasco. Millions of dollars wasted on unused parking decks.
9. Turmoil in the City School System. The only voice city residents have is through our vote for Asheville City Council.
10. Community favoritism. Certain communities have been ignored far too long while others have been given the royal treatment. This cannot be tolerated. All city areas are entitled to all city services.



VOTE OUT THE POLICY MAKERS OF THE 80'S.

THEY'VE BEEN IN CHARGE TOO LONG!

BRATTON
OUT

FRANK
OUT

PRICE
OUT

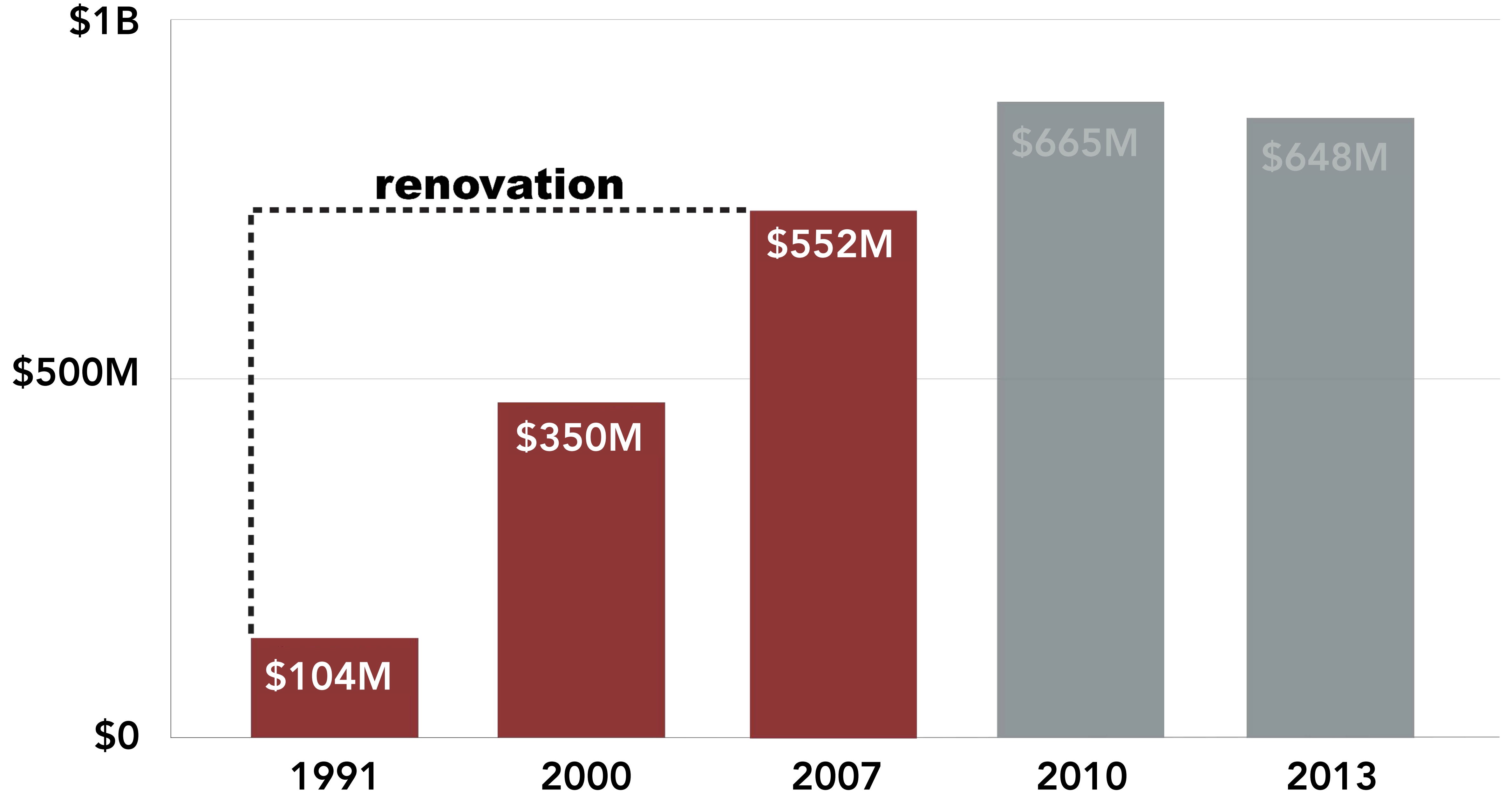
MICHALOVE
OUT

PAID FOR BY THE CITIZENS TO ELECT A NEW CITY GOVERNMENT

Asheville's de facto motto was:

"That will never work here - don't even try."

Asheville CBD Taxable Value



**DON'T TRUST THIS GROUP
OF *LYING POLITICIANS!***

**THE GREAT RIVER GRAB HAS BEGUN!
DON'T BE FOOLED BY THESE *CHARLETANS!***

**THIS CORRUPT
GROUP NEEDS TO
RESIGN ALONG
WITH THEIR
AARRC RIVER
COMMITTEE**

**HELP US FIGHT!
Asheville*RiverGate*.com**

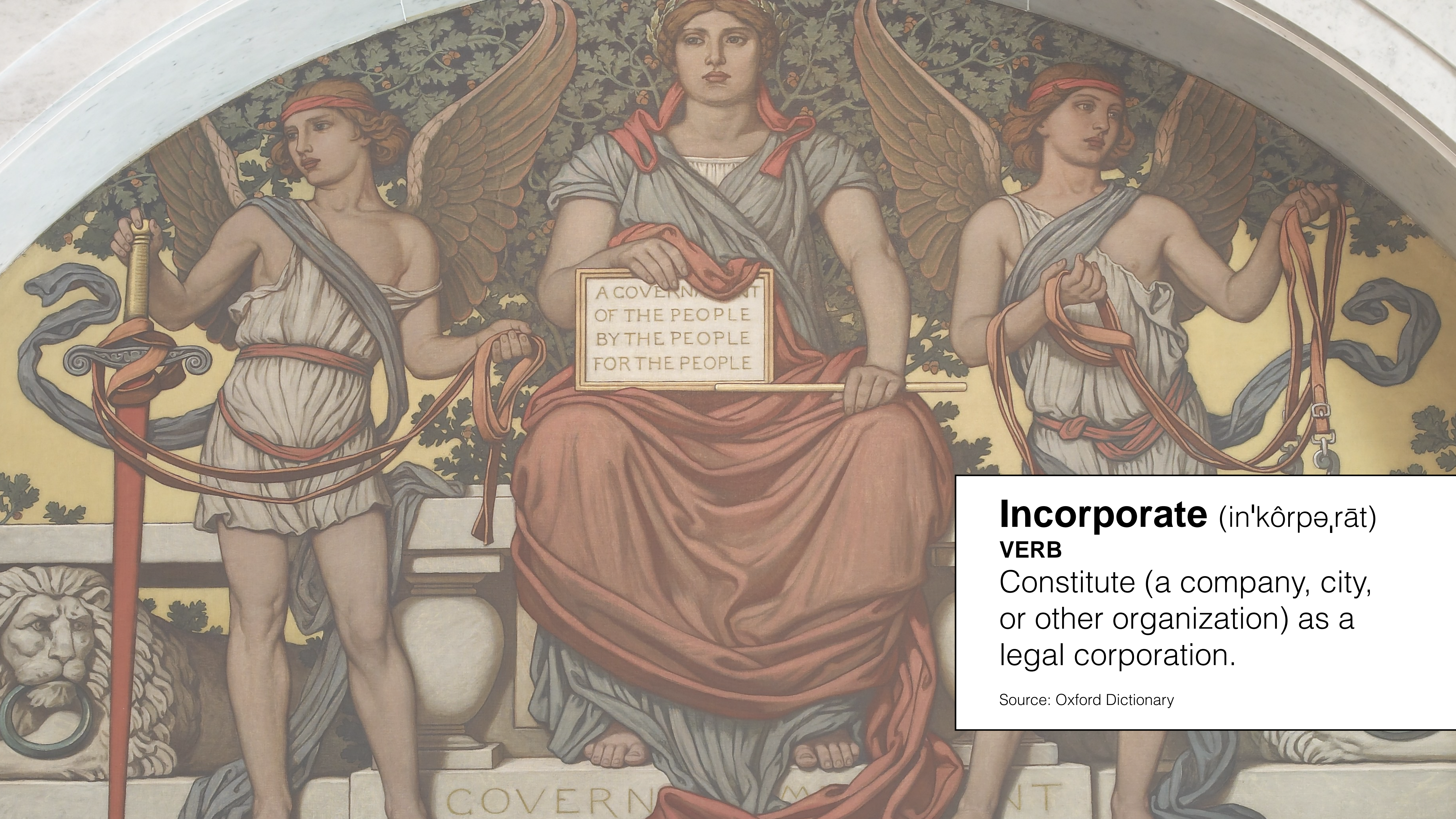




What is a City?



What is a City?



Incorporate (in'kôrpə,rāt)

VERB

Constitute (a company, city, or other organization) as a legal corporation.

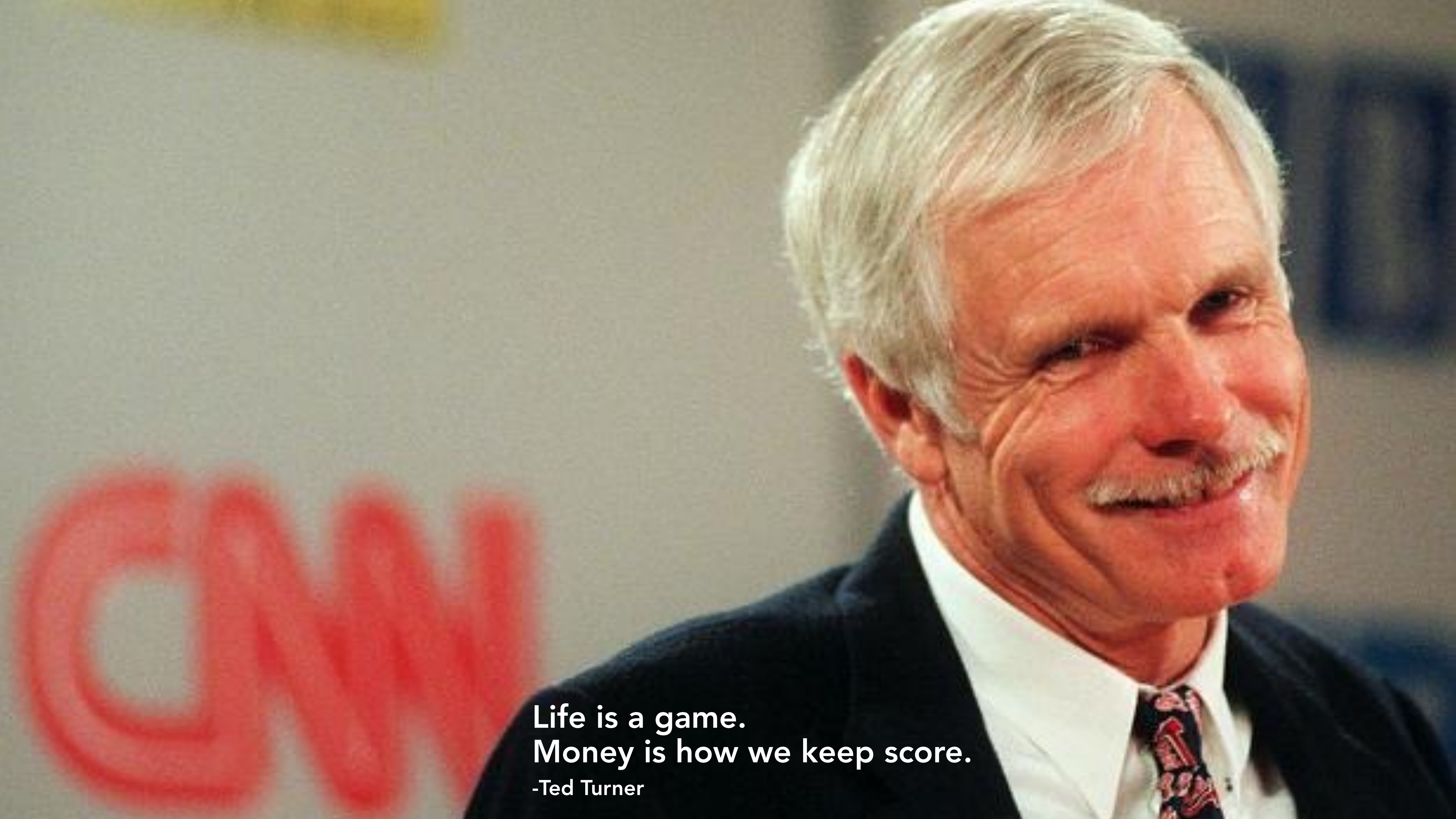
Source: Oxford Dictionary

A photograph of Joe Biden sitting on a talk show set, facing Stephen Colbert. Biden is wearing a dark suit and a blue striped tie. Colbert is wearing a dark suit and glasses. The background is a cityscape at night. The text "The United States is the largest corporation in the world." is overlaid on the image in white.

“The United States
is the largest
corporation
in the world.”

Joe Biden

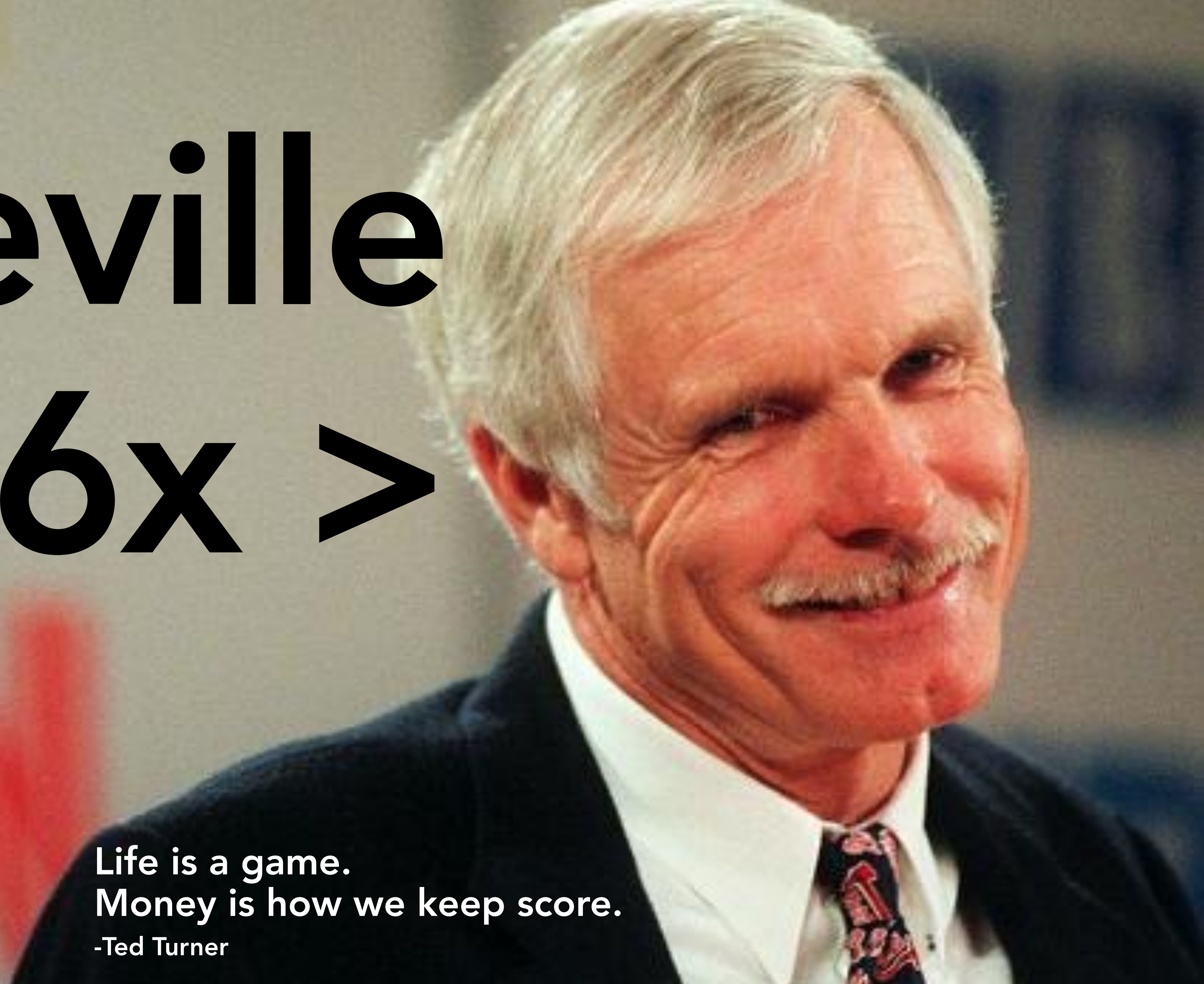
United States Vice President
Late Show: 12/6/2016



Life is a game.
Money is how we keep score.
-Ted Turner

Asheville Is 6x >

Life is a game.
Money is how we keep score.
-Ted Turner







For 40 years this building remained vacant..... its tax value in 1991 was just over **\$300,000**



Today the building is valued at over **\$11,000,000** an increase of

over **3500%**

in **15 years**

The lot is less than **1/5 acre**





Asheville Walmart

Downtown



\$11,000,000 Tax Value

Asheville Walmart



\$20,000,000 Tax Value

Downtown



\$11,000,000 Tax Value

Asheville Walmart

Downtown



\$20,000,000 Tax Value



\$11,000,000 Tax Value

34

0.2

Land Consumed (acres)

International Association of Assessing Officers

80th International Conference

Sacramento, CA

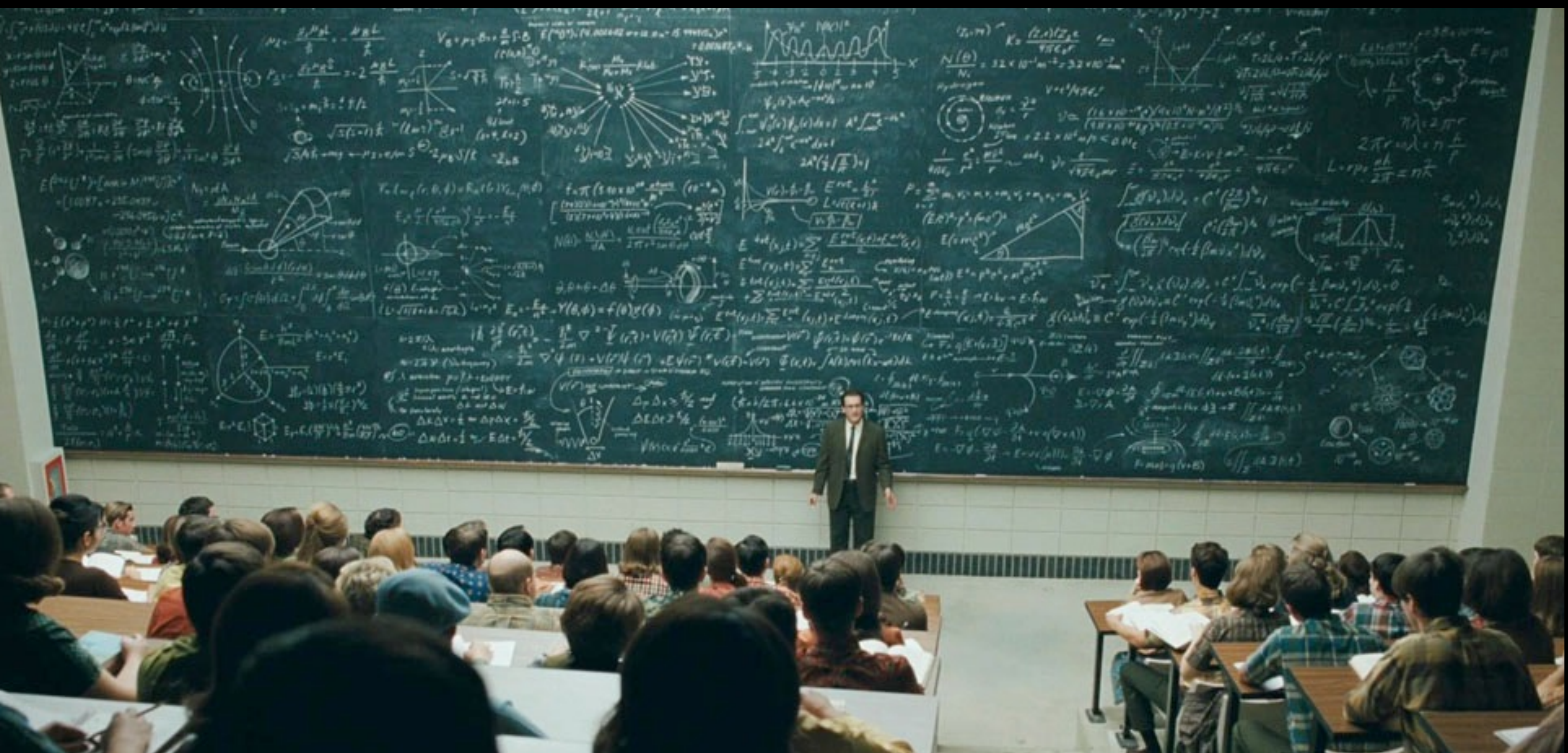
August 26, 2014



Charles Terrell, CMI
Walmart
Director of Property Tax







Scary Math

How do you compare cars?



Ford F150 Lariat LTD
648 miles per tank



Toyota Prius
571 miles per tank



1955 BMW Isetta
245 miles per tank



Rolls-Royce Phantom Drophead
380 miles per tank



Bugatti Veyron SS
390 miles per tank

How do you compare cars?



Ford F150 Lariat LTD
648 miles per tank



Toyota Prius
571 miles per tank



1955 BMW Isetta
245 miles per tank



Rolls-Royce Phantom Drophead
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Bugatti Veyron SS
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How do you compare cars?



Ford F150 Lariat LTD
13/18 mpg



Toyota Prius
51/48 mpg



1955 BMW Isetta
50/70 mpg



Rolls-Royce Phantom Drophead
11/18 mpg



Bugatti Veyron SS
8/14 mpg

How do you compare cars?



Ford F150 Lariat LTD
13/18 mpg



Toyota Prius
51/48 mpg



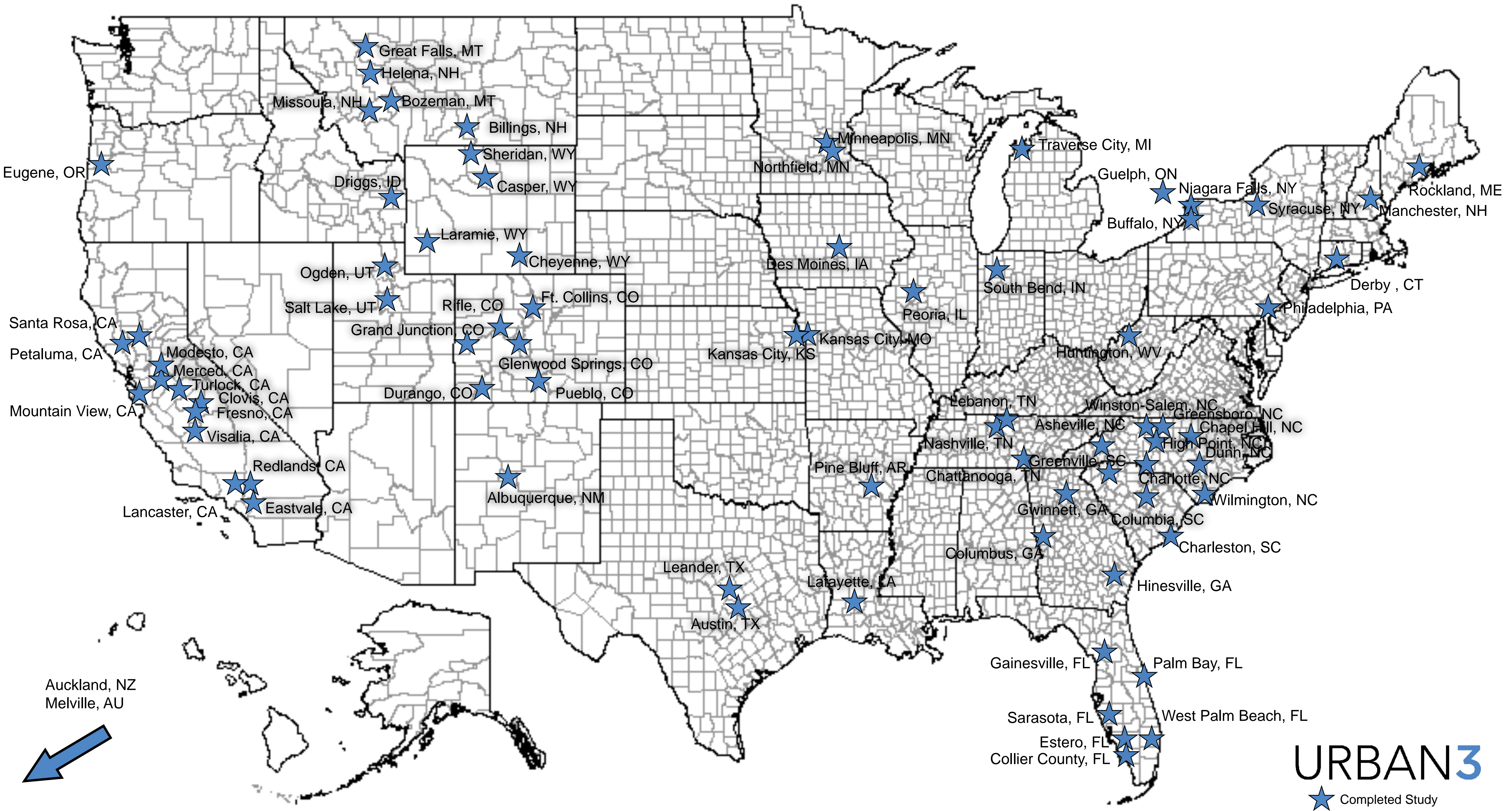
1955 BMW Isetta
50/70 mpg



Rolls-Royce Phantom Drophead
11/18 mpg



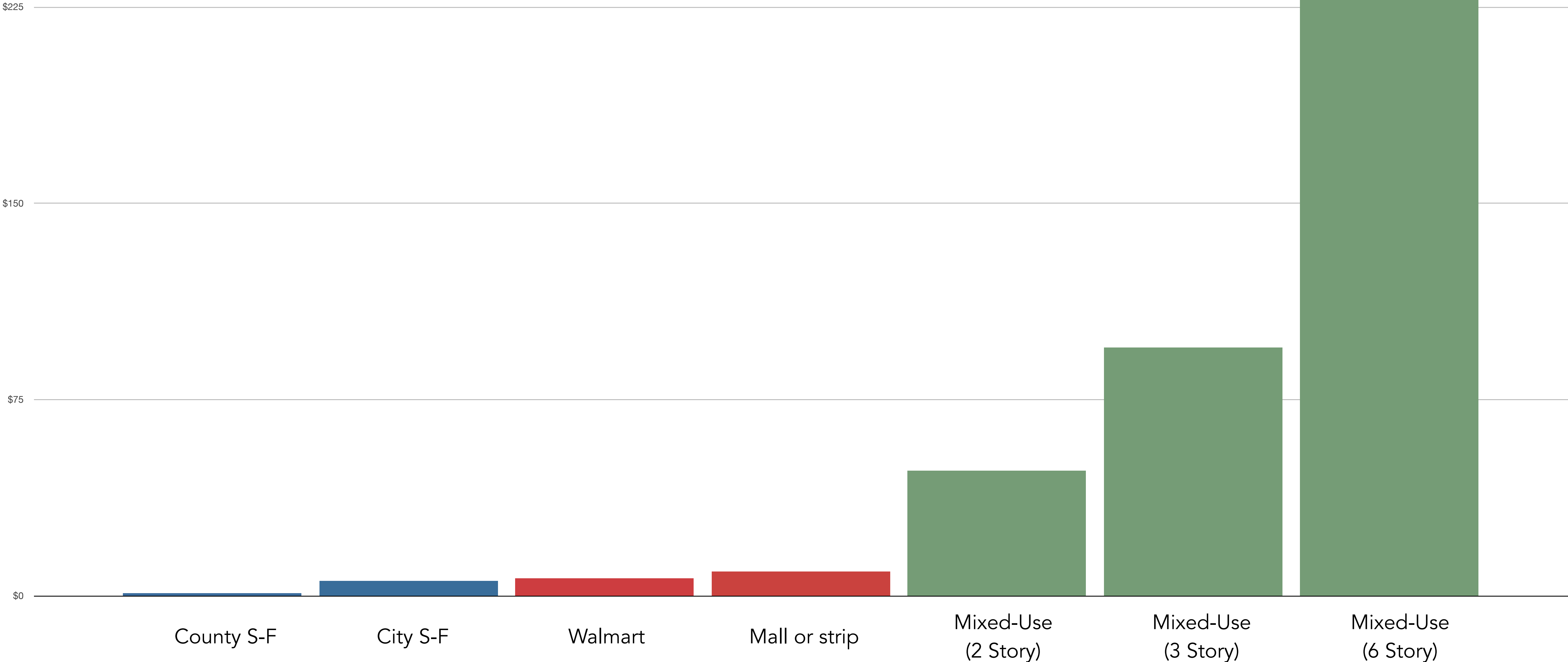
Bugatti Veyron SS
8/14 mpg

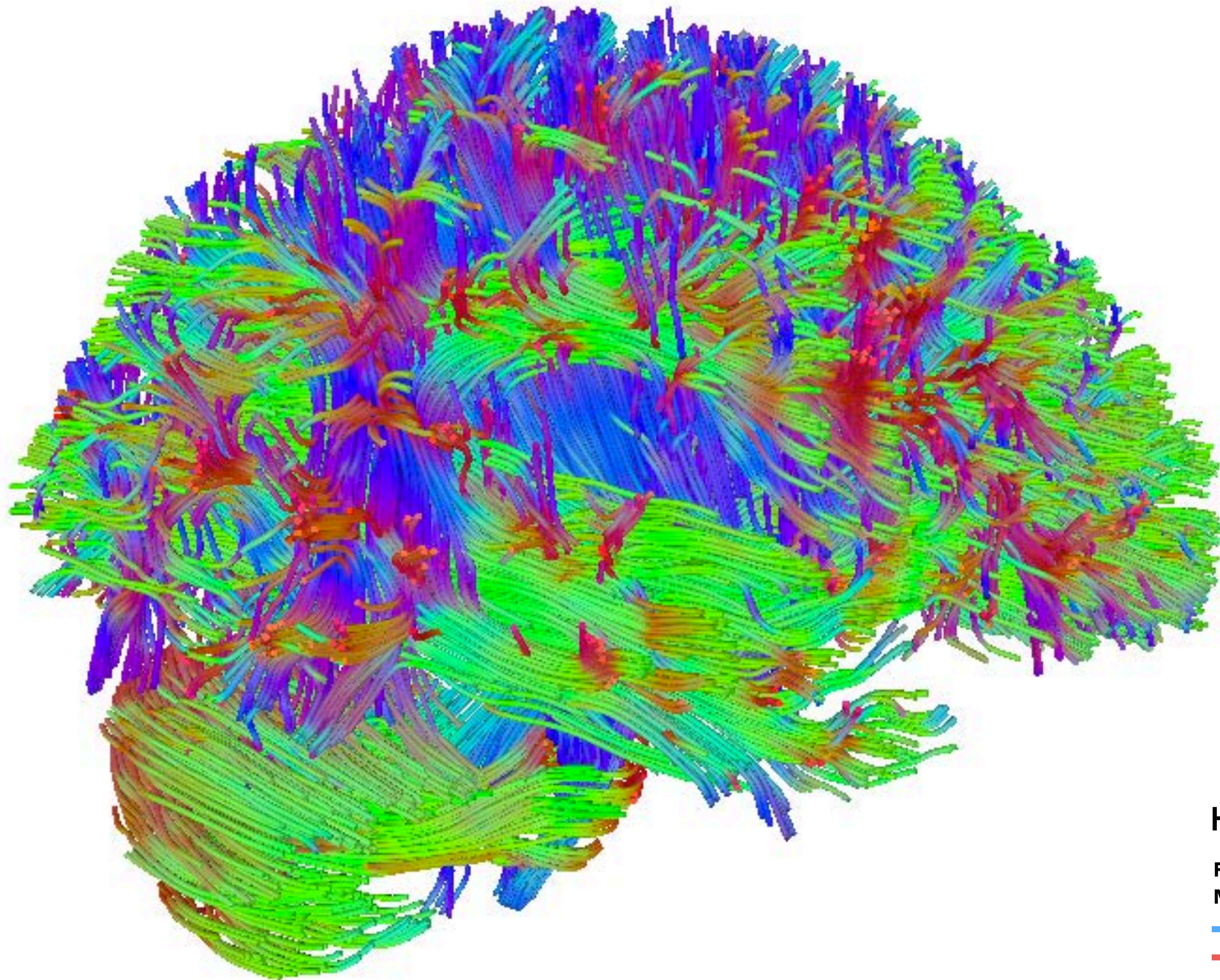


County Property Taxes/Acre

Ratio Difference of 60 City Sample Set, in 21 States (+ a Province)

- Residential
- Commercial
- Mixed-Use

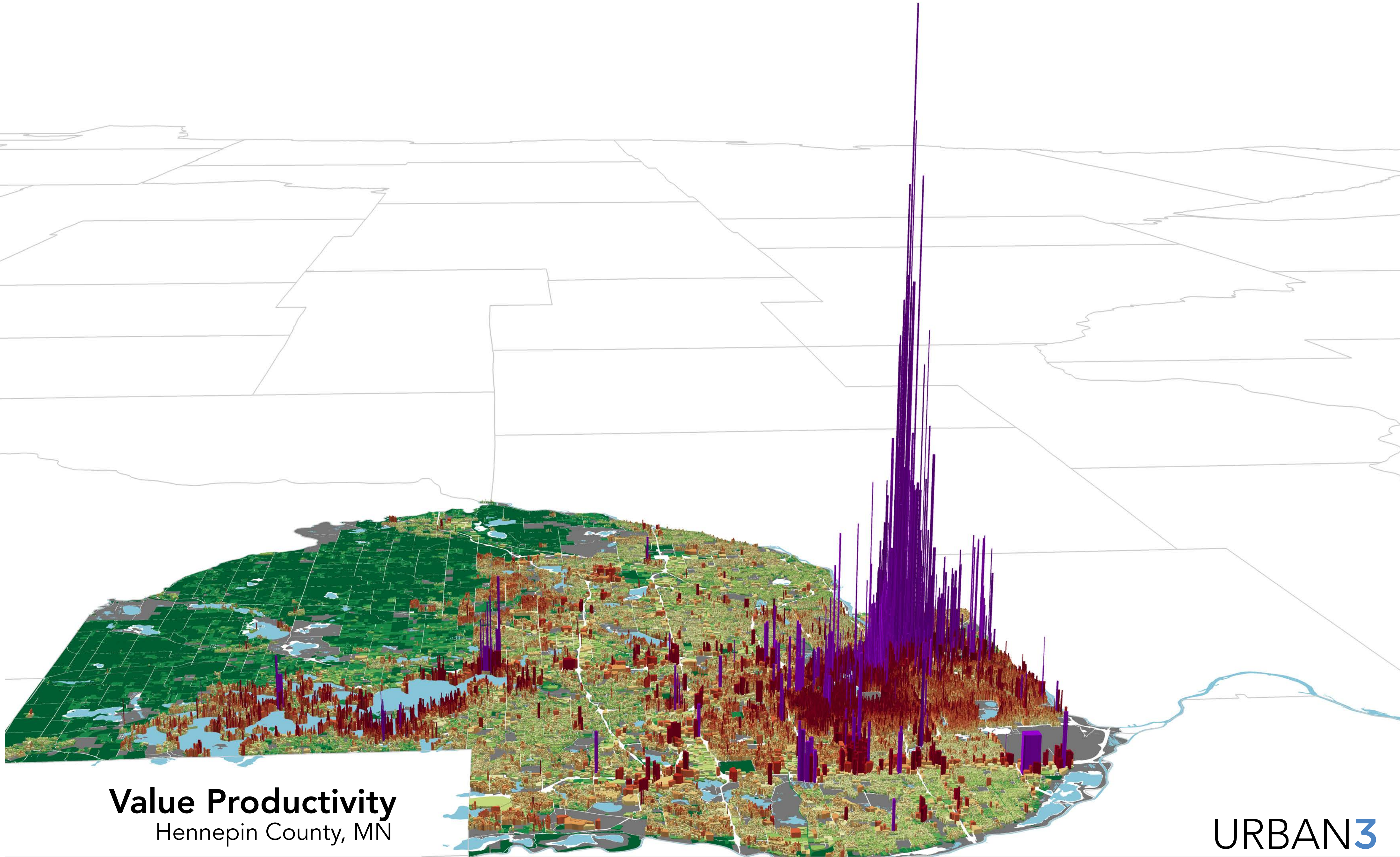
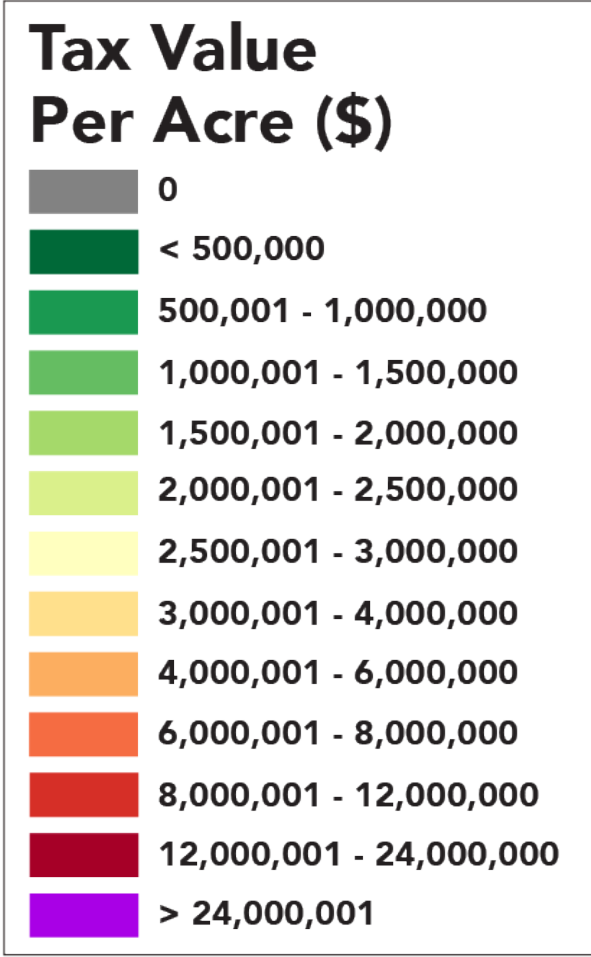
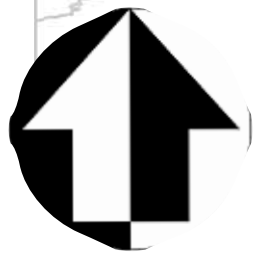


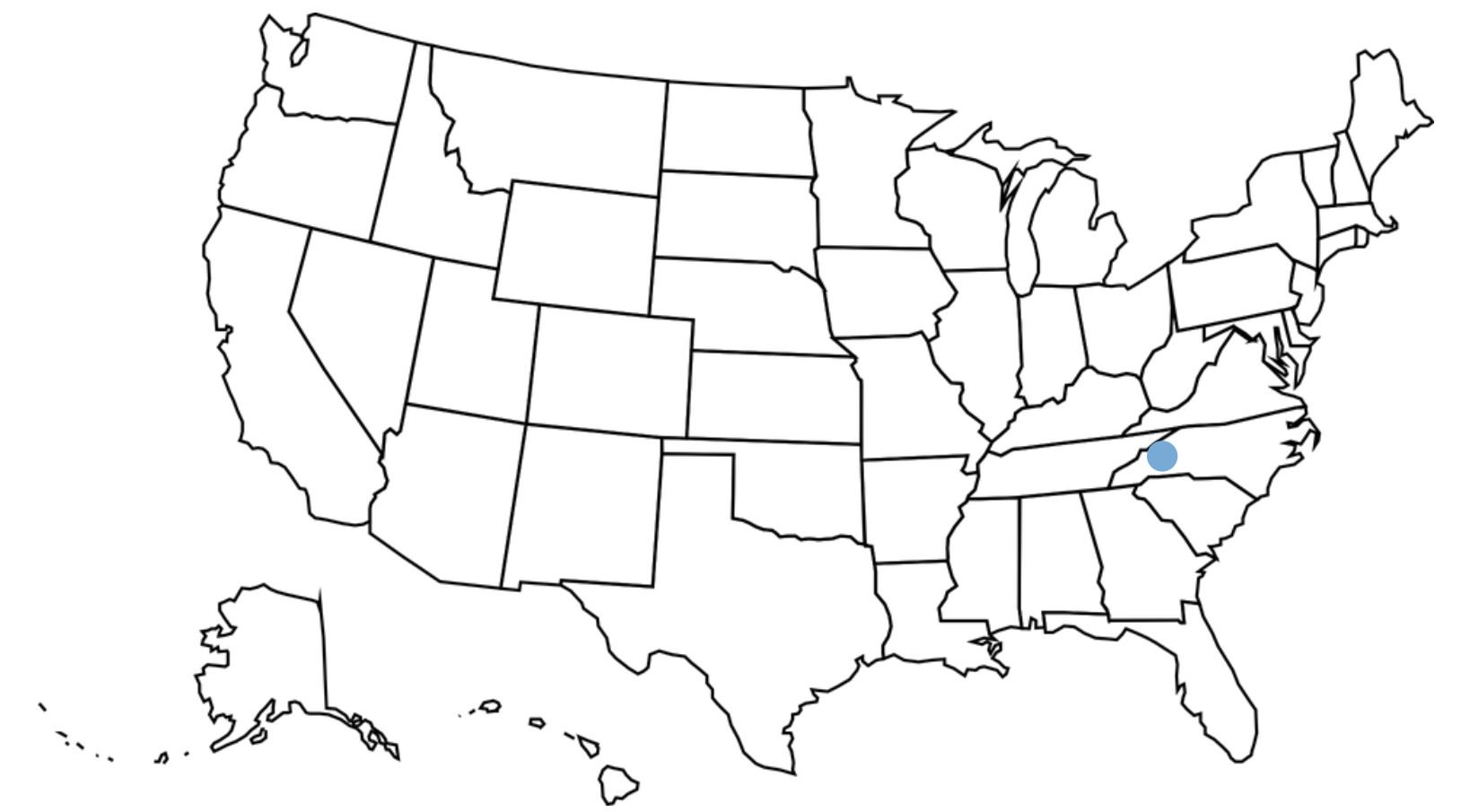


Human Connectome Project

Fiber architecture of the brain.
Measured from diffusion spectral imaging (DSI).

— up-down
— left-right
— anterior-posterior





Case Study: Economic MRI®
2016

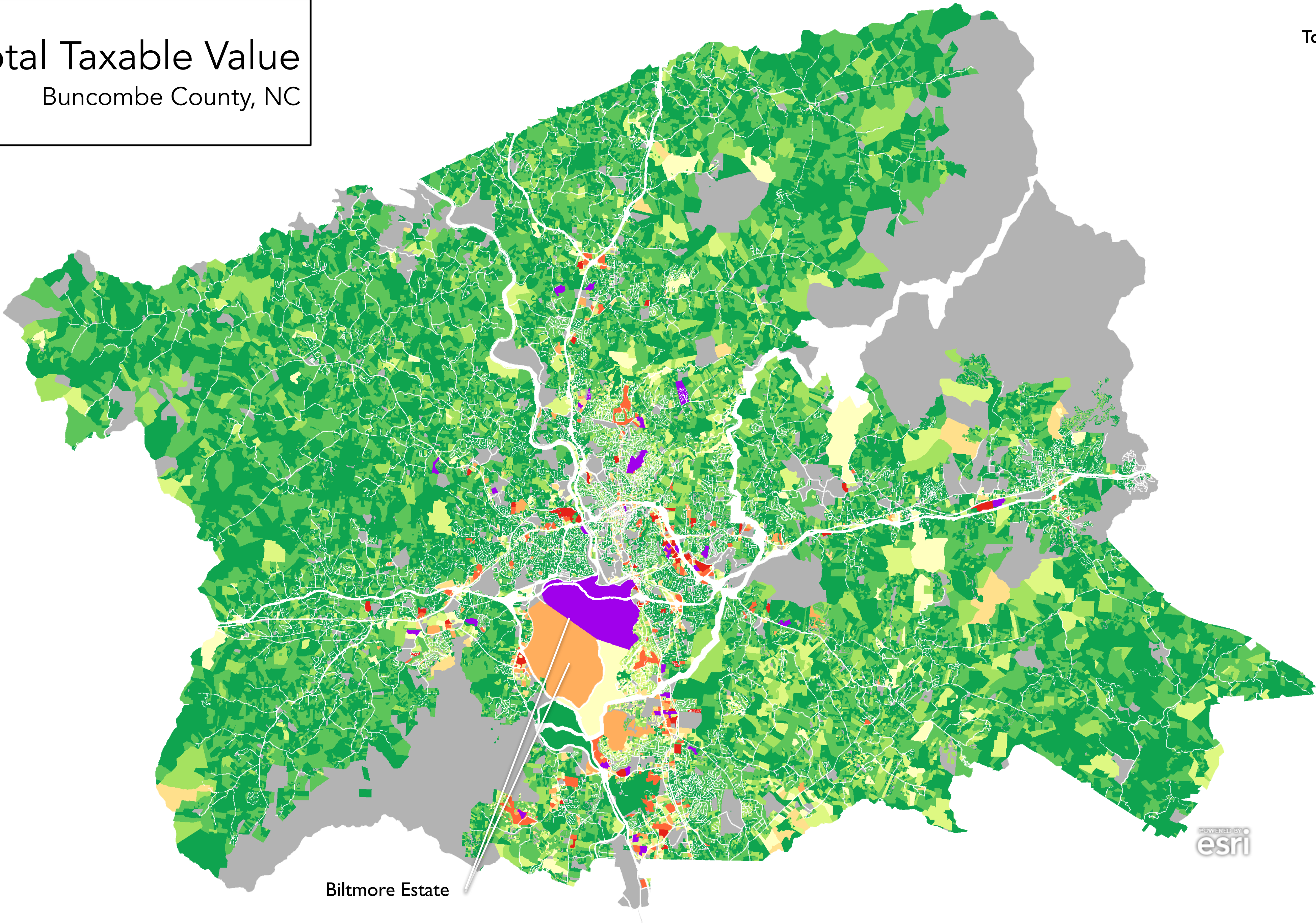
Asheville, North Carolina

Total Taxable Value

Buncombe County, NC

Total Tax Value (\$)

- Not Taxable
- < 160,000
- 160,001 - 430,000
- 430,001 - 1M
- 1M - 2.5M
- 2.5M - 5.5M
- 5.5M - 10M
- 10M - 17M
- 17M - 33M
- 33M - 76M
- > 76M



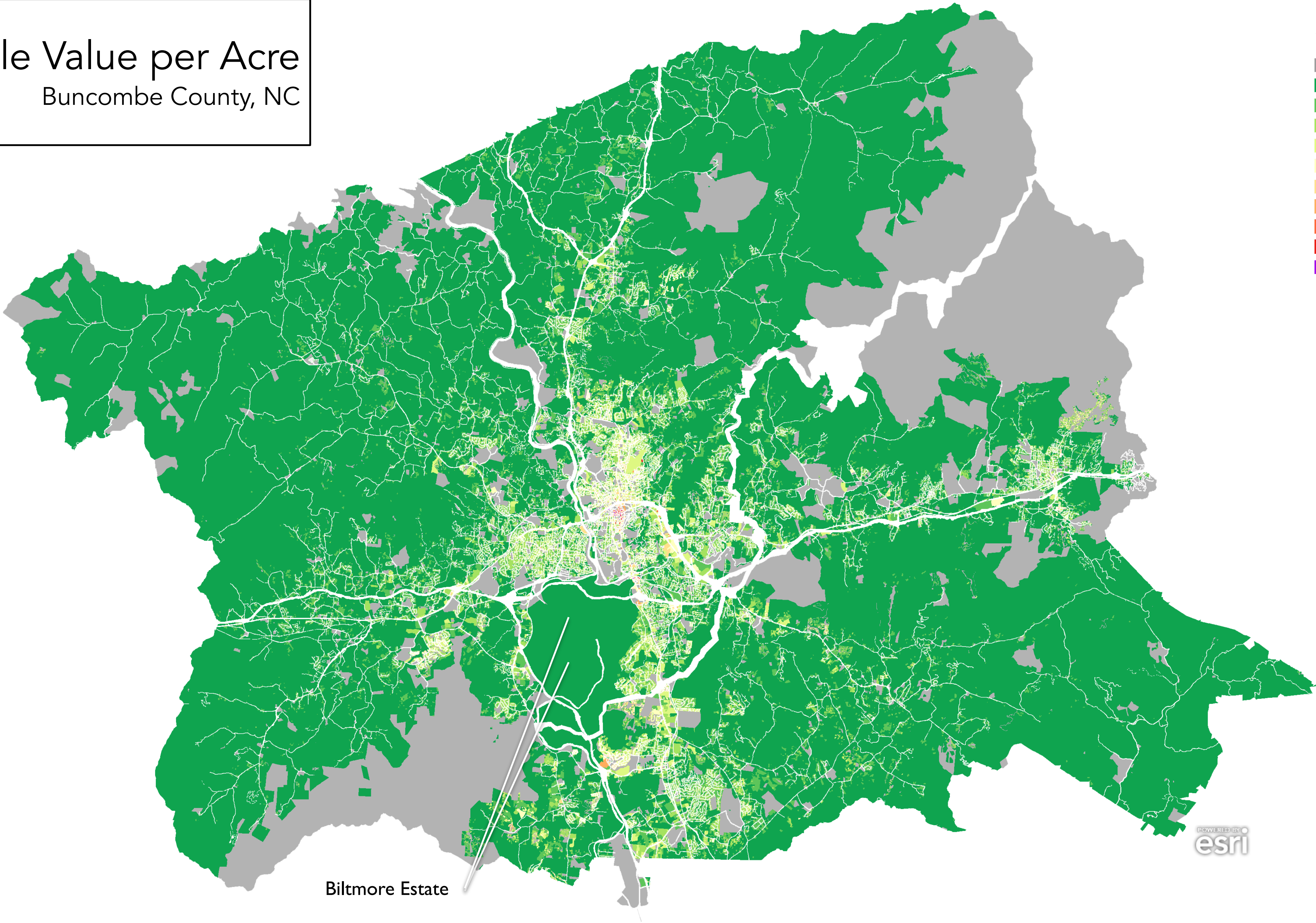
Biltmore Estate

Taxable Value per Acre

Buncombe County, NC

Value Per Acre (\$)

- Not Taxable
- < 170,000
- 170,001 - 420,000
- 420,001 - 760,000
- 760,001 - 1.2M
- 1.2M - 2M
- 2M - 3.5M
- 3.5M - 6.2M
- 6.2M - 12M
- 12M - 20M
- > 20M



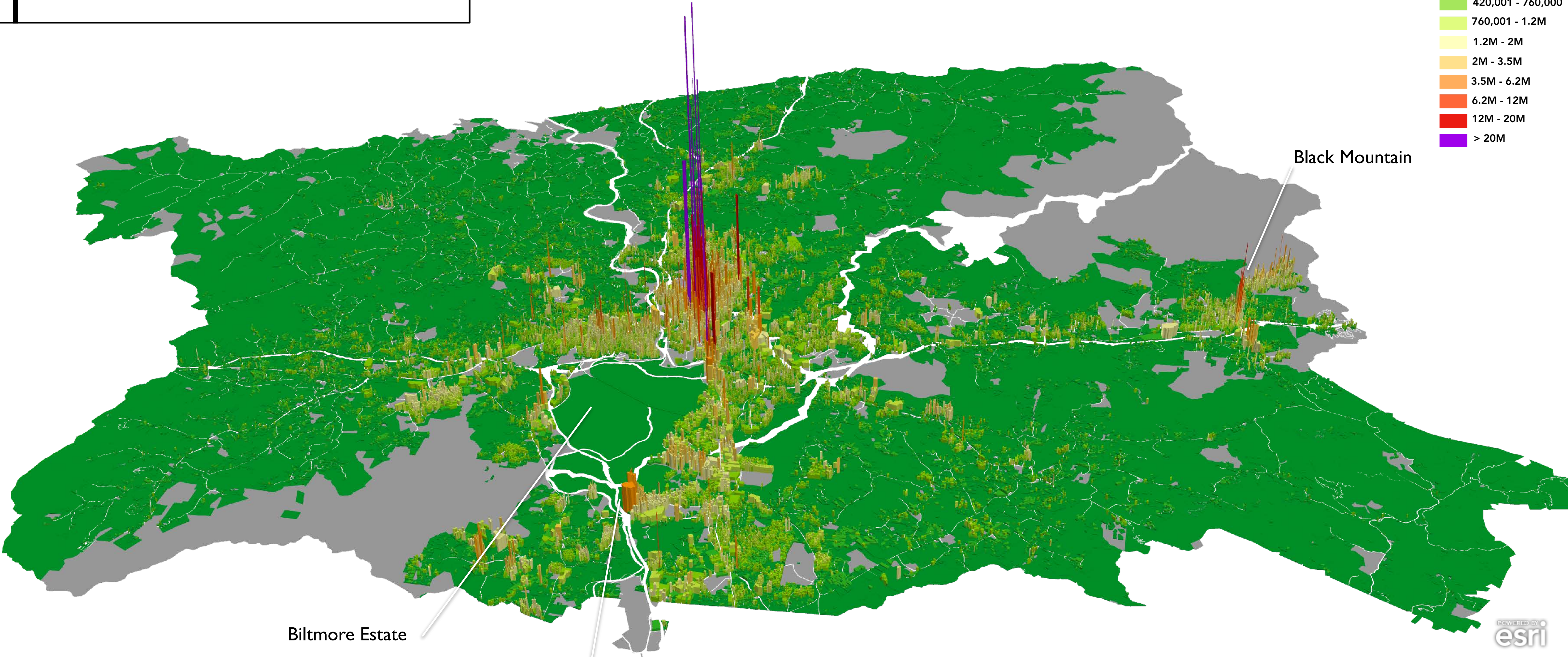
Biltmore Estate

Taxable Value per Acre

Buncombe County, NC

Value Per Acre (\$)

- Not Taxable
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- 420,001 - 760,000
- 760,001 - 1.2M
- 1.2M - 2M
- 2M - 3.5M
- 3.5M - 6.2M
- 6.2M - 12M
- 12M - 20M
- > 20M



Biltmore Estate

Black Mountain

Biltmore Park



WELL

ISN'T THAT SPATIAL



Case Study: Economic MRI®
2020

New Hampshire

New Hampshire Property Taxes

FOR

DUMMIES

A Reference for
North Carolinians!



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New Hampshire Property Taxes

FOR
DUMMIES

Market Value

Taxable Value %

$$\underline{X} = \text{Taxable Value}$$

Tax Rate %

$$\underline{X} = \text{Tax Bill}$$

This is
how NC's system
works.



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New Hampshire Property Taxes

FOR
DUMMIES

(Needed Budget - Non-property tax revenue) / City Assessed Value

Exemptions

Local Tax Rate

$$\text{Assessed Value} - \text{Exemptions} = \text{Taxable Value} \times \text{Local Tax Rate} = \text{Tax Bill}$$

This is how
NH's system works.



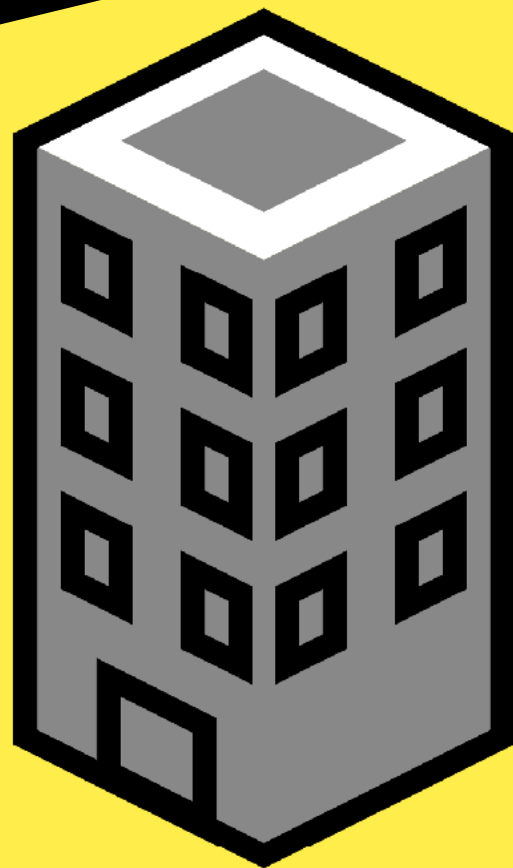
*The city tax rate is established by the State

URBAN3

New Hampshire Property Taxes

FOR
DUMMIES

Assessed Value = \$600k



Commercial

Dover Tax Rate

2.332%



Residential

2.332%

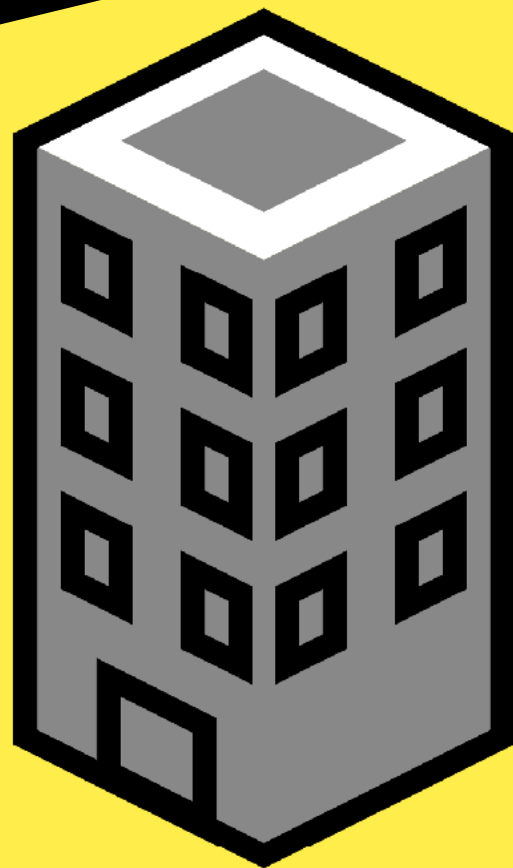


URBAN3

New Hampshire Property Taxes

FOR
DUMMIES

Assessed Value = \$600k



Commercial

Dover Tax Rate

\$13,992



Residential

\$13,992



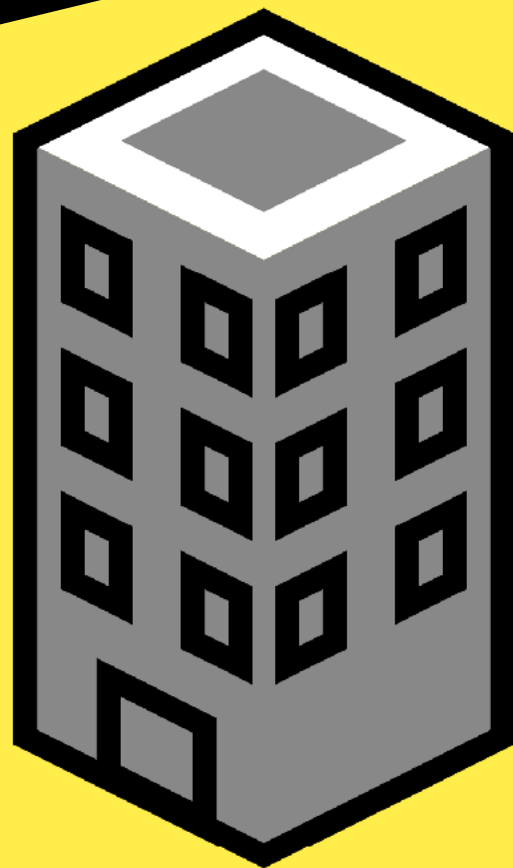
URBAN3

New Hampshire Property Taxes

FOR
DUMMIES

Assessed Value = \$600k

Strafford County Tax Rate



Commercial

0.13%



Residential

0.13%



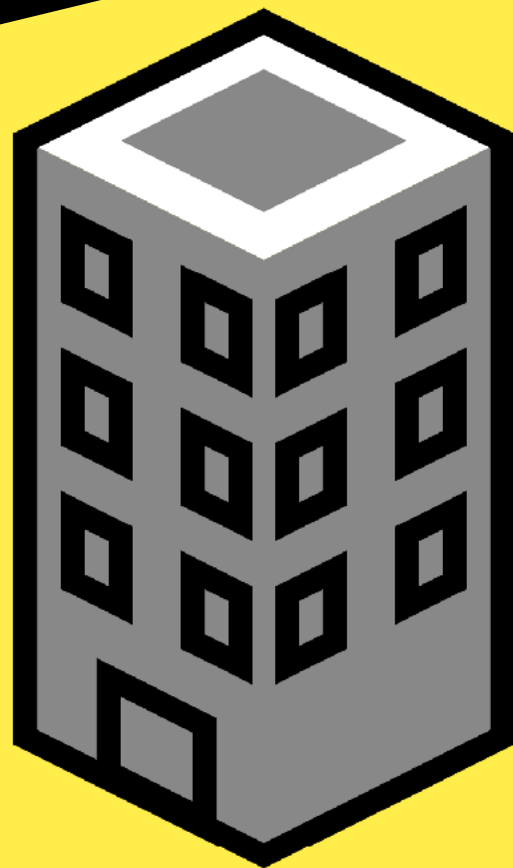
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New Hampshire Property Taxes

FOR
DUMMIES

Assessed Value = \$600k

Strafford County Tax Rate



Commercial

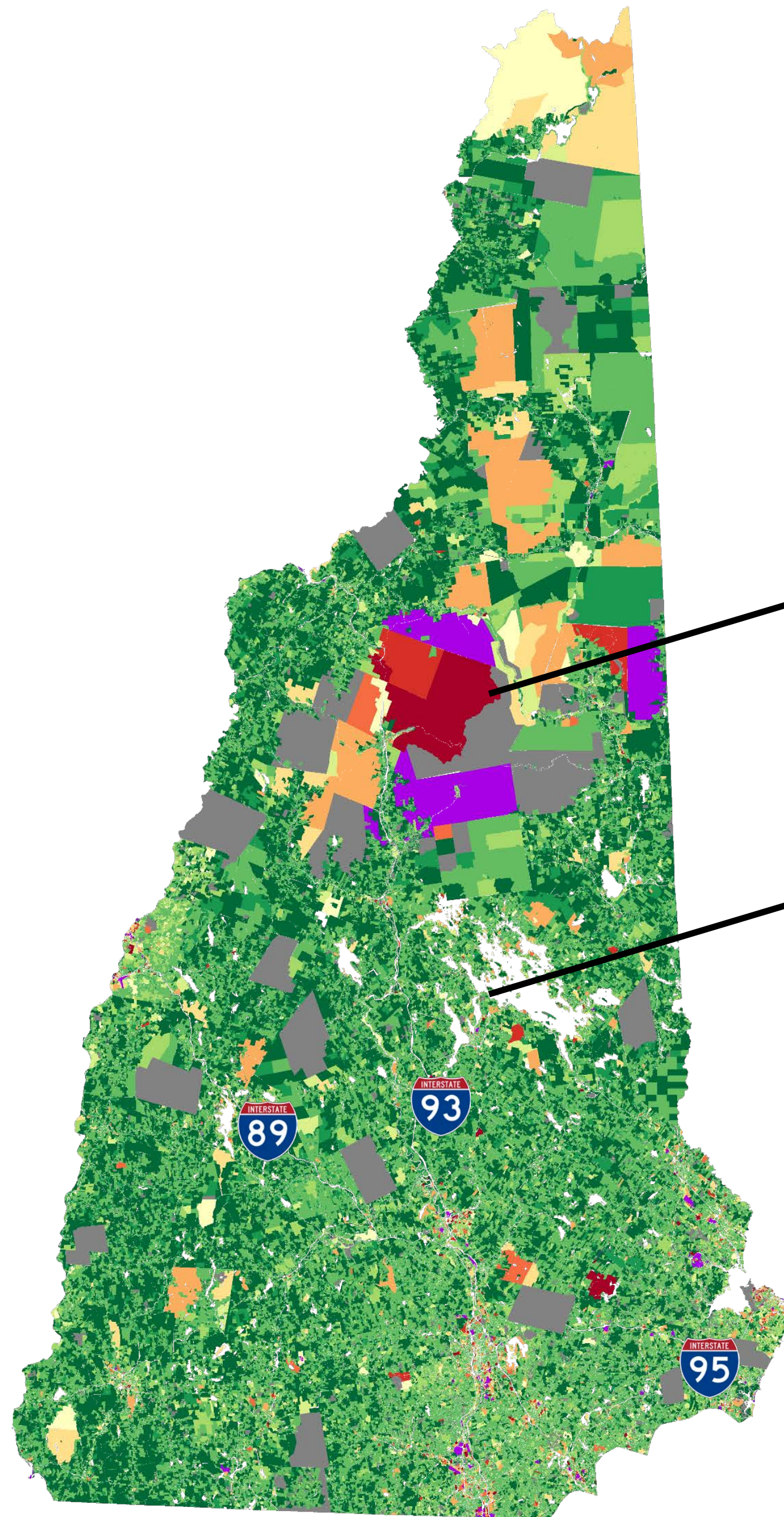
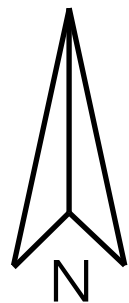
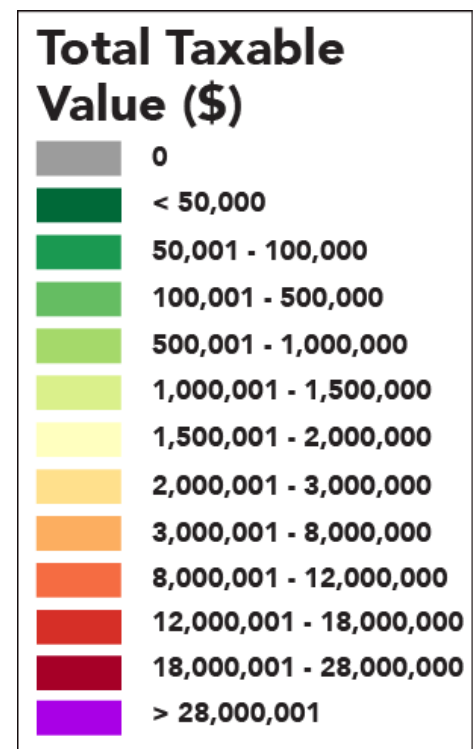
\$780



Residential

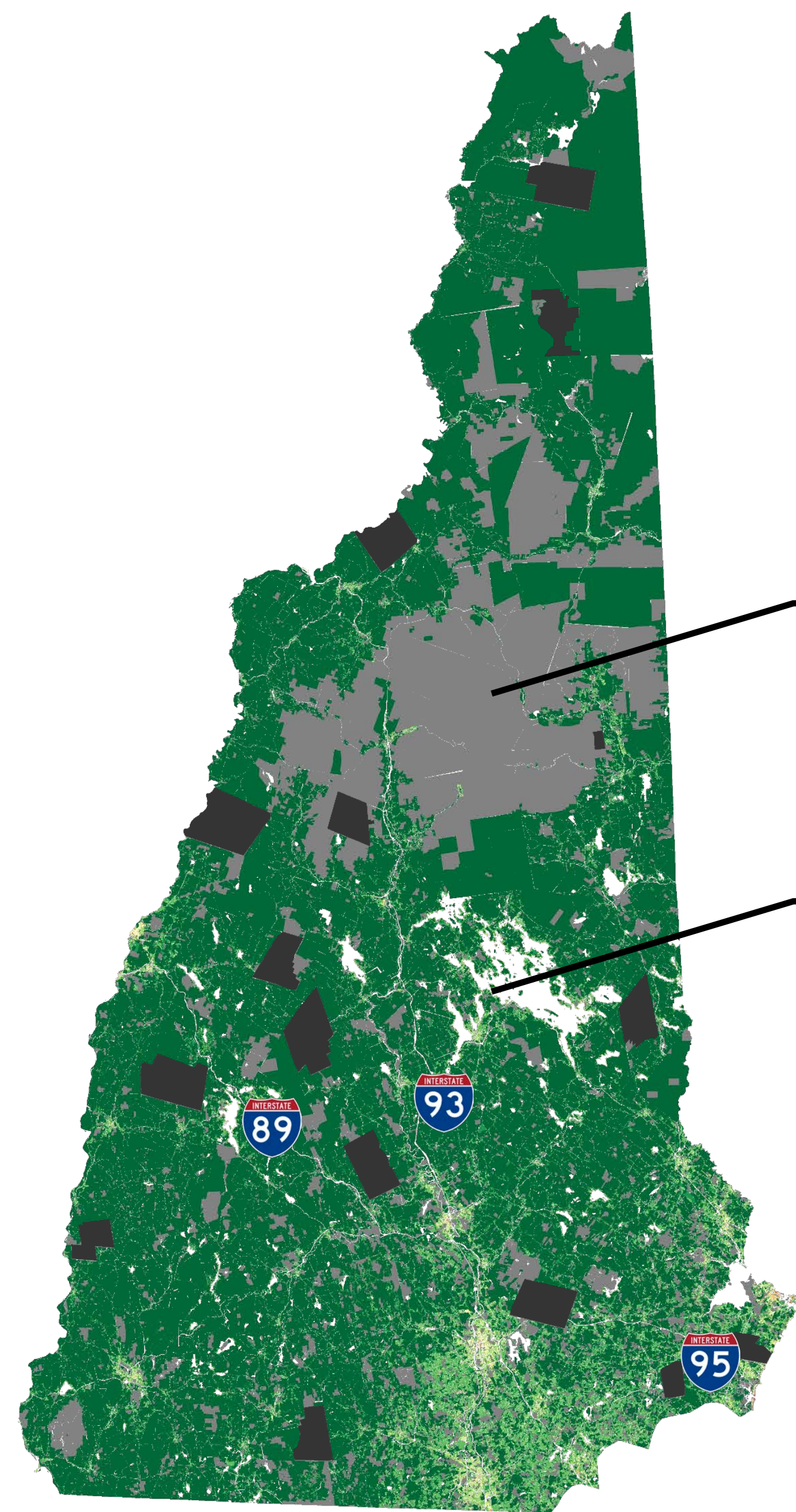
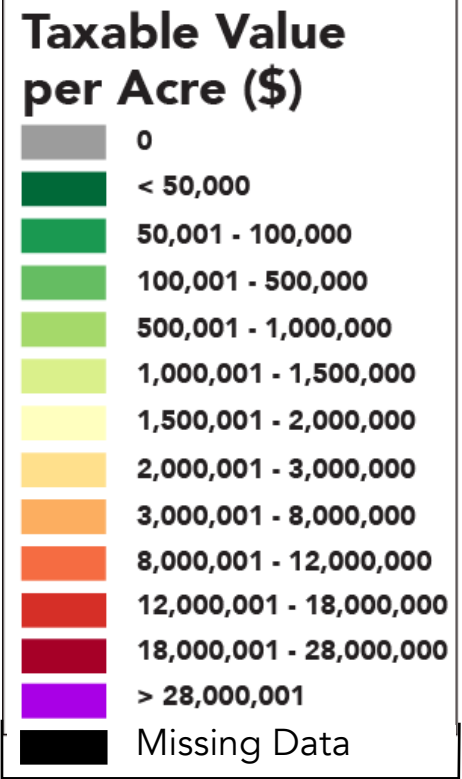
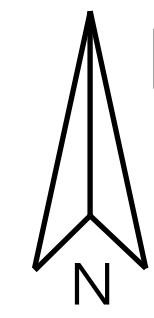
\$780





White Mountains

Lake Winnepesaukee

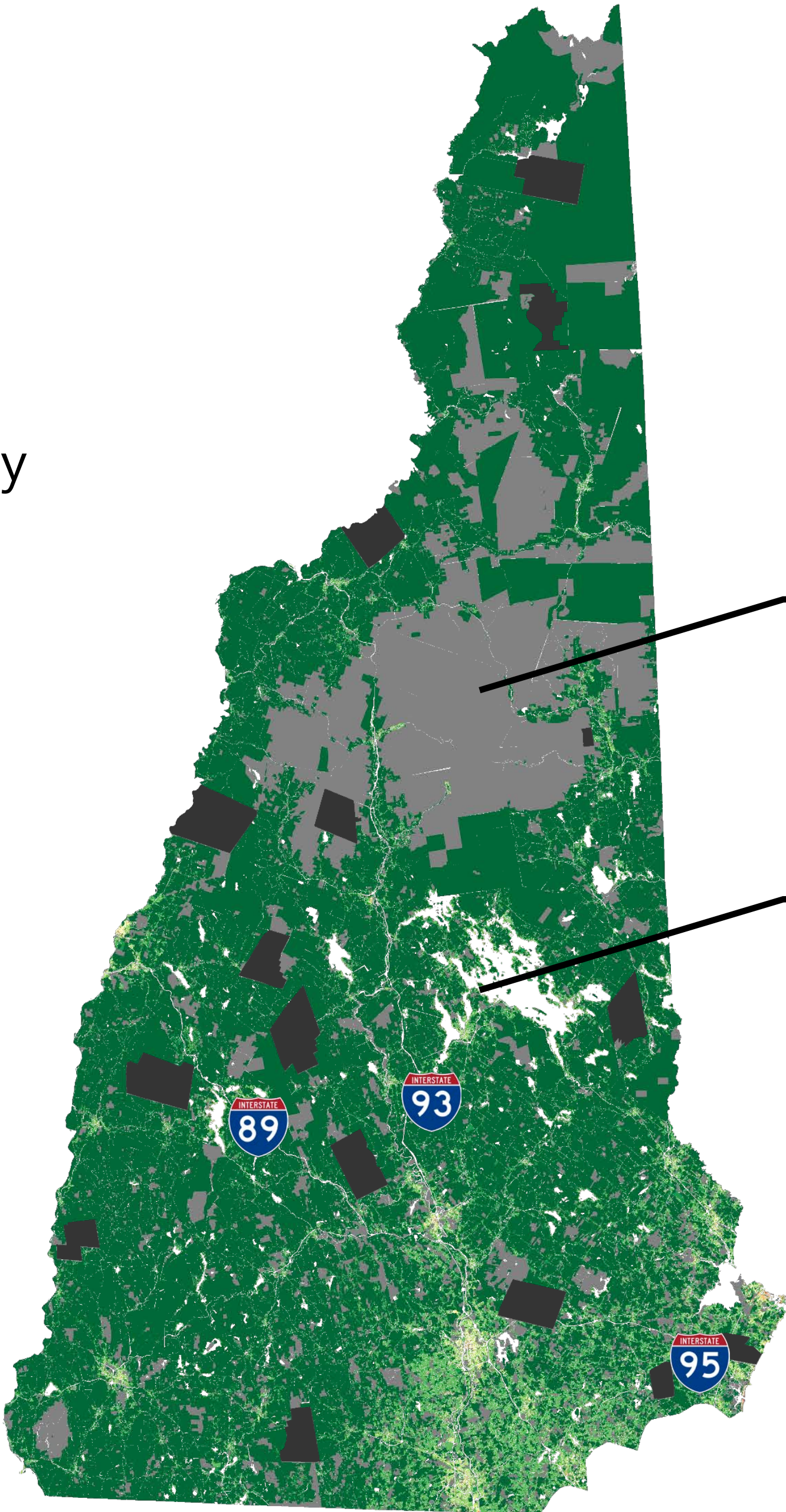
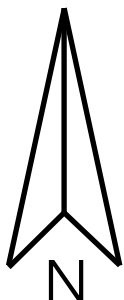
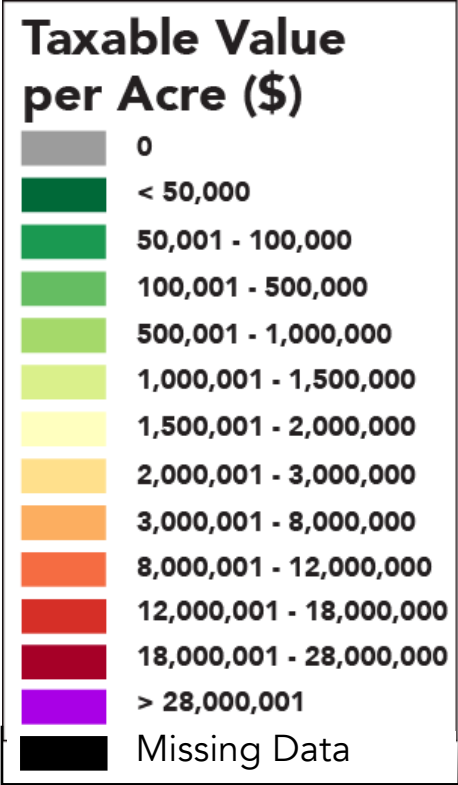


White Mountains

Lake Winnepesaukee

Missing Data Accounts for 5.25% of Total Land Area

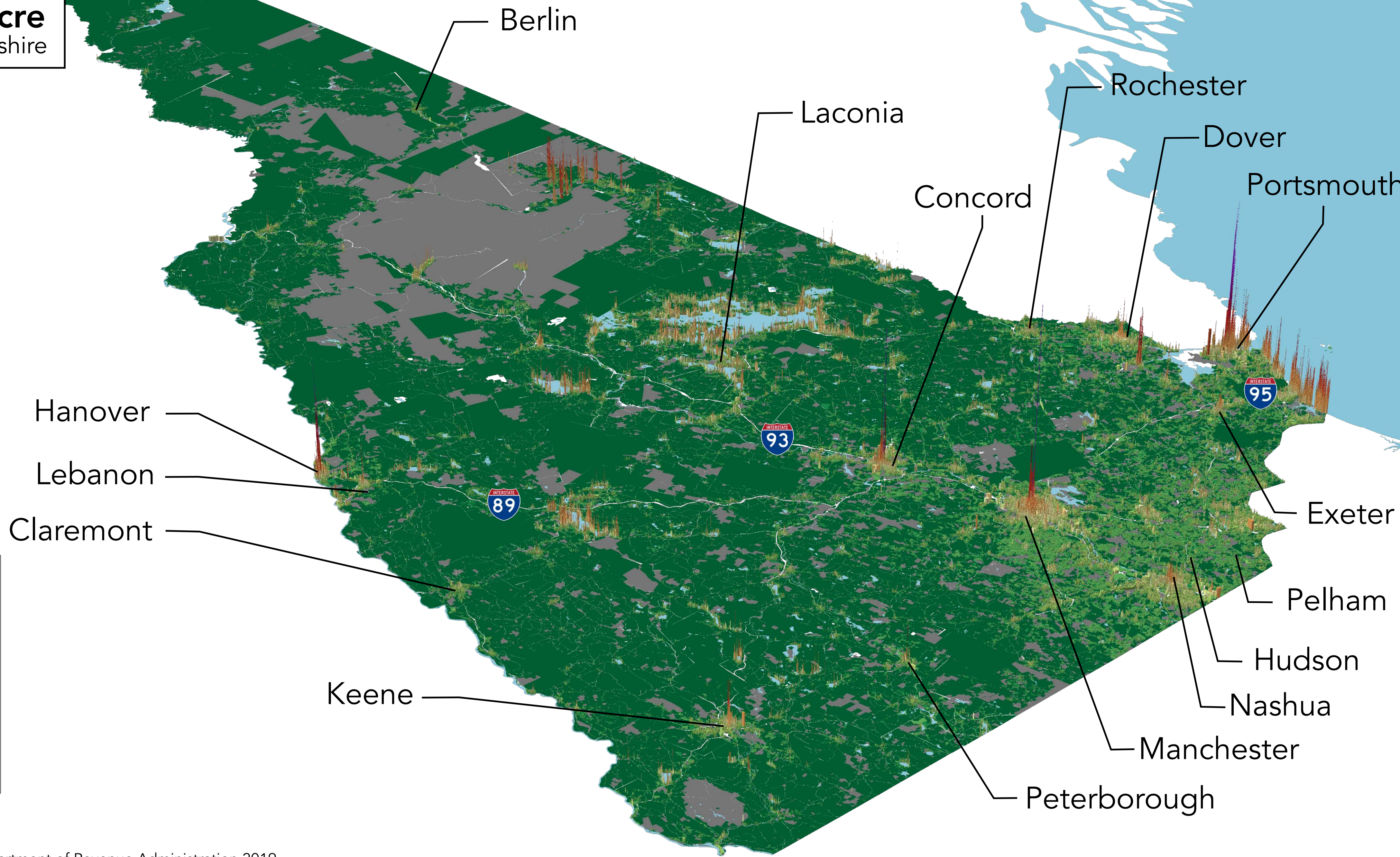
Missing Data: the property is there and paying taxes but isn't mapped. Significantly rural and undeveloped.



White Mountains

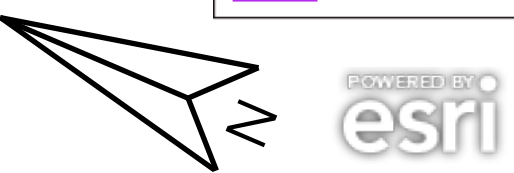
Lake Winnepesaukee

Missing Data Accounts for 5.25% of Total Land Area



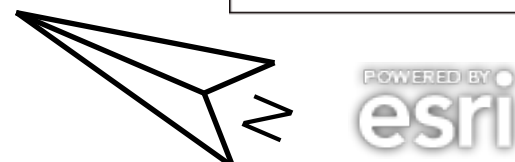
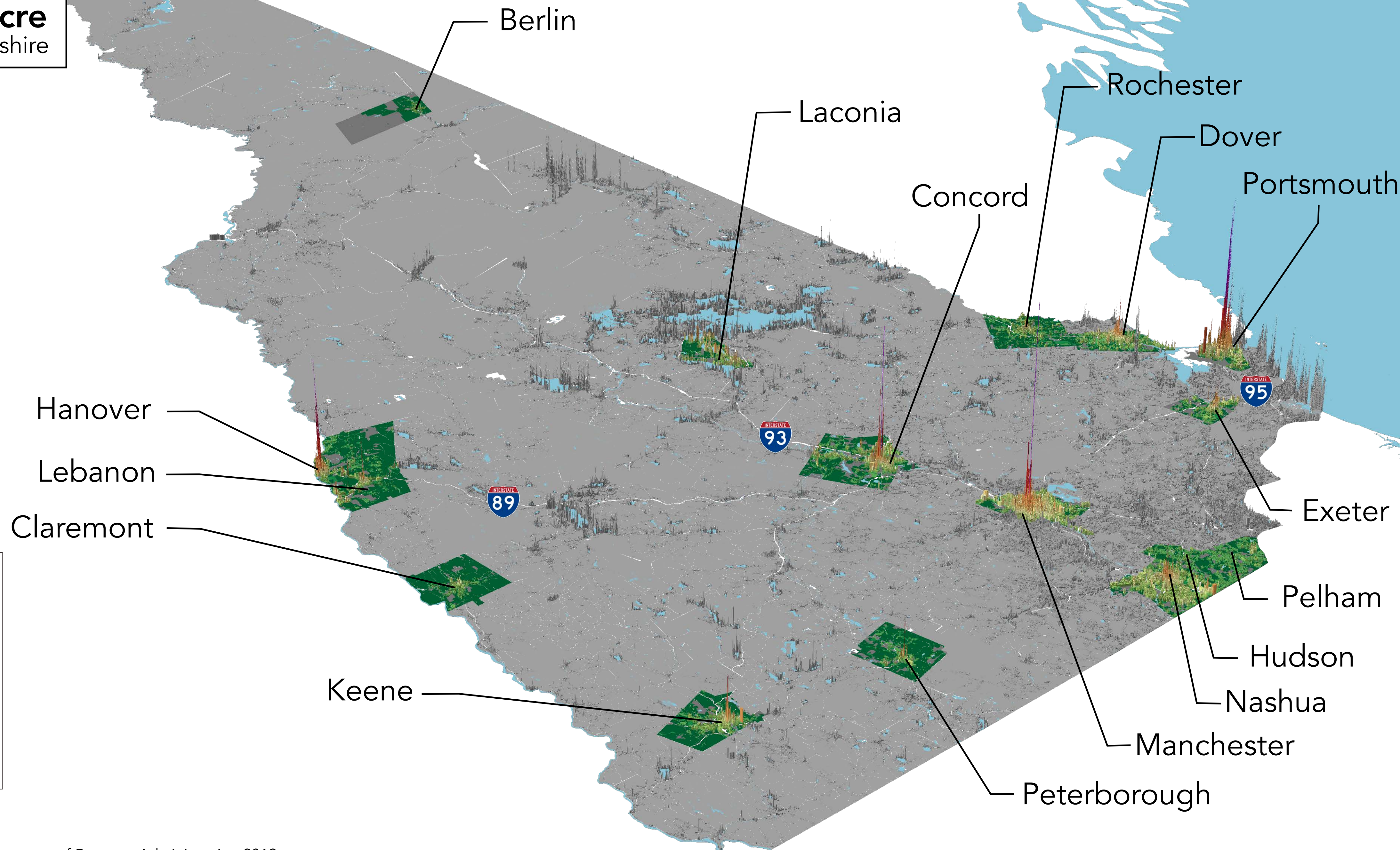
Taxable Value per Acre (\$)

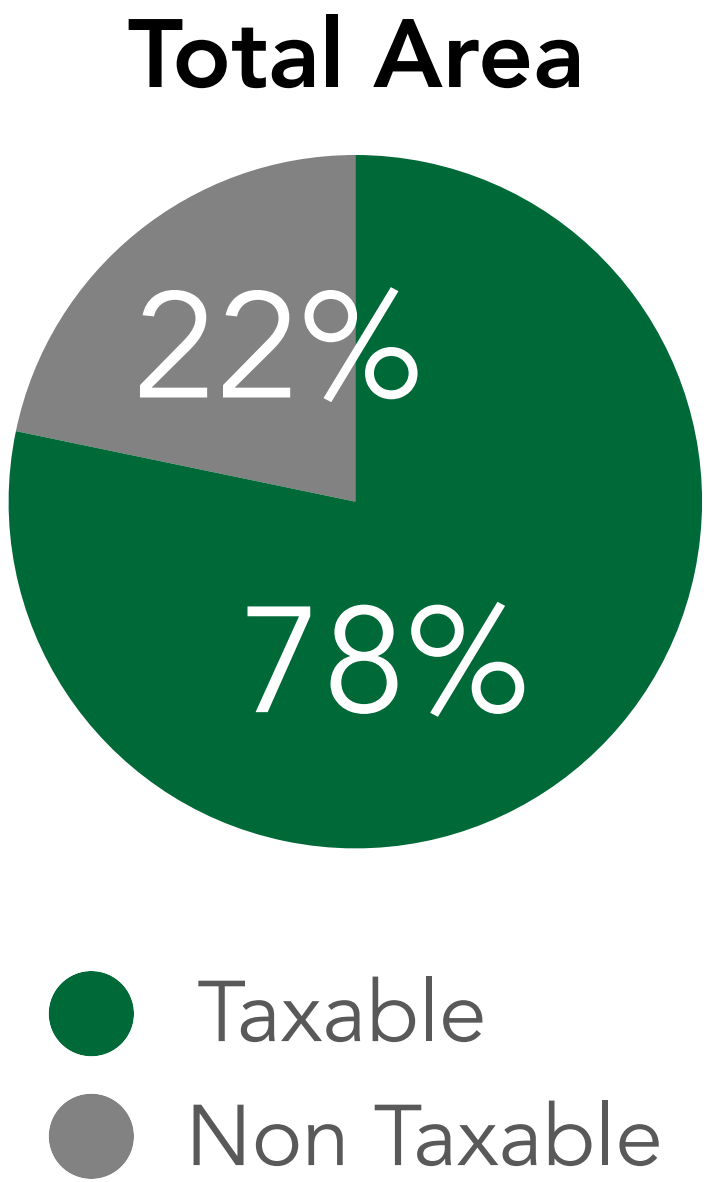
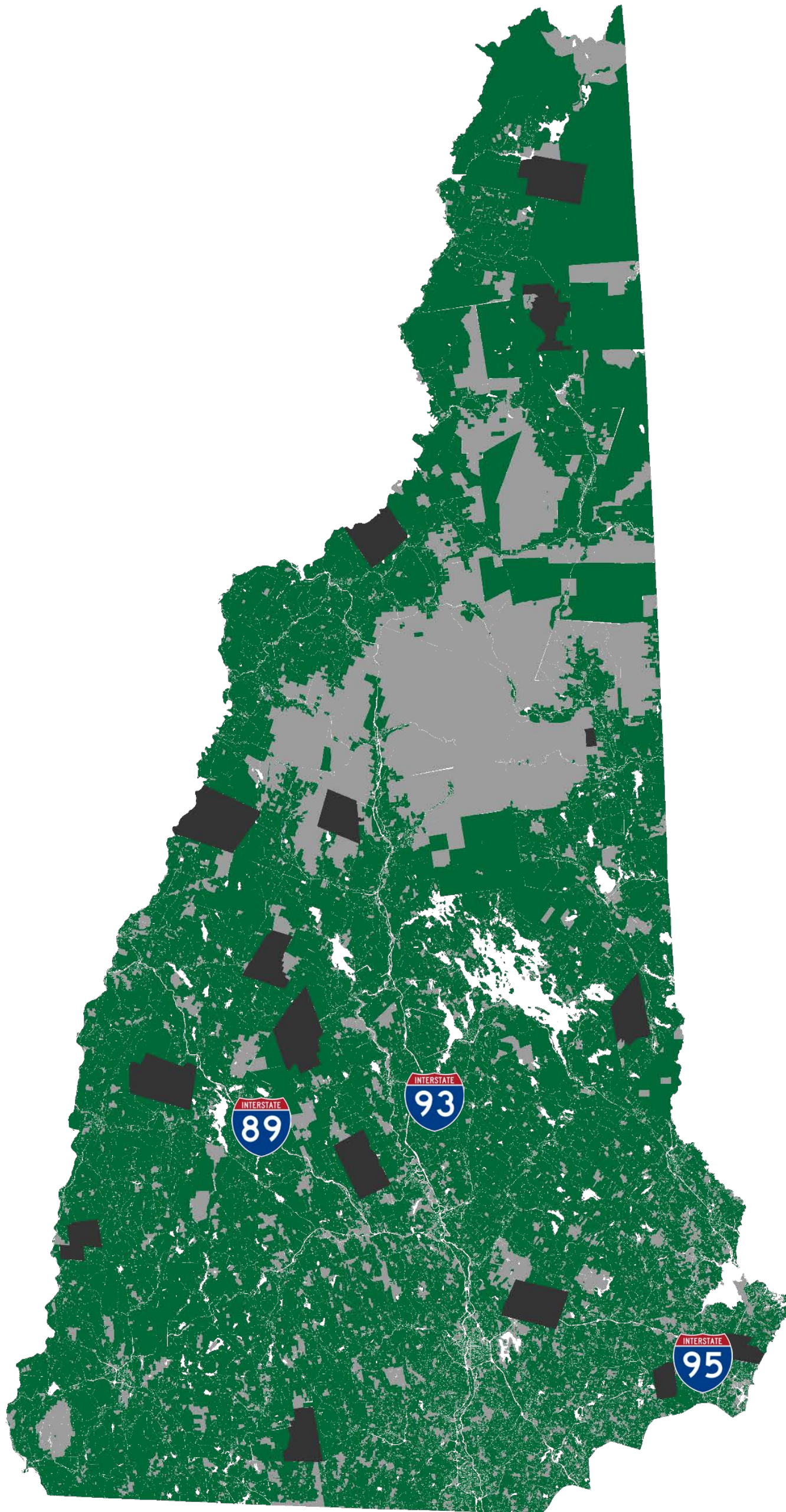
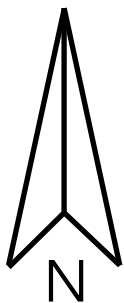
0
< 50,000
50,001 - 100,000
100,001 - 500,000
500,001 - 1,000,000
1,000,001 - 1,500,000
1,500,001 - 2,000,000
2,000,001 - 3,000,000
3,000,001 - 8,000,000
8,000,001 - 12,000,000
12,000,001 - 18,000,000
18,000,001 - 28,000,000
> 28,000,001



Value Per Acre

New Hampshire





Case Study: Economic MRI®
2020

NH Sample

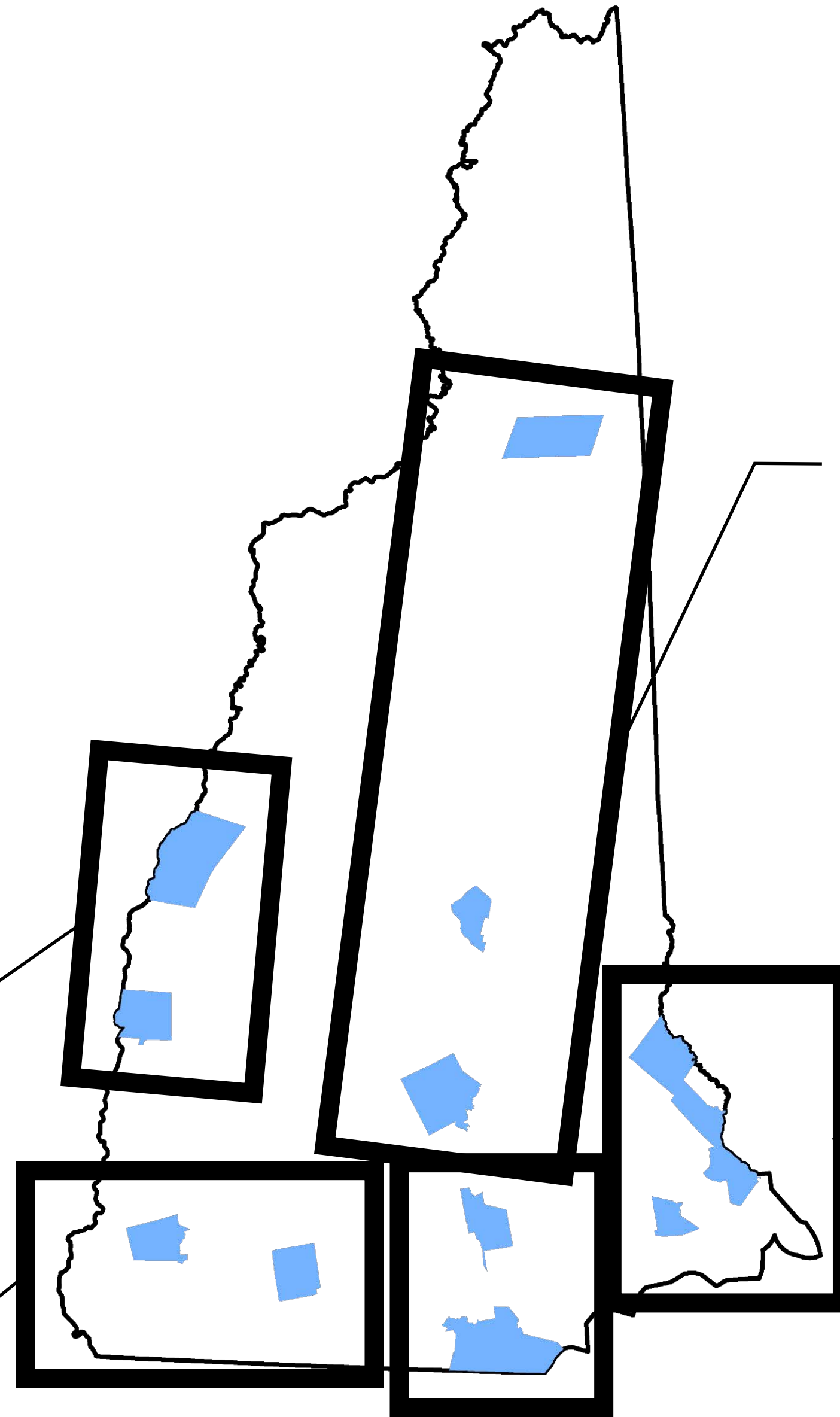
Upper Valley

**Southwest
Region**

**Central
Corridor**

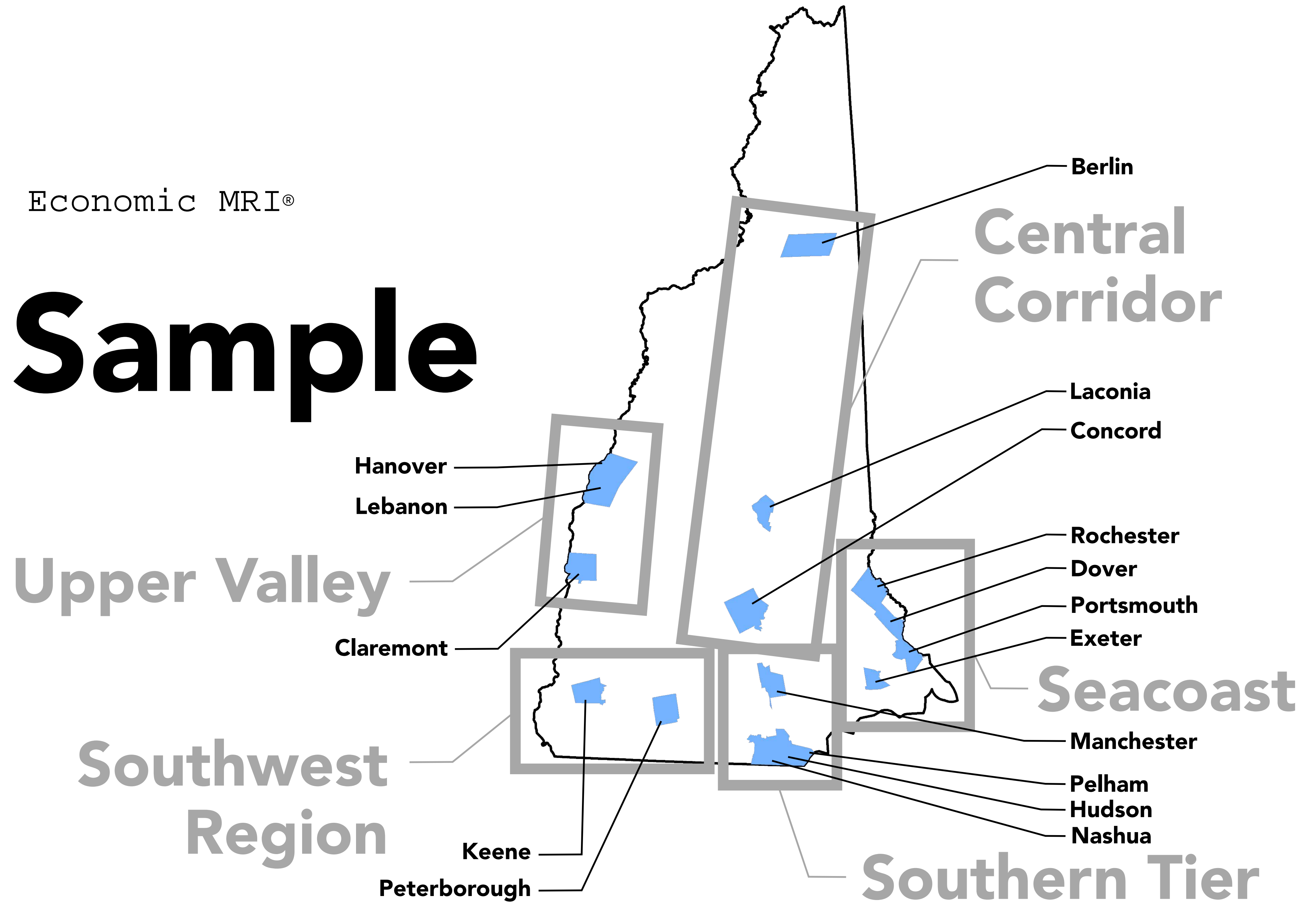
Seacoast

Southern Tier



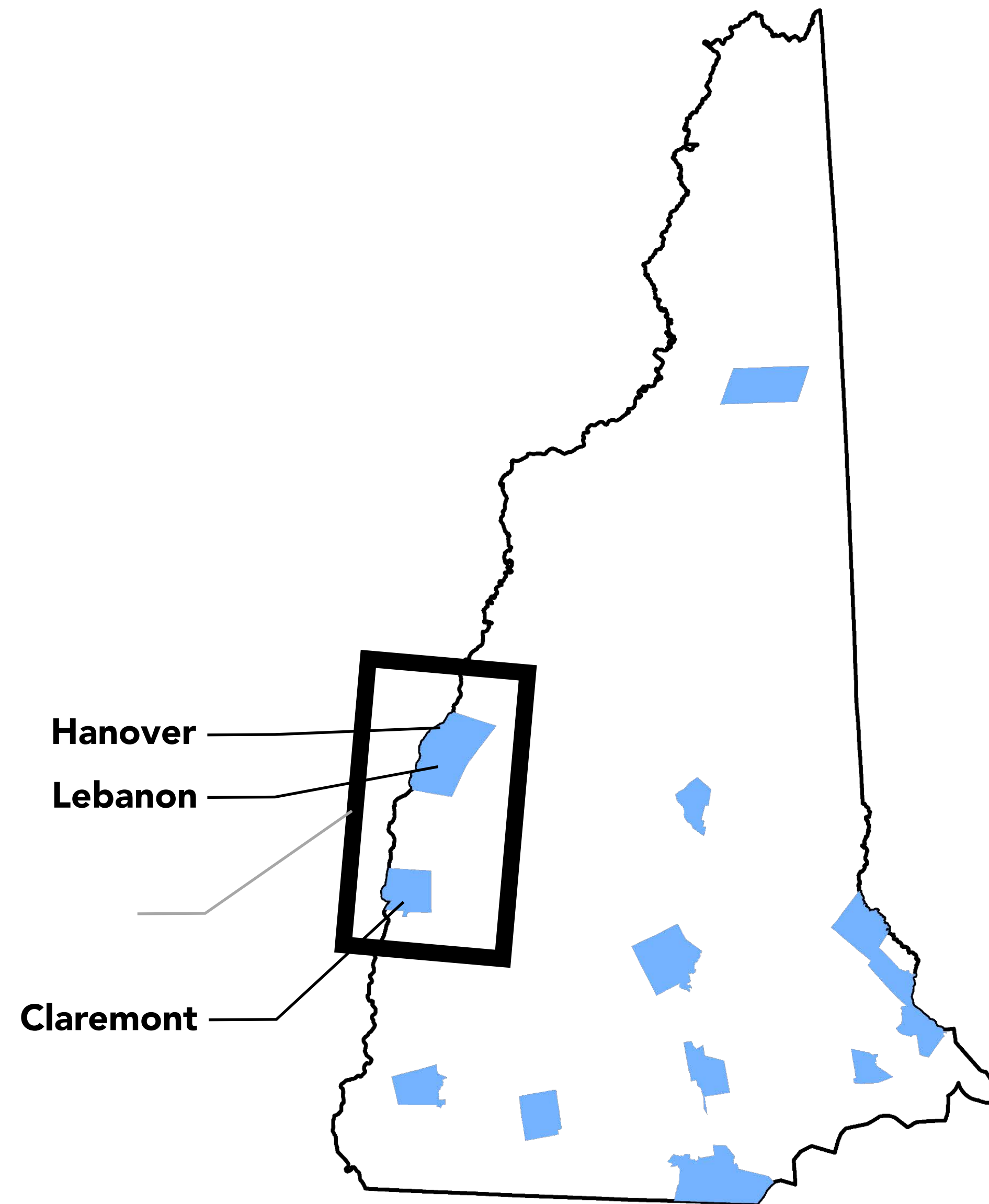
Case Study: Economic MRI®
2020

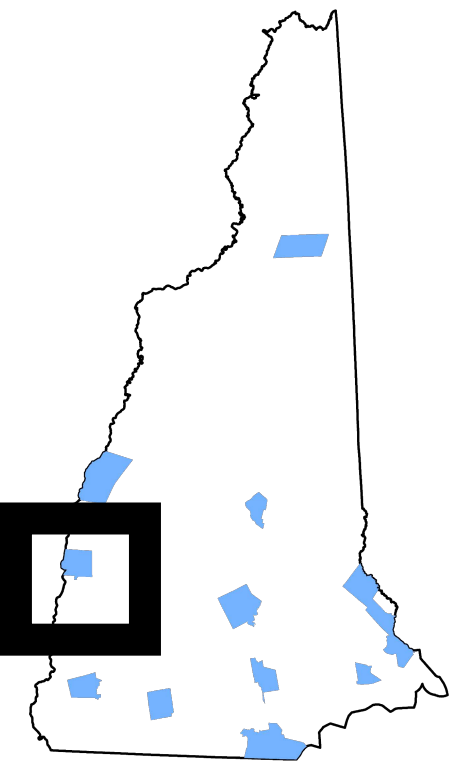
NH Sample



Case Study: Economic MRI®
2020

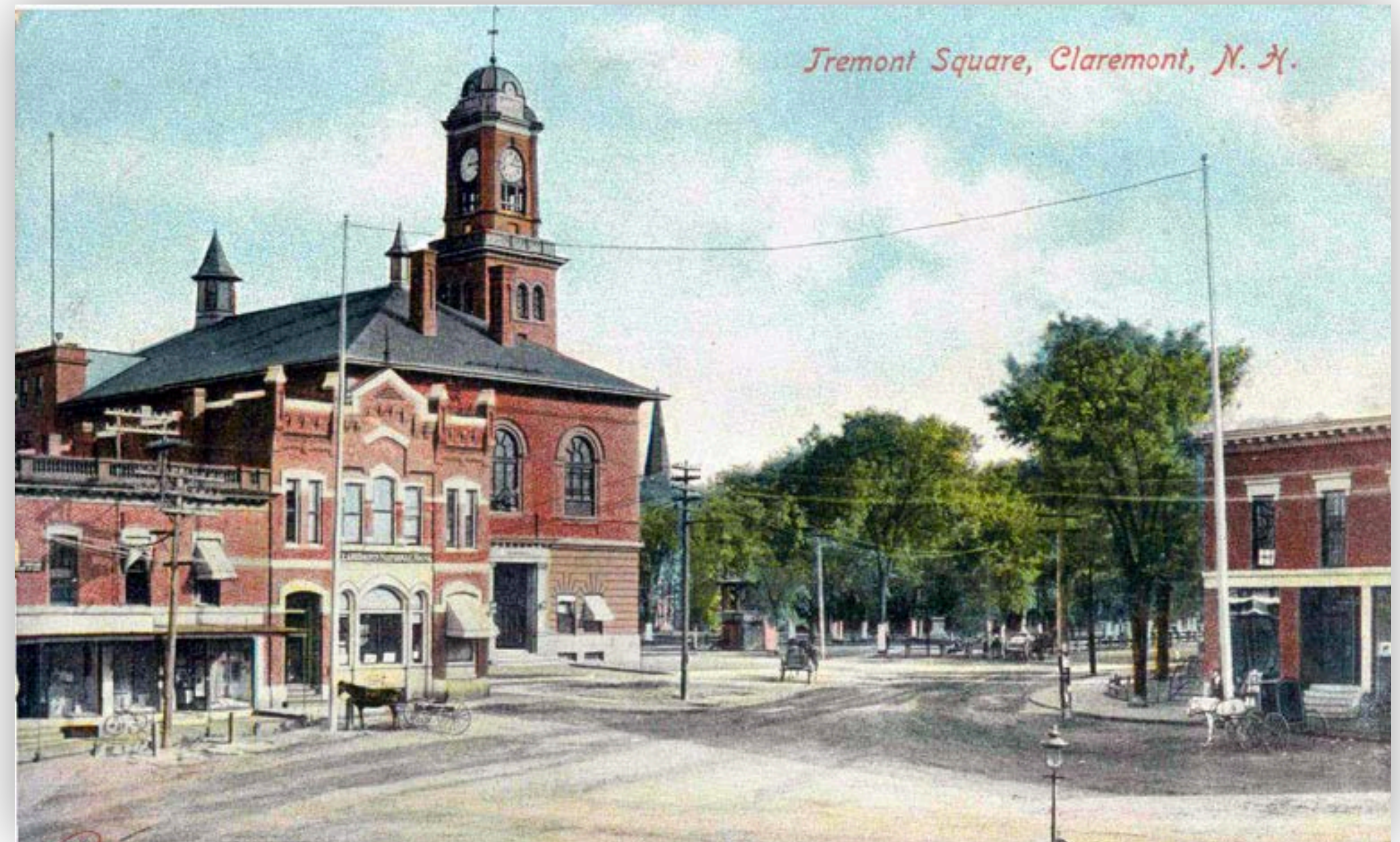
Upper Valley





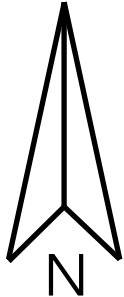
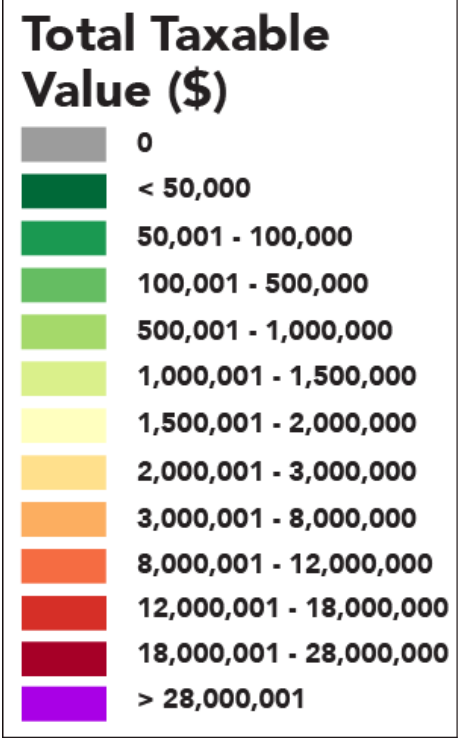
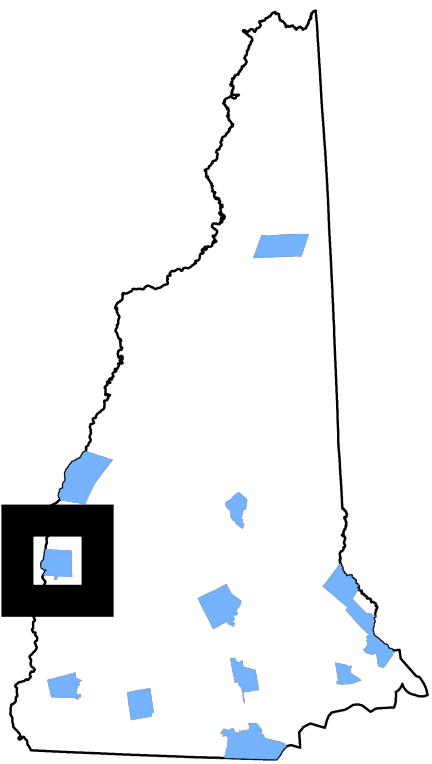
Case Study: Economic MRI®
2020

Claremont



Total Value

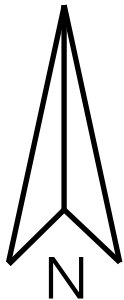
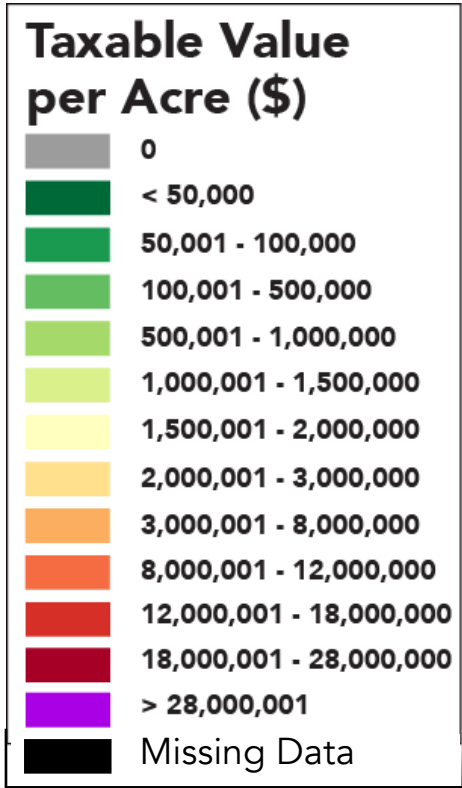
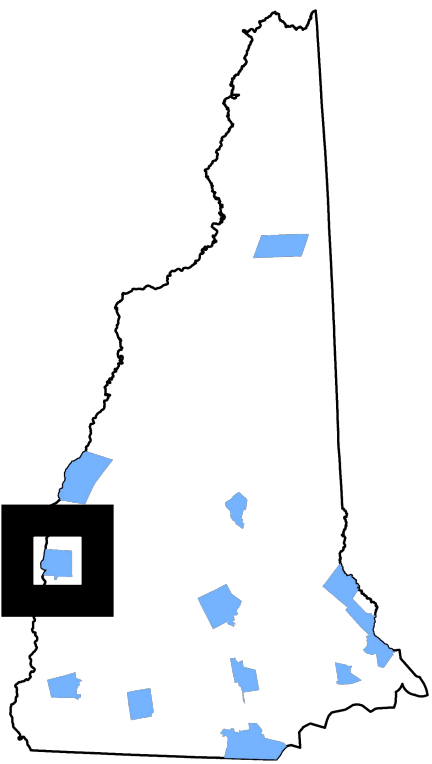
Claremont



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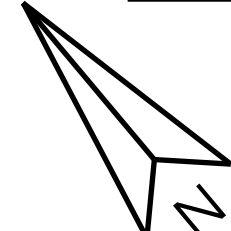
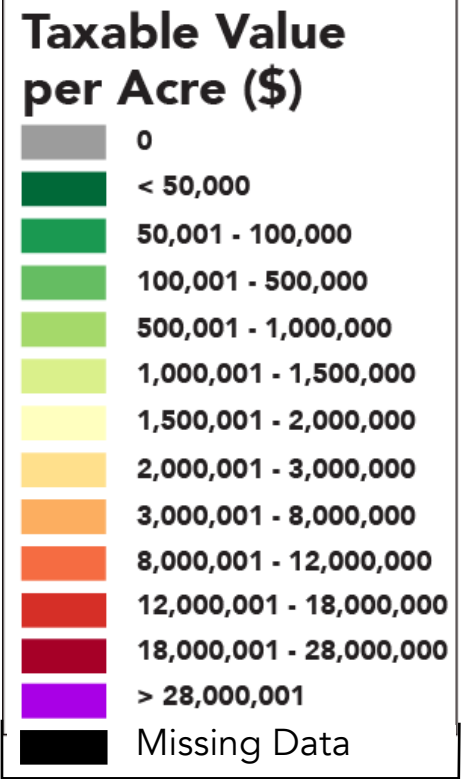
Value Per Acre

Claremont



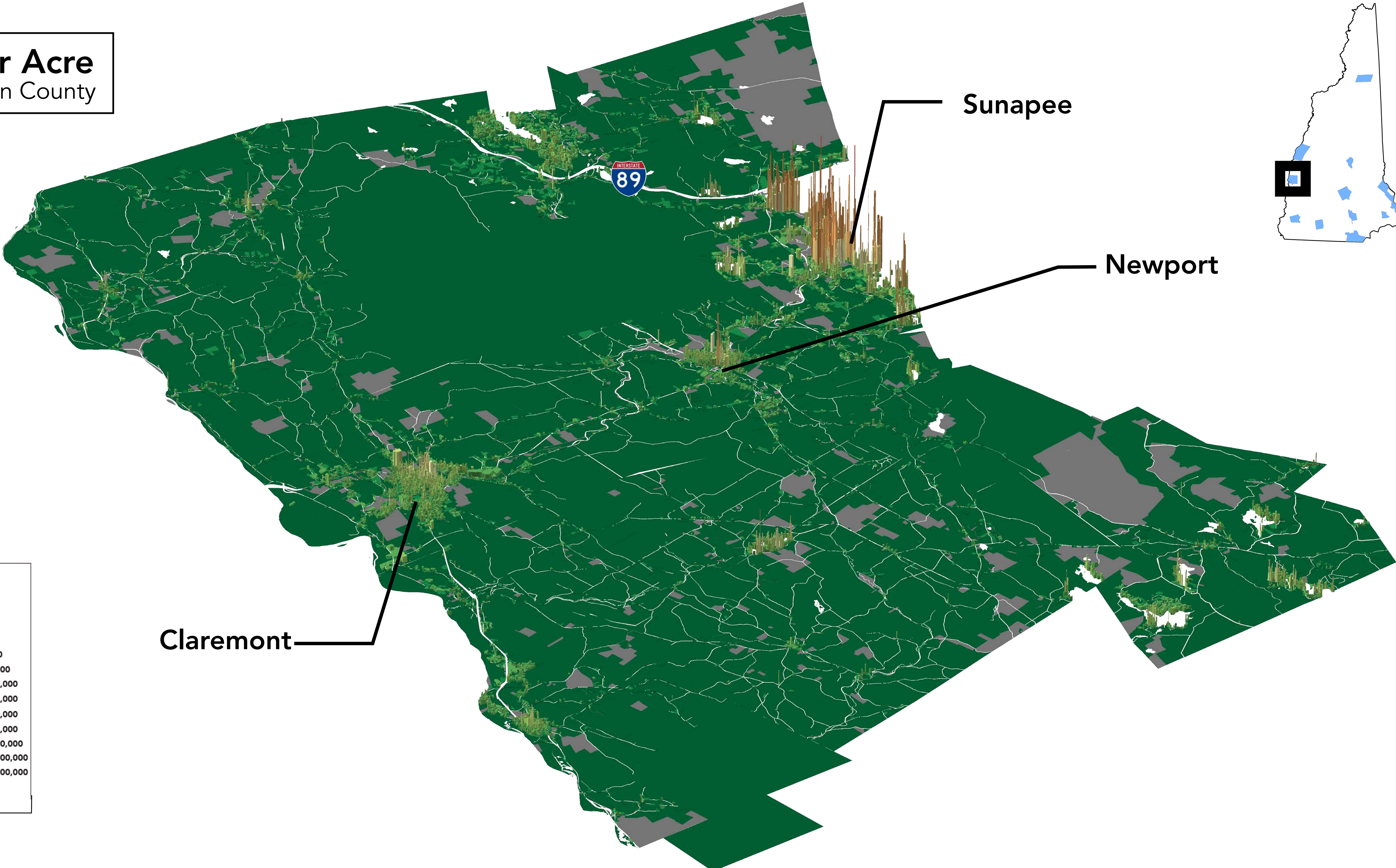
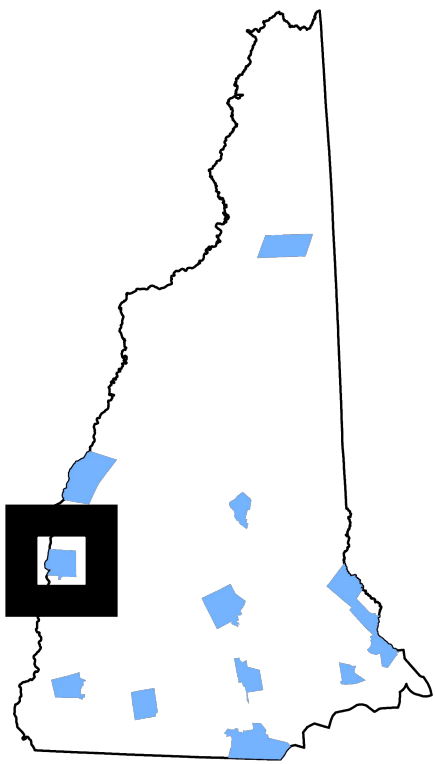
Value Per Acre

Claremont



Value Per Acre

Sullivan County



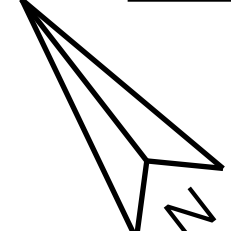
Taxable Value per Acre (\$)

0
< 50,000
50,001 - 100,000
100,001 - 500,000
500,001 - 1,000,000
1,000,001 - 1,500,000
1,500,001 - 2,000,000
2,000,001 - 3,000,000
3,000,001 - 8,000,000
8,000,001 - 12,000,000
12,000,001 - 18,000,000
18,000,001 - 28,000,000
> 28,000,001
Missing Data

Claremont

Sunapee

Newport

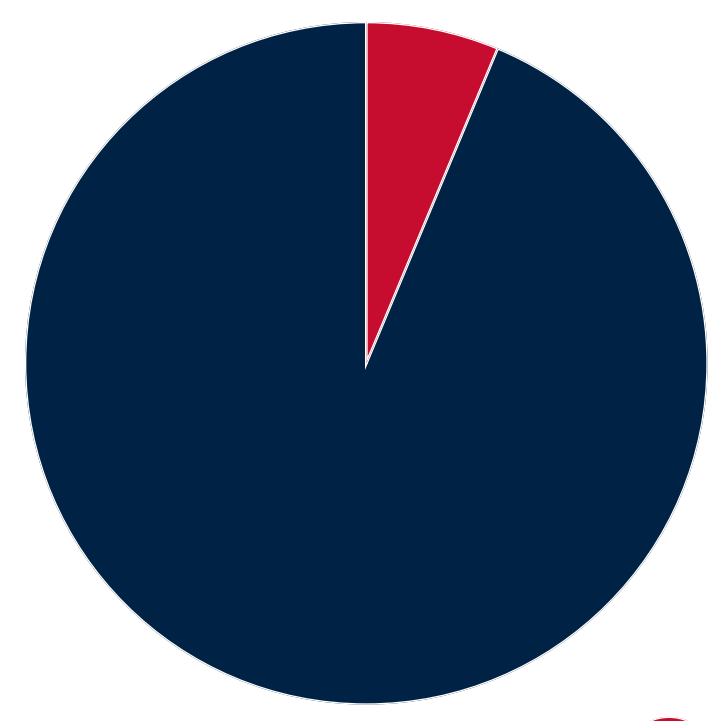


Value Per Acre

New Hampshire

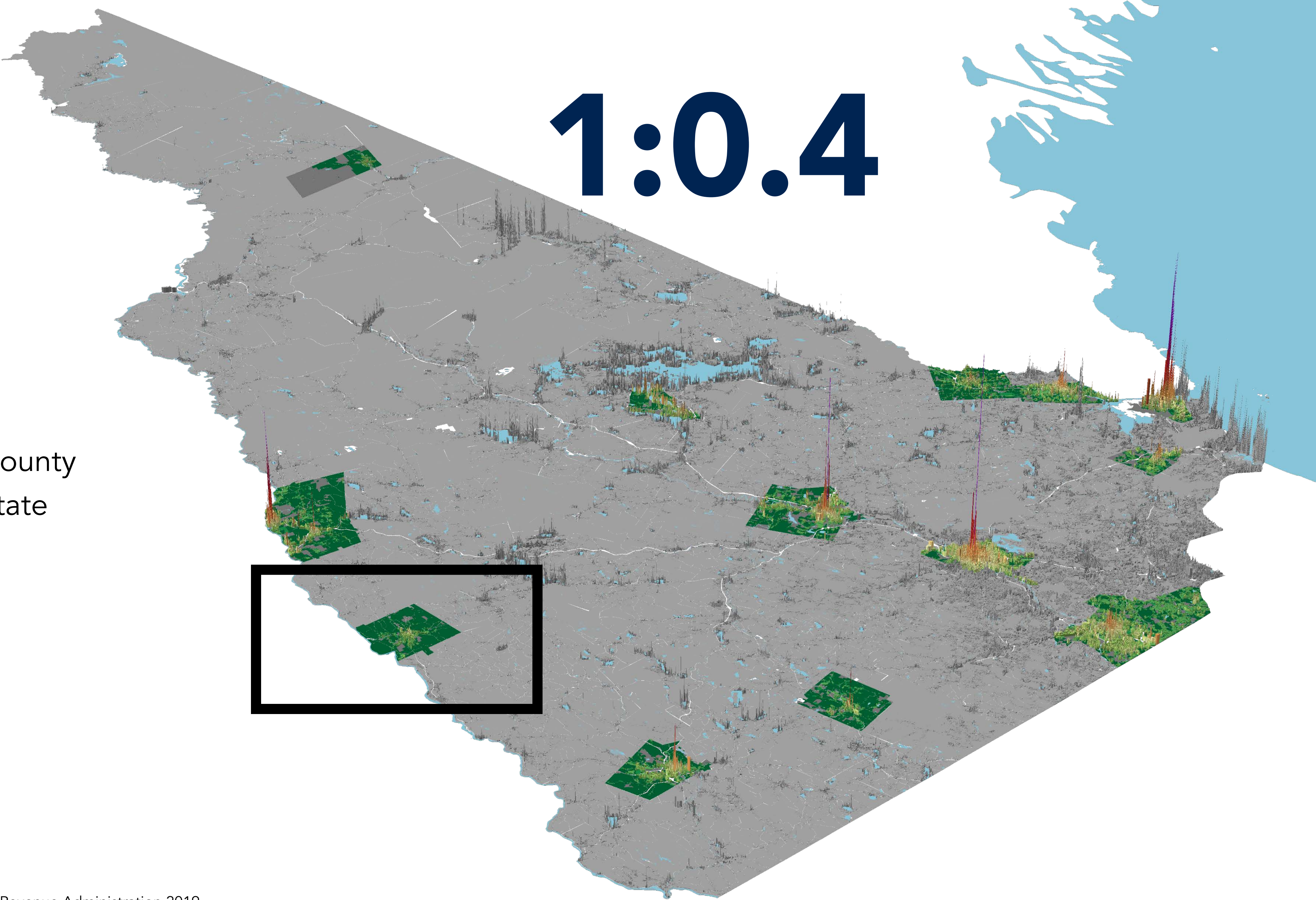
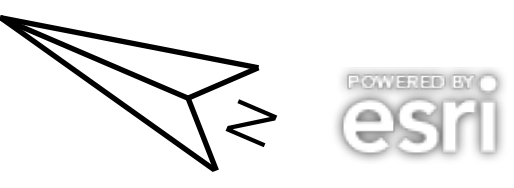
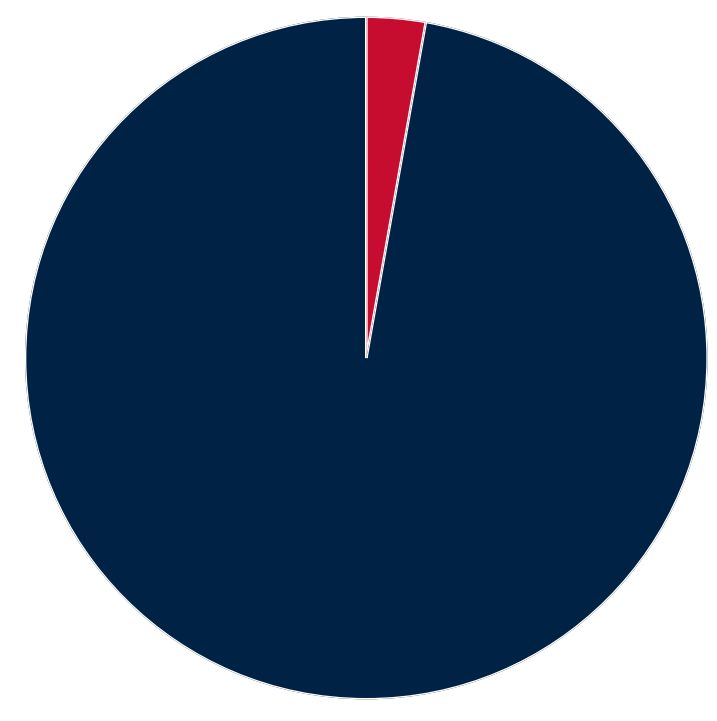
1:0.4

Area

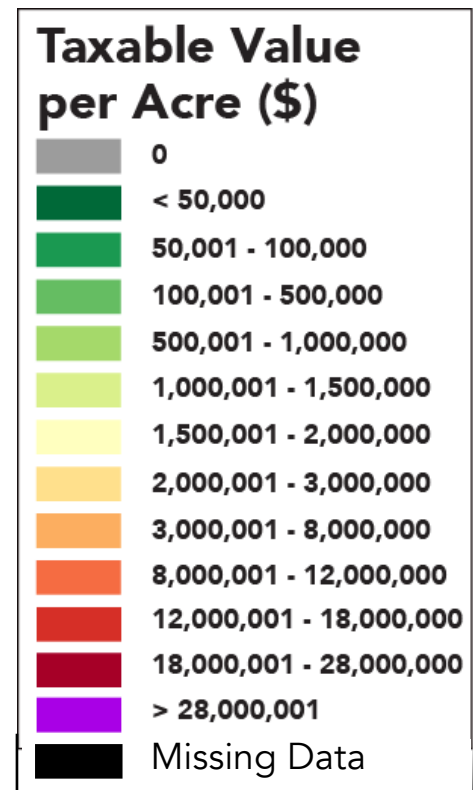
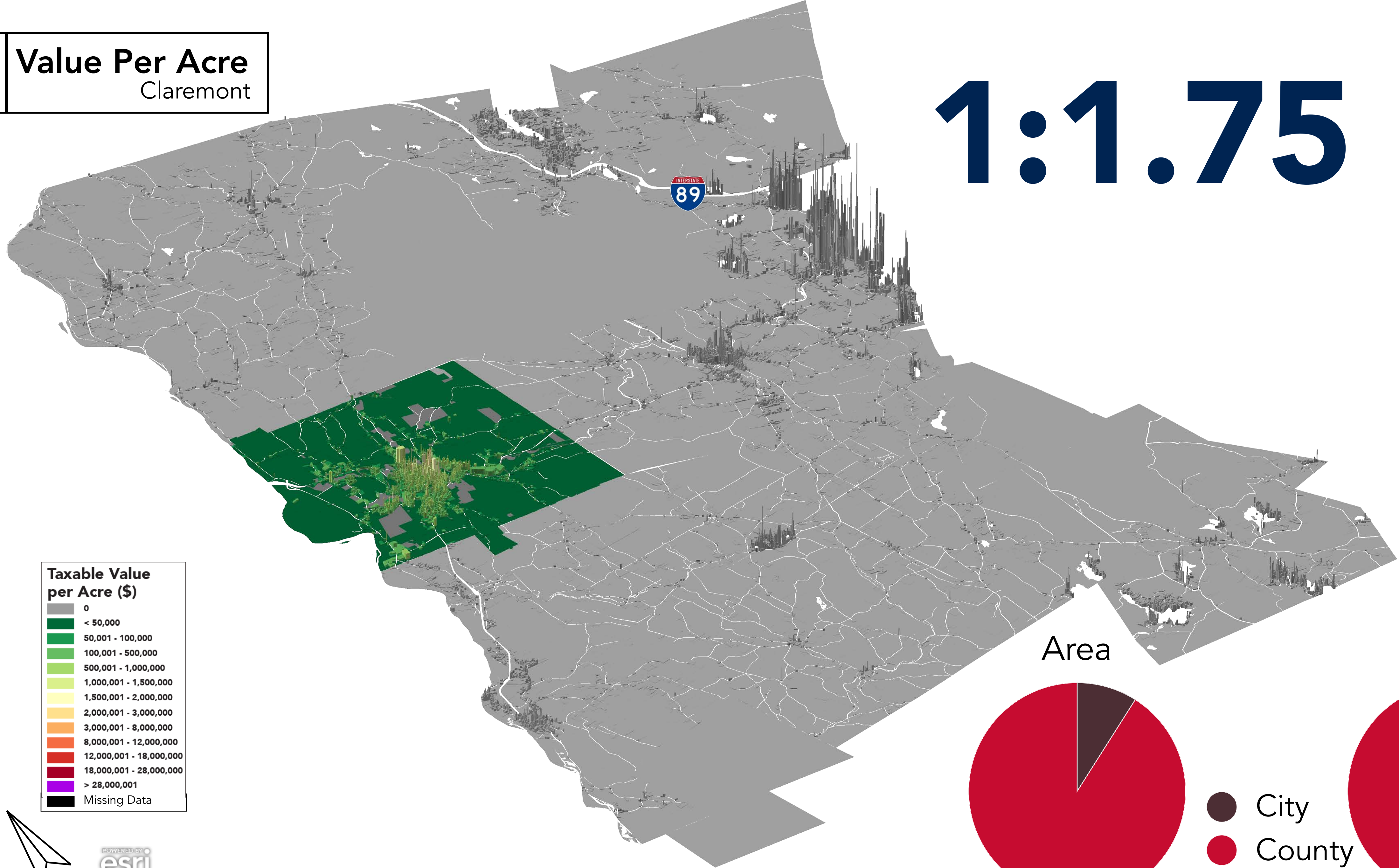
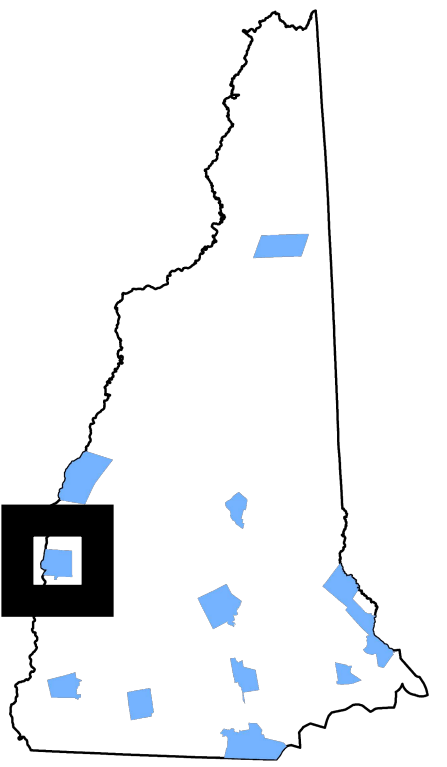


- County
- State

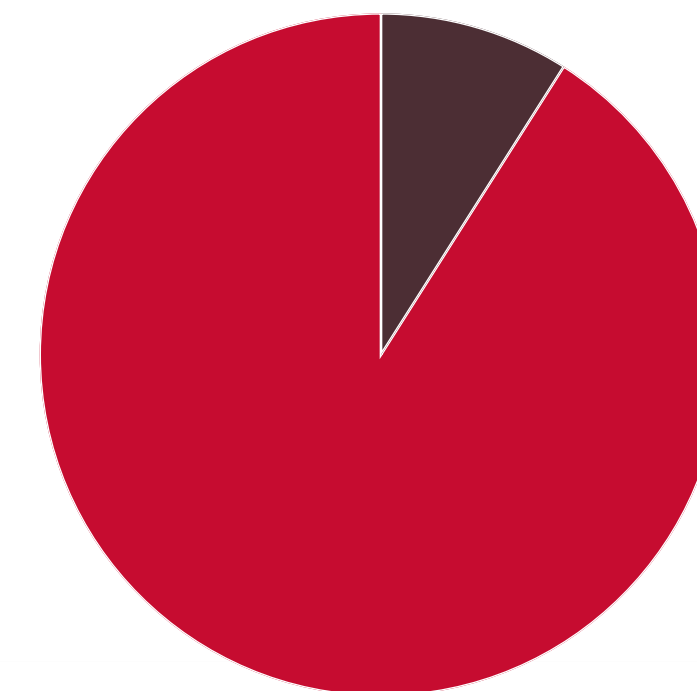
Value



1:1.75

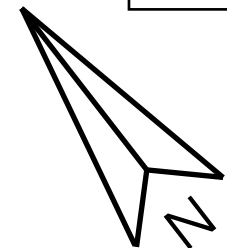
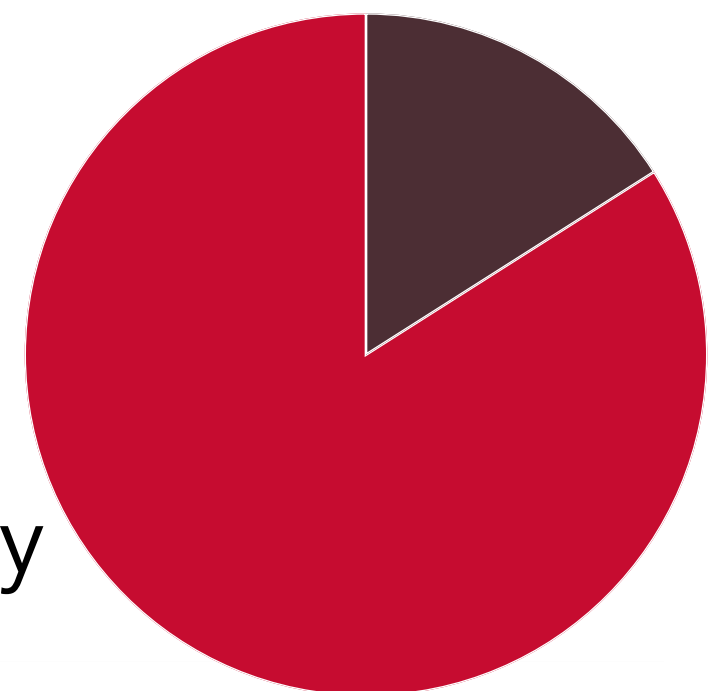


Area

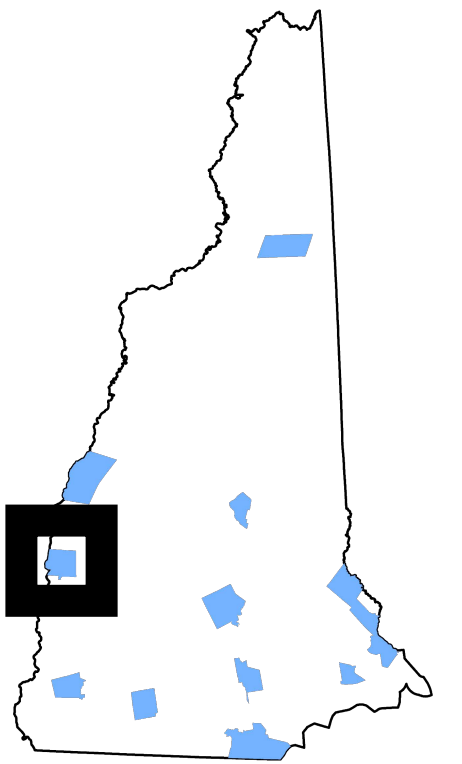
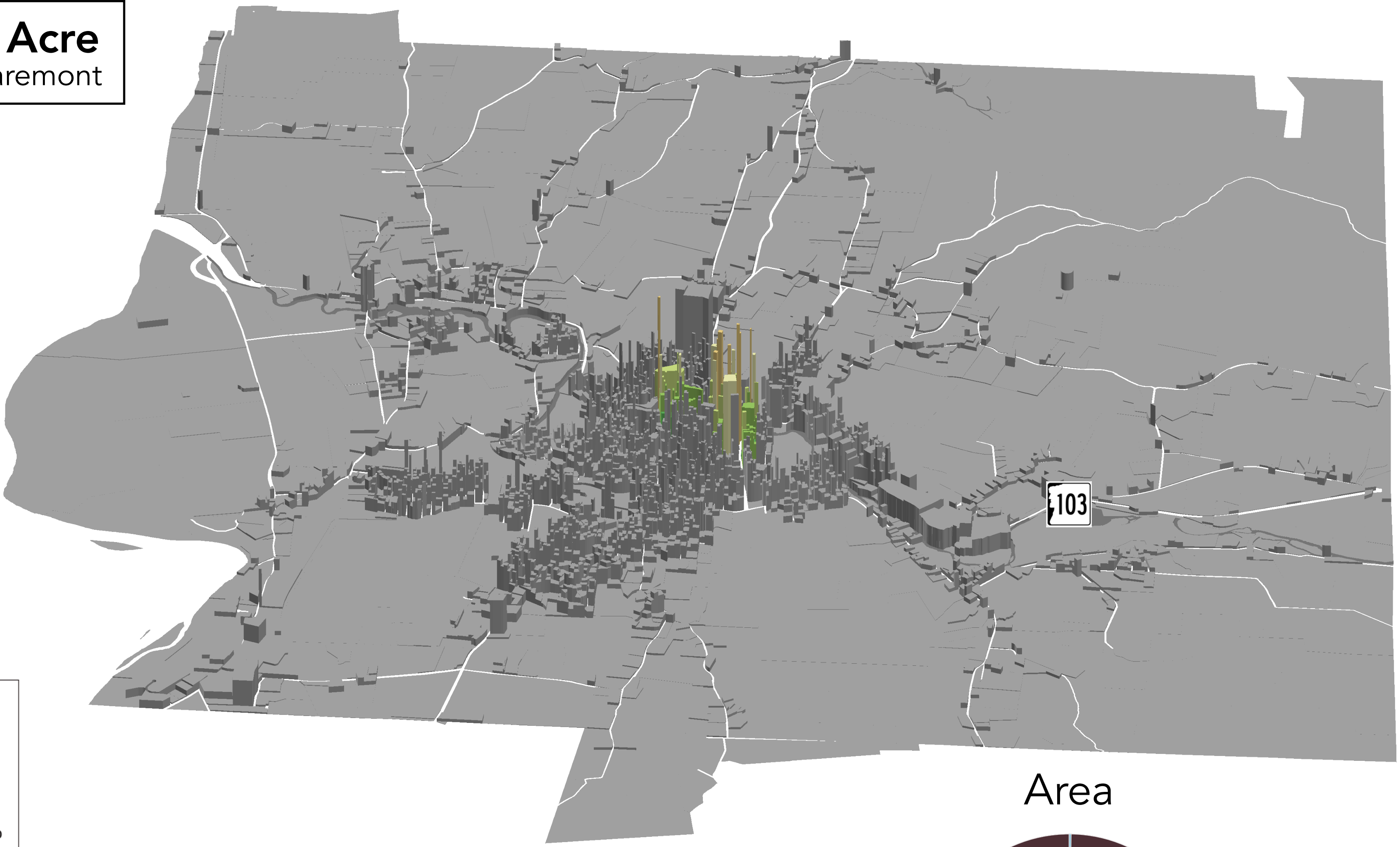


City
County

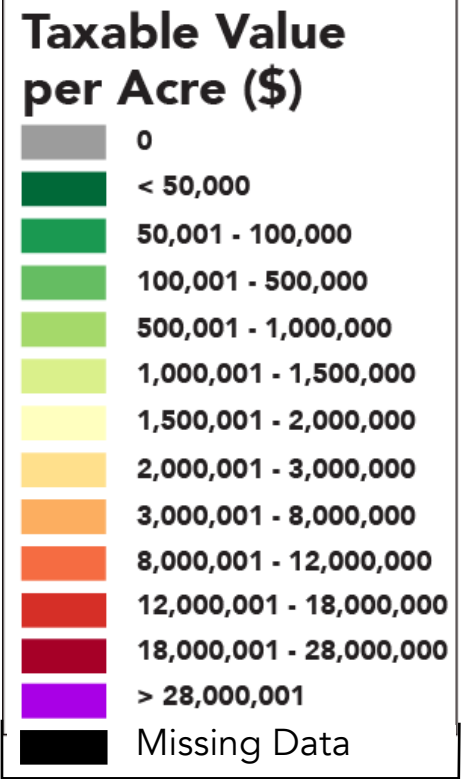
Value



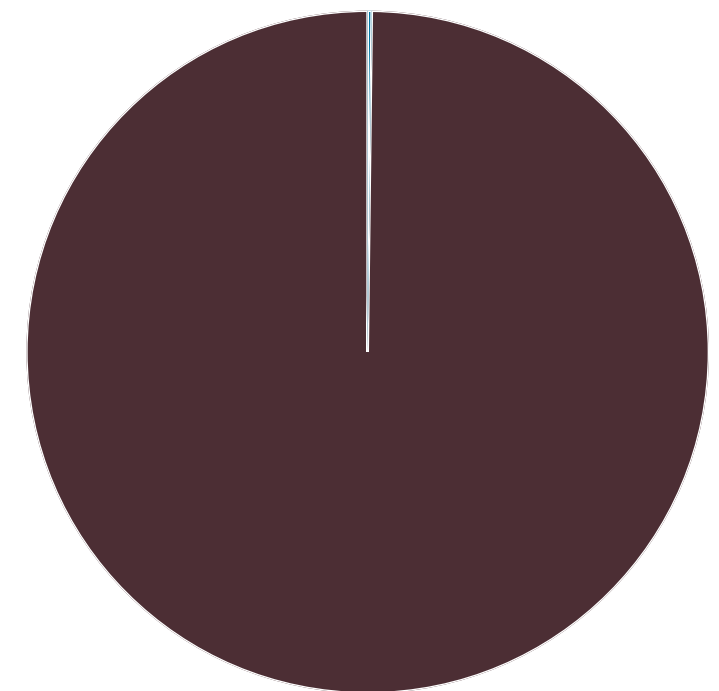
POWERED BY
esri



1:26

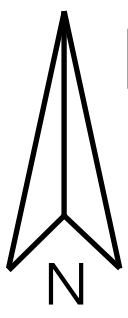
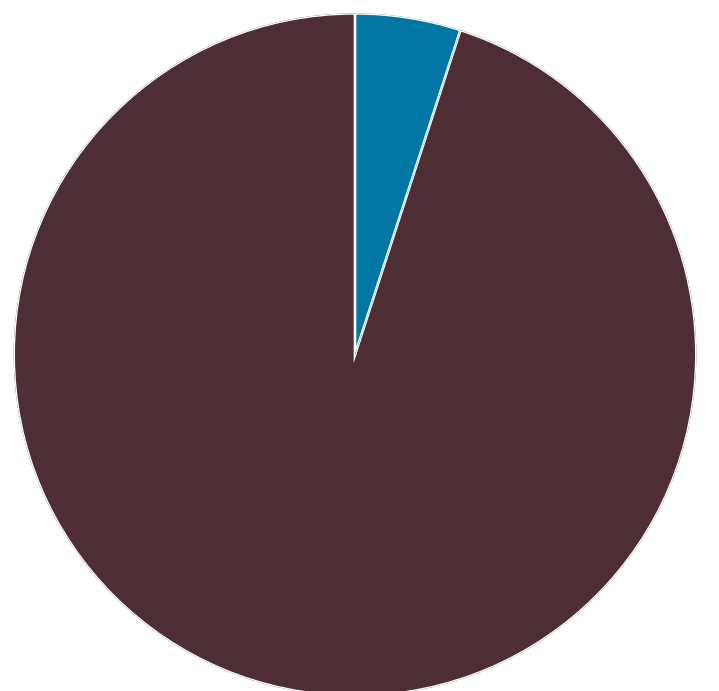


Area

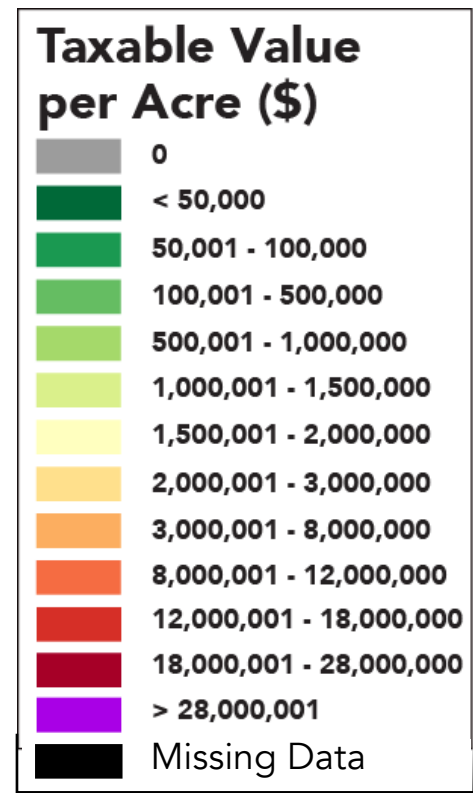
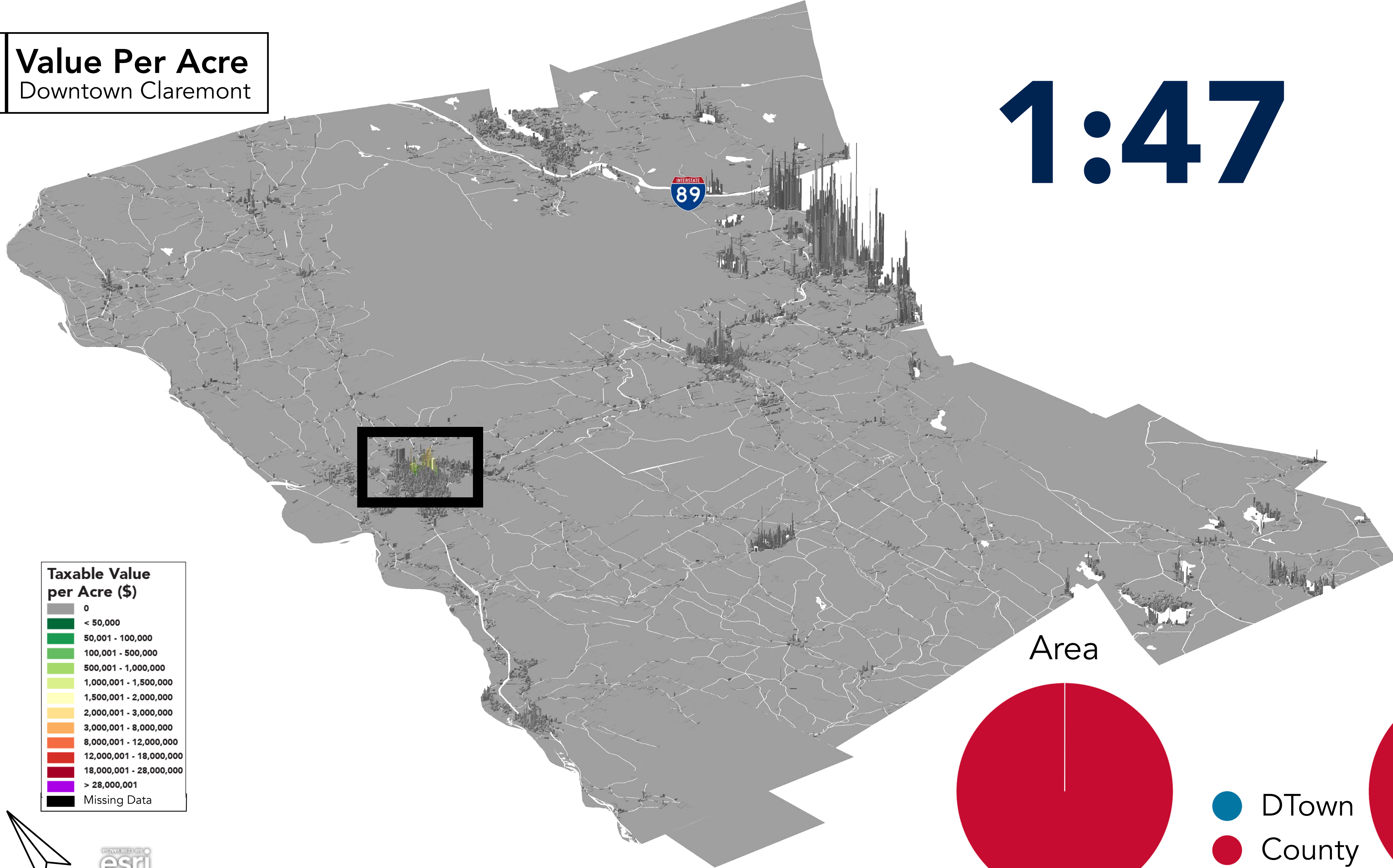
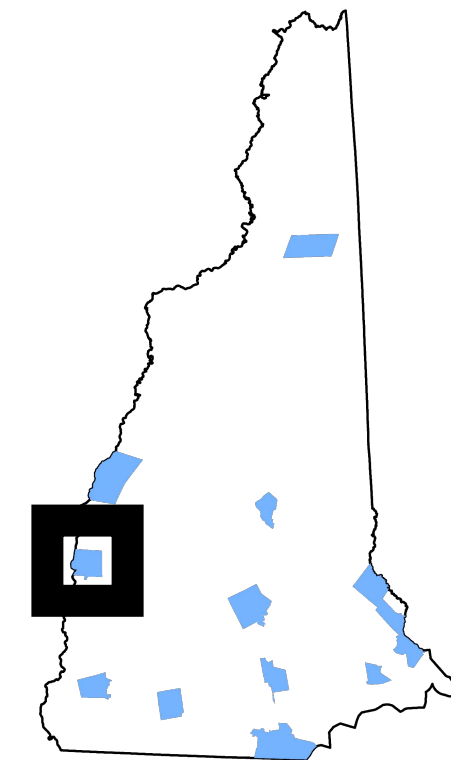


● Downtown
● City

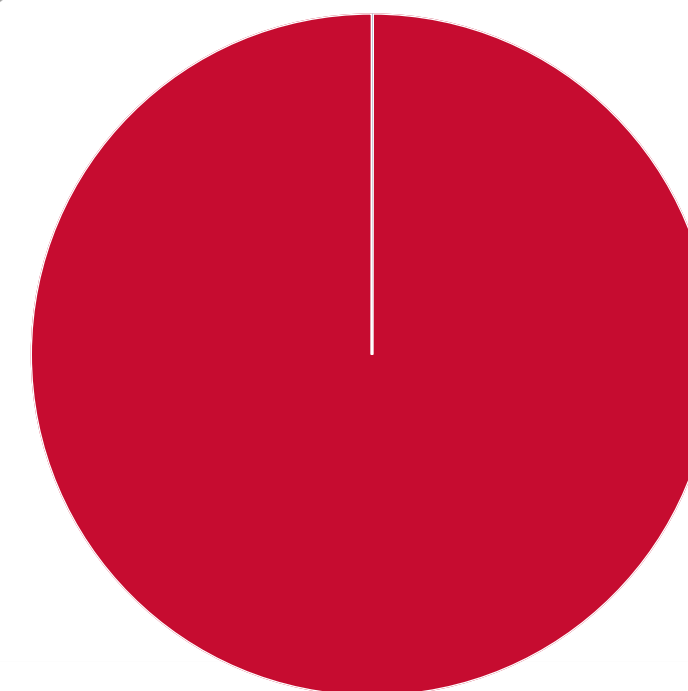
Value



1:47

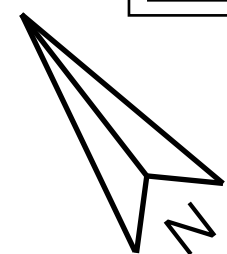
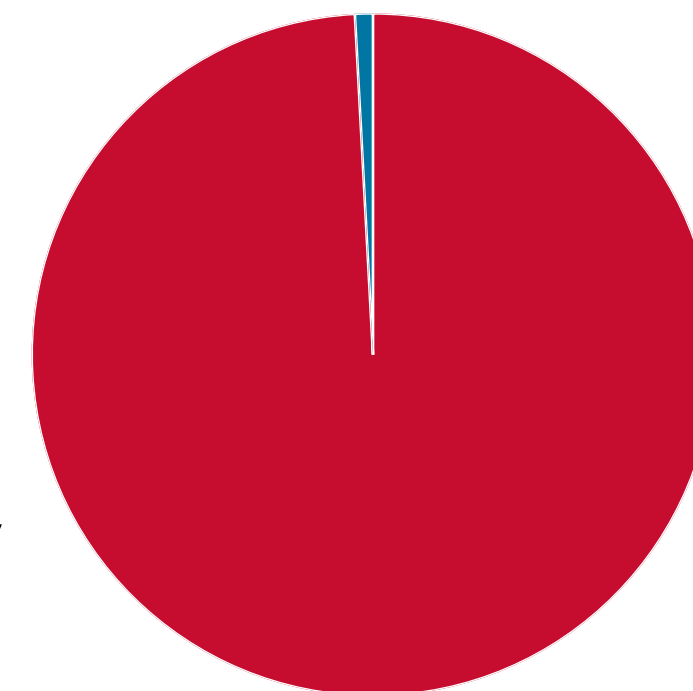


Area



- DTown
- County

Value

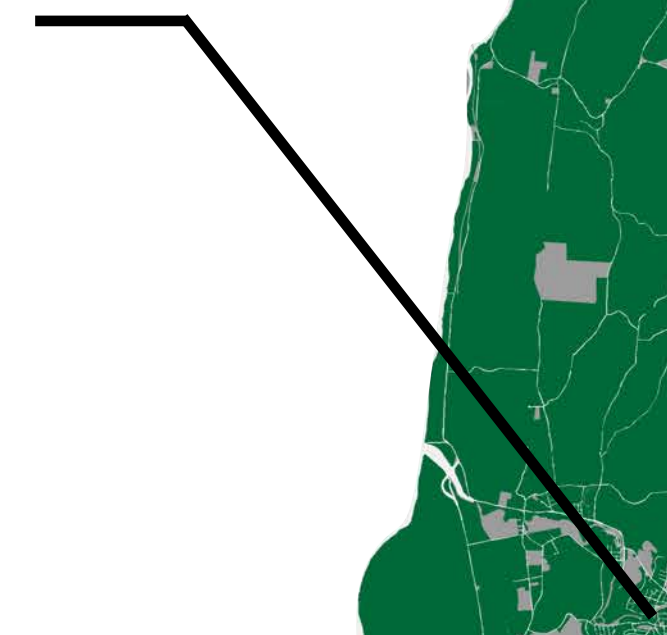


POWERED BY
esri

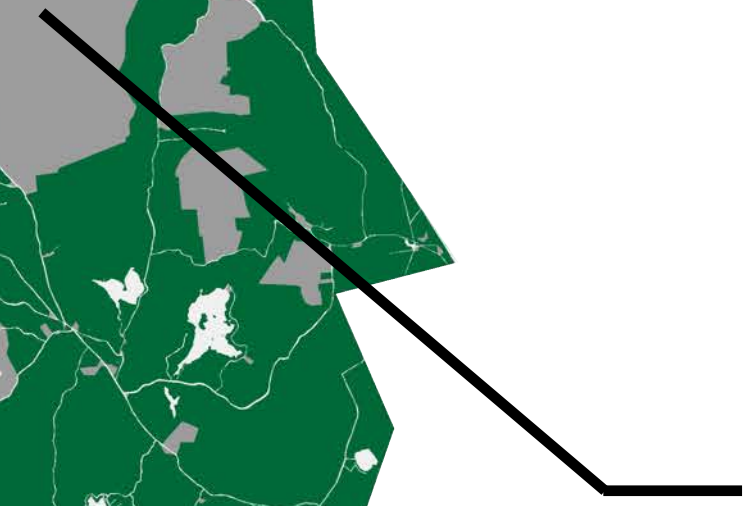
Taxable Area

Sullivan County

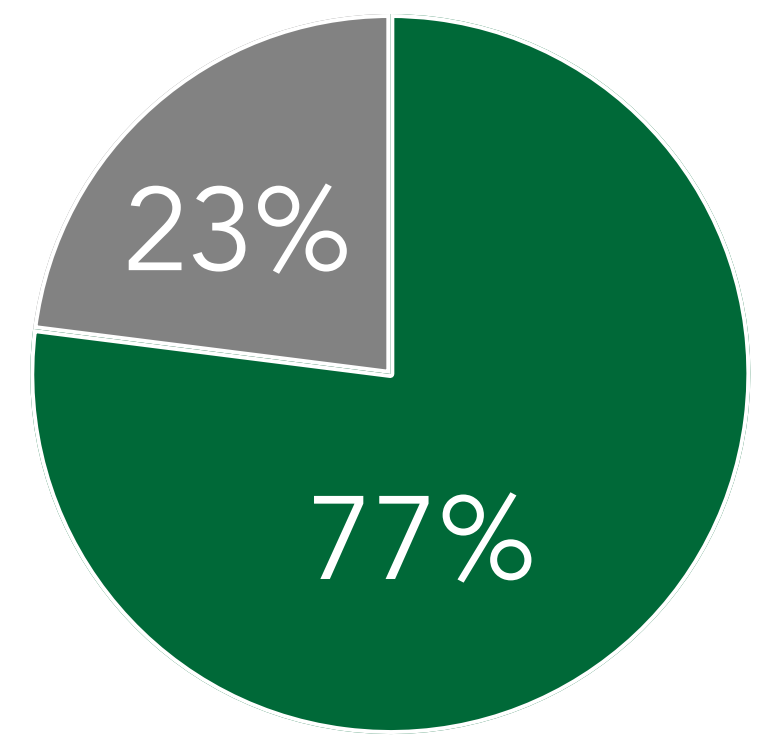
Claremont



Pillsbury State Park



Total Area



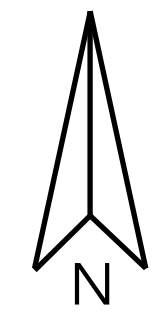
- Taxable
- Non Taxable

Taxable Property

No Data

Nontaxable

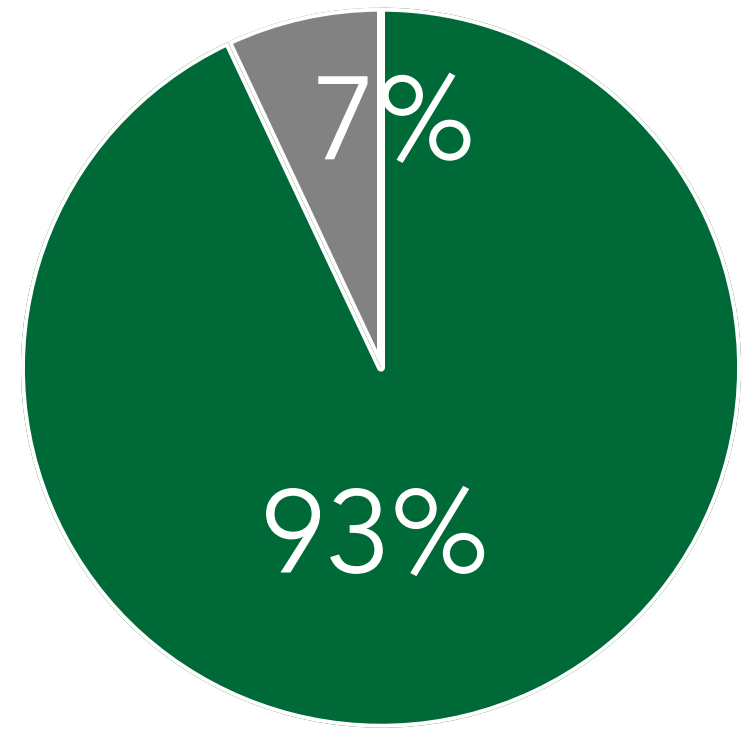
Taxable



Taxable Area

Claremont

Total Area



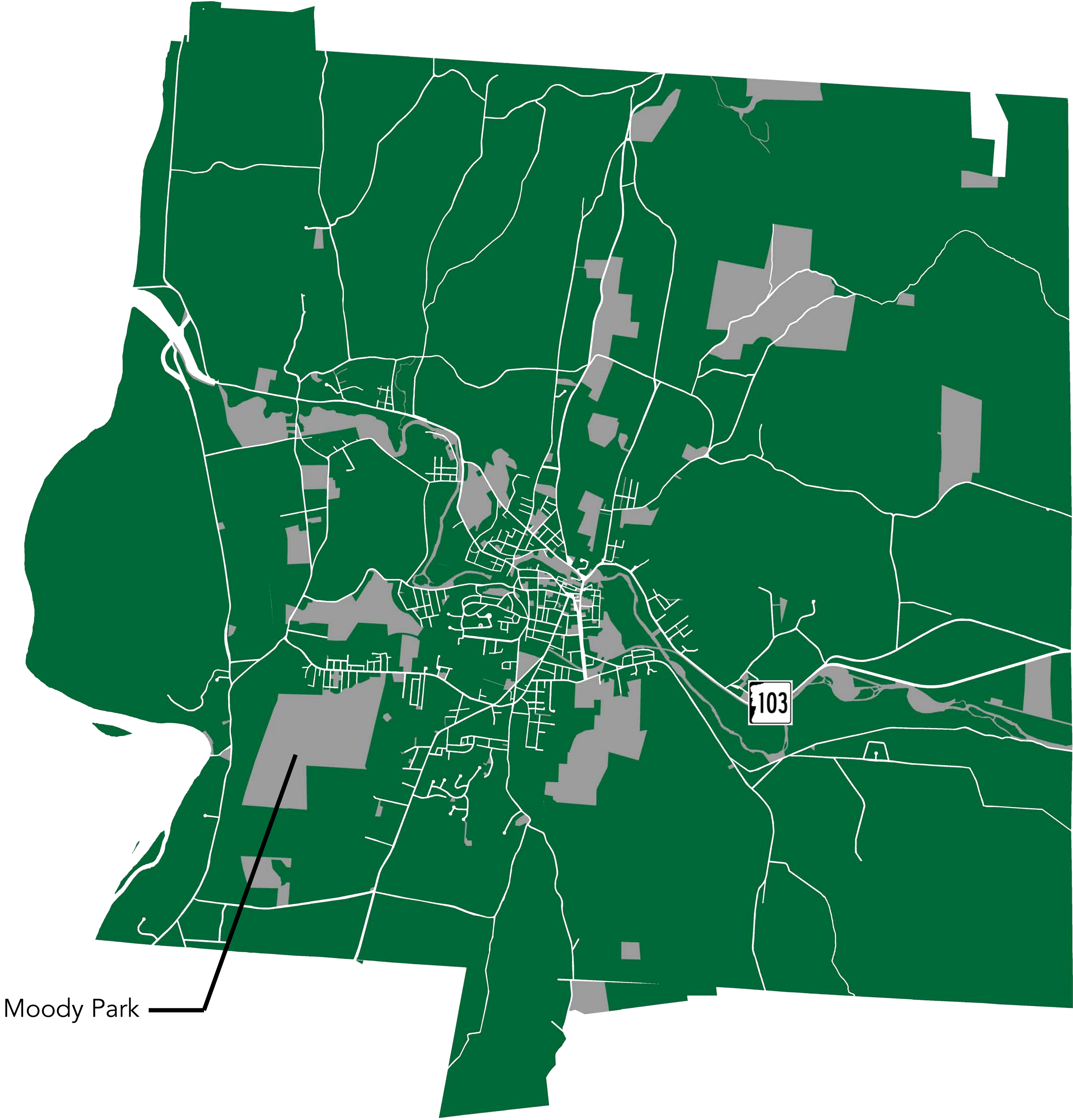
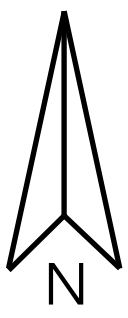
- Taxable
- Nontaxable

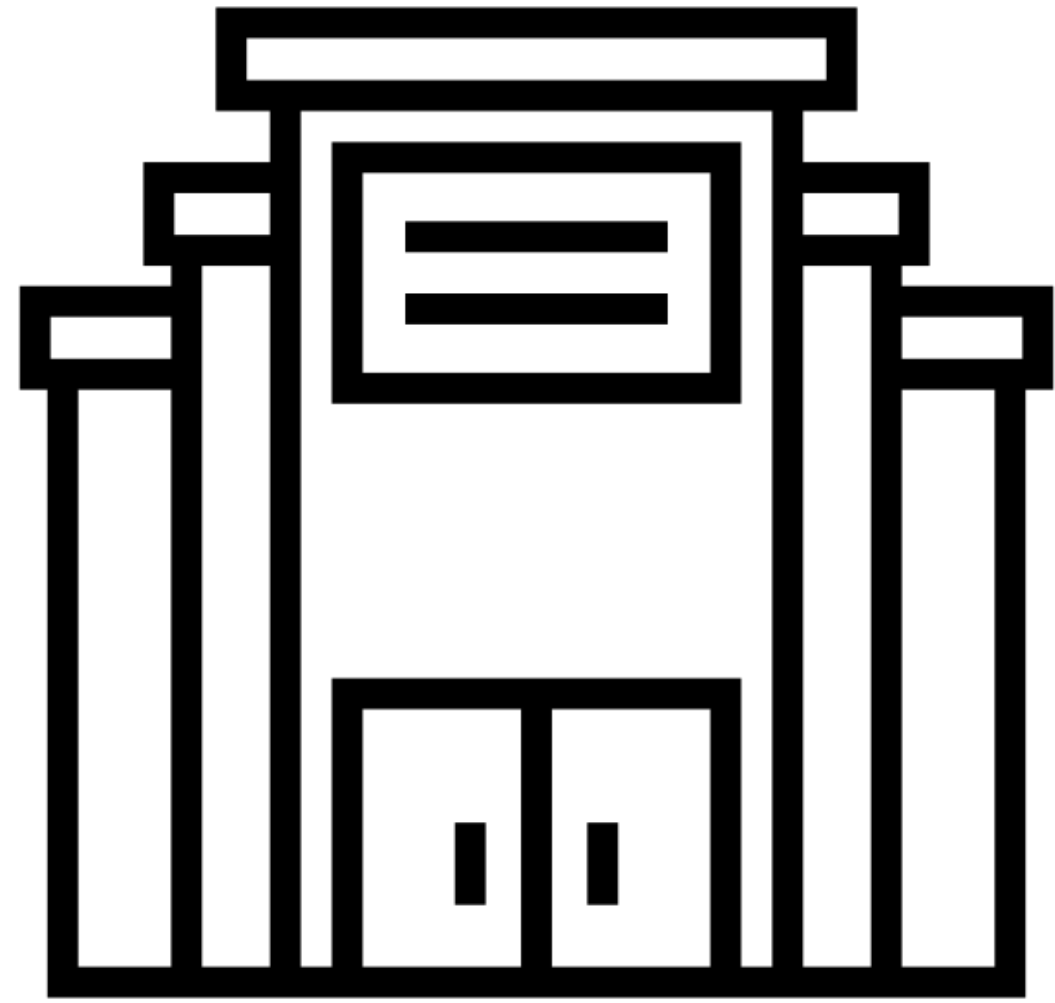
Taxable Property

No Data

Nontaxable

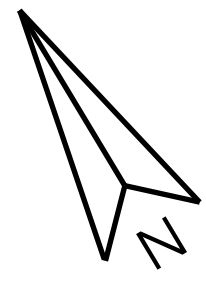
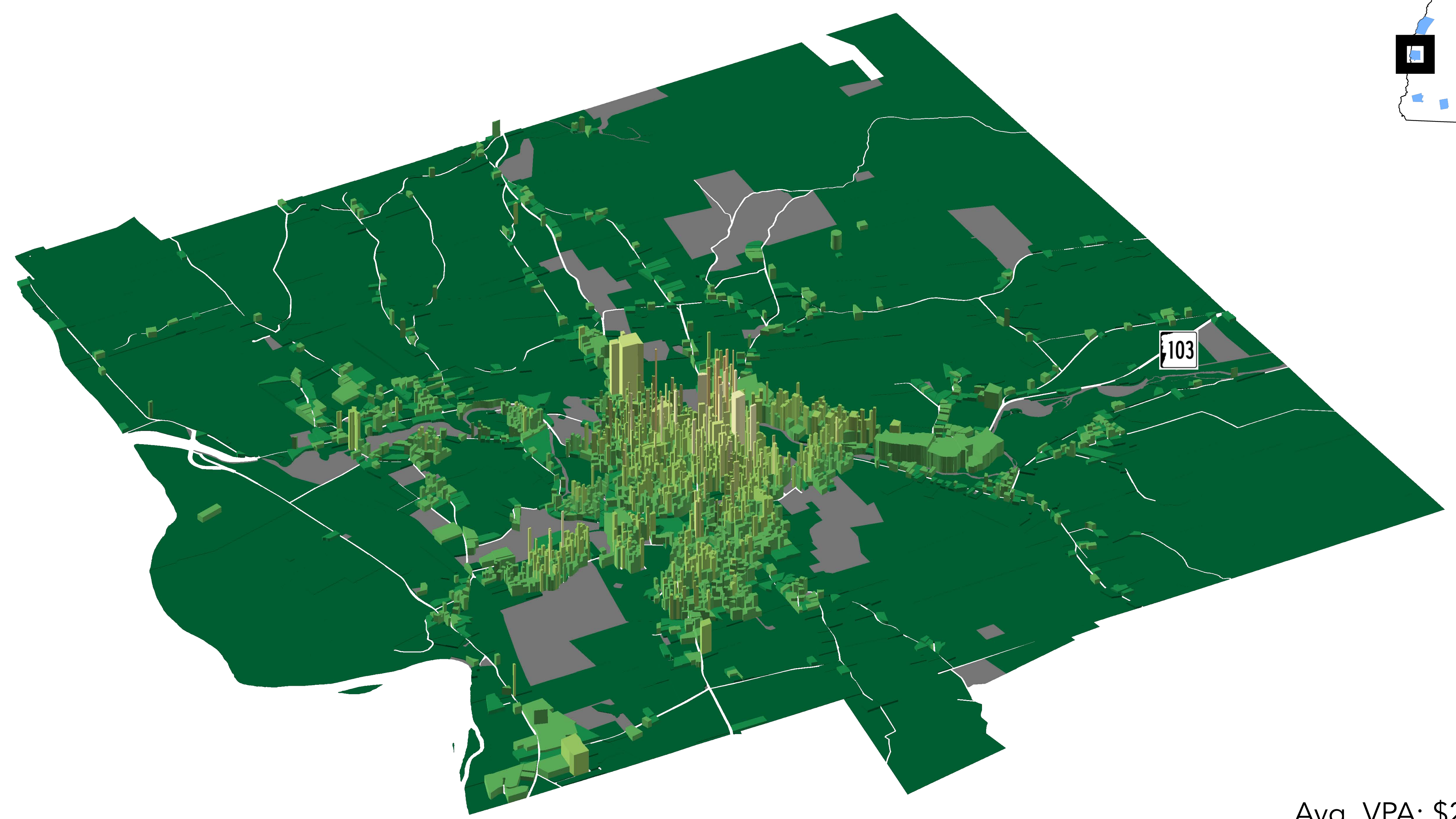
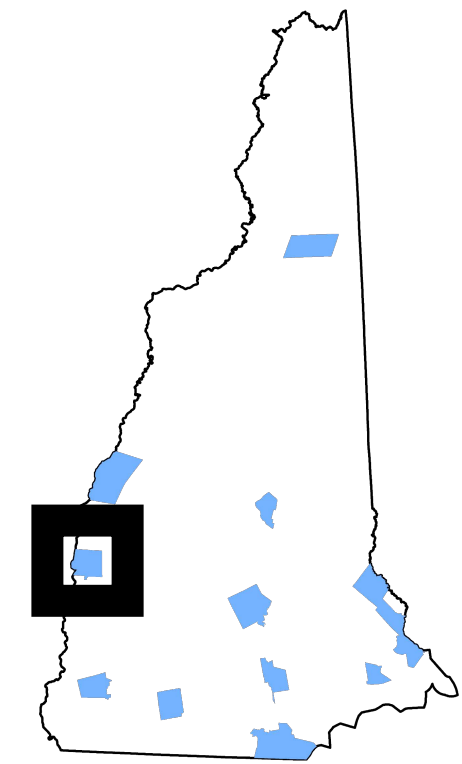
Taxable

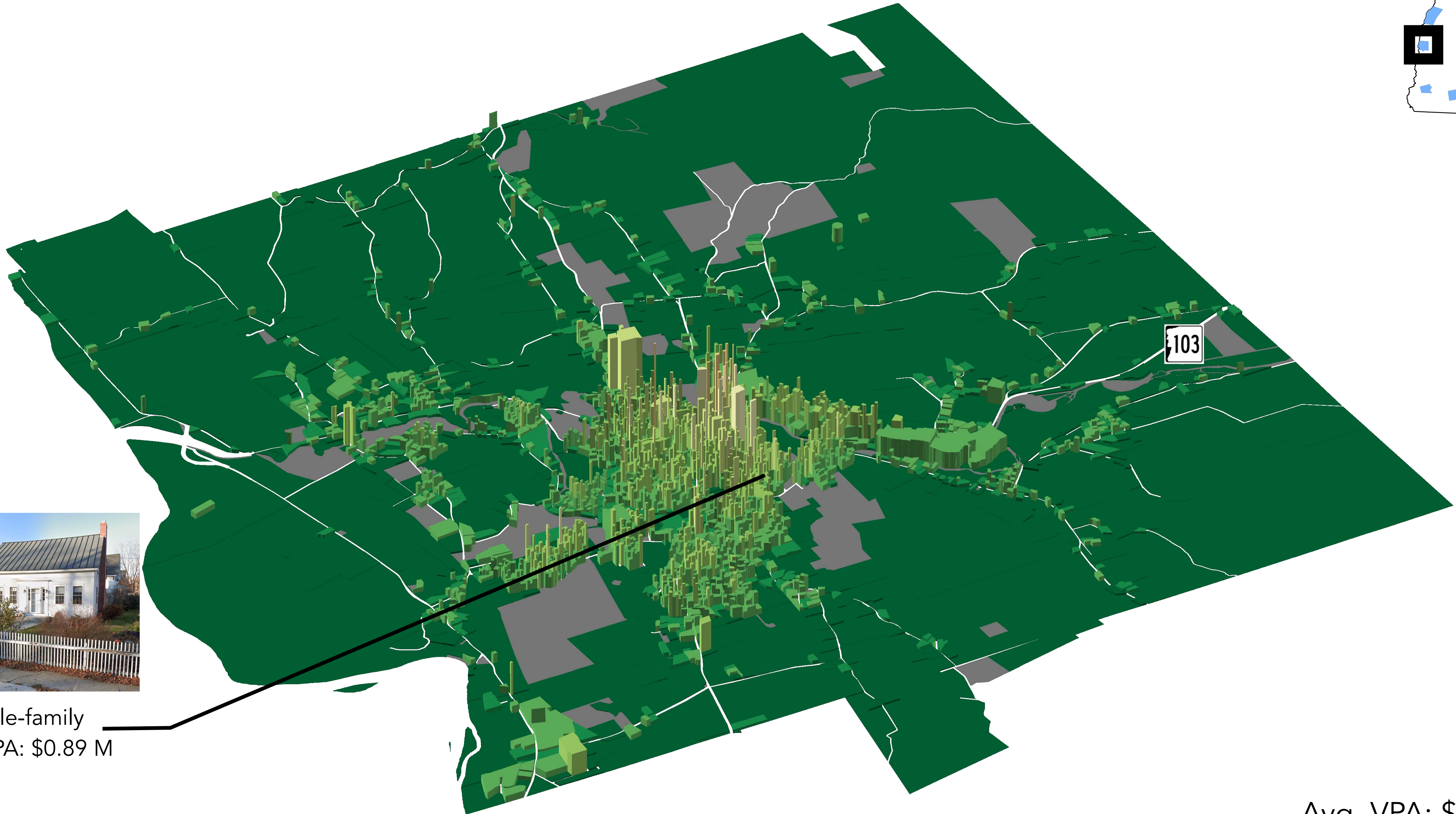
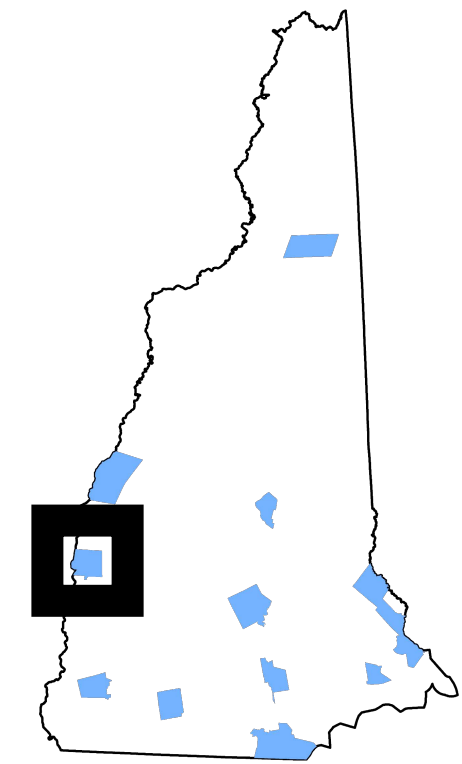




Land Use Types

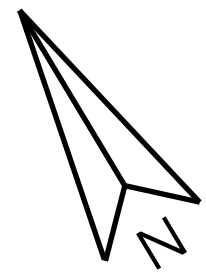
Local samples of buildings and development types





Single-family
Avg. VPA: \$0.89 M

Avg. VPA: \$28,311



URBAN3

Claremont Examples

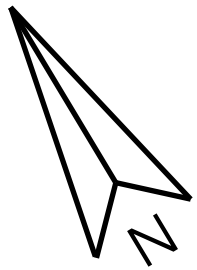
Land Use Productivity



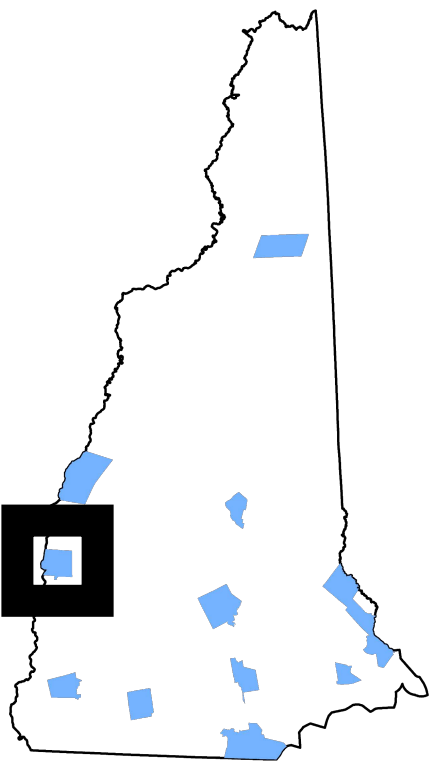
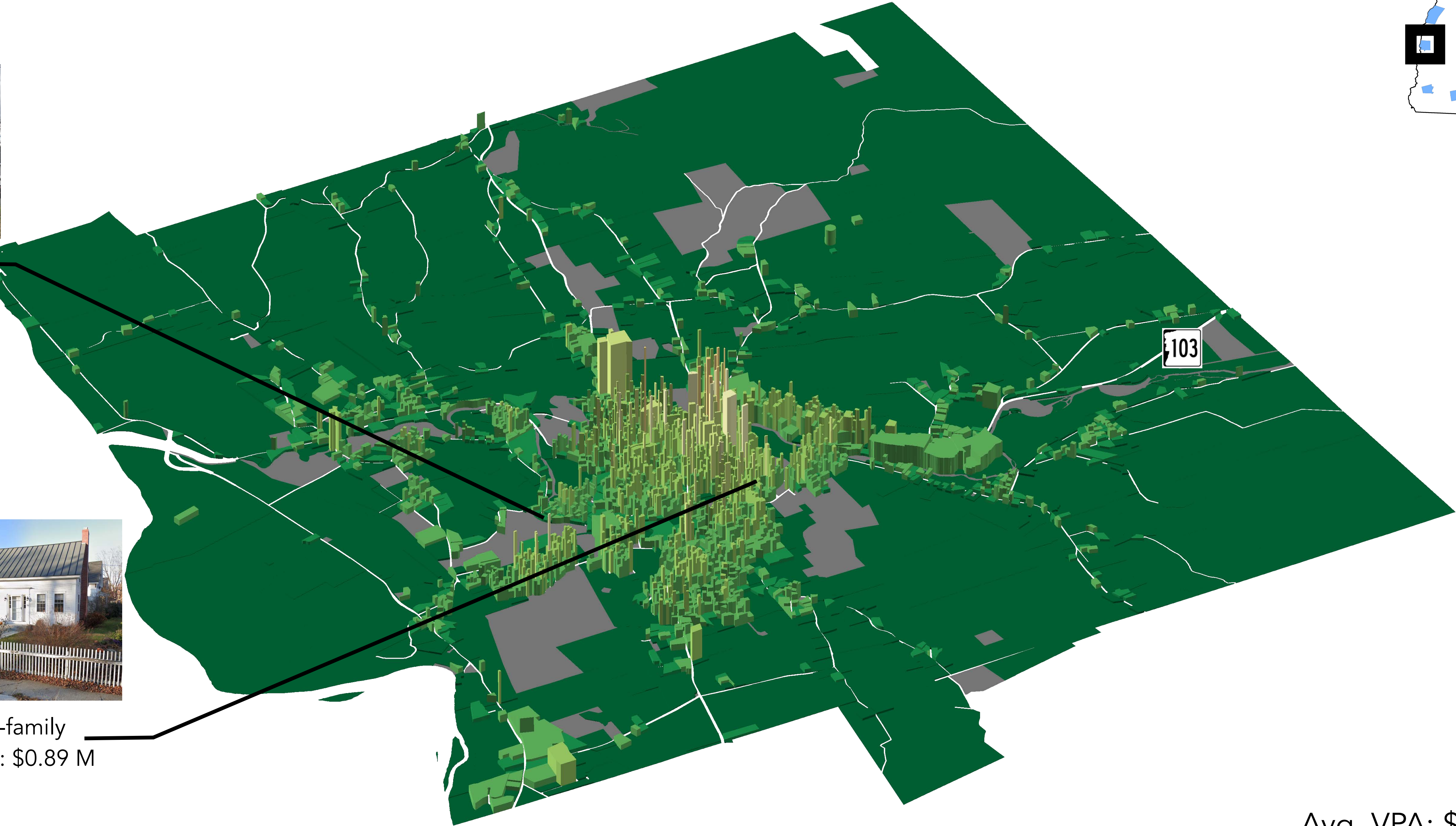
Multi-family
Avg.VPA: \$0.6 M



Single-family
Avg. VPA: \$0.89 M



Source: New Hampshire Department of Revenue Administration 2019

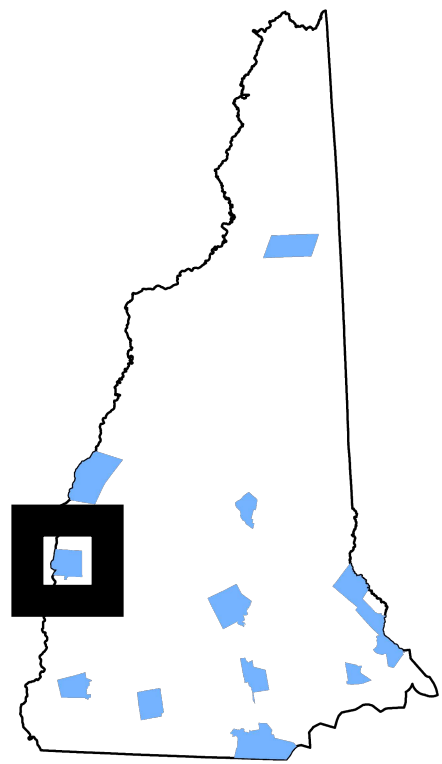


Avg. VPA: \$28,311

URBAN3

Claremont Examples

Land Use Productivity



Multi-family
Avg.VPA: \$0.6 M

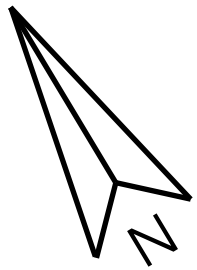


Single-family
Avg. VPA: \$0.89 M



Commercial
VPA: \$0.49 M

Avg. VPA: \$28,311

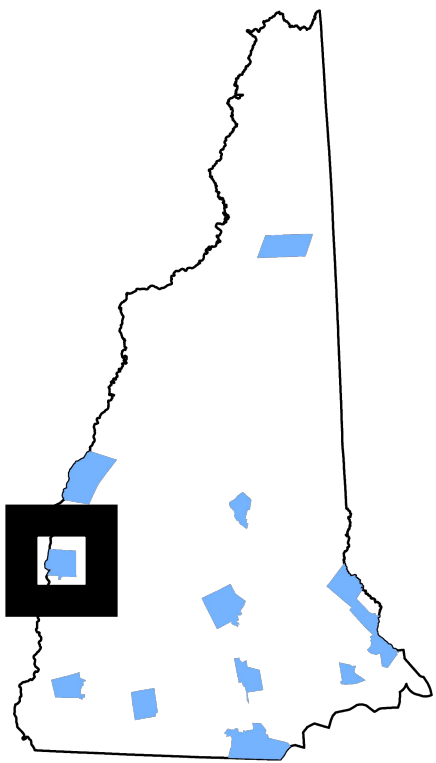


Claremont Examples

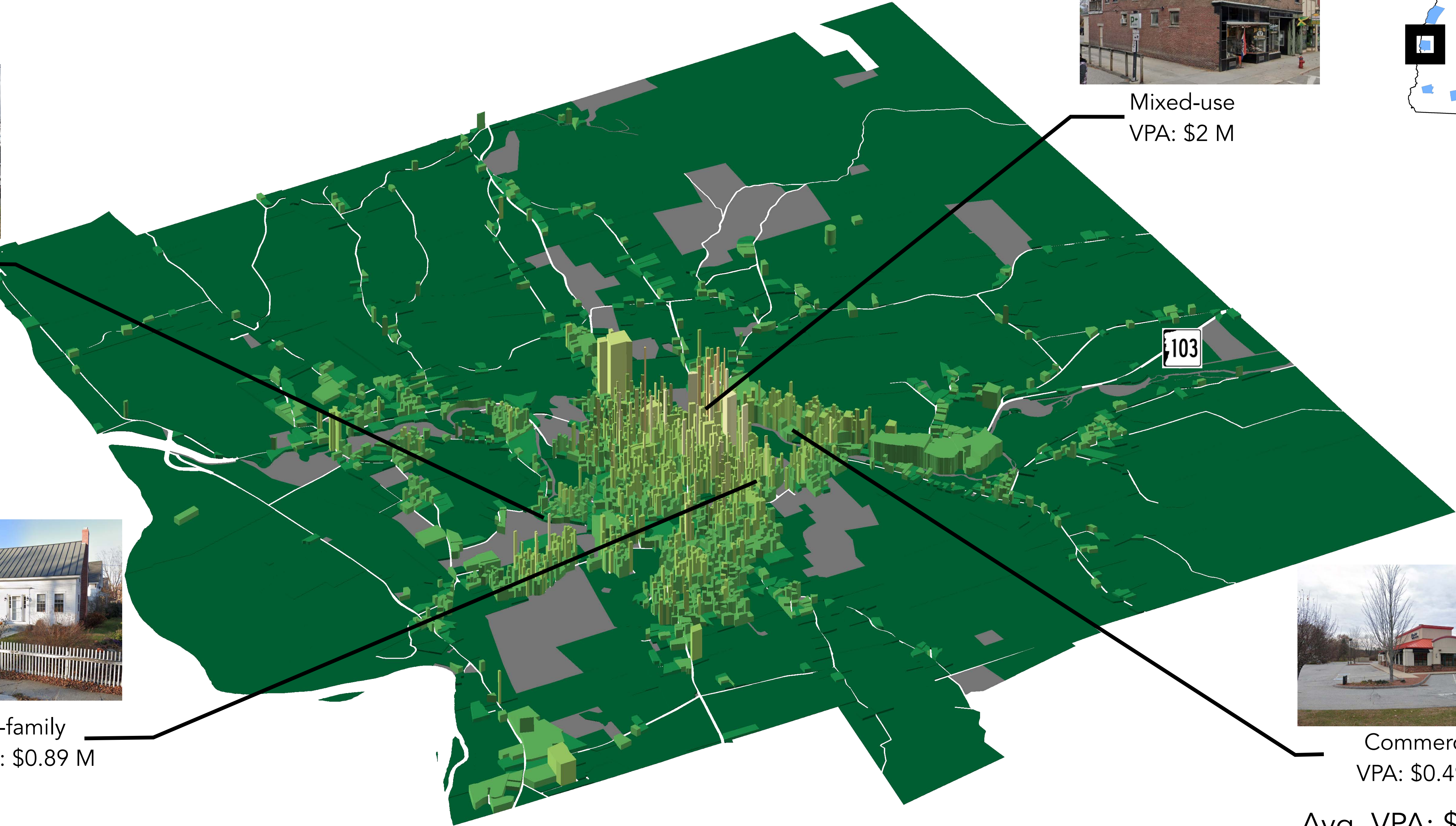
Land Use Productivity



Mixed-use
VPA: \$2 M



Multi-family
Avg.VPA: \$0.6 M

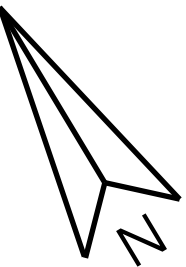


Single-family
Avg. VPA: \$0.89 M



Commercial
VPA: \$0.49 M

Avg. VPA: \$28,311



Claremont Examples

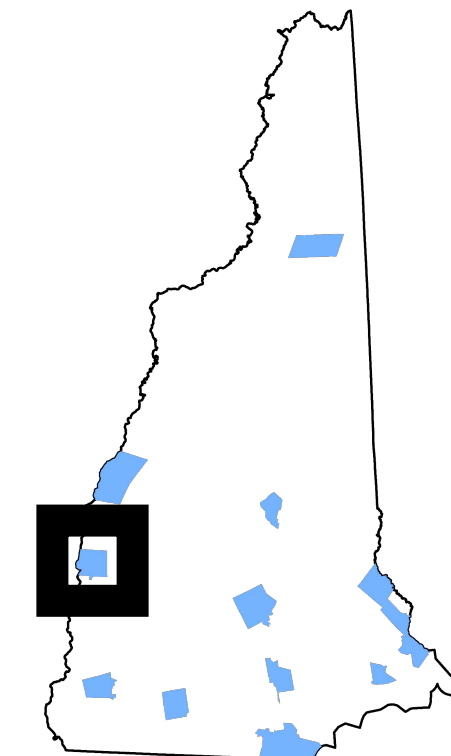
Land Use Productivity



Peak VPA
VPA: \$2.6 M



Mixed-use
VPA: \$2 M



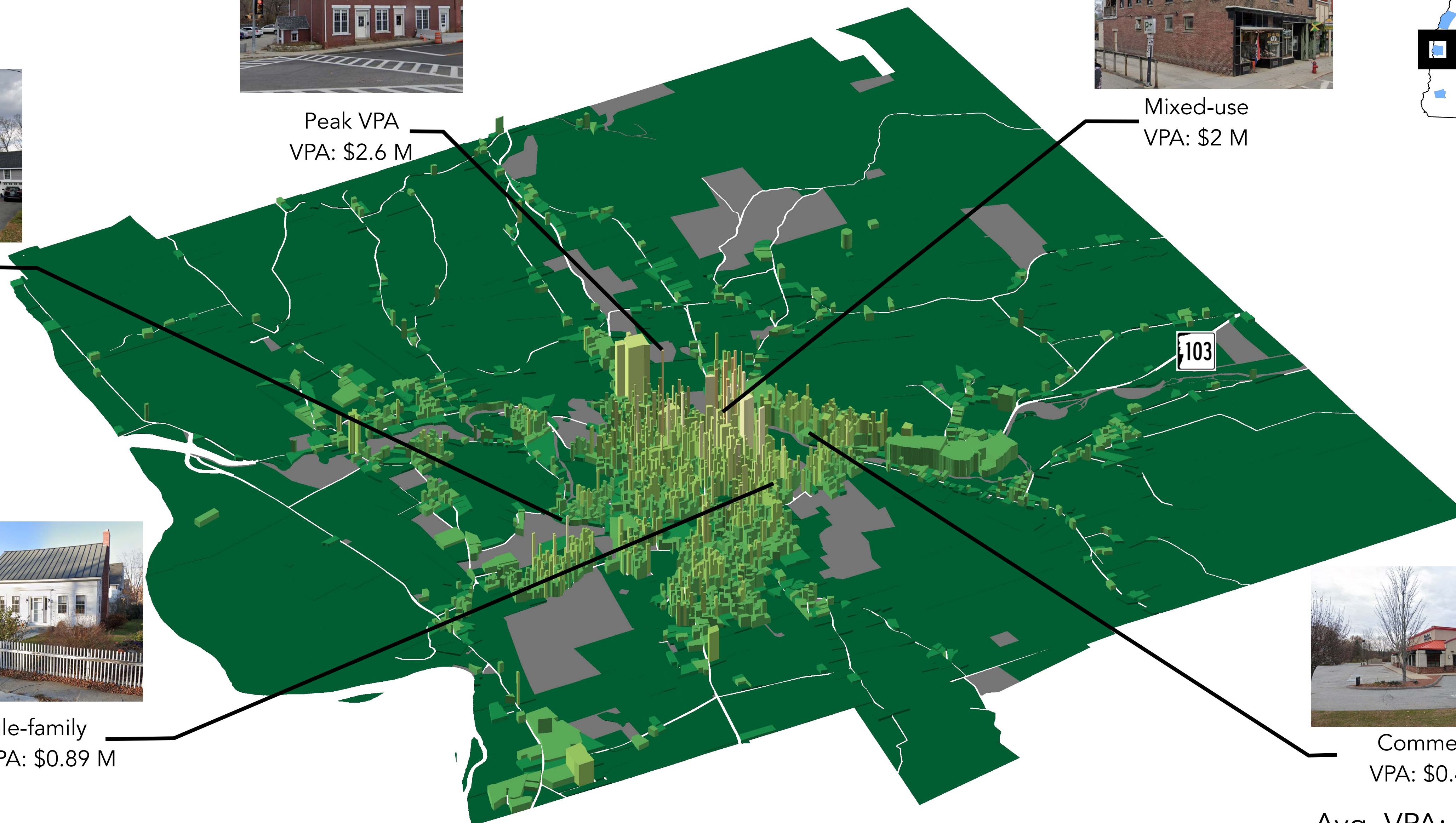
Multi-family
Avg.VPA: \$0.6 M



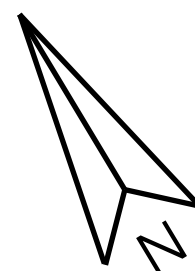
Single-family
Avg. VPA: \$0.89 M



Commercial
VPA: \$0.49 M



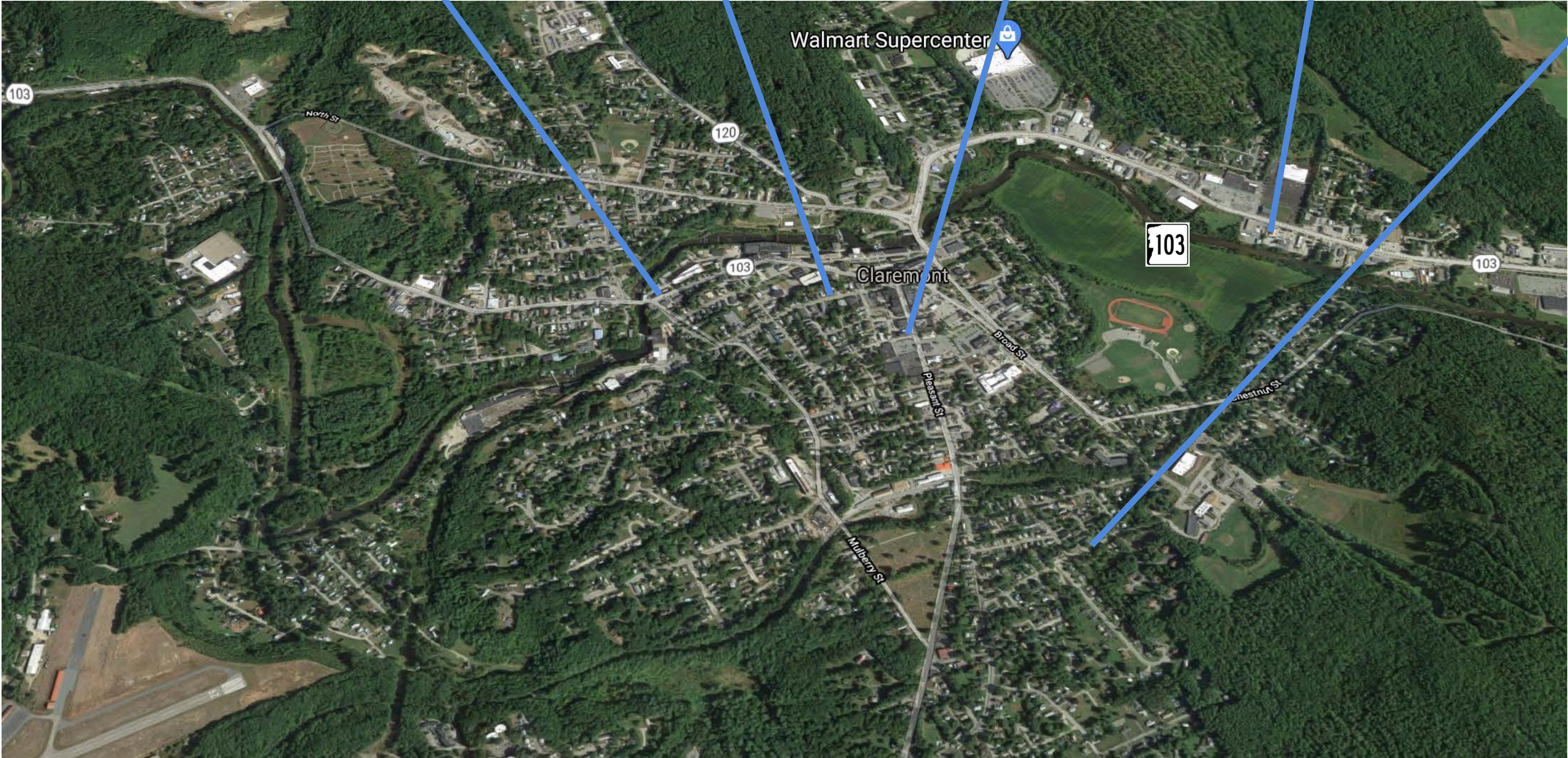
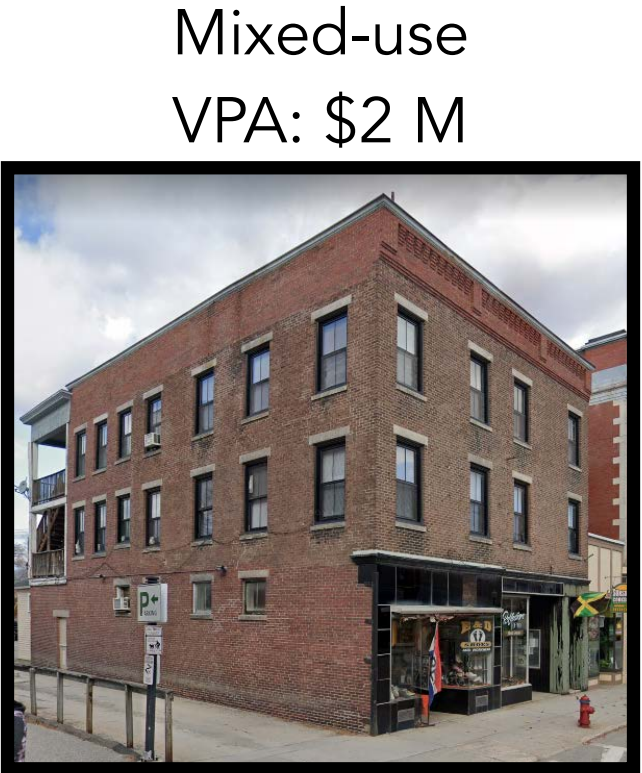
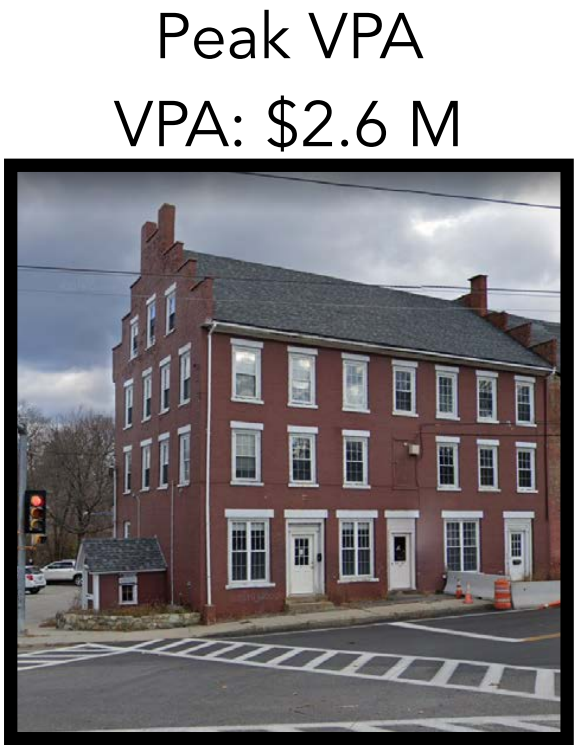
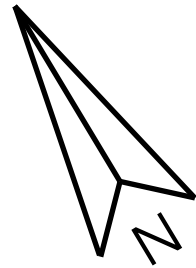
Avg. VPA: \$28,311



URBAN3

Claremont Examples

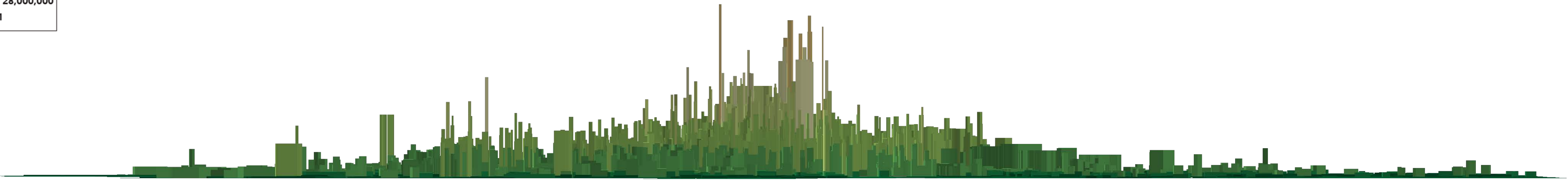
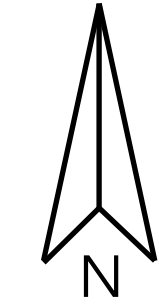
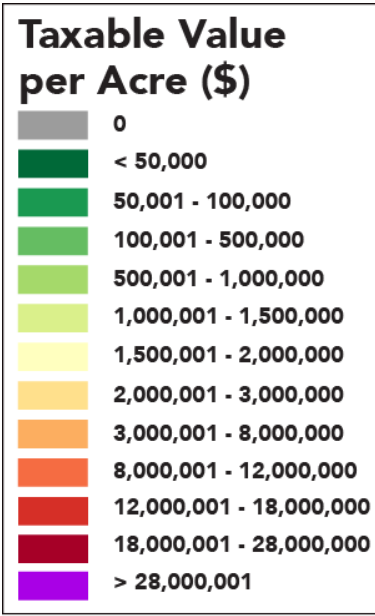
Land Use Productivity





Productivity

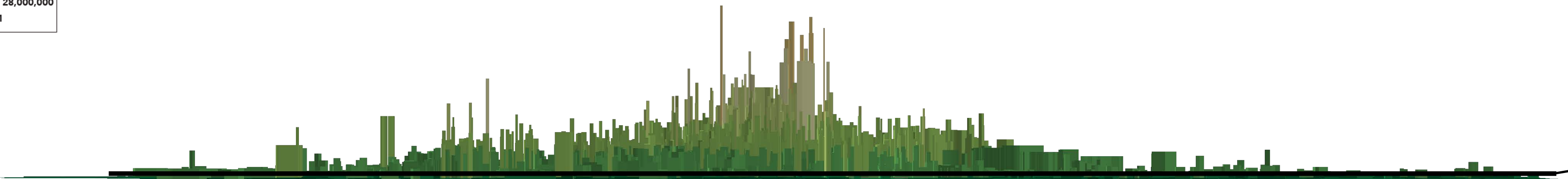
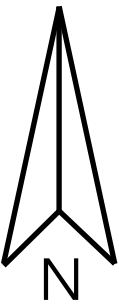
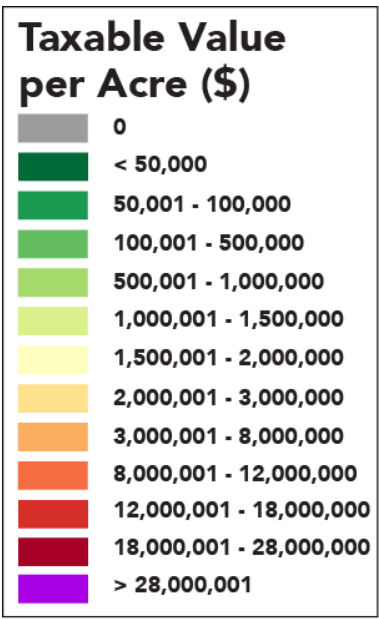
Geospatial Analysis



*Not Perfectly to Scale

Claremont Profile

Land Use Productivity

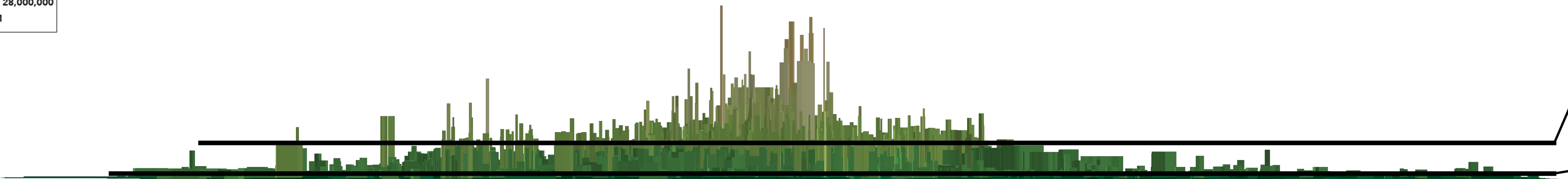
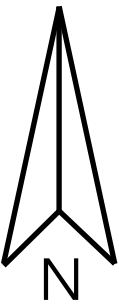
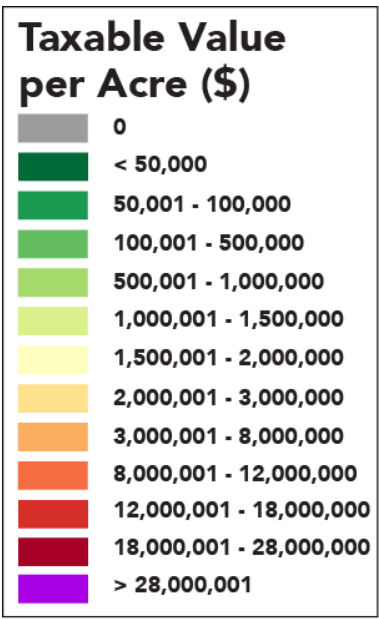


City Avg. VPA
\$28 K

*Not Perfectly to Scale

Claremont Profile

Land Use Productivity



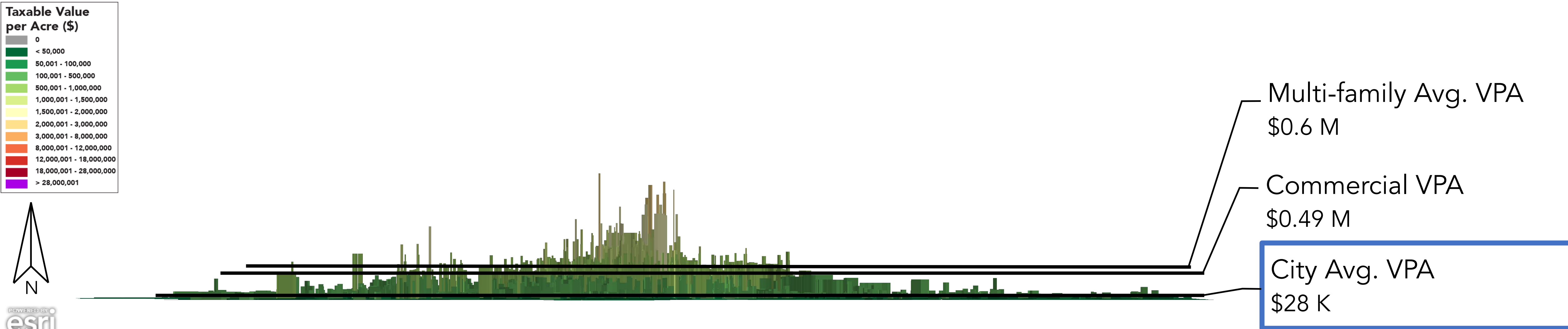
Commercial VPA
\$0.49 M

City Avg. VPA
\$28 K

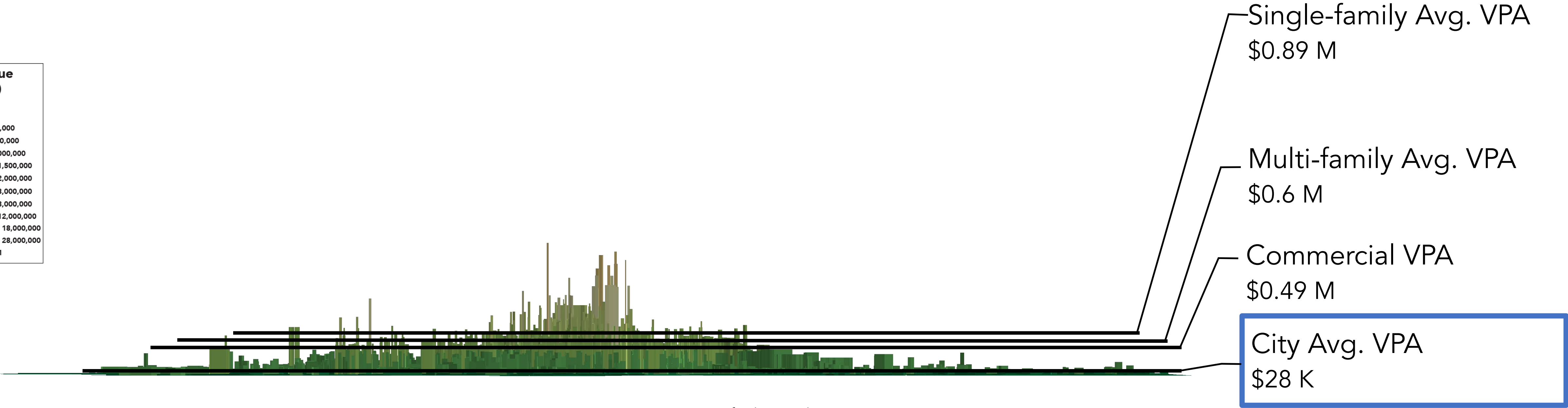
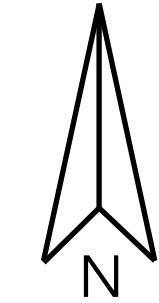
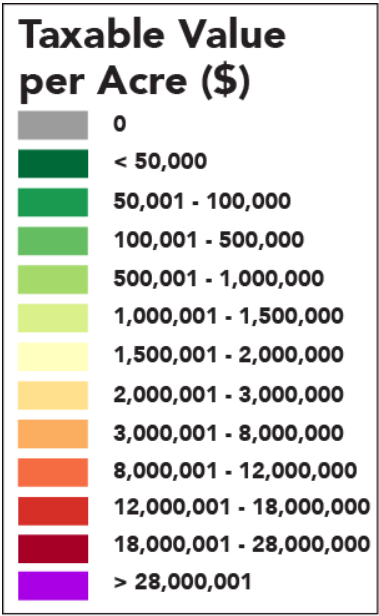
*Not Perfectly to Scale

Claremont Profile

Land Use Productivity



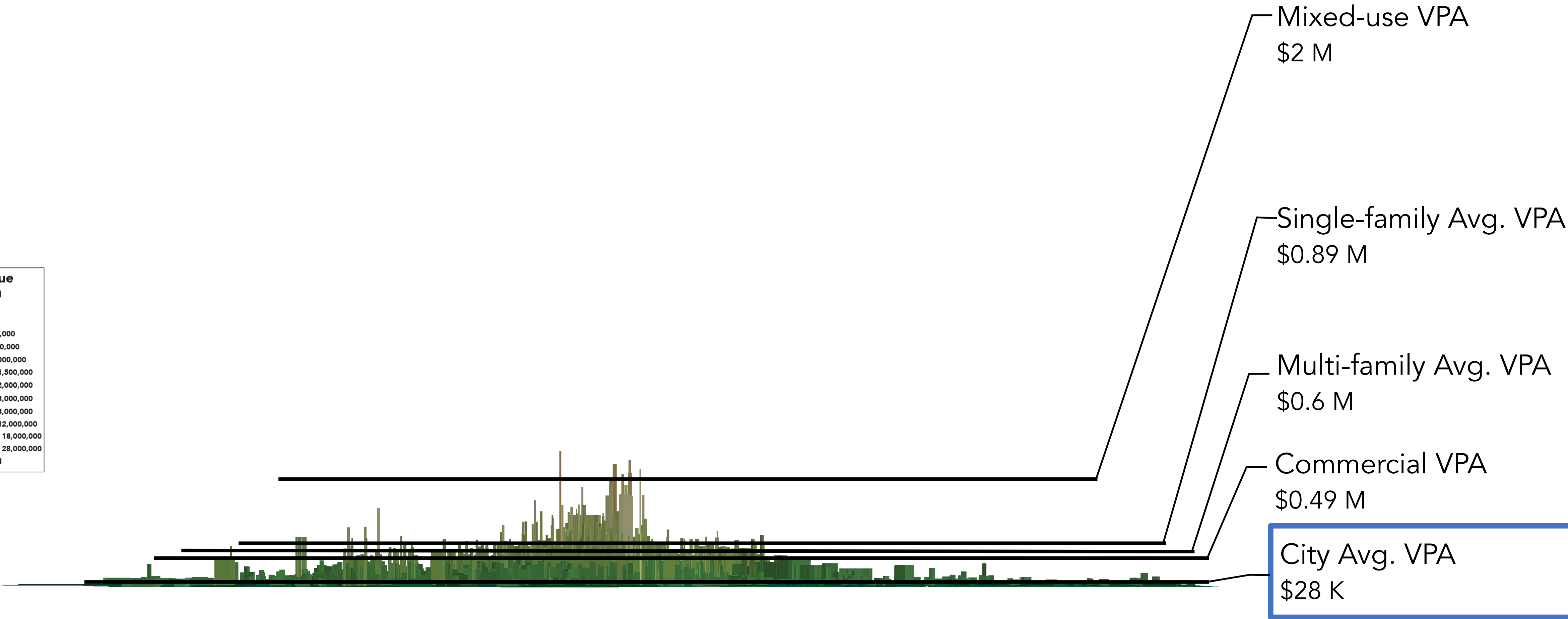
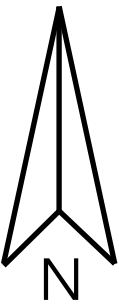
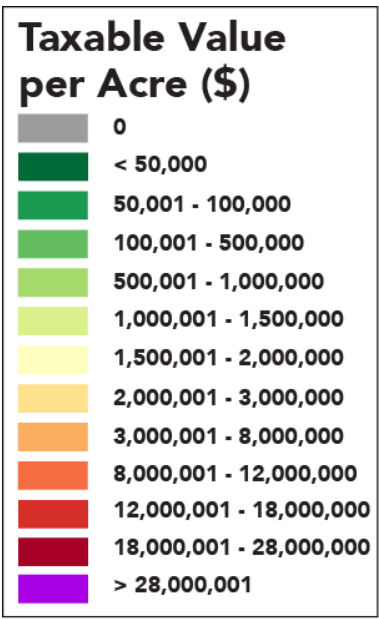
*Not Perfectly to Scale



*Not Perfectly to Scale

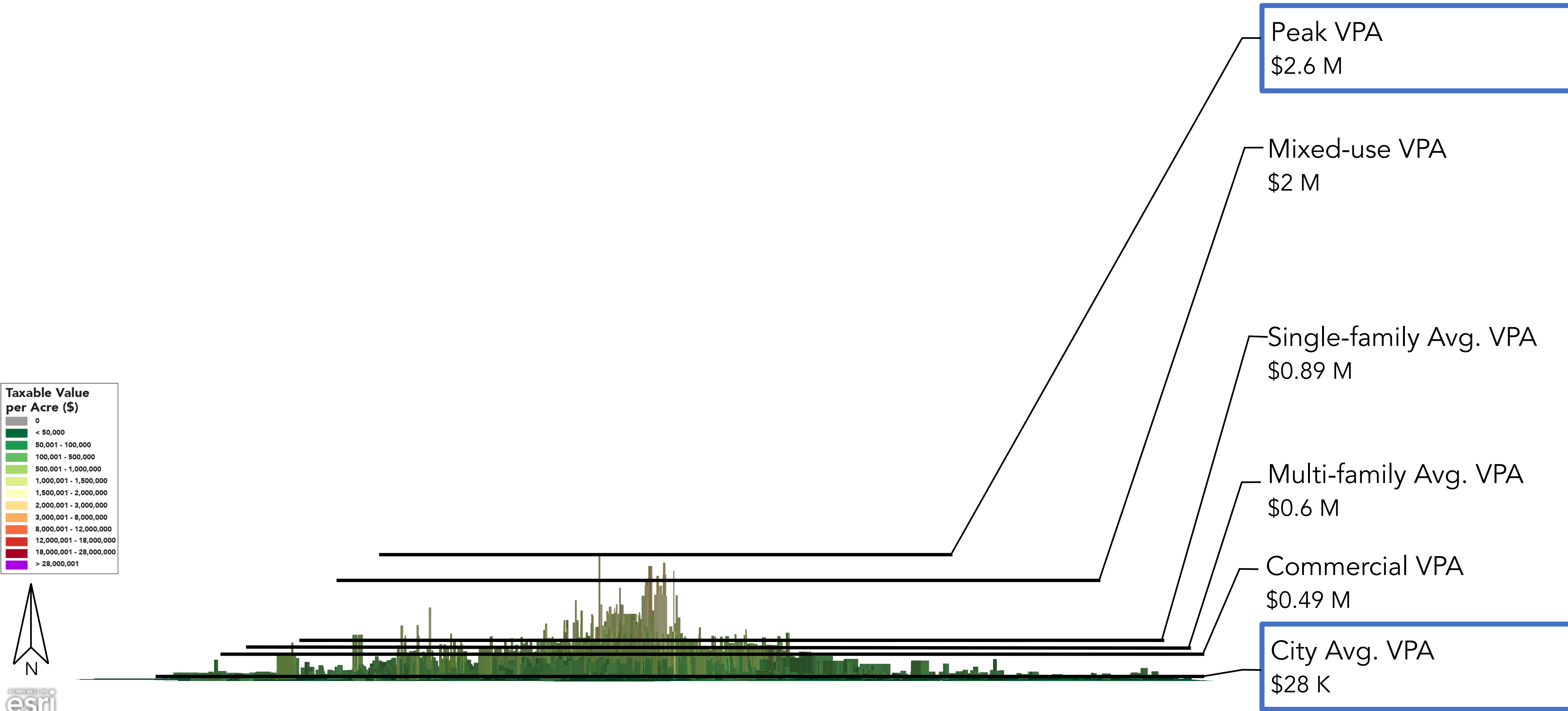
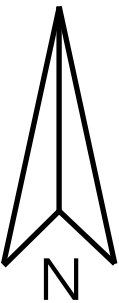
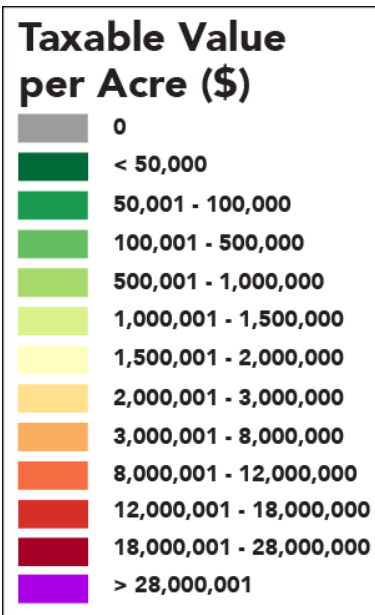
Claremont Profile

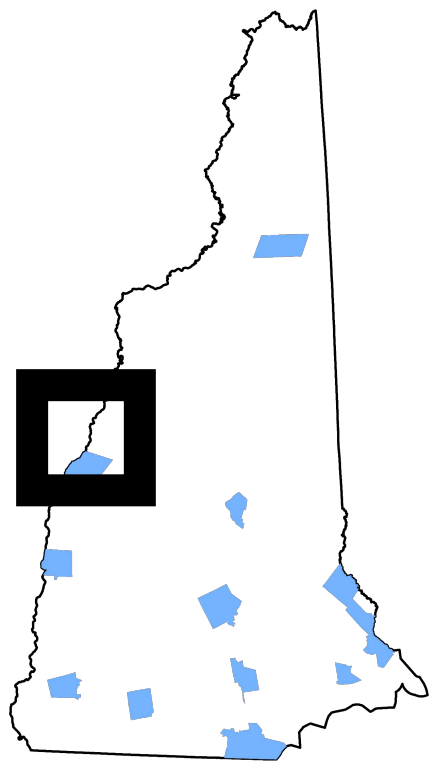
Land Use Productivity



Claremont Profile

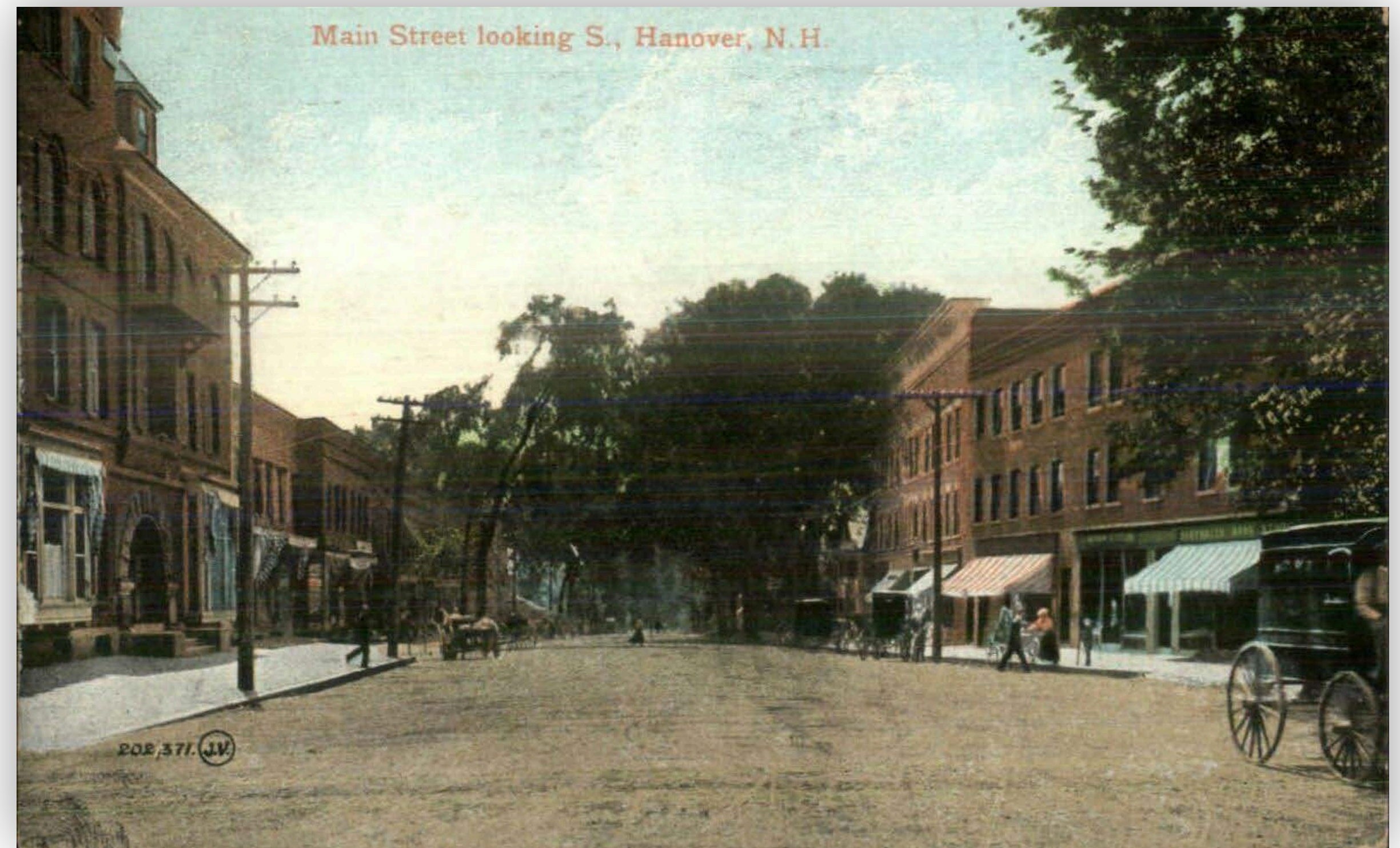
Land Use Productivity





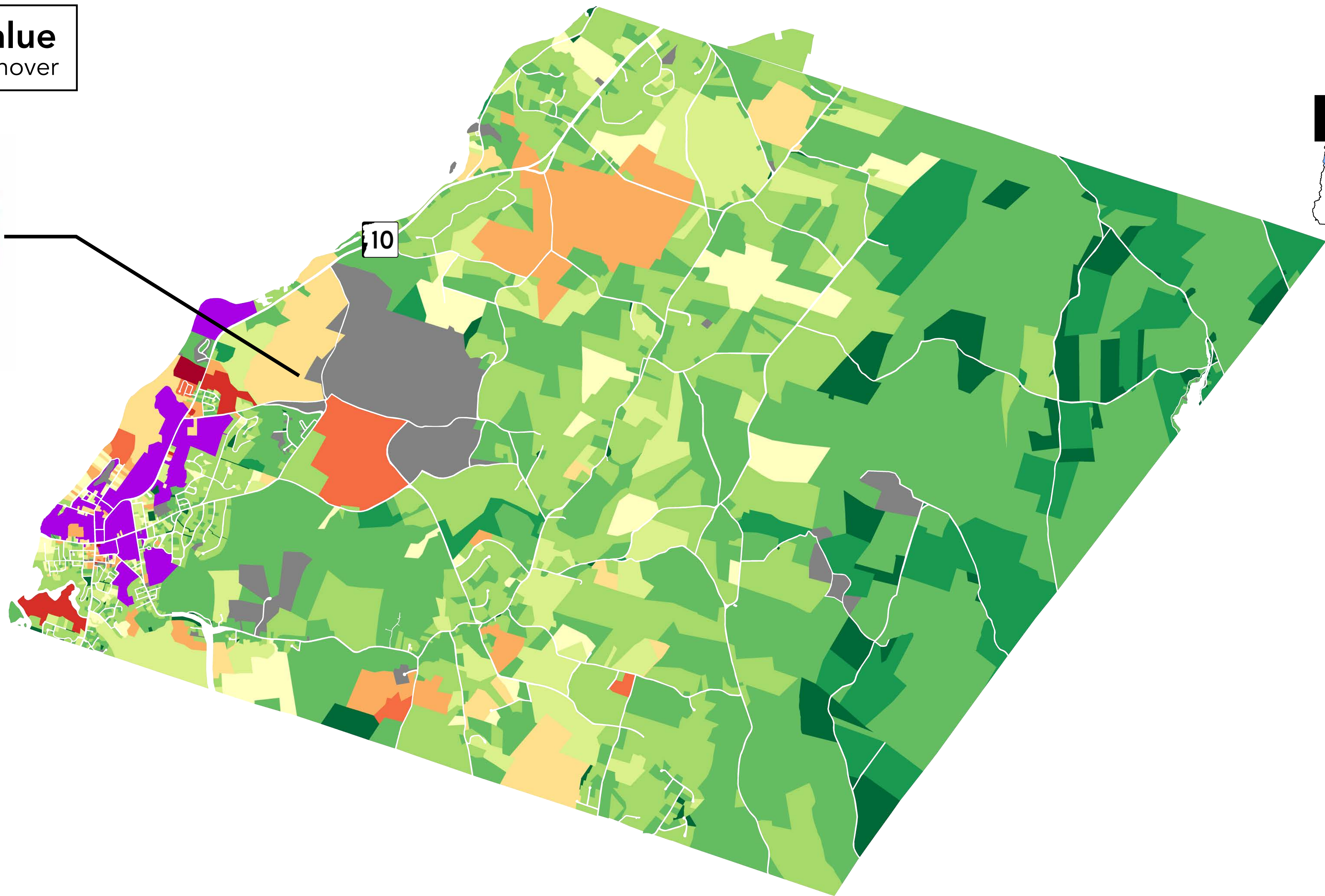
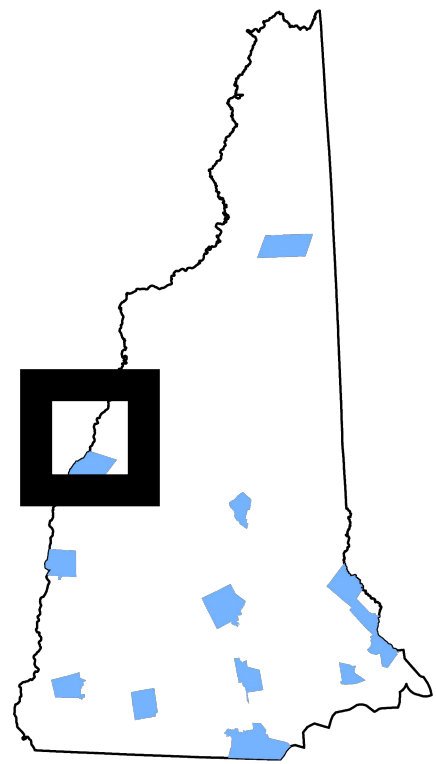
Case Study: Economic MRI®
2020

Hanover



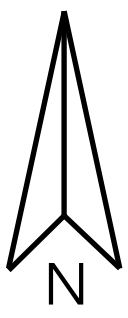
Total Value

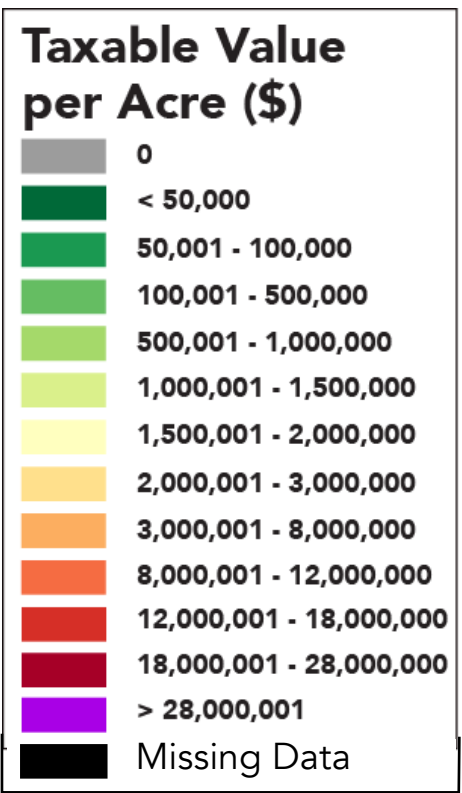
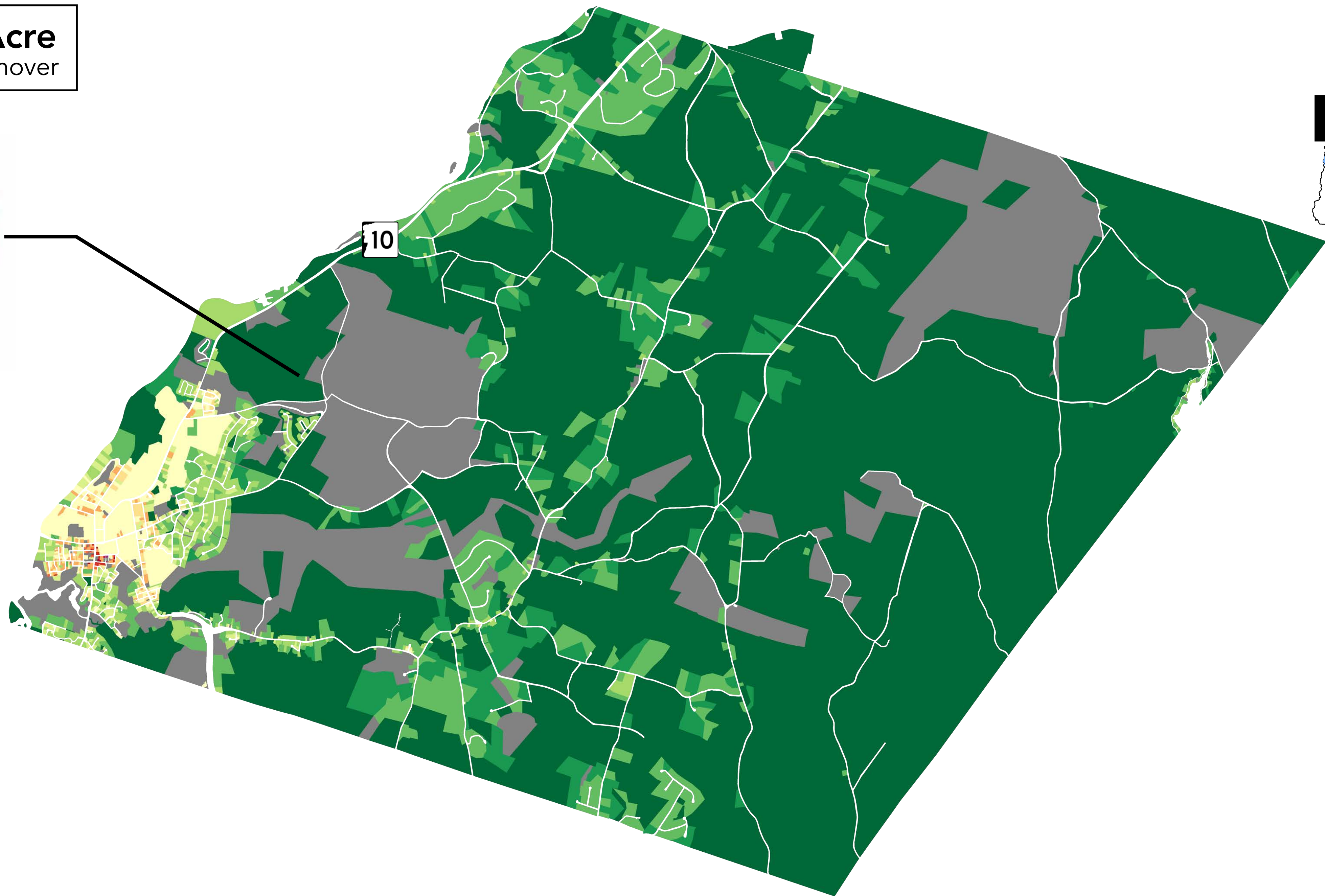
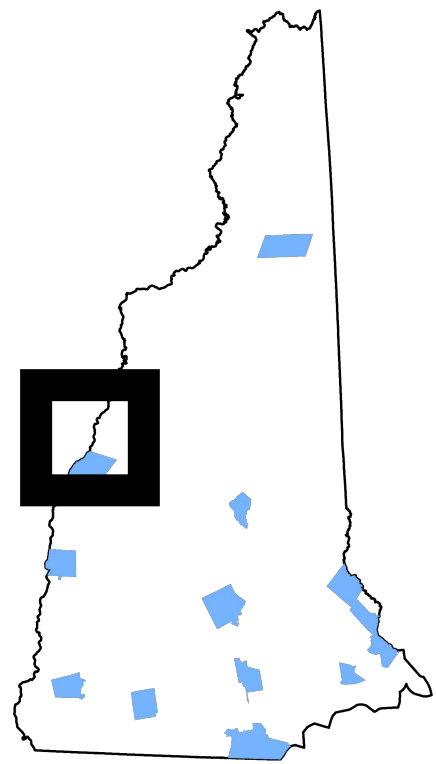
Hanover

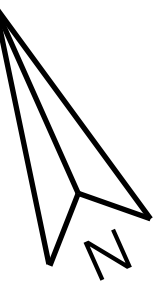
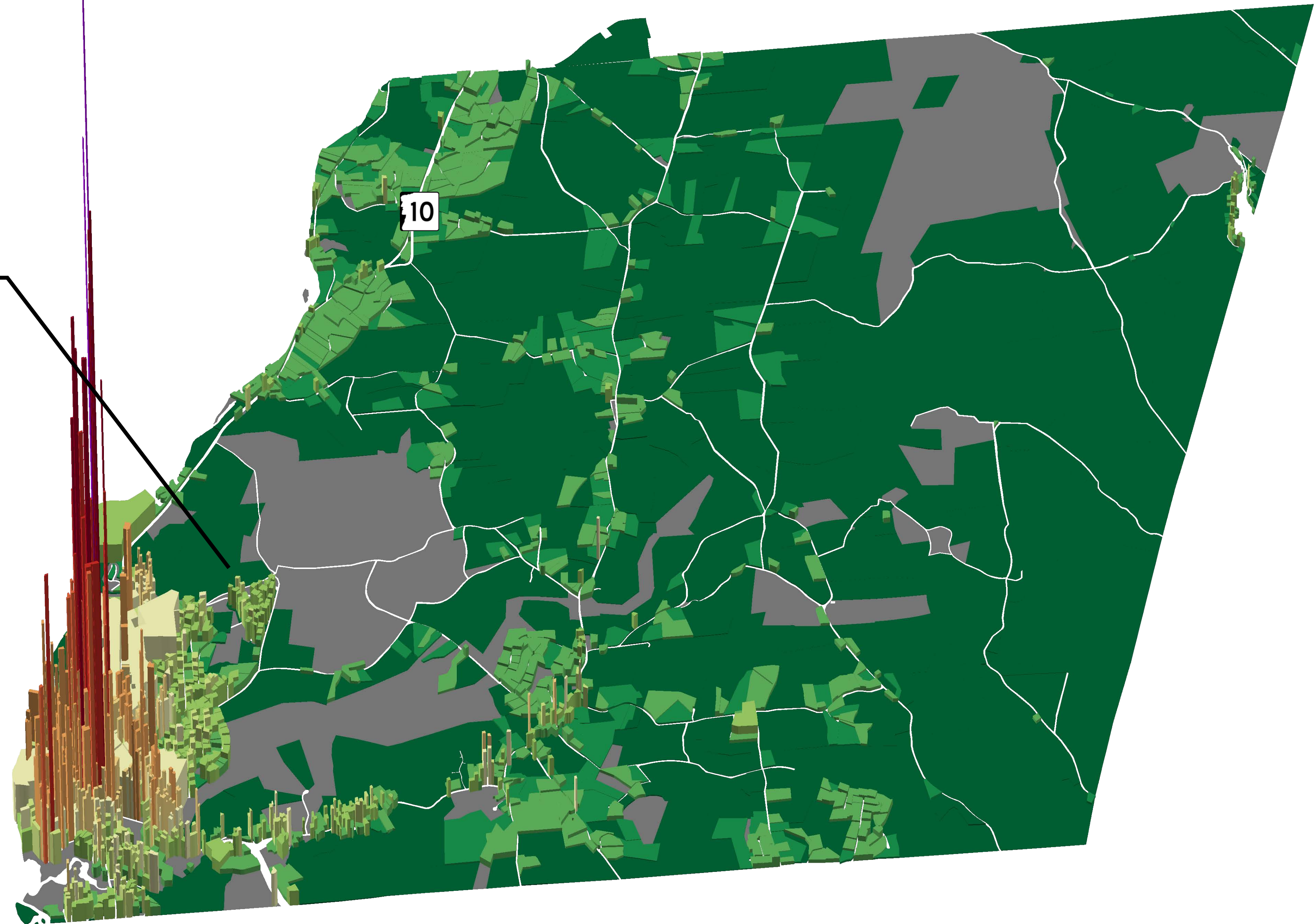
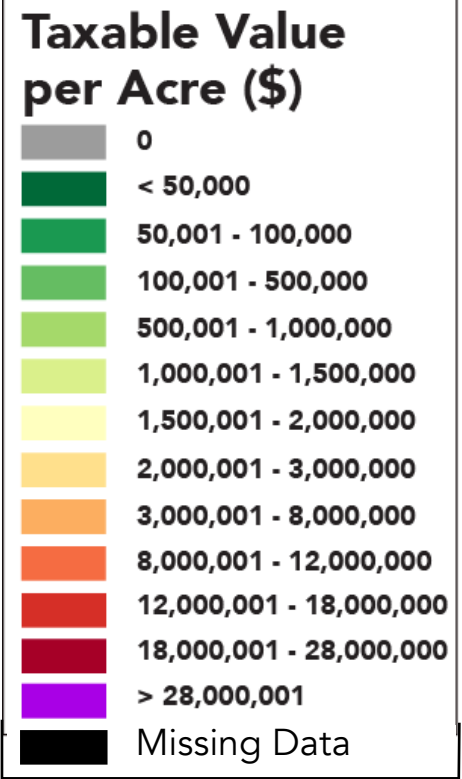


Total Taxable Value (\$)

0
< 50,000
50,001 - 100,000
100,001 - 500,000
500,001 - 1,000,000
1,000,001 - 1,500,000
1,500,001 - 2,000,000
2,000,001 - 3,000,000
3,000,001 - 8,000,000
8,000,001 - 12,000,000
12,000,001 - 18,000,000
18,000,001 - 28,000,000
> 28,000,001



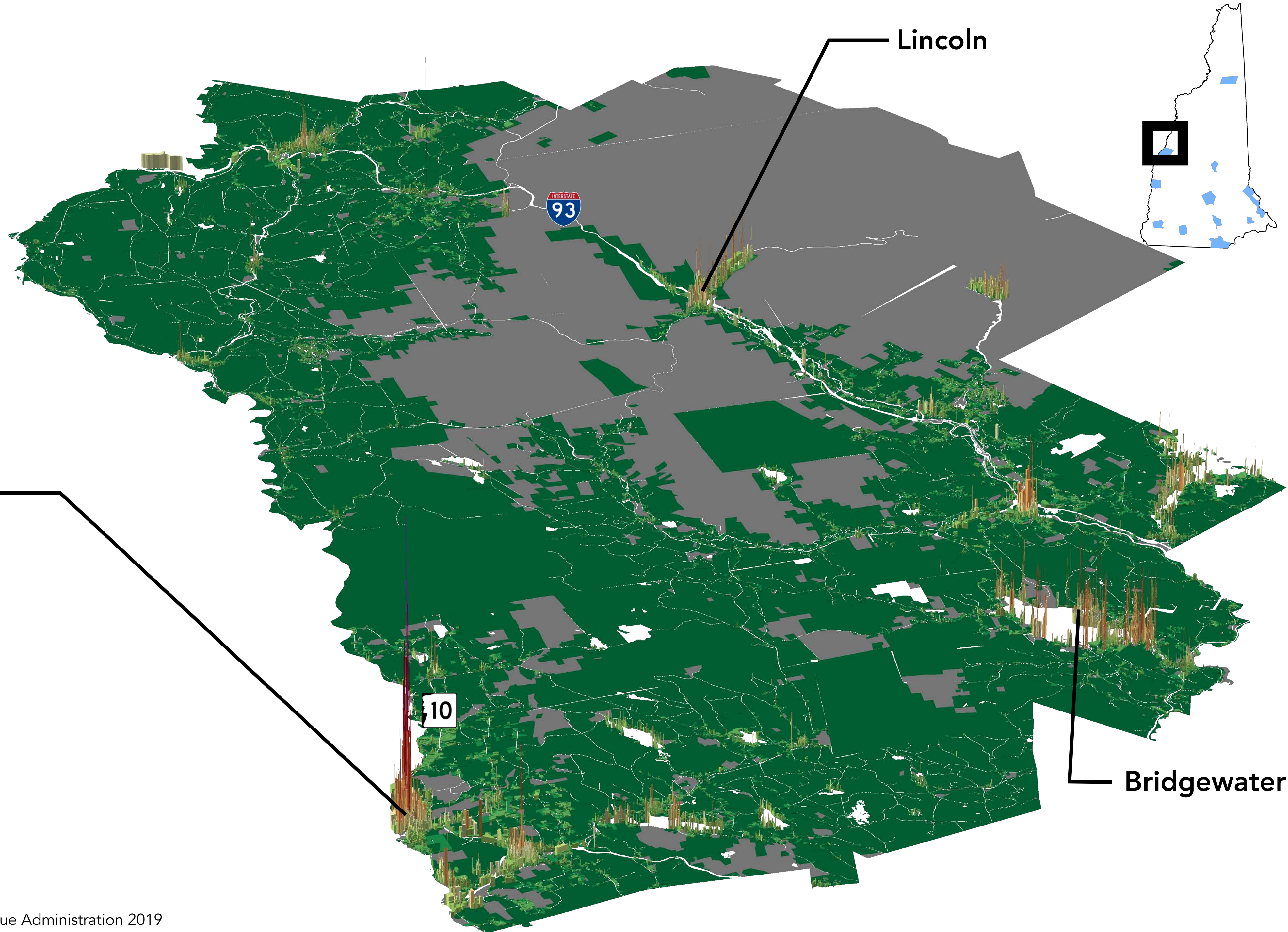




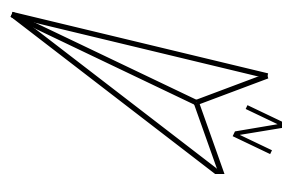
URBAN3

Value Per Acre

Grafton County



Taxable Value per Acre (\$)	
0	
< 50,000	
50,001 - 100,000	
100,001 - 500,000	
500,001 - 1,000,000	
1,000,001 - 1,500,000	
1,500,001 - 2,000,000	
2,000,001 - 3,000,000	
3,000,001 - 8,000,000	
8,000,001 - 12,000,000	
12,000,001 - 18,000,000	
18,000,001 - 28,000,000	
> 28,000,001	
Missing Data	

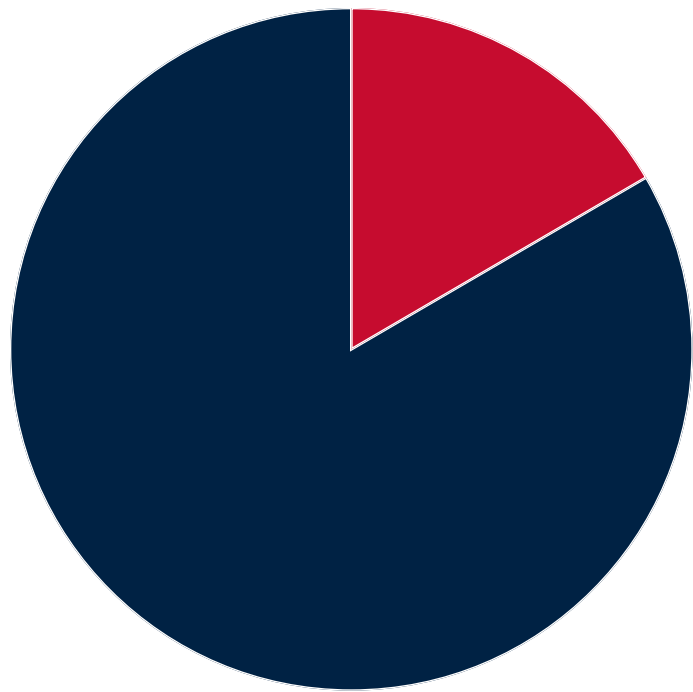


Value Per Acre

New Hampshire

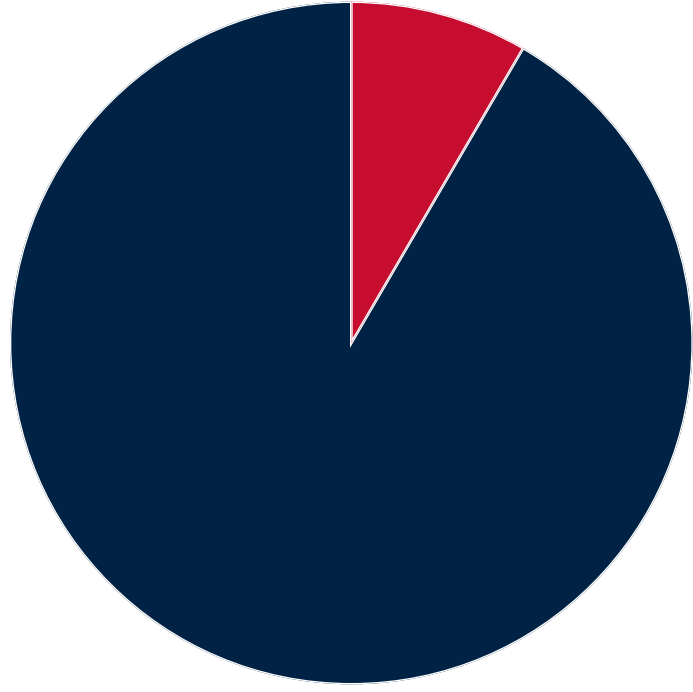
1:0.5

Area

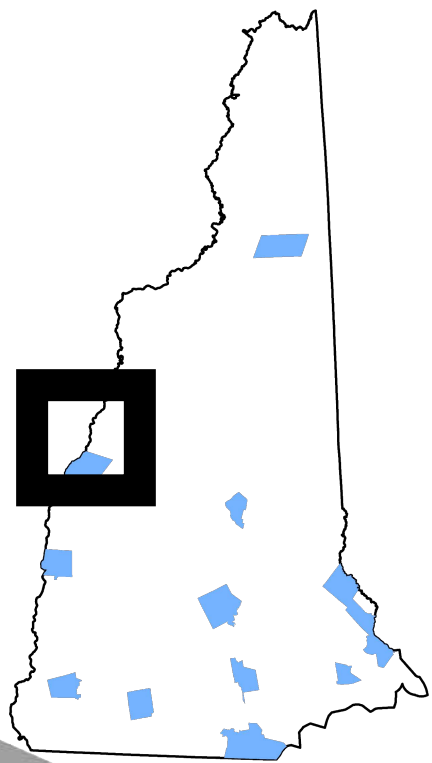


- County
- State

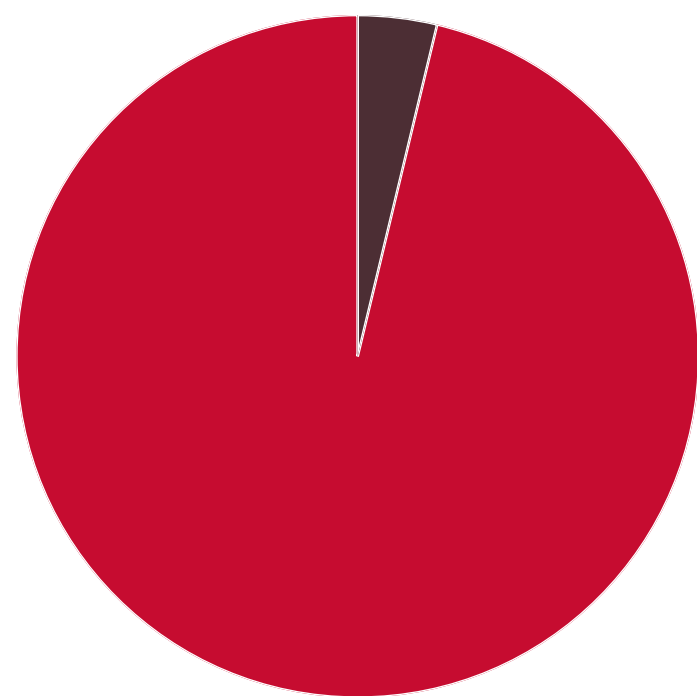
Value



1:5.5

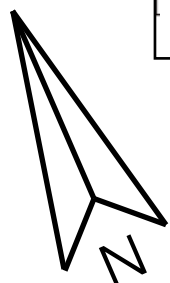
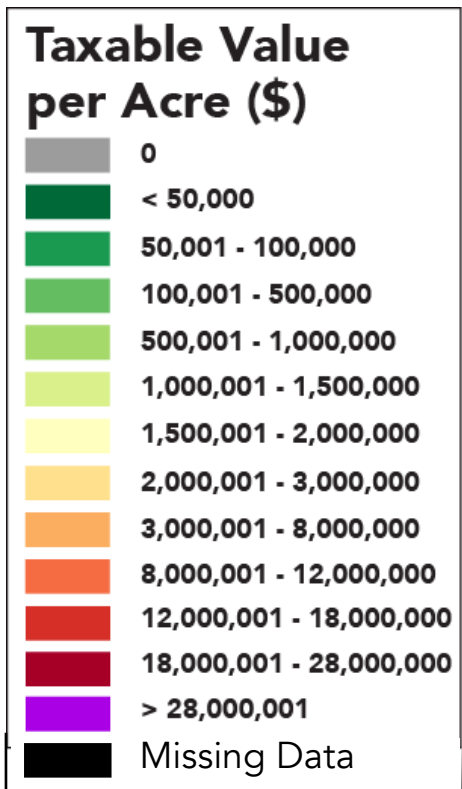
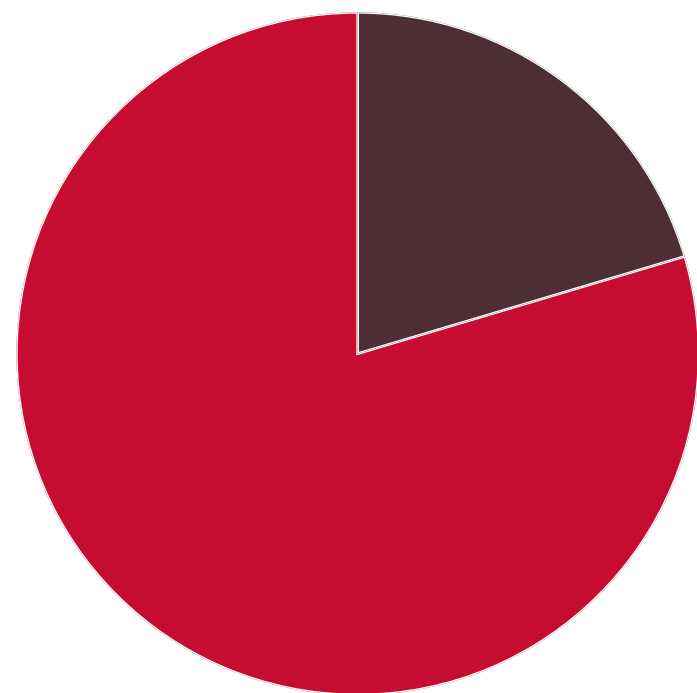


Area



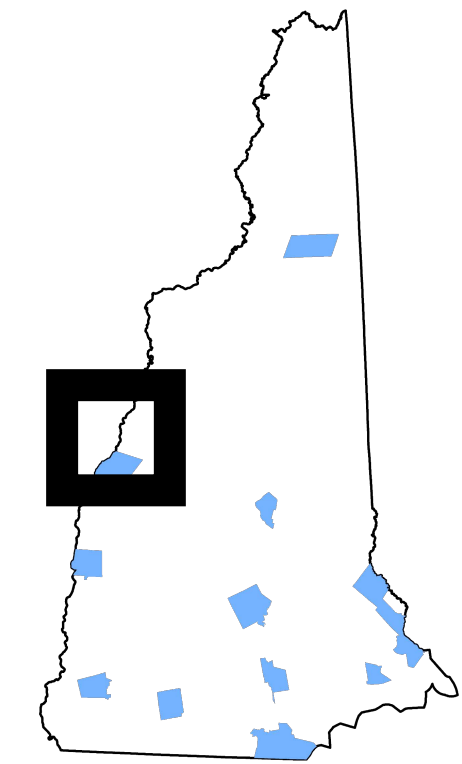
● City
● County

Value

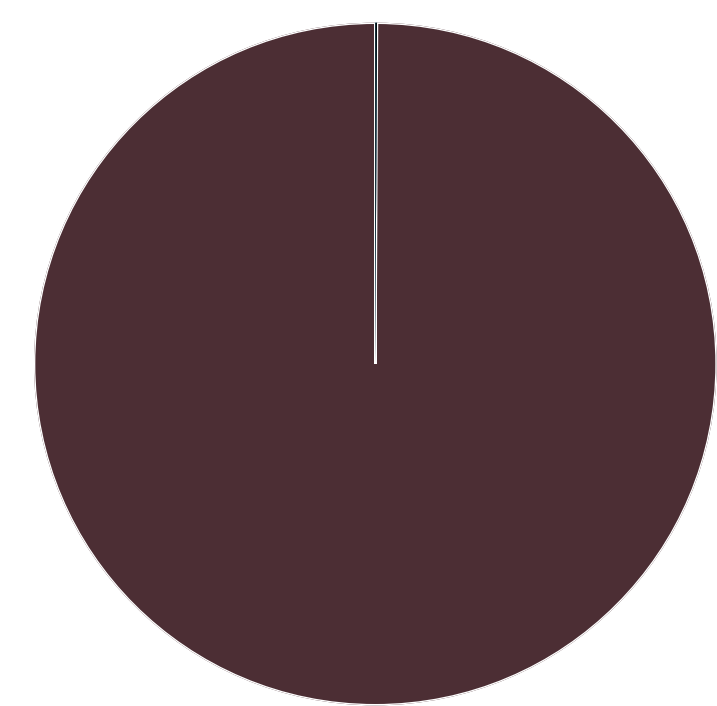


POWERED BY
esri

1:78

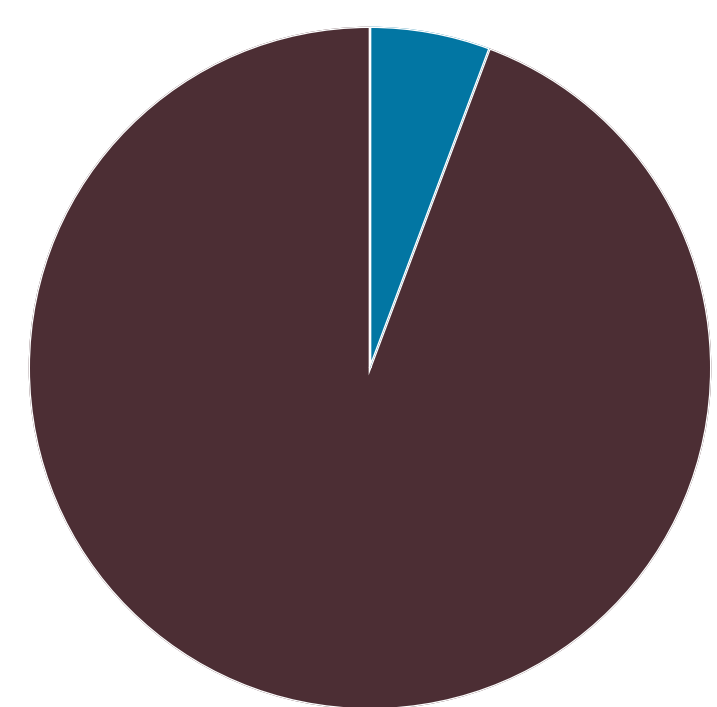


Area

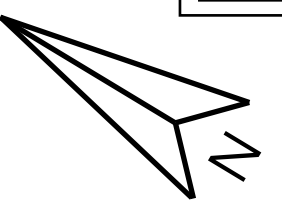
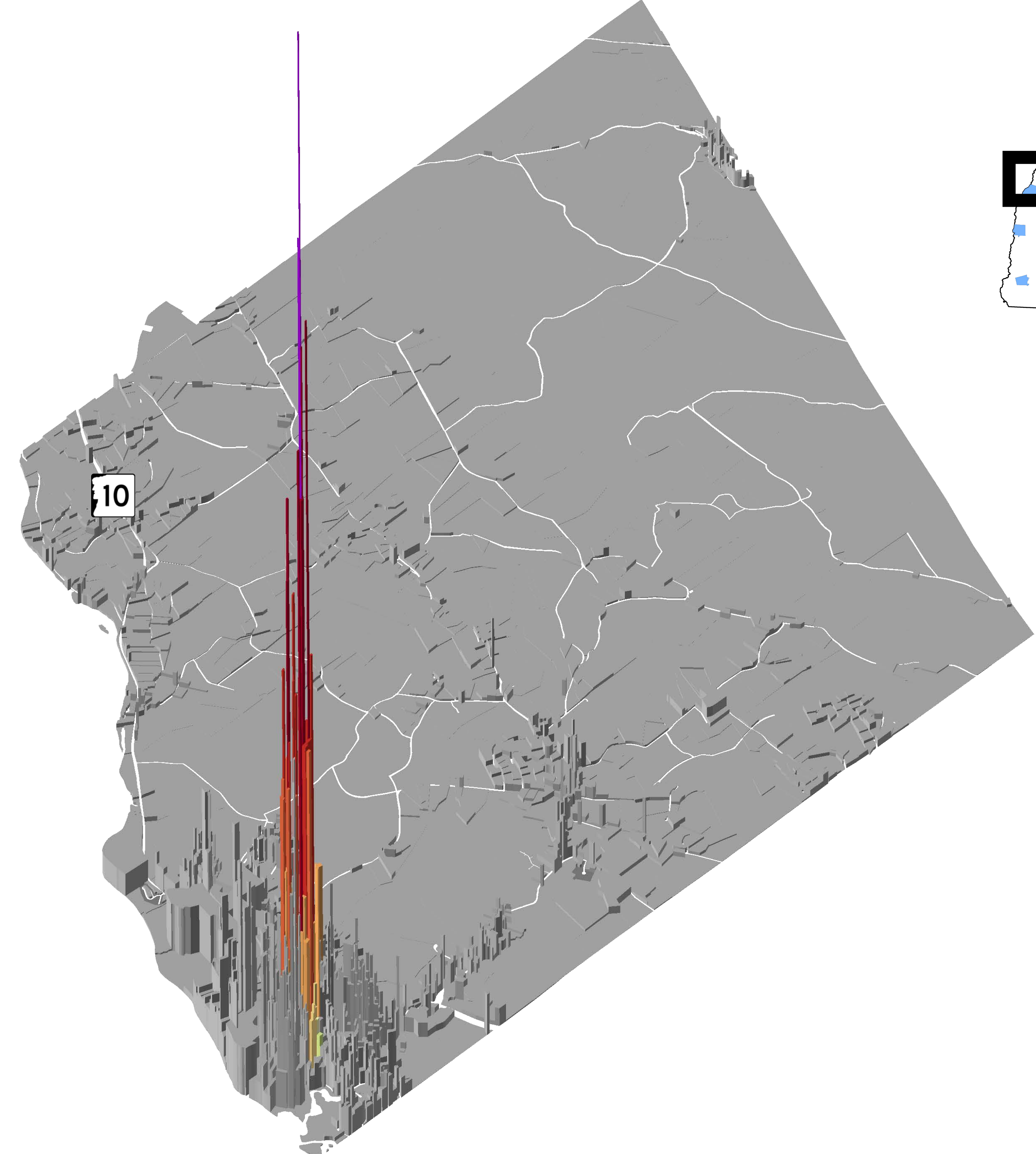


- Downtown
- City

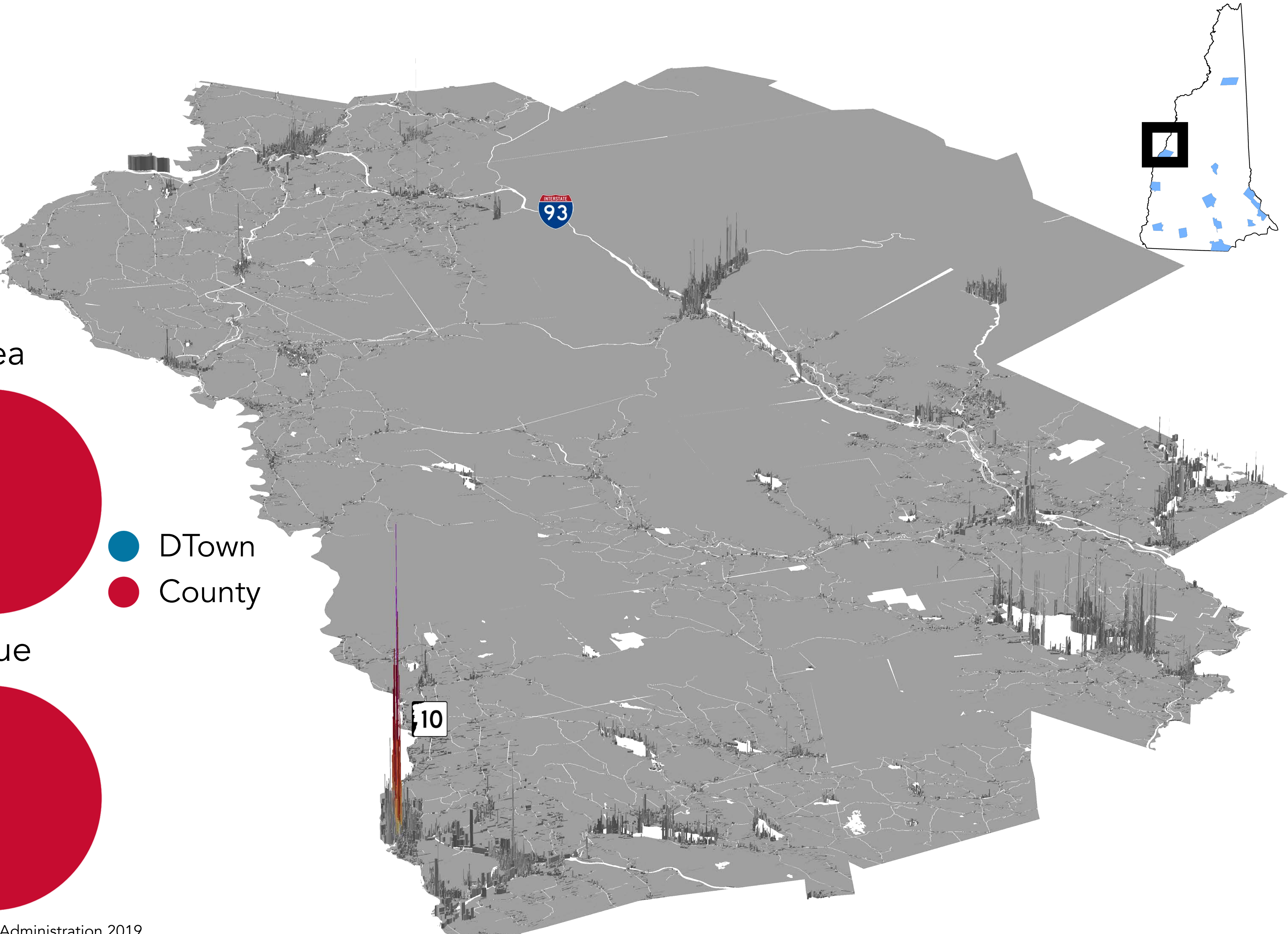
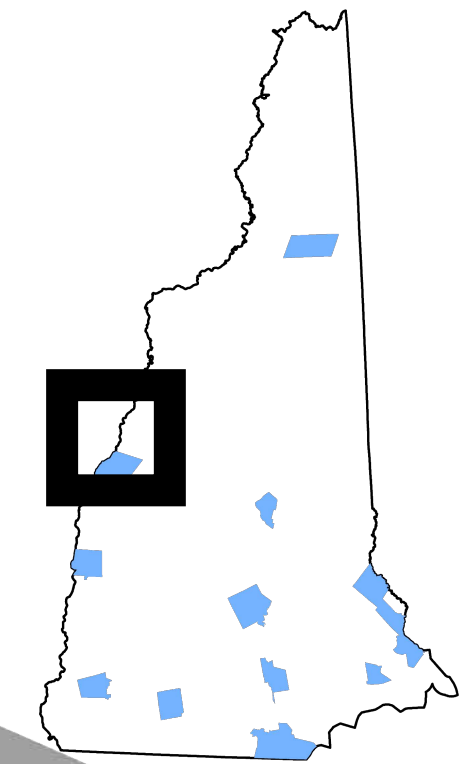
Value



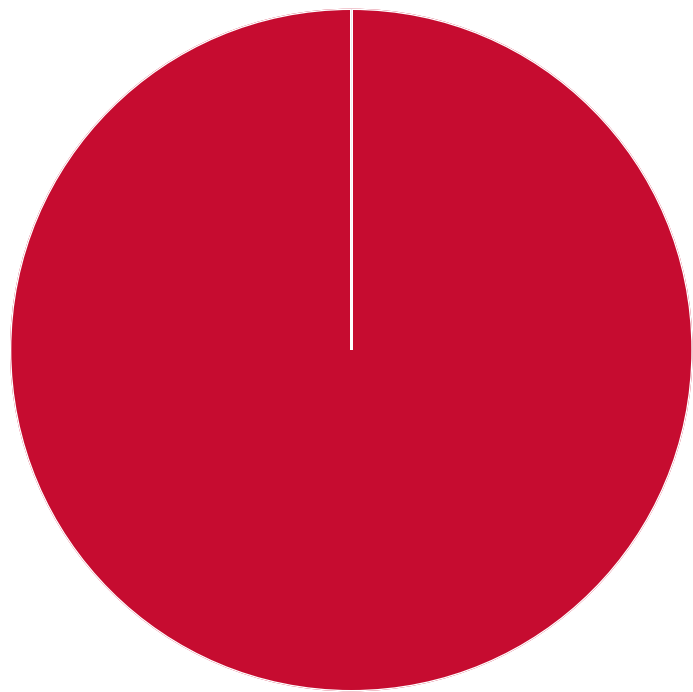
Taxable Value per Acre (\$)	
0	
< 50,000	
50,001 - 100,000	
100,001 - 500,000	
500,001 - 1,000,000	
1,000,001 - 1,500,000	
1,500,001 - 2,000,000	
2,000,001 - 3,000,000	
3,000,001 - 8,000,000	
8,000,001 - 12,000,000	
12,000,001 - 18,000,000	
18,000,001 - 28,000,000	
> 28,000,001	
Missing Data	



1:423

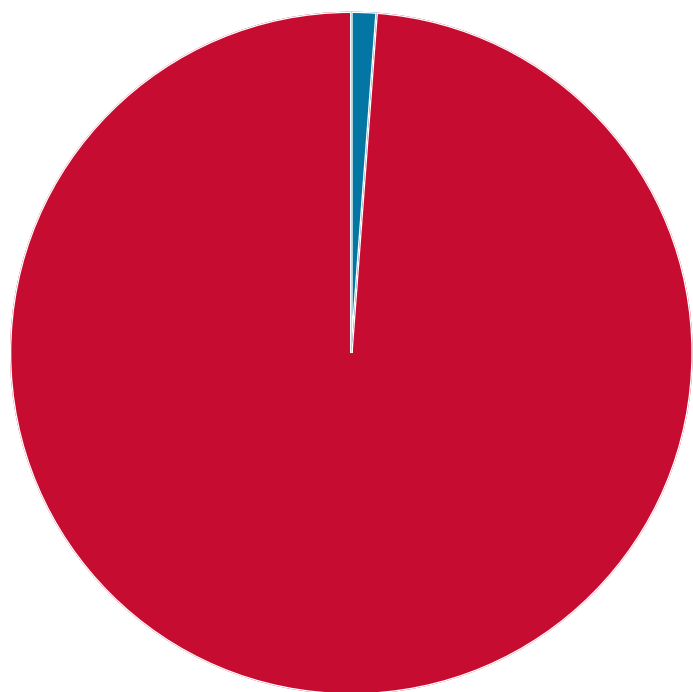


Area

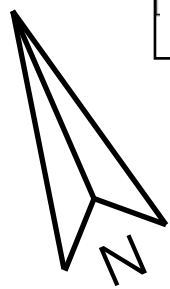


DTown
County

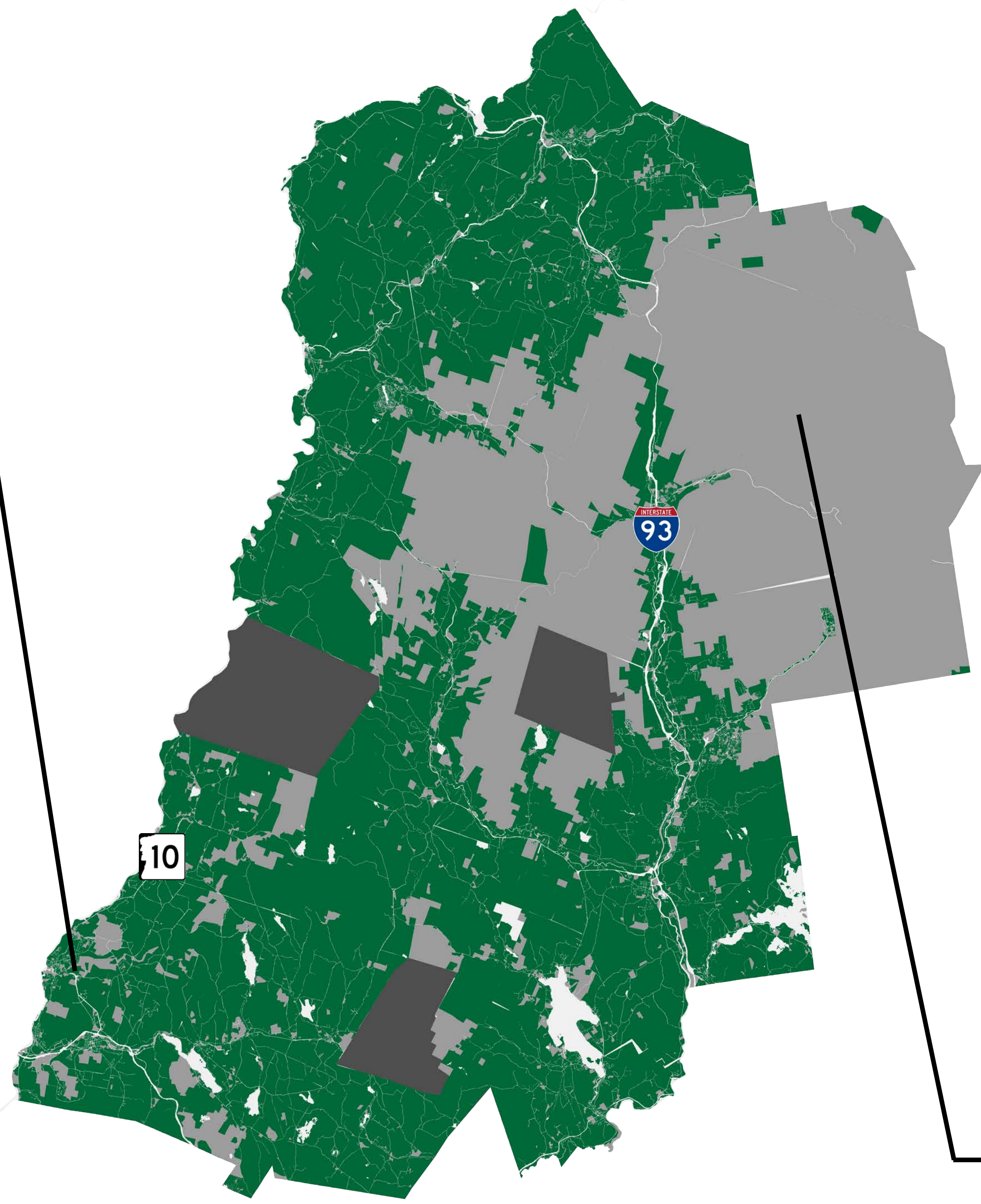
Value



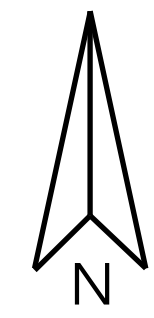
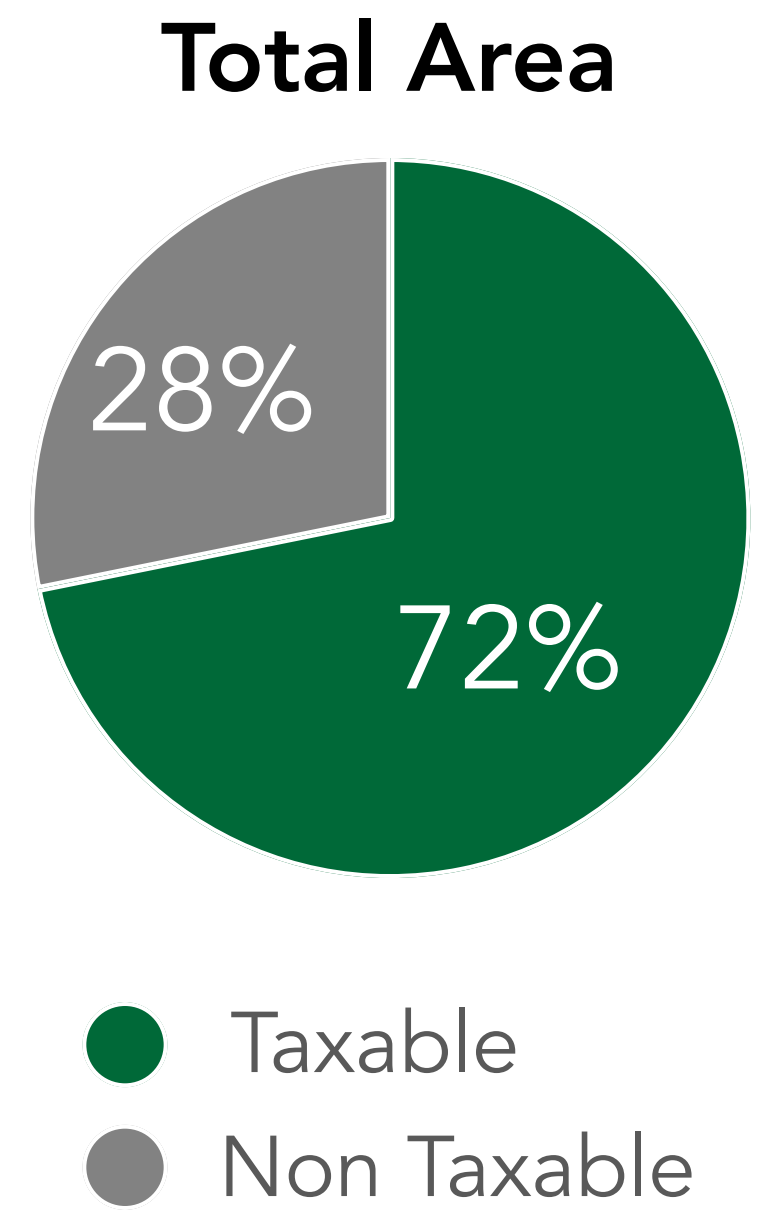
Taxable Value per Acre (\$)	
	0
	< 50,000
	50,001 - 100,000
	100,001 - 500,000
	500,001 - 1,000,000
	1,000,001 - 1,500,000
	1,500,001 - 2,000,000
	2,000,001 - 3,000,000
	3,000,001 - 8,000,000
	8,000,001 - 12,000,000
	12,000,001 - 18,000,000
	18,000,001 - 28,000,000
	> 28,000,001
	Missing Data



Hanover



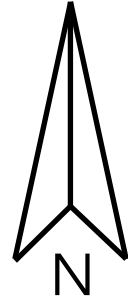
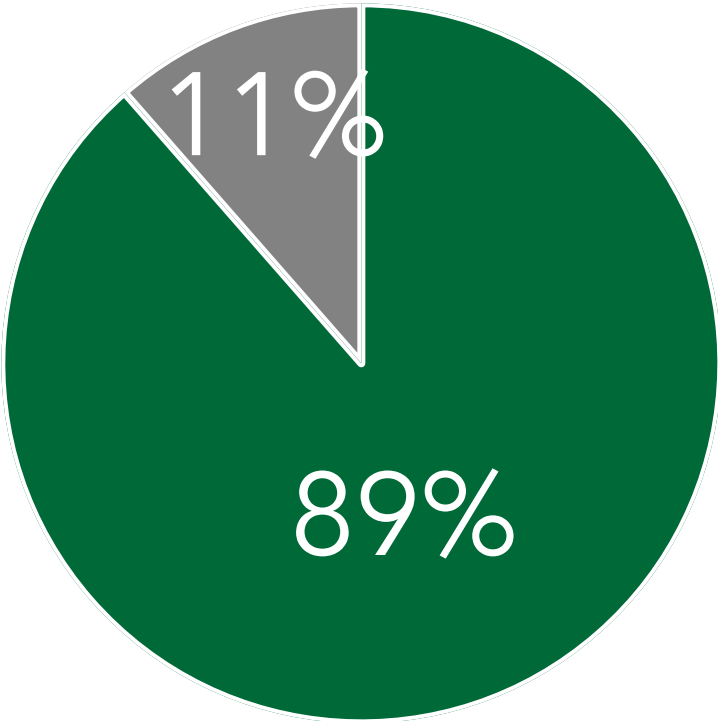
White Mountain
National Forest



Taxable Area

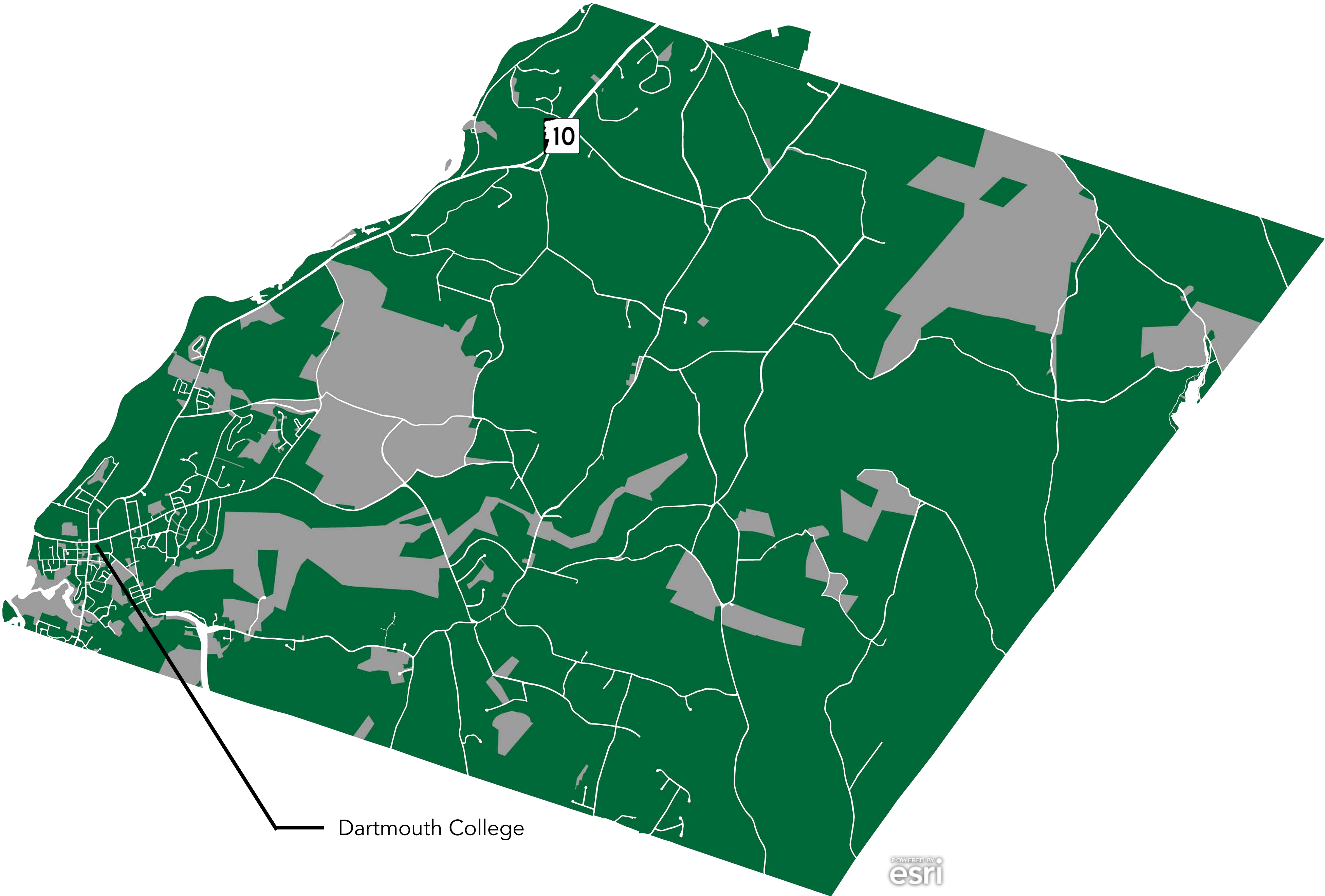
Hanover

Total Area*

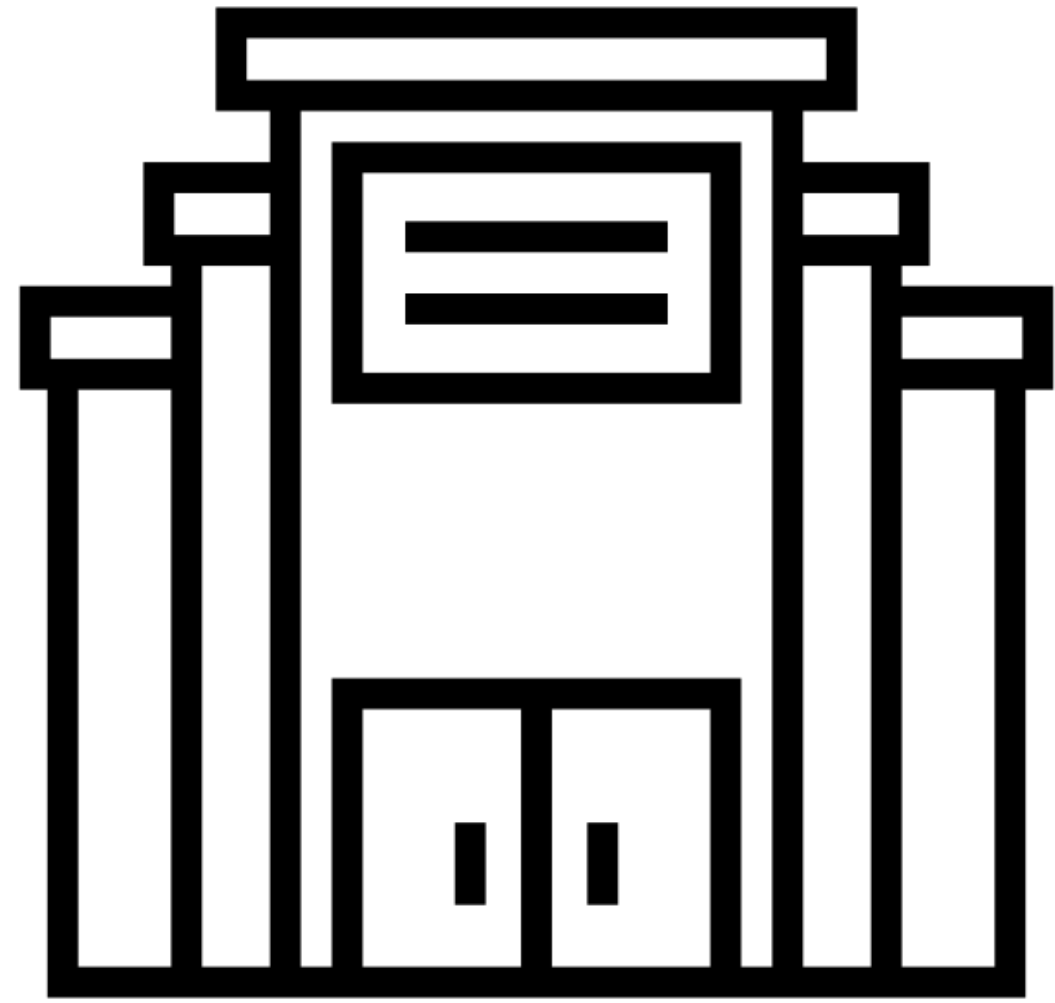


Taxable Property

- No Data (black square)
- Nontaxable (gray square)
- Taxable (dark green square)

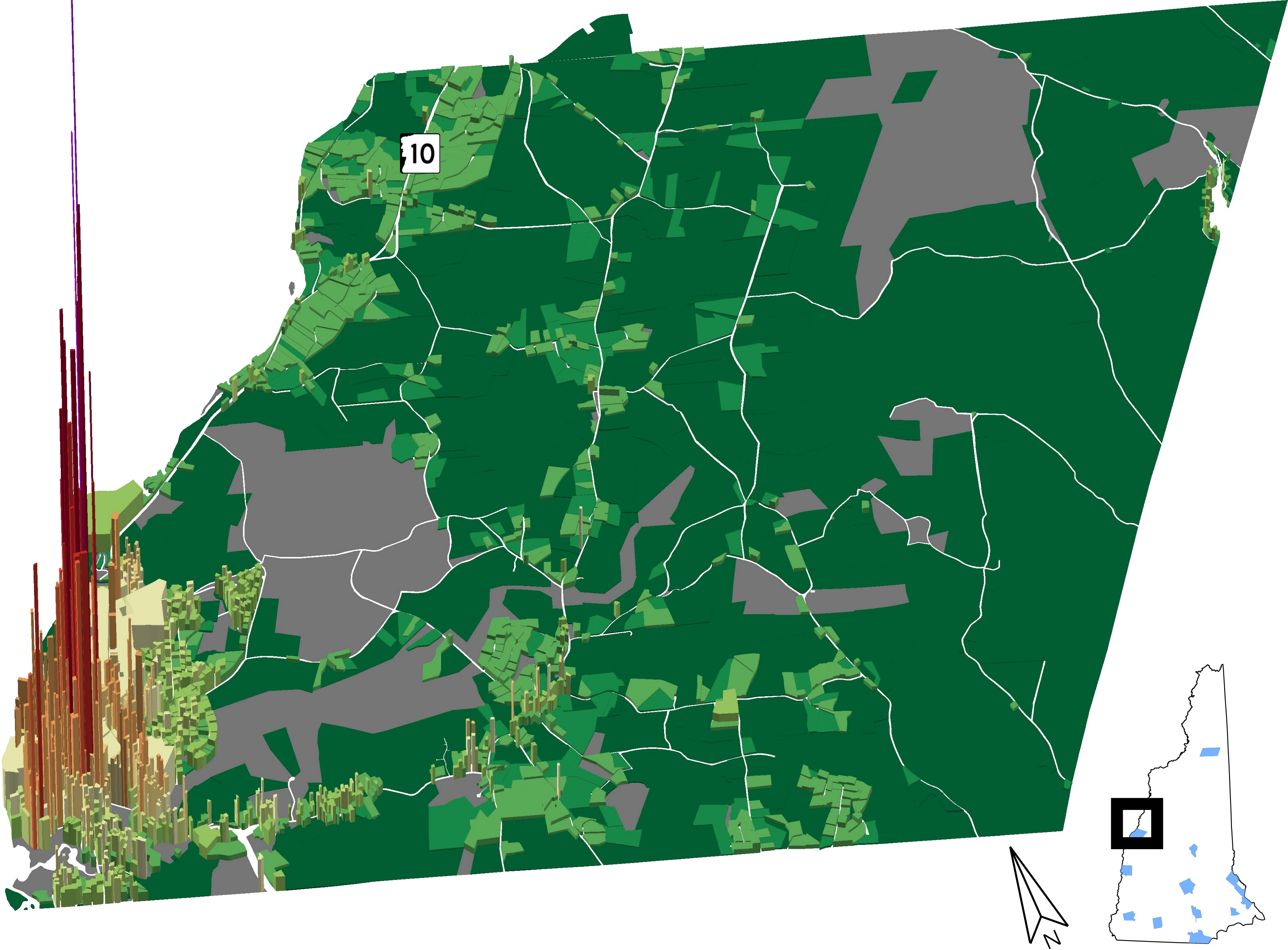


* Some parcels of Dartmouth campus shows up as taxable



Land Use Types

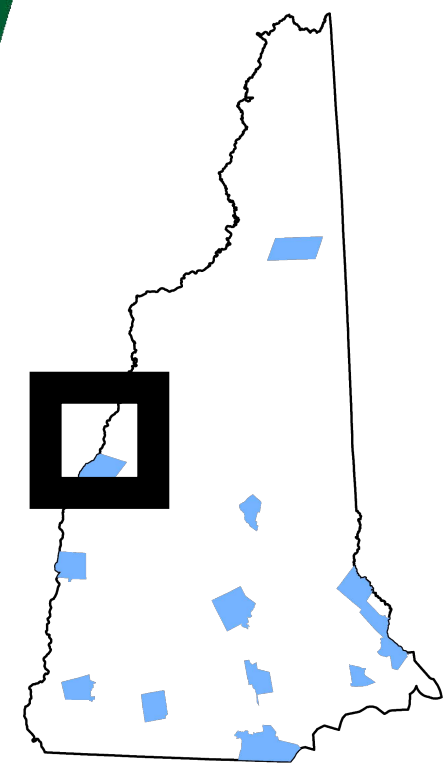
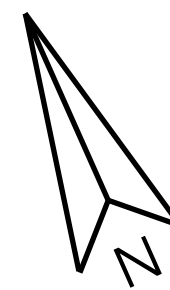
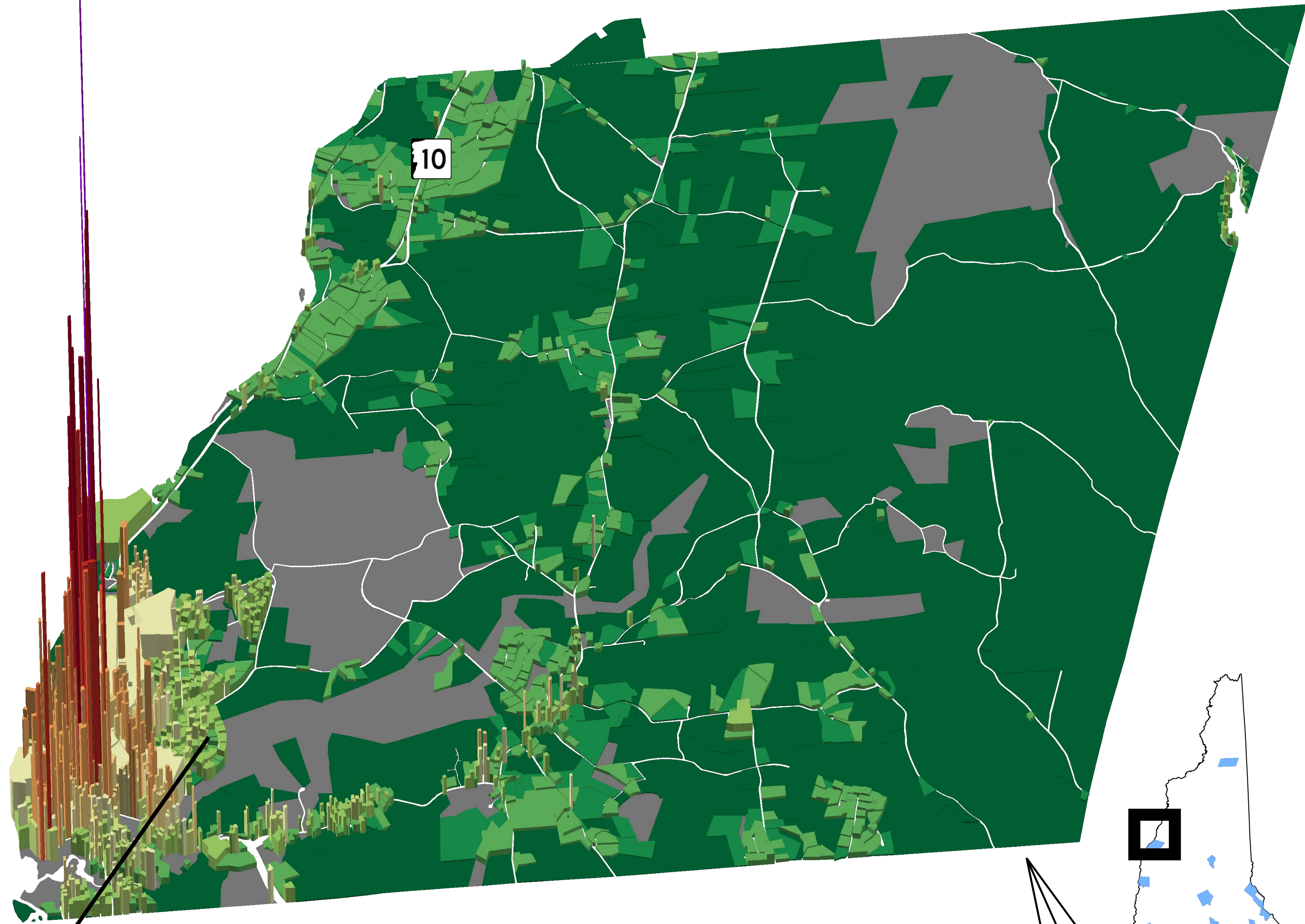
Local samples of buildings and development types



Avg. VPA: \$100,083



Single-family
Avg. VPA: \$0.81 M



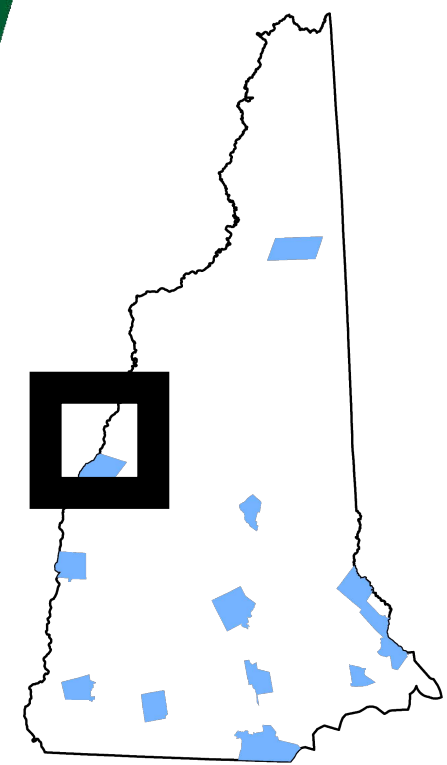
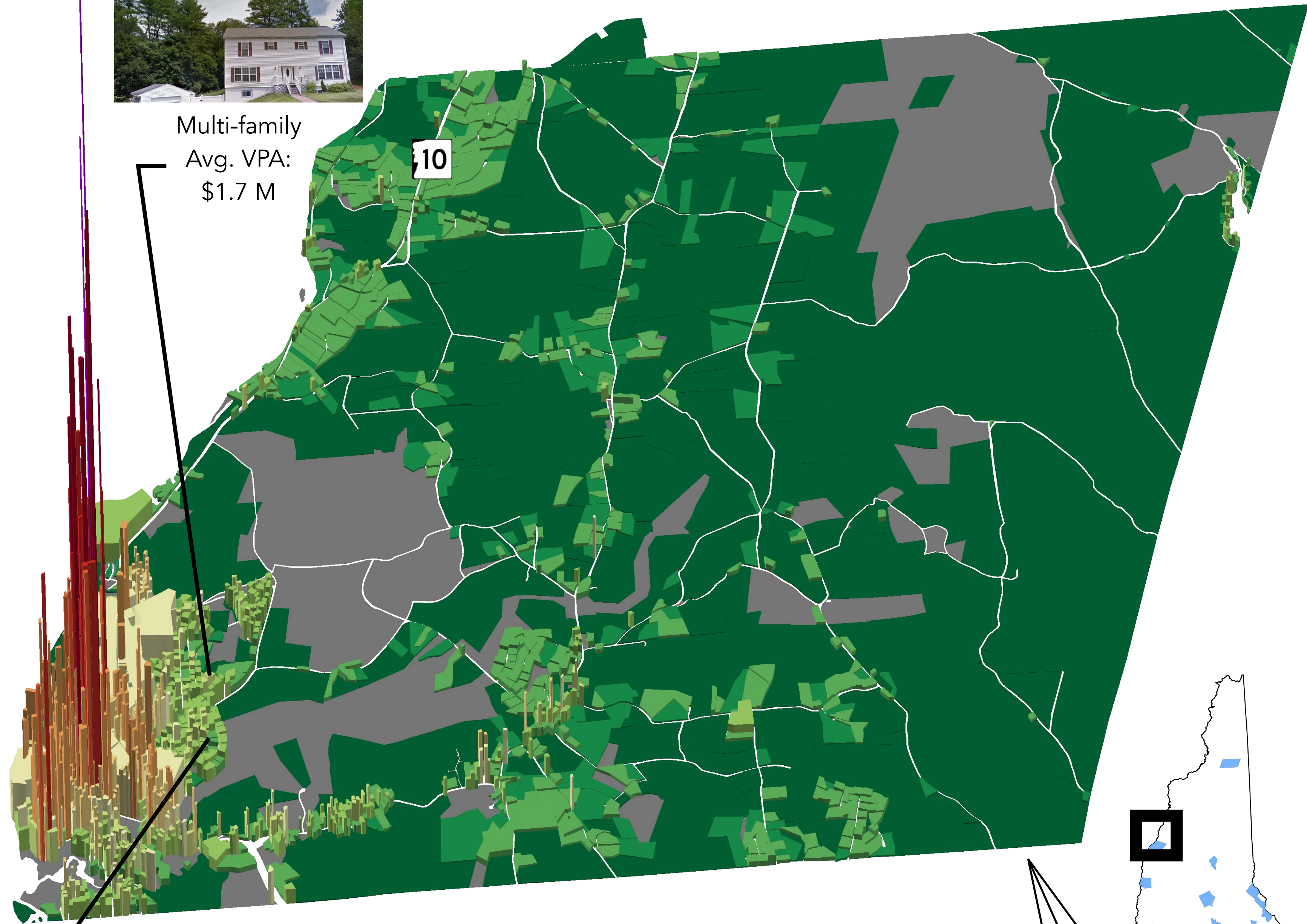
Avg. VPA: \$100,083



Multi-family
Avg. VPA:
\$1.7 M



Single-family
Avg. VPA: \$0.81 M



Avg. VPA: \$100,083



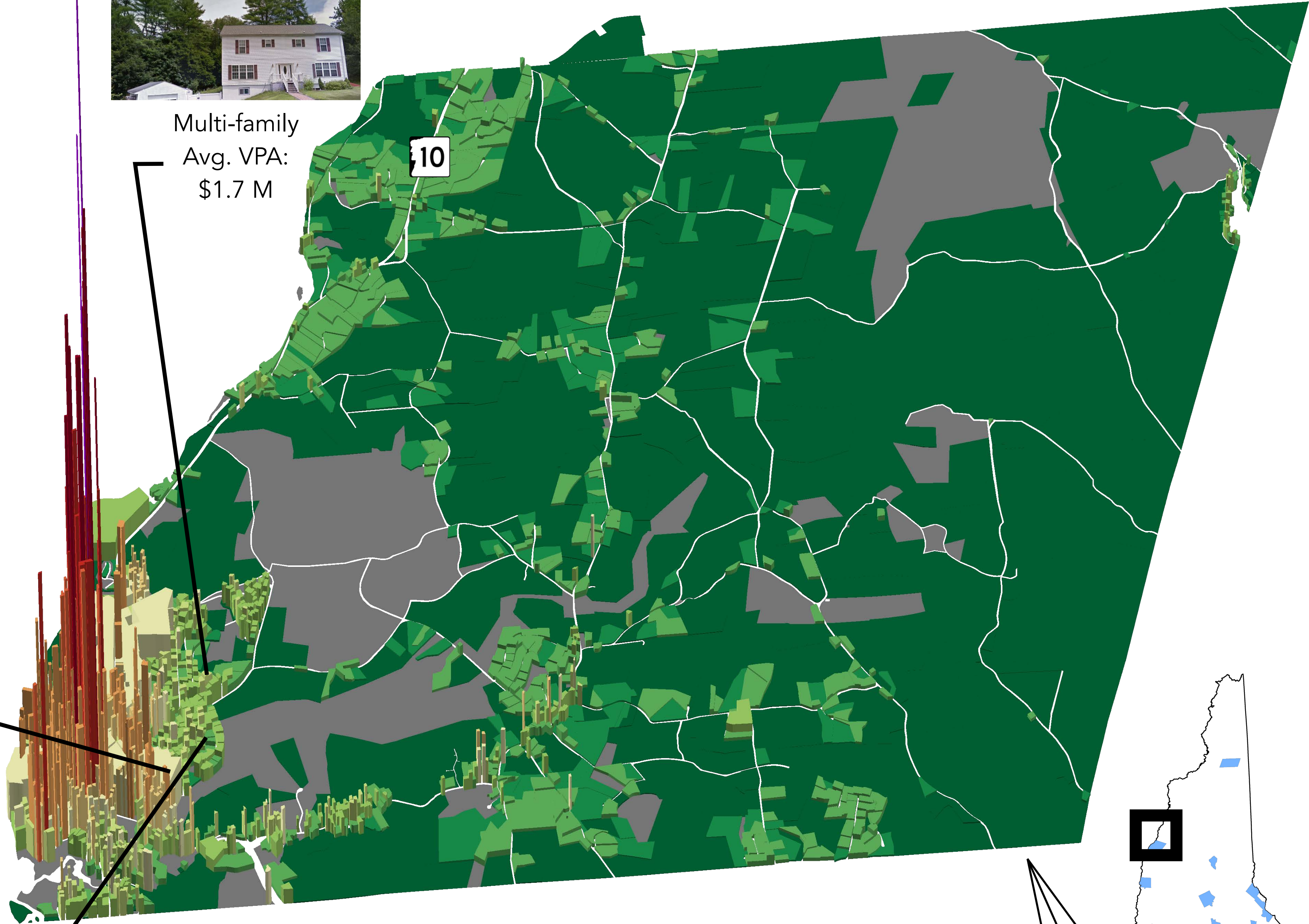
Multi-family
Avg. VPA:
\$1.7 M



Commercial
VPA: \$3.4 M



Single-family
Avg. VPA: \$0.81 M



Avg. VPA: \$100,083

URBAN3

Hanover Examples

Land Use Productivity



Mixed-use
VPA: \$12 M



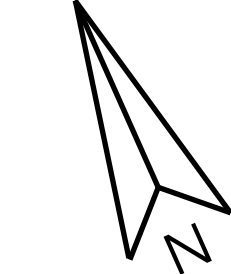
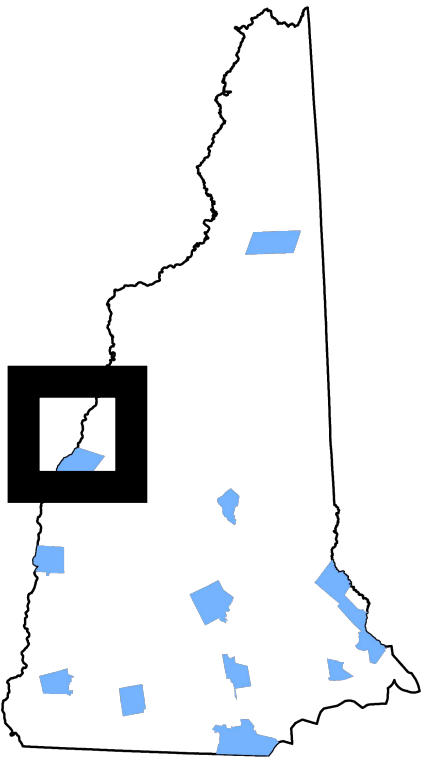
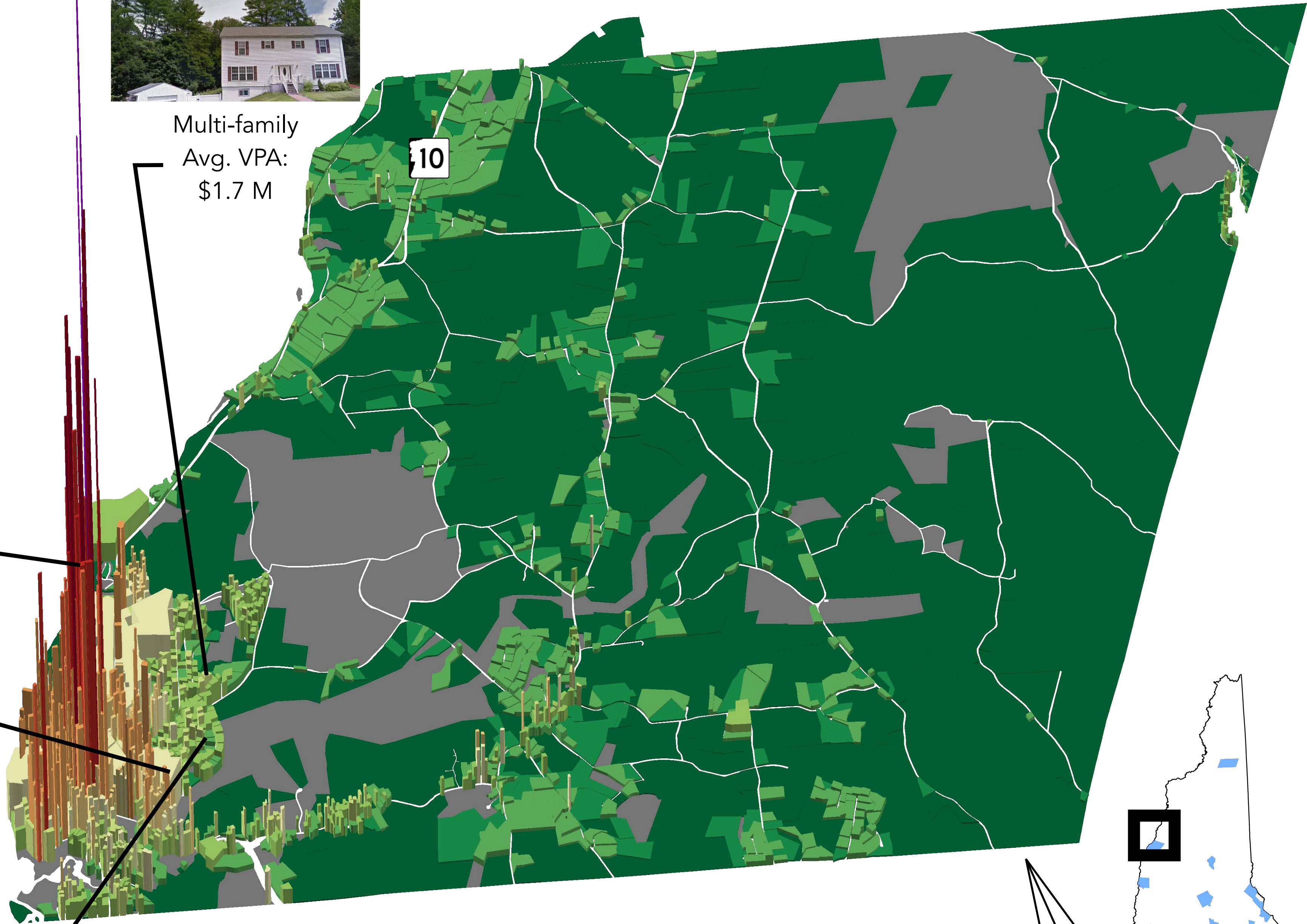
Commercial
VPA: \$3.4 M



Single-family
Avg. VPA: \$0.81 M



Multi-family
Avg. VPA:
\$1.7 M



Avg. VPA: \$100,083

URBAN3

Hanover Examples

Land Use Productivity



Peak VPA
VPA: \$37.8 M



Multi-family
Avg. VPA:
\$1.7 M



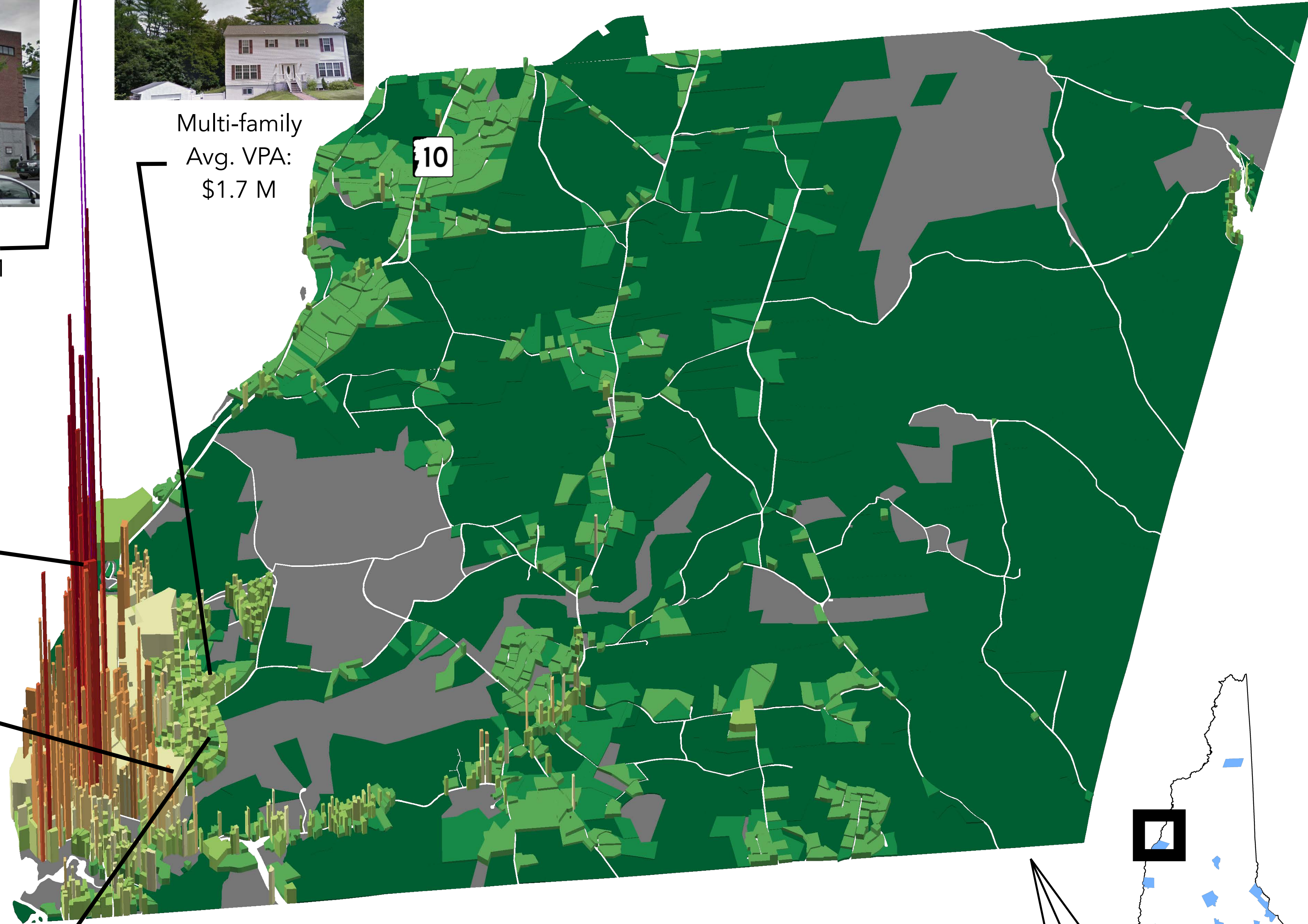
Mixed-use
VPA: \$12 M



Commercial
VPA: \$3.4 M



Single-family
Avg. VPA: \$0.81 M

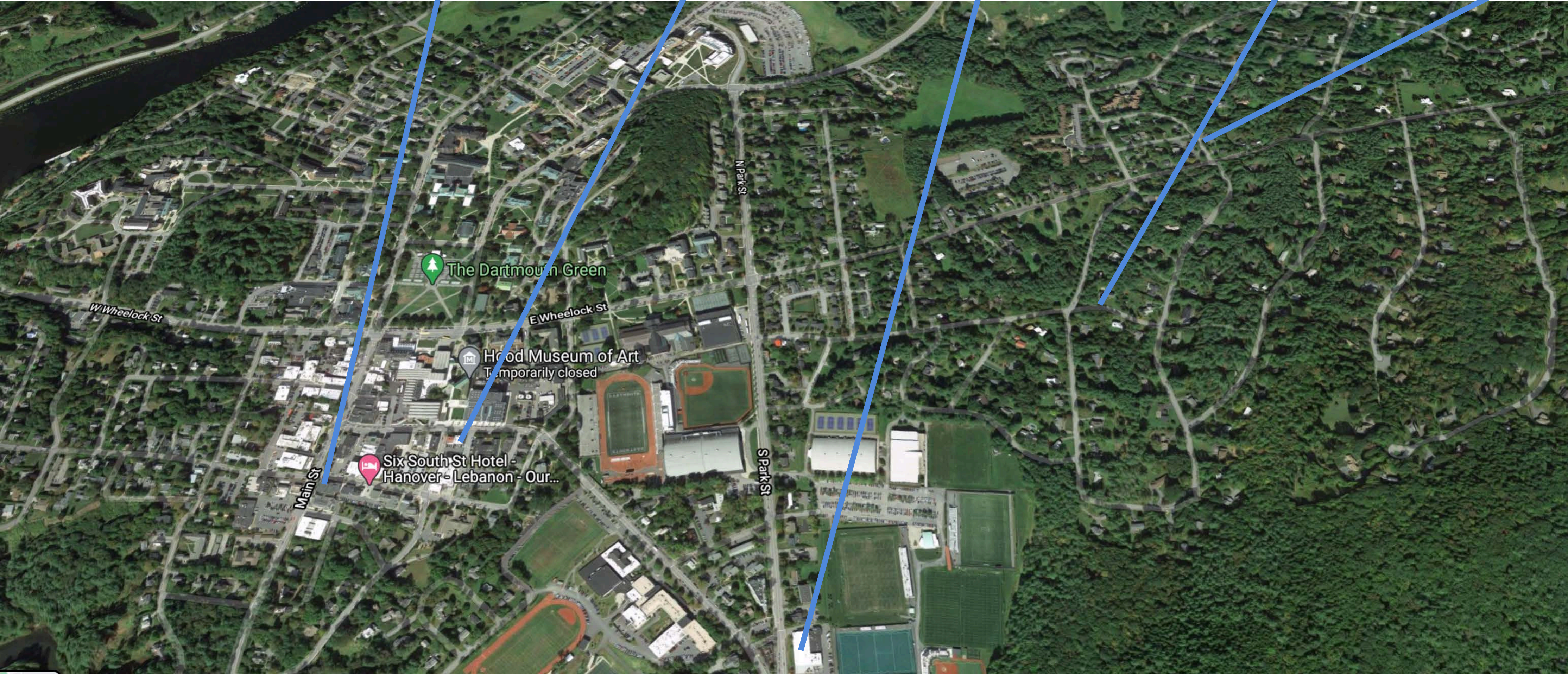
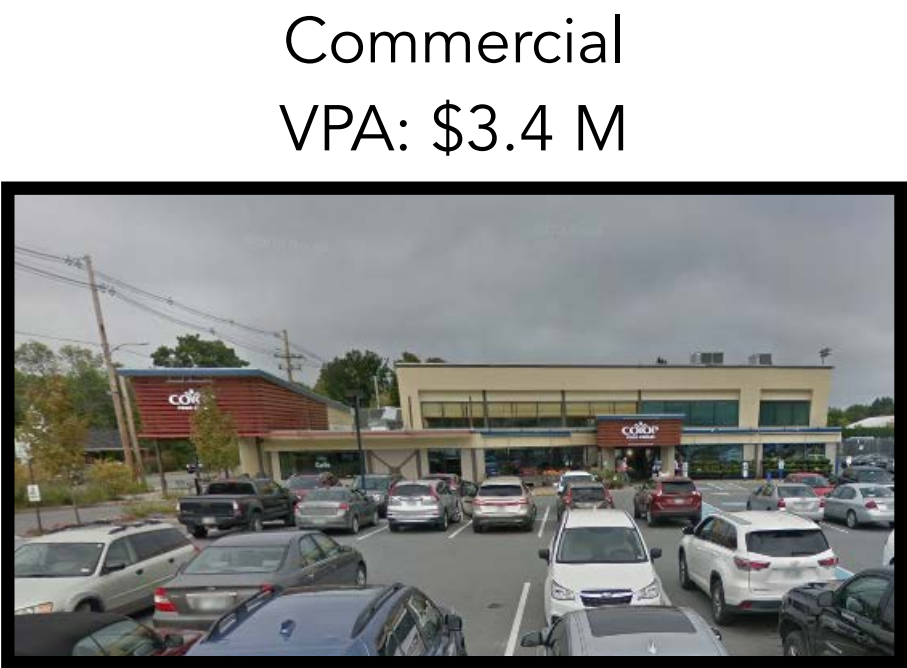


Avg. VPA: \$100,083

URBAN3

Hanover Examples

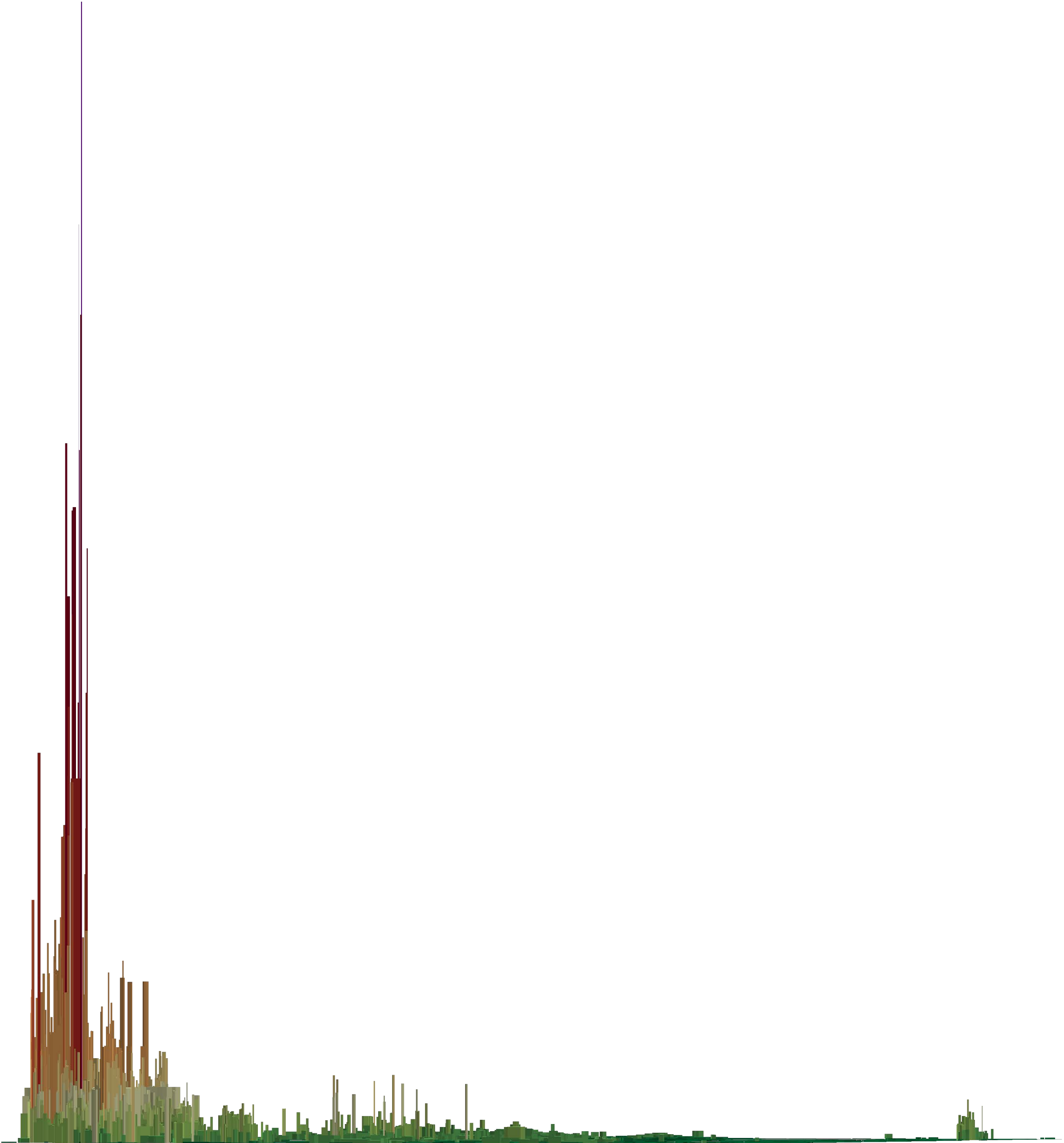
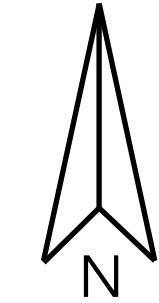
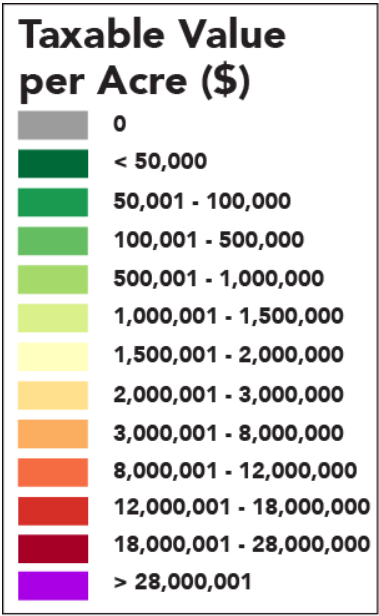
Land Use Productivity





Productivity

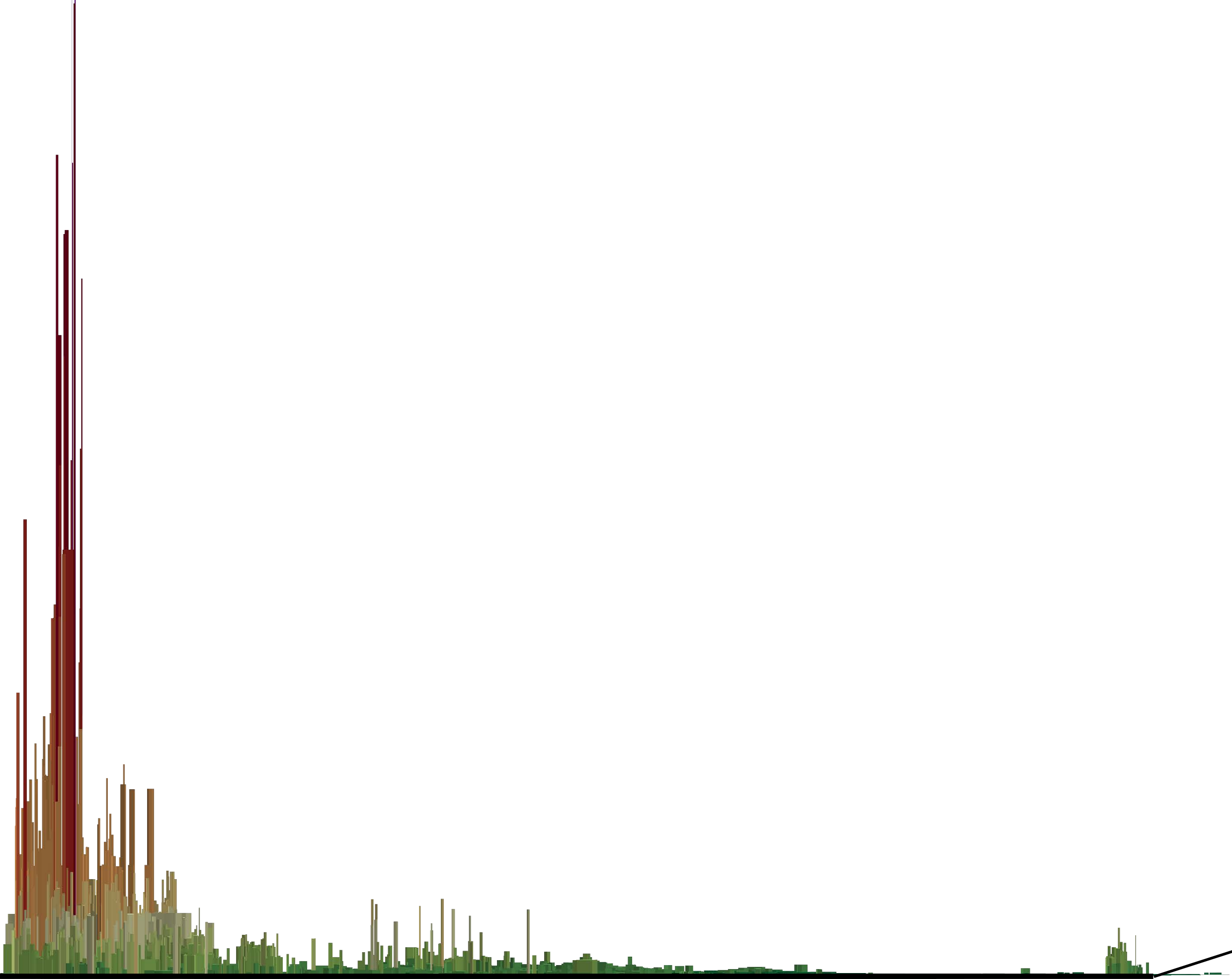
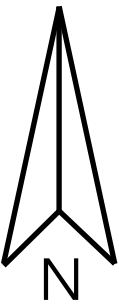
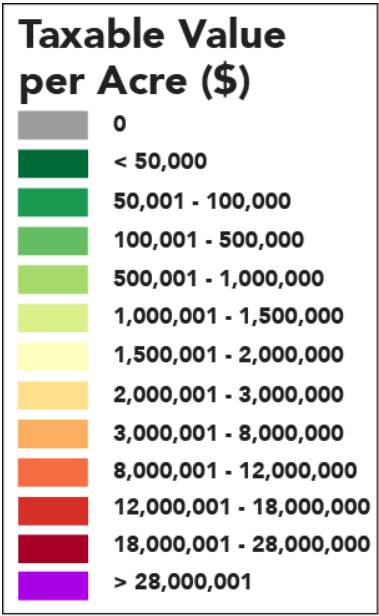
Geospatial Analysis



*Not Perfectly to Scale

Hanover Profile

Land Use Productivity

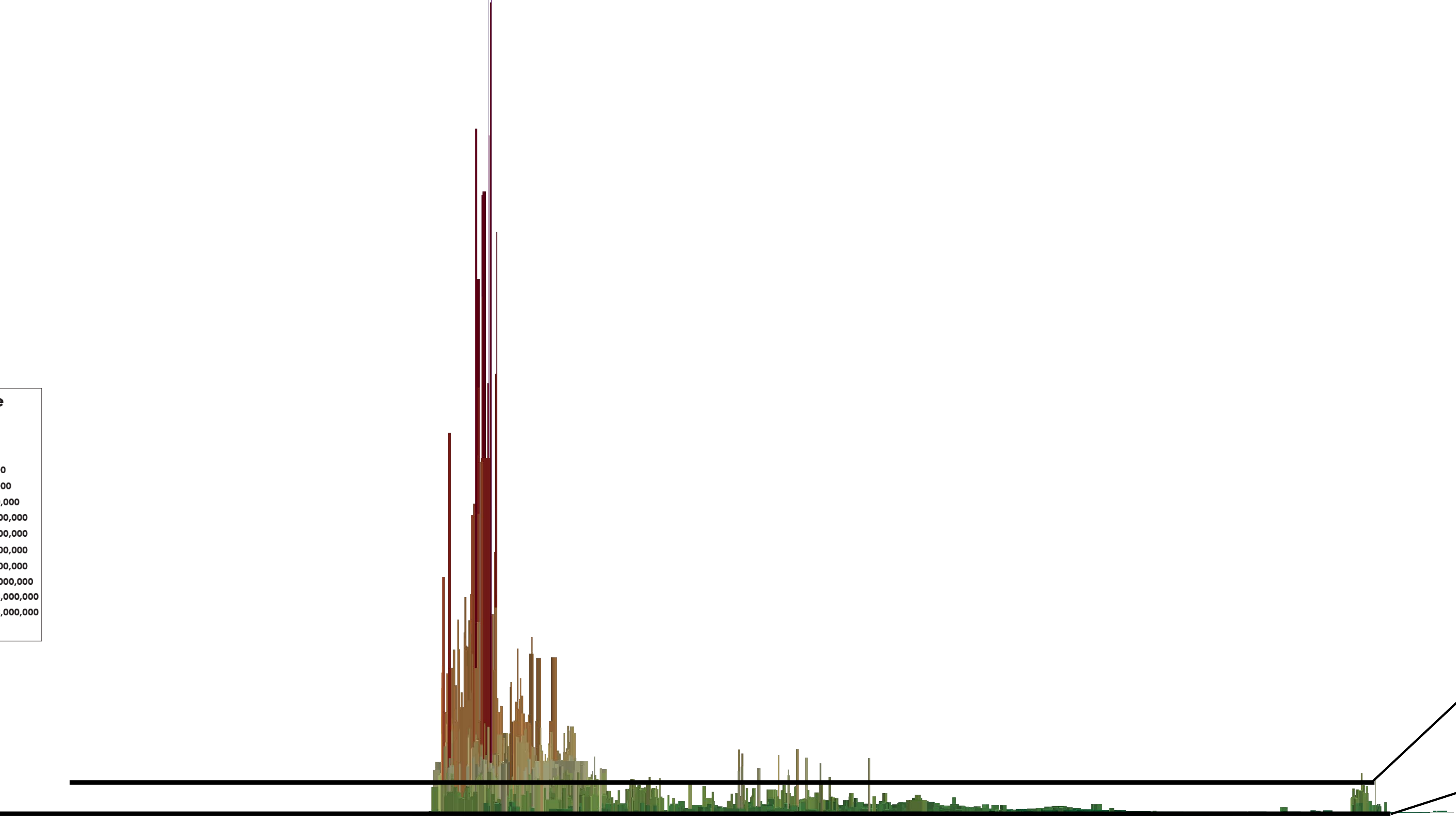
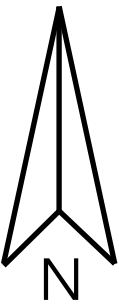
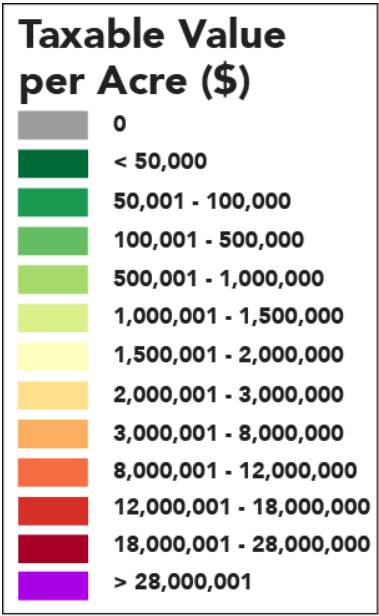


*Not Perfectly to Scale

City Avg. VPA
\$0.1 M

Hanover Profile

Land Use Productivity



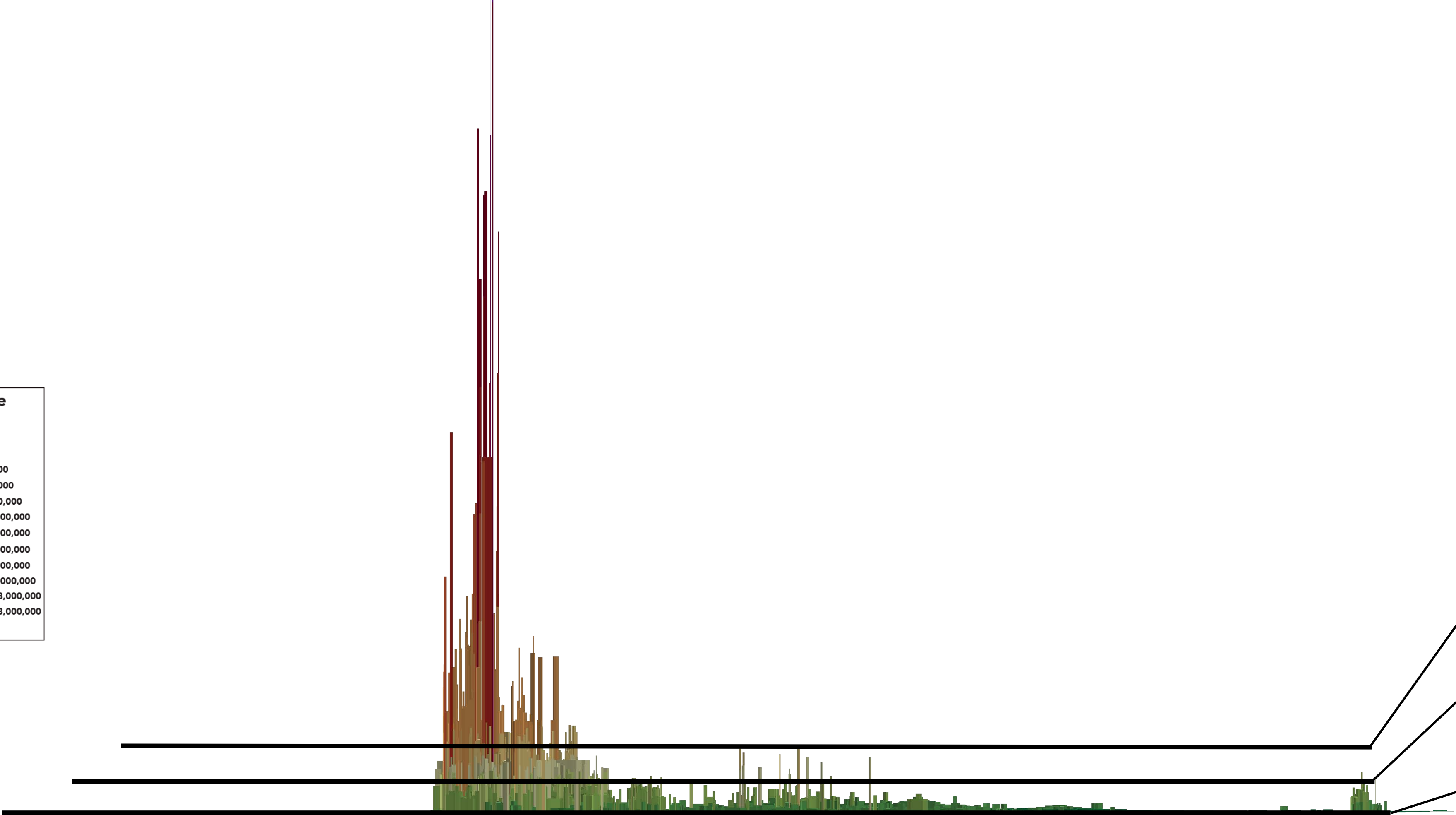
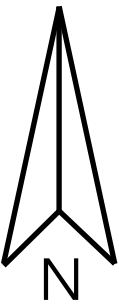
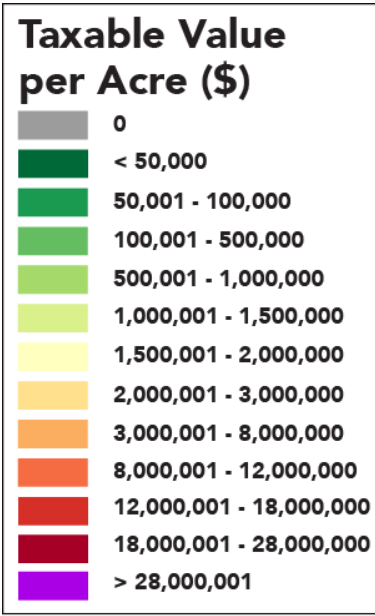
*Not Perfectly to Scale

Single-family Avg. VPA
\$0.81 M

City Avg. VPA
\$0.1 M

Hanover Profile

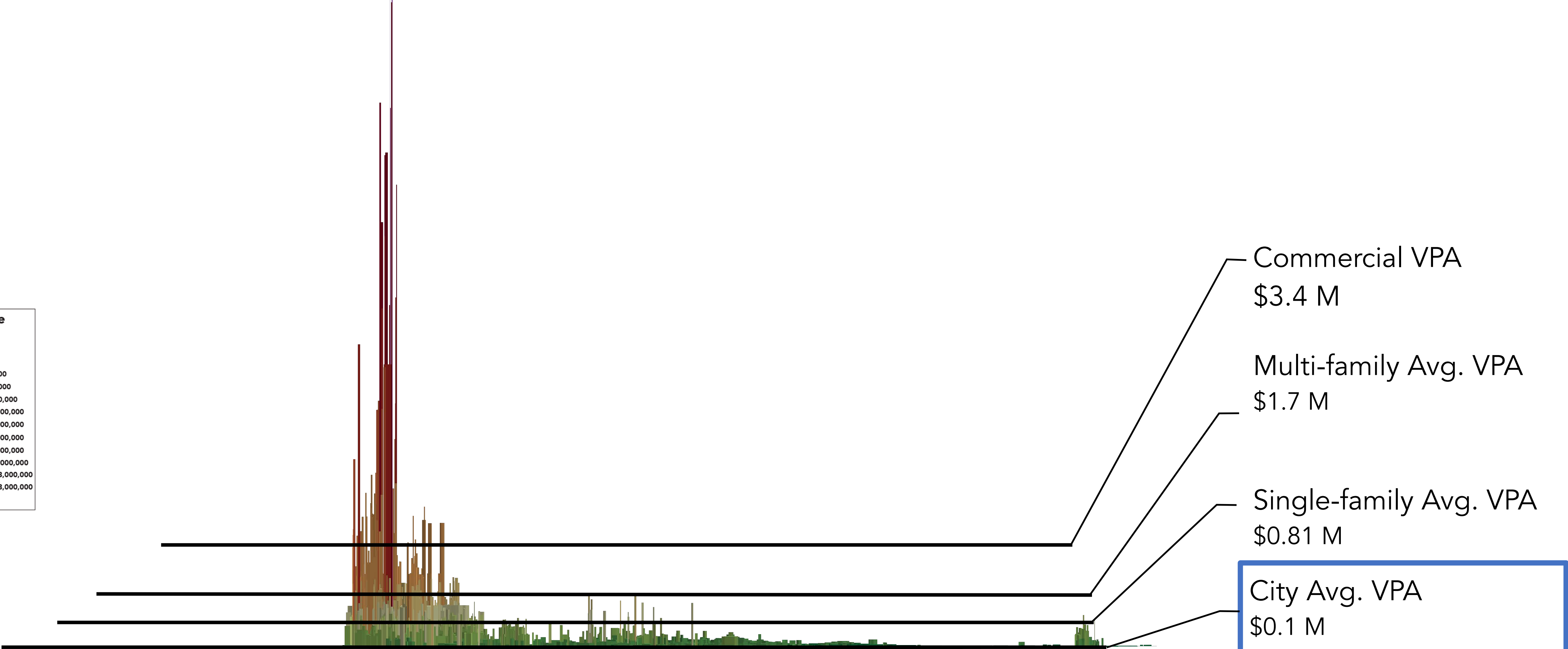
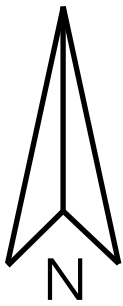
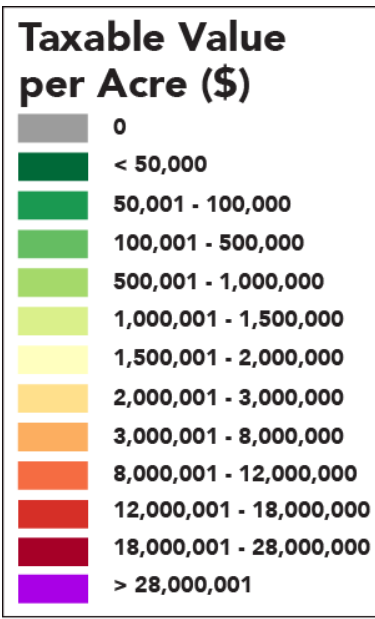
Land Use Productivity



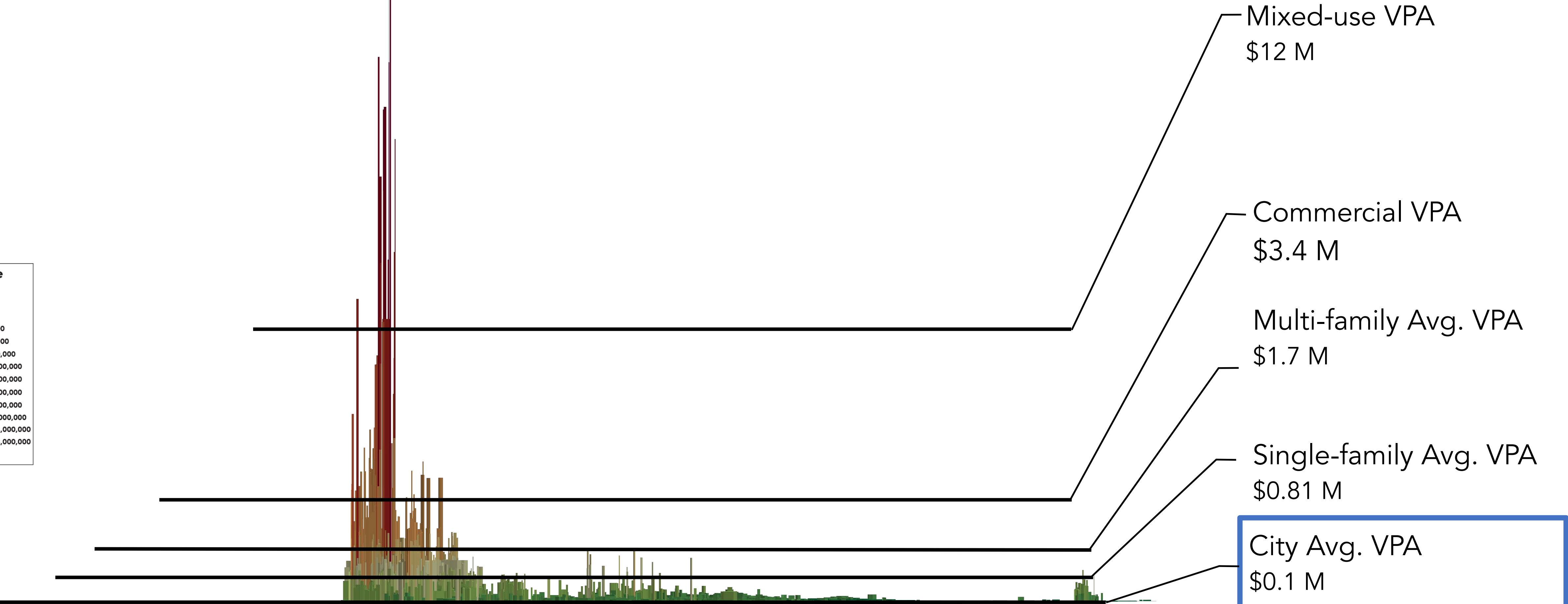
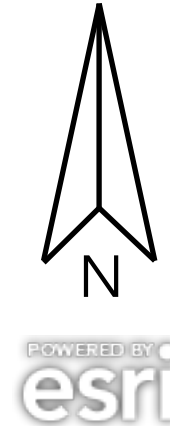
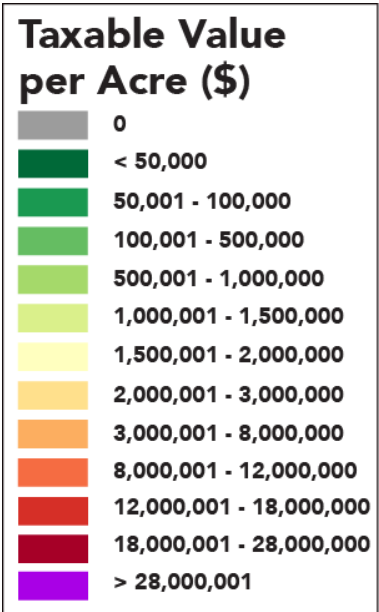
*Not Perfectly to Scale

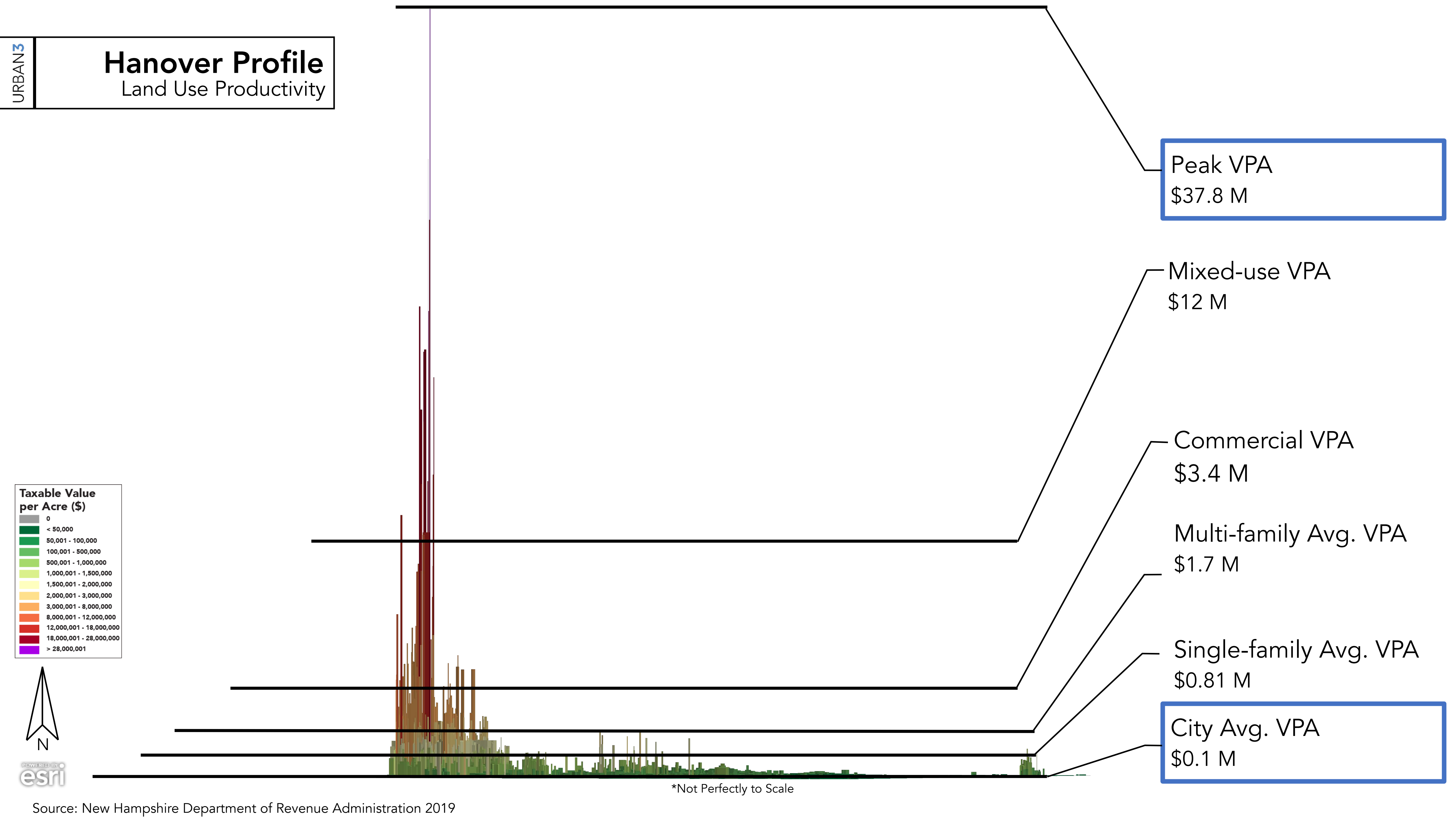
Hanover Profile

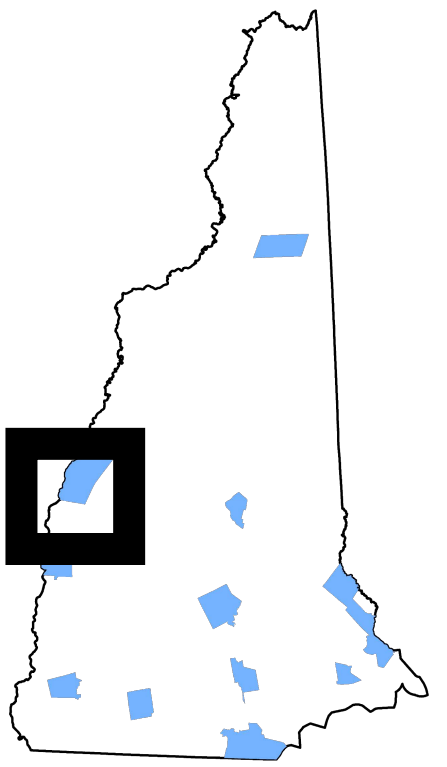
Land Use Productivity



*Not Perfectly to Scale

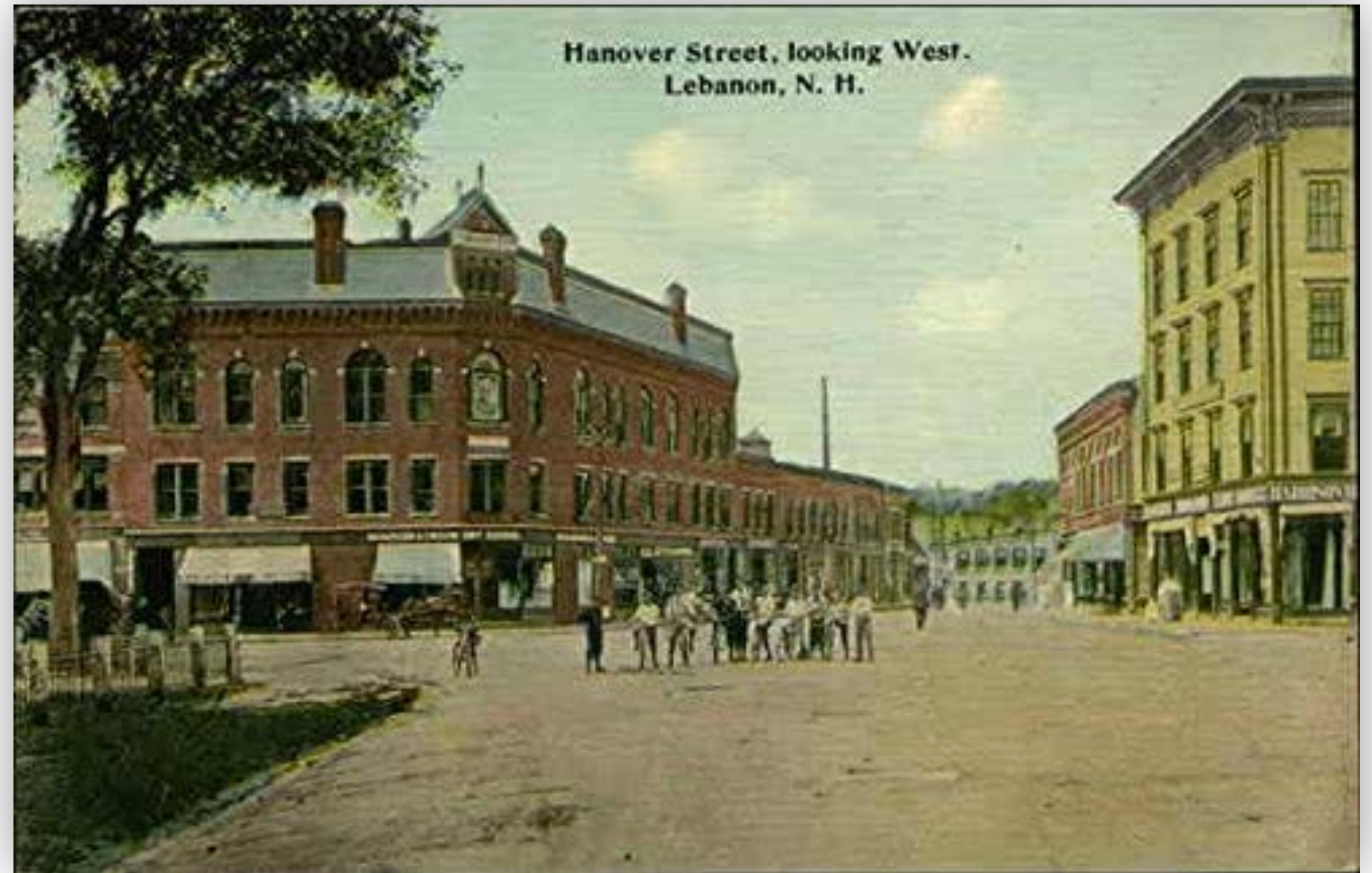




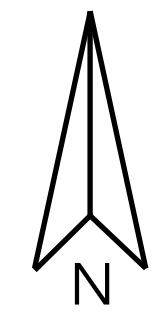
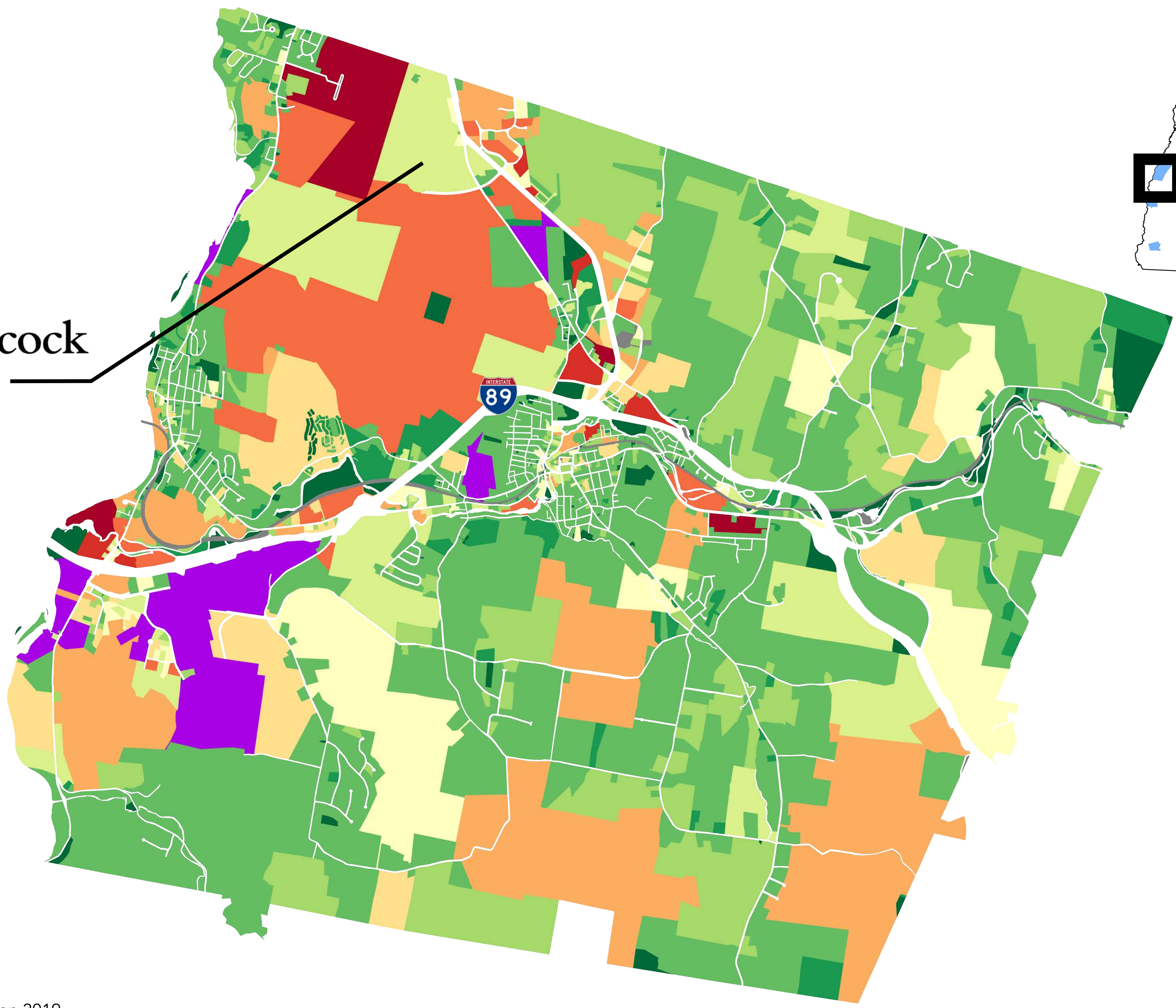
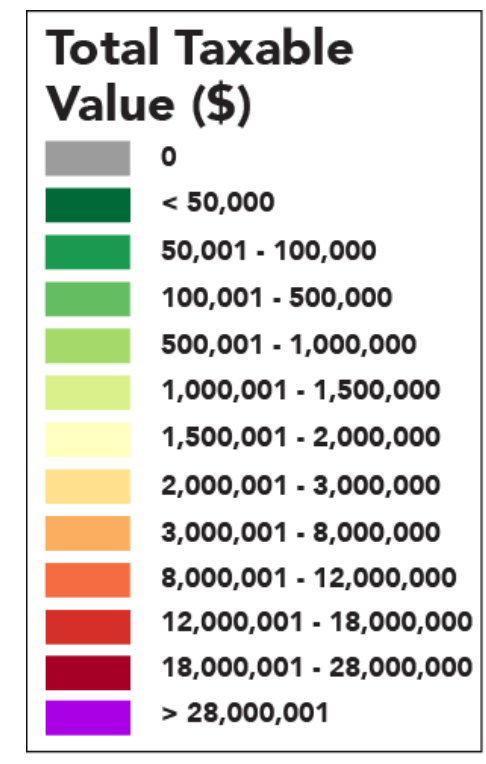
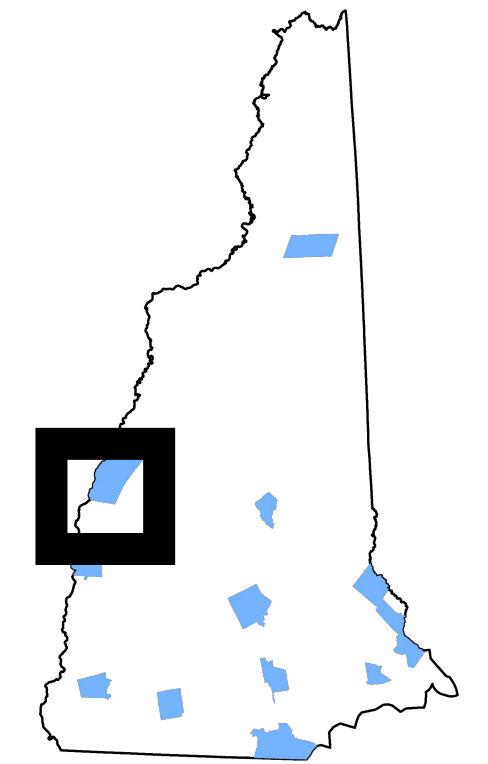


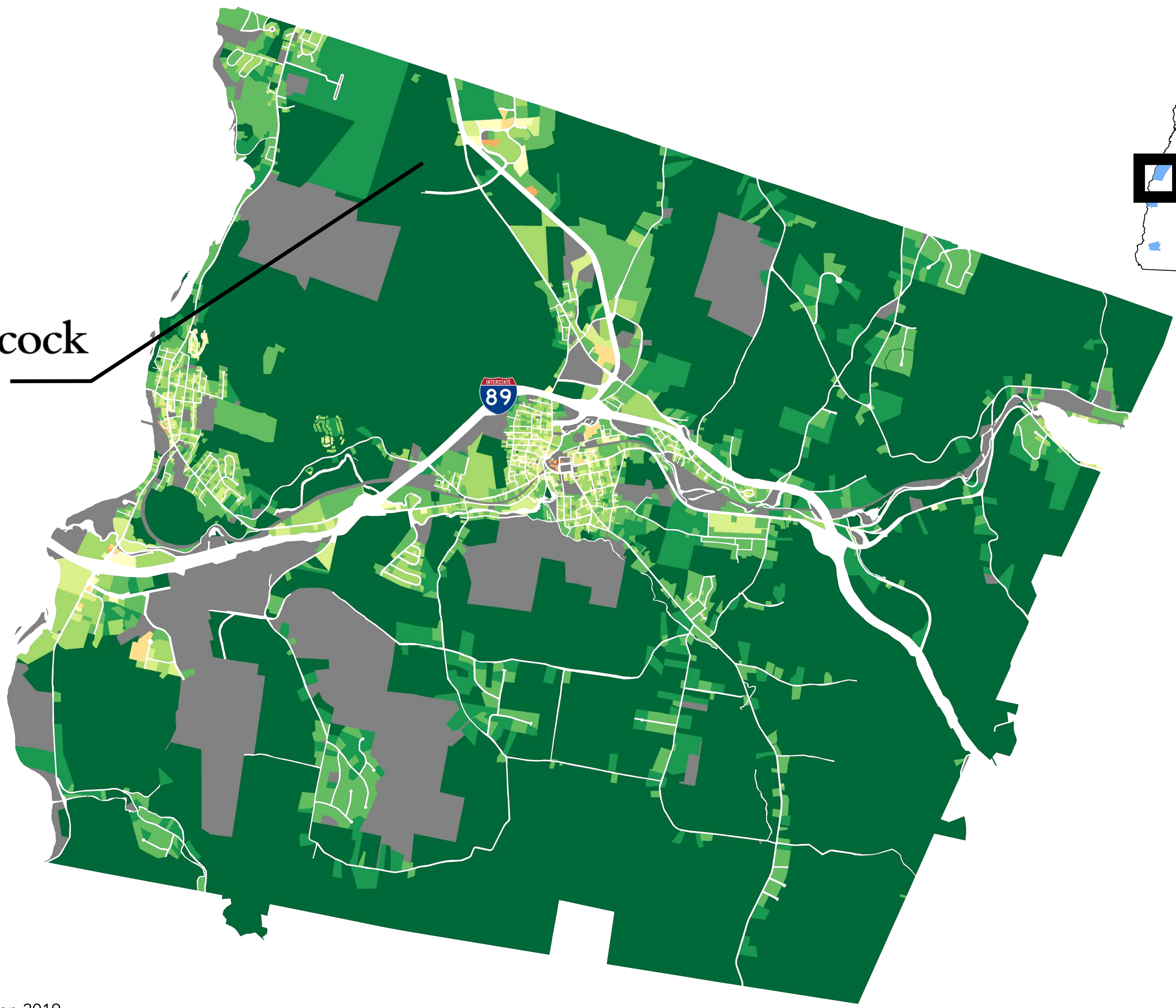
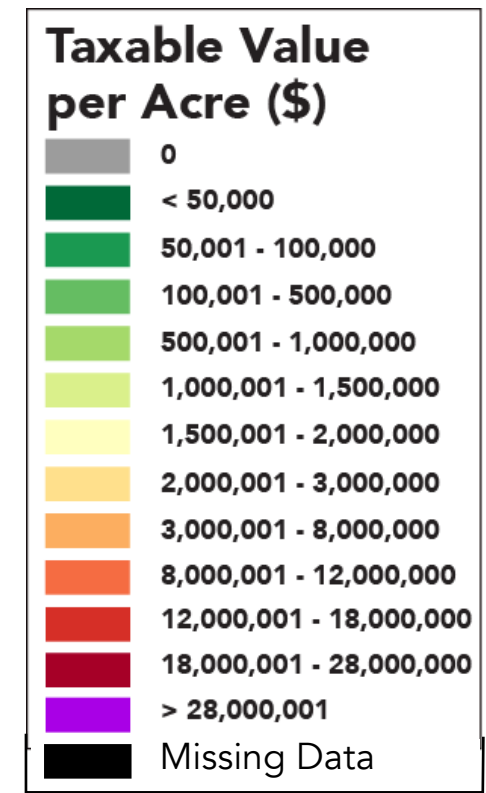
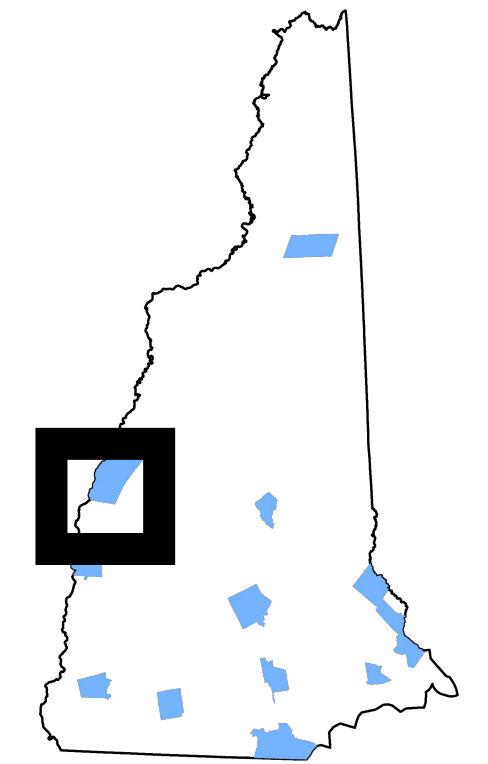
Case Study: Economic MRI®
2020

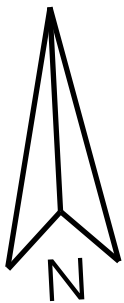
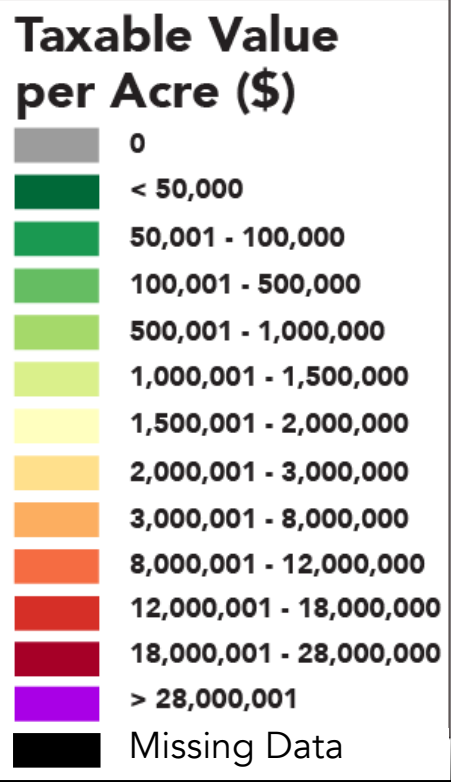
Lebanon



Dartmouth-Hitchcock
MEDICAL CENTER



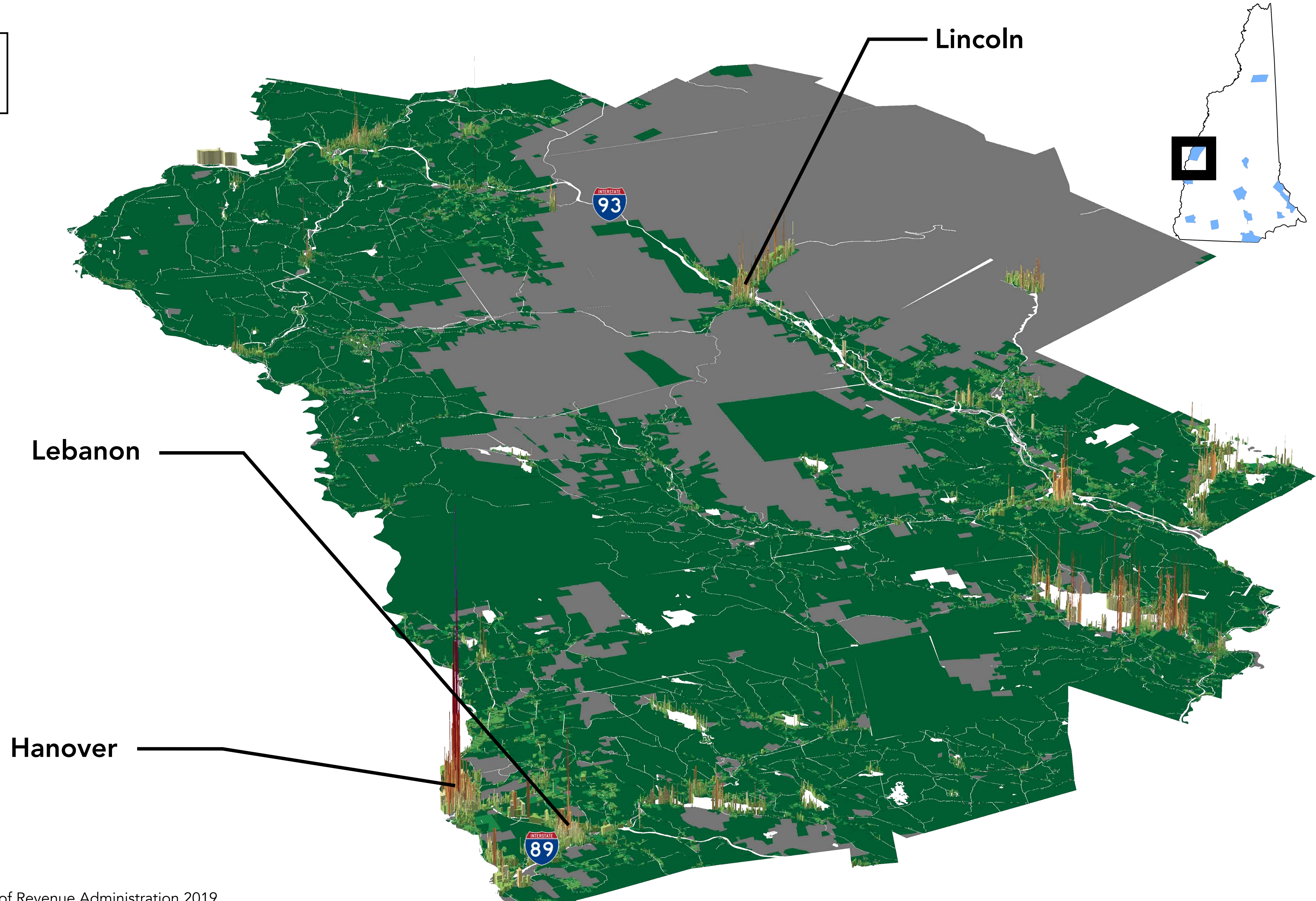




URBAN3

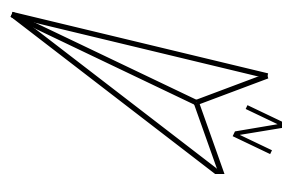
Value Per Acre

Grafton County

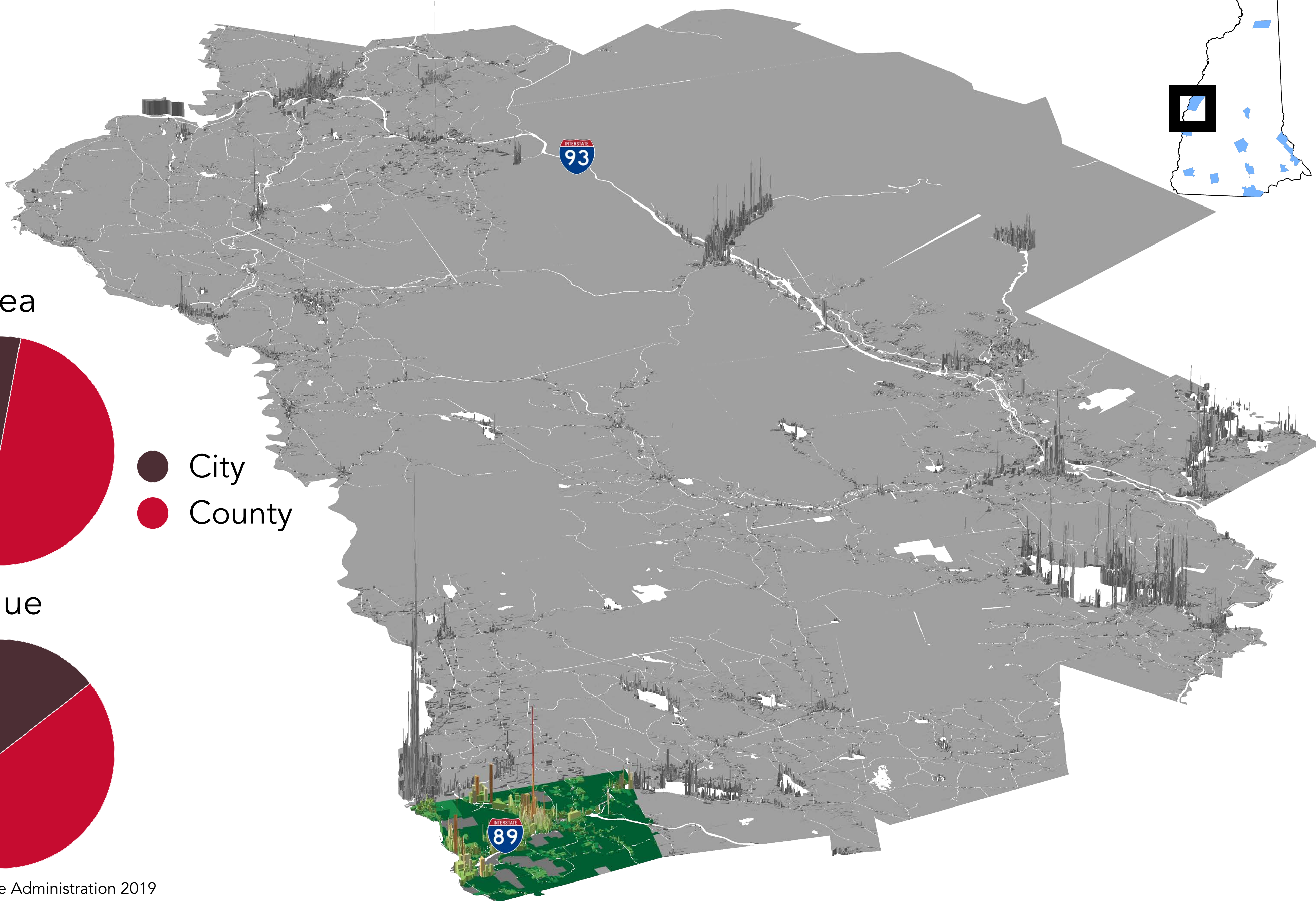
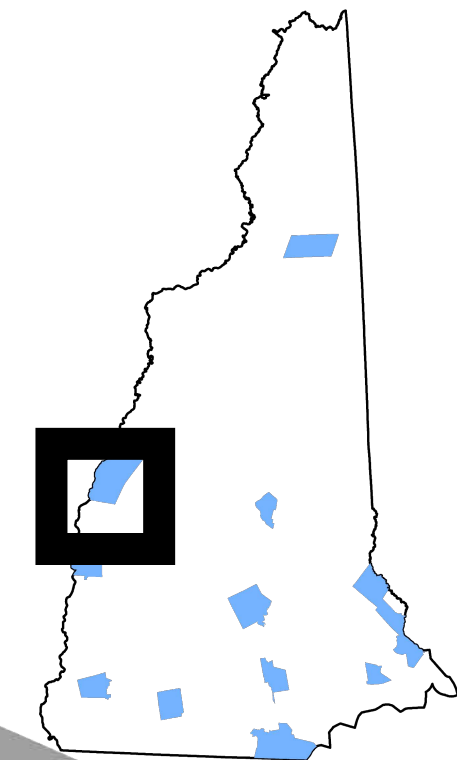


Taxable Value per Acre (\$)

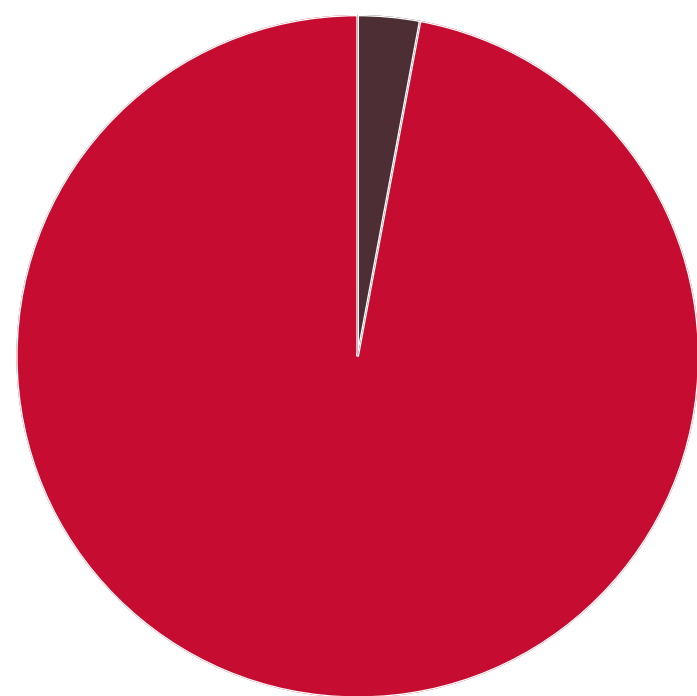
0
< 50,000
50,001 - 100,000
100,001 - 500,000
500,001 - 1,000,000
1,000,001 - 1,500,000
1,500,001 - 2,000,000
2,000,001 - 3,000,000
3,000,001 - 8,000,000
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18,000,001 - 28,000,000
> 28,000,001
Missing Data



1:4.9

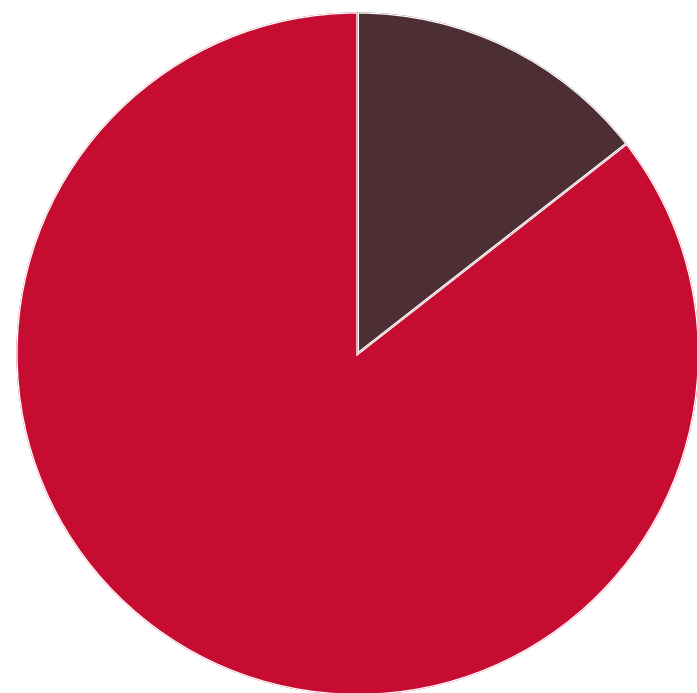


Area

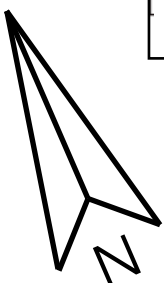


- City
- County

Value



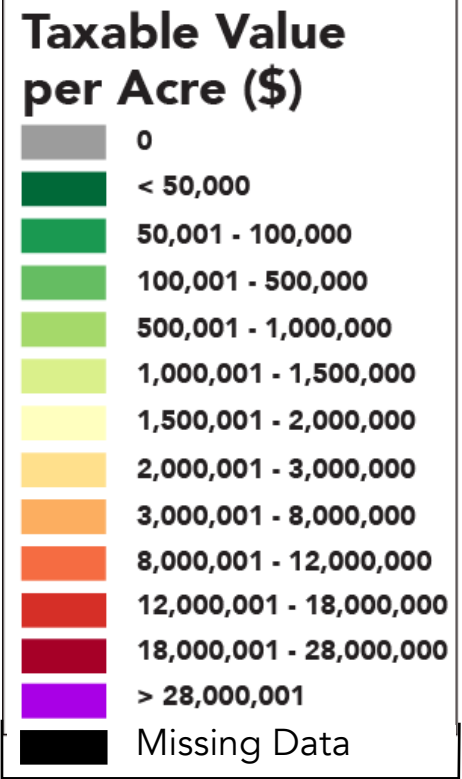
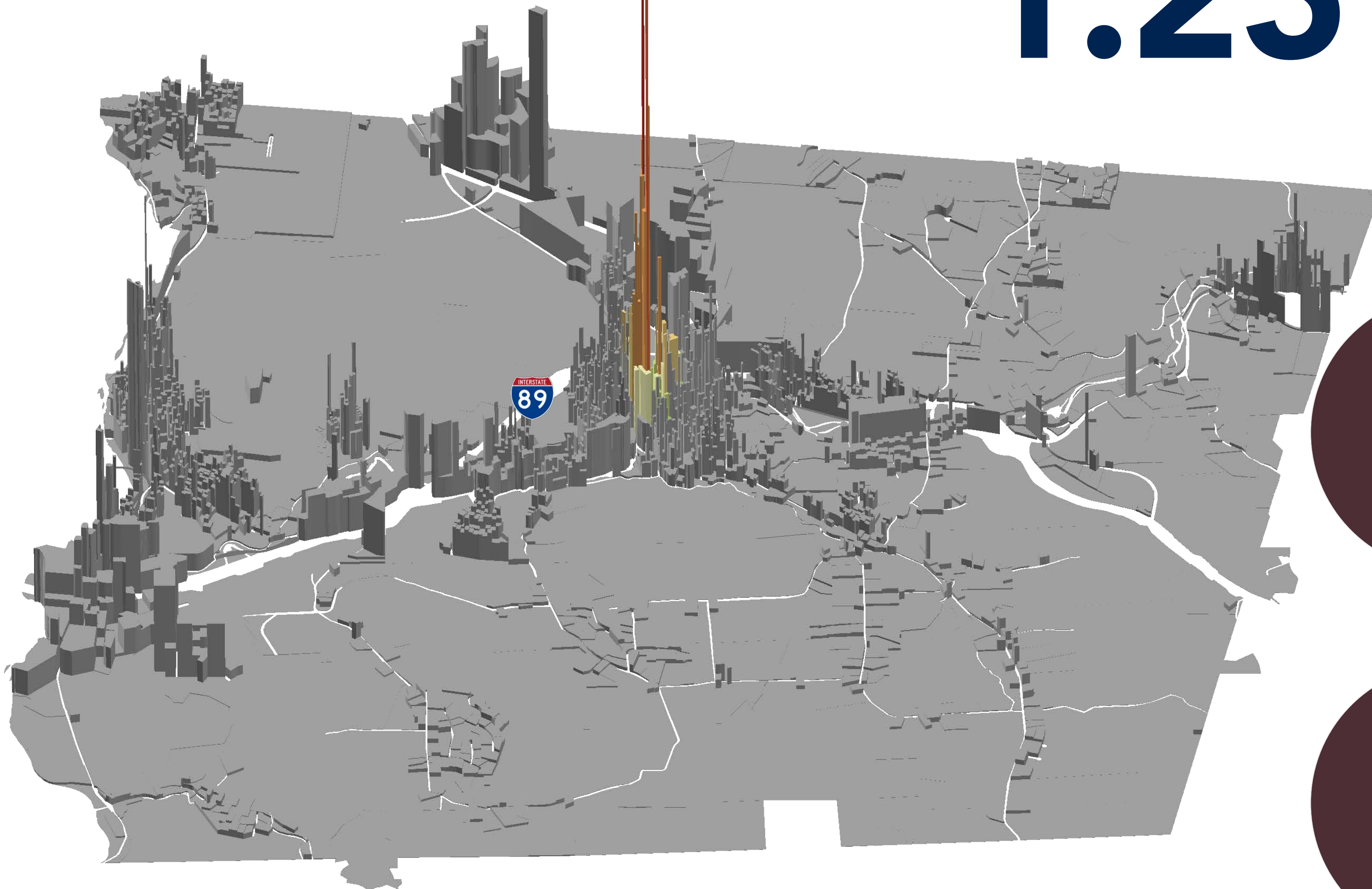
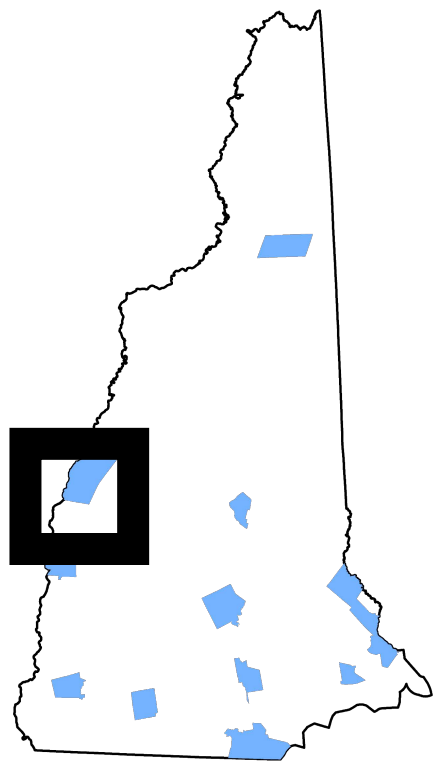
Taxable Value per Acre (\$)	
	0
	< 50,000
	50,001 - 100,000
	100,001 - 500,000
	500,001 - 1,000,000
	1,000,001 - 1,500,000
	1,500,001 - 2,000,000
	2,000,001 - 3,000,000
	3,000,001 - 8,000,000
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	18,000,001 - 28,000,000
	> 28,000,001
	Missing Data



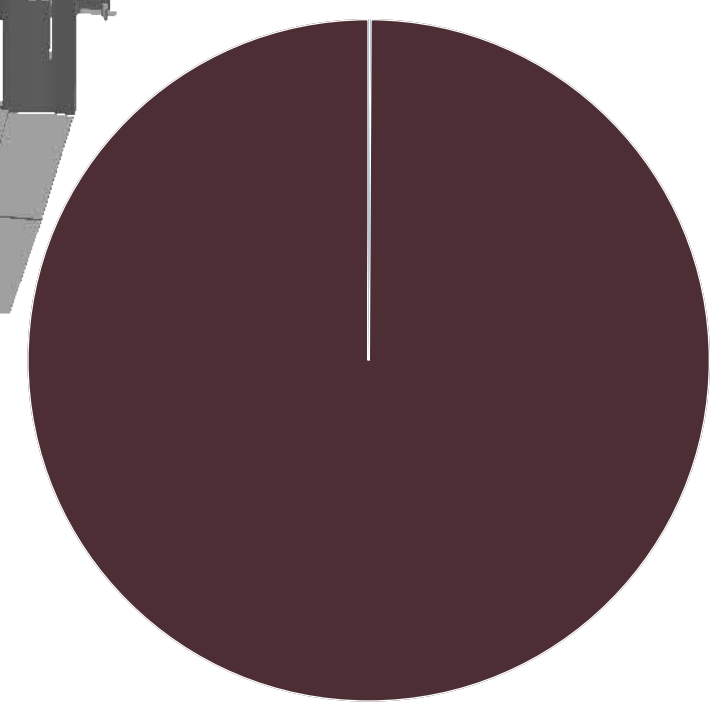
Value Per Acre

Downtown Lebanon

1:25

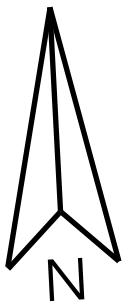
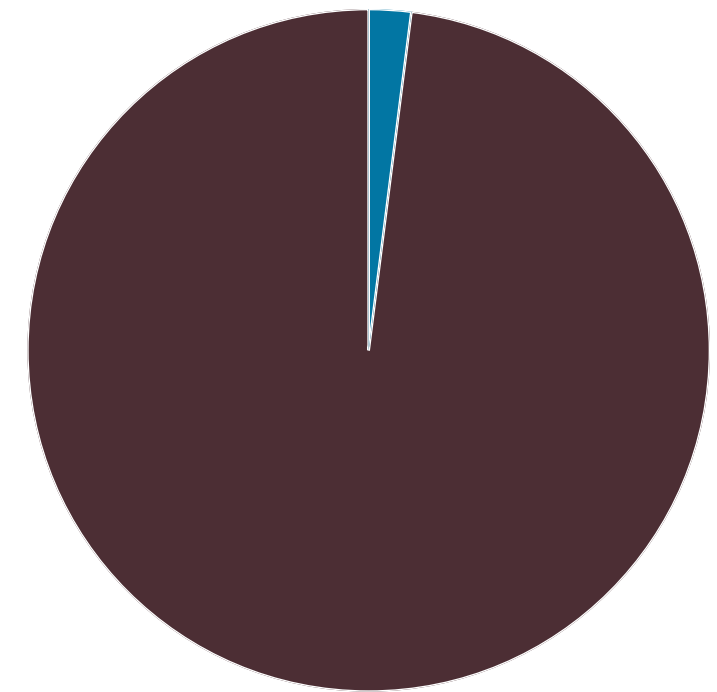


Area

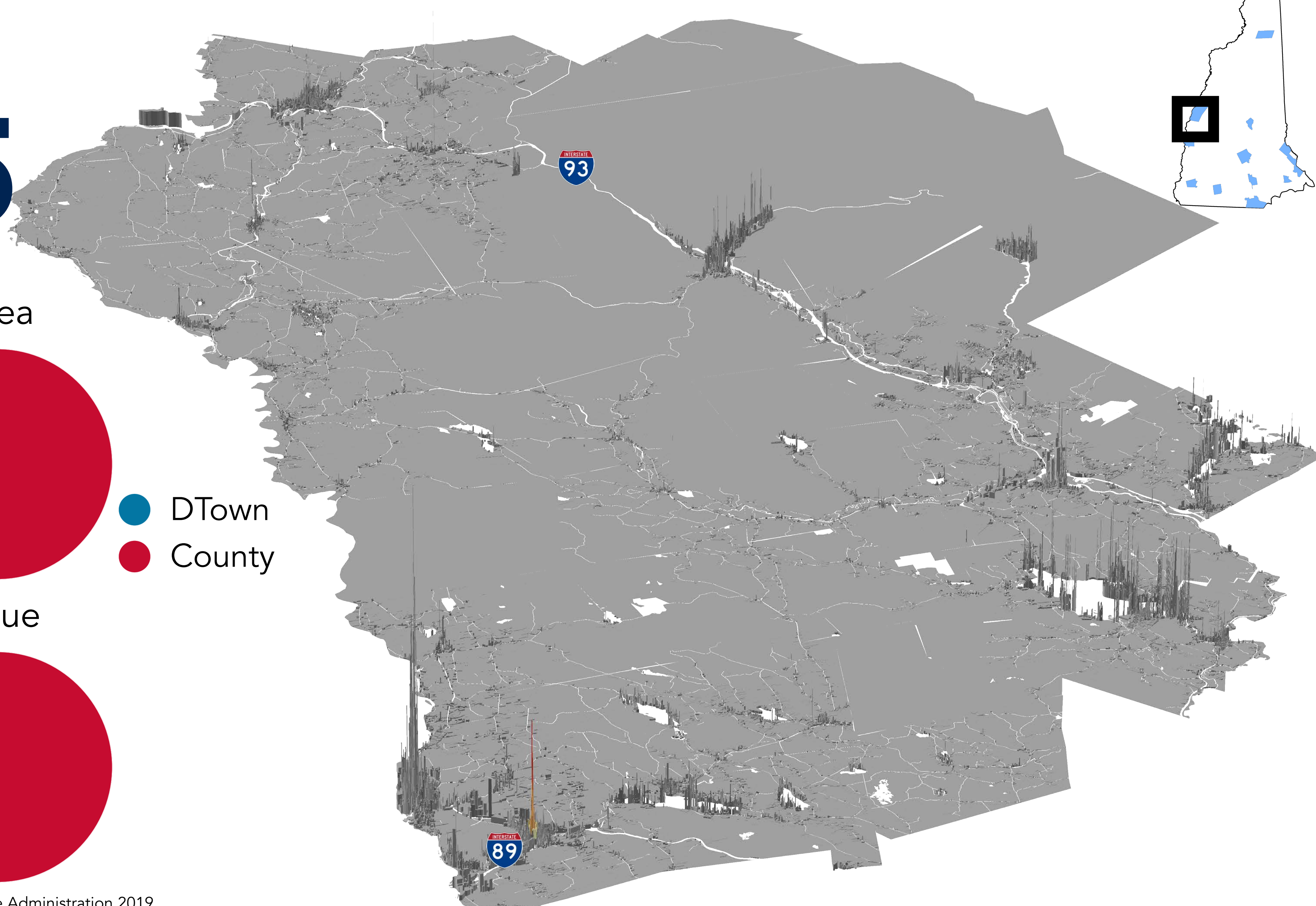
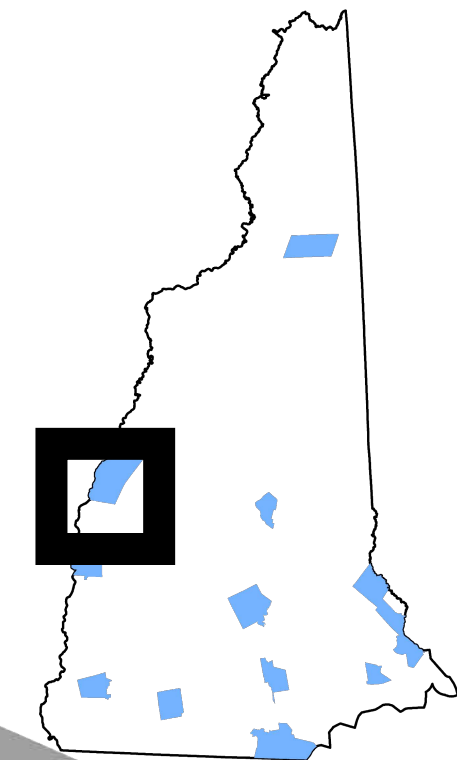


- DTown
- City

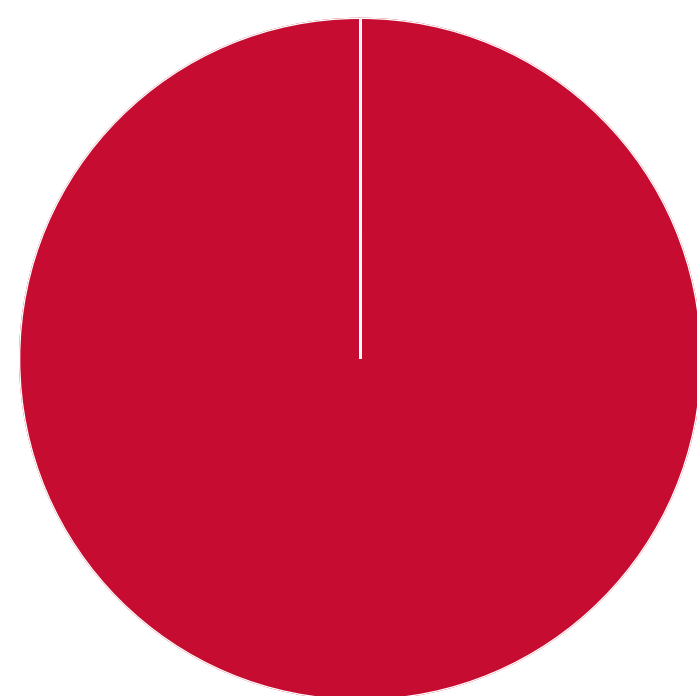
Value



1:125

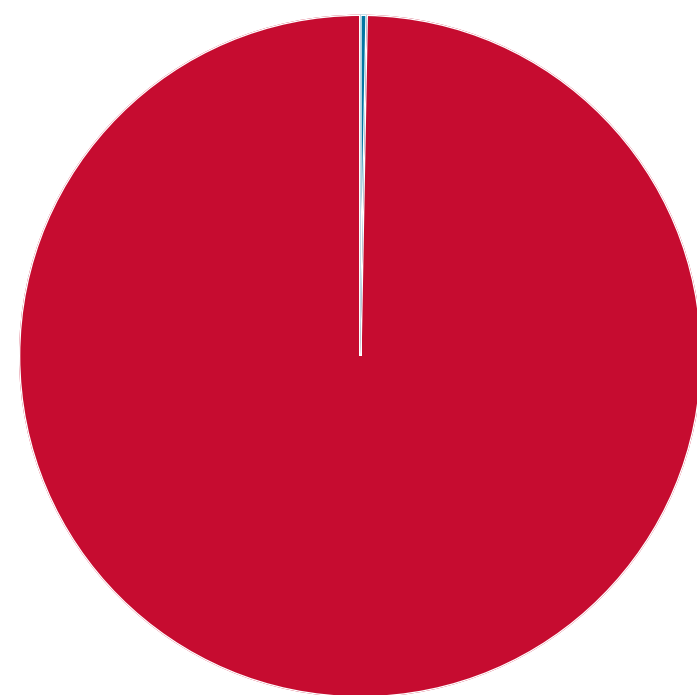


Area

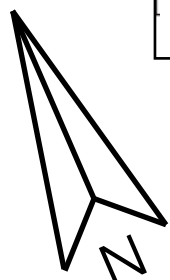


- DTown
- County

Value



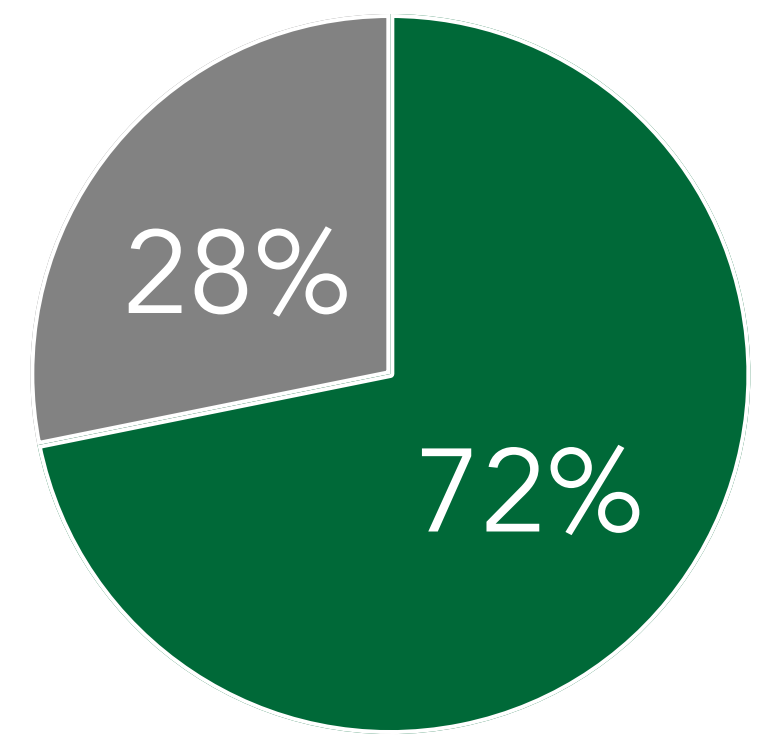
Taxable Value per Acre (\$)	
	0
	< 50,000
	50,001 - 100,000
	100,001 - 500,000
	500,001 - 1,000,000
	1,000,001 - 1,500,000
	1,500,001 - 2,000,000
	2,000,001 - 3,000,000
	3,000,001 - 8,000,000
	8,000,001 - 12,000,000
	12,000,001 - 18,000,000
	18,000,001 - 28,000,000
	> 28,000,001
	Missing Data



Lebanon

White Mountain
National Forest

Total Area



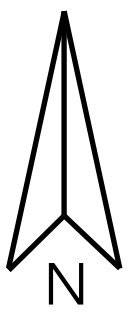
- Taxable
- Non Taxable

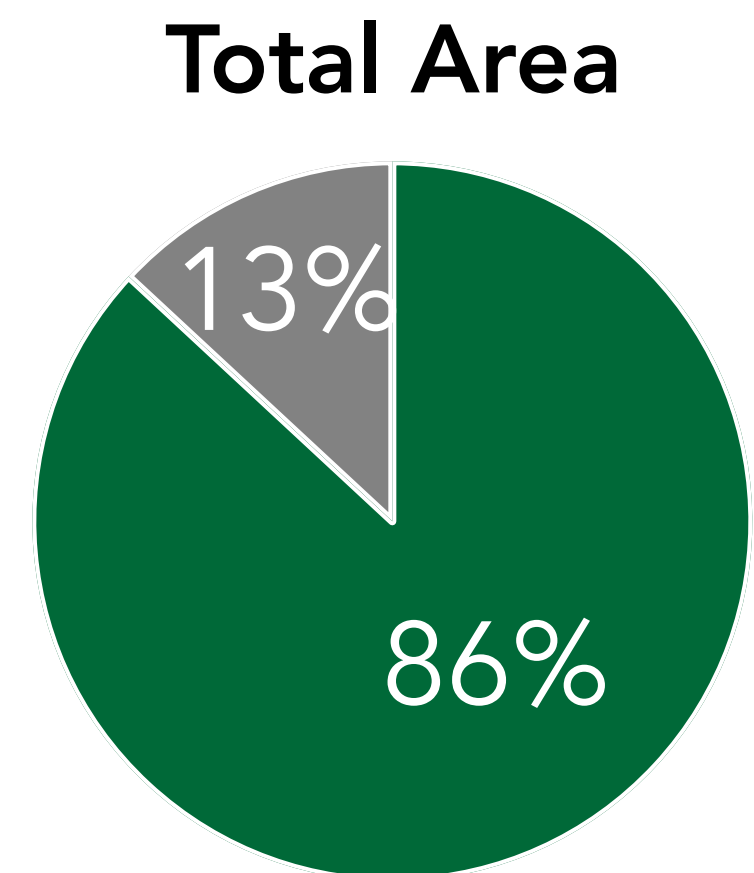
Taxable Property

No Data

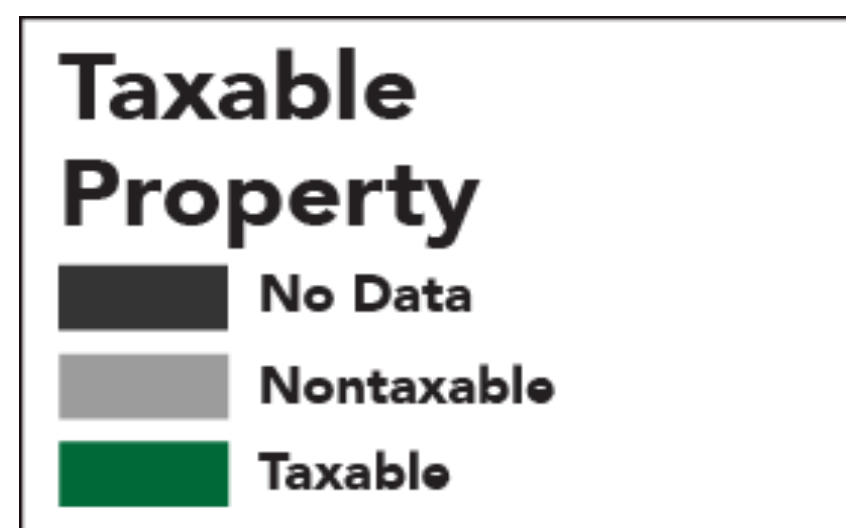
Nontaxable

Taxable

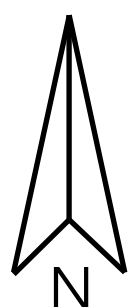


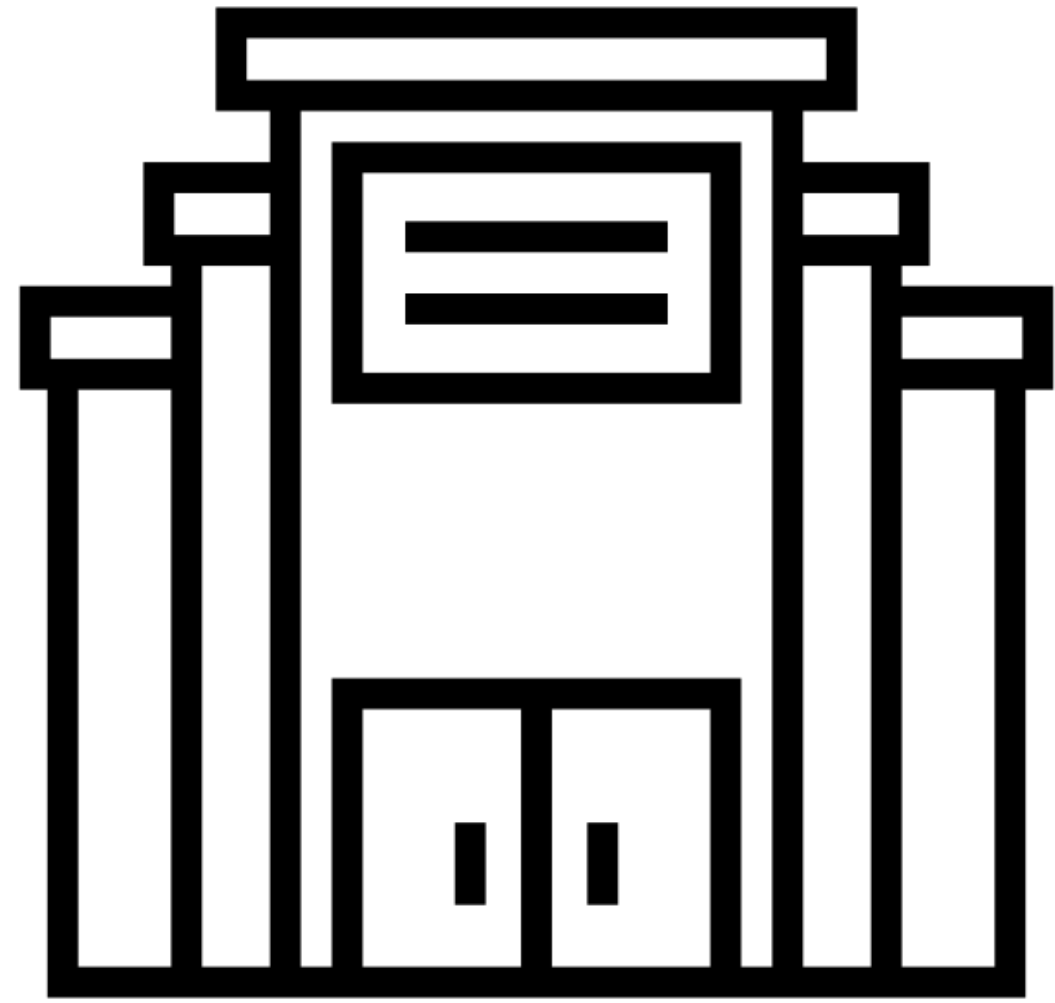


- Taxable
- Nontaxable



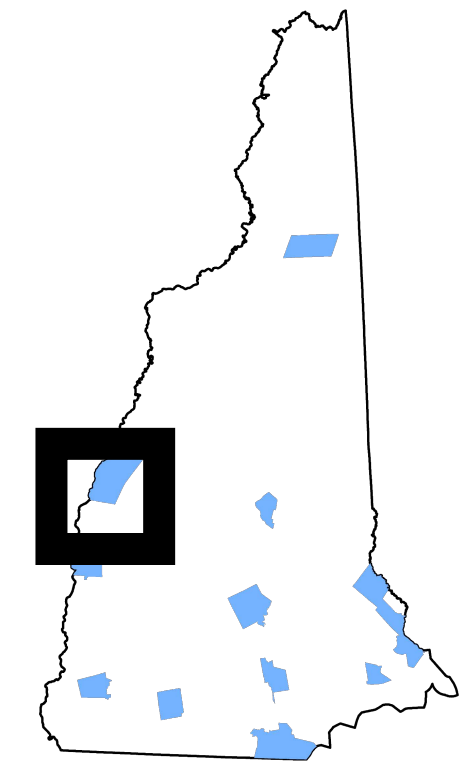
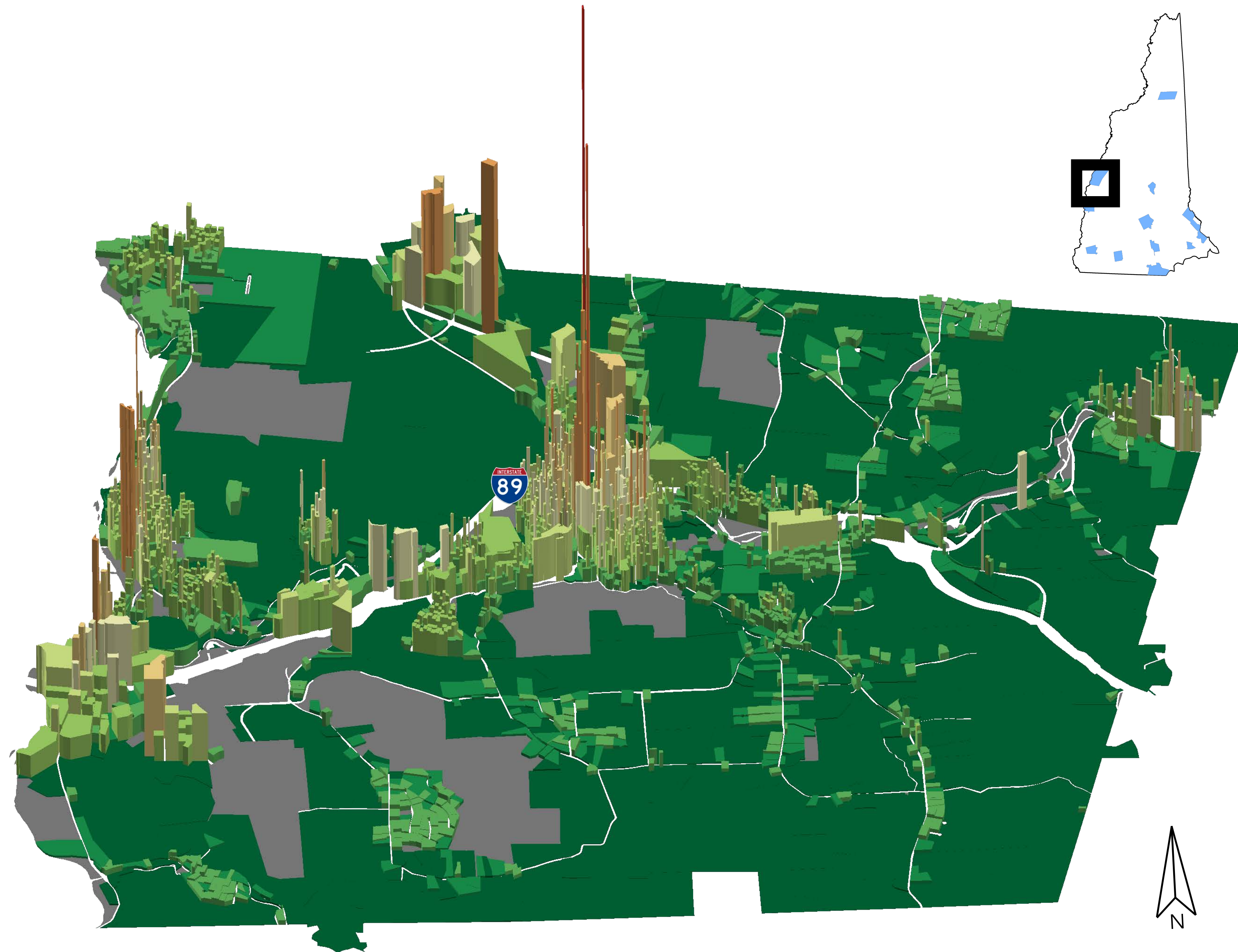
Lebanon Municipal
Airport





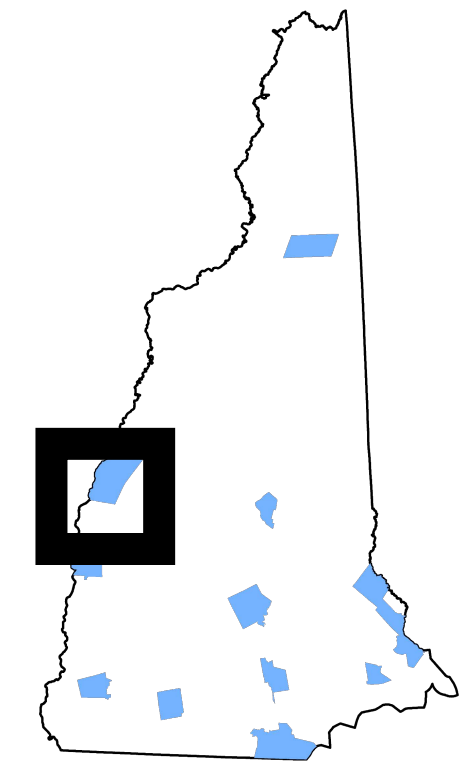
Land Use Types

Local samples of buildings and development types



Lebanon Examples

Land Use Productivity



Single-family
Avg. VPA: \$0.51 M

Avg. VPA: \$90,509

Lebanon Examples

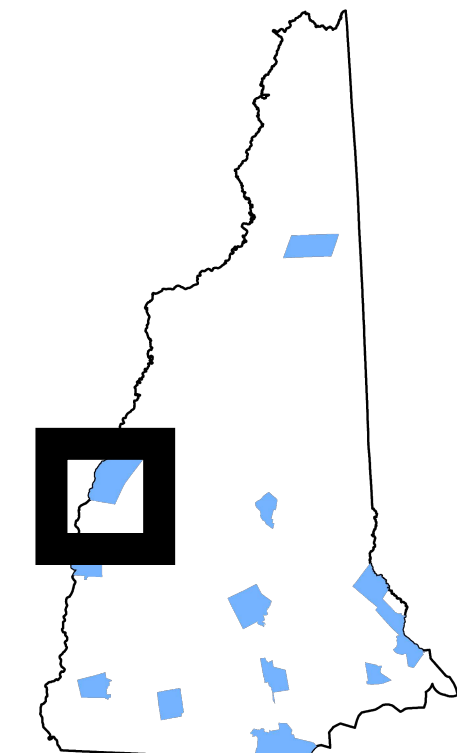
Land Use Productivity



Multi-family
Avg. VPA: \$1.2 M



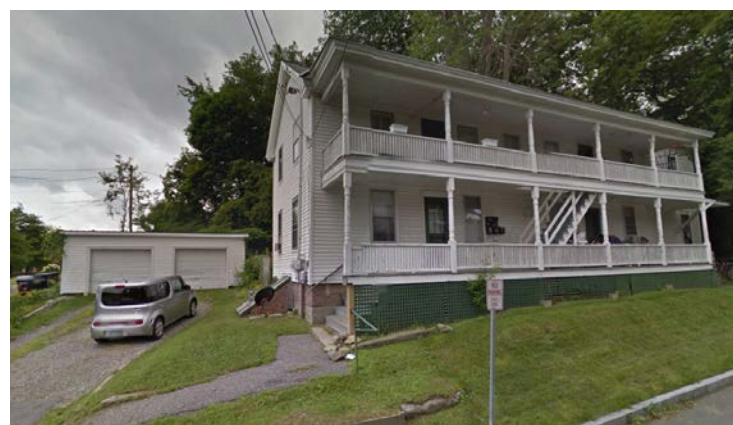
Single-family
Avg. VPA: \$0.51 M



Avg. VPA: \$90,509

Lebanon Examples

Land Use Productivity



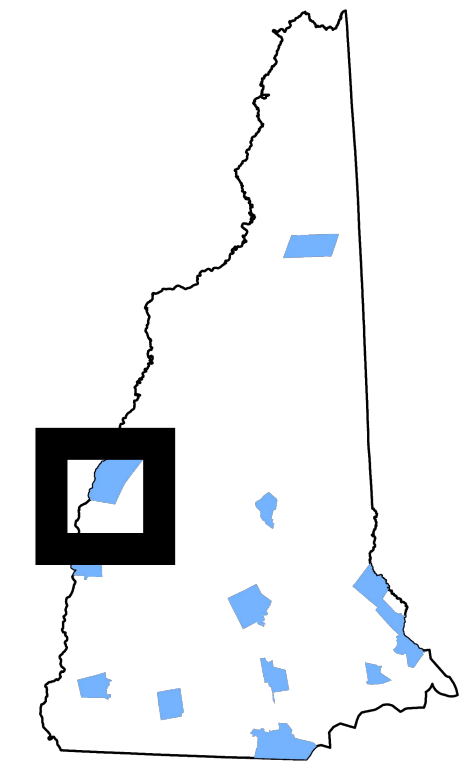
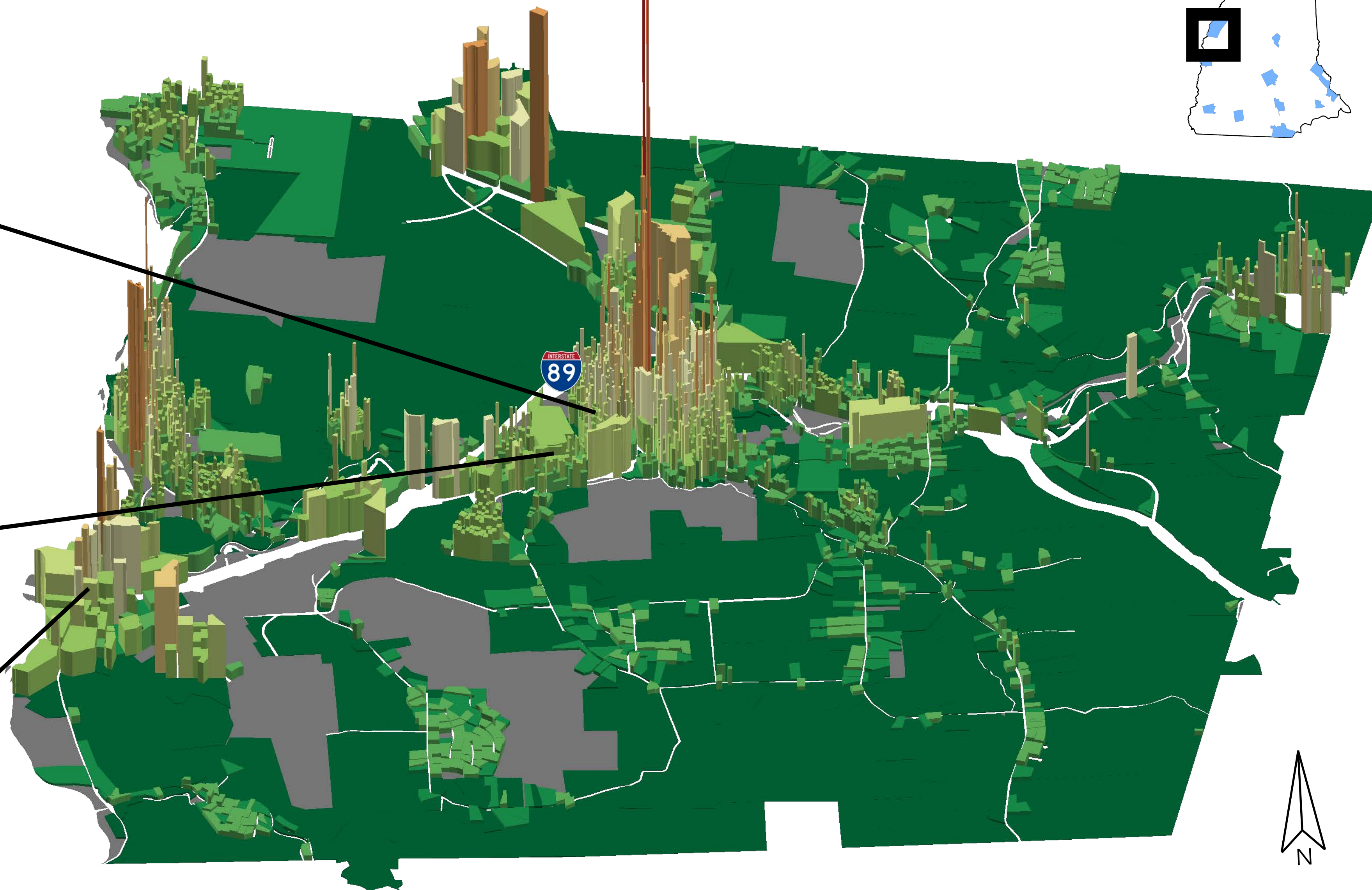
Multi-family
Avg. VPA: \$1.2 M



Single-family
Avg. VPA: \$0.51 M



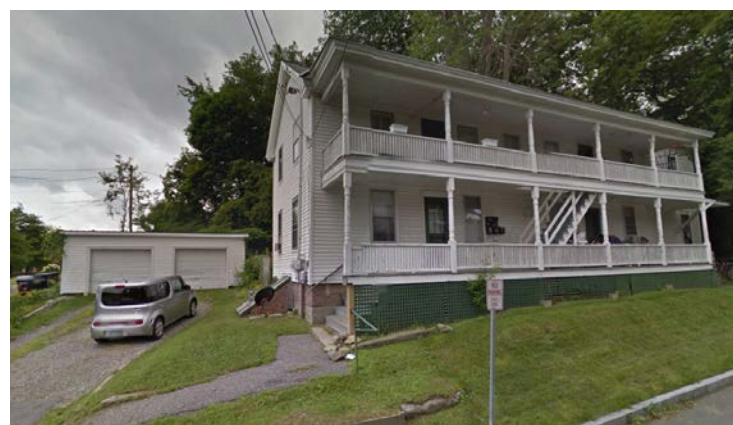
Commercial
VPA: \$1.1 M



Avg. VPA: \$90,509

Lebanon Examples

Land Use Productivity



Multi-family
Avg. VPA: \$1.2 M



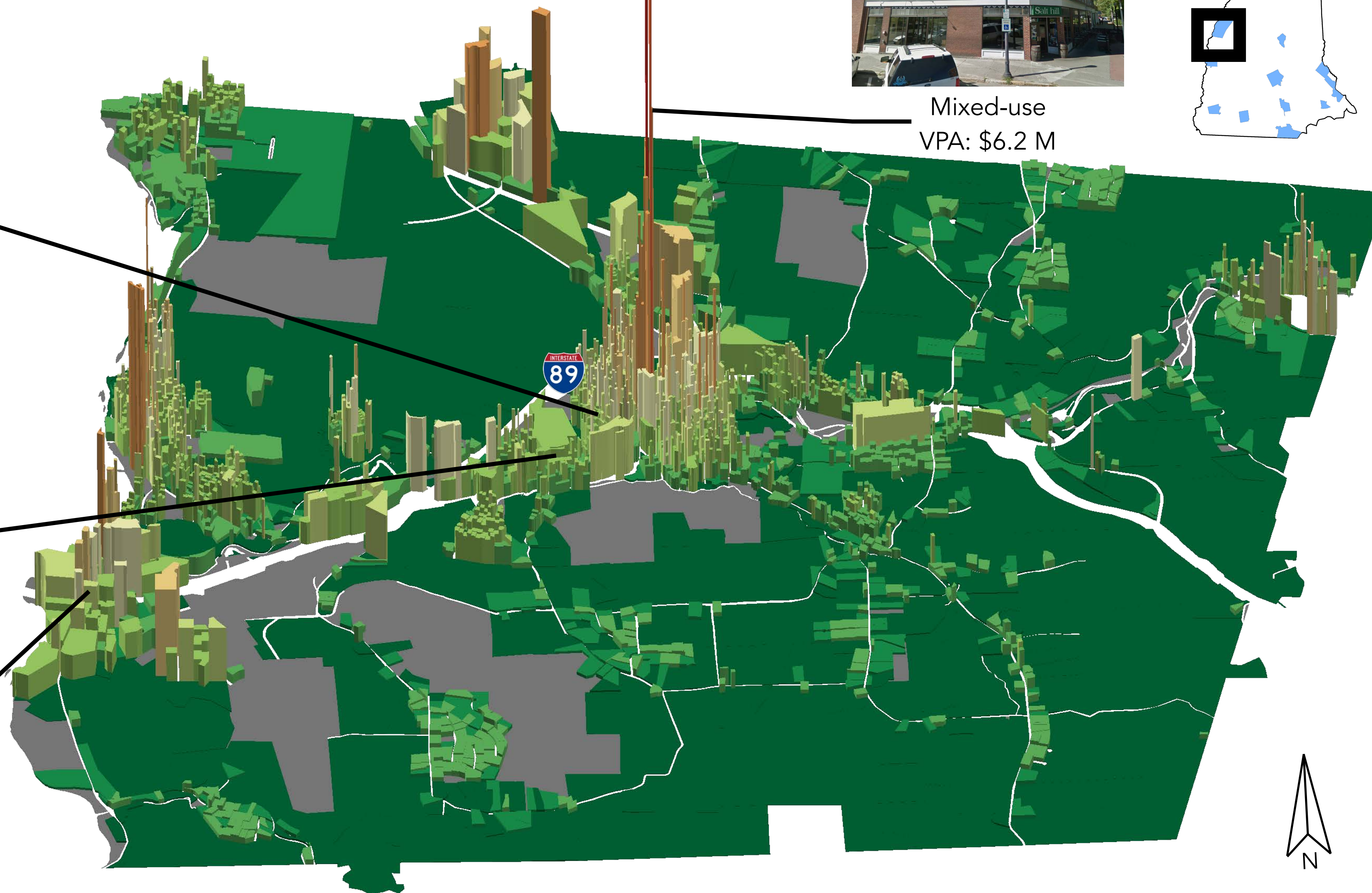
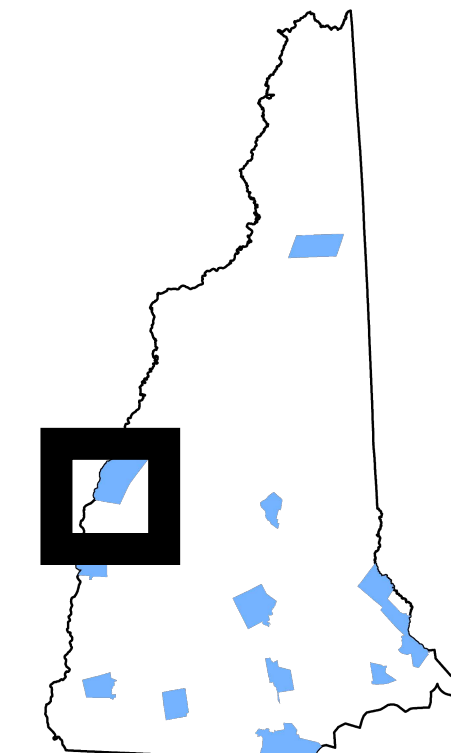
Single-family
Avg. VPA: \$0.51 M



Commercial
VPA: \$1.1 M



Mixed-use
VPA: \$6.2 M



Avg. VPA: \$90,509

Lebanon Examples

Land Use Productivity



Multi-family
Avg. VPA: \$1.2 M



Single-family
Avg. VPA: \$0.51 M



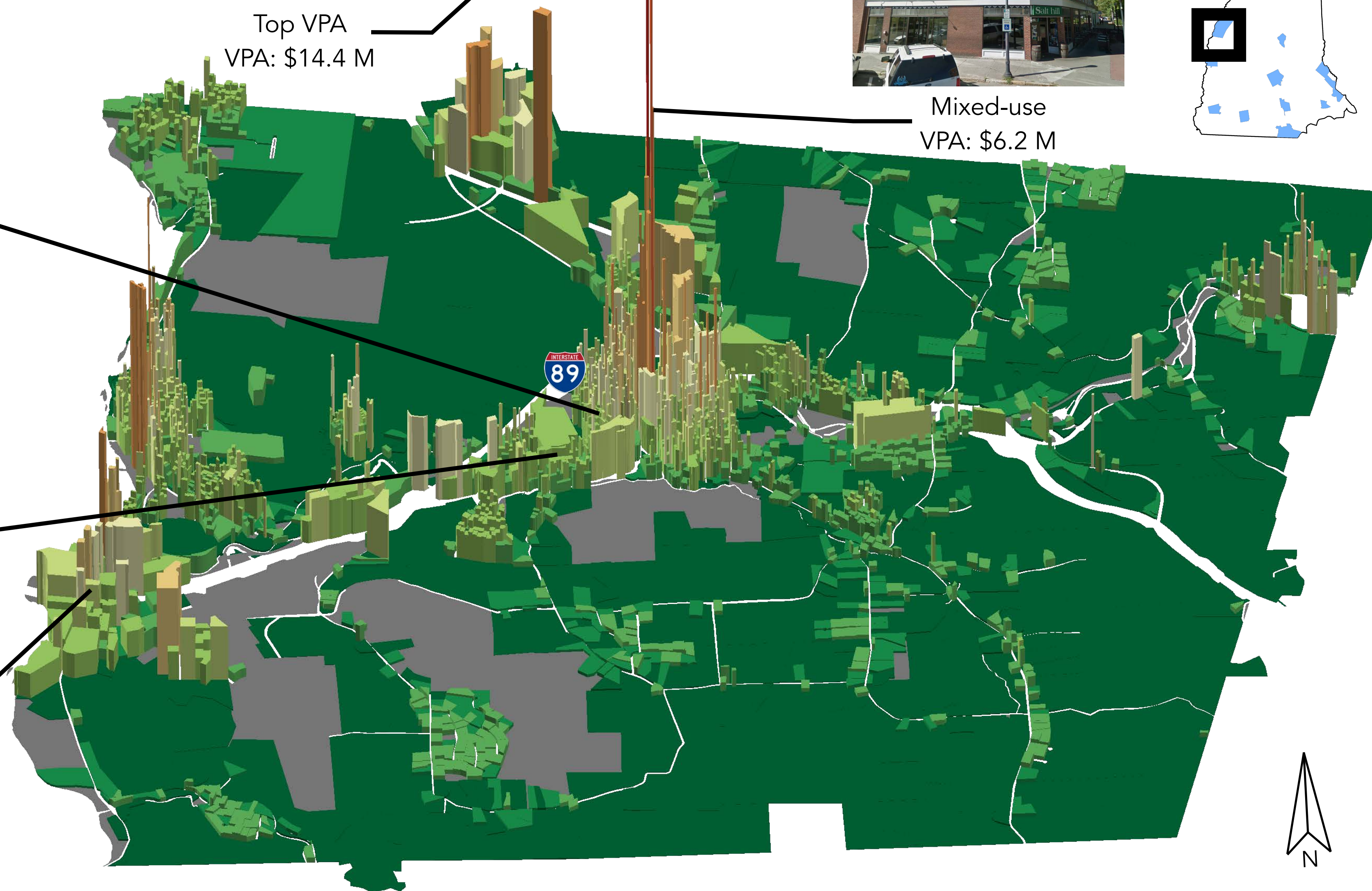
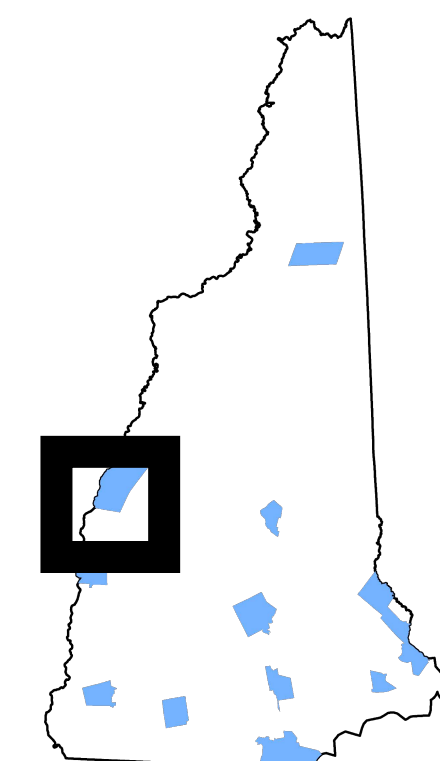
Commercial
VPA: \$1.1 M



Top VPA
VPA: \$14.4 M



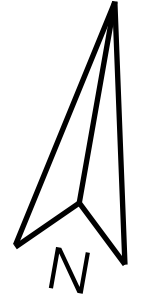
Mixed-use
VPA: \$6.2 M



Avg. VPA: \$90,509

Lebanon Examples

Land Use Productivity



Commercial
VPA: \$1.1 M



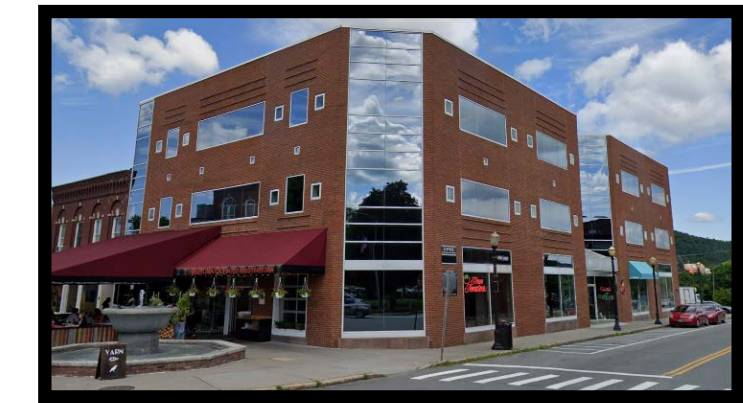
Single-family
Avg. VPA: \$0.51 M



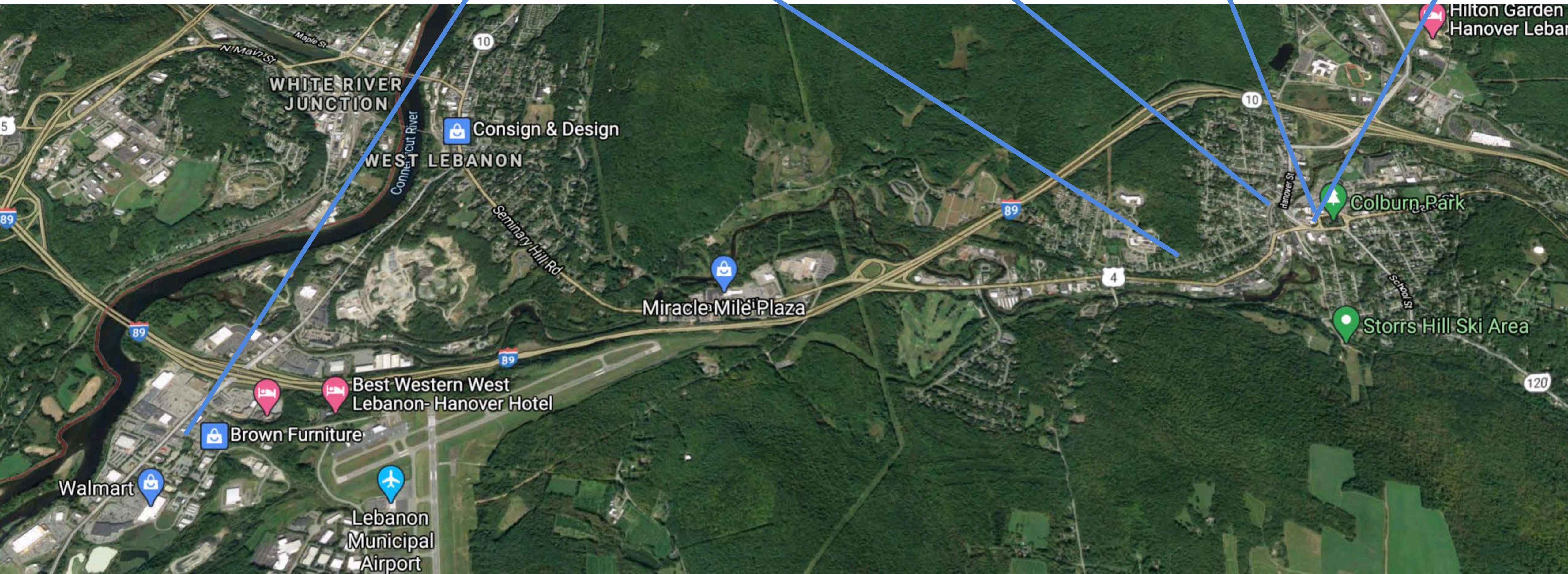
Multi-family
Avg. VPA: \$1.2 M



Peak VPA
VPA: \$14.4 M



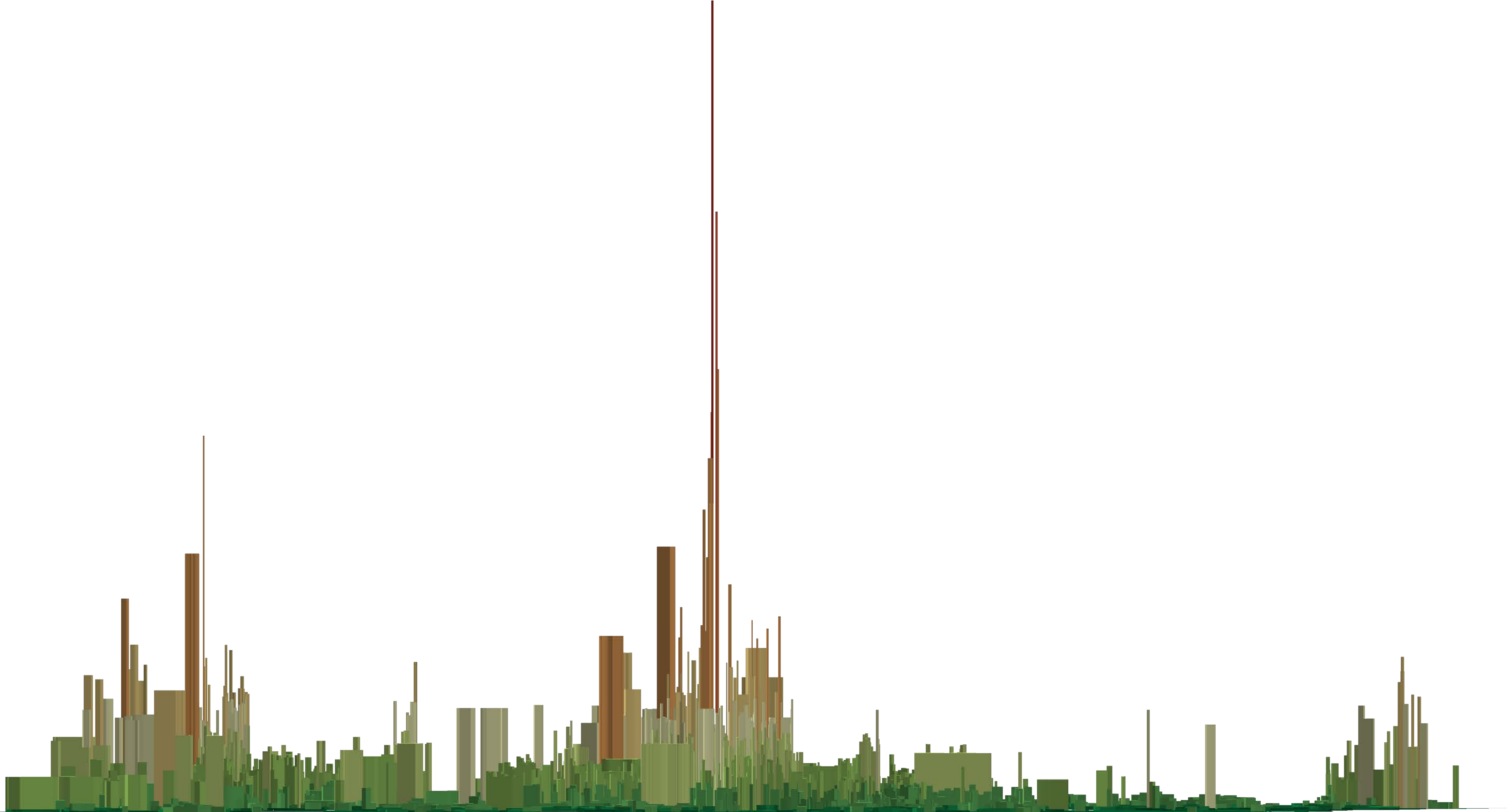
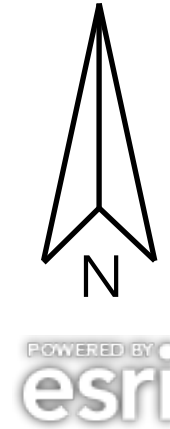
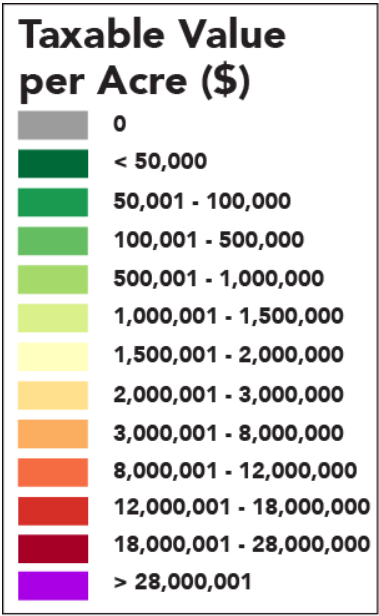
Mixed-use
VPA: \$6.2 M



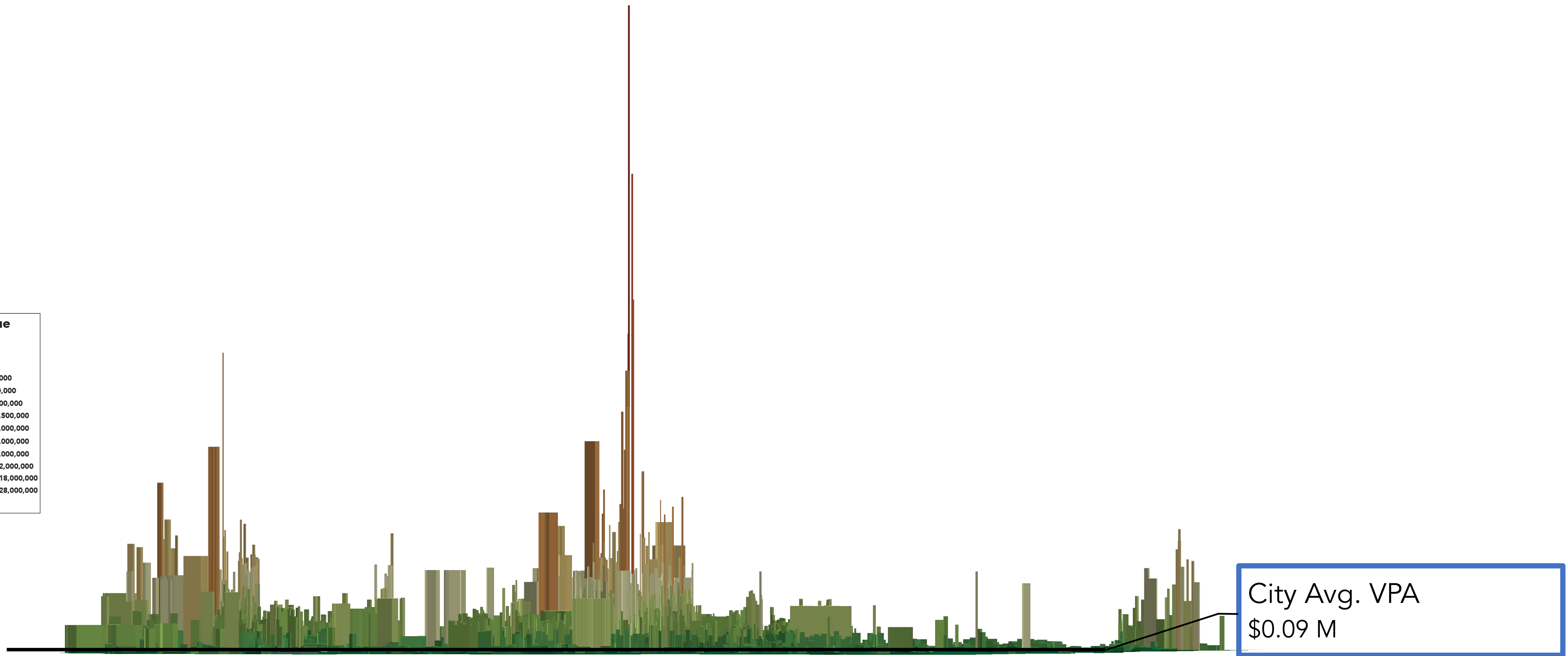
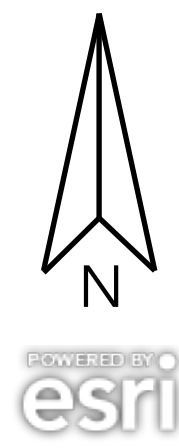
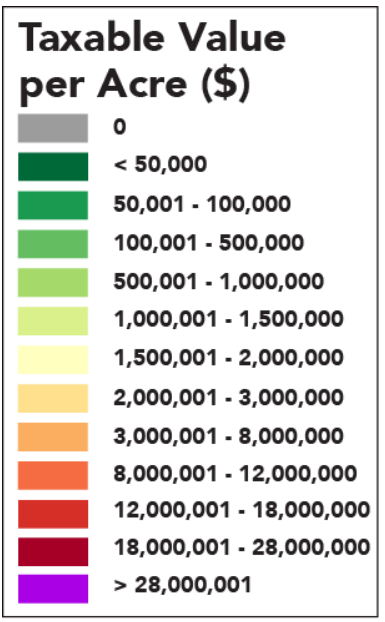


Productivity

Geospatial Analysis



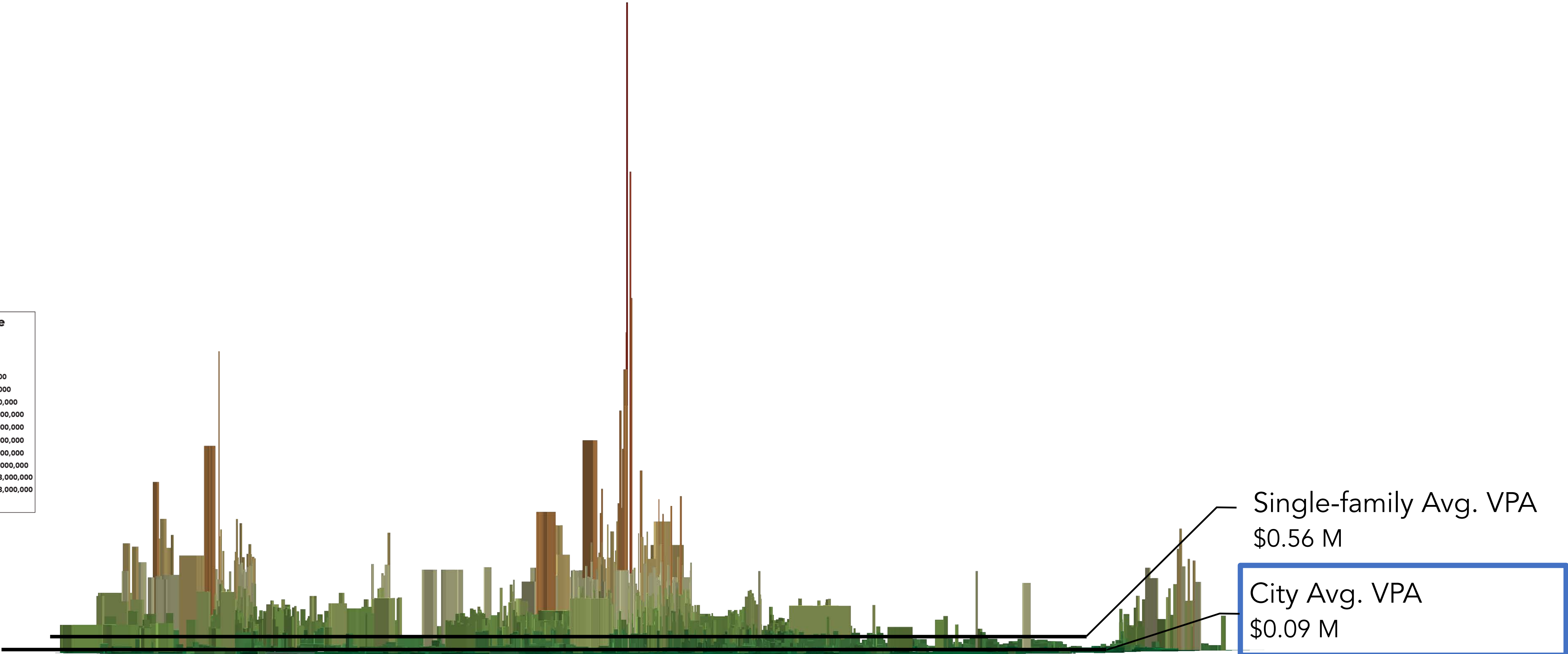
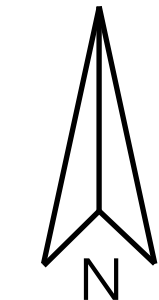
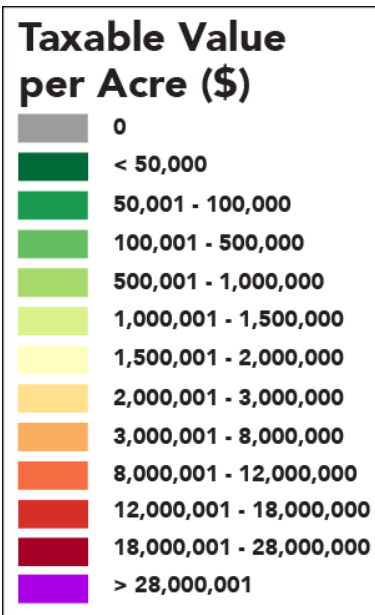
*Not Perfectly to Scale



*Not Perfectly to Scale

Lebanon Profile

Land Use Productivity



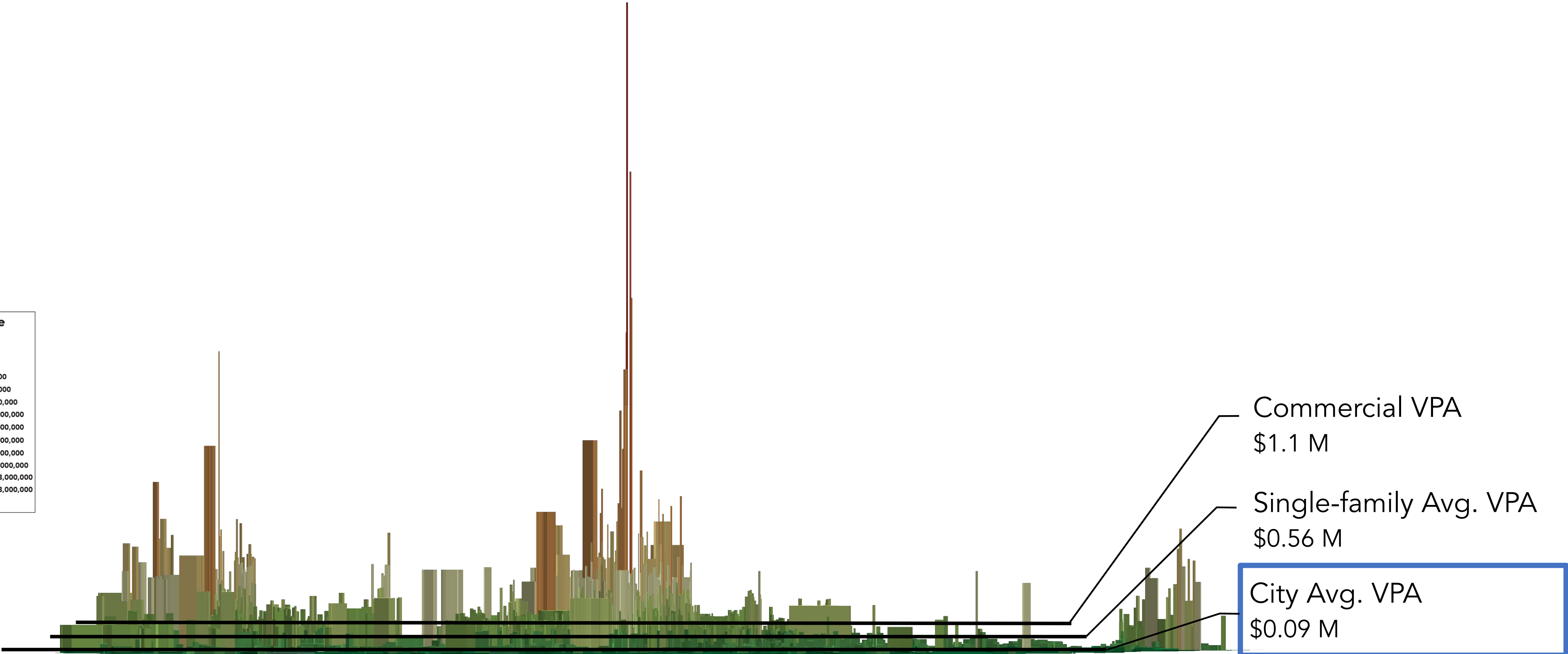
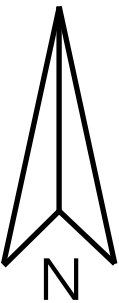
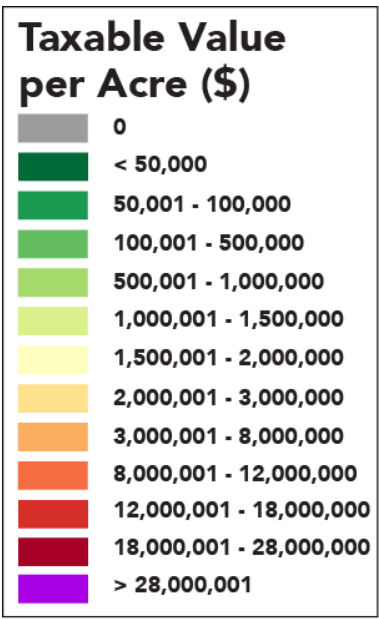
Single-family Avg. VPA
\$0.56 M

City Avg. VPA
\$0.09 M

*Not Perfectly to Scale

Lebanon Profile

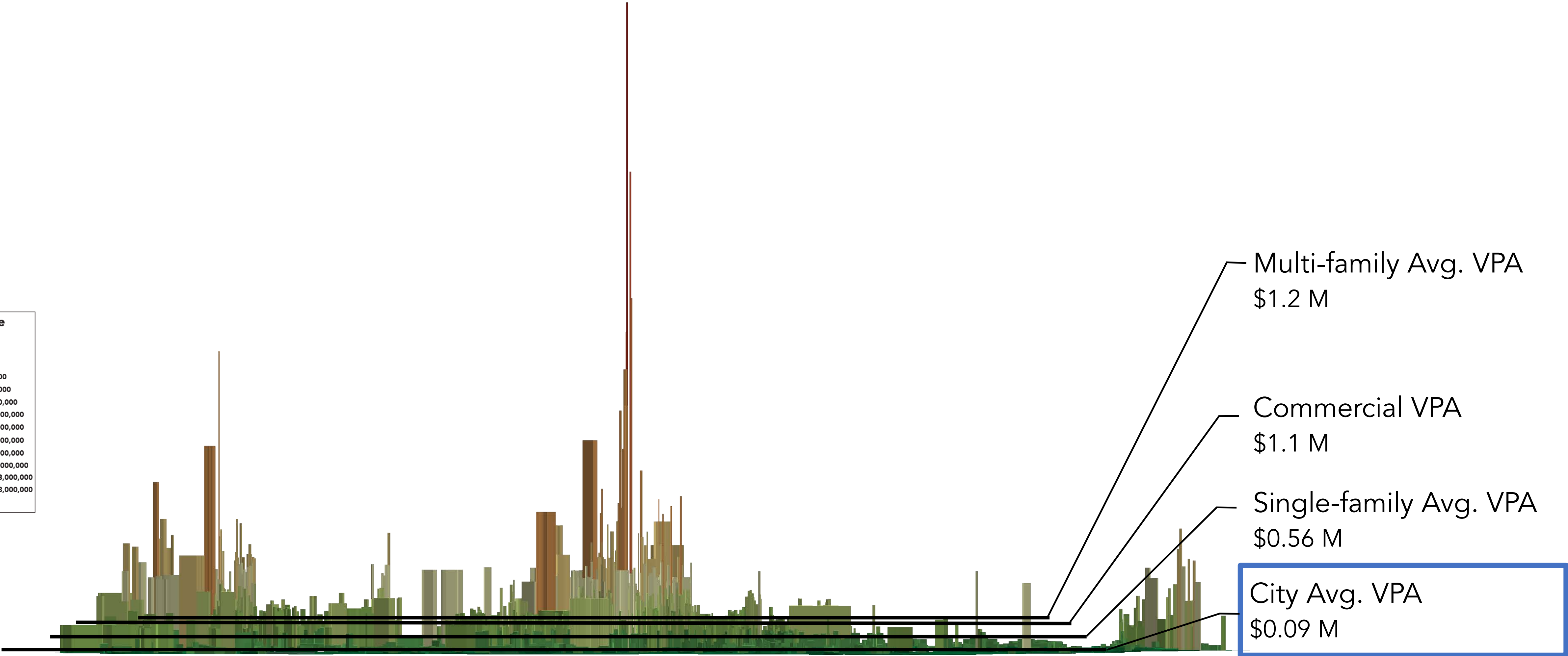
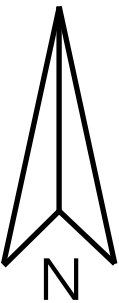
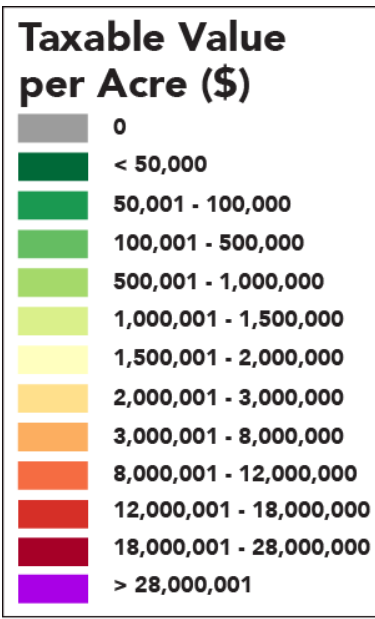
Land Use Productivity



*Not Perfectly to Scale

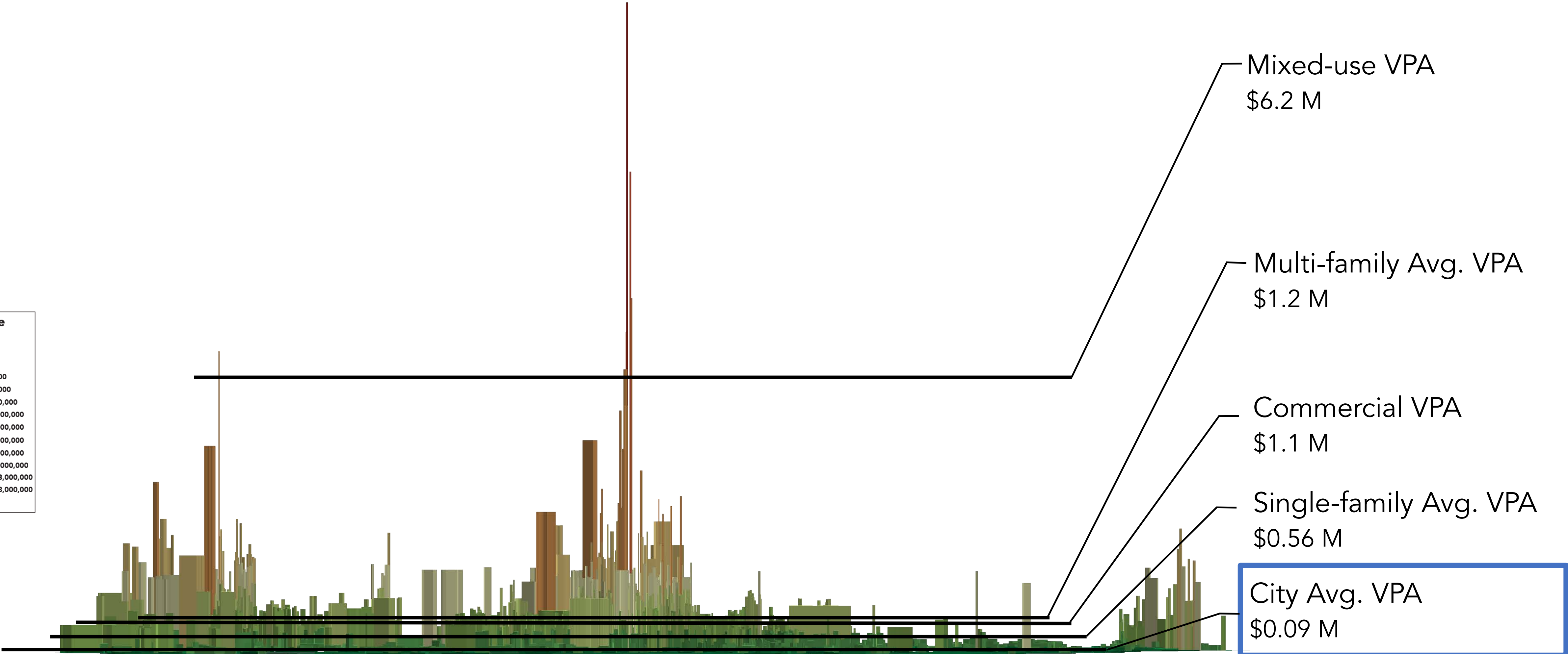
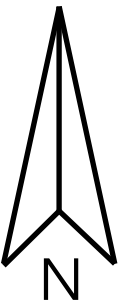
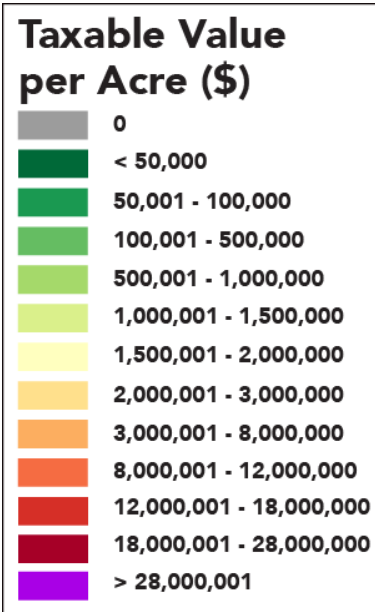
Lebanon Profile

Land Use Productivity



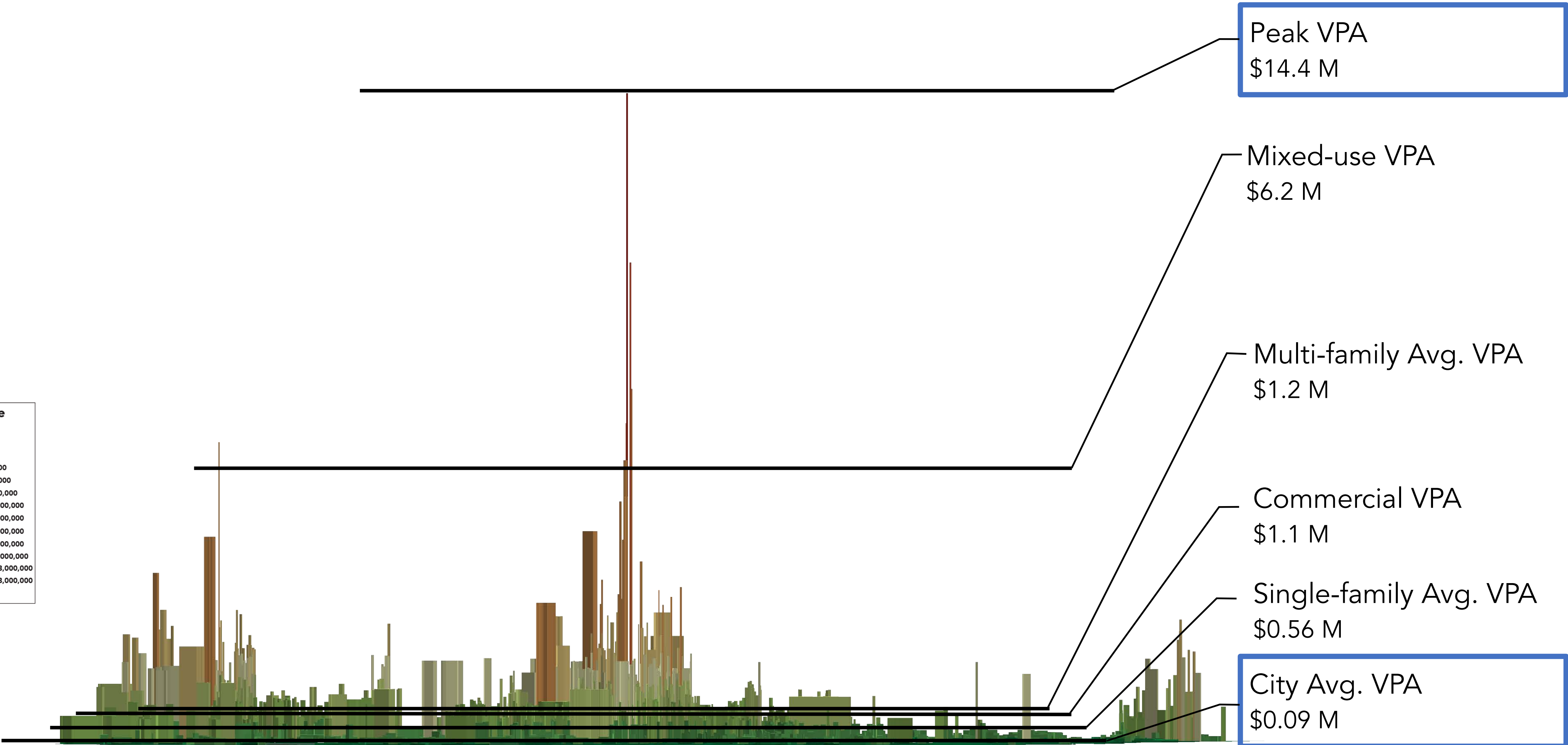
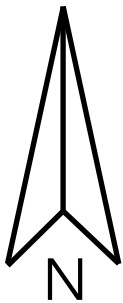
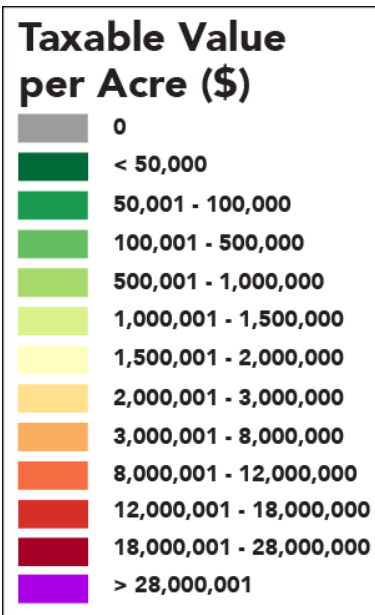
Lebanon Profile

Land Use Productivity

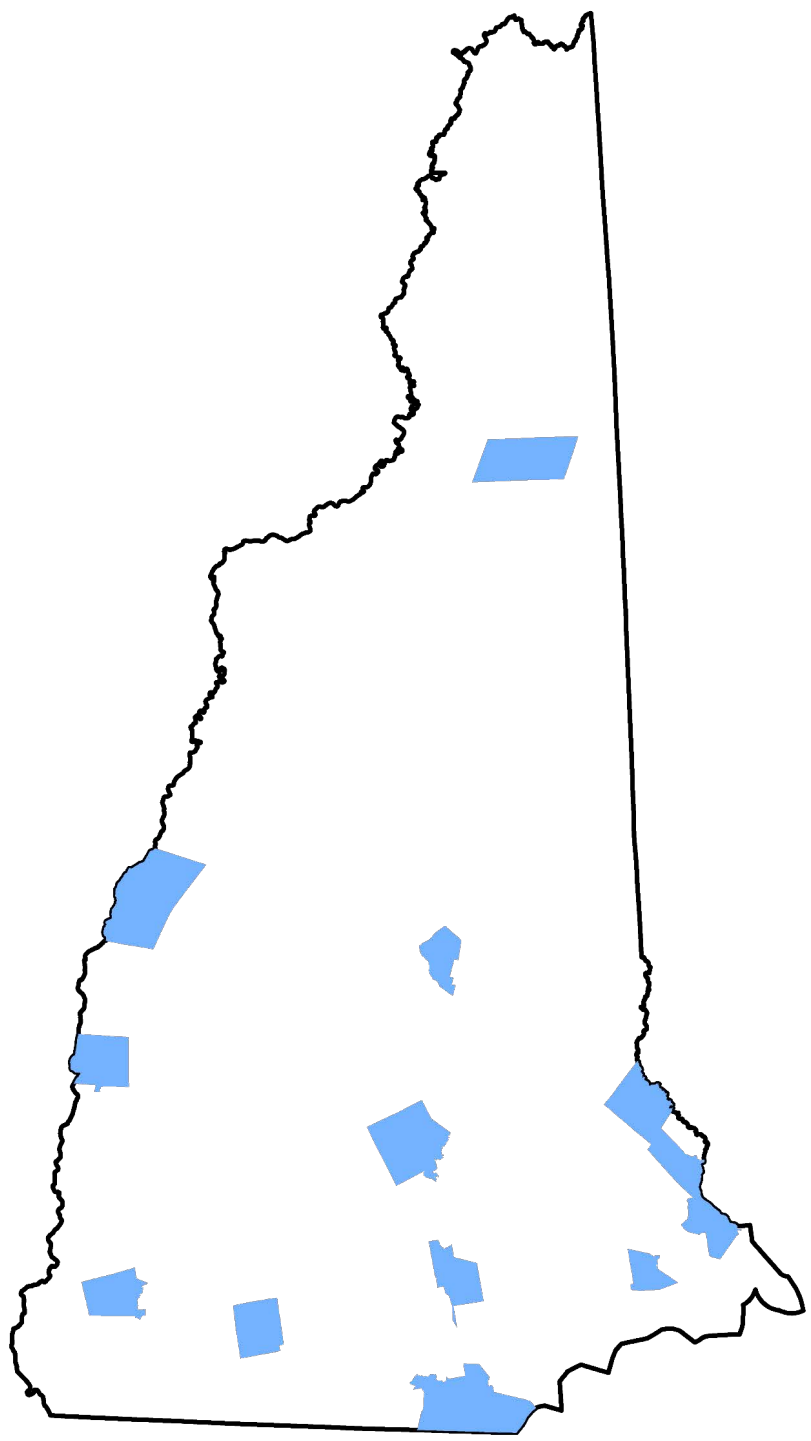


Lebanon Profile

Land Use Productivity



*Not Perfectly to Scale

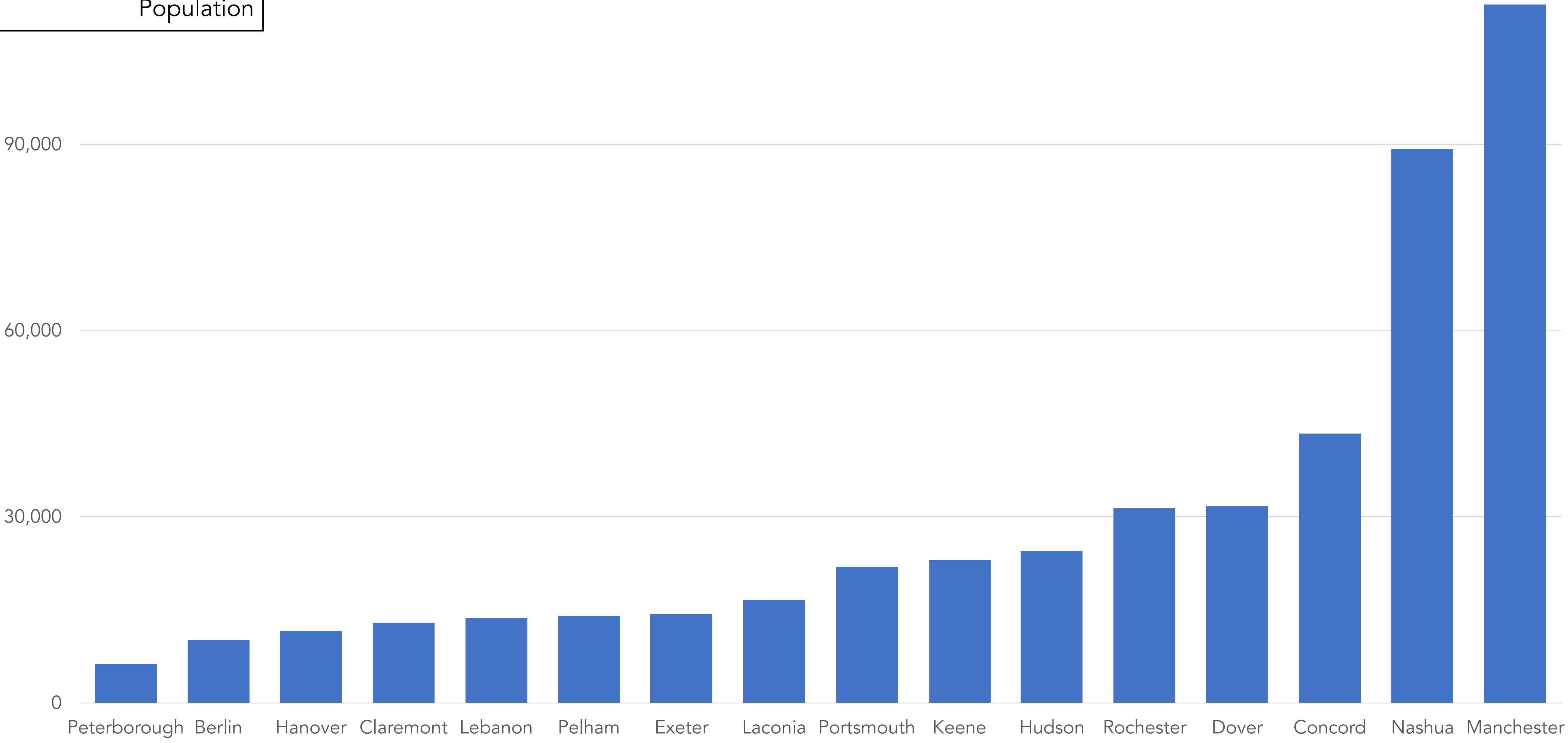


Comparing Communities

15 municipalities from across New Hampshire

Comparisons

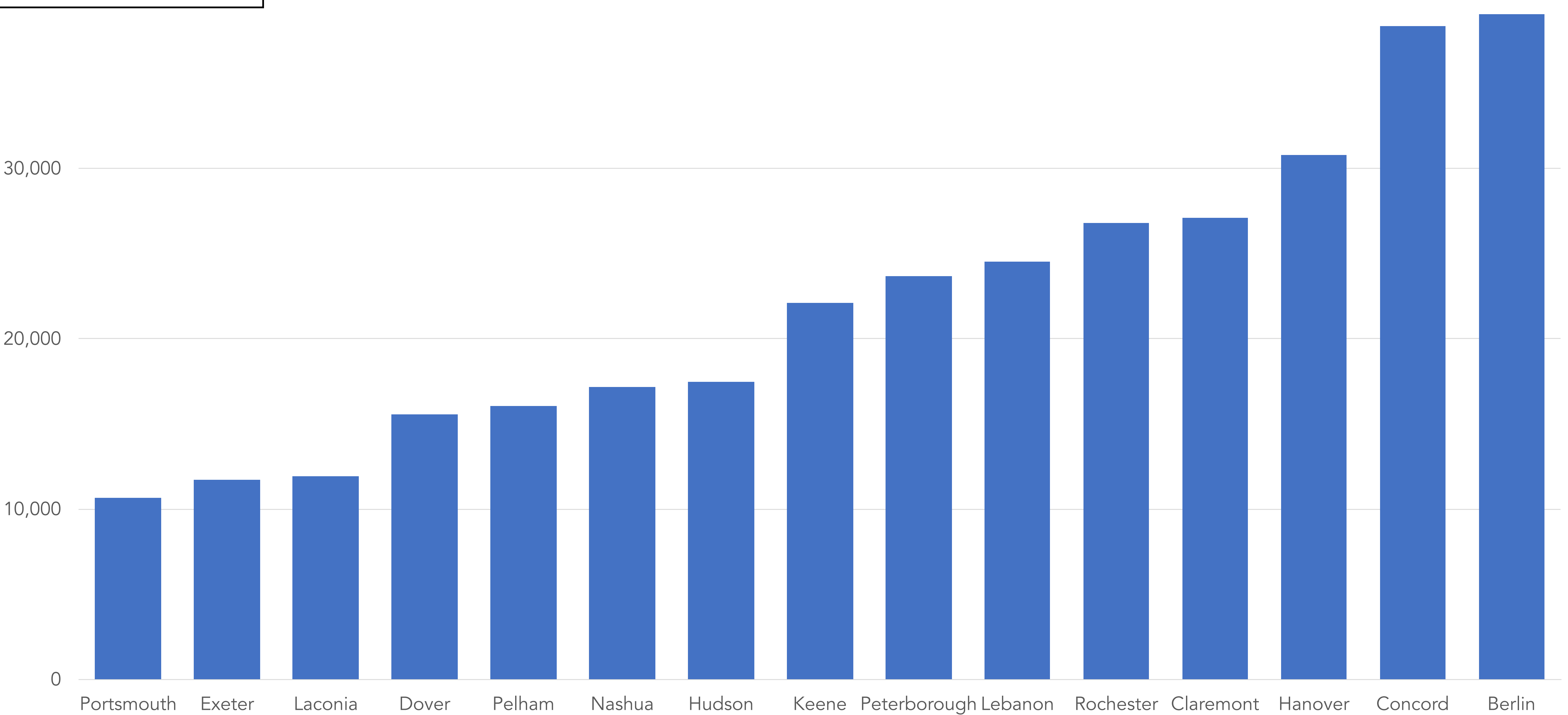
Population



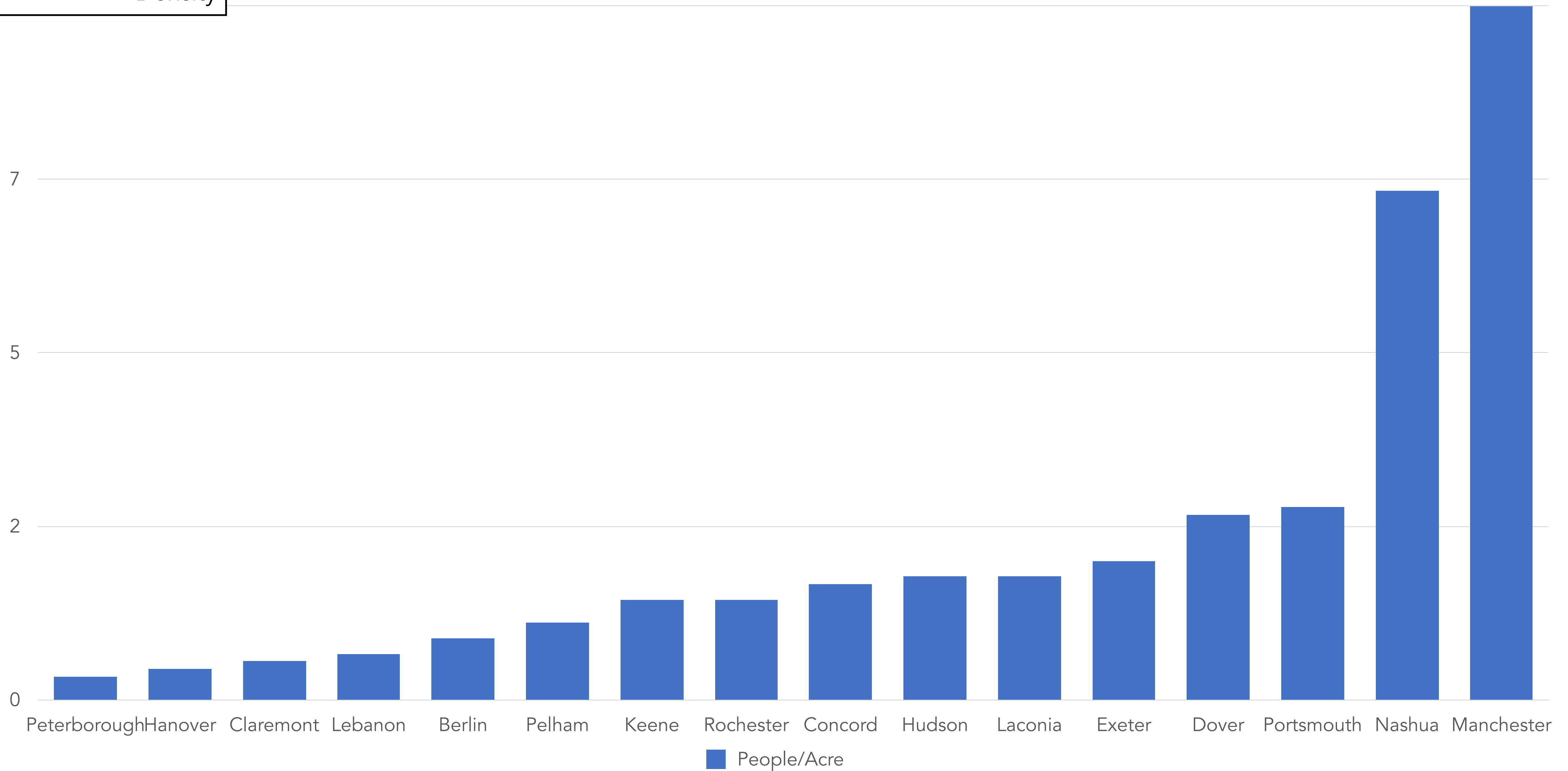
Source: New Hampshire Department of Revenue Administration 2019

Comparisons

Total Area (acres)

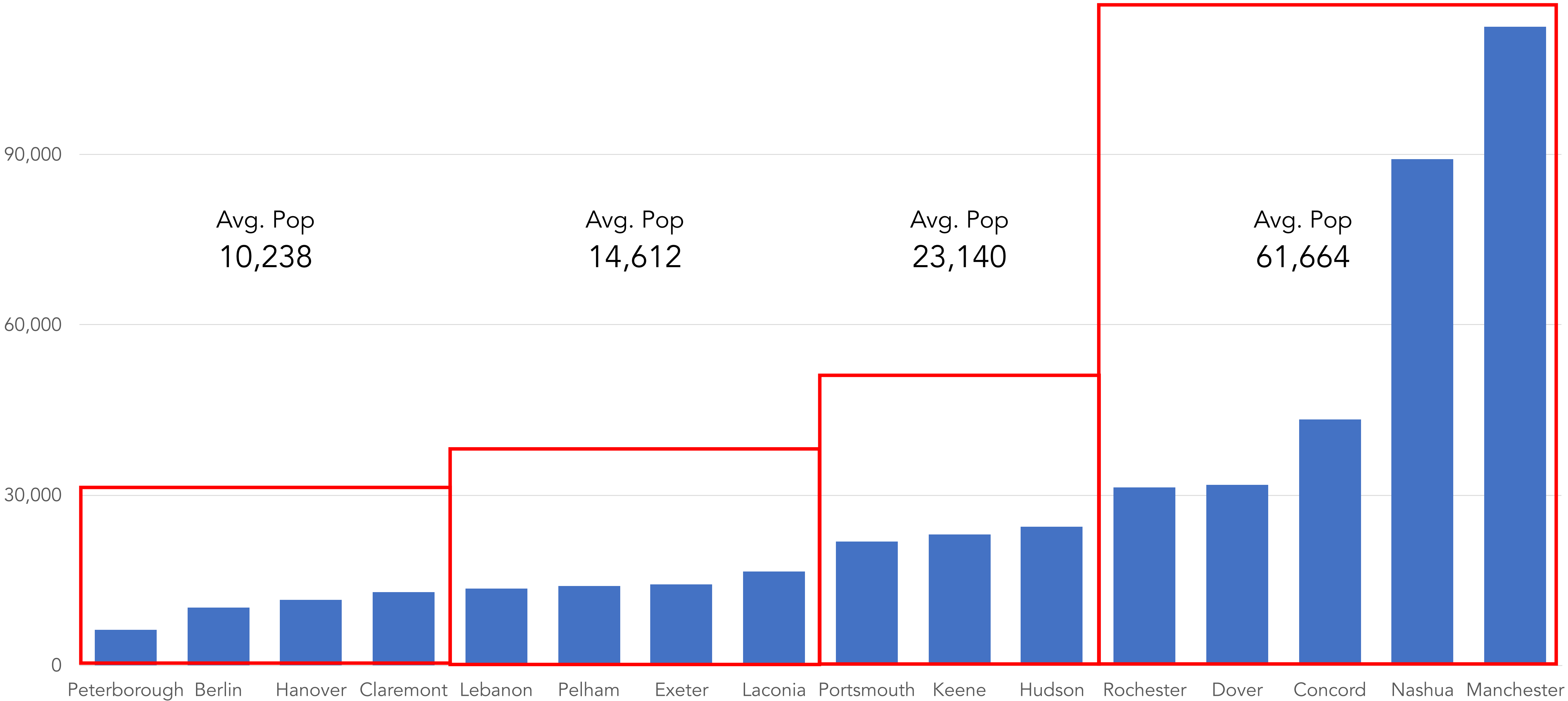


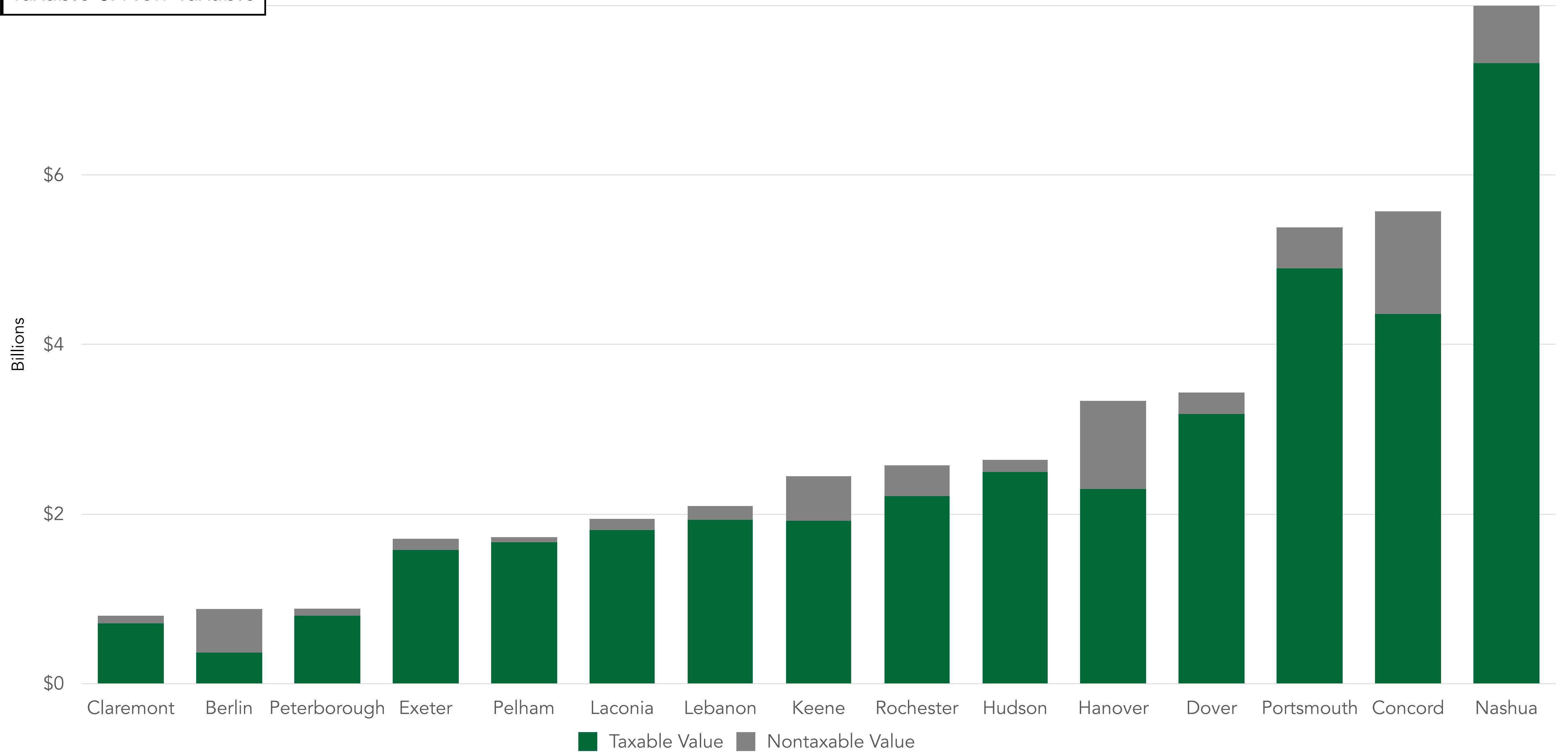
Source: New Hampshire Department of Revenue Administration 2019

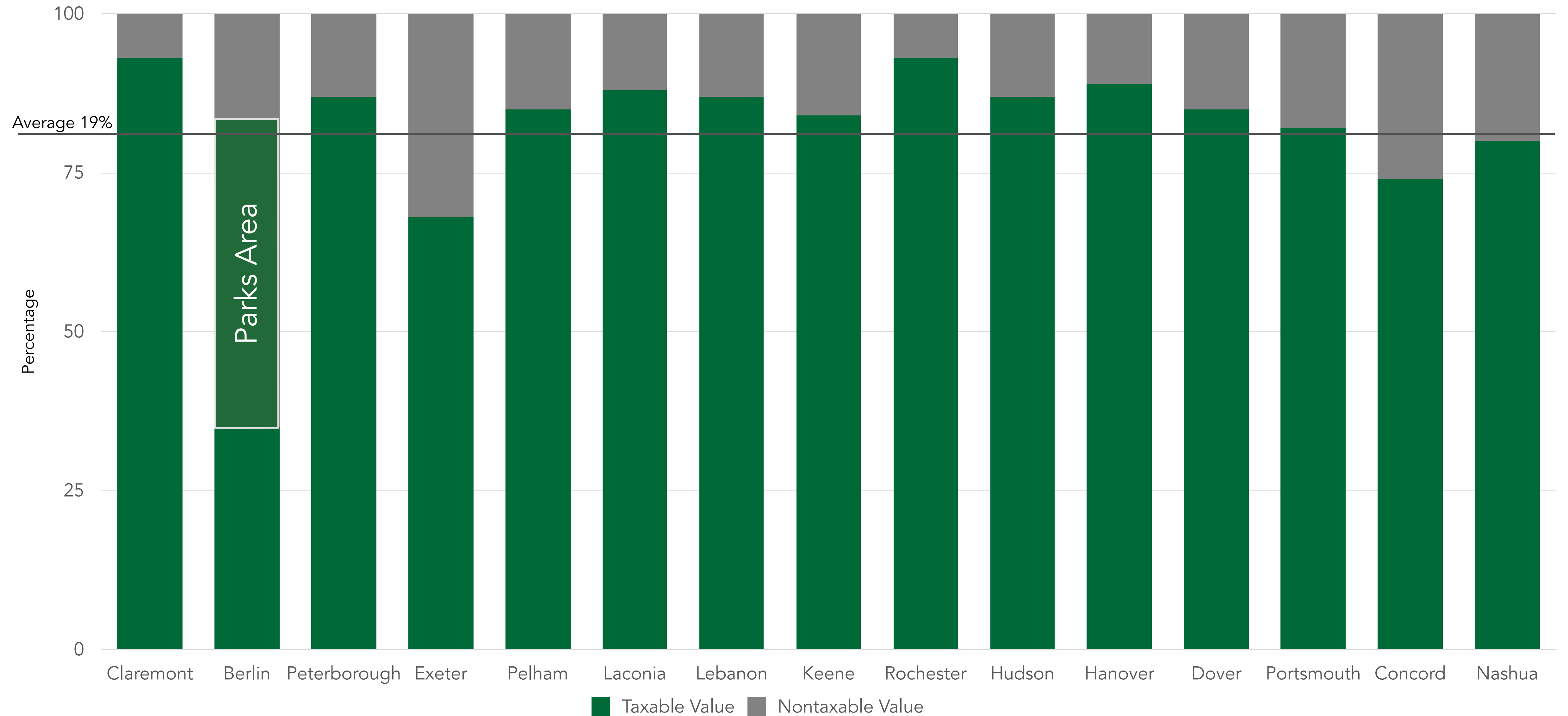


Peer Groups

Population



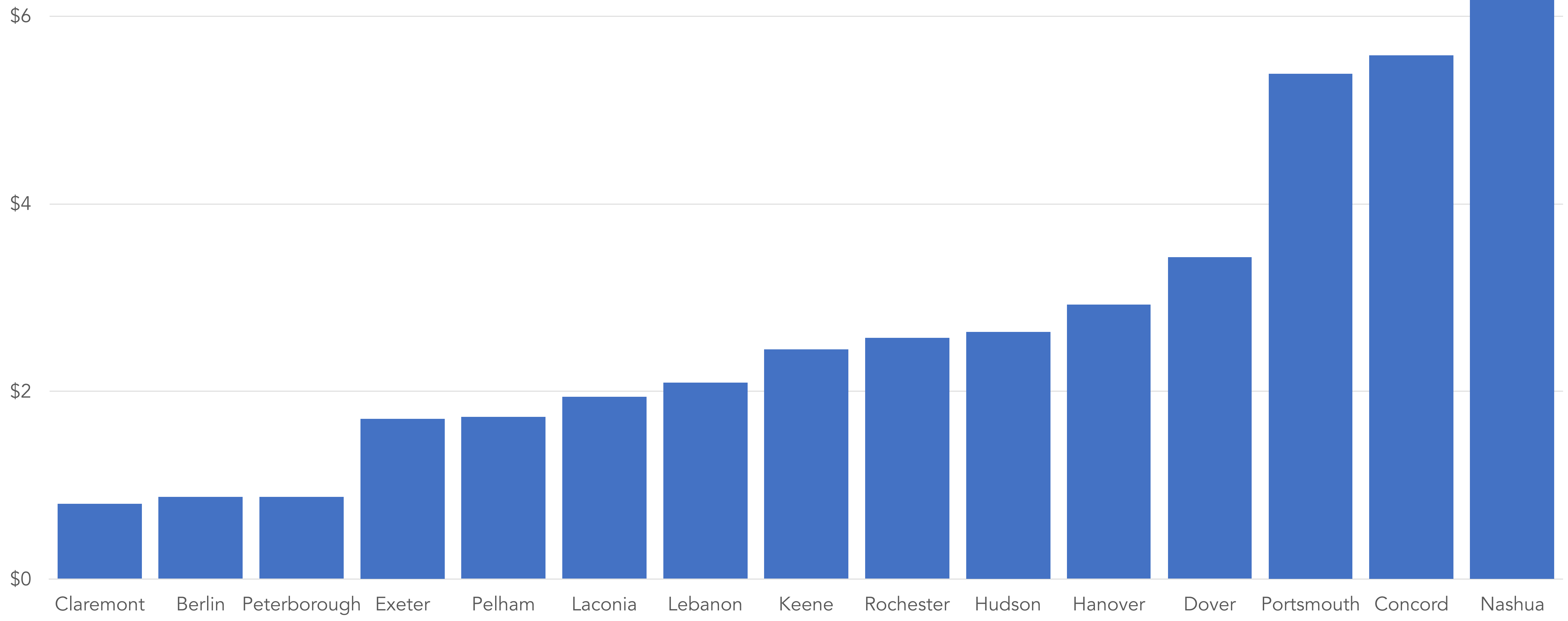


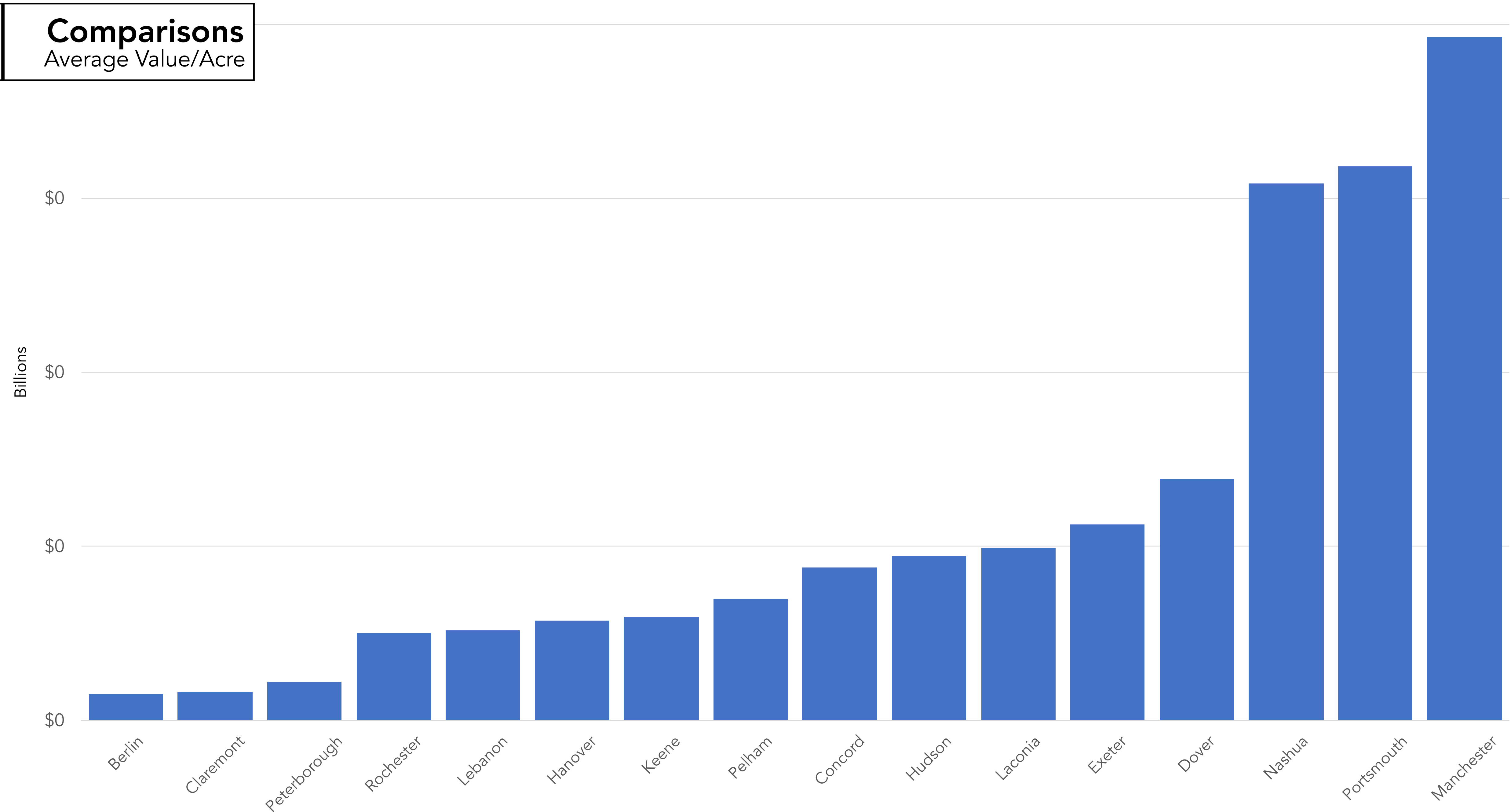


Comparisons

Total Value

Billions

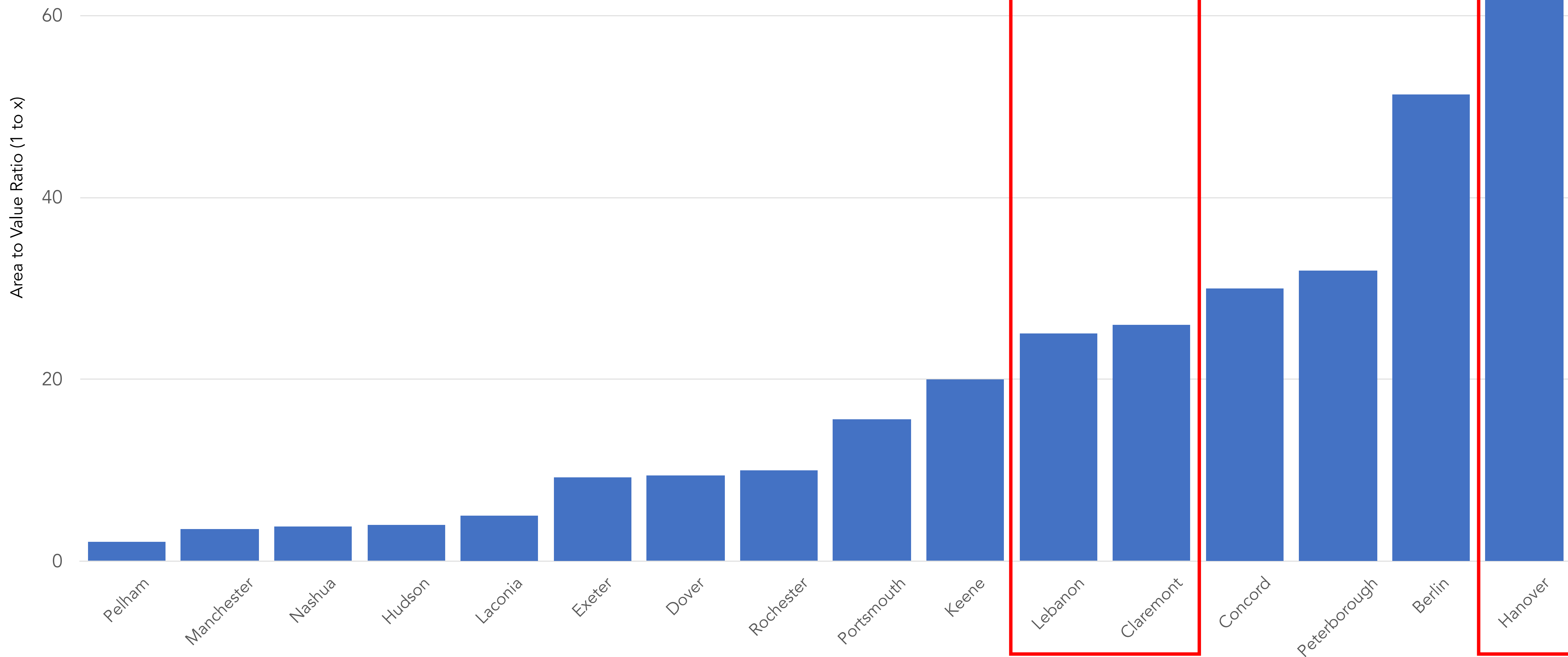




Source: New Hampshire Department of Revenue Administration 2019

Comparisons

Downtown to City Ratio



URBAN3

Comparisons

Density : Value

■ People/Acre

7

5

2

0

Peterborough
Hanover
Claremont
Lebanon
Berlin
Pelham
Keene
Rochester
Concord
Hudson
Laconia
Exeter
Dover
Portsmouth
Nashua
Manchester

■ Value/Acre

\$0

\$0

\$0

\$0

\$0

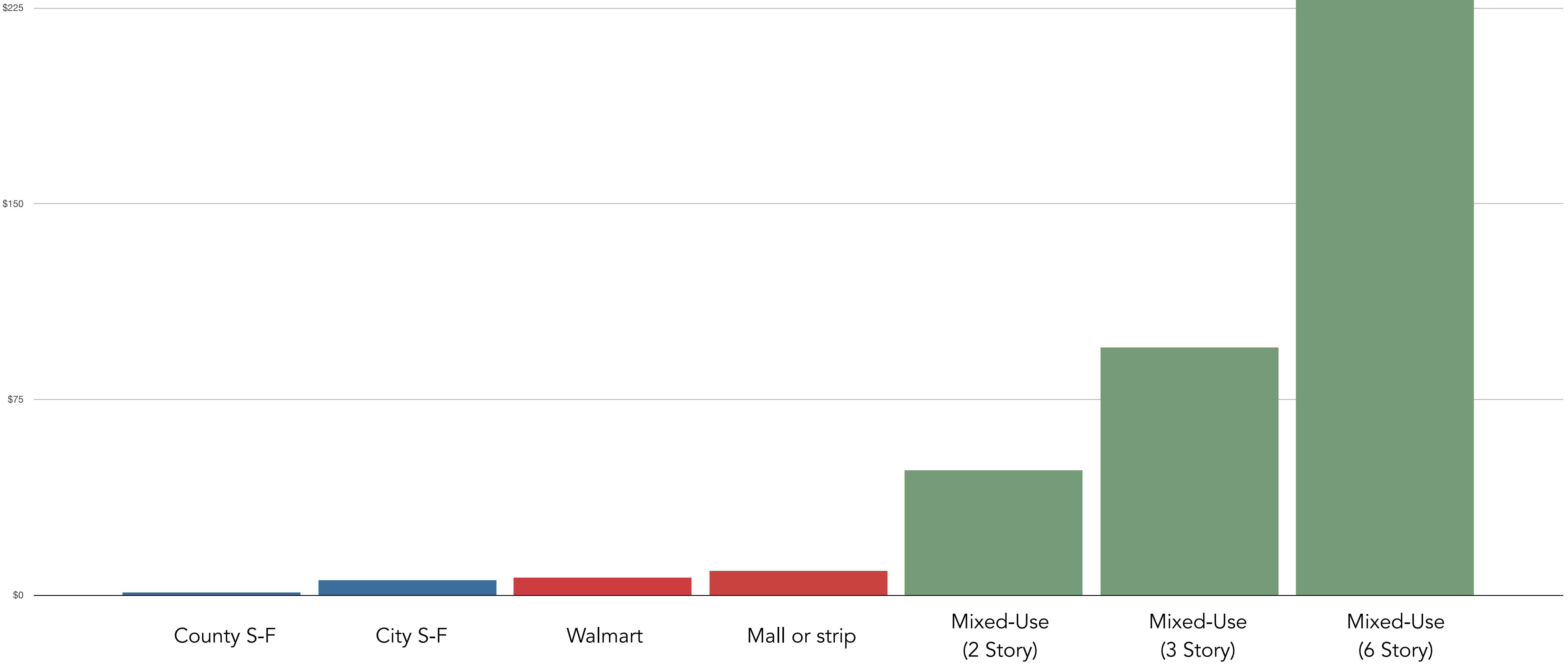
Billions

Berlin
Claremont
Peterborough
Rochester
Lebanon
Hanover
Keene
Pelham
Concord
Hudson
Laconia
Exeter
Dover
Nashua
Portsmouth
Manchester

County Property Taxes/Acre

Ratio Difference of 60 City Sample Set, in 21 States (+ a Province)

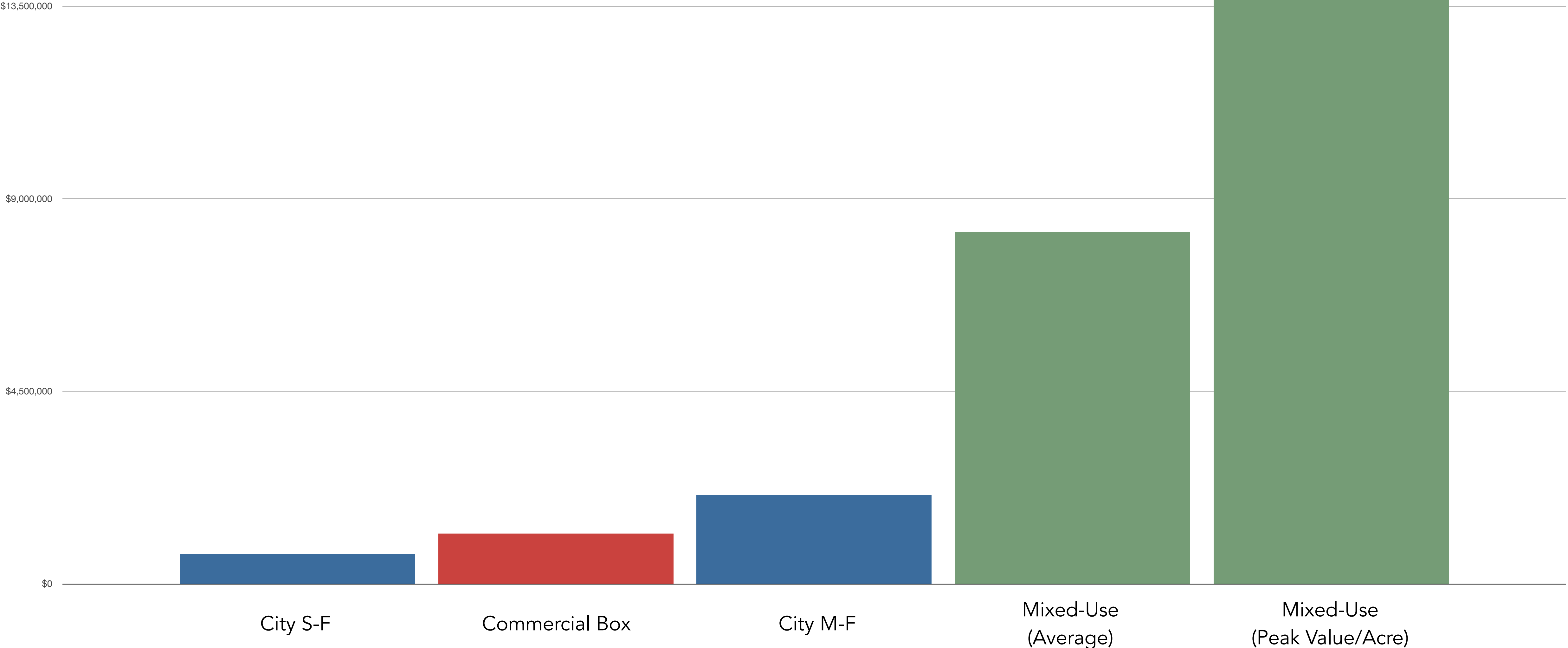
- Residential
- Commercial
- Mixed-Use

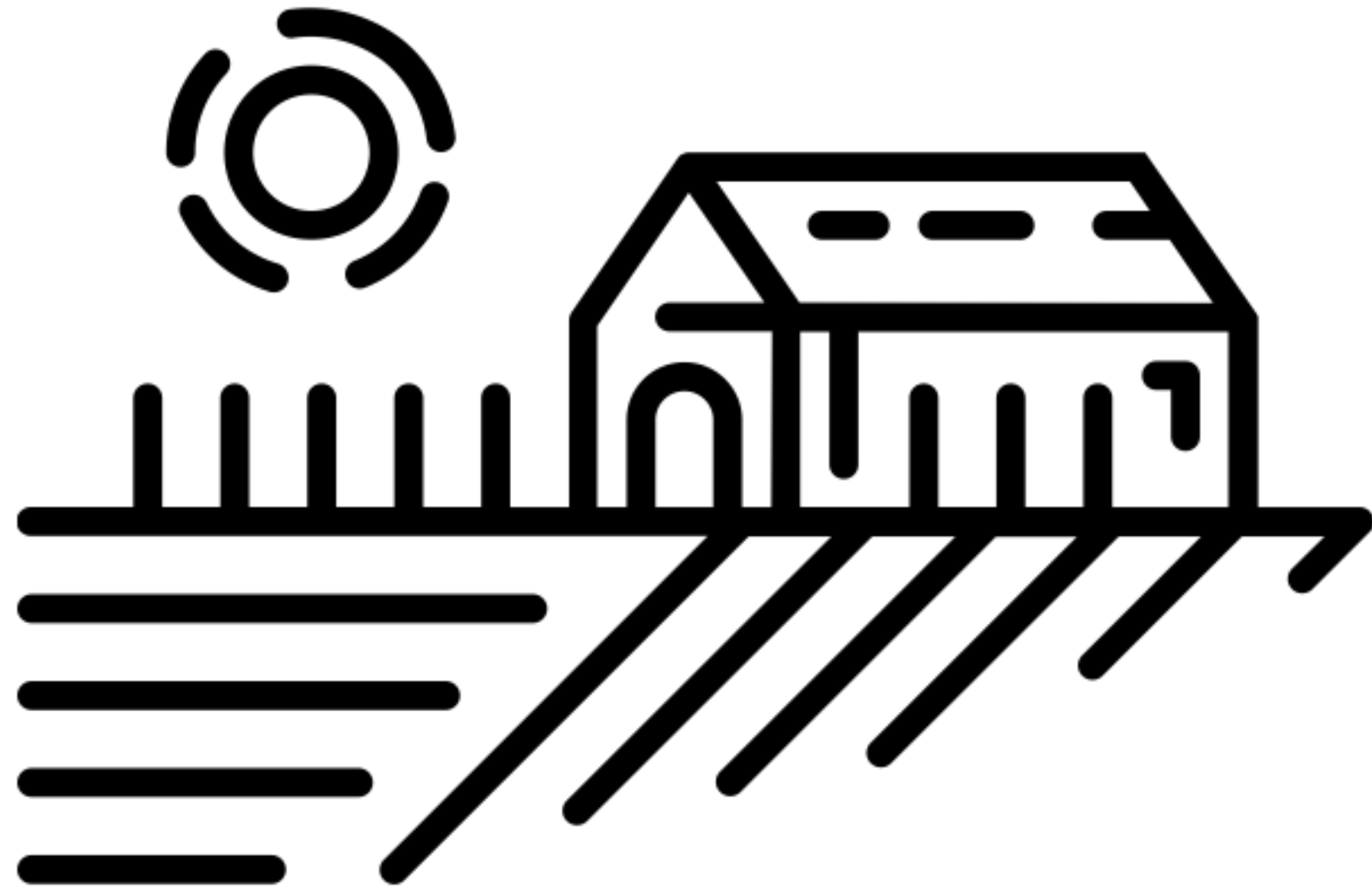


Property Value/Acre

Ratio Difference of New Hampshire Sample Set

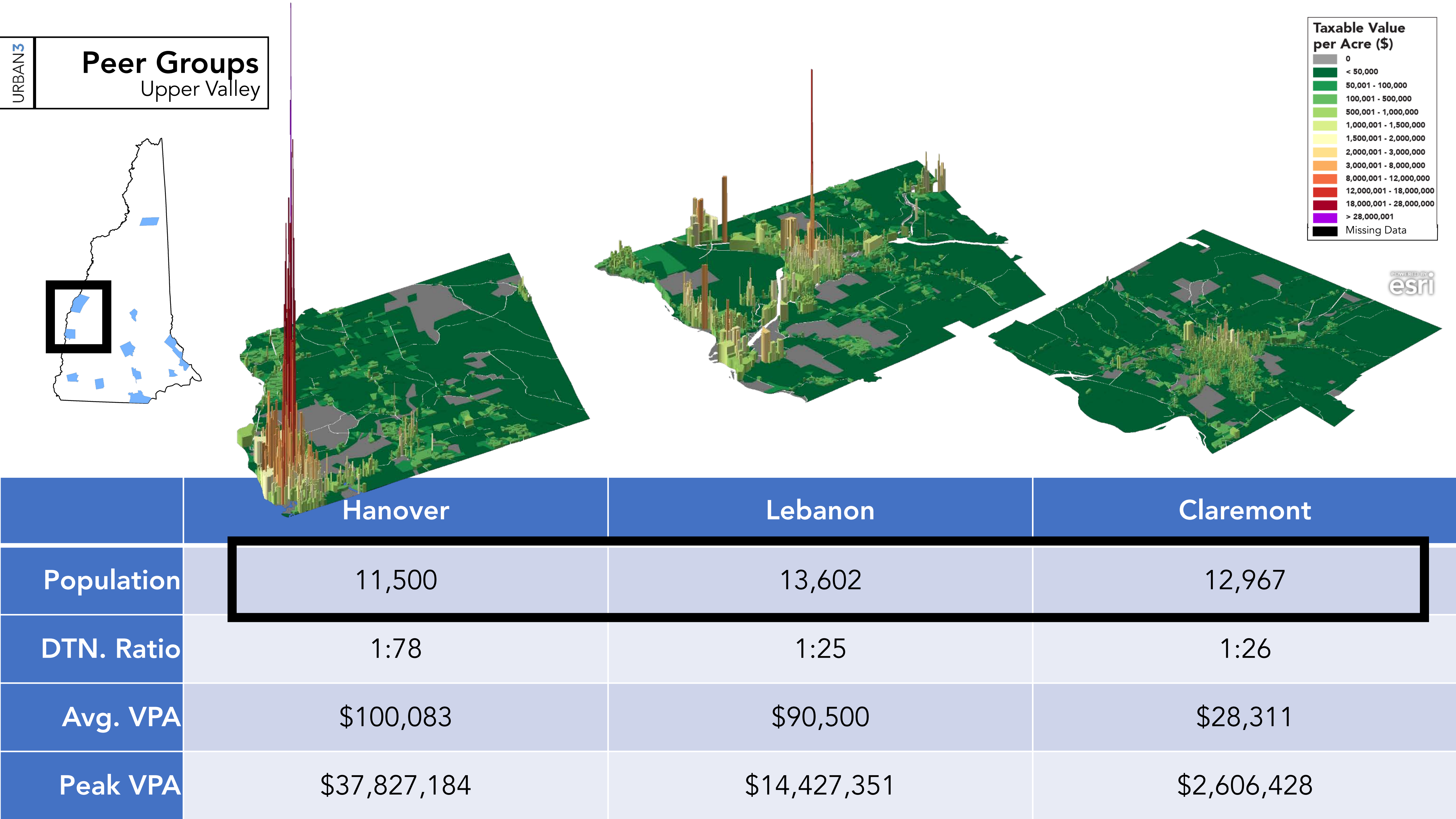
- Residential
- Commercial
- Mixed-Use

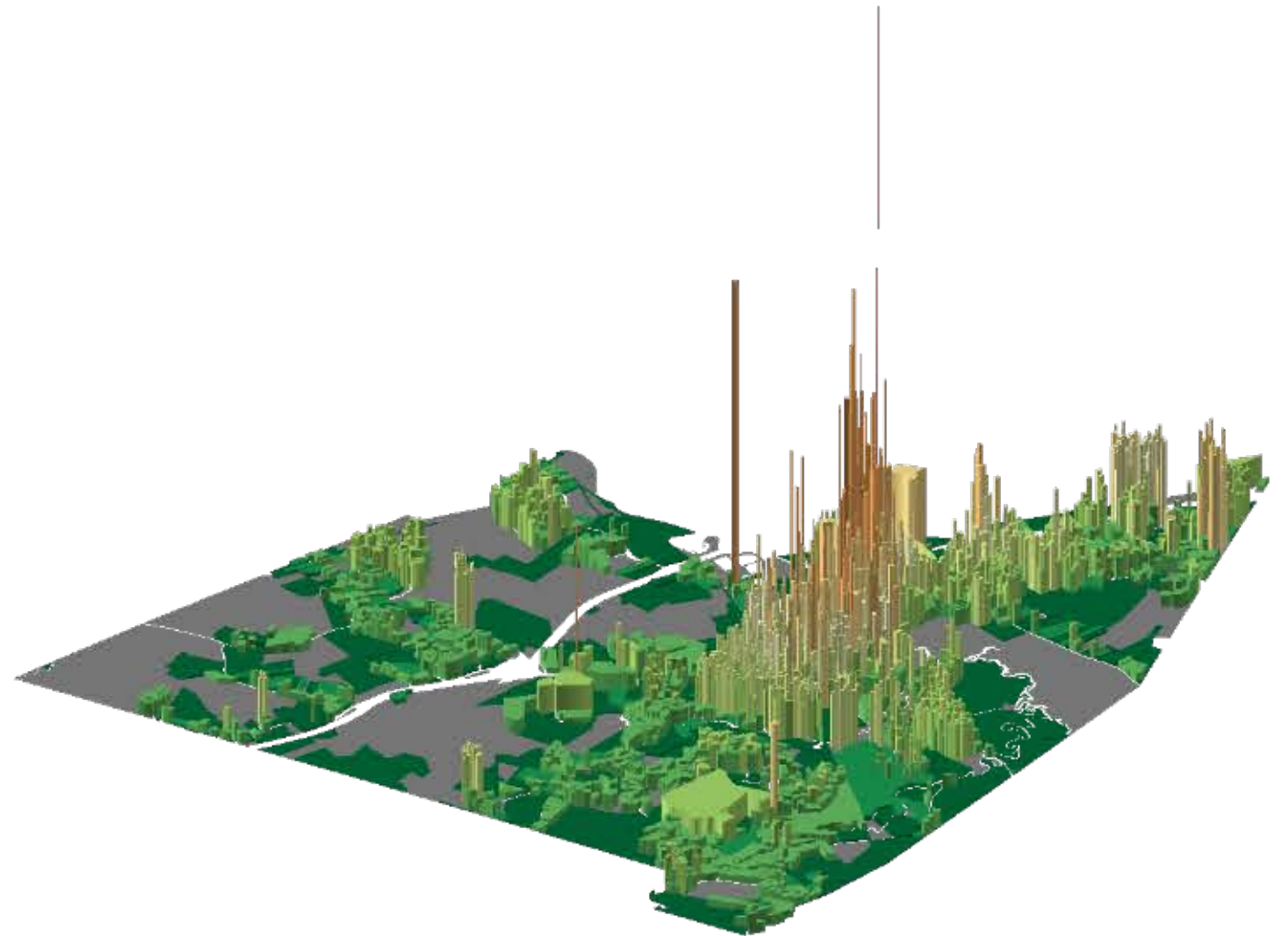
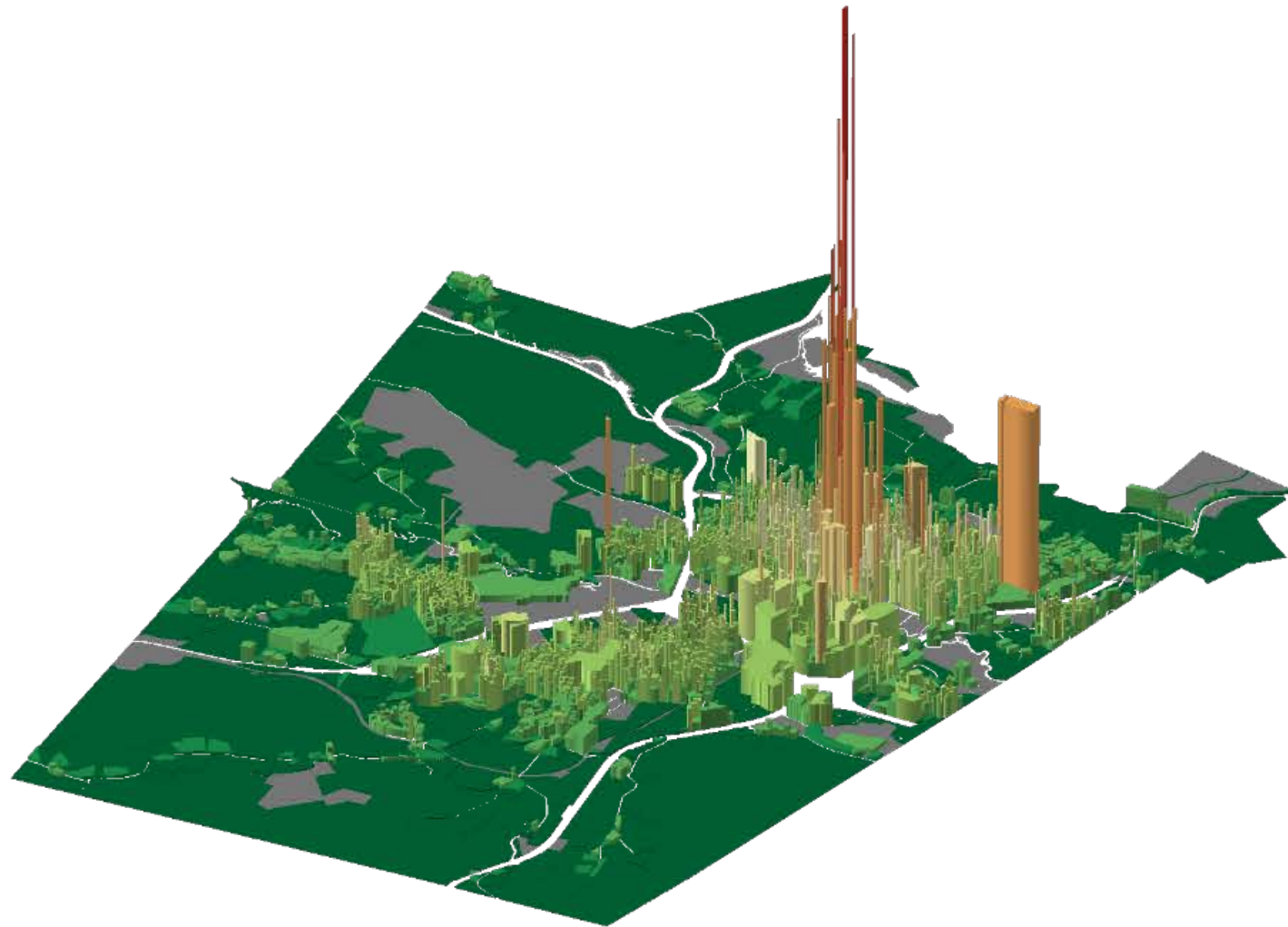
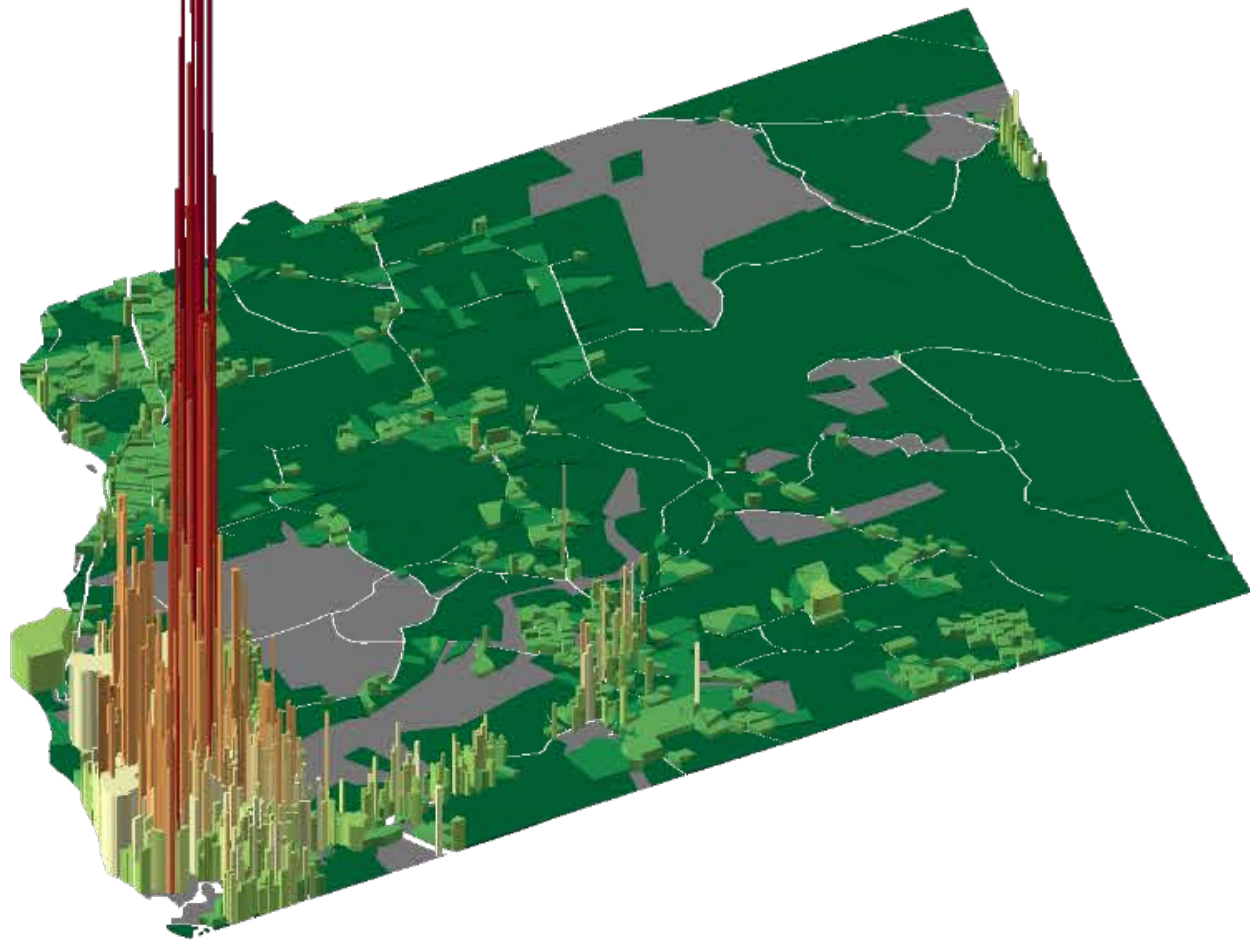
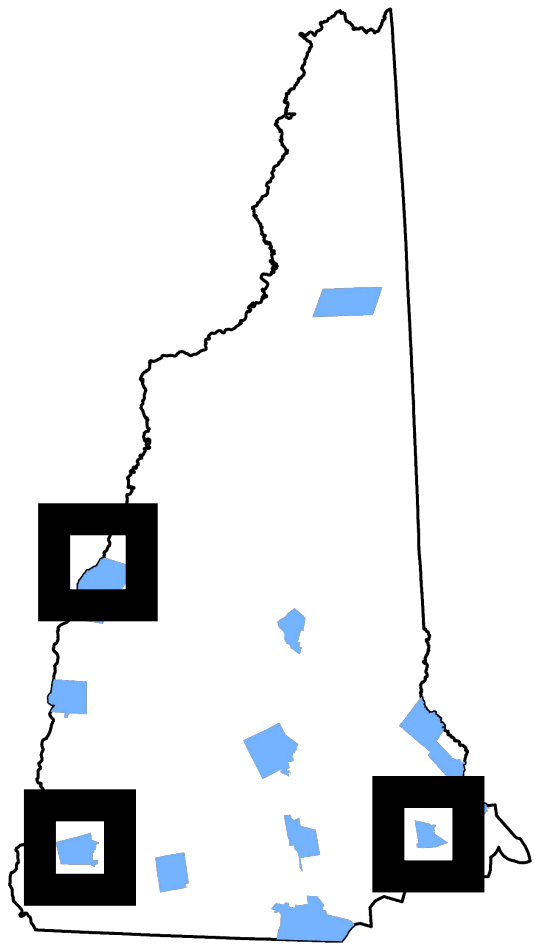




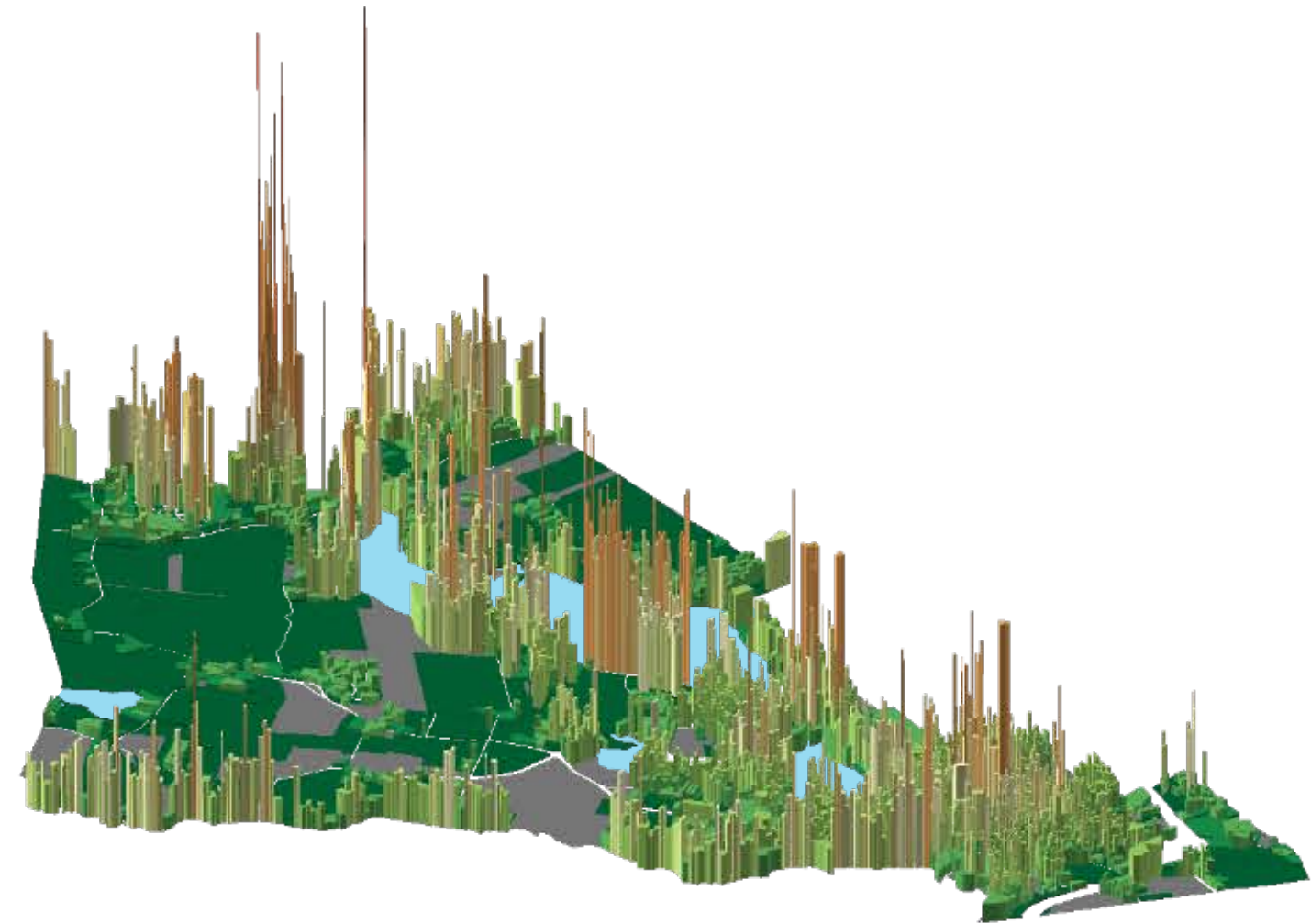
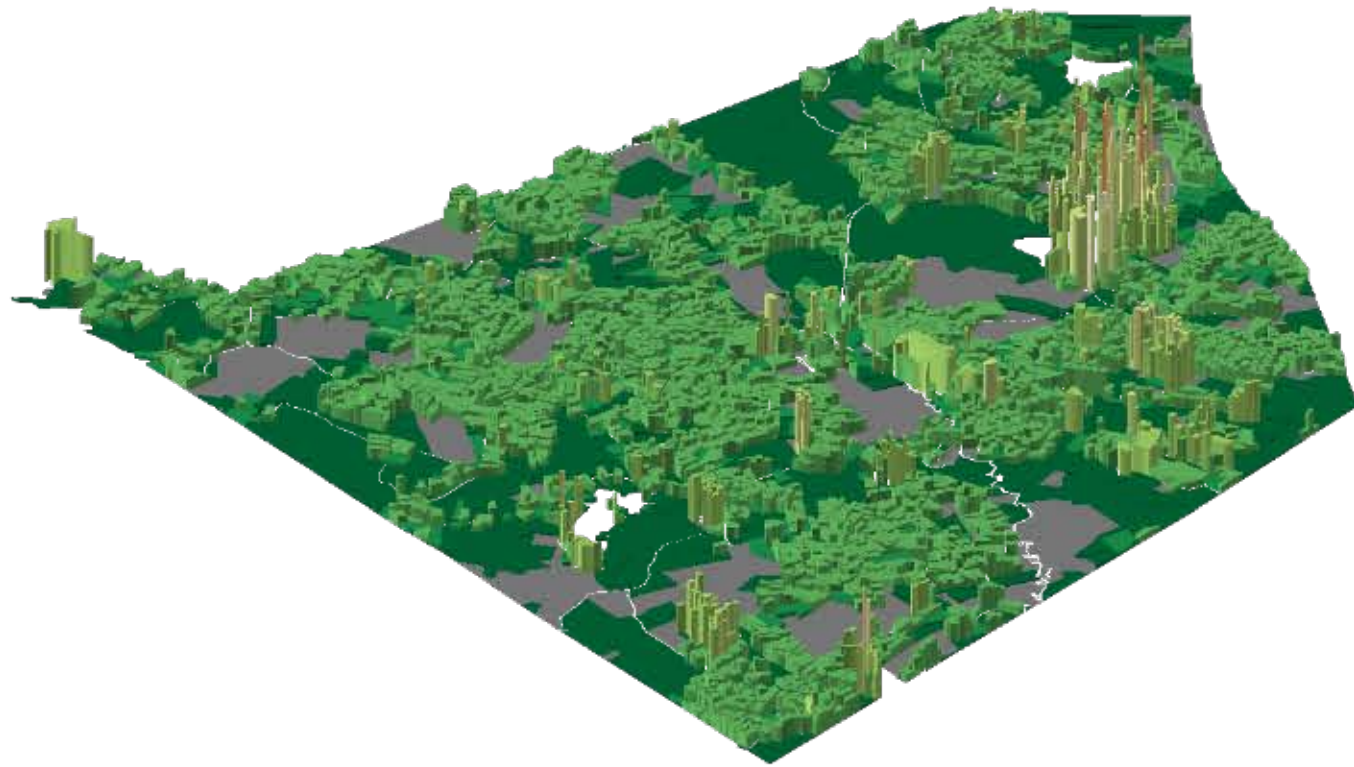
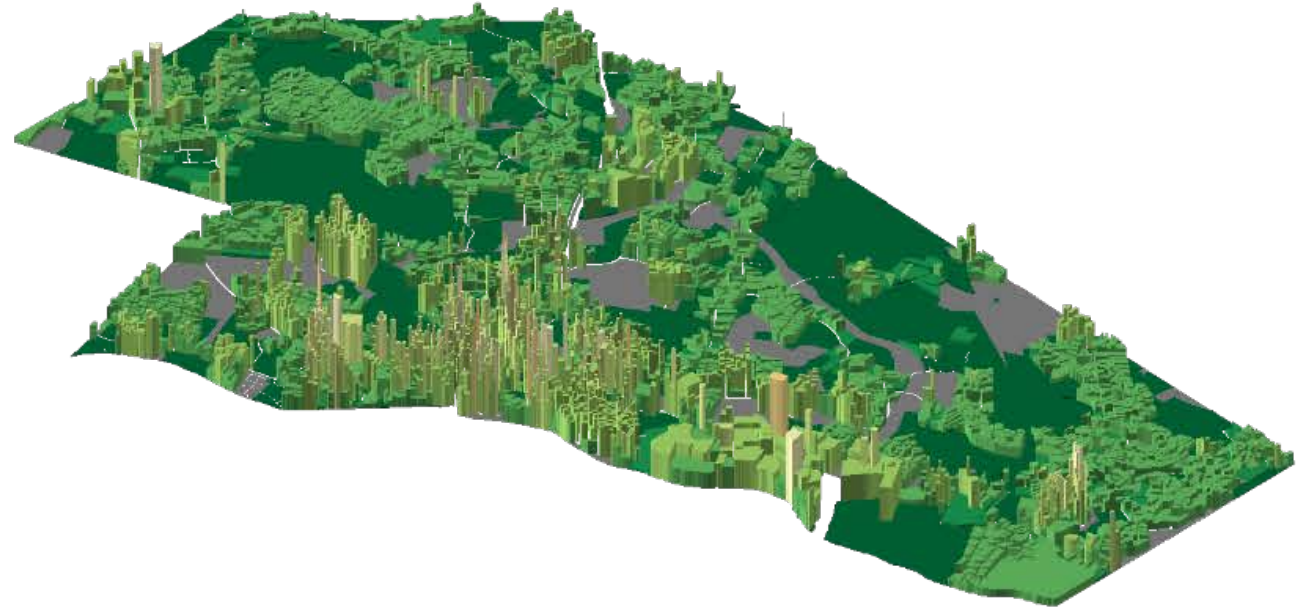
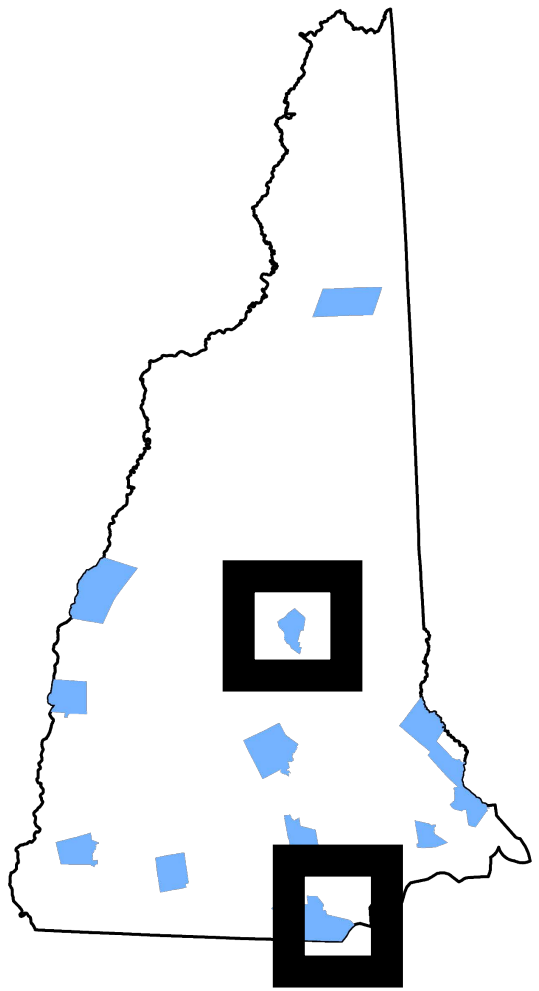
Peer Clusters

Similar characteristics of places & learning from each other.

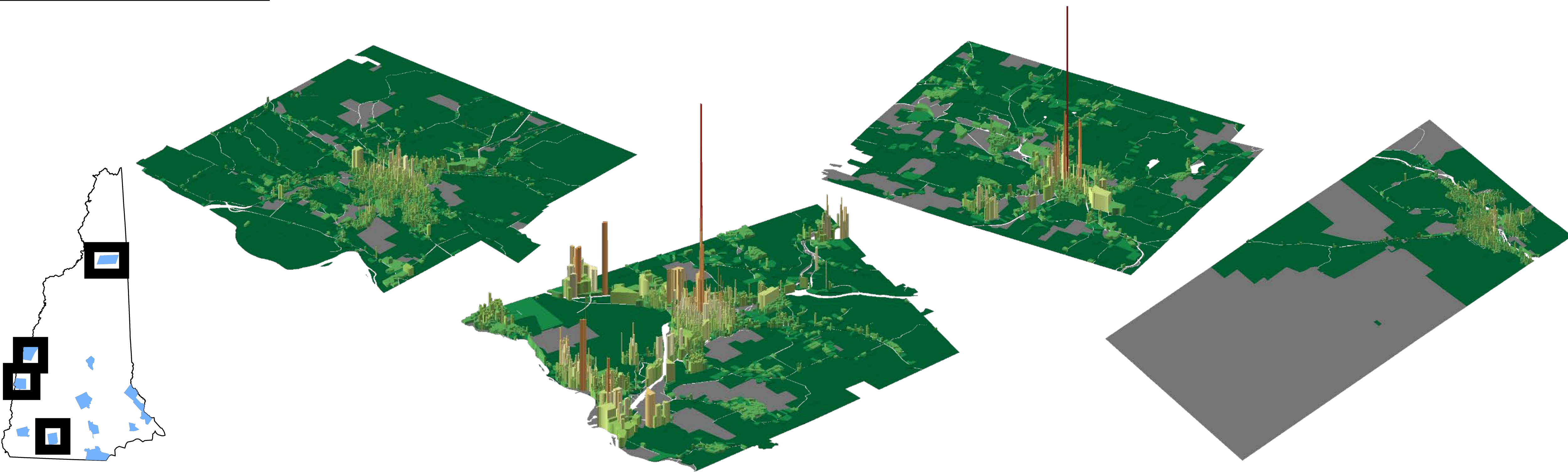




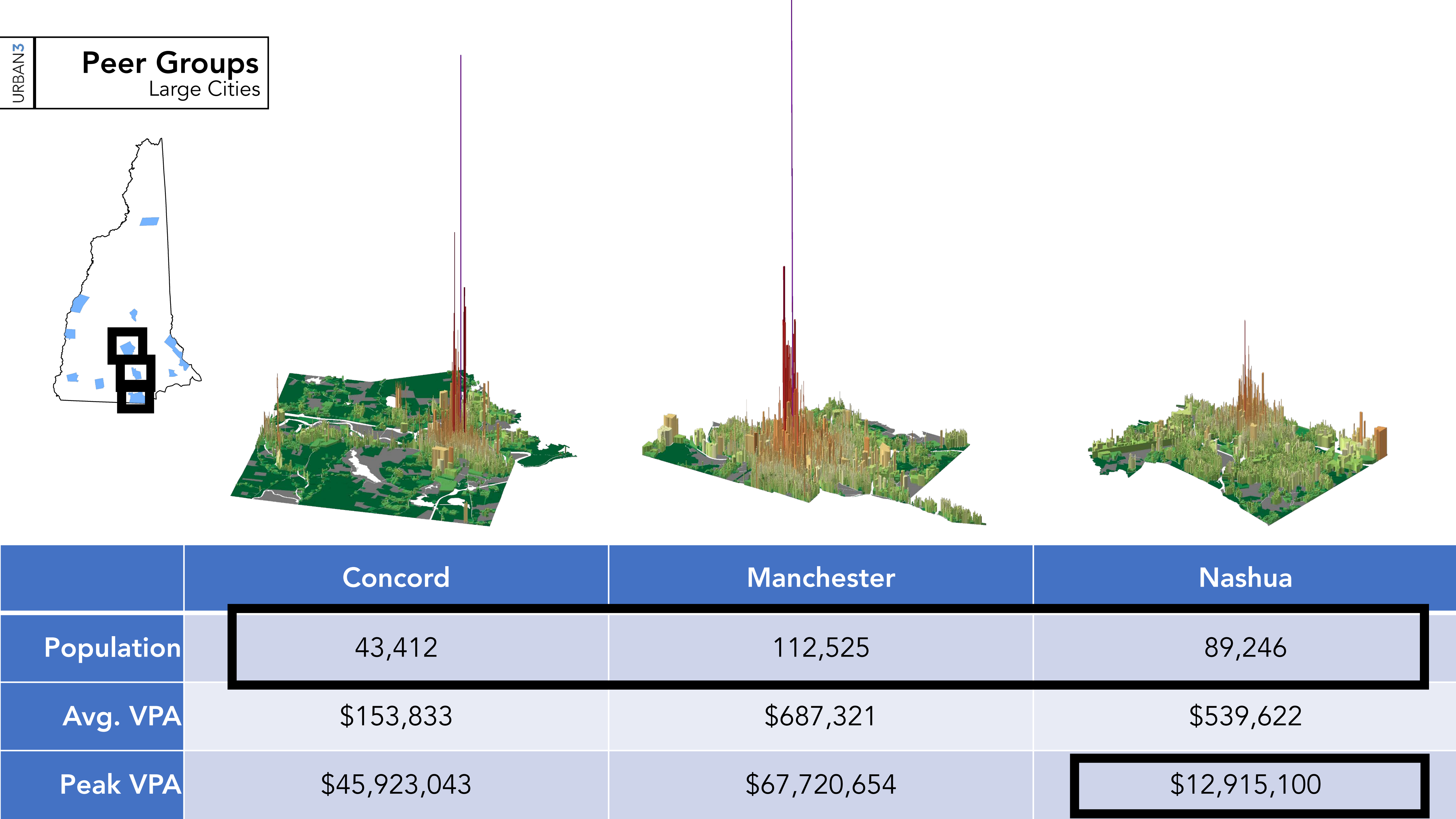
	Hanover	Keene	Exeter
Population	11,500	23,056	14,306
Non Tax %	11%	16%	32%
Avg. VPA	\$100,083	\$103,944	\$197,142
Peak VPA	\$37,827,184	\$14,050,950	\$13,578,189



	Hudson	Pelham	Laconia
Population	24,467	14,049	16,492
Avg. VPA	\$165,357	\$121,607	\$173,092
Peak VPA	\$2,690,571	\$3,610,967	\$10,897,320

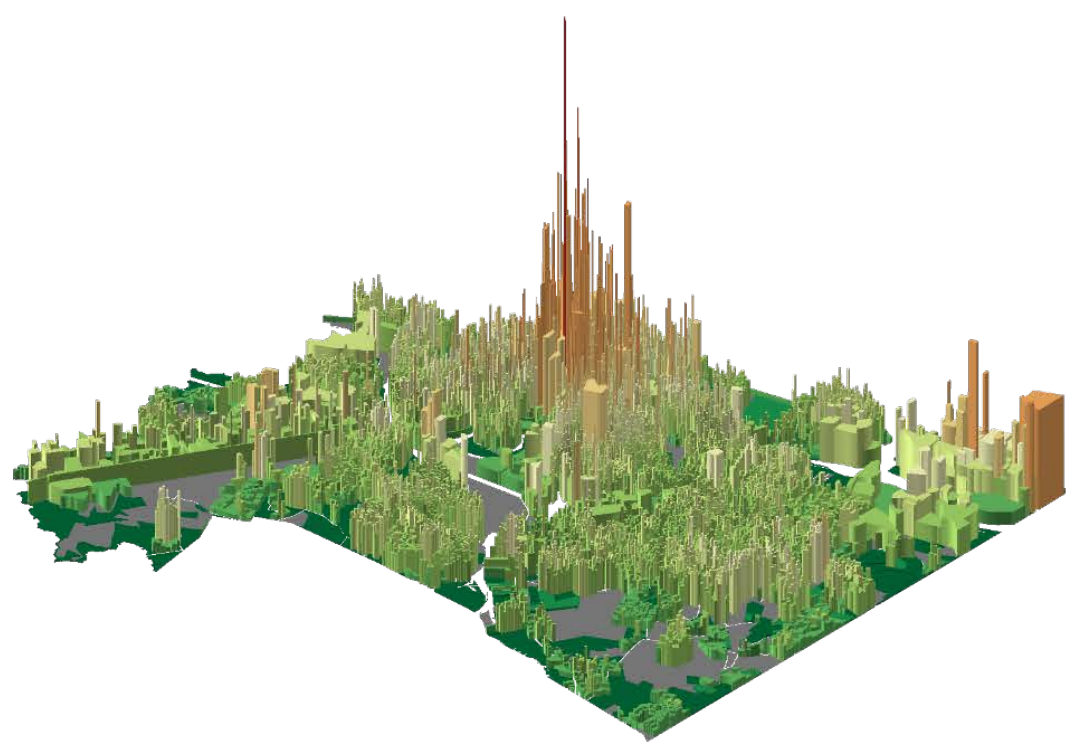
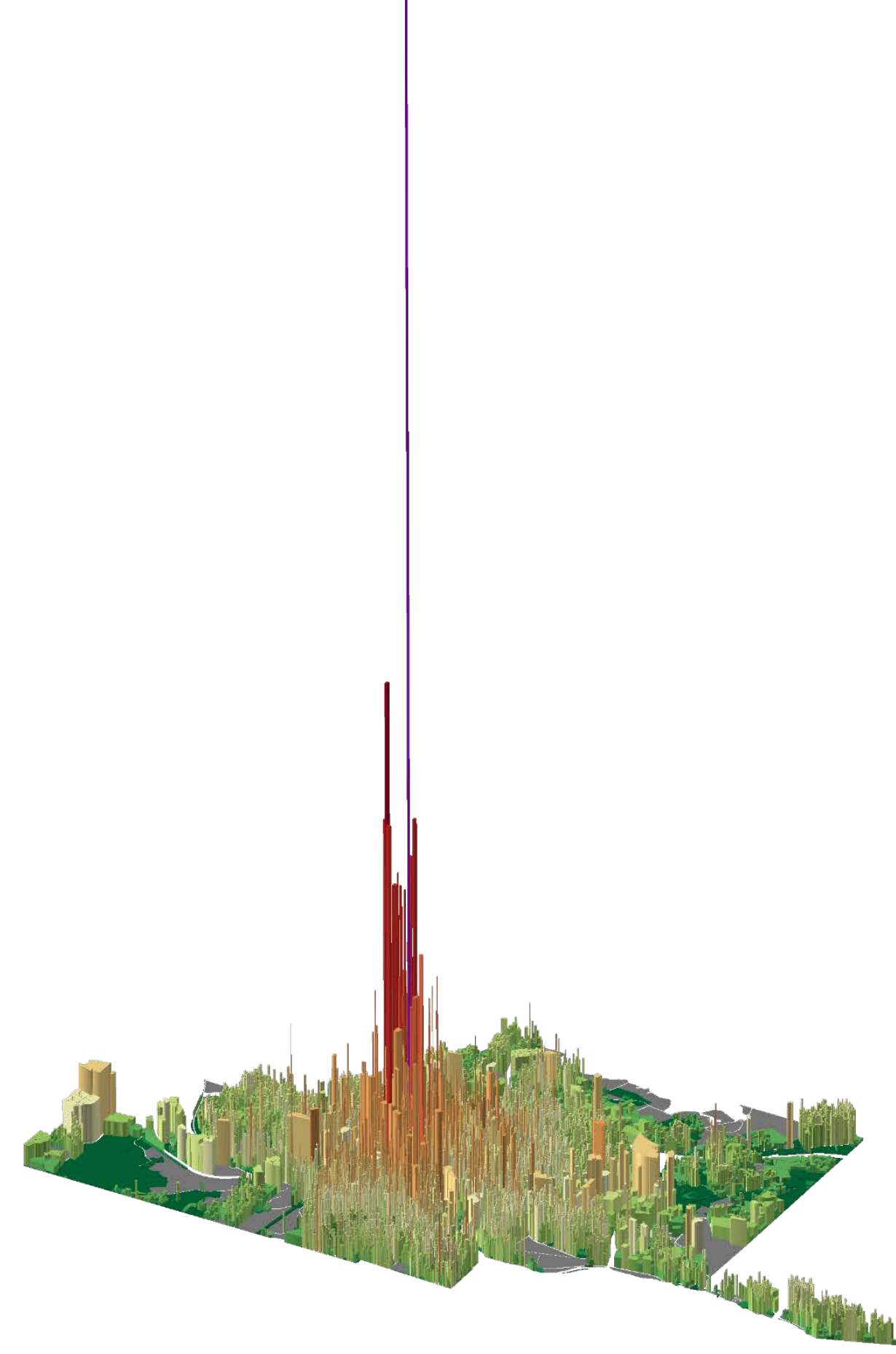
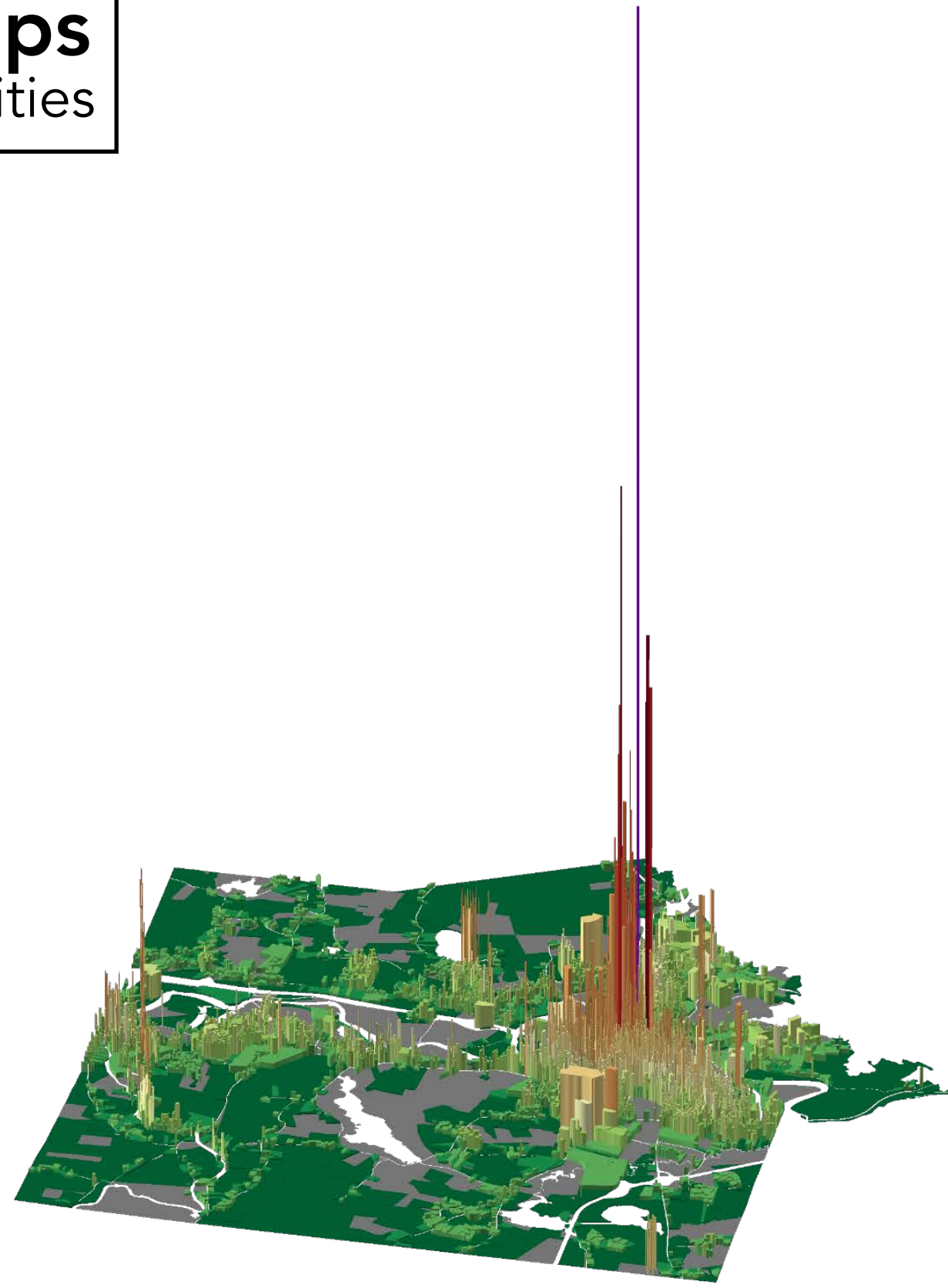
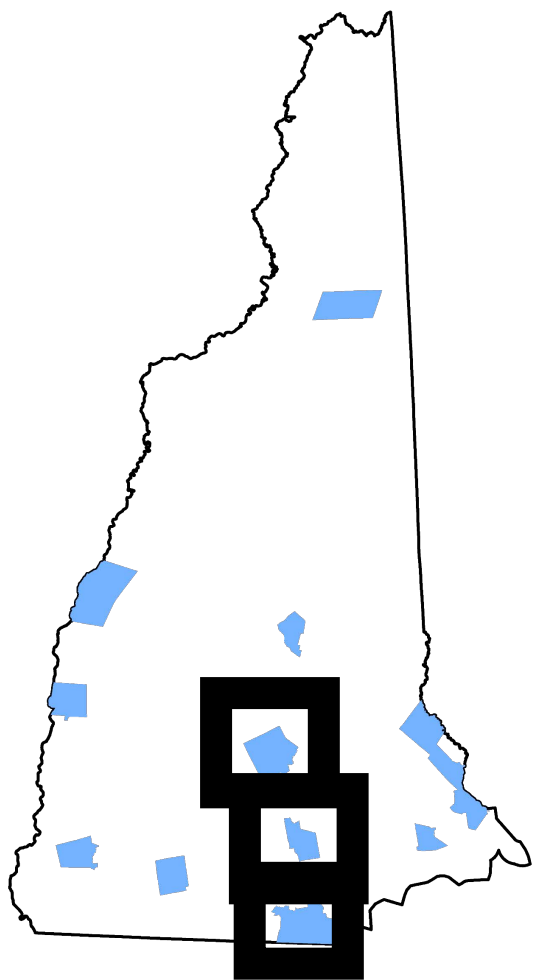


	Claremont	Lebanon	Peterborough	Berlin
Population	12,967	13,602	6,284	10,200
Avg. VPA	\$28,311	\$90,500	\$38,904	\$27,106
Peak VPA	\$2,606,428	\$14,427,351	\$12,205,874	\$2,537,768



Peer Groups

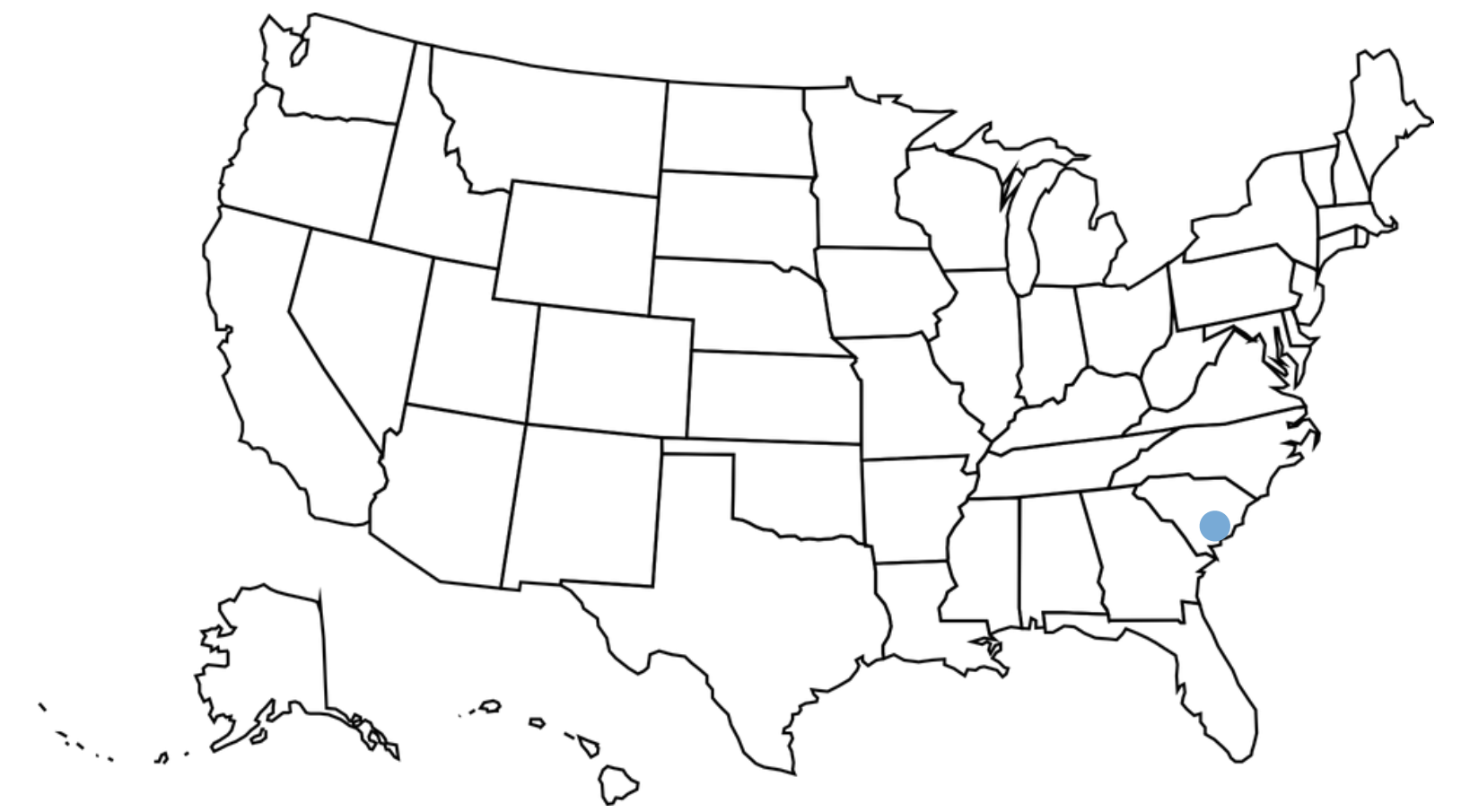
Large Cities



	Concord	Manchester	Nashua
Population	43,412	112,525	89,246
Avg. VPA	\$153,833	\$687,321	\$539,622
Peak VPA	\$45,923,043	\$67,720,654	\$12,915,100

Lesson:

Historic Value

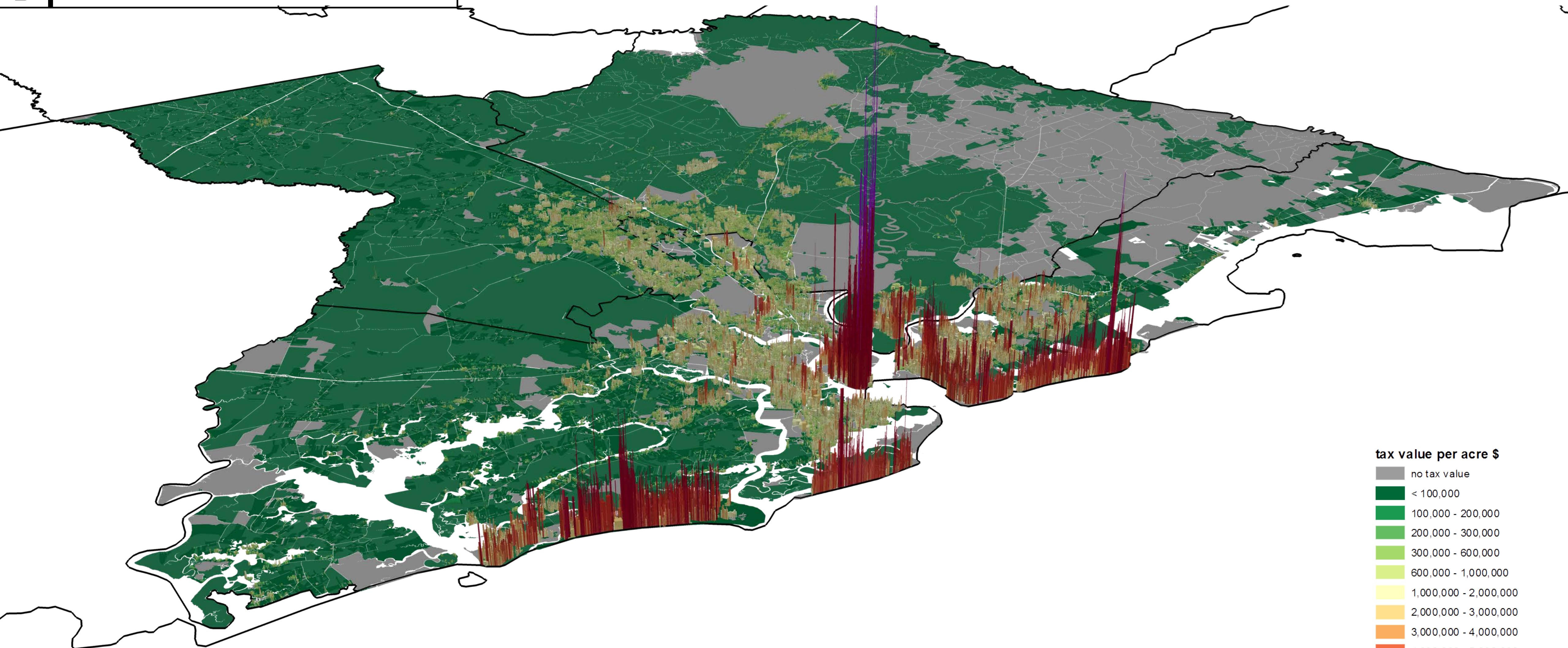
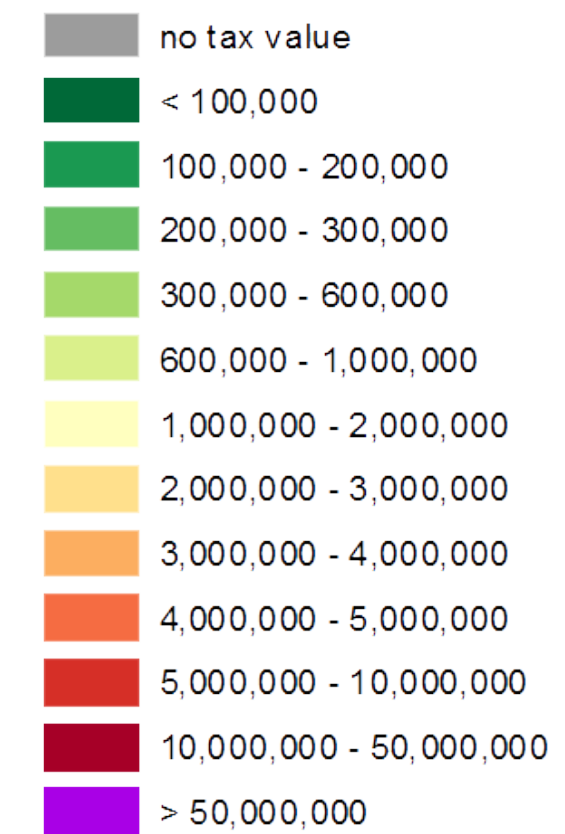


Case Study: Economic MRI®, Value Capture Analysis
2015

Charleston, South Carolina

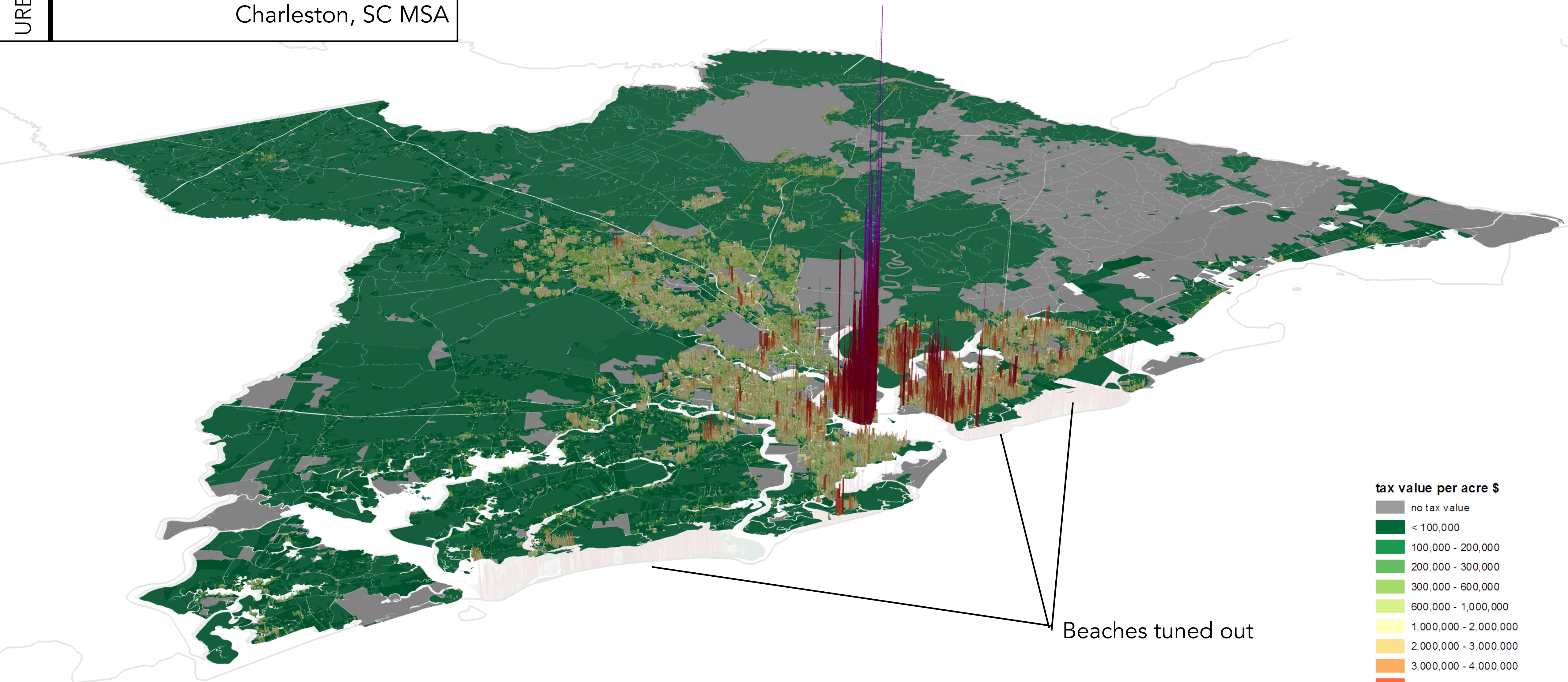
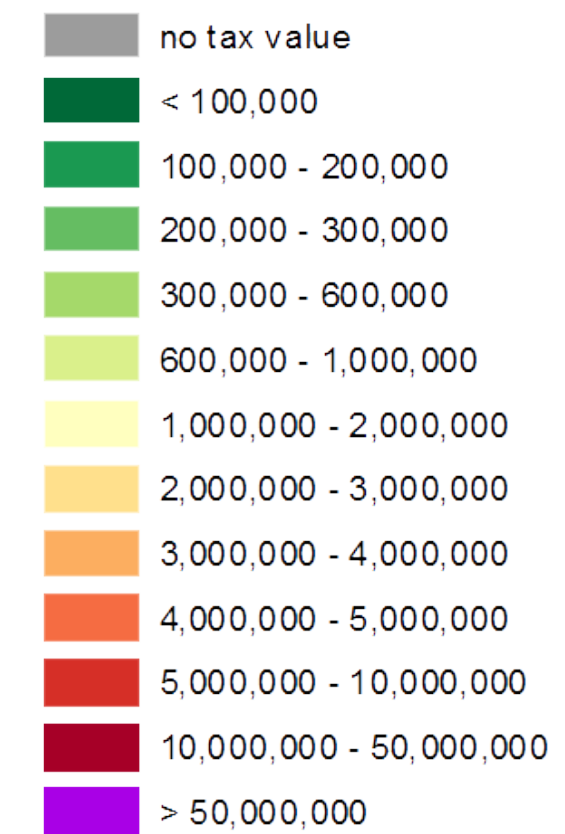
Taxable Value Per Acre

Charleston, SC MSA

**tax value per acre \$**

Taxable Value Per Acre

Charleston, SC MSA

**tax value per acre \$**

Beaches tuned out





Declaration of Independence

July 4, 1776

240 years ago



Built ca: 1686

Revolutionary



Walmart
\$866,760 value per acre



Tavern Wine and Spirits
\$13,394,415 Value per Acre

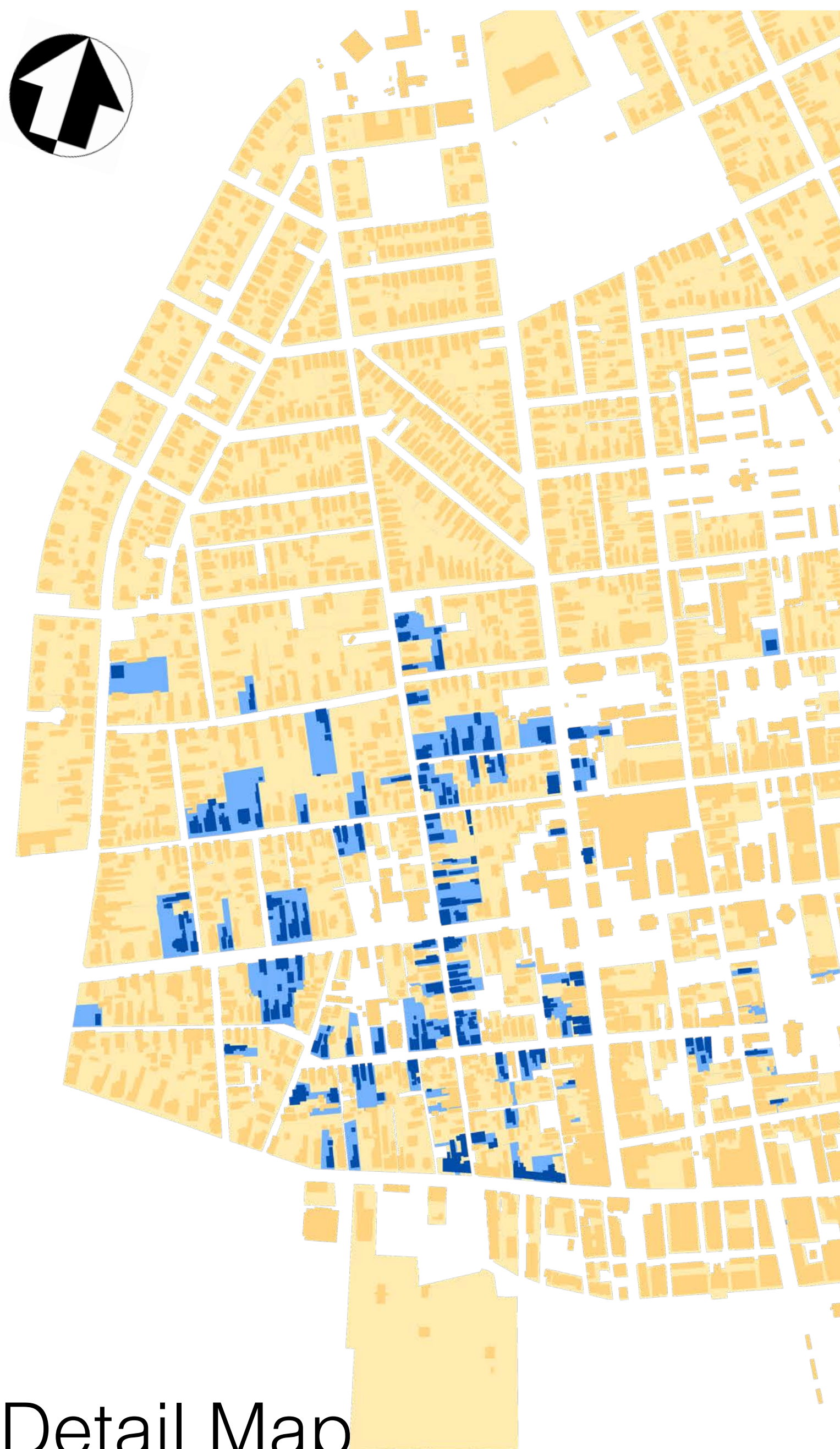
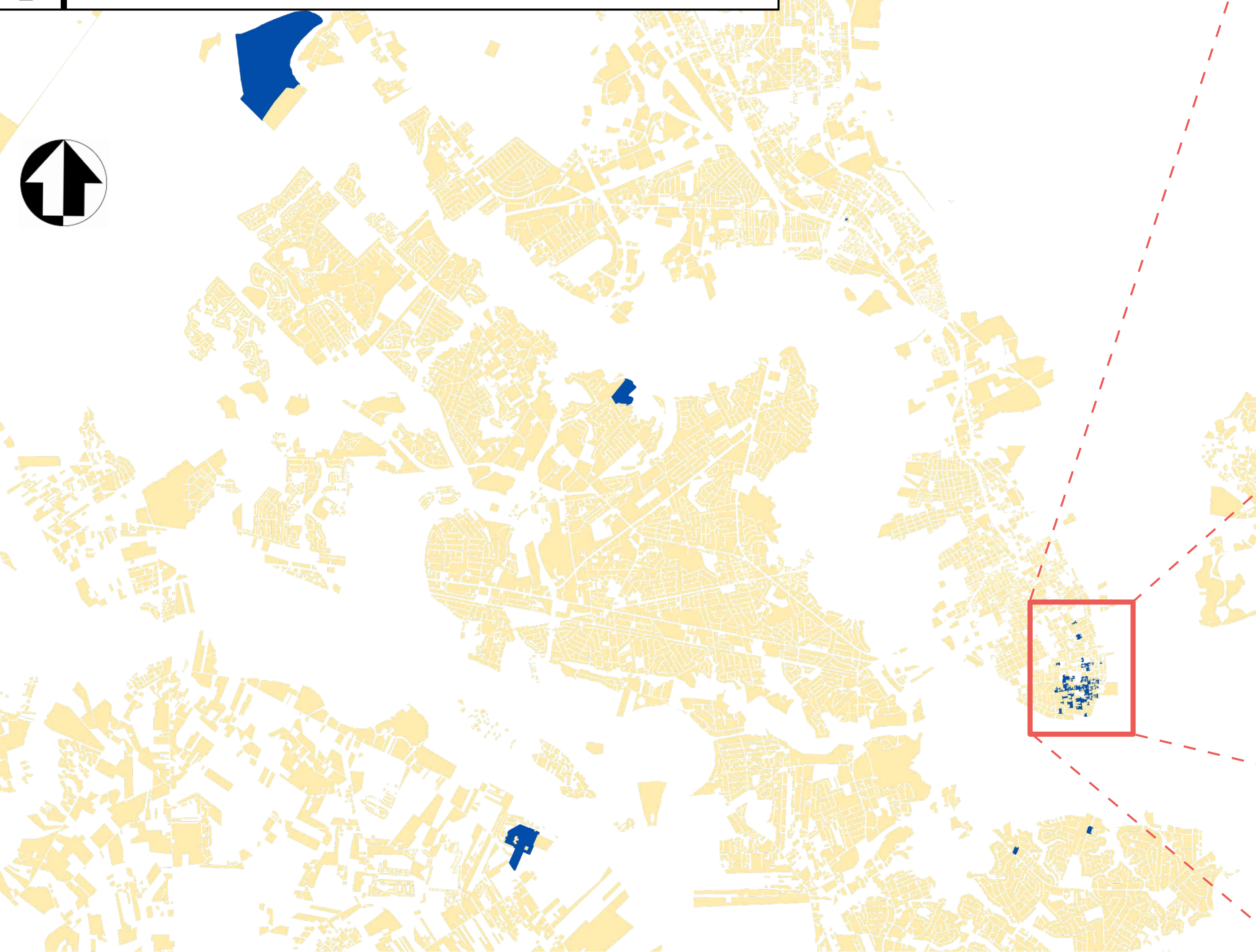
Pre-1776 Taxable Value Per Acre

Charleston, SC MSA



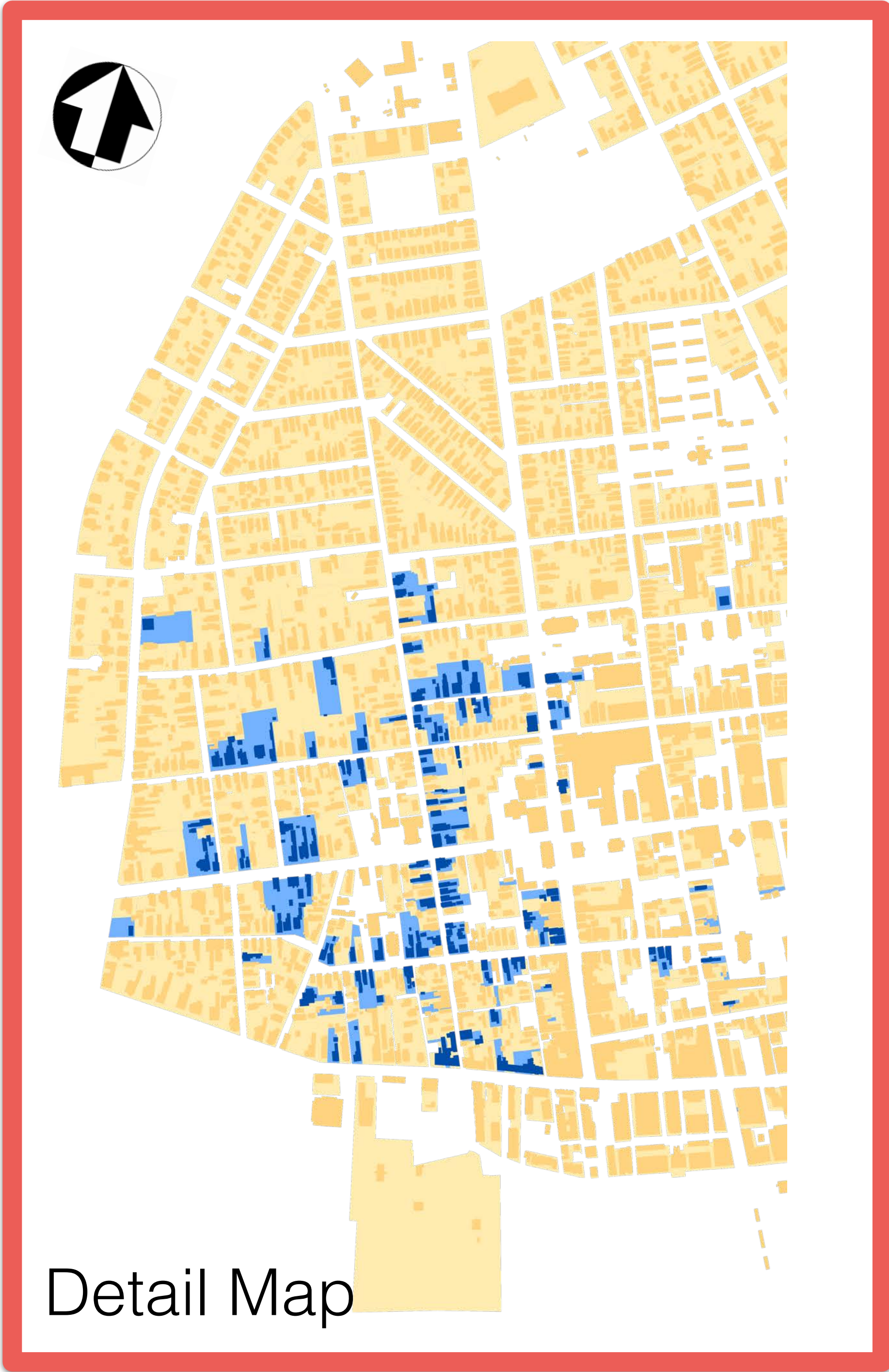
Pre-1776 Taxable Value Per Acre

Charleston, SC MSA



Detail Map

	> 1776
Acres	20.95
Value	\$344M
Value/Acre	\$16,440,700
County Taxes 2015	\$631,000

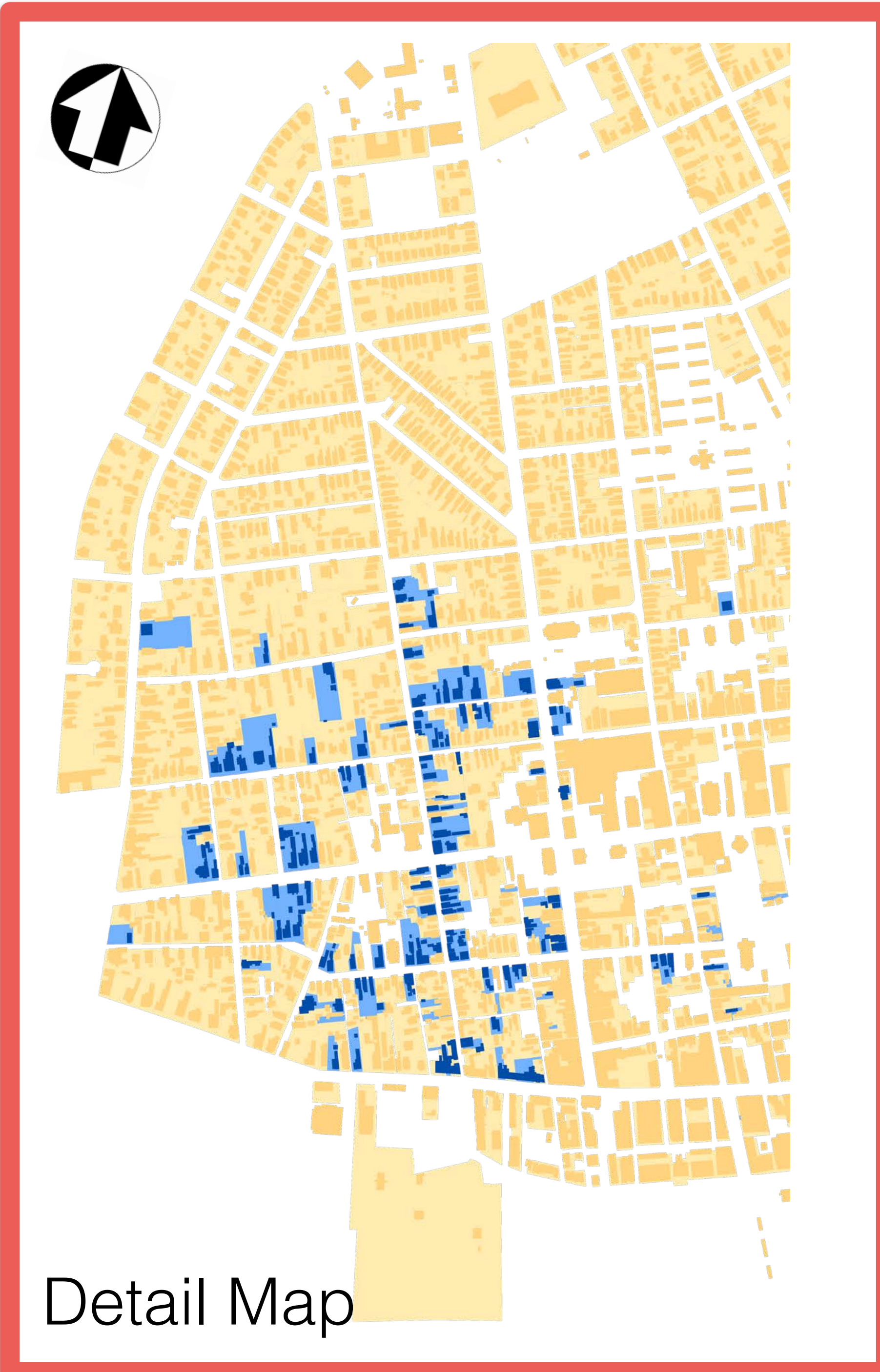


Pre-1776 Tax Productivity

Charleston, SC MSA



	> 1776
Acres	20.95
Value	\$344M
Value/Acre	\$16,440,700
County Taxes 2015	\$631,000

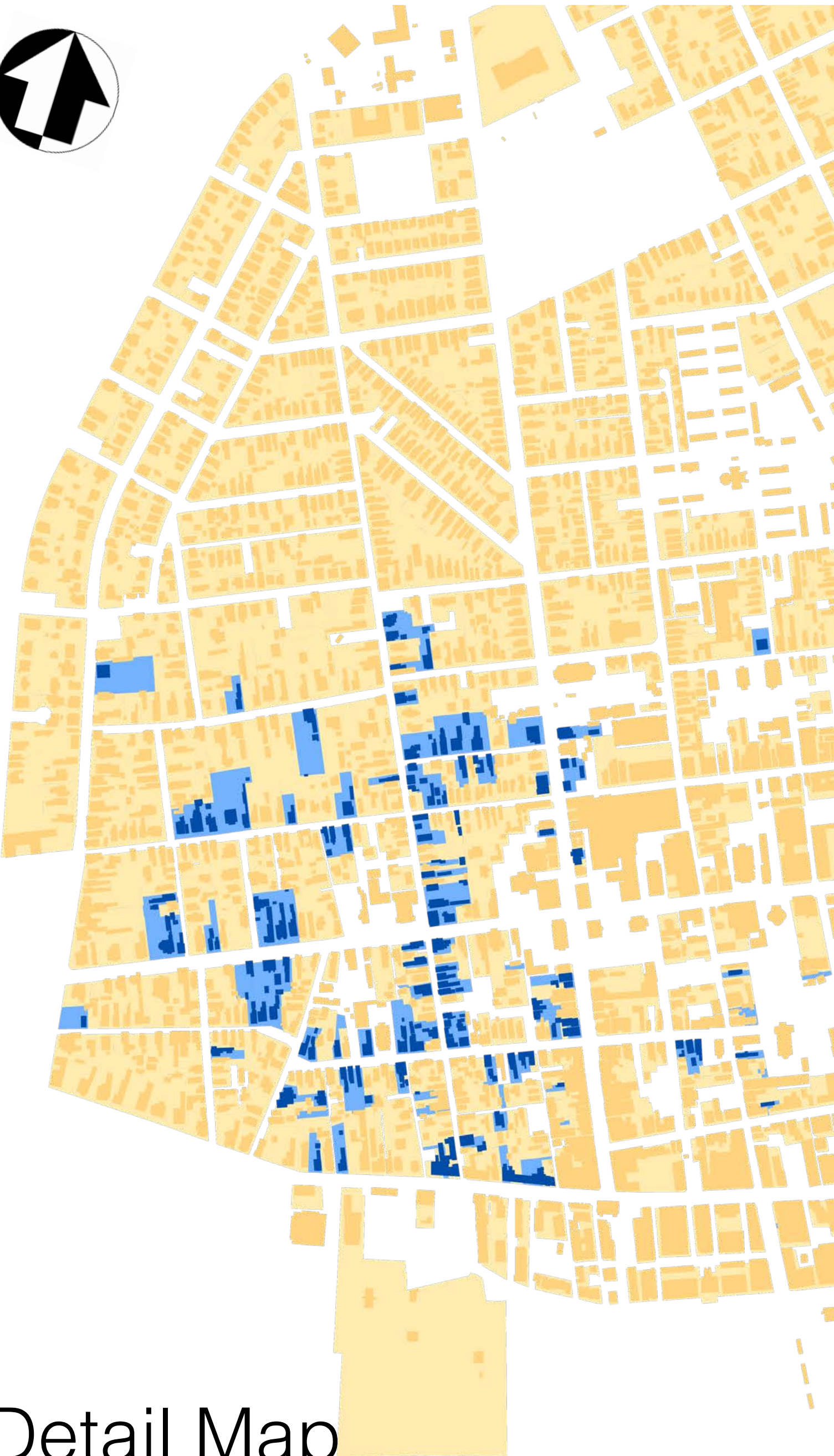


Pre-1776 Tax Productivity

Charleston, SC MSA



	Walmart	> 1776
Acres	20.58	20.95
Value	\$18M	\$344M
Value/Acre	\$866,760	\$16,440,700
County Taxes 2015	\$47,000	\$631,000



Detail Map

Pre-1776 Tax Productivity

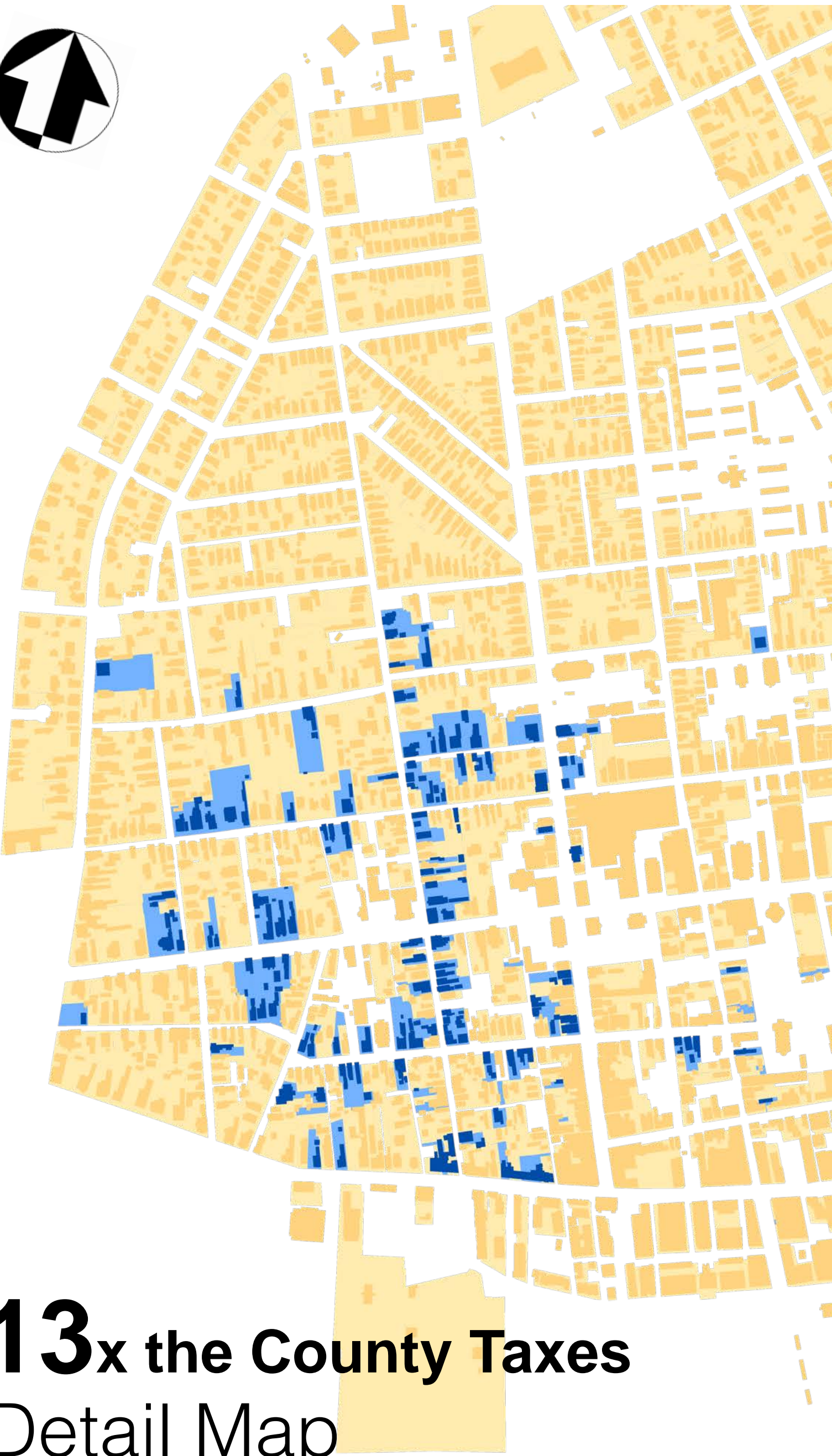
Charleston, SC MSA



Walmart (at Tanger)
\$866,760 value per acre

Born: 2005

	Walmart	> 1776
Acres	20.58	20.95
Value	\$18M	\$344M
Value/Acre	\$866,760	\$16,440,700
County Taxes 2015	\$47,000	\$631,000



13x the County Taxes
Detail Map

Value Per Acre

Traditional Commercial



Keene
Peak VPA
VPA: \$14 M



Lebanon
Mixed-use
VPA: \$6.2 M



Laconia
Mixed-use
VPA: \$3.7 M



Hanover
Mixed-use
VPA: \$12 M



Concord
Mixed-use
VPA: \$7.6 M



Nashua
Mixed-use
VPA: \$10 M



Exeter
Peak VPA
VPA: \$13.5 M



Dover
Mixed-use
VPA: \$9.6 M



Berlin
Peak VPA
VPA: \$2.5 M



Peterborough
Peak VPA
VPA: \$12.2 M



Rochester
Mixed-use
VPA: \$3.9 M

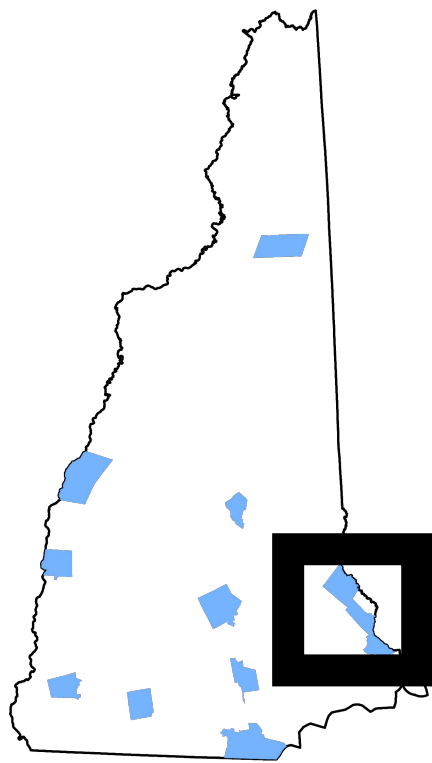


Portsmouth
Mixed-use
VPA: \$29.3 M

Sample average: **\$8,300,000** value/acre

Lesson:

The Value of Urban Design



Case Study: Economic MRI®
2020

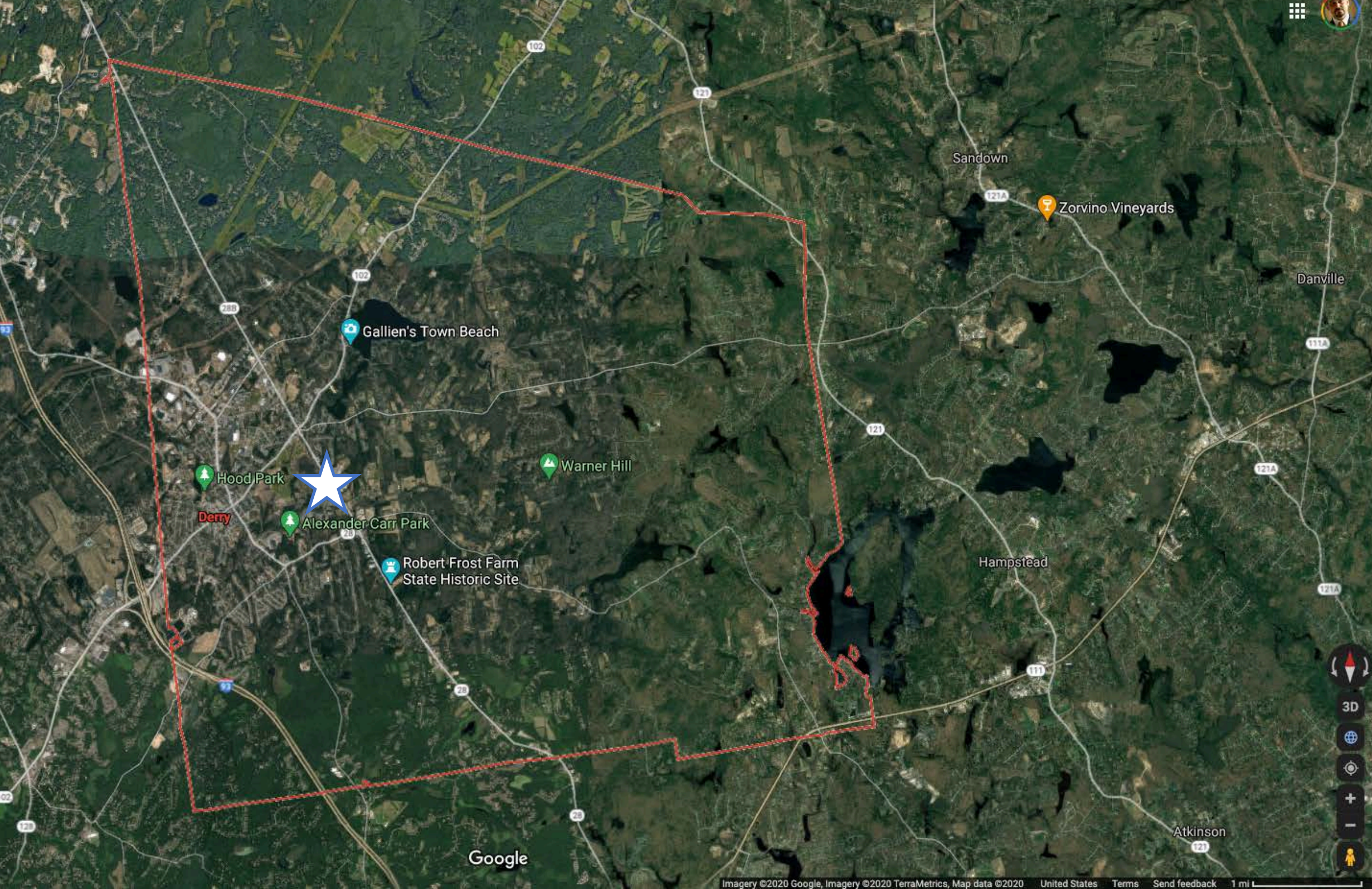
Derry



Published by A. H. Fowler

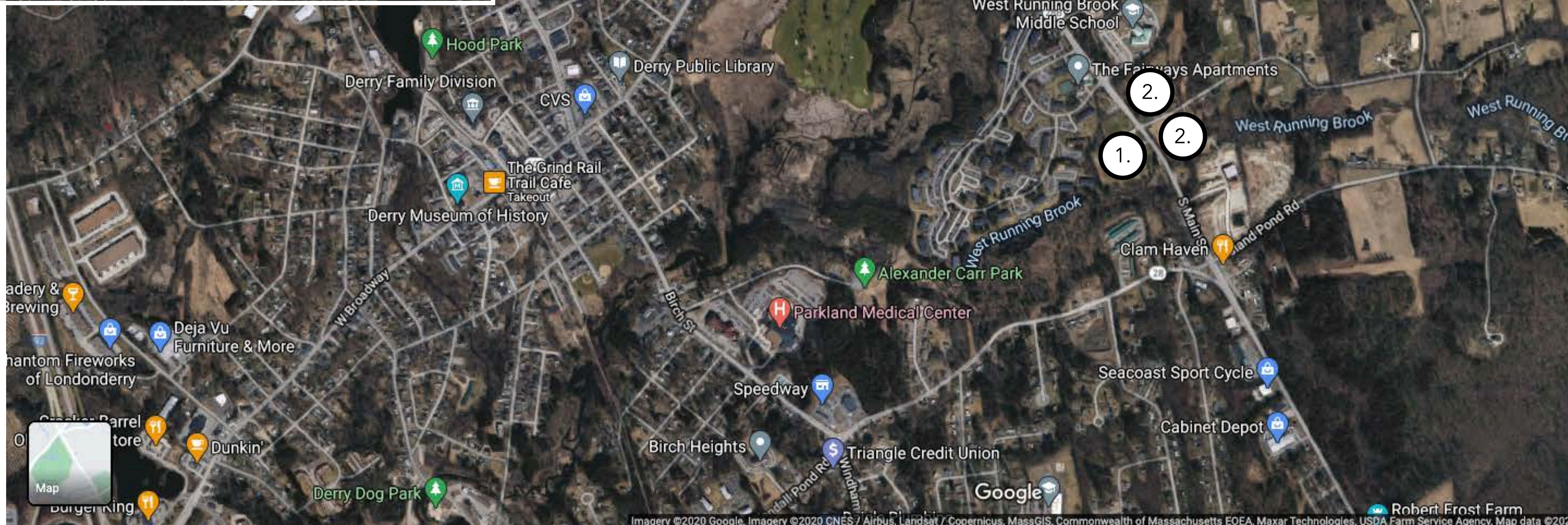
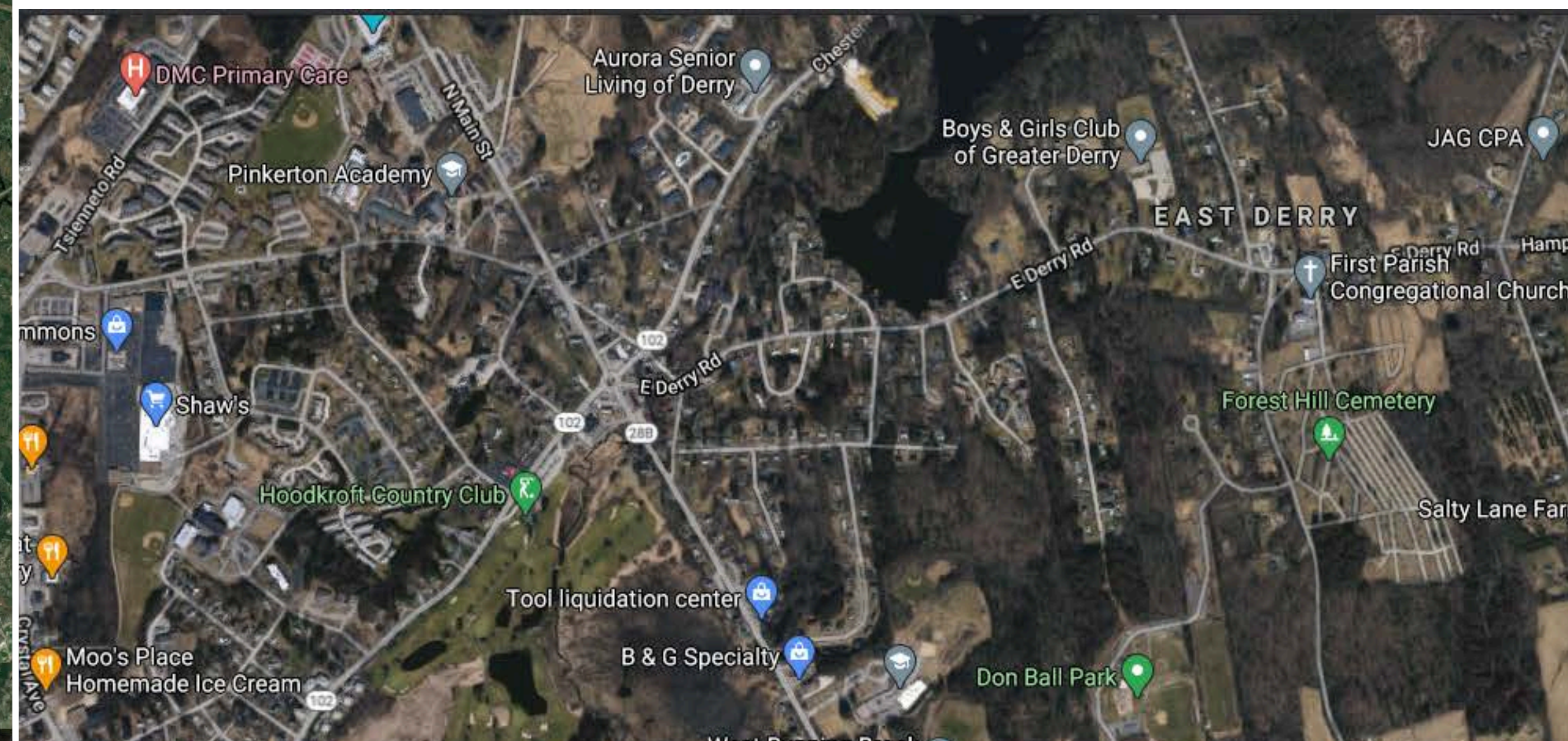
West Broadway, Derry, N. H.

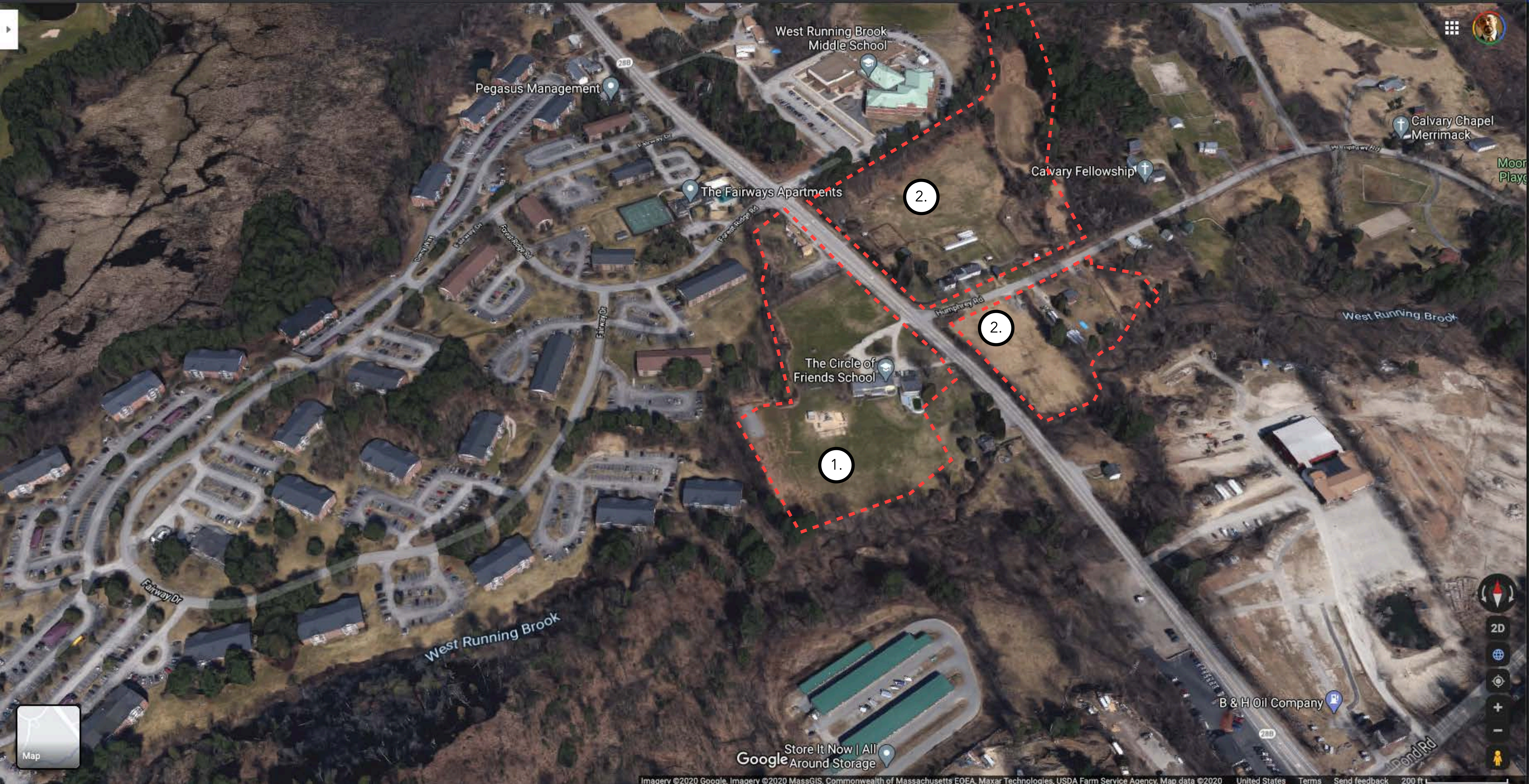
We are going to keep him in the house when ^{you} arrive.



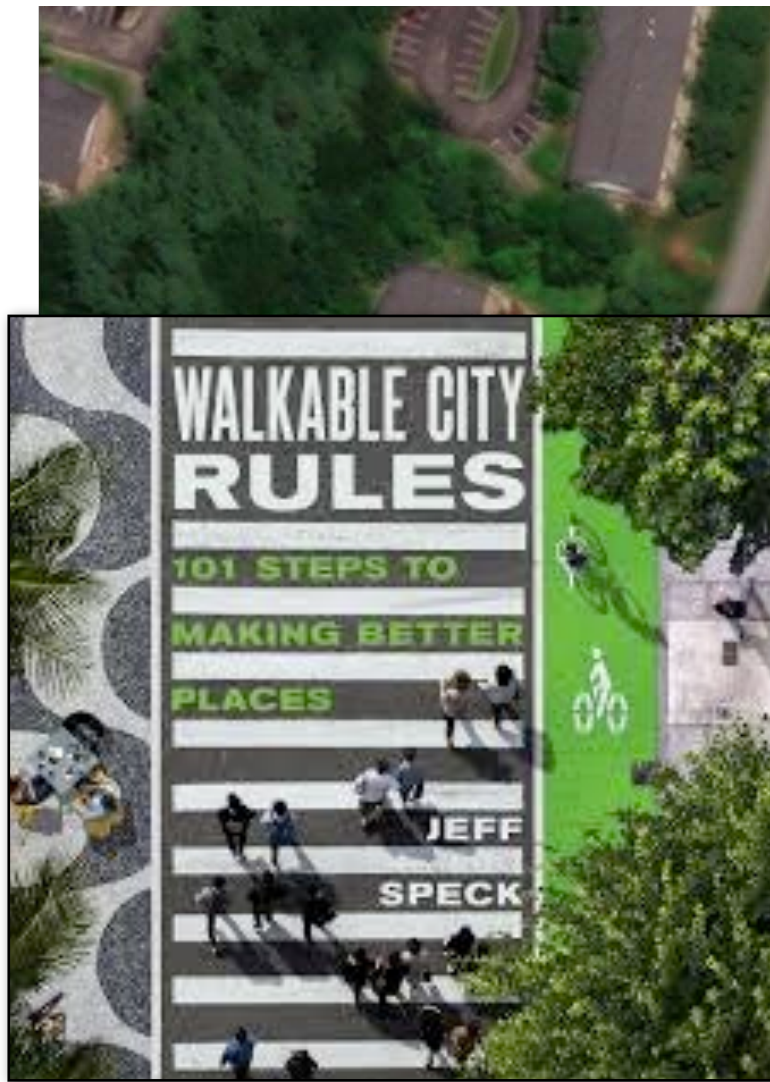
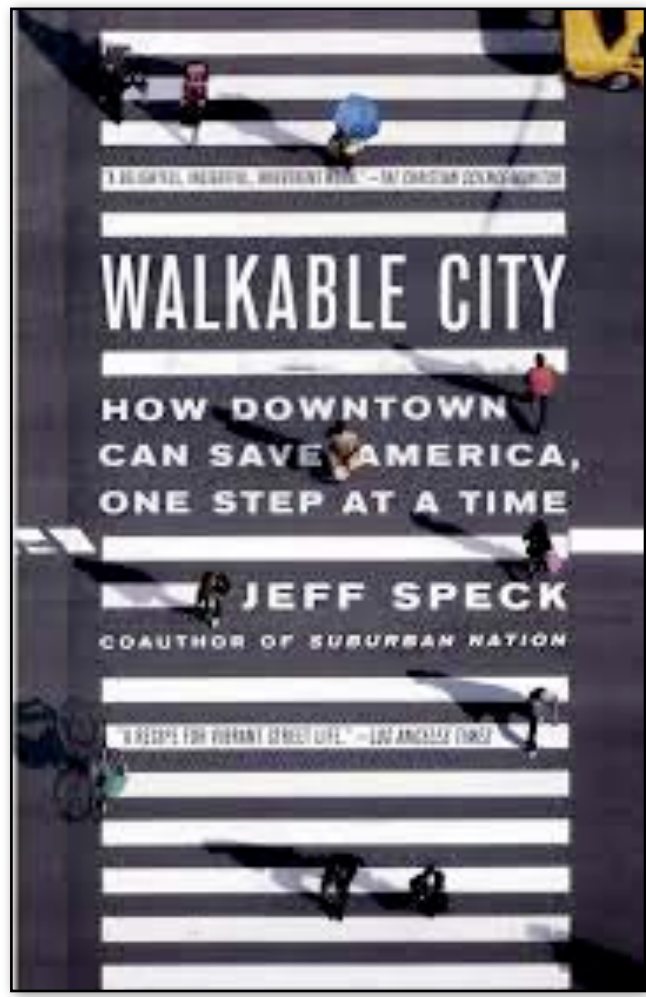
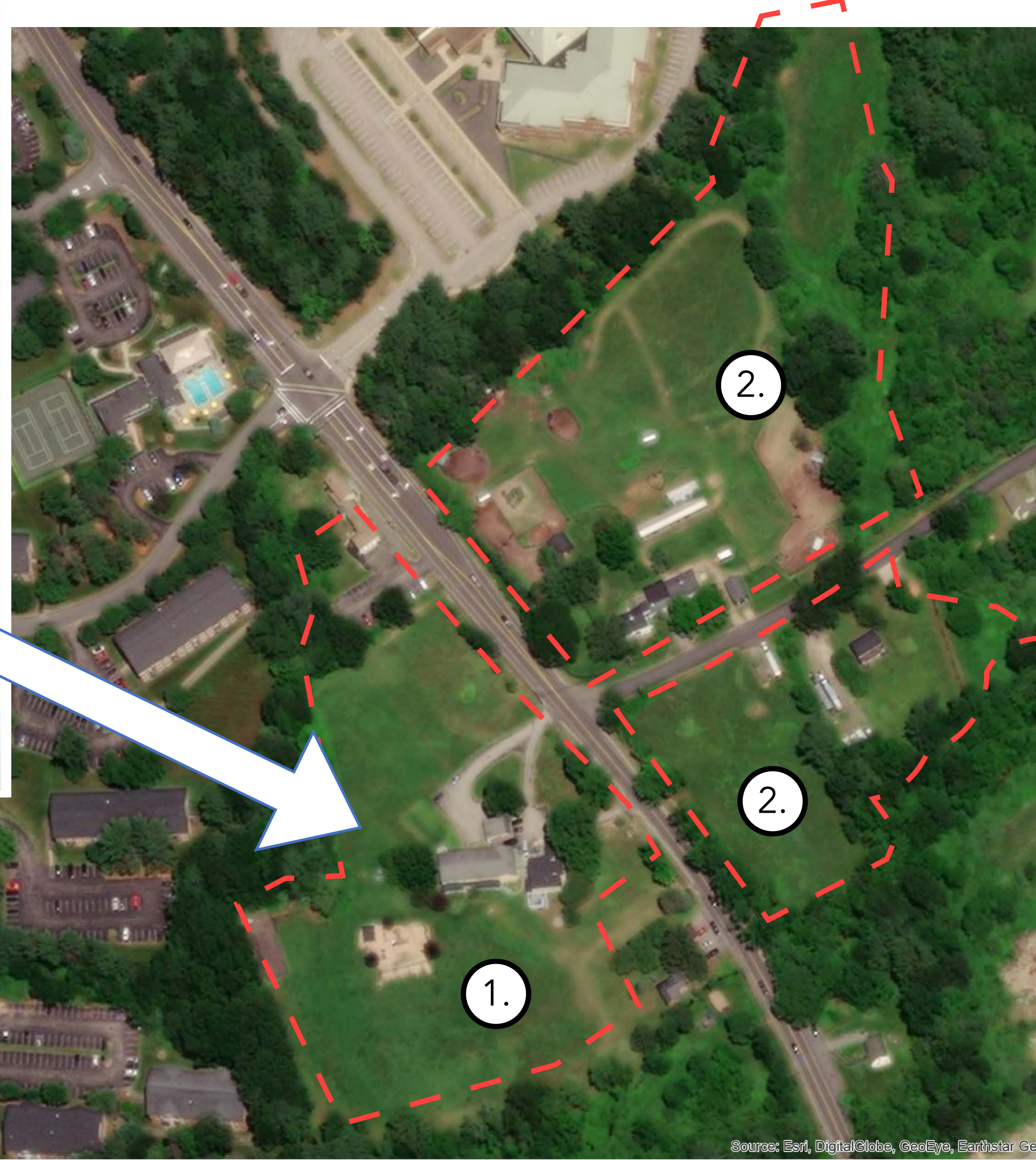
Derry

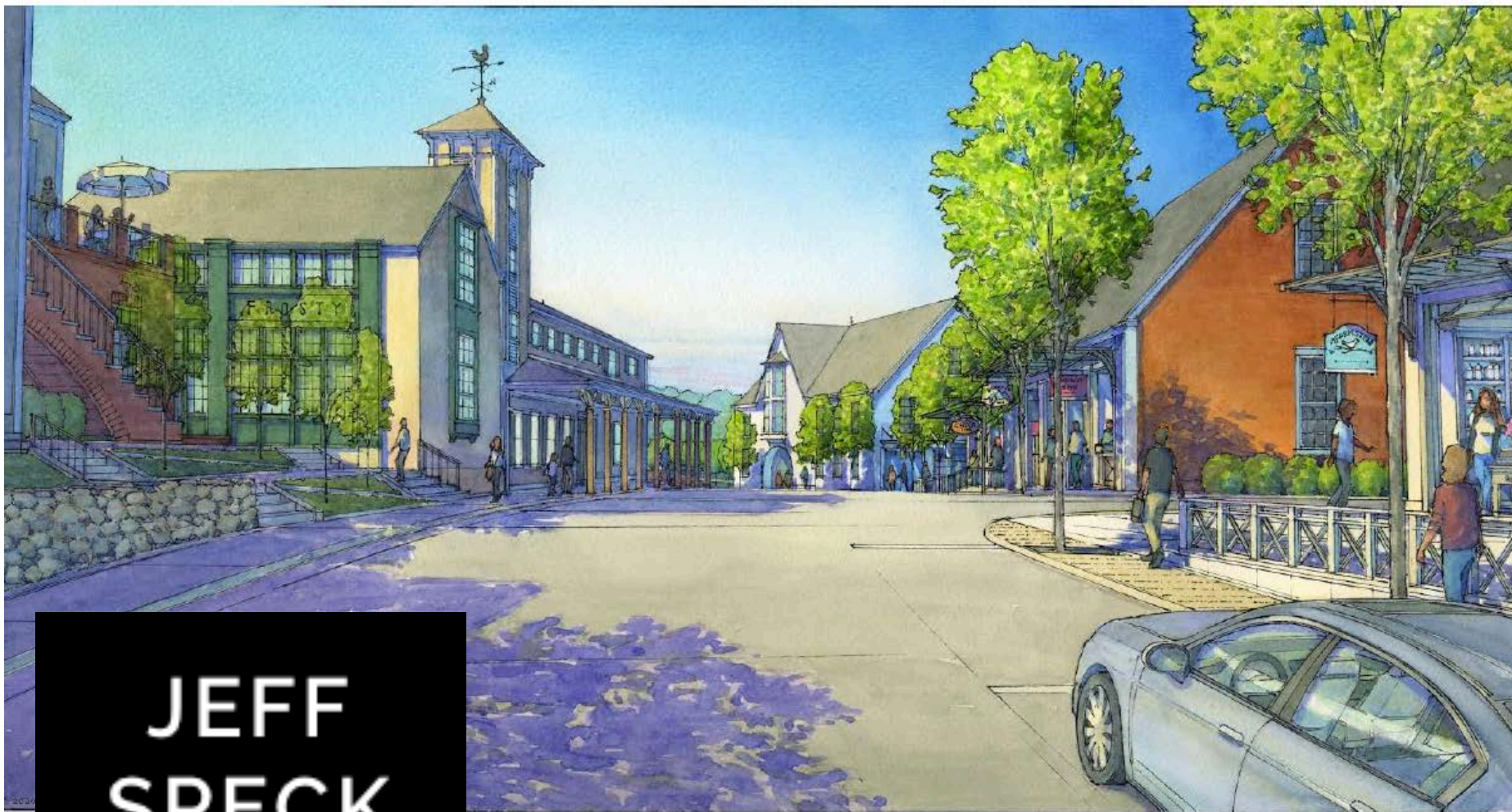
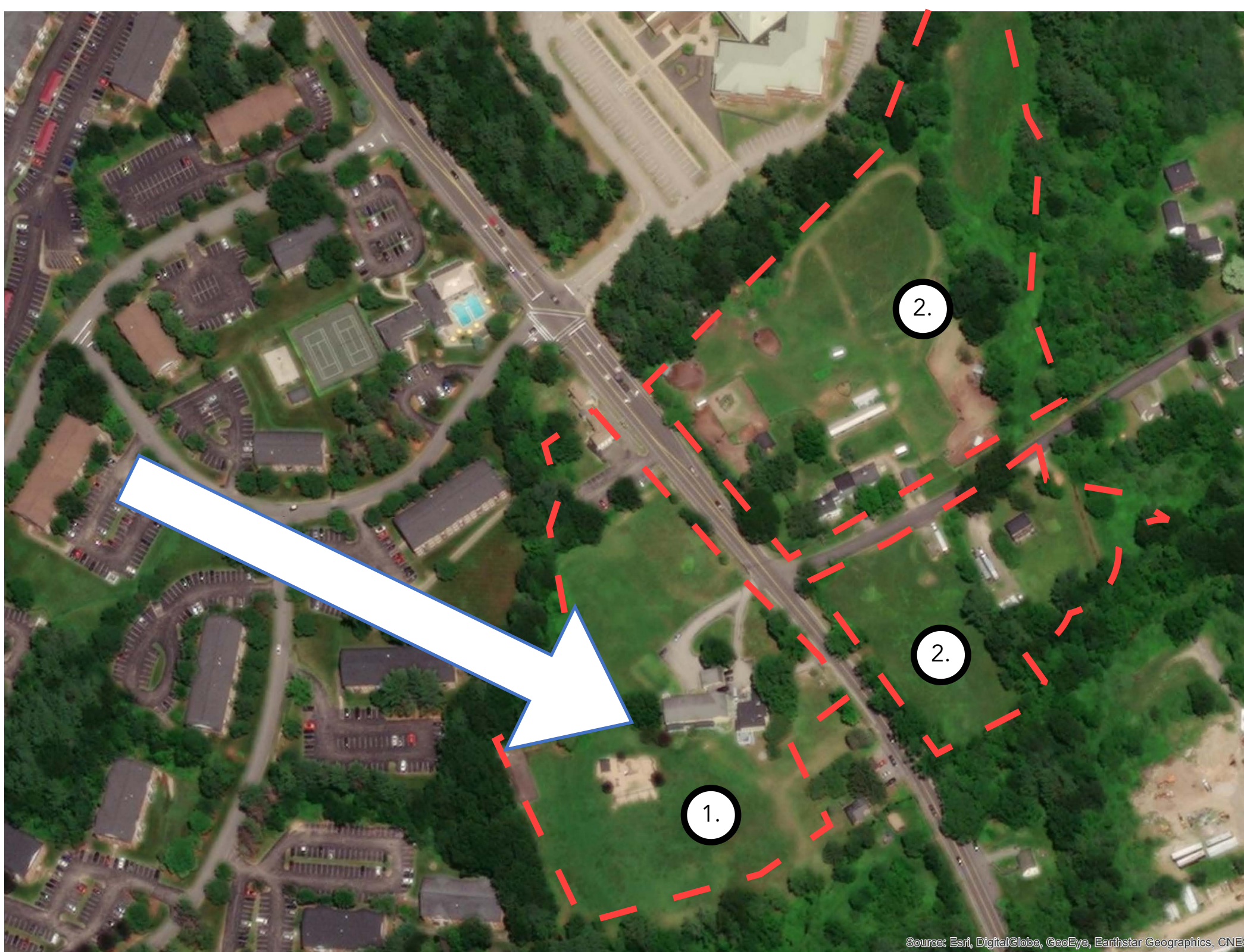
Humphrey Rd/Main Street & Route 28B



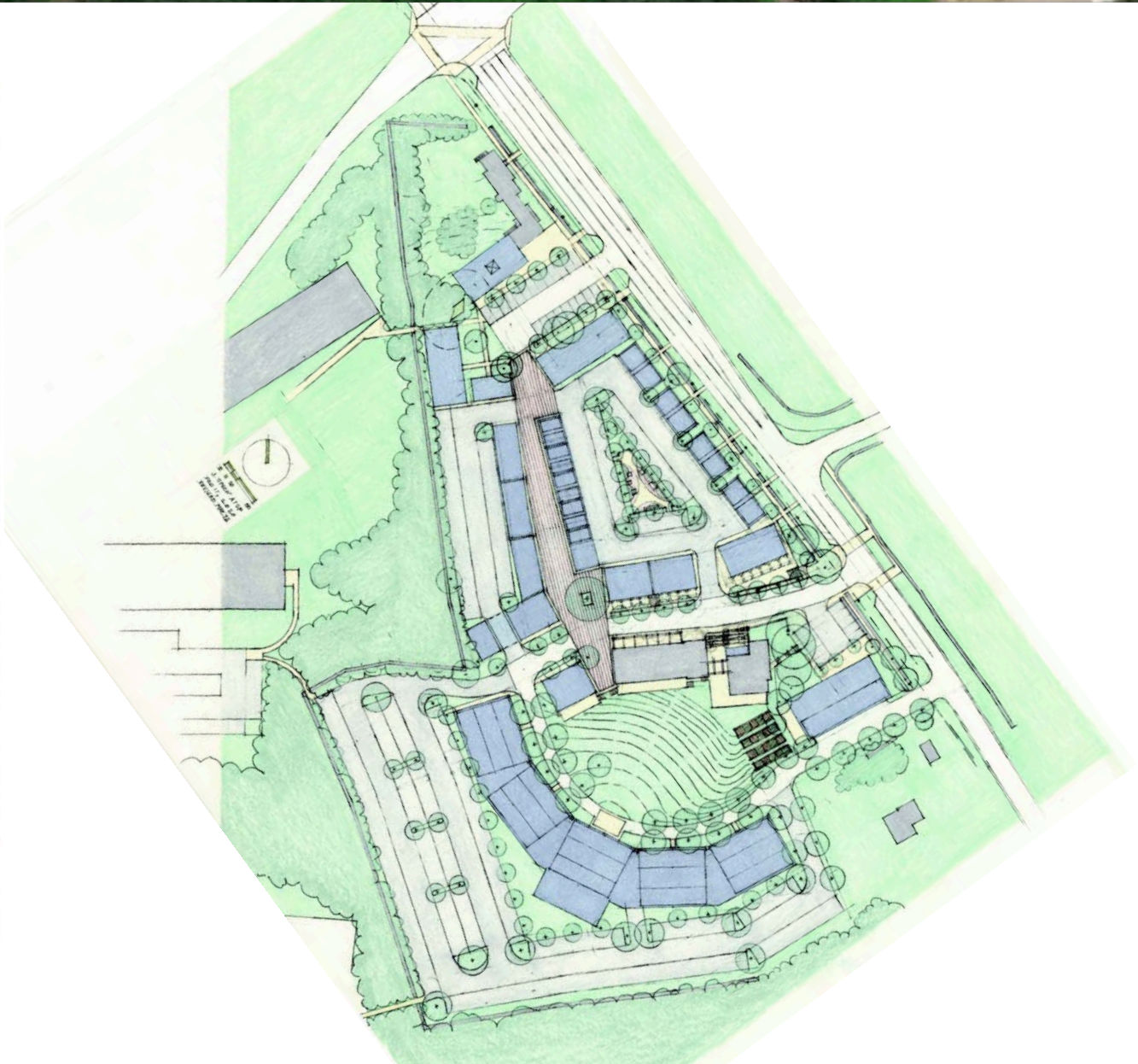


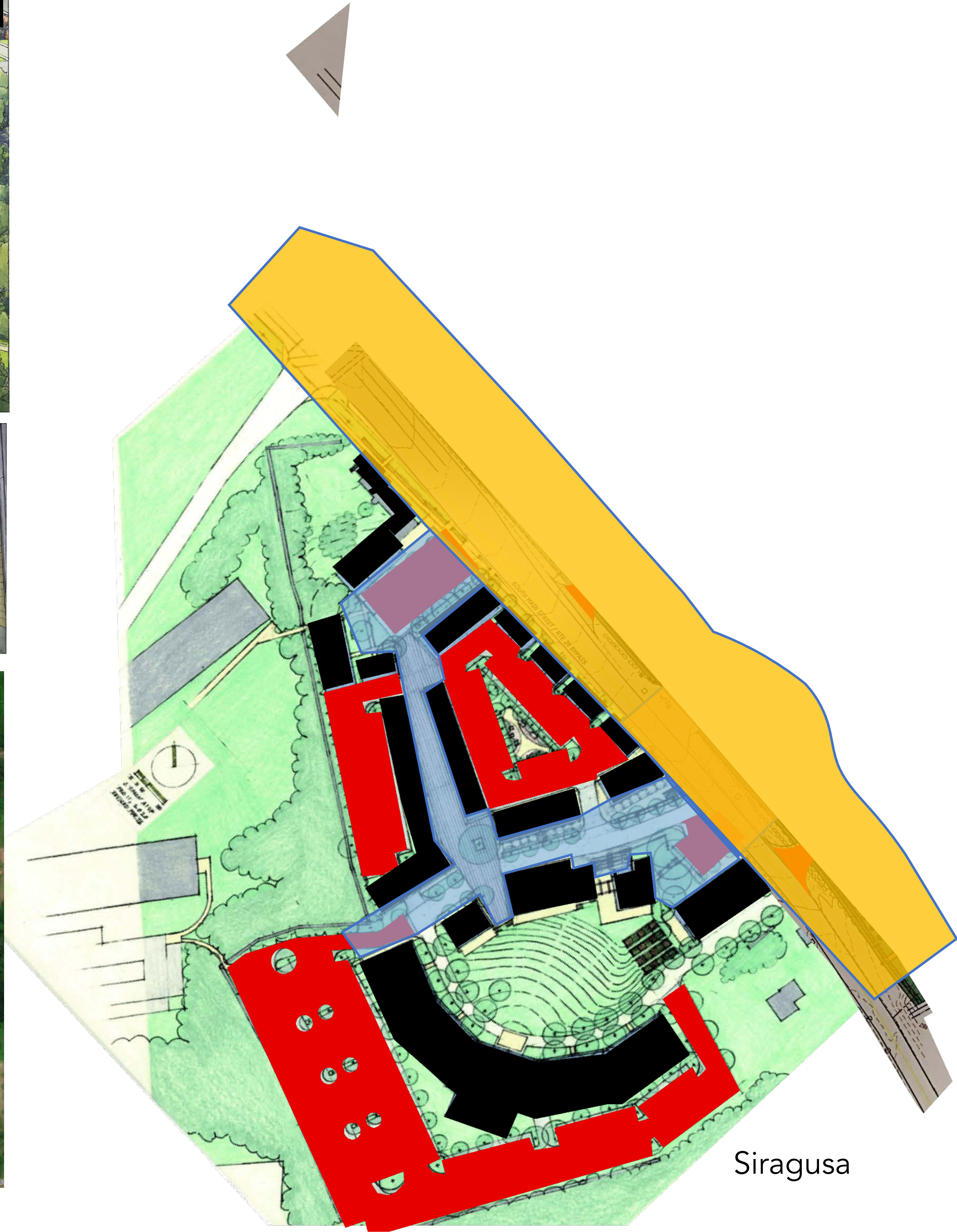
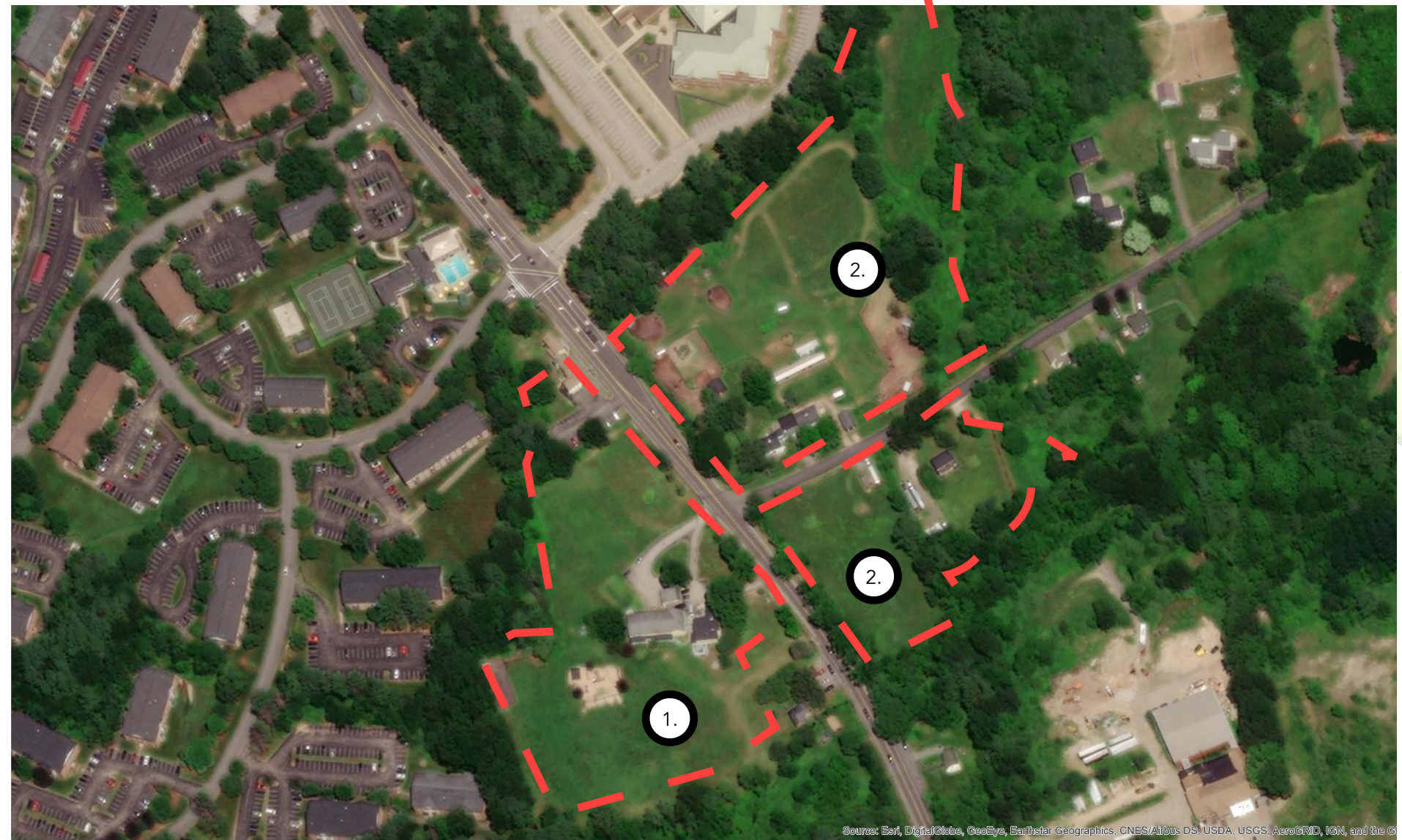




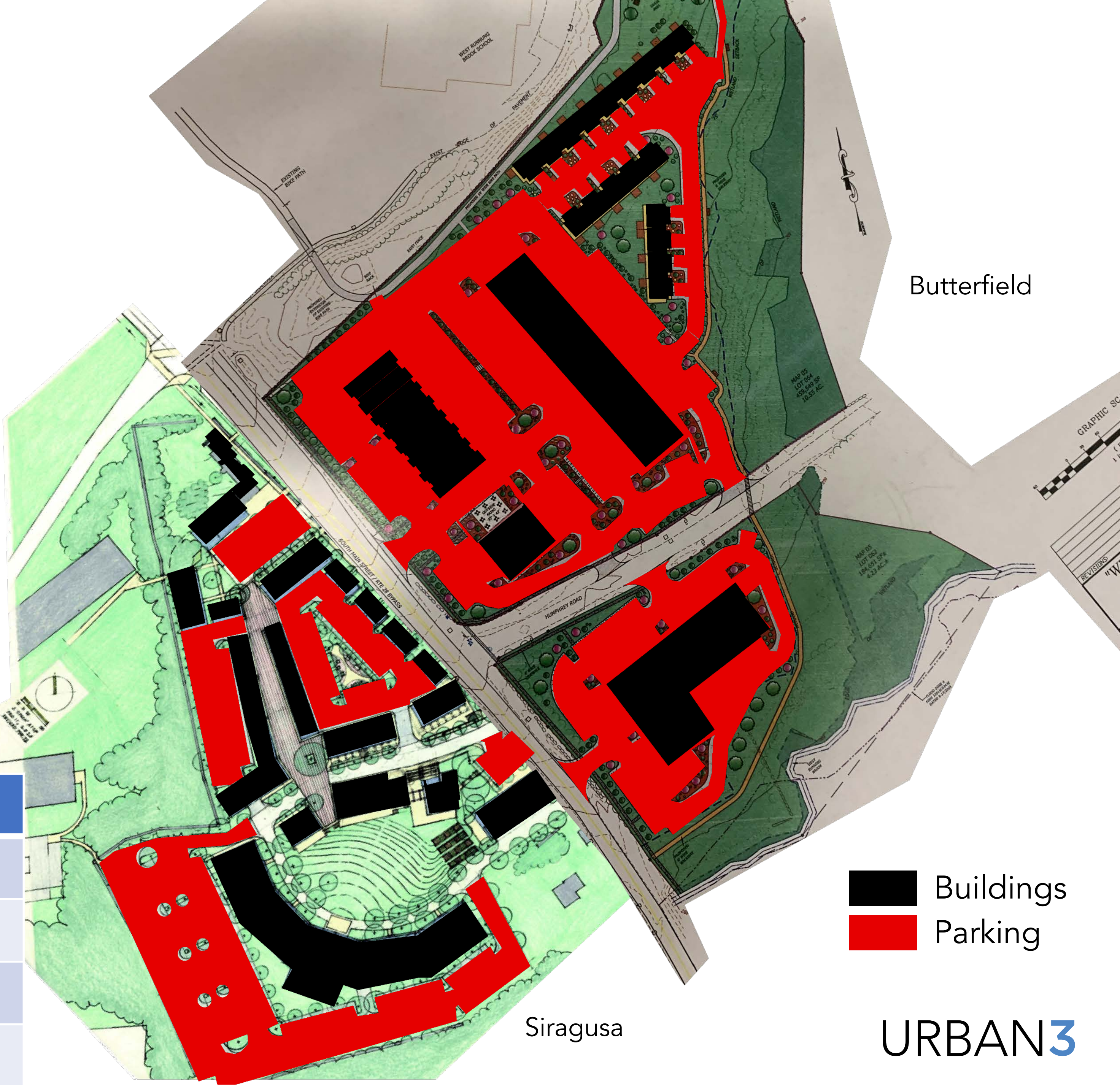
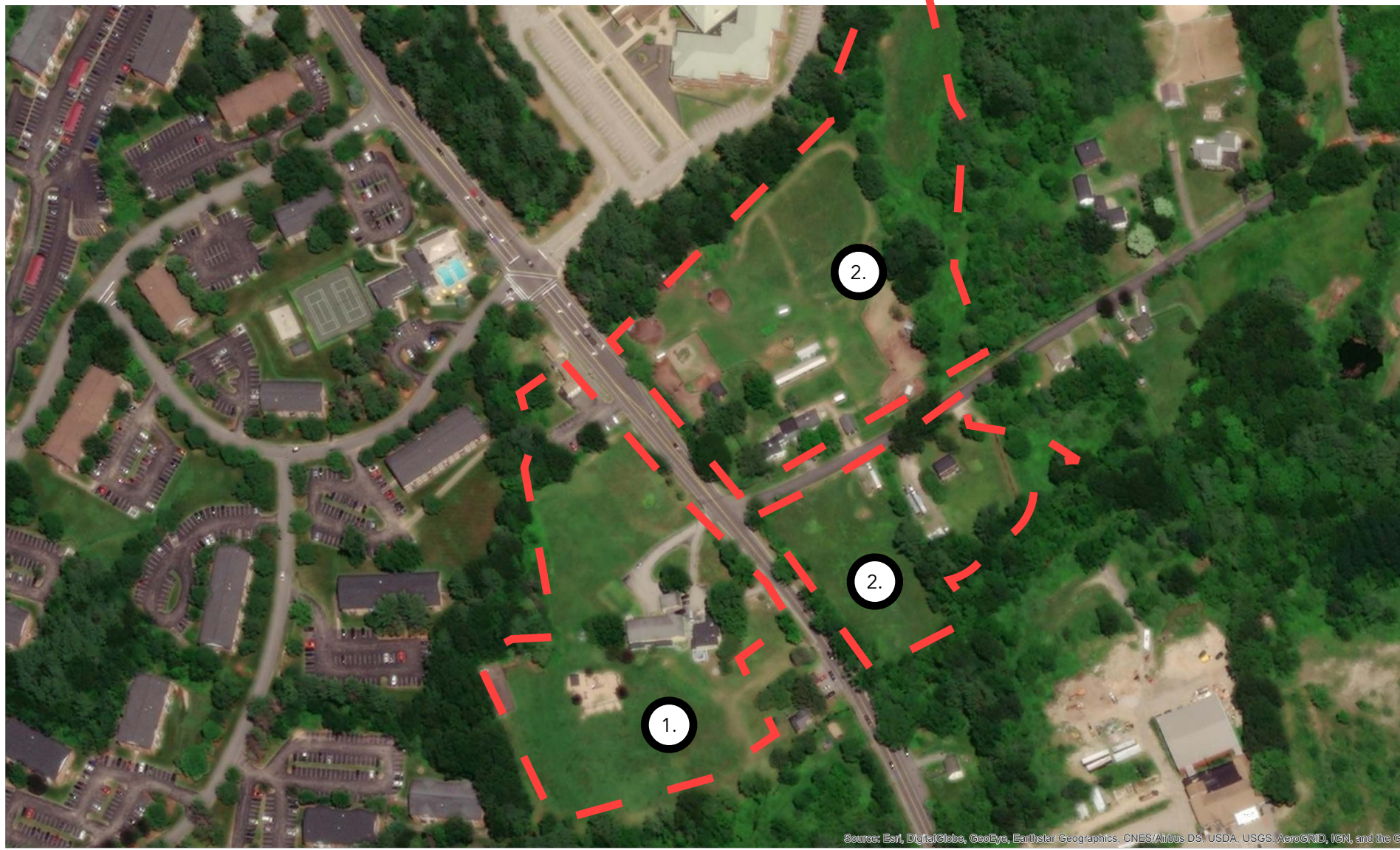


JEFF
SPECK



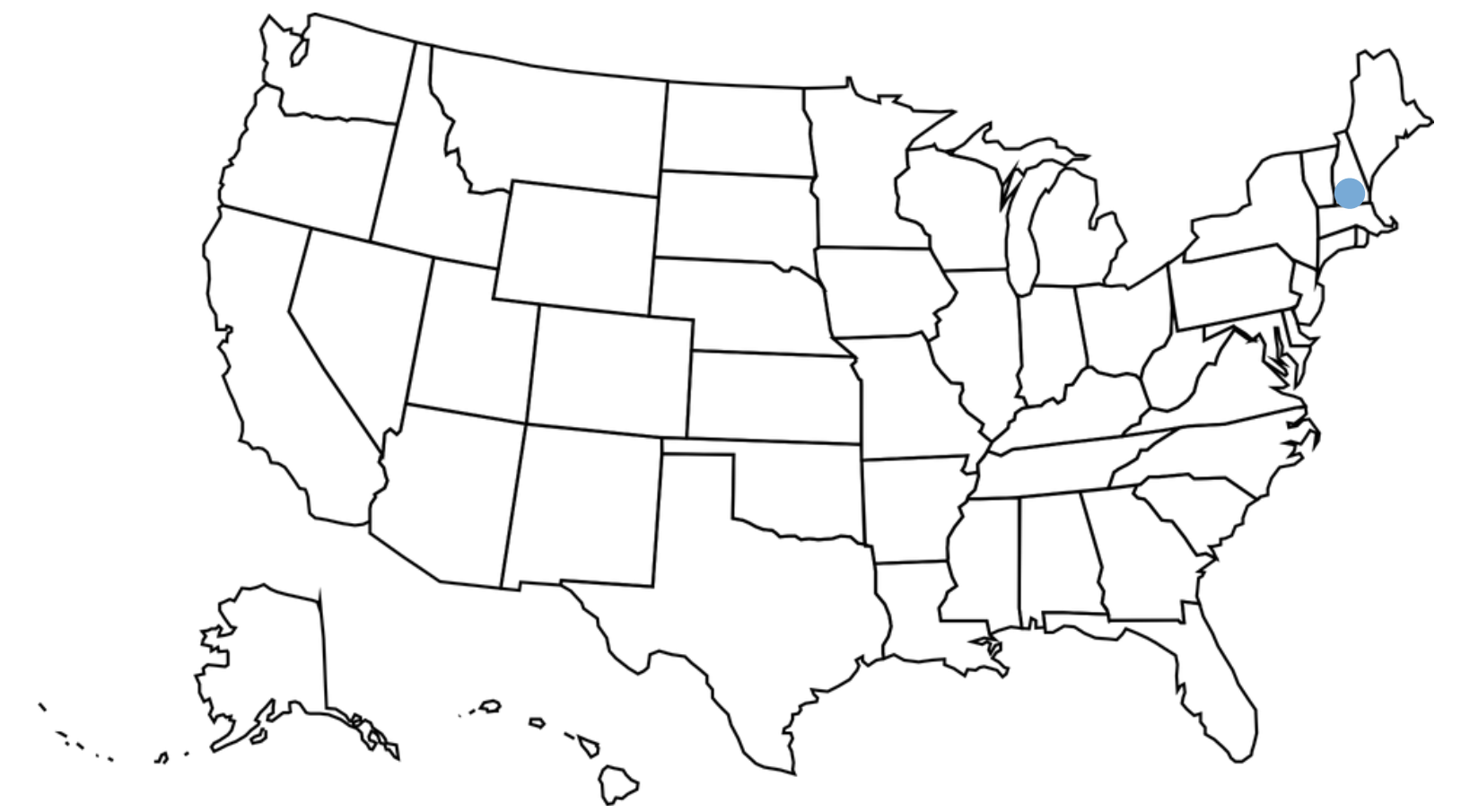


Siragusa



	Siragusa	Butterfield
Building Footprint (Acres)	1.92	2.13
Parking Acres	2.65	5.95
Building:Parking Ratio	1 : 1.4	1 : 2.8

Buildings
Parking



Case Study: Economic MRI®
2018

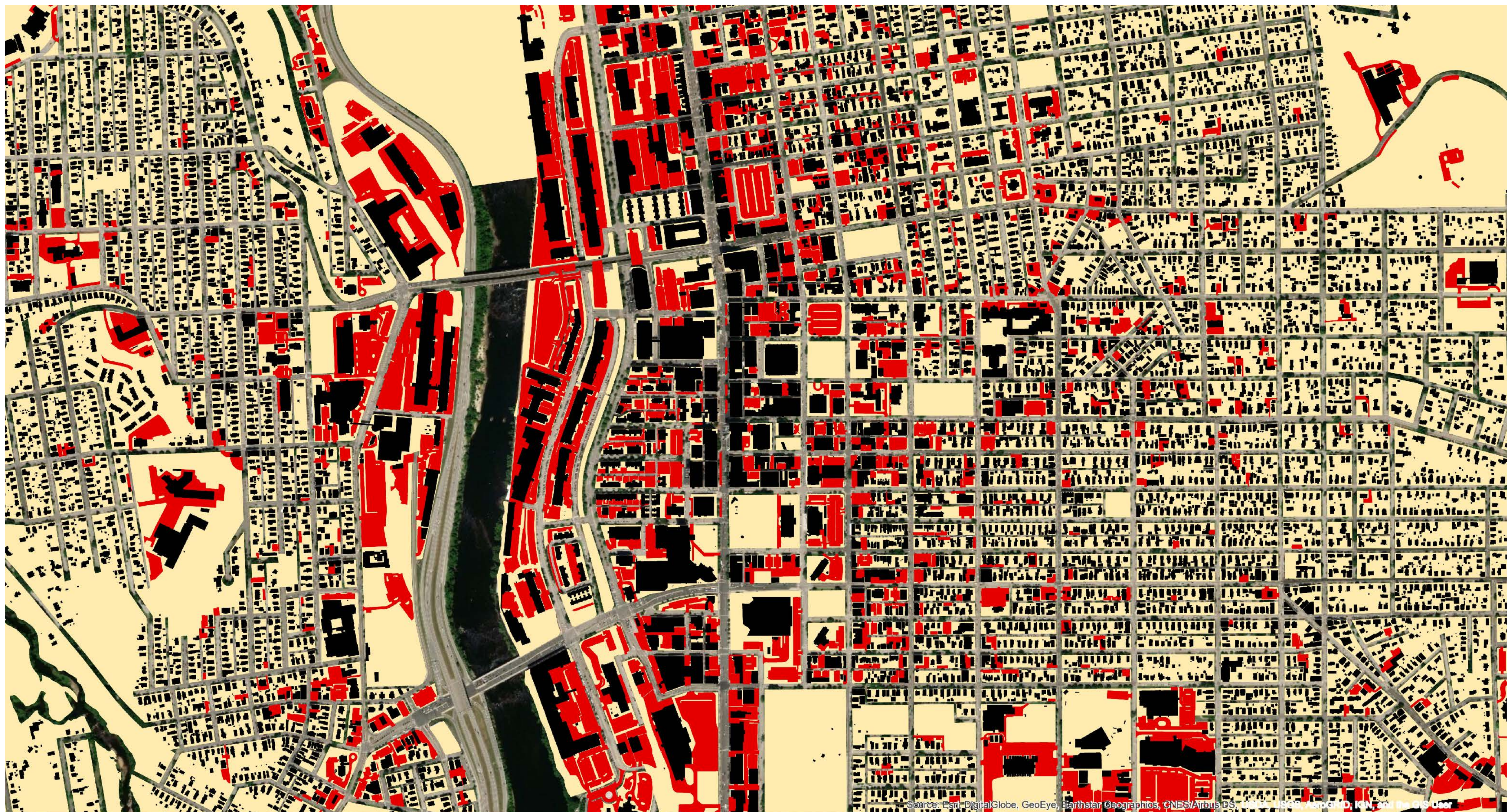
Manchester, New Hampshire

Land Use Analysis

Manchester, NH

City of Manchester

- Parking
- Buildings
- Other
- Roads

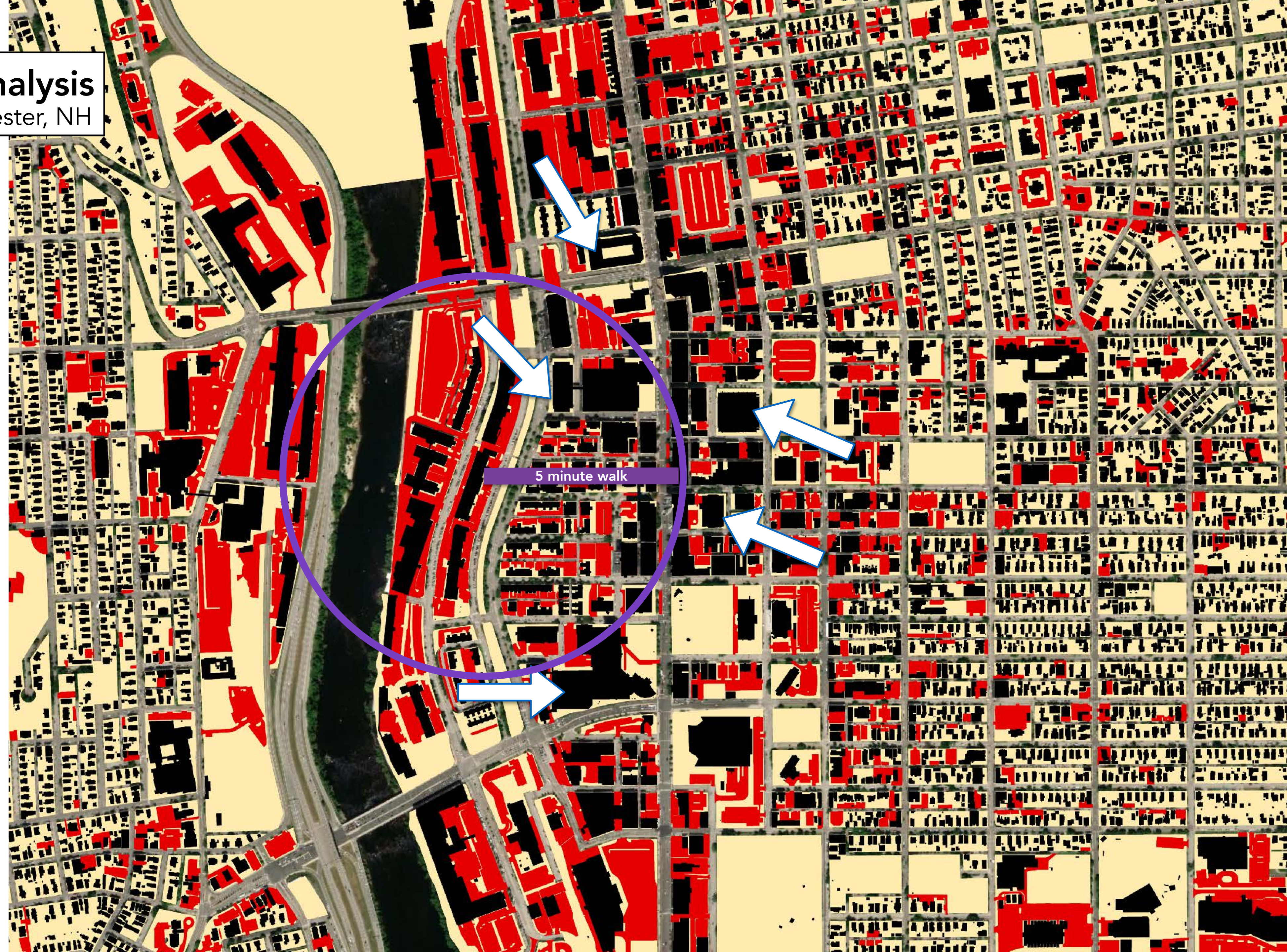


Land Use Analysis

Manchester, NH

City of Manchester

- Parking
- Buildings
- Other
- Roads

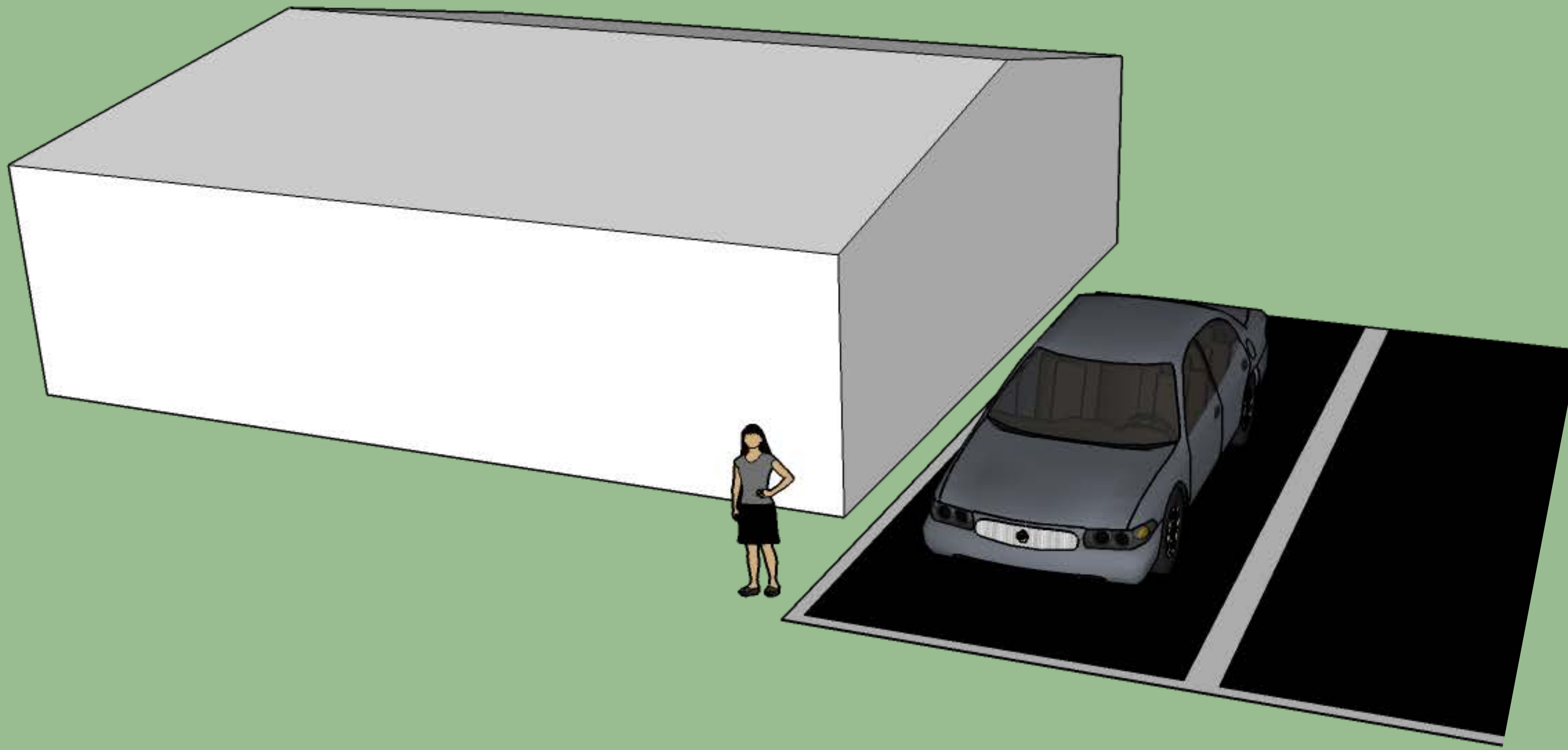


City of Manchester



What is Parking?

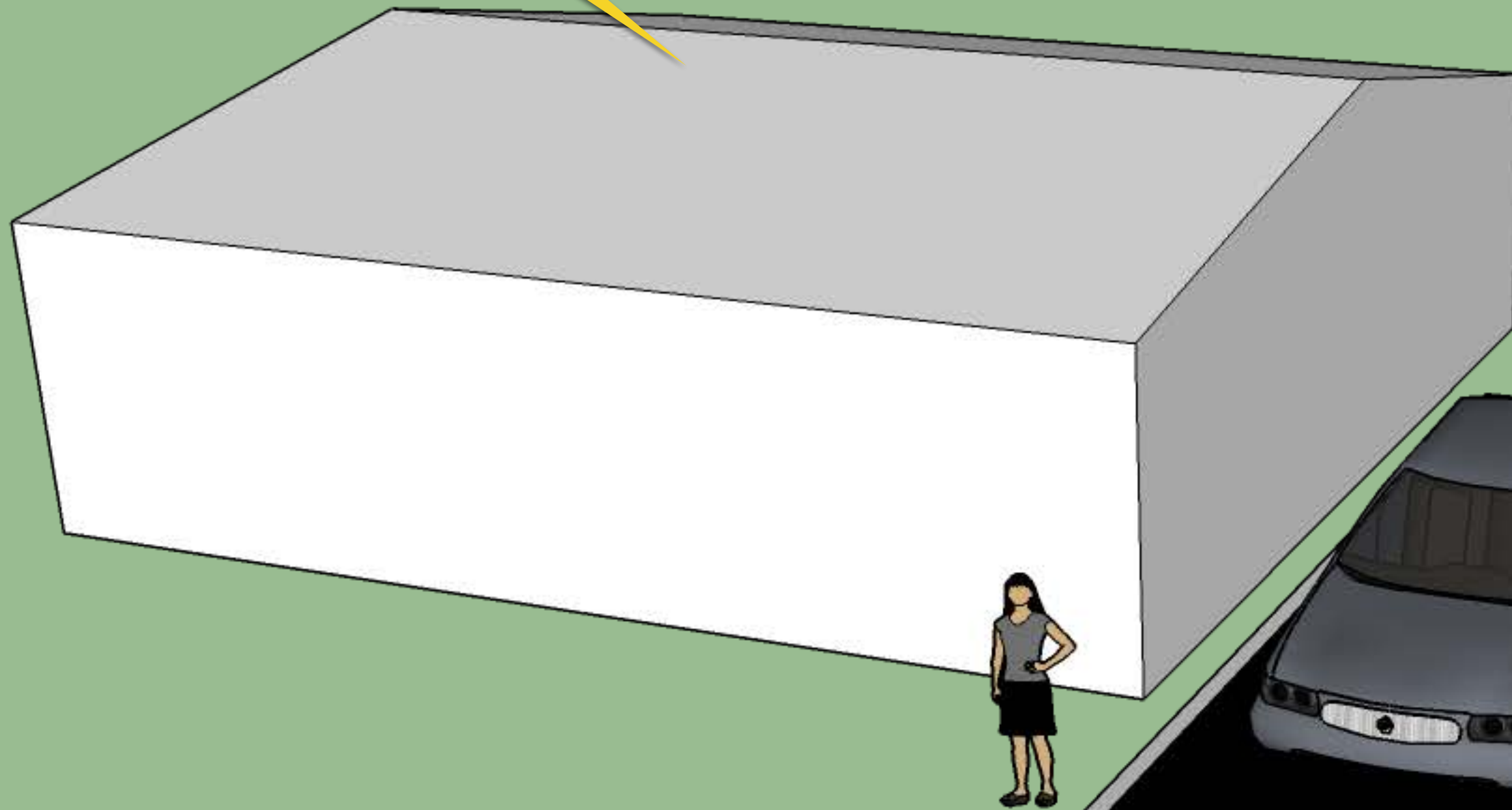
Measuring space



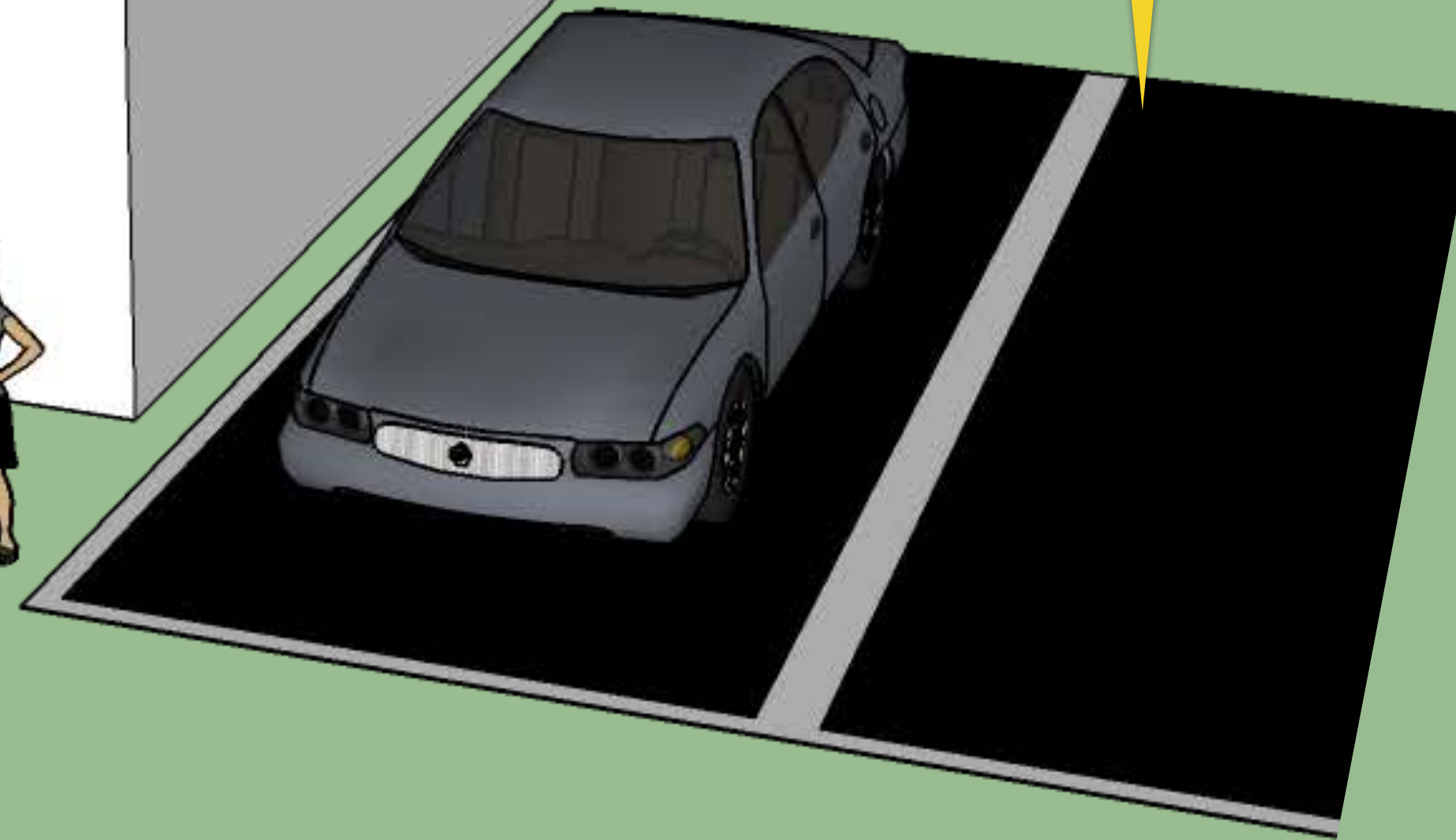
What is Parking?

Measuring space

Average Building
998 sq.ft.

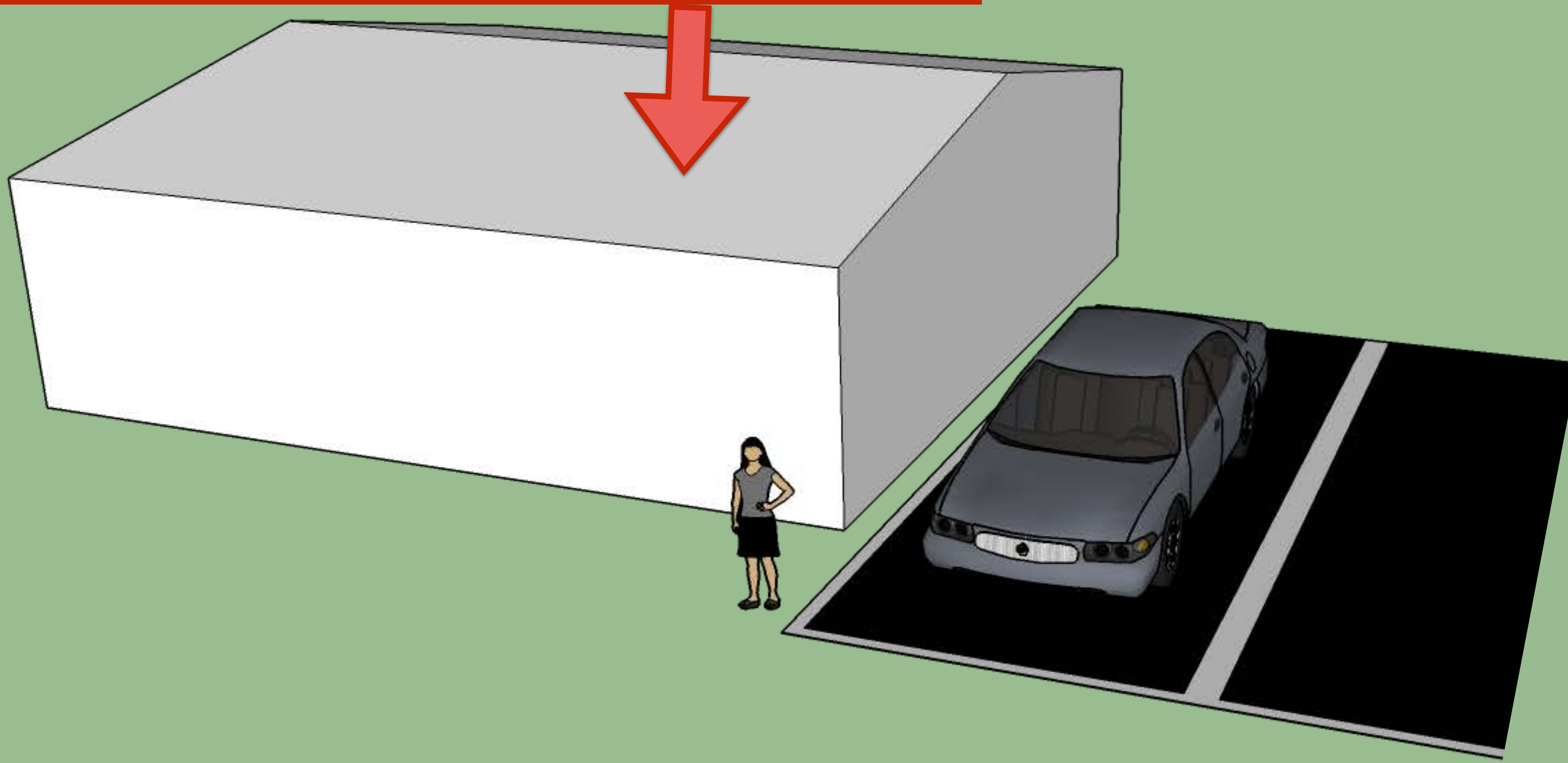


Average Parking (1.5 spaces)
585 sq.ft.



\$90/square foot

What is Parking?
Measuring Manchester space



What is Parking?

Measuring Manchester space

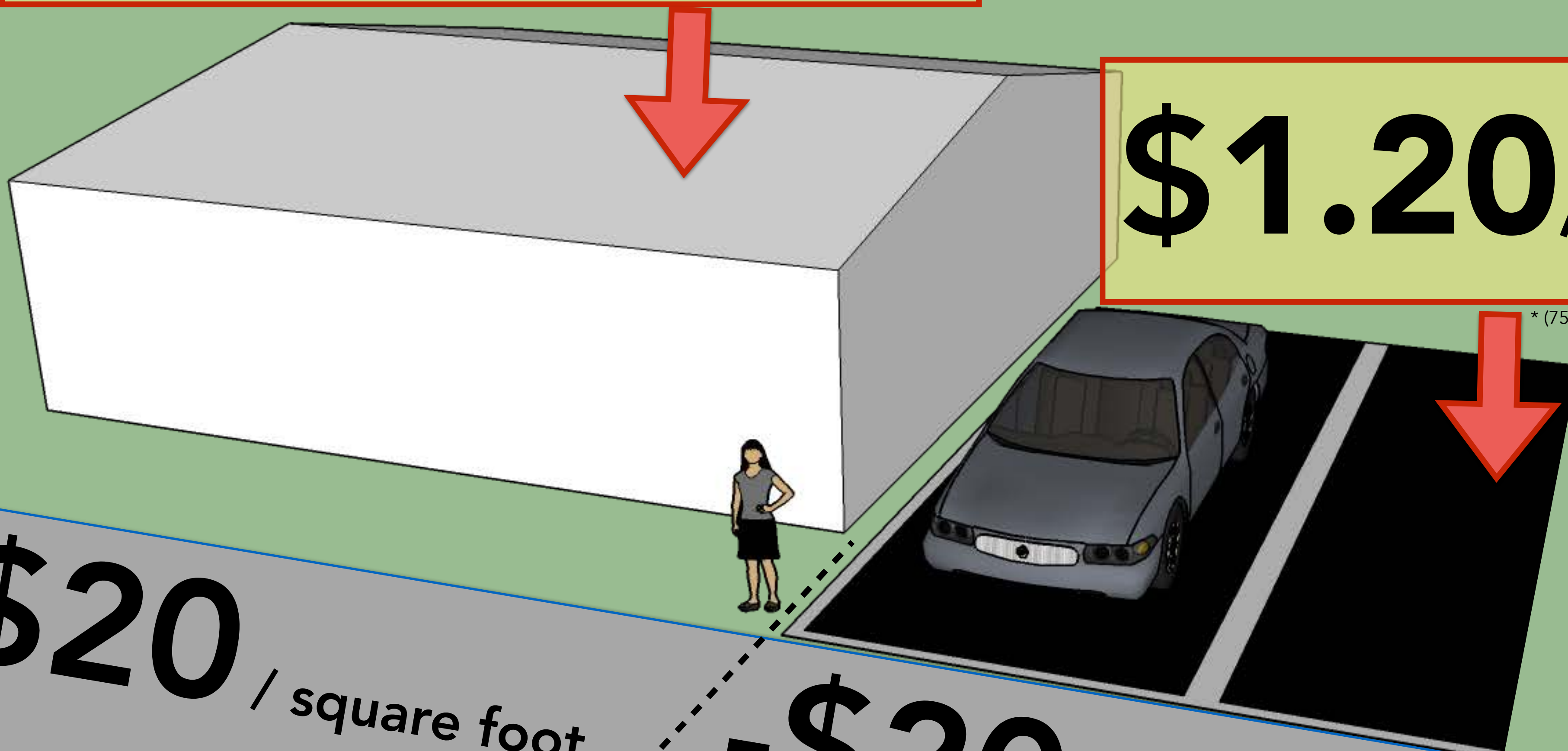
\$90/square foot

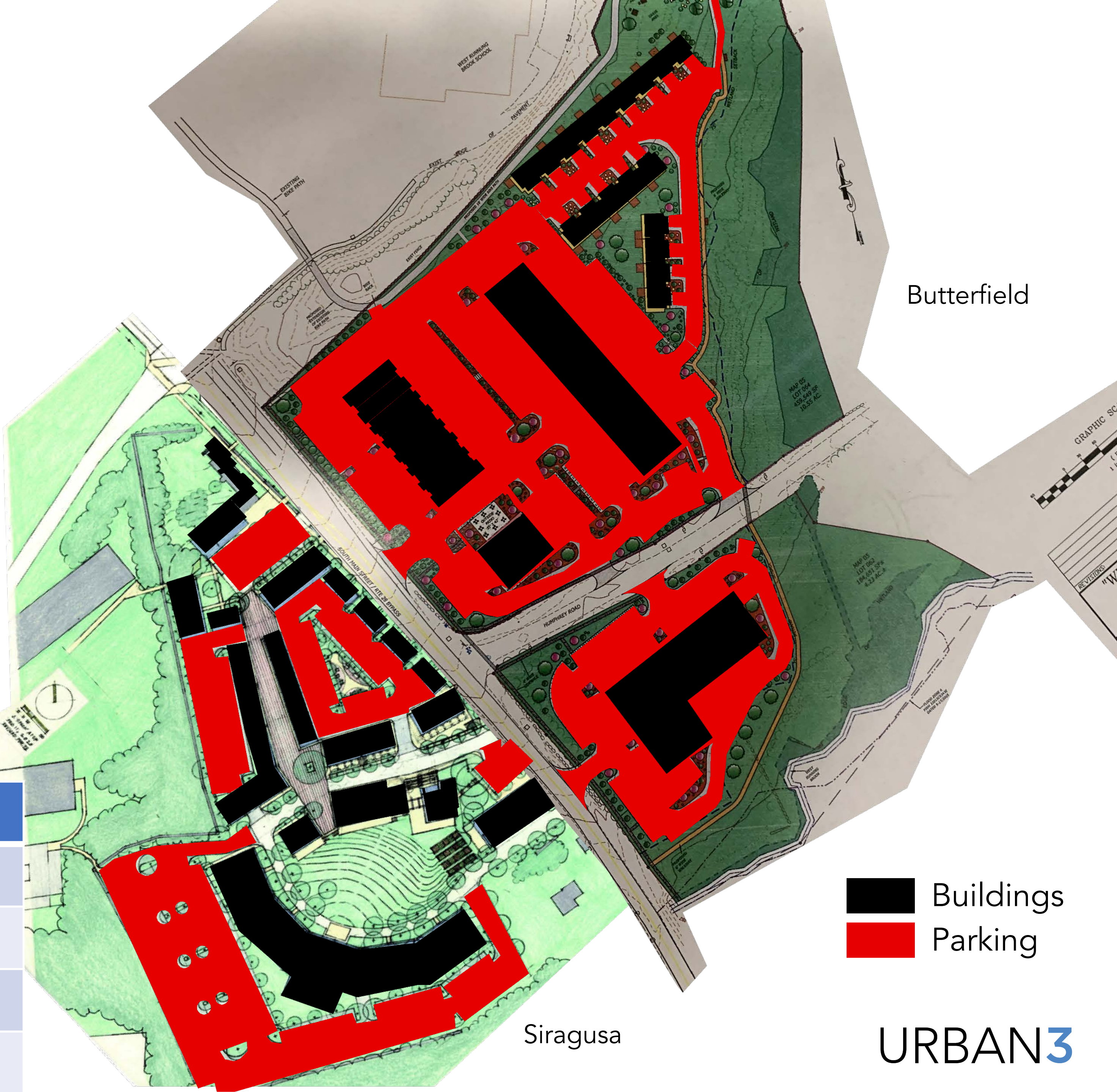
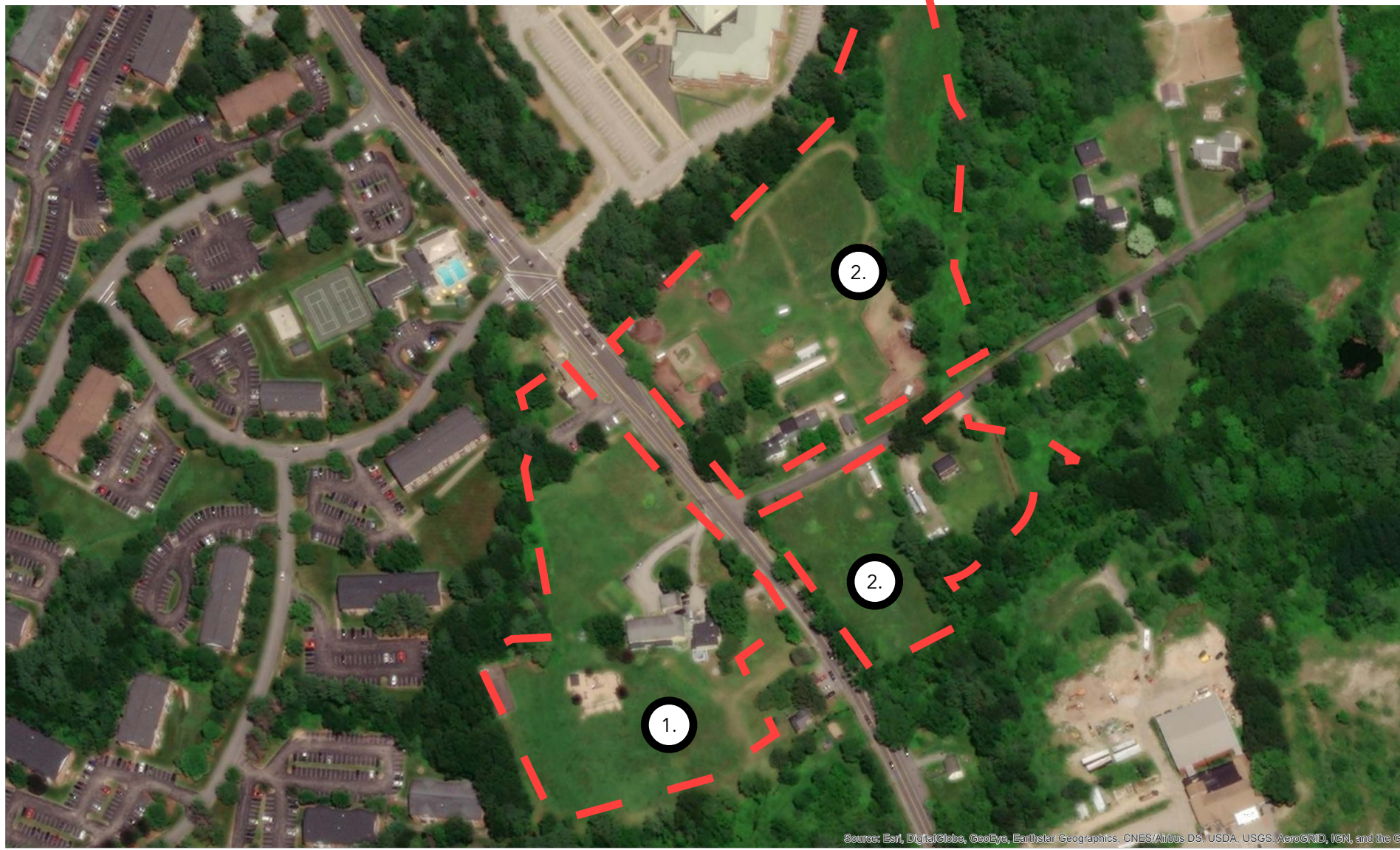
\$1.20/square foot*

* (75X) - Data from Assessment data on Pearl Street parking lot

-\$20 / square foot

-\$20 / square foot





	Siragusa	Butterfield
Building Footprint <small>(Acres)</small>	1.92	2.13
Parking Acres	2.65	5.95
Building:Parking Ratio	1 : 1.4	1 : 2.8
Value Per Acre	\$4.6M	\$2.5M

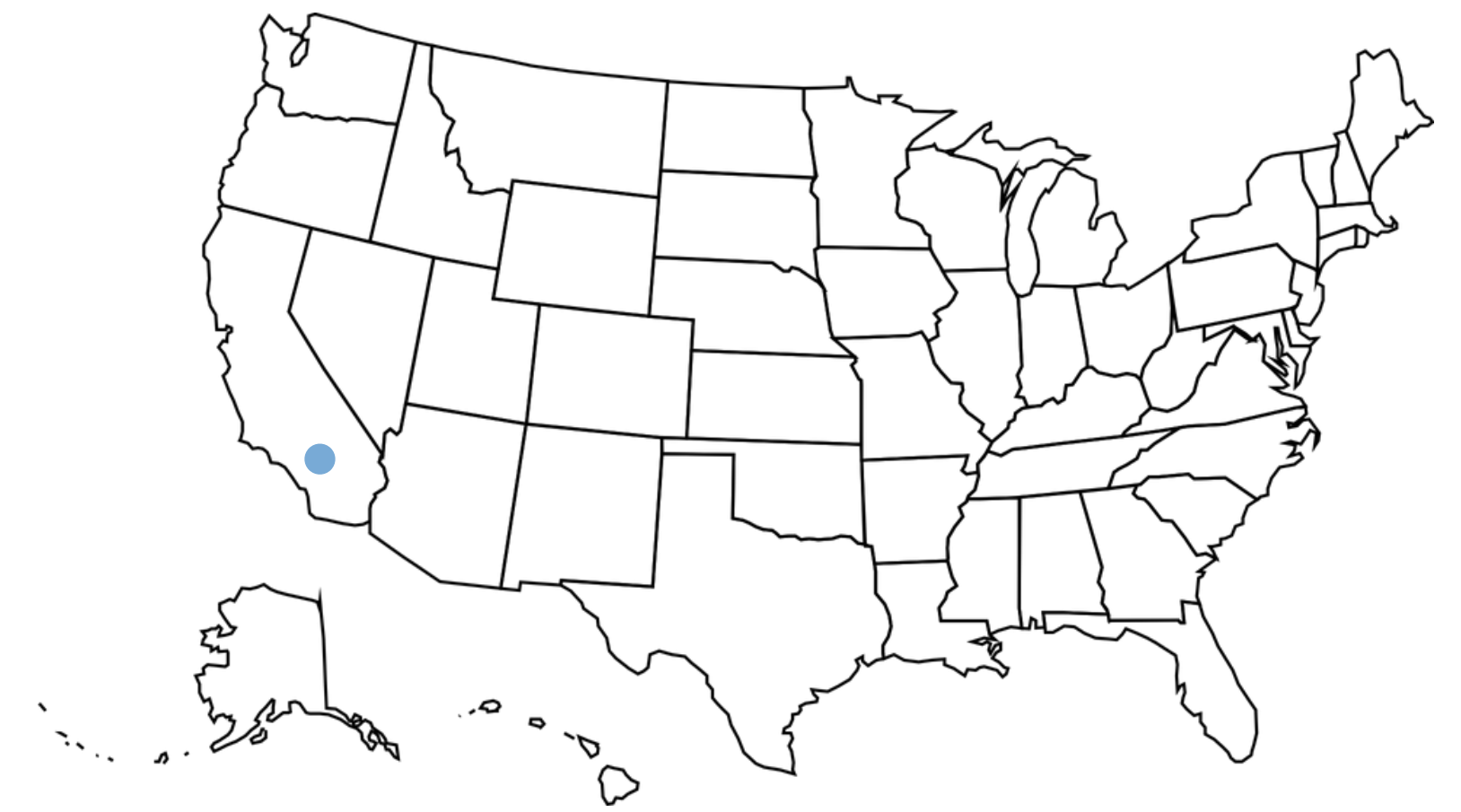
Buildings
Parking



URBAN3

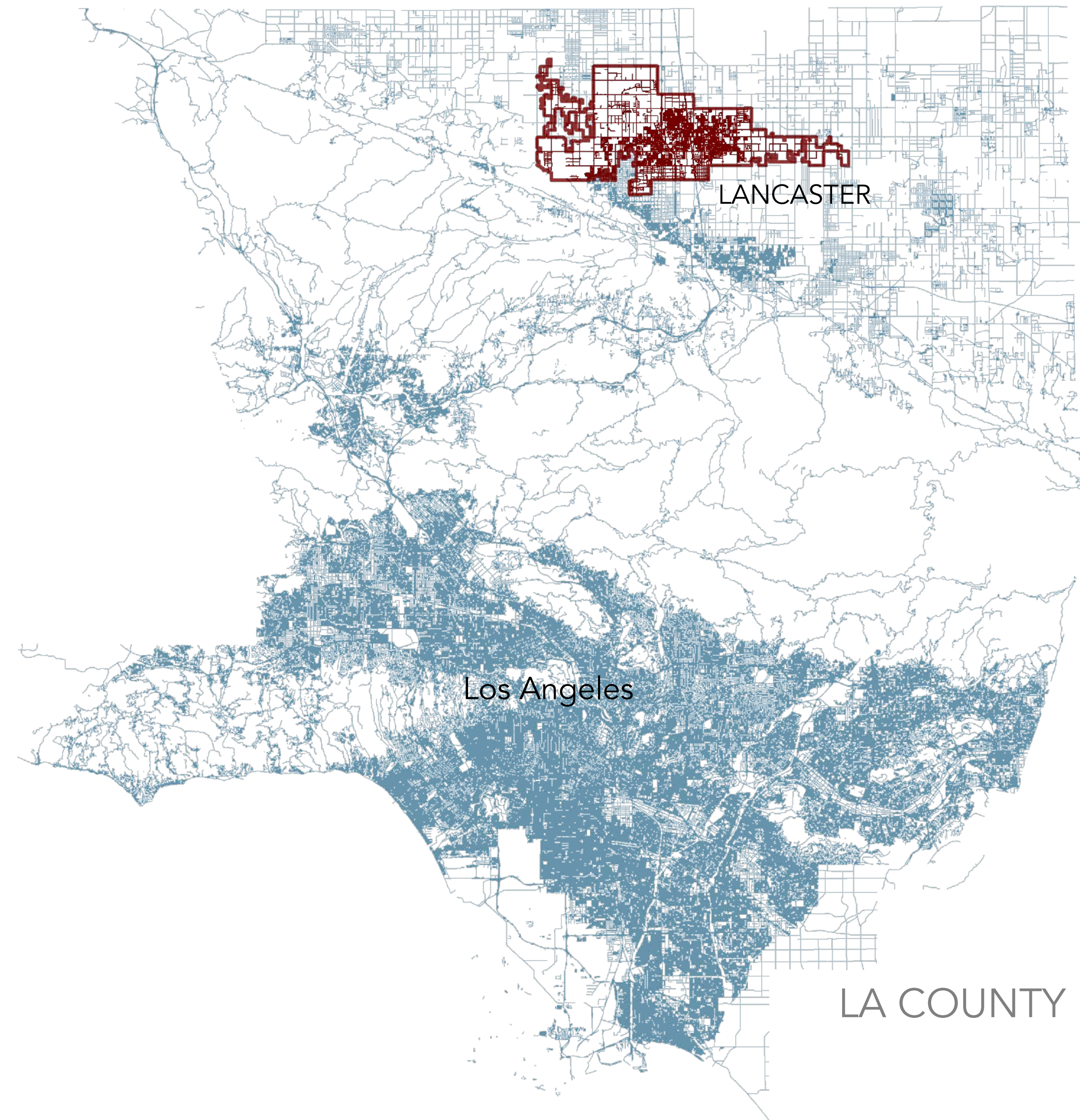
Lesson:

What are you carrying?

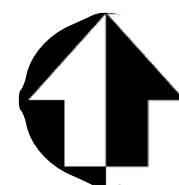


Case Study: Economic MRI®, Fiscal MRI®, Policy Analytics
2014 - 2019

Lancaster, California

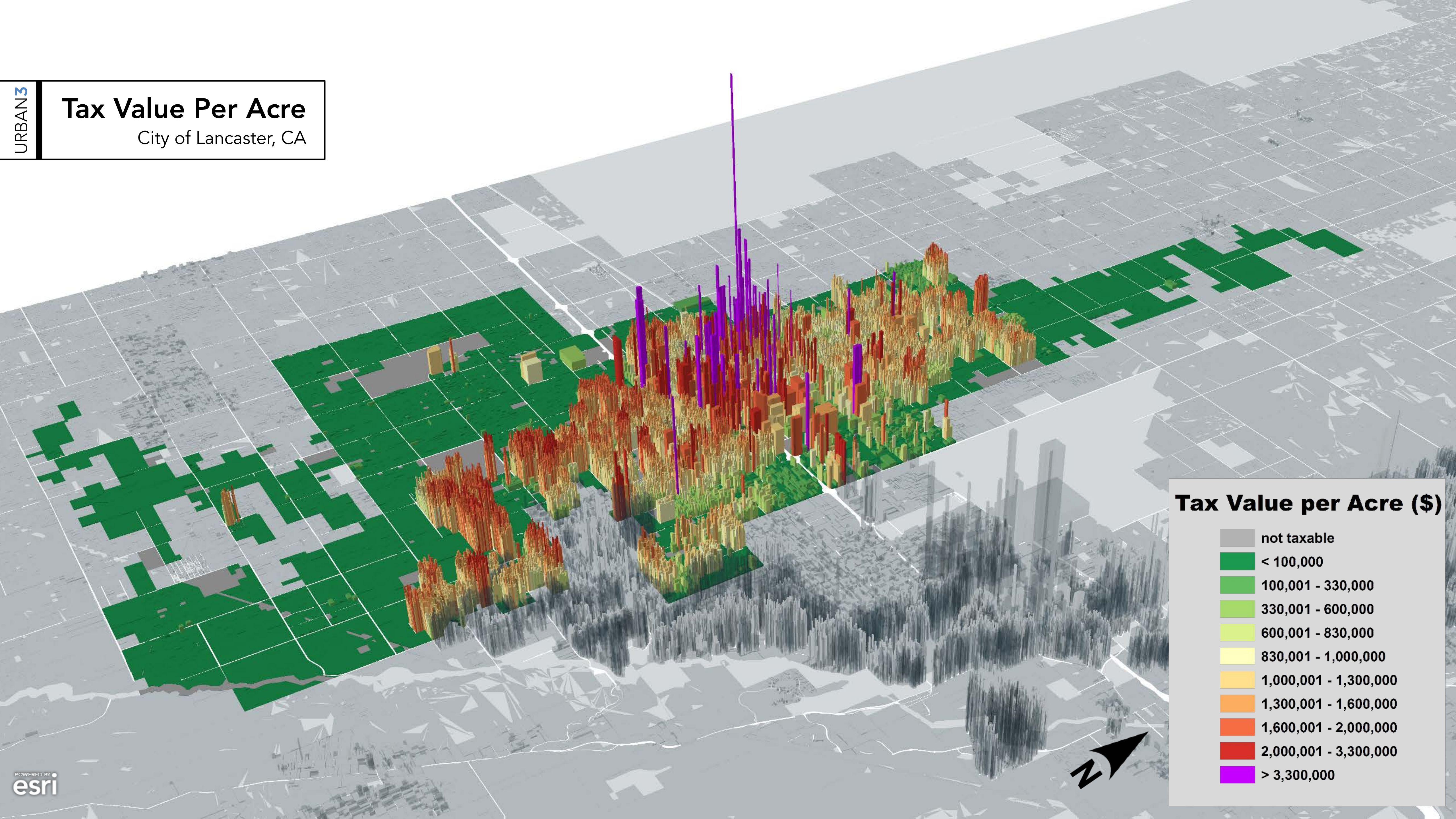


LANCASTER:



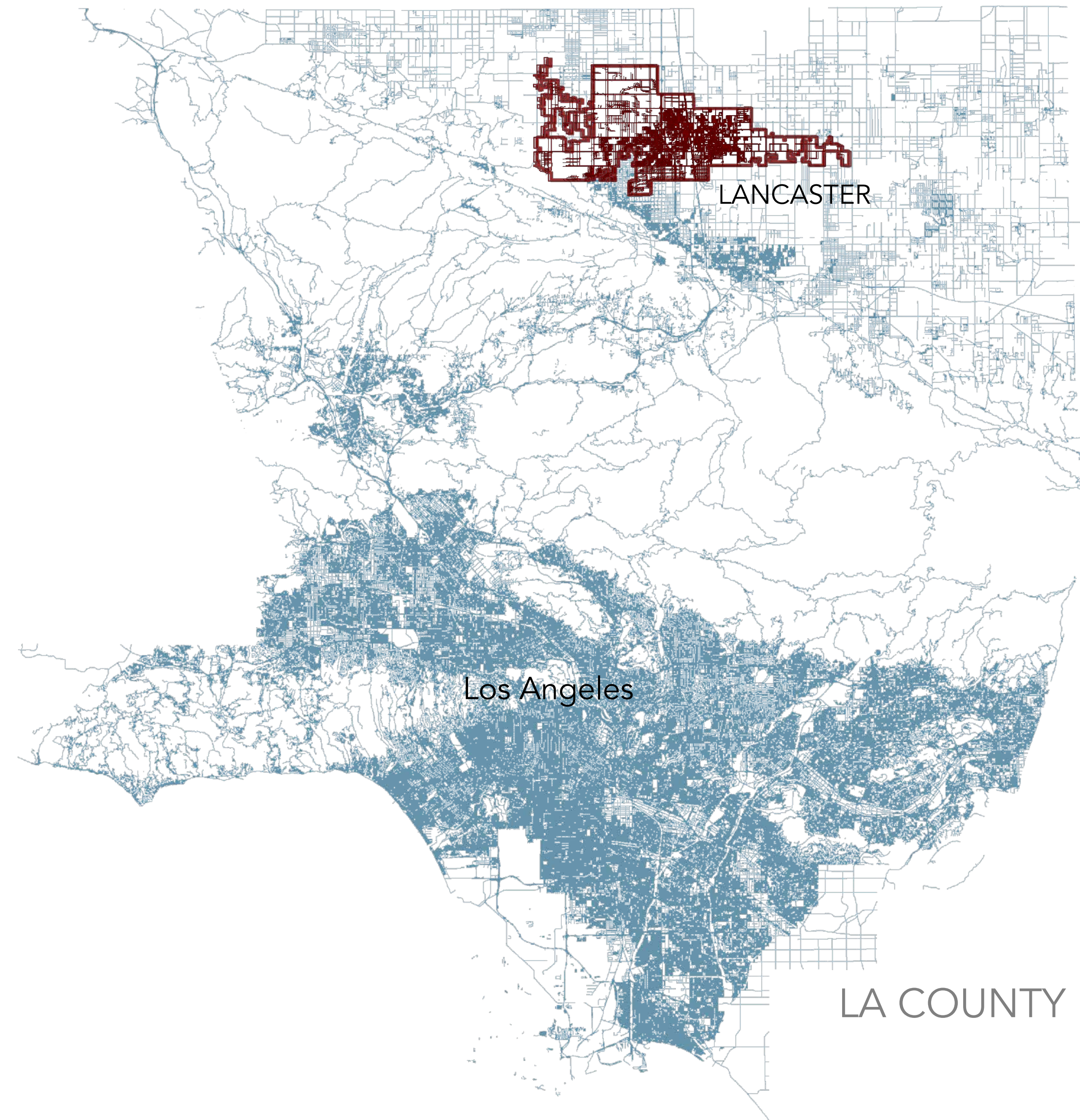
Tax Value Per Acre

City of Lancaster, CA

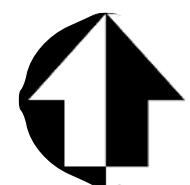


Tax Value per Acre (\$)

- not taxable
- < 100,000
- 100,001 - 330,000
- 330,001 - 600,000
- 600,001 - 830,000
- 830,001 - 1,000,000
- 1,000,001 - 1,300,000
- 1,300,001 - 1,600,000
- 1,600,001 - 2,000,000
- 2,000,001 - 3,300,000
- > 3,300,000

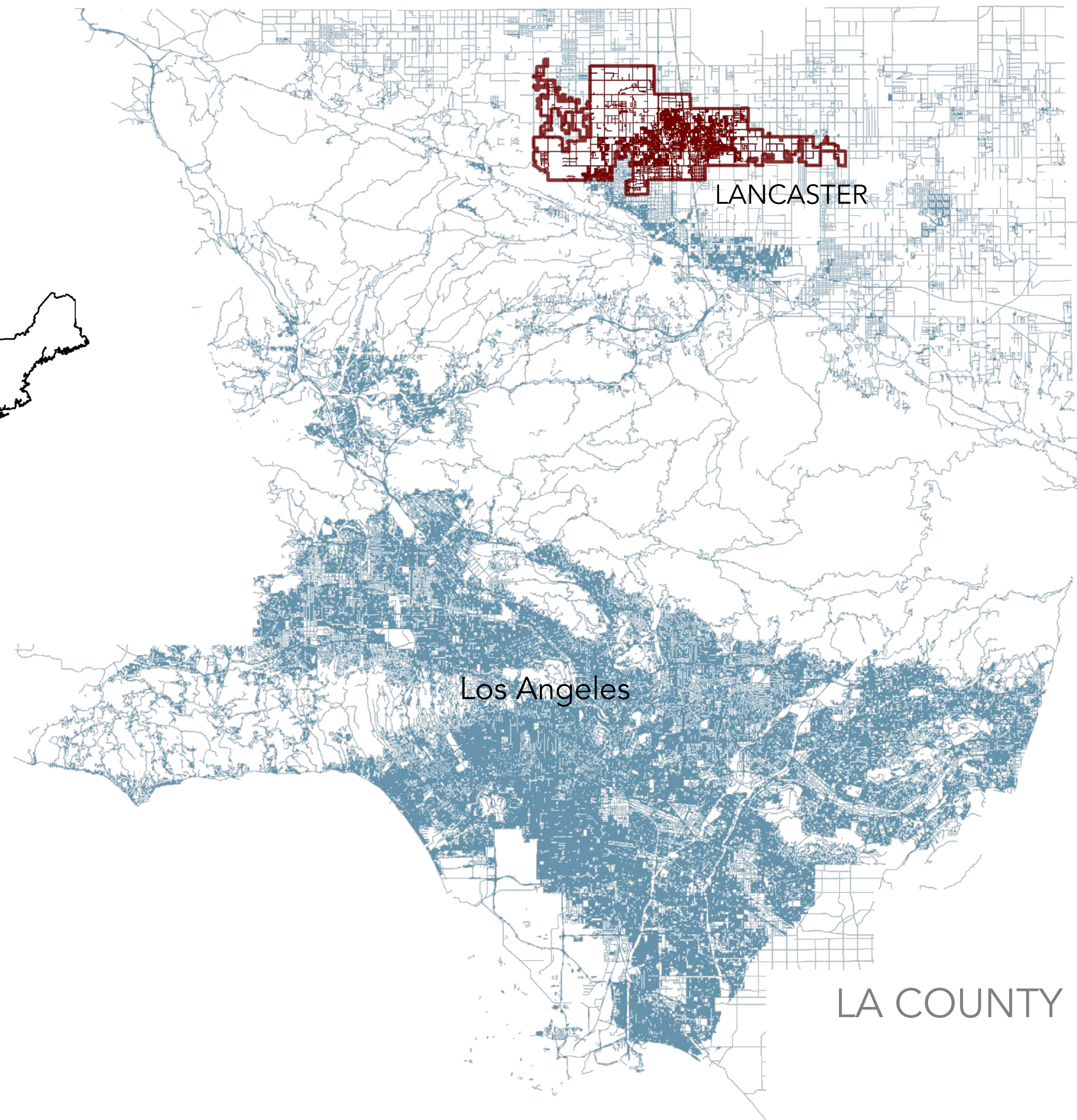
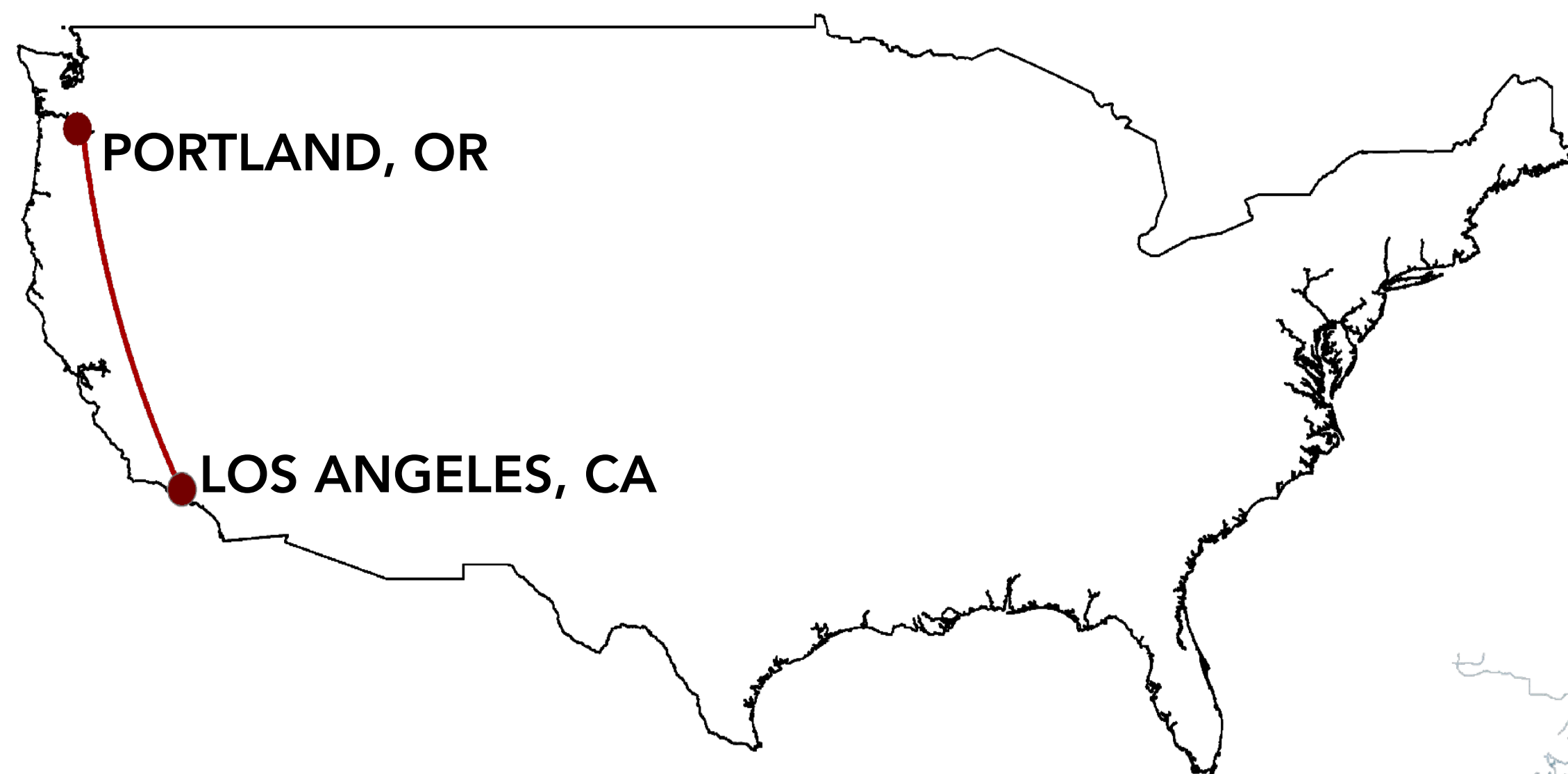


LANCASTER: 953 MILES



Paved Roads

City of Lancaster, CA



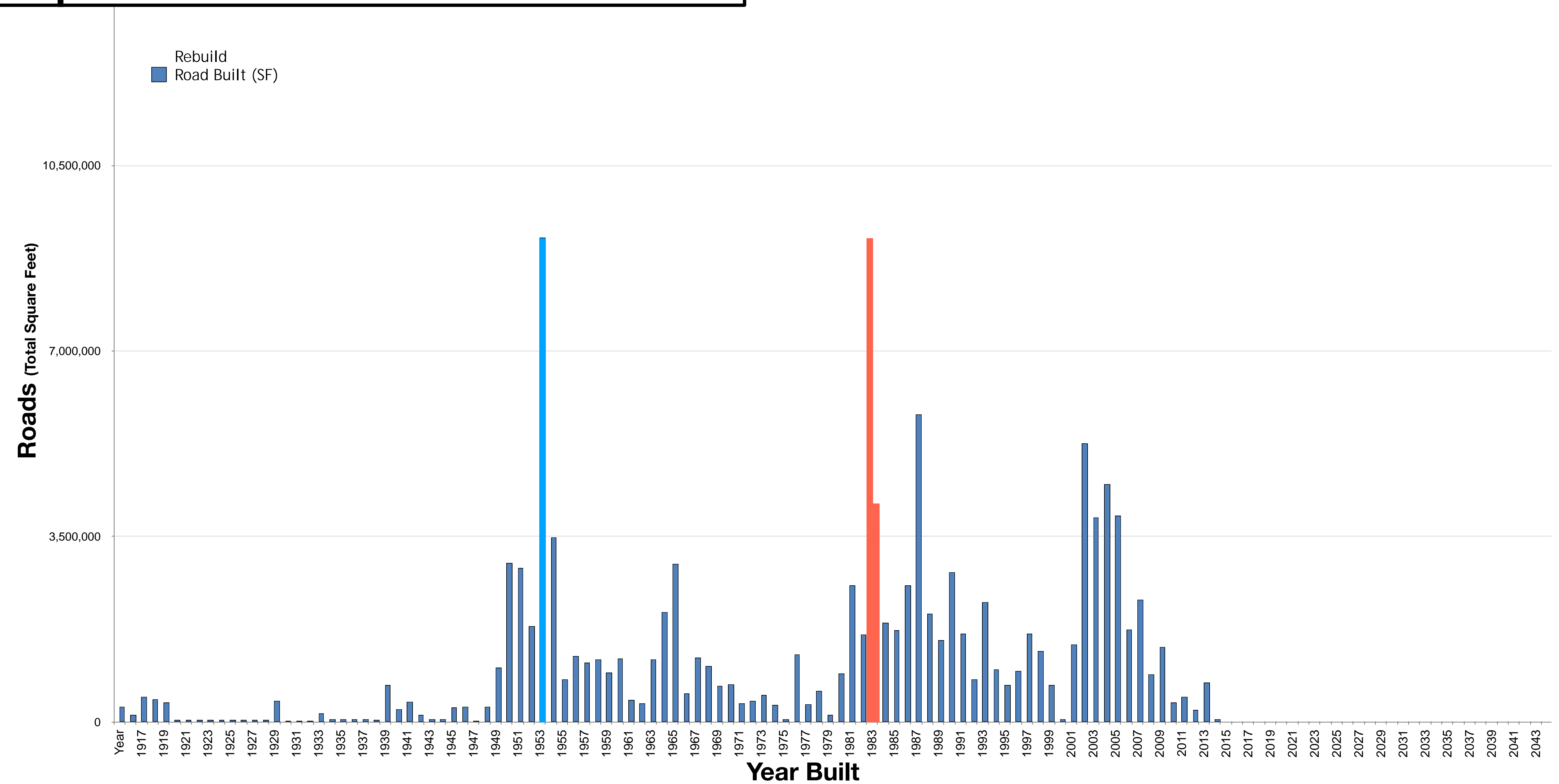
LA COUNTY

LANCASTER: 953 MILES



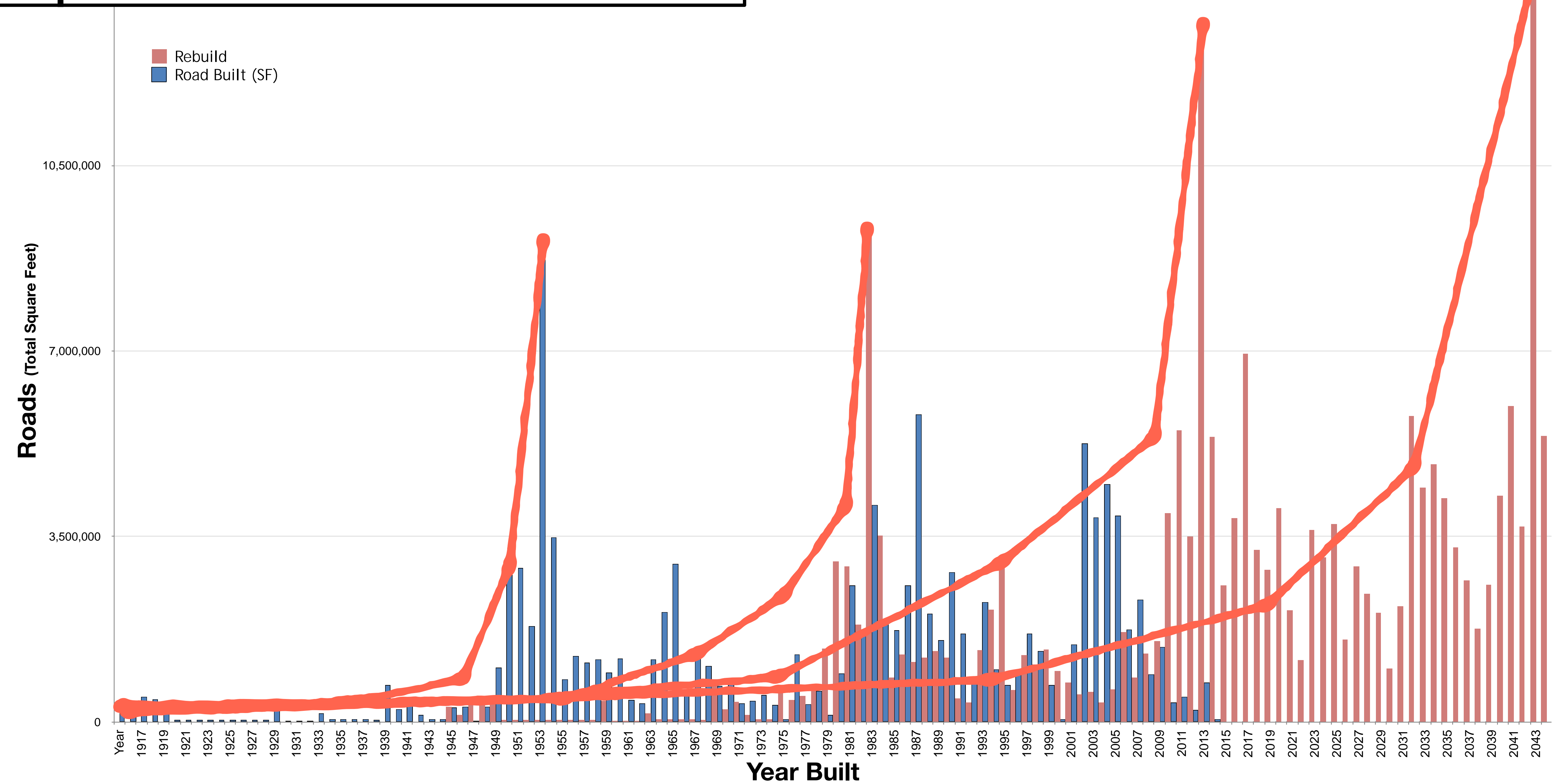
Road Construction and Reconstruction

Lancaster, CA



Road Construction and Reconstruction

Lancaster, CA



What Roads Can You Sustain?

Based on revenue flow, what can we afford? About half the network.

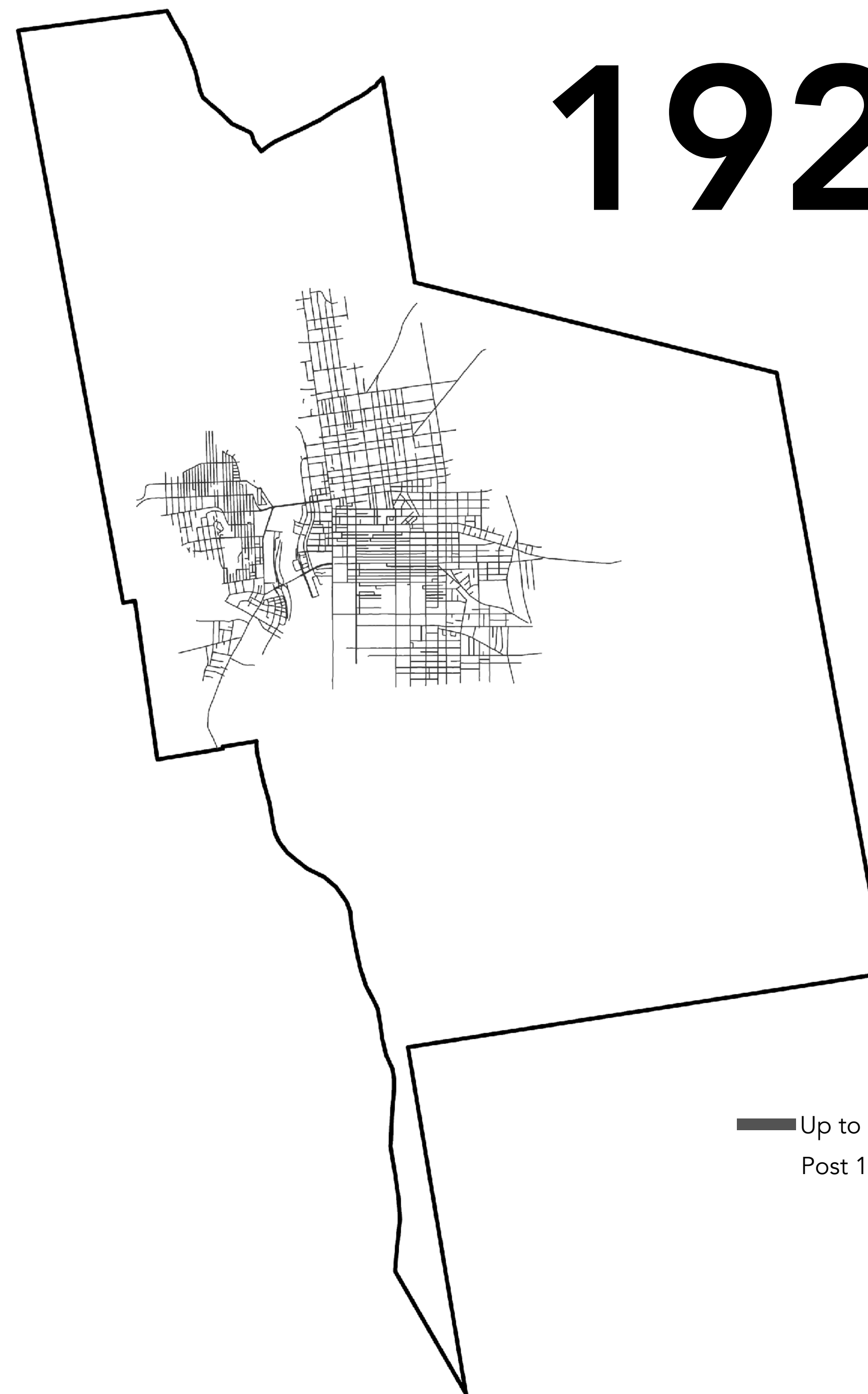


77,000 people

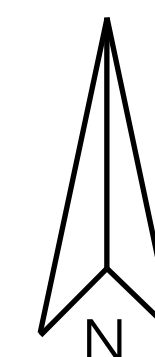
140 miles* of road

9.6 feet of road per person

1925



— Up to 1925
— Post 1925



*Road centerline miles

Roads over Time

Manchester, NH

111,000 people

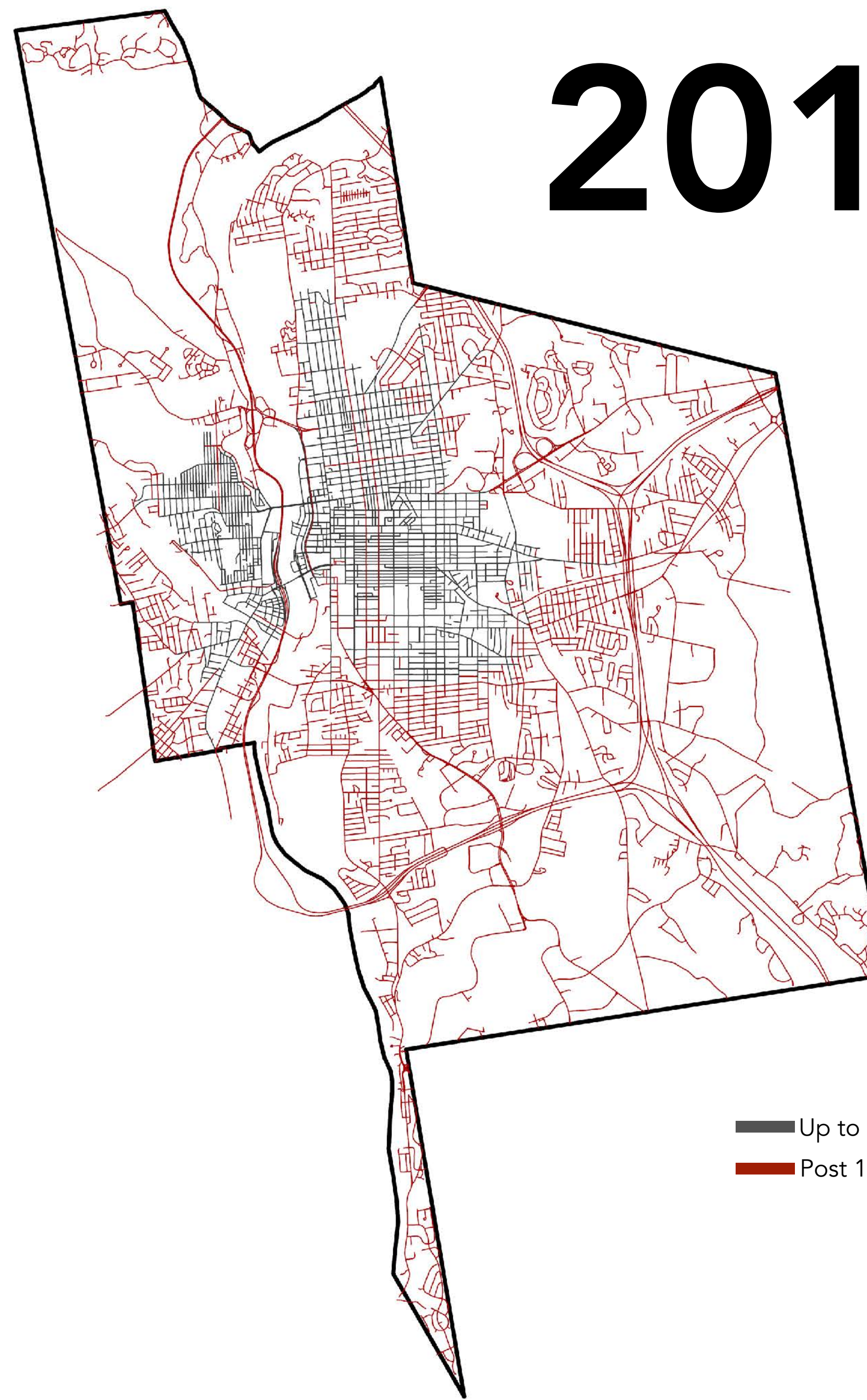
535 miles* of road

25.4 feet of road per person

Population **44%**

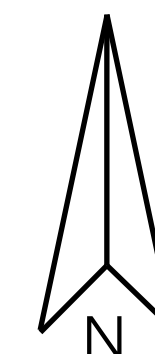
Feet per person

163% Increase



2018

— Up to 1925
— Post 1925



*Road centerline miles

Question:

OK. So now what?

What you can do:

1. Do more analytics.



Dell Avenue

FAIR+EQUITABLE

AUGUST 2019 | VOLUME 17 | NUMBER 7

A publication of IAAO on appraisal and appraisal management, within the property assessment industry.

DON'T CUT ME OFF!

USING POST-VALUATION DATE EVIDENCE IN APPRAISALS | 8

INSIDE

IAAO CONFERENCE SESSION HIGHLIGHTS
Available session topics are vast and wide for 2019. | 17

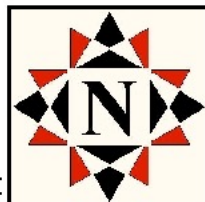
HIGHEST AND BEST USE
TEGoVA extends Highest and Best Use value to encompass Hope Value | 28





Legend

-  Study Area
-  Tax Exempt



LAND Assessment

Assessed Value Per Acre

-  \$0.00 - \$5,000.00
-  \$5,000.01 - \$10,000.00
-  \$10,000.01 - \$15,000.00
-  \$15,000.01 - \$20,000.00
-  \$20,000.01 - \$25,000.00
-  \$25,000.01 - \$30,000.00
-  \$30,000.01 - \$35,000.00
-  \$35,000.01 - \$40,000.00
-  \$40,000.01 - \$45,000.00
-  \$45,000.01 +



Tax Code

4444
747444

4444
747444
747444



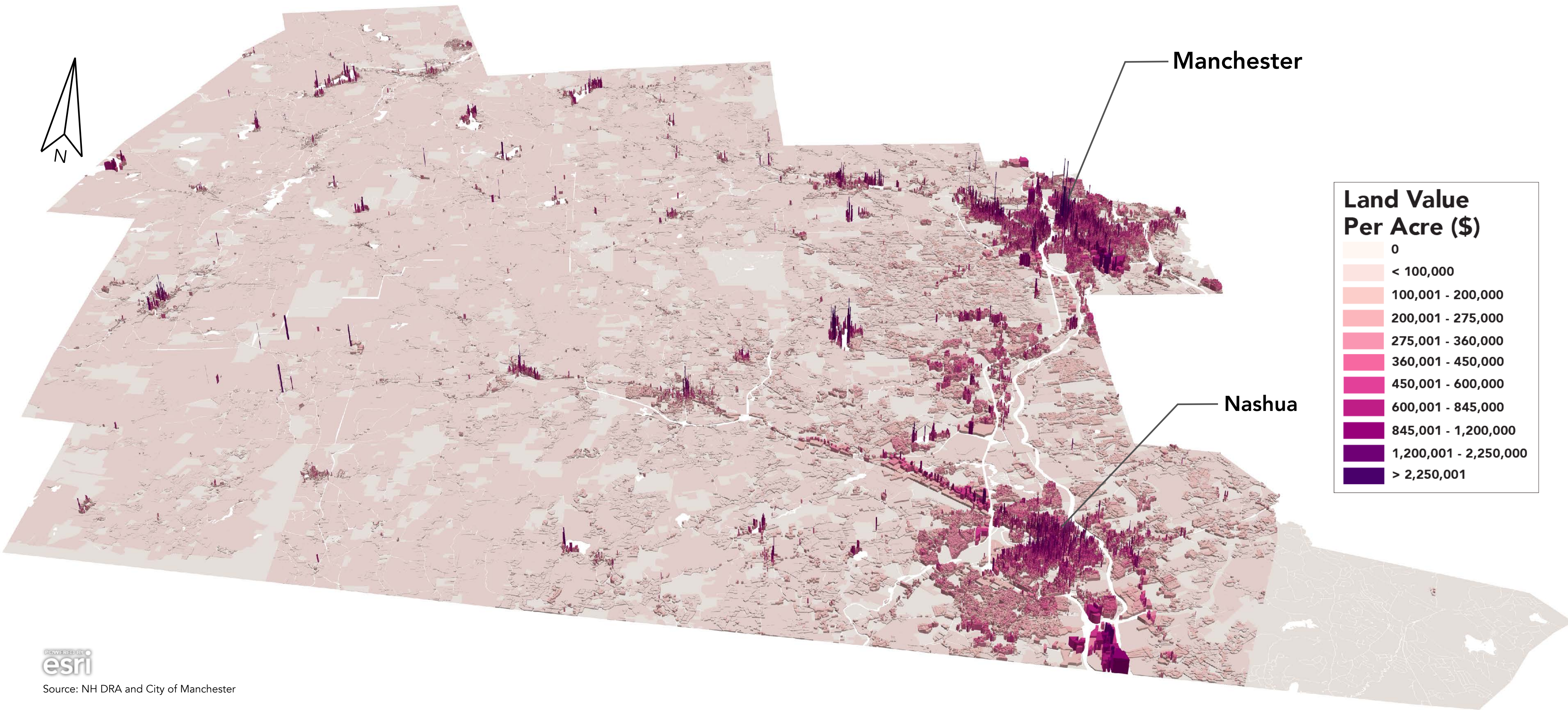
MARKET FORCES



Larry Clark

Land Value Per Acre

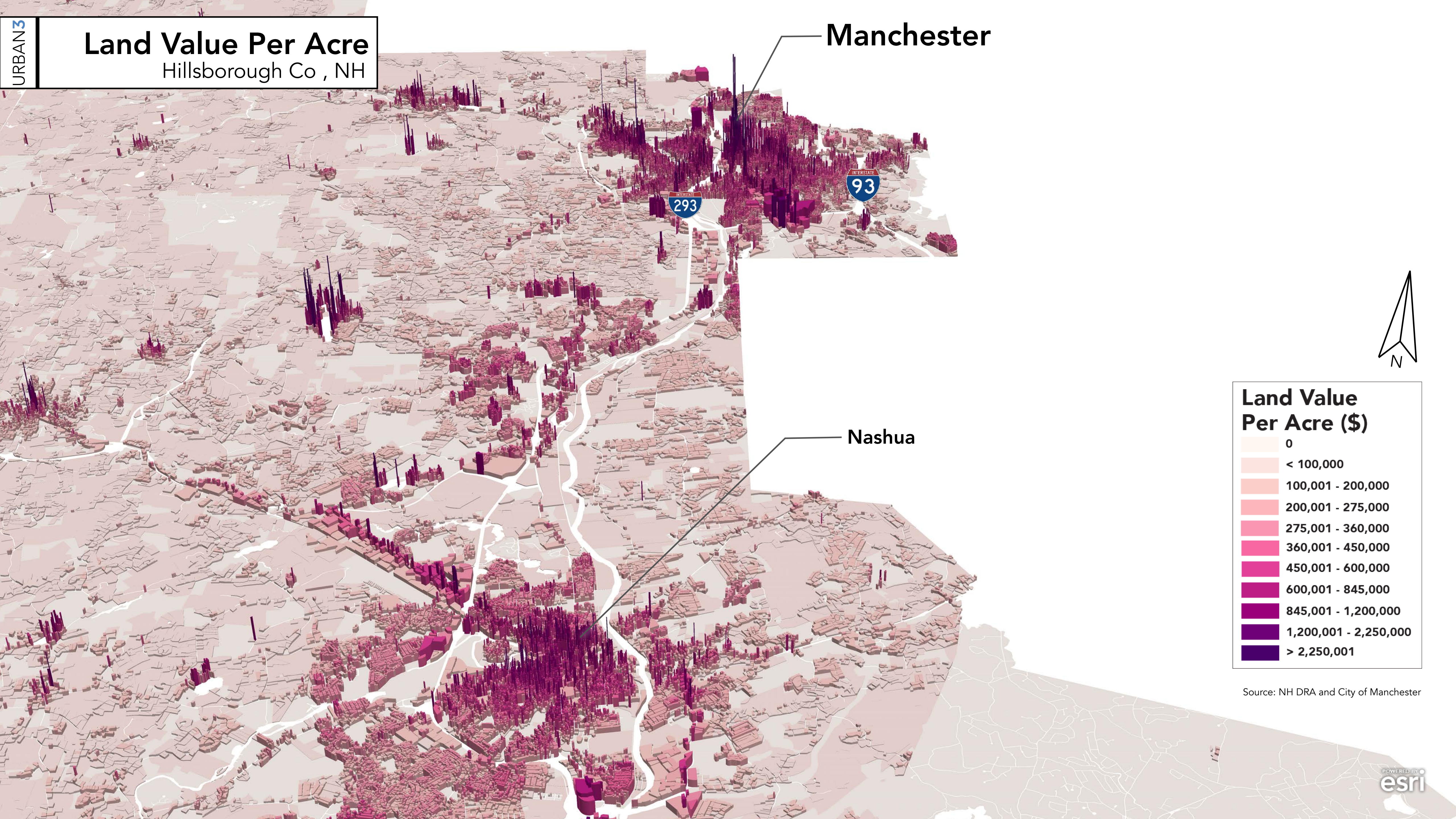
Hillsborough Co , NH



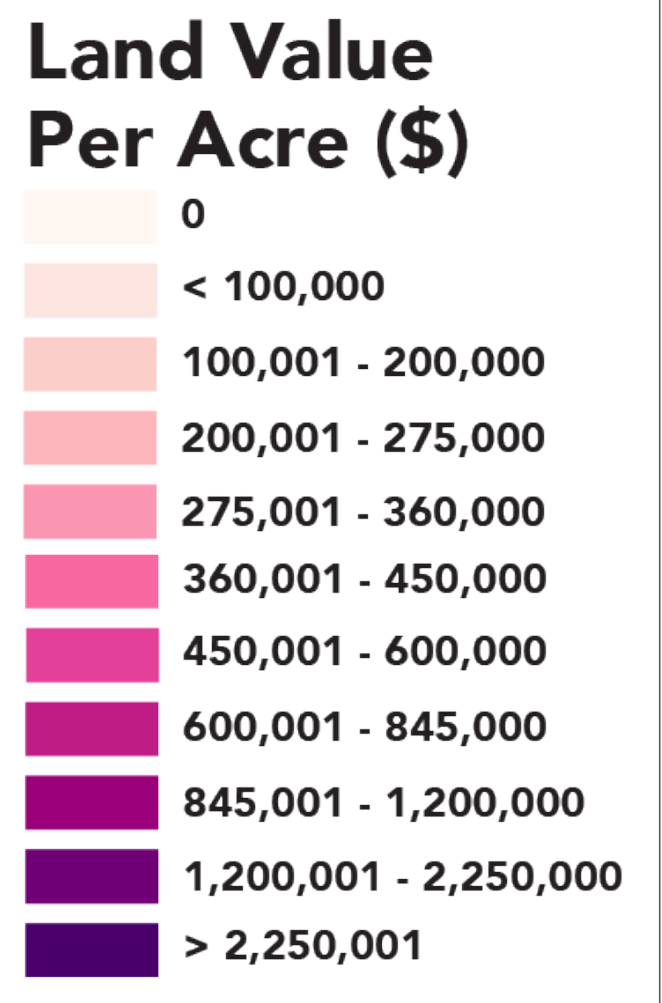
Land Value Per Acre

Hillsborough Co , NH

Manchester



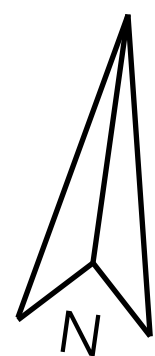
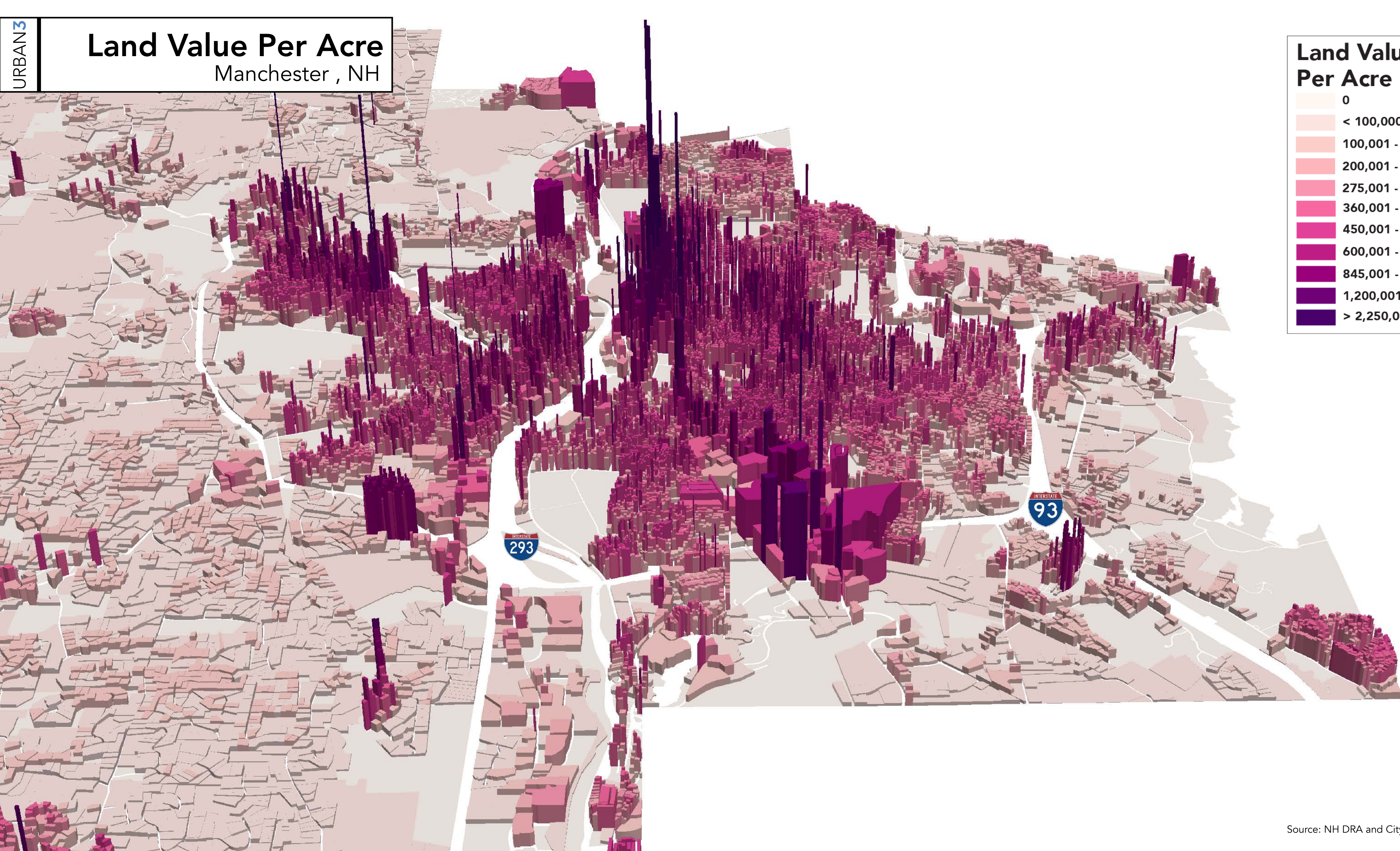
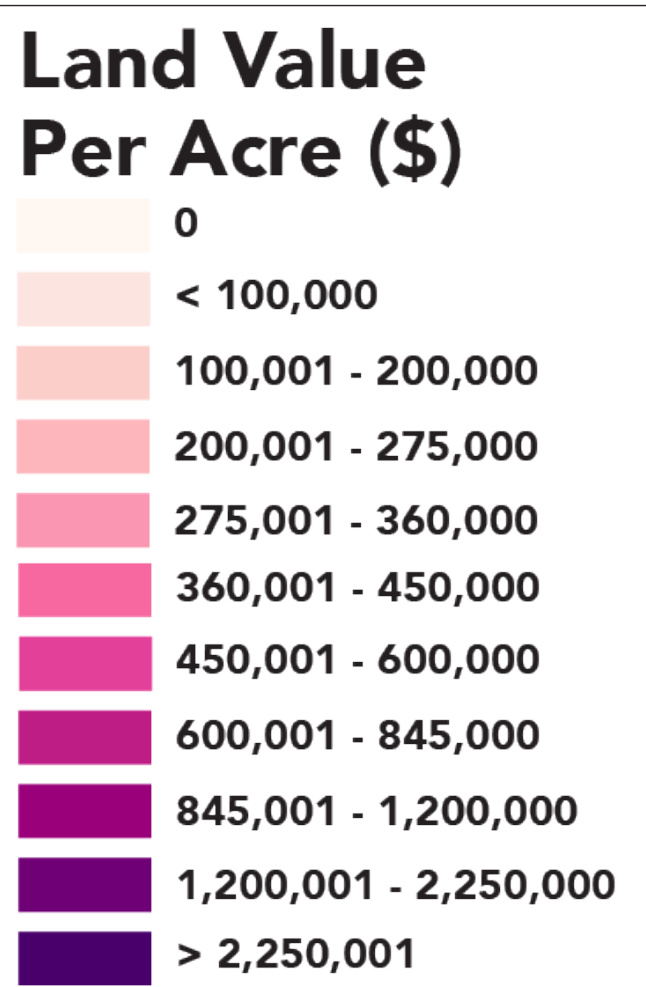
Nashua



Source: NH DRA and City of Manchester

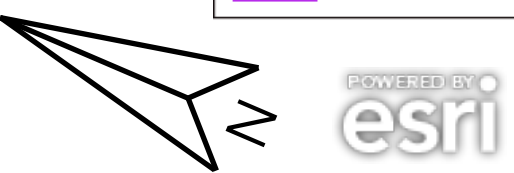
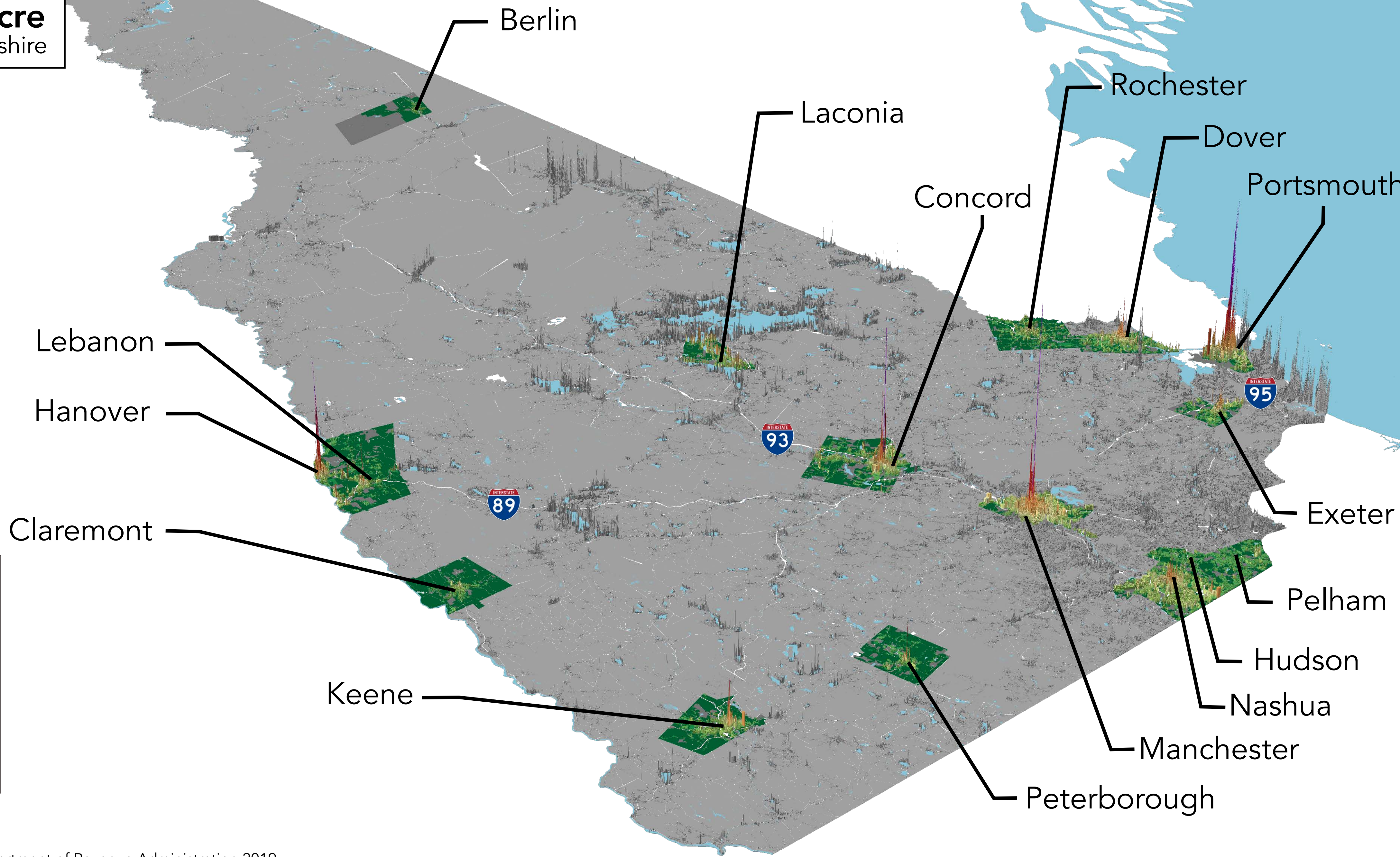
Land Value Per Acre

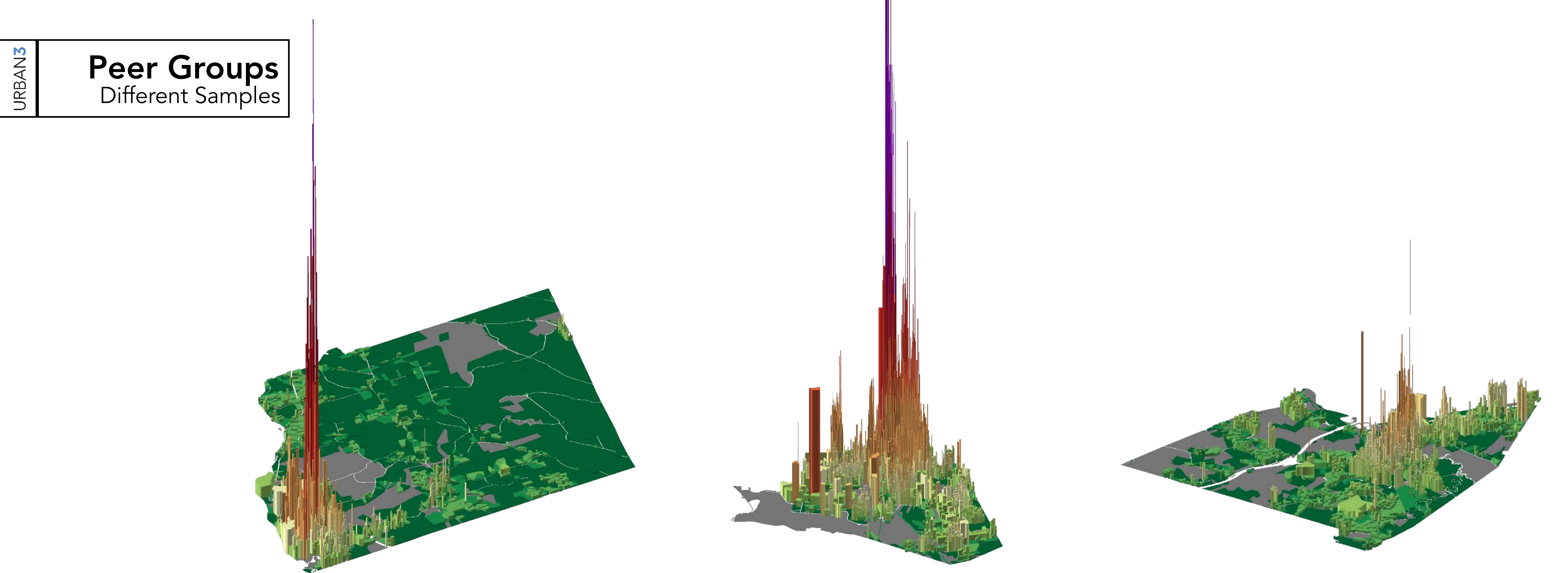
Manchester , NH



What you can do:

2. Learn from your neighbors





	Hanover	Portsmouth	Exeter
Population	11,500	21,896	14,306
% Non-Tax	11%	18%	32%
Avg. VPA	\$100,083	\$557,719	\$197,142
Peak VPA	\$37,827,184	\$51,157,466	\$13,578,189

What you can do:

3. Maintain/Recreate Historic Value

Circa: 1905



National Mechanics Bank
VPA: \$29.3 M



Pierce Block
VPA: \$40 M

6 Market
VPA: \$5 M

9 Market
VPA: \$34.9 M

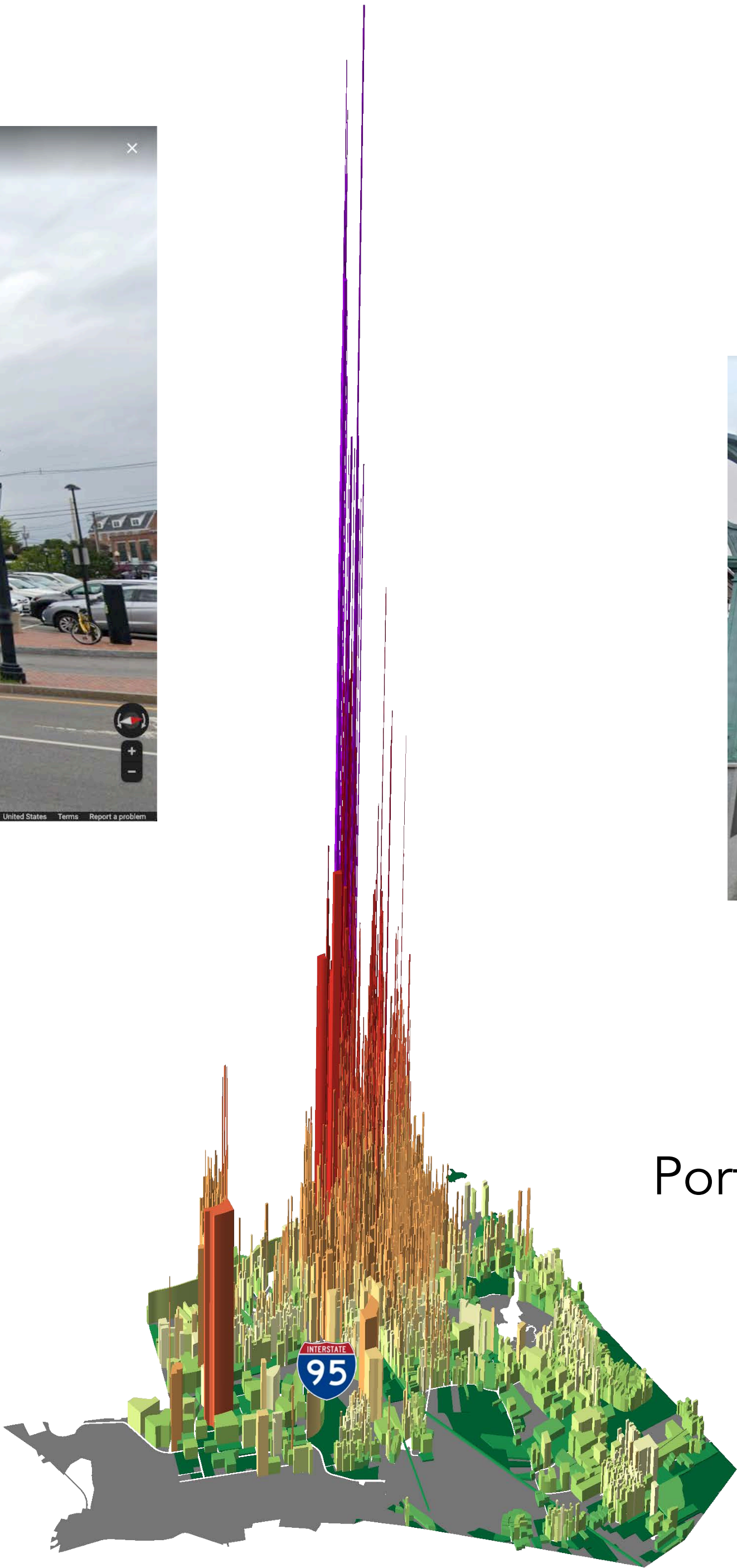
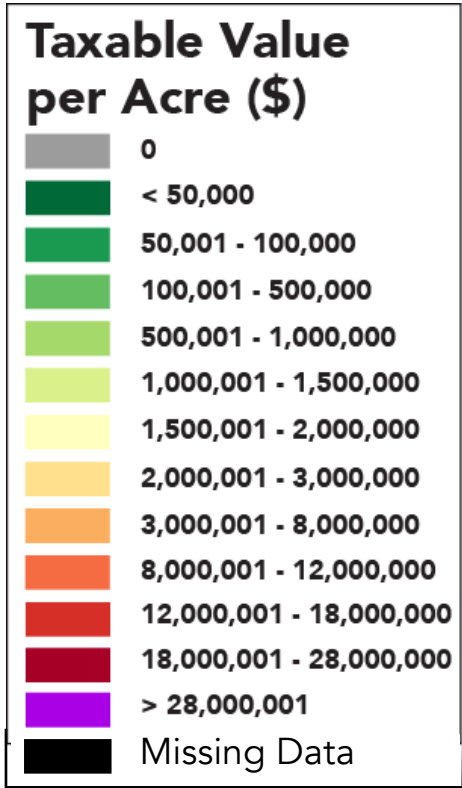
10 Market
VPA: \$30.5 M

Value Per Acre

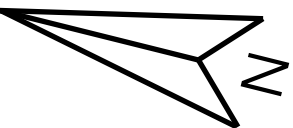
High Yield Buildings



Portsmouth
Mixed-use
VPA: \$29.3 M



Portsmouth, long term success.



POWERED BY
esri

What you can do:

4. Adapt

Value Per Acre

High Yield Buildings



Multi-family
VPA: \$1.9 M



Mixed-use
VPA: \$9.6 M



Peak VPA
VPA: \$15.3 M

What you can do:

5. Realize that Parking is Subsidized.

What is Parking?

Measuring Manchester space

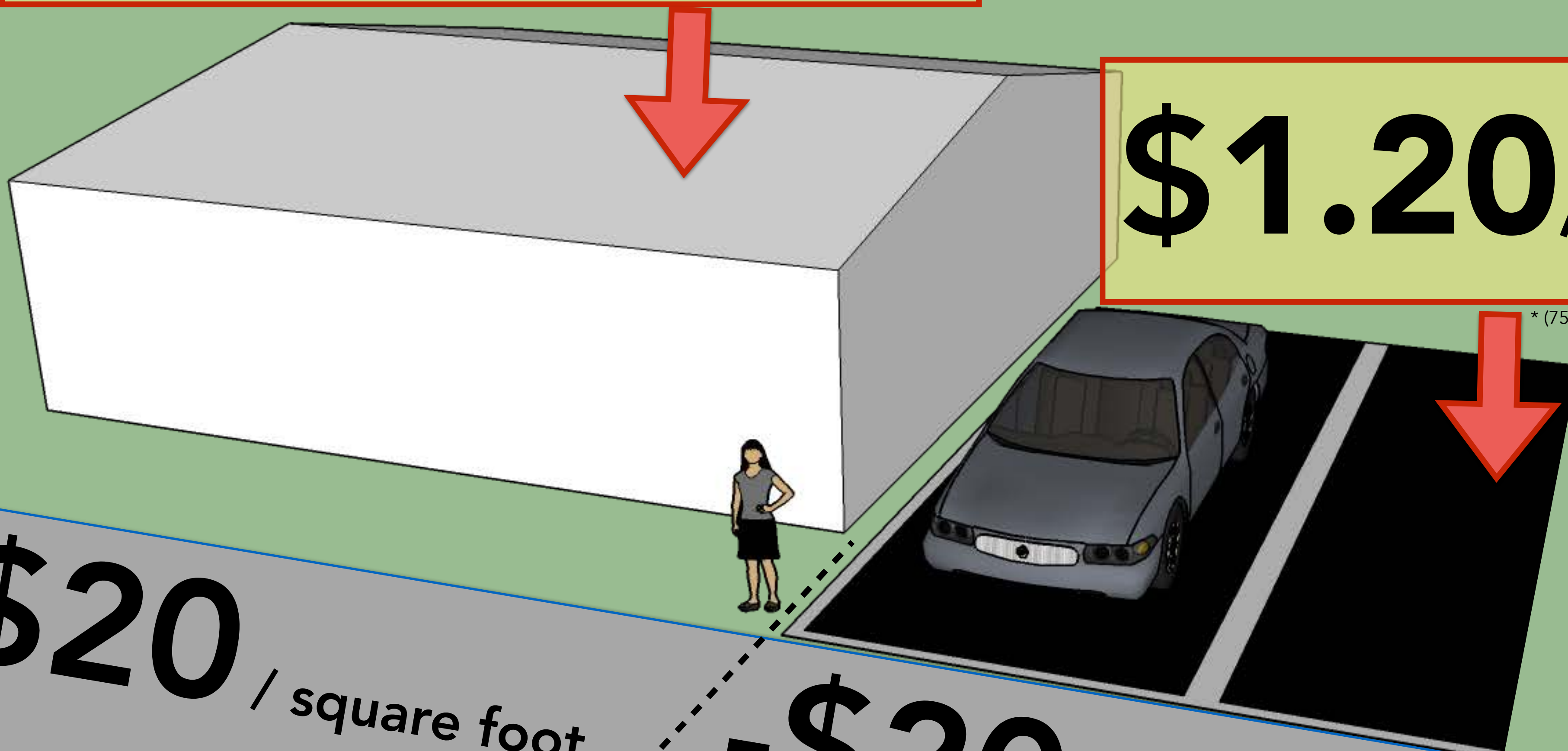
\$90/square foot

\$1.20/square foot*

* (75X) - Data from Assessment data on Pearl Street parking lot

-\$20 / square foot

-\$20 / square foot



What you can do:

6. Build for Productivity

URBAN3

Value Per Acre
Commercial



Peterborough
Commercial
VPA: \$0.94 M



Exeter
Commercial
VPA: \$0.97 M



Concord
Commercial
VPA: \$0.84 M



Berlin
Commercial
VPA: \$0.31 M



Dover
Commercial
VPA: \$1.3 M



Portsmouth
Commercial
VPA: \$2.4 M



Hanover
Commercial
VPA: \$3.4 M



Hudson
Commercial
VPA: \$0.66 M



Kennebunk
Commercial
VPA: \$0.95 M



Rochester
Commercial
VPA: \$1.2 M



Pelham
Commercial
VPA: \$0.5 M



Claremont
Commercial
VPA: \$0.49 M



Lebanon
Commercial
VPA: \$1.1 M



Laconia
Commercial
VPA: \$0.9 M



Nashua
Commercial
VPA: \$1.3 M

Sample average: **\$970,000** value/acre

Value Per Acre

Traditional Commercial



Keene
Peak VPA
VPA: \$14 M



Lebanon
Mixed-use
VPA: \$6.2 M



Laconia
Mixed-use
VPA: \$3.7 M



Hanover
Mixed-use
VPA: \$12 M



Concord
Mixed-use
VPA: \$7.6 M



Nashua
Mixed-use
VPA: \$10 M



Exeter
Peak VPA
VPA: \$13.5 M



Dover
Mixed-use
VPA: \$9.6 M



Berlin
Peak VPA
VPA: \$2.5 M



Peterborough
Peak VPA
VPA: \$12.2 M



Rochester
Mixed-use
VPA: \$3.9 M



Portsmouth
Mixed-use
VPA: \$29.3 M

Sample average: **\$8,300,000** value/acre

What you can do:

7. Patterns of Costs



Asset Management
15-20 years

\$85,000

\$85,000

\$35,000

A large orange helicopter crane is lifting a heavy, rectangular metal component from a parking lot. The component is suspended by several cables. In the background, a Dillard's store is visible, along with several workers in safety gear standing near other metal components on the ground. The sky is overcast with dark clouds.

Asset Management

In 20 years
you'll need
another
\$205,000

Asset Management

+\$\$\$

+\$\$\$

+\$\$\$

+\$\$\$

+\$\$\$

+\$\$\$

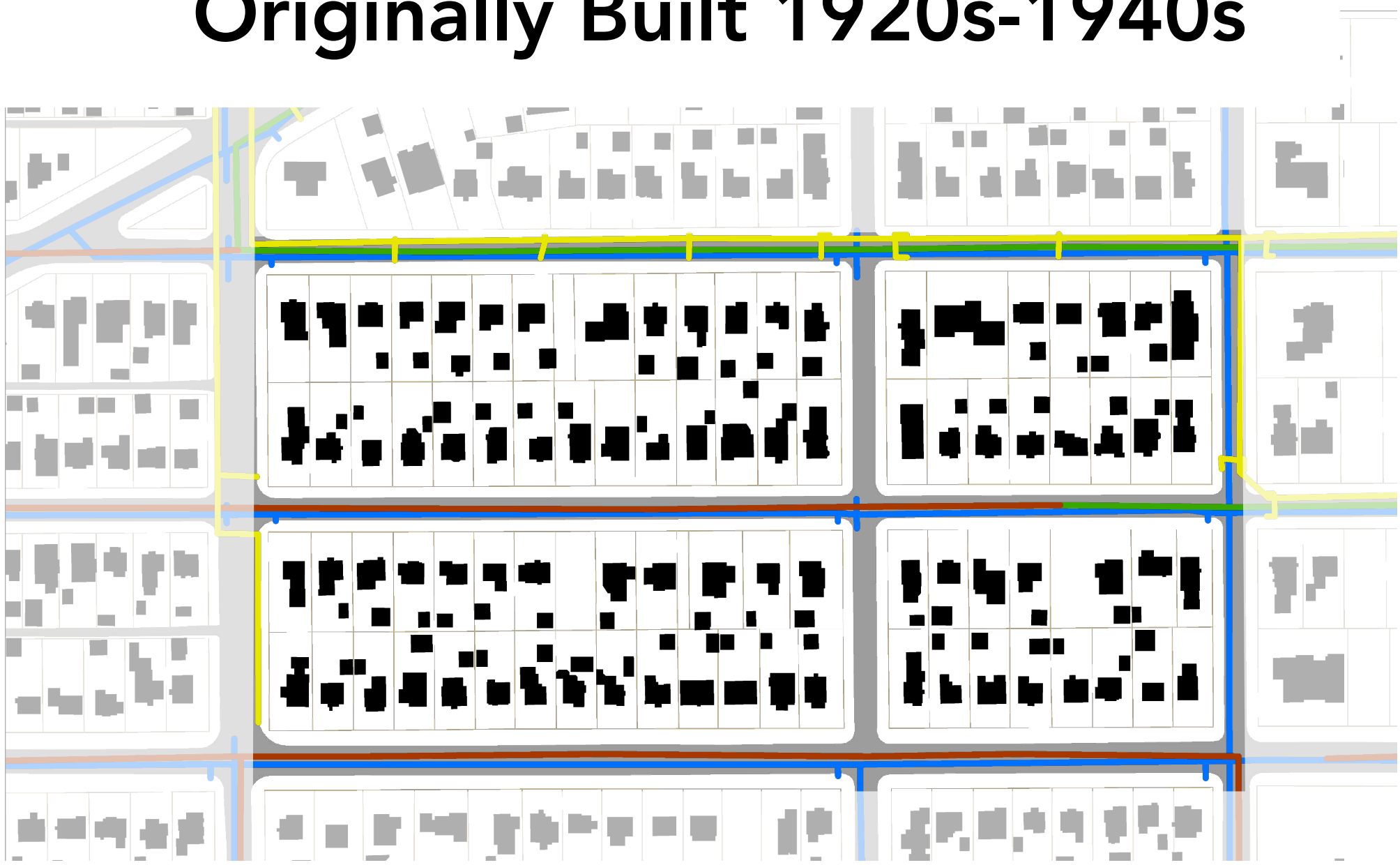
+\$

+\$

Asset Management



Originally Built 1920s-1940s



Infrastructure

Roads

Water Pipe

Combined Sewer

Seperated Sewer

Storm Water

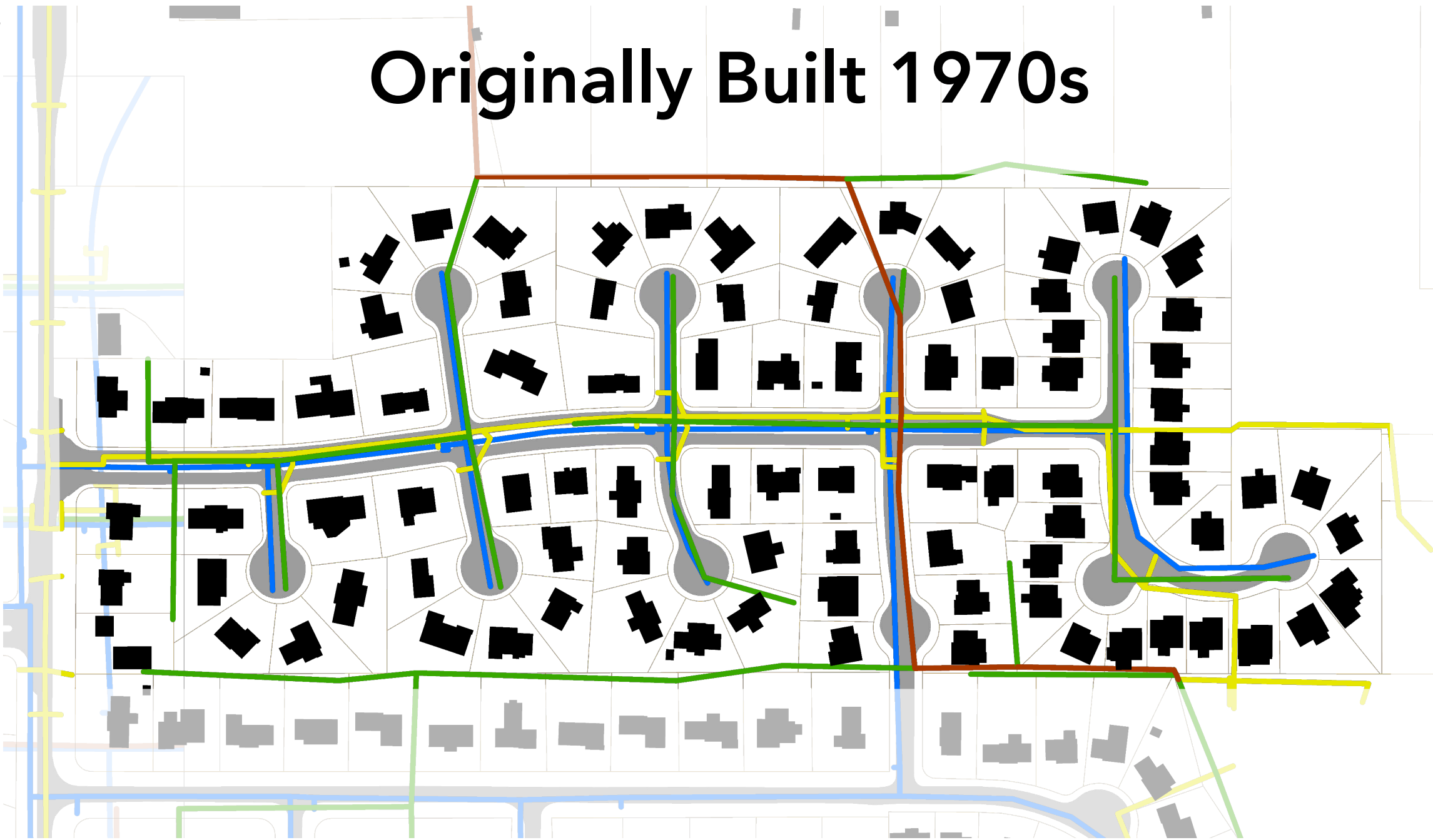
Neighborhood Costs

South Bend, IN

Originally Built 1920s-1940s



Originally Built 1970s



Infrastructure

- Roads
- Water Pipe
- Combined Sewer
- Seperated Sewer
- Storm Water

Neighborhood Costs

South Bend, IN

Originally Built 1970s

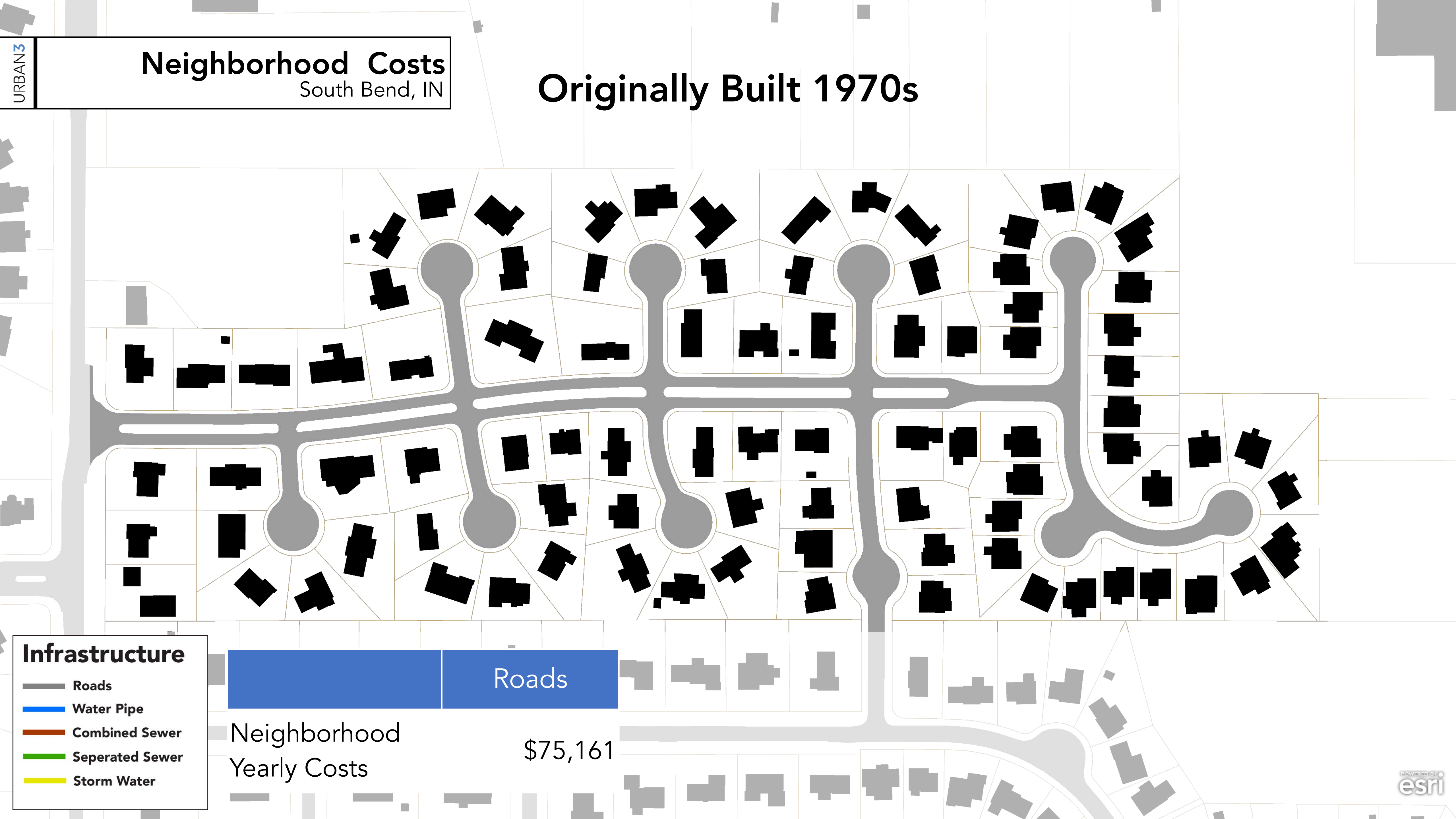


Neighborhood Costs

South Bend, IN

Originally Built 1970s





Neighborhood Costs

South Bend, IN

Originally Built 1970s

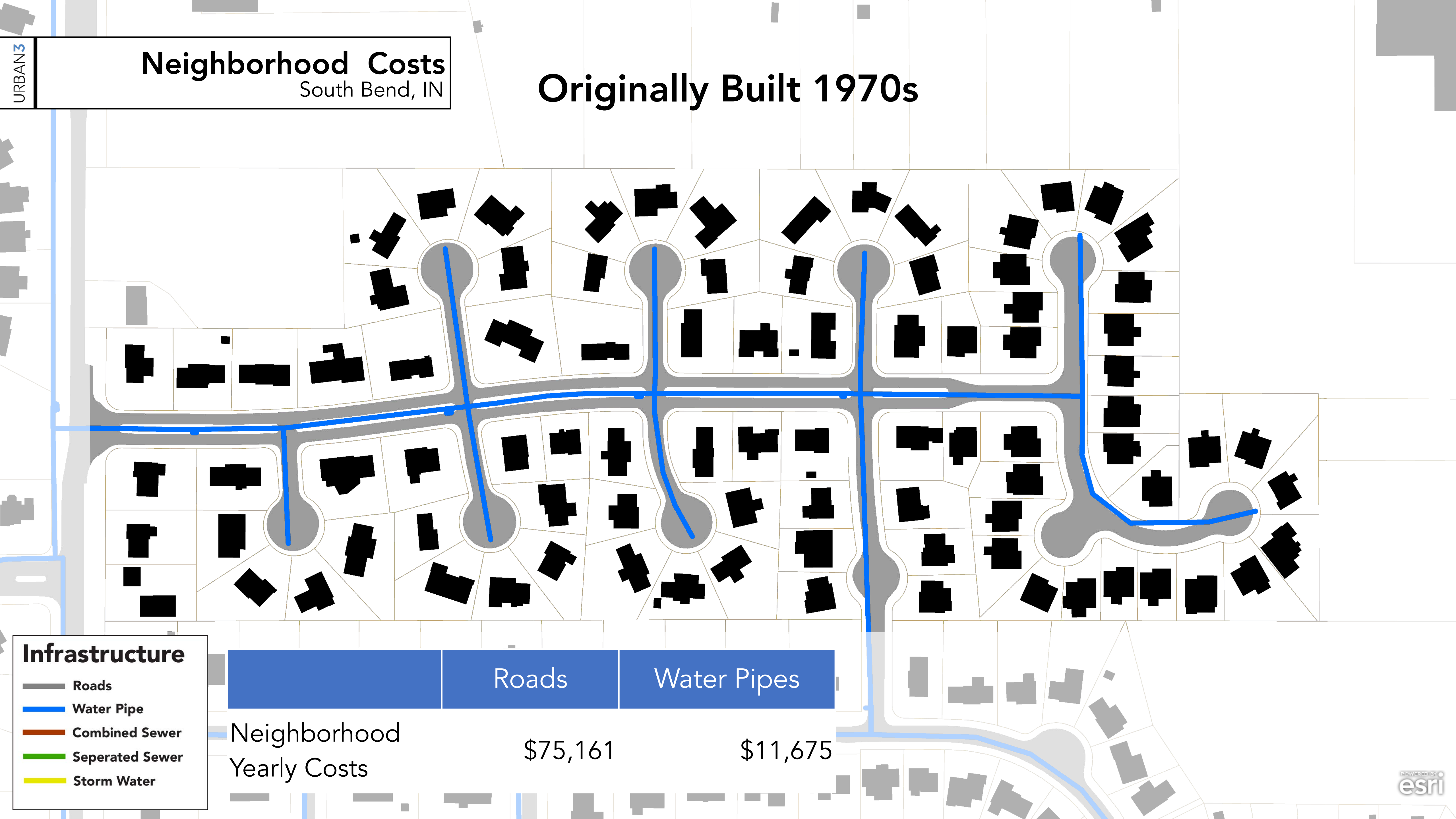
Infrastructure

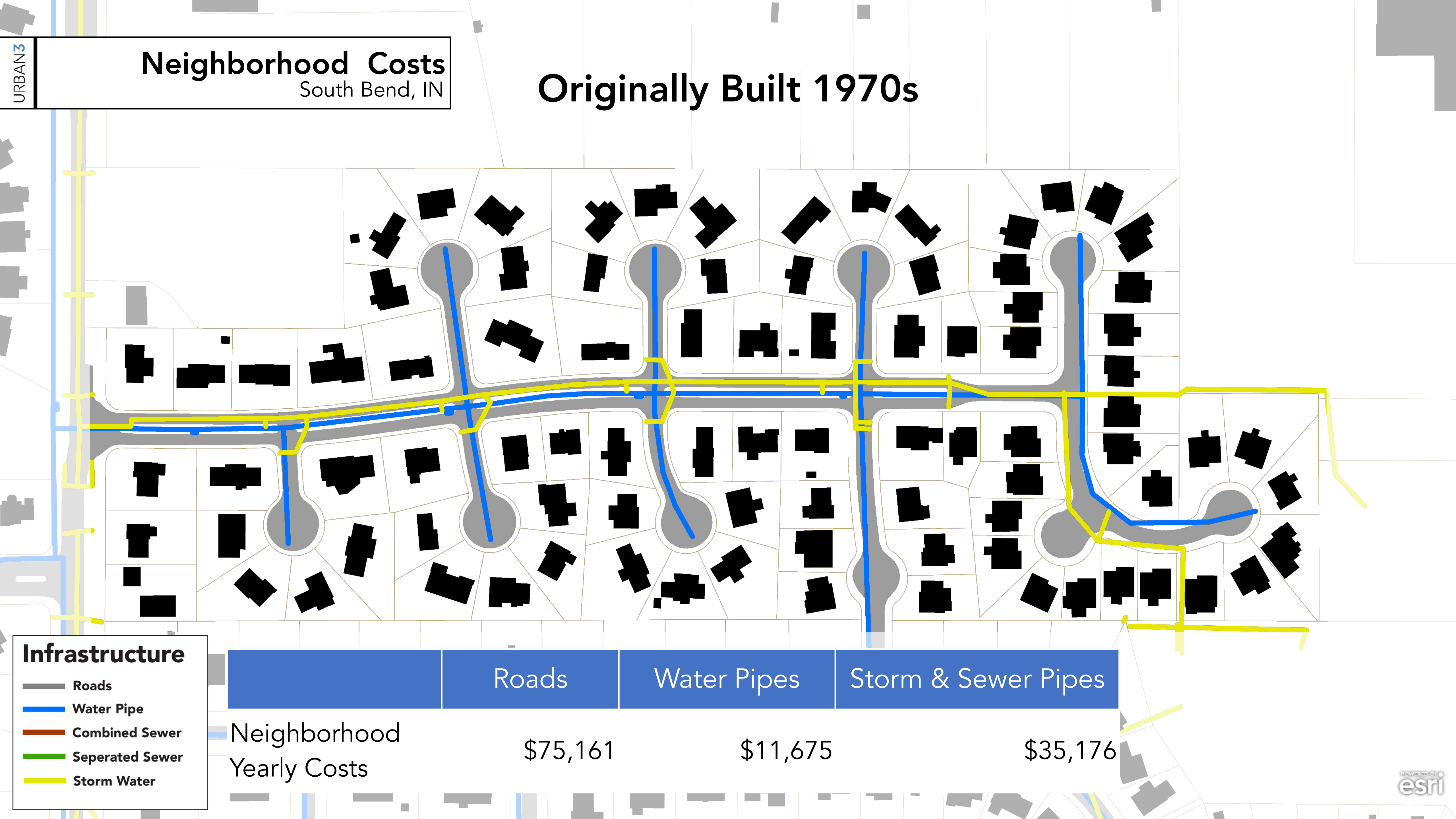
- Roads
- Water Pipe
- Combined Sewer
- Seperated Sewer
- Storm Water

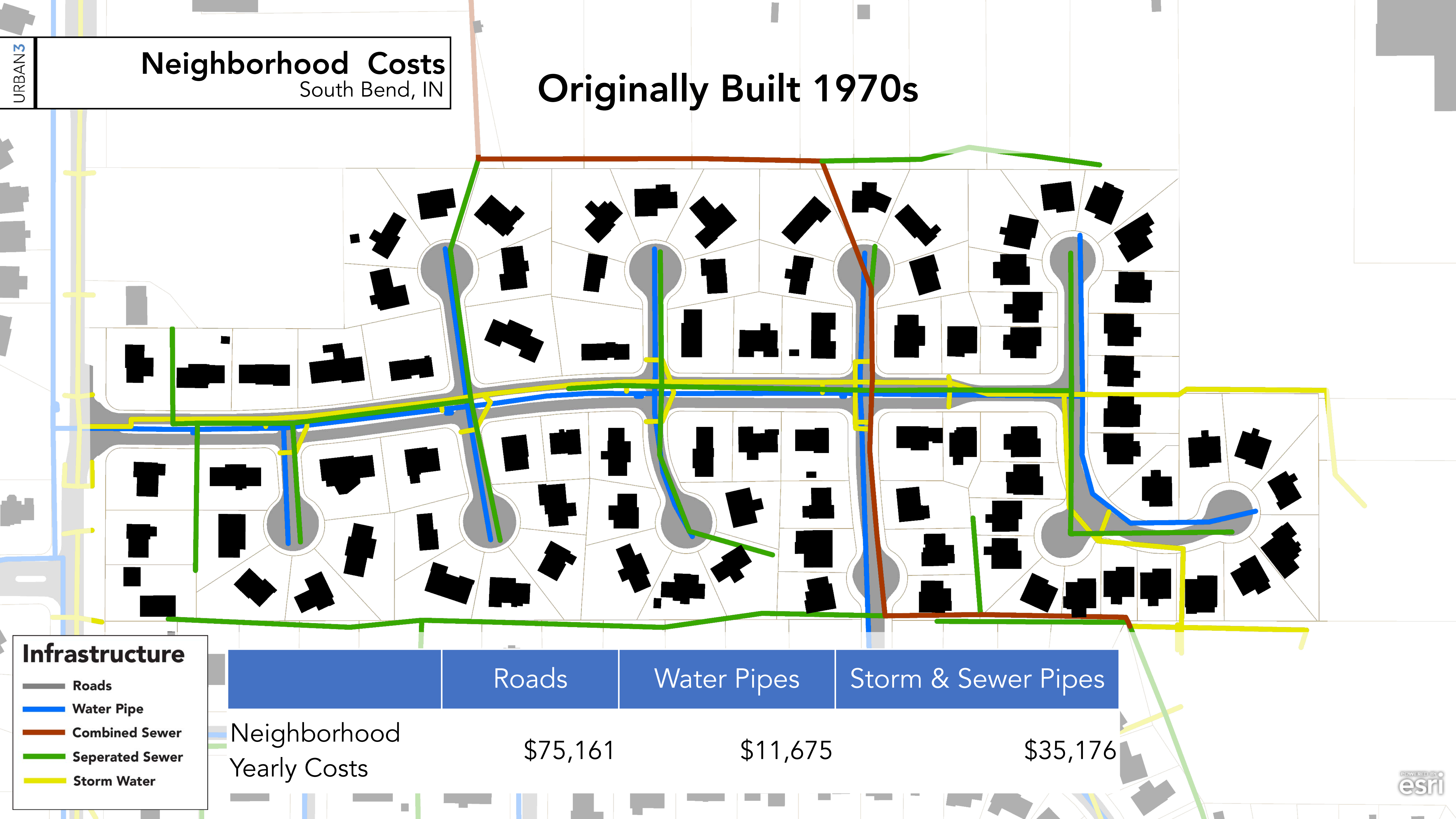
Roads

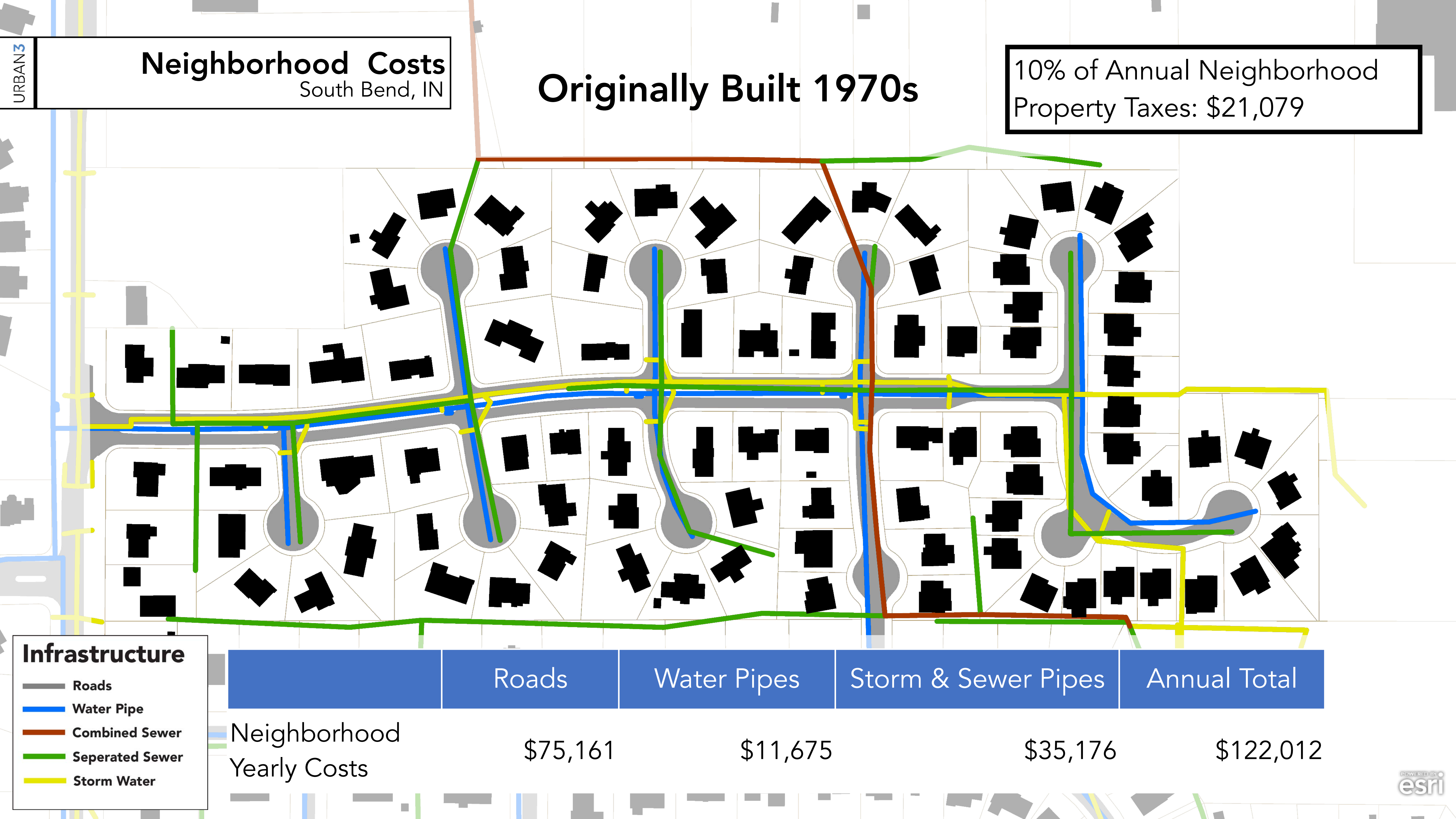
Neighborhood
Yearly Costs

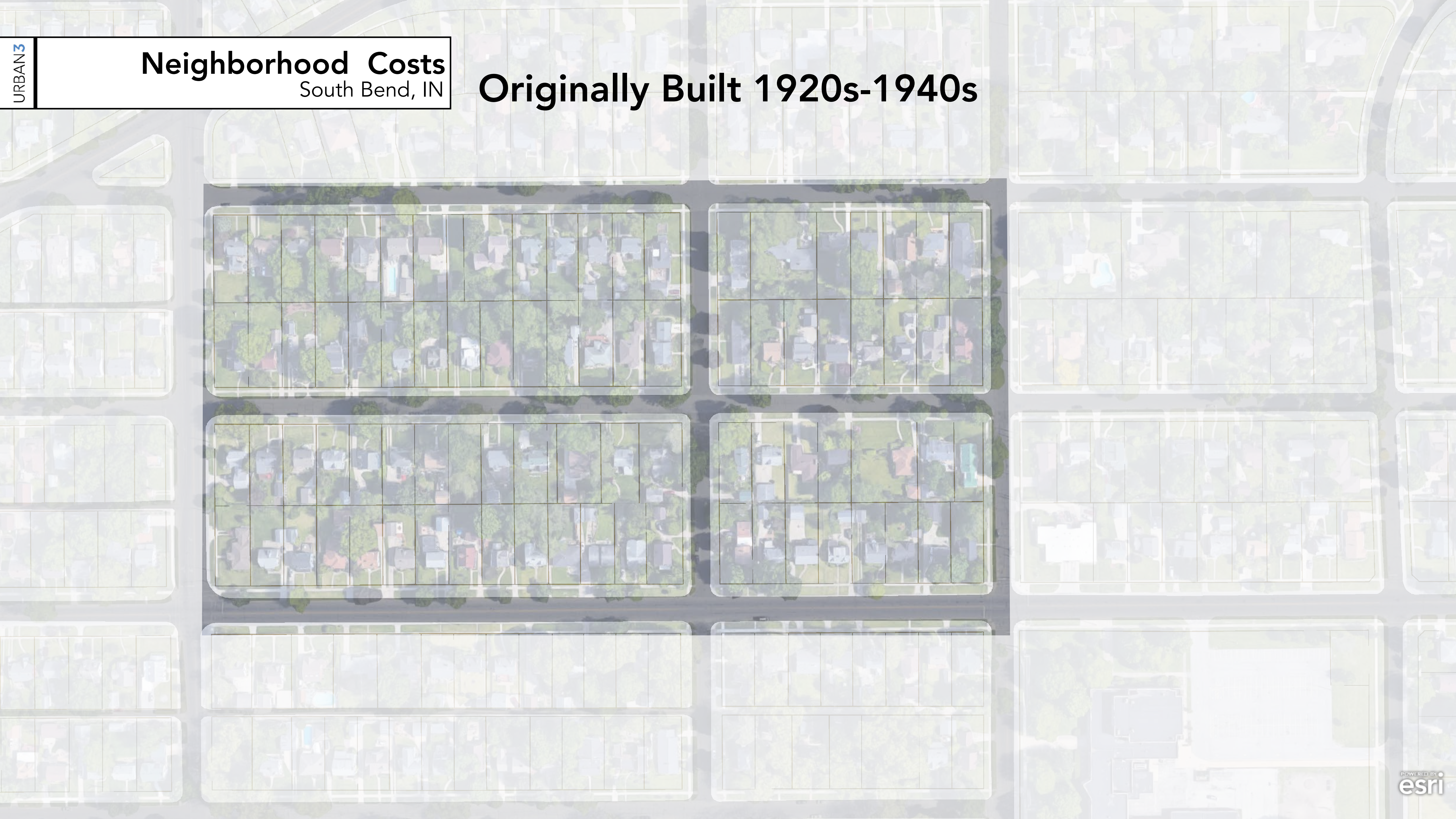
\$75,161







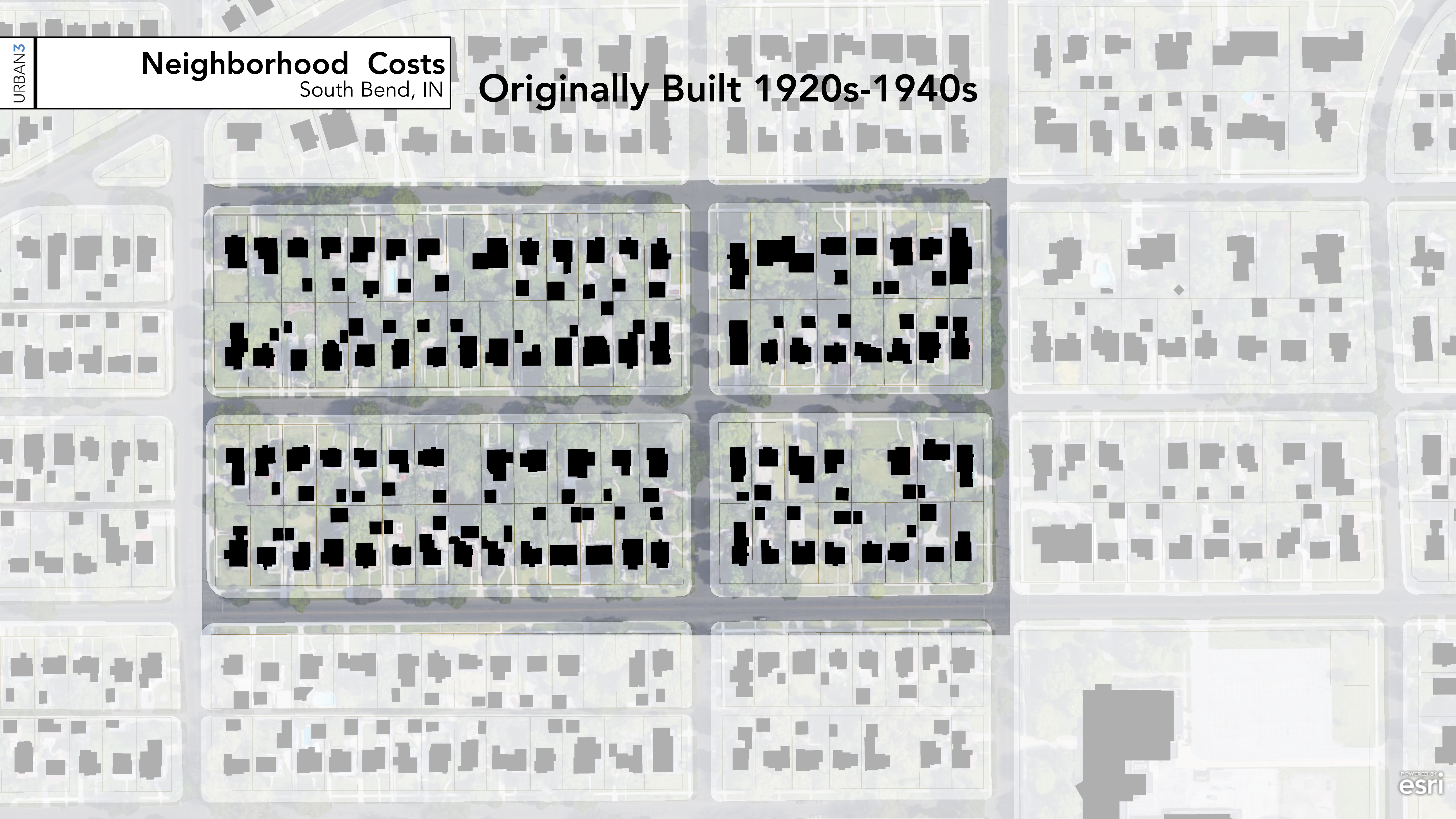




Neighborhood Costs

South Bend, IN

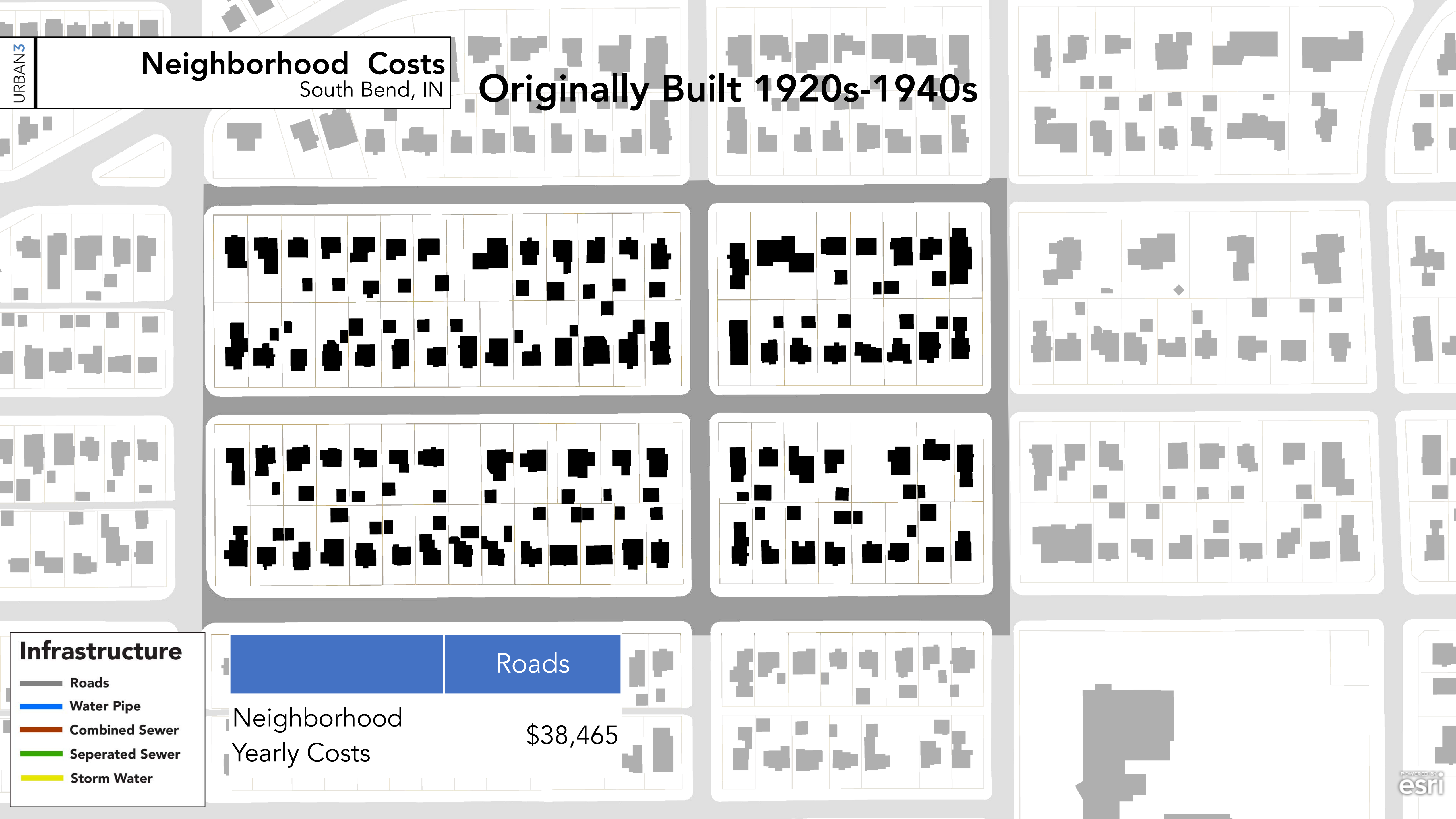
Originally Built 1920s-1940s



Neighborhood Costs

South Bend, IN

Originally Built 1920s-1940s



Neighborhood Costs

South Bend, IN

Originally Built 1920s-1940s

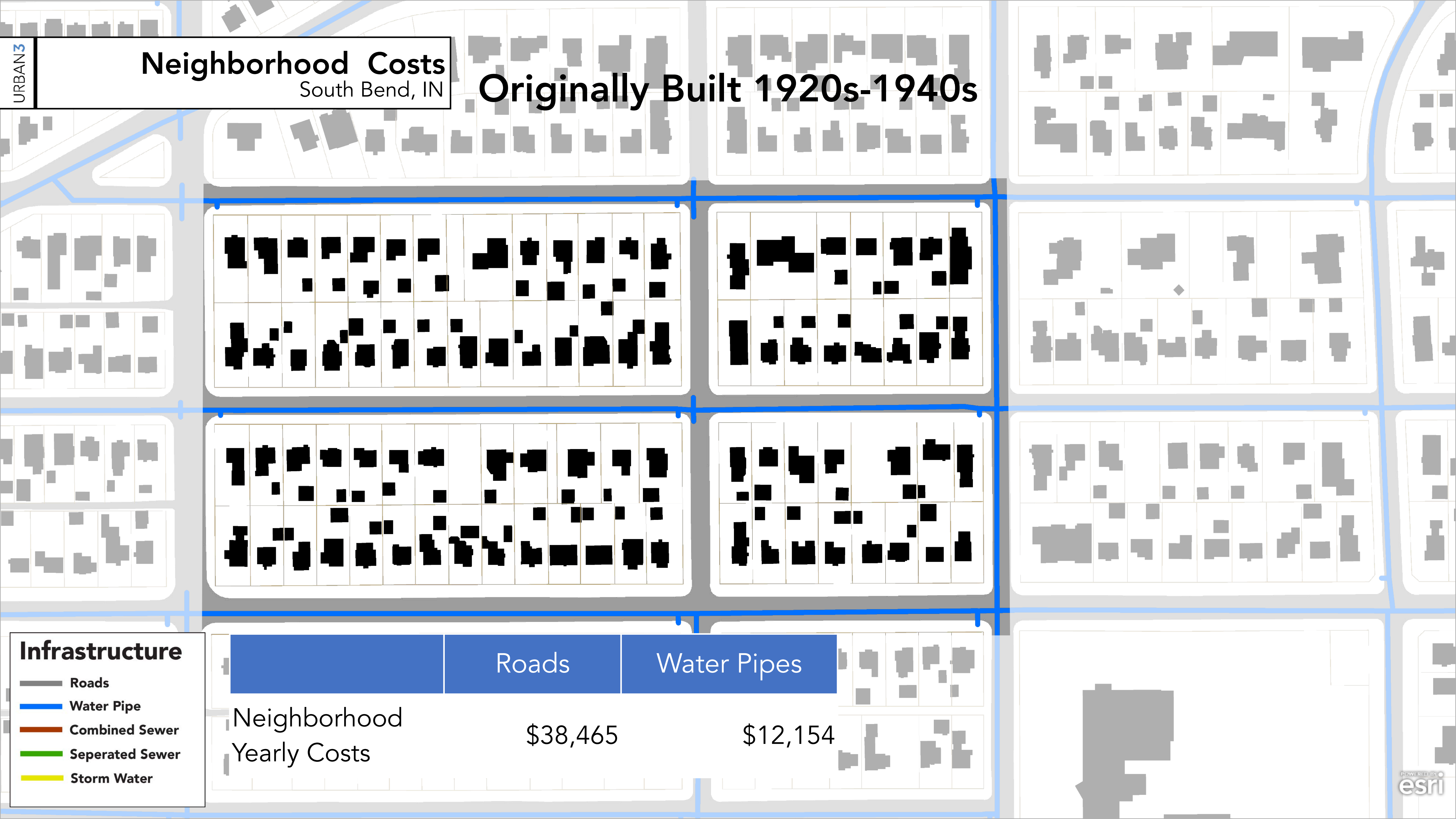
Infrastructure

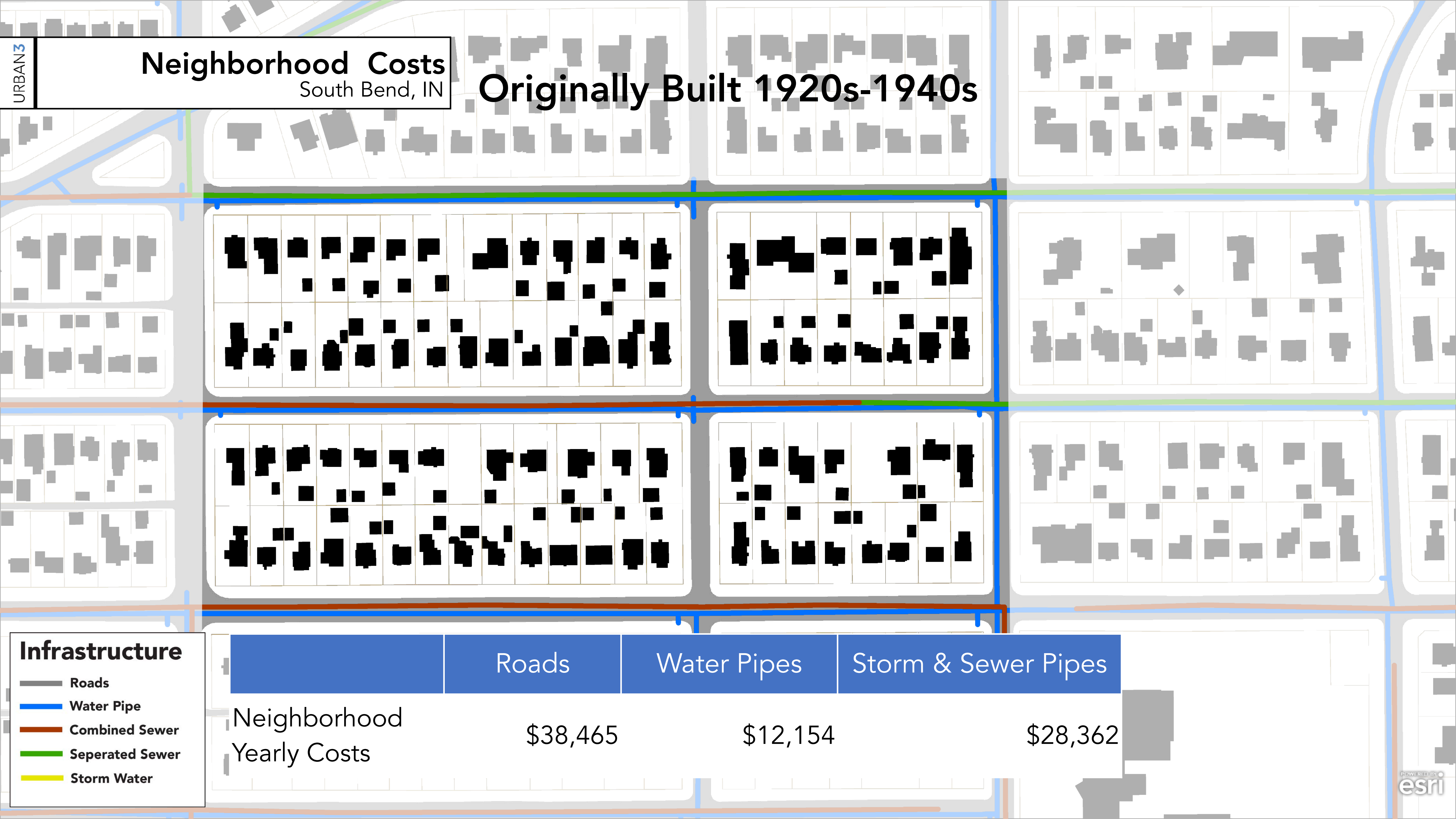
- Roads
- Water Pipe
- Combined Sewer
- Seperated Sewer
- Storm Water

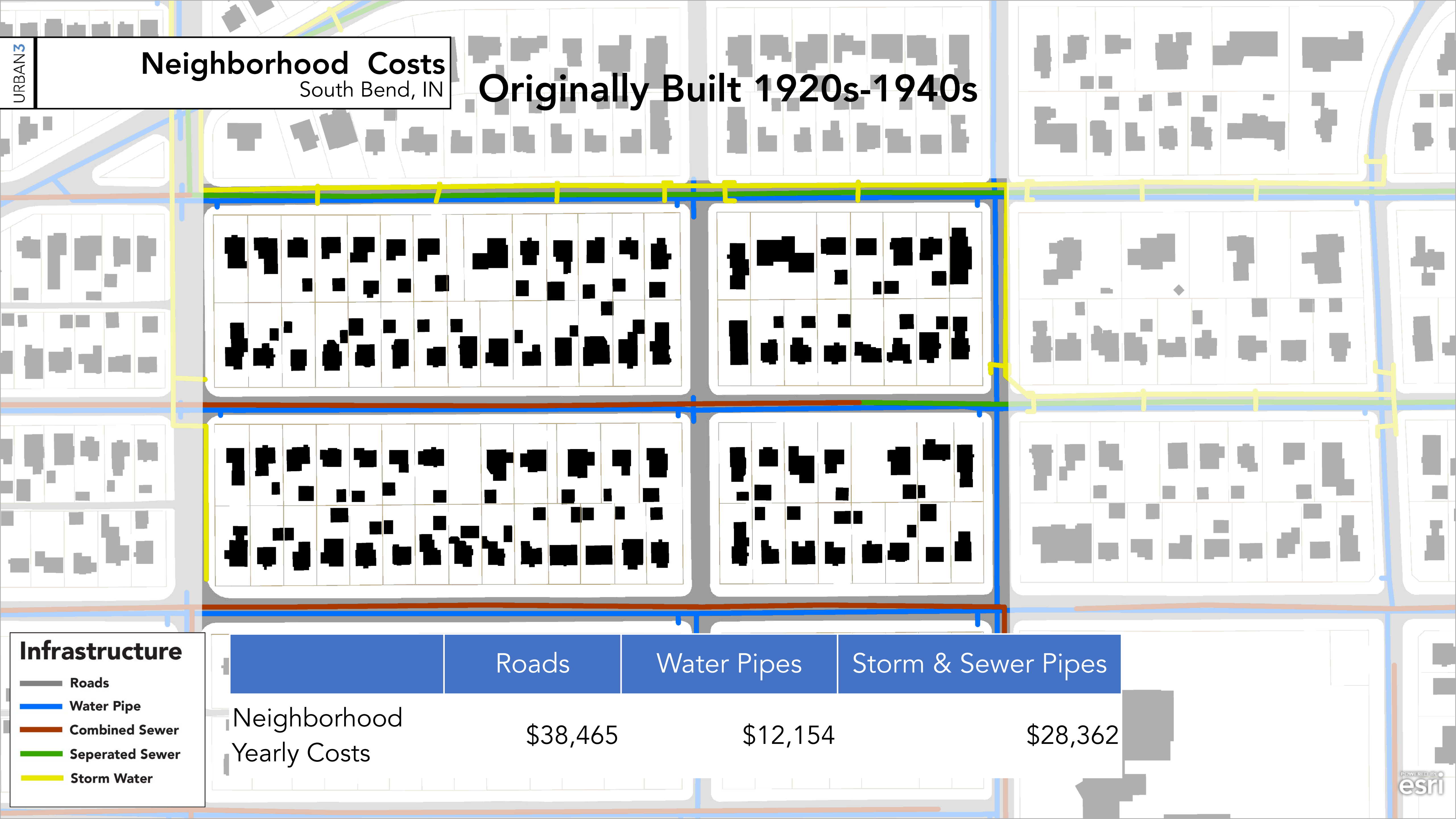


Neighborhood
Yearly Costs

\$38,465







Neighborhood Costs

South Bend, IN

Originally Built 1920s-1940s

Infrastructure

- Roads
- Water Pipe
- Combined Sewer
- Seperated Sewer
- Storm Water

Neighborhood
Yearly Costs

Roads

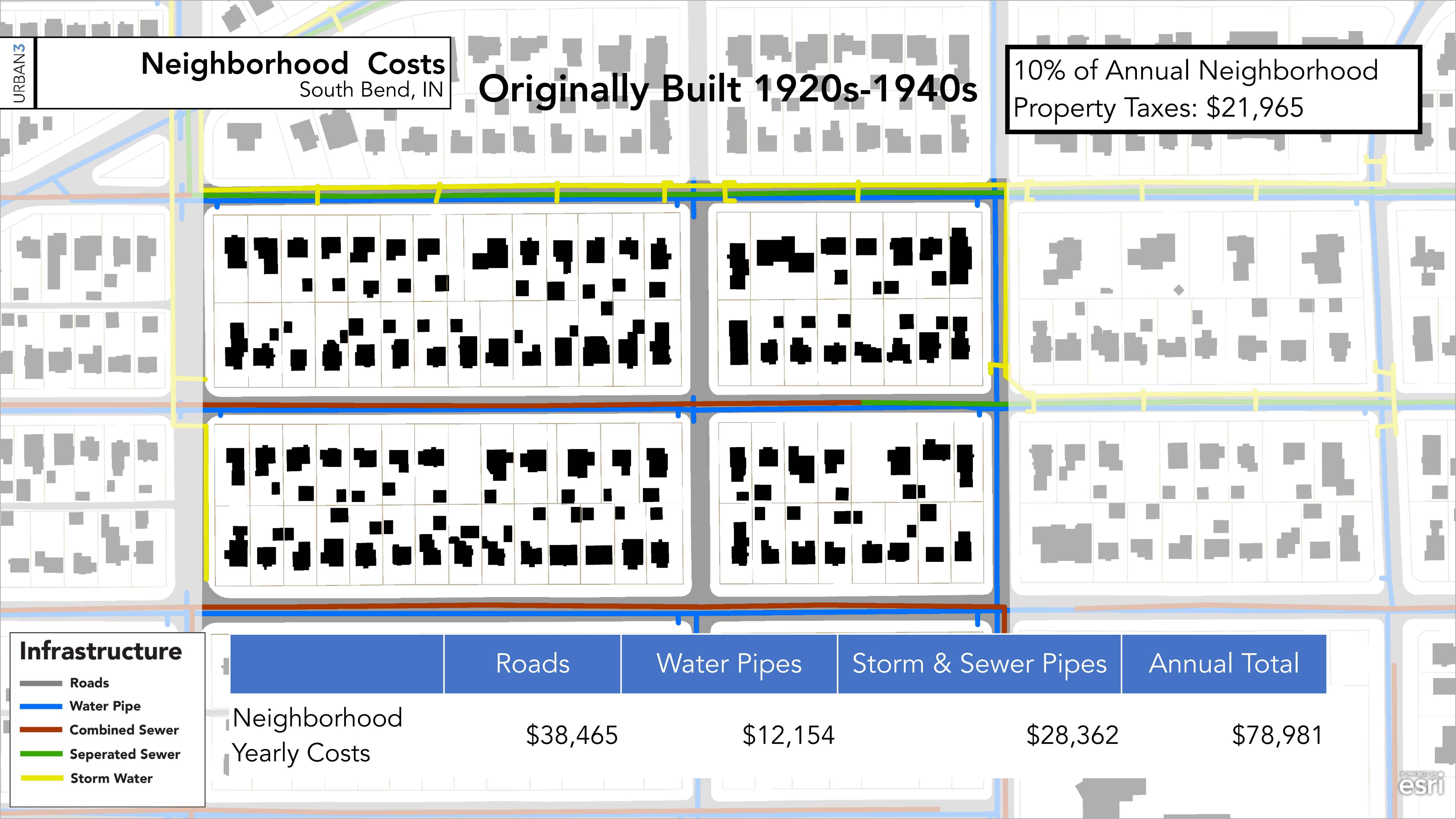
\$38,465

Water Pipes

\$12,154

Storm & Sewer Pipes

\$28,362



Neighborhood Costs

South Bend, IN

Originally Built 1920s-1940s

10% of Annual Neighborhood
Property Taxes: \$21,965

Infrastructure

- Roads
- Water Pipe
- Combined Sewer
- Separated Sewer
- Storm Water

	Roads	Water Pipes	Storm & Sewer Pipes	Annual Total
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Neighborhood Yearly Costs	\$38,465	\$12,154	\$28,362	\$78,981
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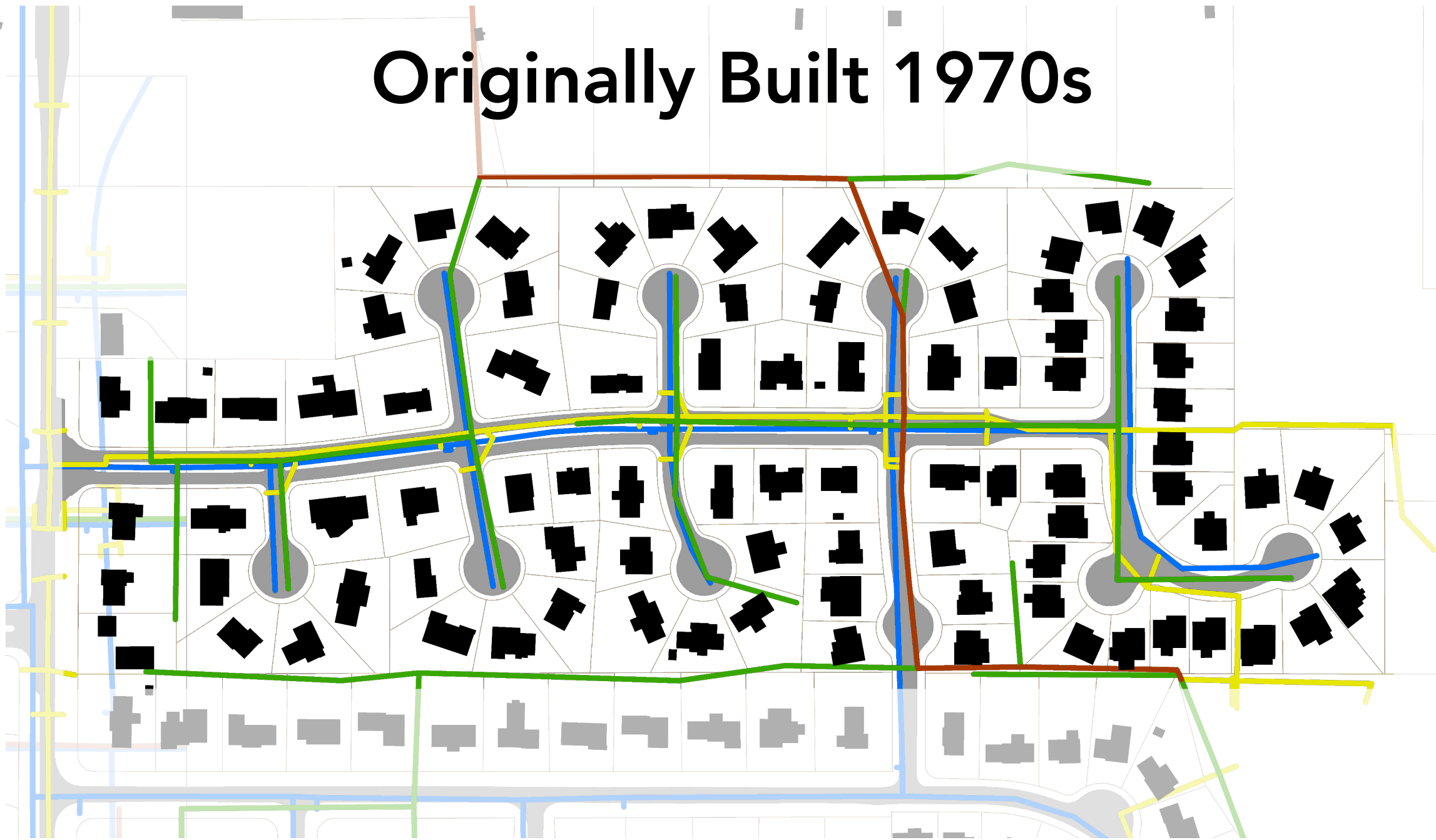
Neighborhood Costs

South Bend, IN

Originally Built 1920s-1940s



Originally Built 1970s



	1920-1940s	1970s
Lots	88	88
Road Cost	\$38,465	\$75,161
Water Pipes	\$12,154	\$11,675
Storm & Sewer Pipes	\$28,382	\$35,176
Annual Total Costs	\$78,981	\$122,012
10% Property Taxes	\$21,965	\$21,079
Deficit	-\$57,016	-\$100,933

Infrastructure

- Roads
- Water Pipe
- Combined Sewer
- Seperated Sewer
- Storm Water

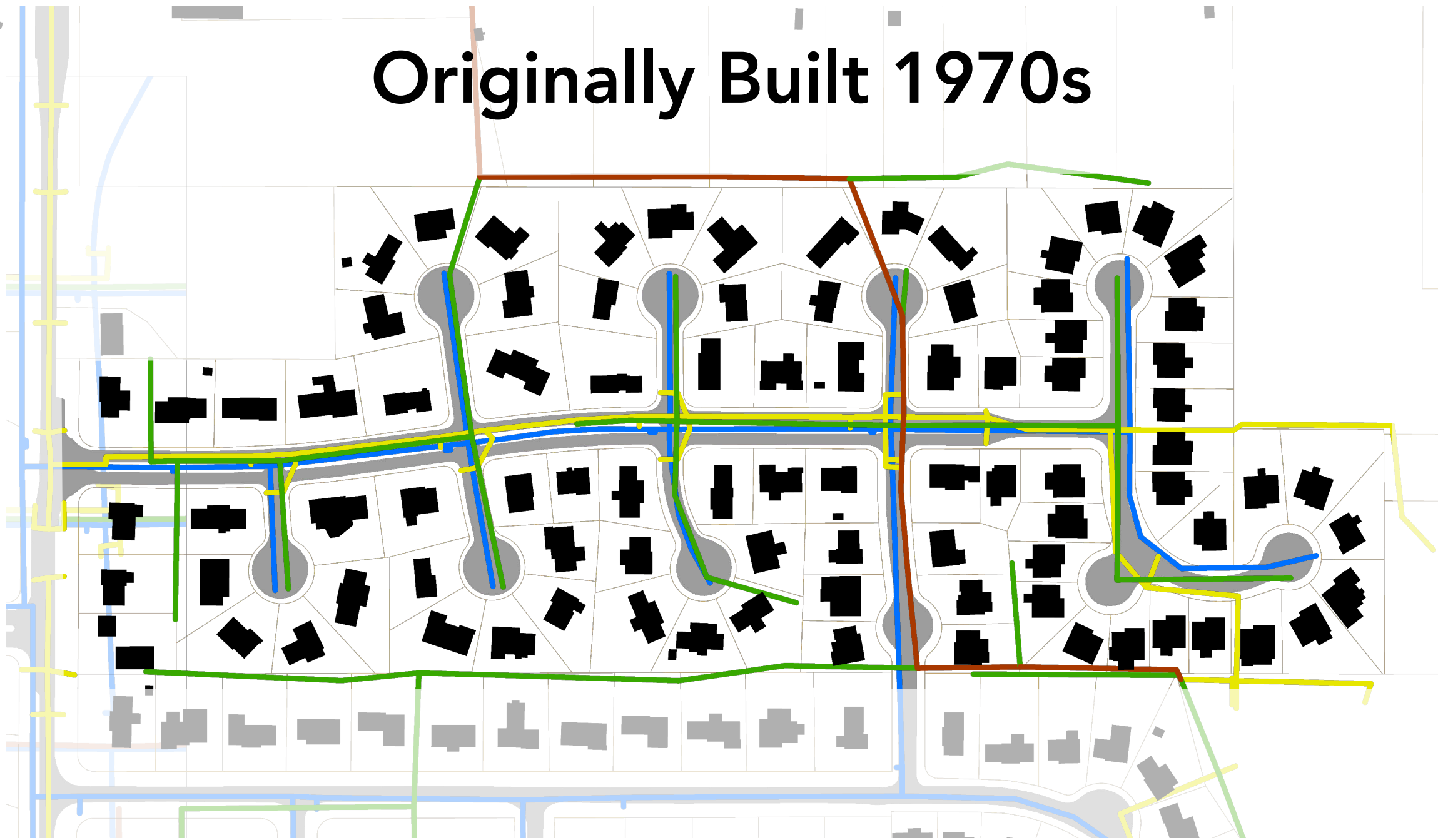
Neighborhood Costs

South Bend, IN

Originally Built 1920s-1940s



Originally Built 1970s



	1920-1940s	1970s	Difference
Lots	88	88	0
Road Cost	\$38,465	\$75,161	2x
Water Pipes	\$12,154	\$11,675	-0.96x
Storm & Sewer Pipes	\$28,382	\$35,176	1.2x
Annual Total Costs	\$78,981	\$122,012	1.5x
10% Property Taxes	\$21,965	\$21,079	-0.96x
Deficit	-\$57,016	-\$100,933	1.8x

Infrastructure

- Roads
- Water Pipe
- Combined Sewer
- Seperated Sewer
- Storm Water

What you can do:

8. Measure What You Own

Roads over Time

Manchester, NH

111,000 people

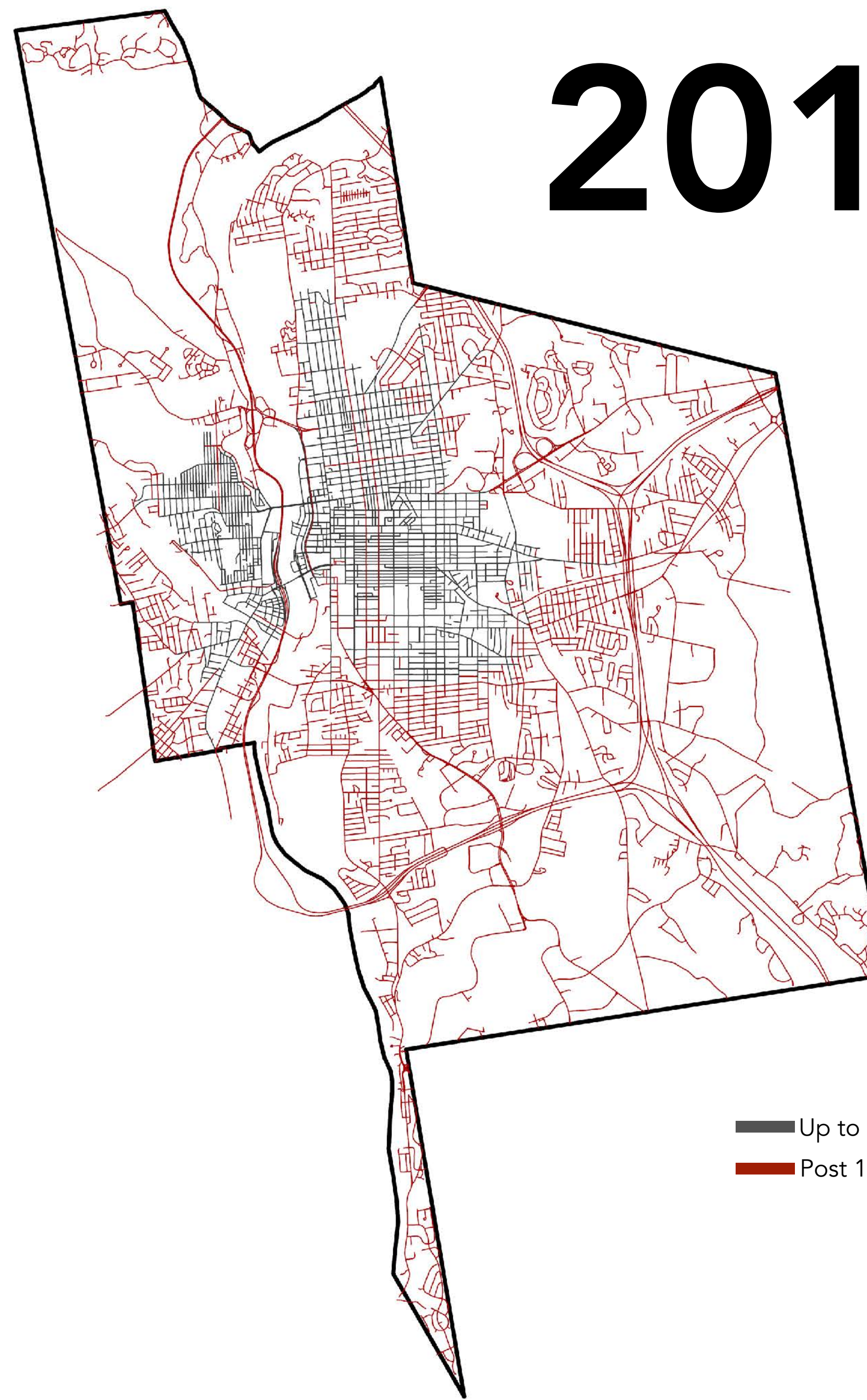
535 miles* of road

25.4 feet of road per person

Population **44%**

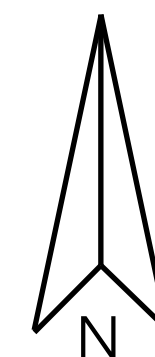
Feet per person

163% Increase



2018

— Up to 1925
— Post 1925



*Road centerline miles

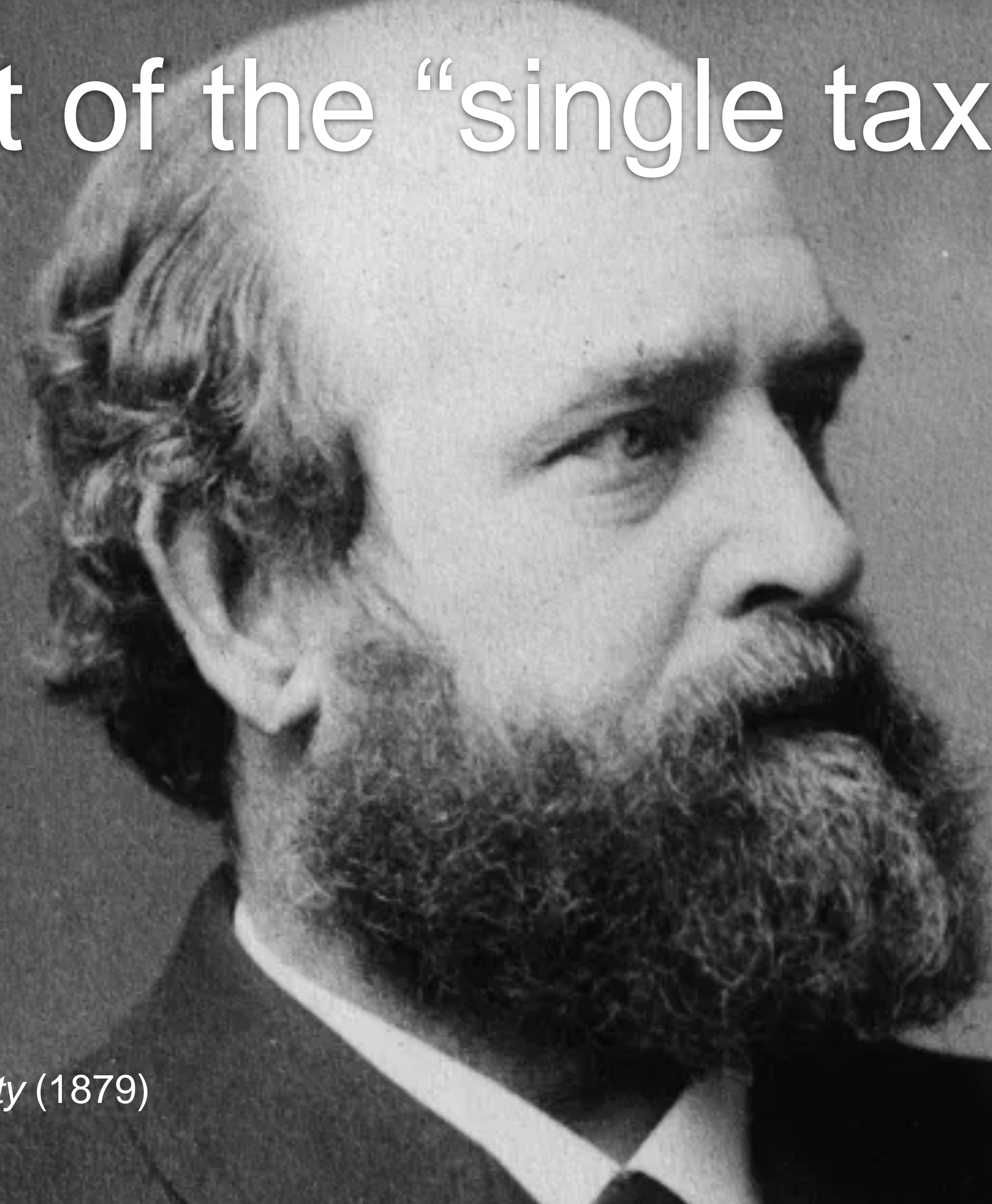
What you can do:

9. Consider the Tax System

Question:

What is an appropriate tax?

Proponent of the “single tax” on land.



Henry George

Author of *Progress and Poverty* (1879)

1839-97



by Elizabeth Magie Phillips
FAMOUS ORIGINATOR OF GAMES

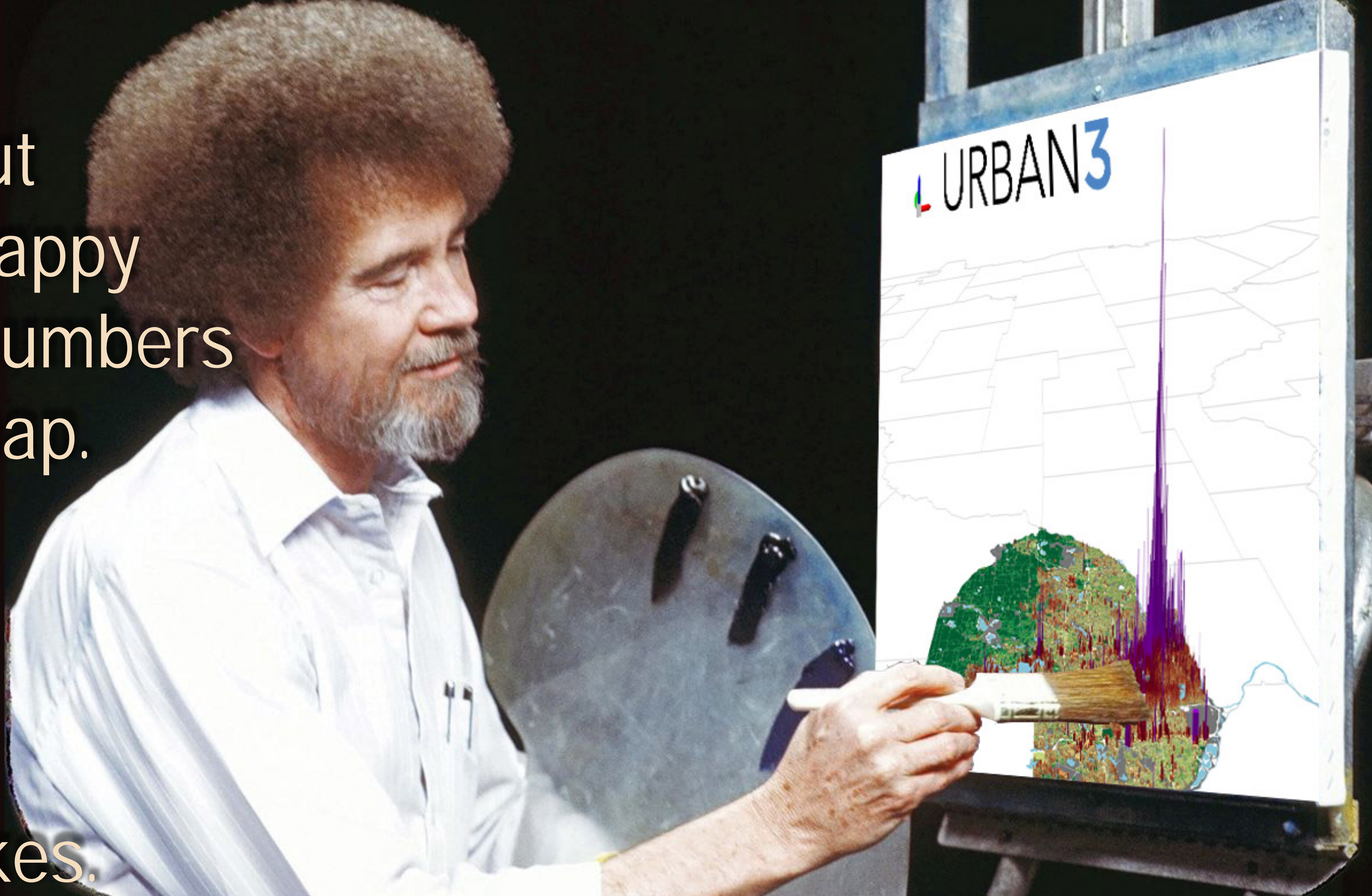


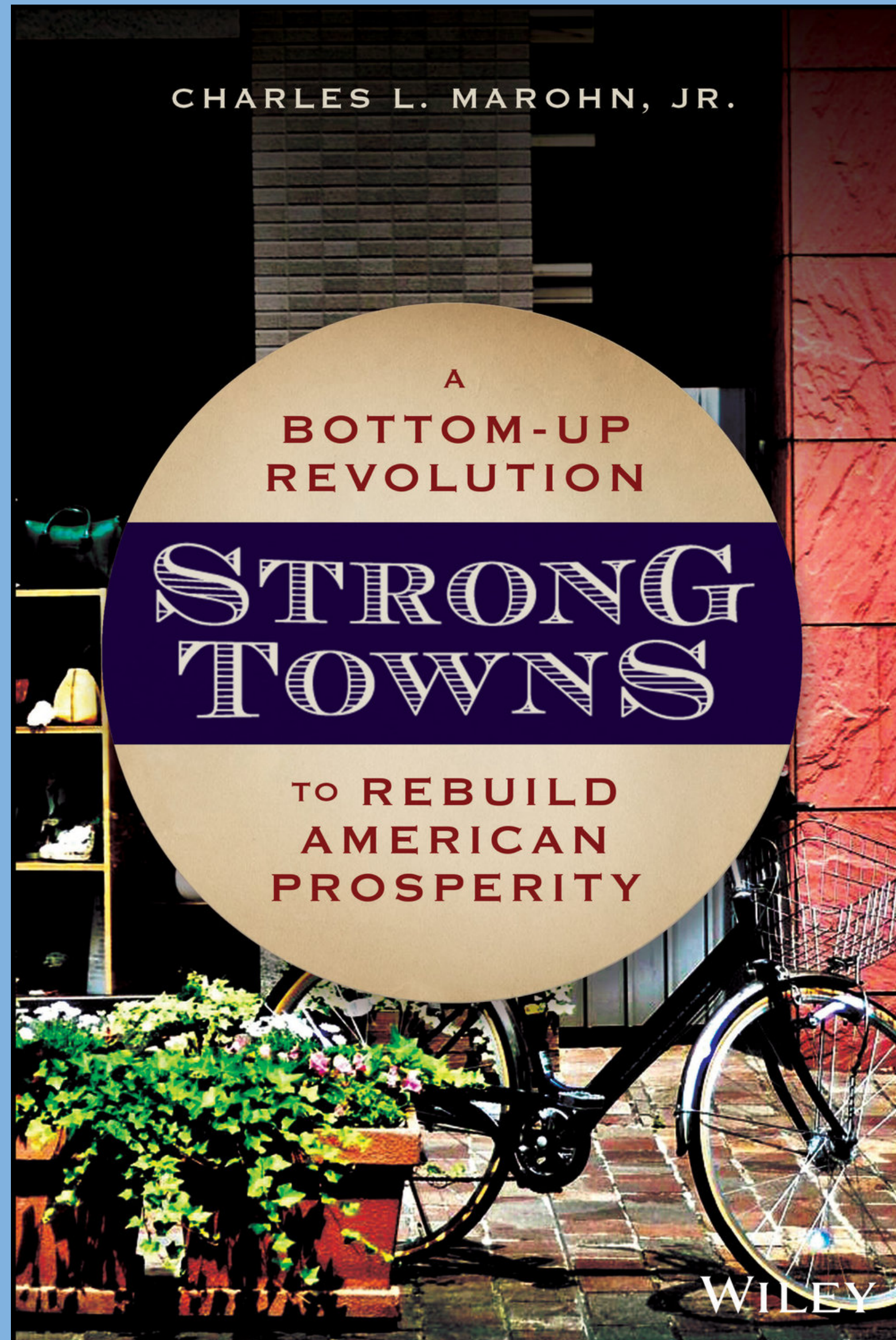




Just put
your happy
little numbers
on a map.

Don't
worry
about
mistakes.





DO THE MATH



DO THE MATH

From the Outskirts to Downtown: Taxes, Land Use & Value in Upper Valley Communities

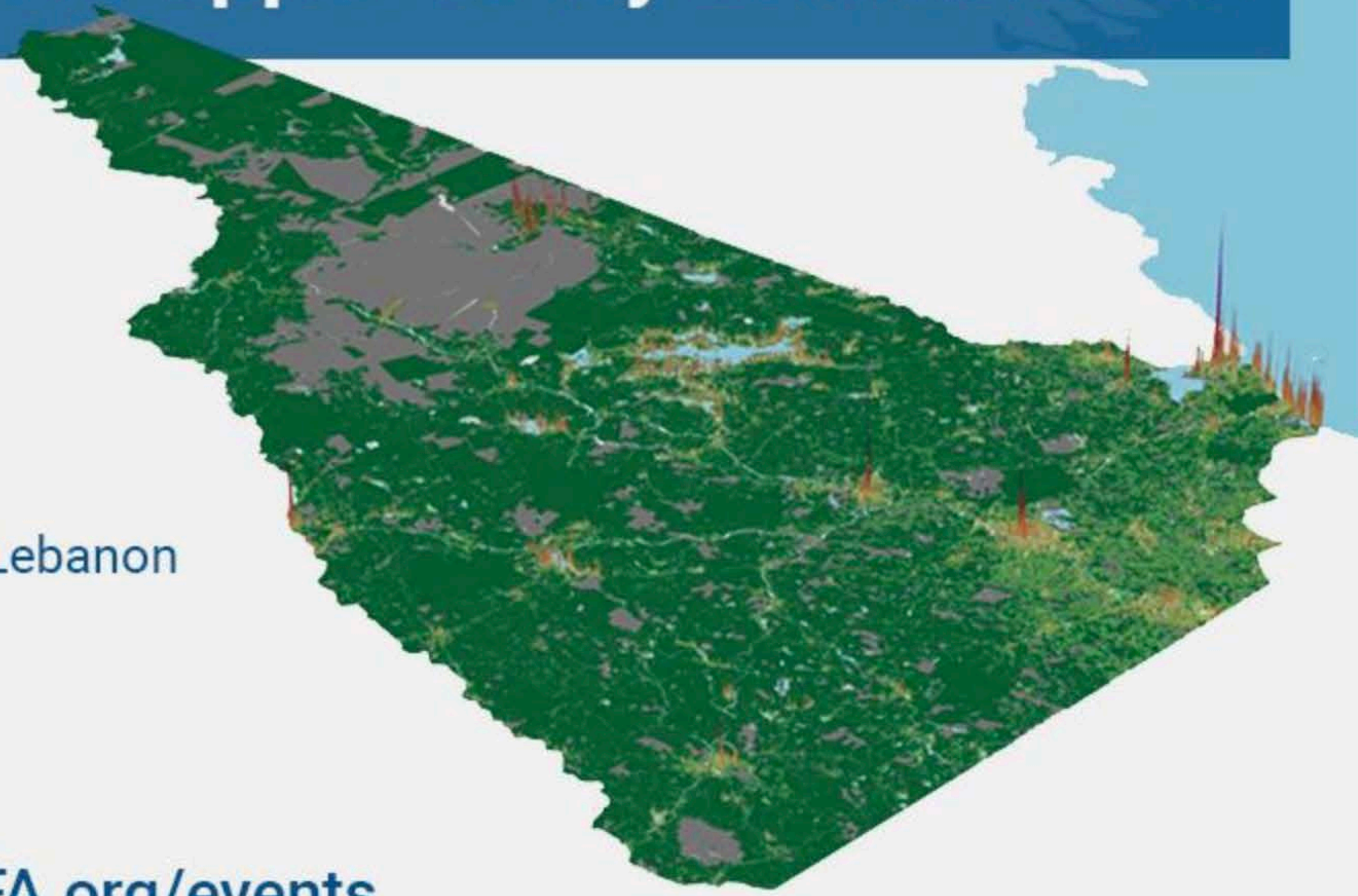
A virtual presentation by
Joe Minicozzi AICP | Urban3
October 29, 2020 at 11 AM

Hosted by

Vital Communities | Claremont | Hanover | Lebanon



NHHFA.org/events



Next :

Questions?