

**LAND USE &
INFRA-
STRUCTURE
FISCAL
ANALYSIS**

NACOGDOCHES, TEXAS

JANUARY, 2021



Introduction

In most communities, there is a growing gap between the funds cities have available and what is needed to serve and maintain neighborhoods and infrastructure.

There is pressure to keep property taxes down, and sales tax revenue fluctuates based on market conditions and demand. Meanwhile, as cities age and expand, there is more infrastructure to maintain and more services to provide. As a result, community leaders across the country are struggling to address basic service, employment, and lifestyle expectations with limited resources.

There are three basic options for cities to consider when trying to close the resource gap:

1. Keep development patterns and service levels where they are, but charge more (via higher taxes and fees) to cover the true costs.
2. Keep tax rate where it is, but cut services to align with revenues.
3. Shift development pattern and infrastructure design to enable an affordable balance of services and taxes.

Ultimately the goal of this process is to provide information that empowers city leaders to align your community's development and service model with what residents are willing and able to pay for -

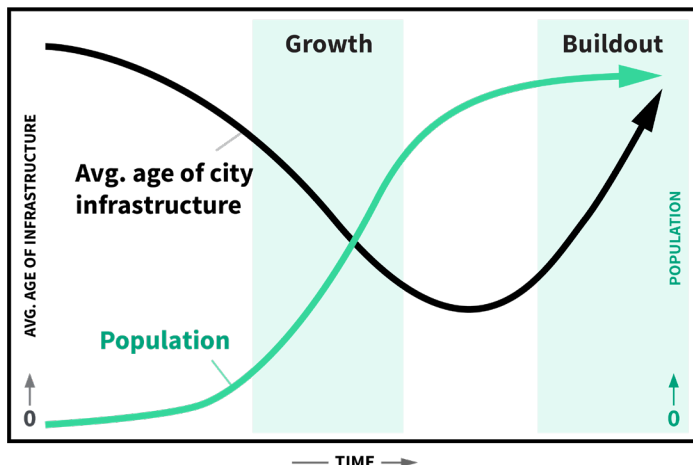
In most cases, the post WW2 (autocentric) development pattern does not generate enough public wealth (tax base) to pay for the costs required to maintain infrastructure and public services at current expectation levels over time.

now and in the future. Currently, there's a disconnect in most cities between the services and quality of life residents are getting and what they are paying for. This process and analysis is intended to help open up a deeper dialogue about the resource gap and strategies to close it.

The underlying philosophy is that ideally the property tax revenue generated by development in a city should be enough to cover

street maintenance and reconstruction as well as a portion of other basic services. When property tax revenue can cover more basic services, this frees up revenue from sales tax to focus on economic development and quality of life improvements that preserve and enhance property values over time. The more a city has to rely on sales tax for basic services, the less funding it will have for amenities and economic development incentives. A city can adjust its development regulations to guide development into forms with cost burdens more suitable for its revenue potential. First though, a city must understand the relationship between its development patterns, revenue potential, and cost burden. A land use fiscal analysis, such as this report, can help a city understand that relationship.

Fiscal sustainability and the land use analysis presented in this report can be a common language for community stakeholders to discuss and make informed decisions about land use planning, zoning and subdivision regulations, capital improvement program and infrastructure investment, economic development incentives, budgeting, and setting the tax rate. This report provides a foundation to help Nacogdoches align the costs of its development and service policies with a financial approach that citizens are willing and able to pay for.



Long Term Impacts of Rate and Pattern of Growth

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1.

***METHODOLOGY &
BASE CONCEPTS***

Land Use Fiscal Analysis Methodology

There are three levels to this fiscal analysis. First is to quantify and map your current property tax levy revenue to the parcel level. The second level maps general fund costs paid for by property taxes to the parcels, illuminating which parcels generate surplus revenue, and which ones cost more to serve than they generate in tax revenue. The third step is to estimate the amount it would take for the city to replace existing street infrastructure, and then break that into an annual amount by parcel. This map then shows how different parcels and development patterns perform fiscally when considering the true infrastructure burden and assuming these costs are covered from property tax revenue.

Certain development patterns will hold their value and remain positive, even with the additional cost burden, while others will decrease significantly. The results of the baseline modeling and context from other places can then be used to project how different future development scenarios would perform financially. This is especially applicable for things like Comprehensive Planning, annexation decisions, zoning code amendments and other big picture planning tasks within a city.

Level 1: Property Tax Revenue per Acre

Map the existing property tax revenue (levy) per acre basis for all parcels in the city

Level 2: Net per Acre for Current Conditions (What You Have)

Map existing property tax revenue \$ minus current operating budget funded by property taxes

Level 3: Deficit (What You Really Need)

Adds projected general fund costs and unfunded street replacement costs spread over future years

Scenario Planning

Use baseline model and context data to project fiscal performance of Future Land Use and development alternatives

Property Tax Revenue per Acre

To understand the impact of development patterns on the city's budget, it's important to look at the fiscal performance of the city's properties on a per-acre basis, rather than simply counting a given lot's overall value. Levy revenue per acre takes the actual property tax revenue amount the municipality receives from the property, and divides it by the size of the parcel to get a levy revenue per acre number. This makes it possible to compare parcels on more of an "apples to apples" basis.

Some properties may seem at first glance to be revenue winners for the city, but underperform in terms of property tax levy per acre. In this example case, the commercial lot has a much larger footprint than the residential lot but only a modest increase in the appraised value. Despite the overall higher value, the commercial lot produces less revenue per acre than the much smaller residential lot. This pattern of a higher revenue per acre on smaller lots holds true for both residential and commercial uses.

The following examples illustrate how some different lot, building, and value combinations impact the revenue/acre metric.

$$\text{Revenue/Acre} = \frac{\text{Levy collected by the city per parcel}}{\text{Parcel area (acres)}}$$



RESIDENTIAL LOT WITH SMALL FOOTPRINT

Dimensions: 50 ft x 150 ft
Area: 7,500 sqft = 0.172 acres
Assessed Value: \$52,983
Property Tax Revenue (Levy): \$198
Levy per Acre: \$1,200

COMMERCIAL LOT WITH LARGE FOOTPRINT

Dimensions: 400 ft x 300 ft
Area: 12,000 sqft = 2.75 acres
Assessed Value: \$282,070
Property Tax Revenue (Levy): \$1,732
Levy per Acre: \$630

* Does not factor in residential or commercial exemptions or sales tax

** Shapes are drawn to scale

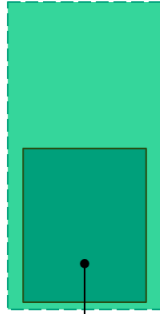
Value Capture of Development Patterns

2,000 SF Home on Different Size Lots



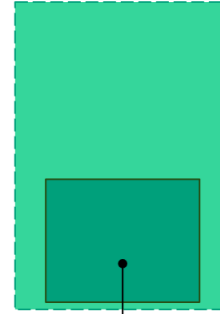
3,000 SF RESIDENTIAL LOT

Lot Dimensions: 30 ft x 100 ft (0.069 Acres)
Lot Coverage: 67%
Appraised Value: \$205,000
Property Tax Revenue** (Levy): \$1,025
Revenue per Acre: \$14,885



5,000 SF RESIDENTIAL LOT

Lot Dimensions: 50 ft x 100 ft (0.115 Acres)
Lot Coverage: 40%
Appraised Value: \$210,000
Property Tax Revenue** (Levy): \$1,050
Revenue per Acre: \$9,130

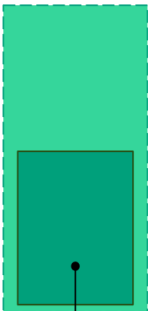


7,000 SF RESIDENTIAL LOT

Lot Dimensions: 70 ft x 100 ft (0.161 Acres)
Lot Coverage: 29%
Appraised Value: \$220,000
Property Tax Revenue** (Levy): \$1,100
Revenue per Acre: \$6,832

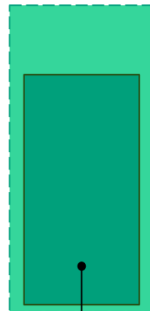
* Shapes are drawn to scale ** Conceptual tax rate of 0.50 used to find Levy

5,000 SF Lot: 1 Story Home with Different Footprint Size



2,000 SF HOME

Lot Dimensions: 50 ft x 100 ft (0.115 Acres)
Lot Coverage: 40%
Appraised Value: \$210,000
Property Tax Revenue** (Levy): \$1,050
Revenue per Acre: \$9,130



3,000 SF HOME

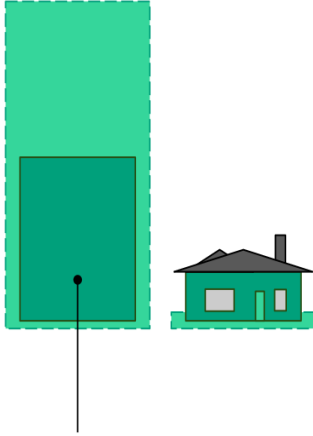
Lot Dimensions: 50 ft x 100 ft (0.115 Acres)
Lot Coverage: 60%
Appraised Value: \$310,000
Property Tax Revenue** (Levy): \$1,550
Revenue per Acre: \$13,478

* Shapes are drawn to scale

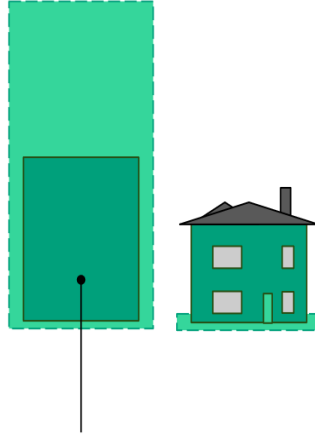
** Conceptual tax rate of 0.50 used to find Levy

Value Capture of Development Patterns

5,000 SF Lot: 1 Story vs 2 Story with Same Building Footprint



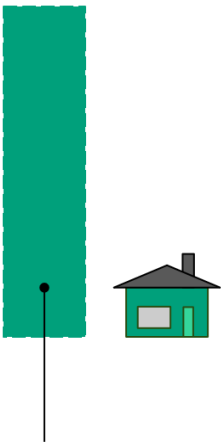
1 STORY HOME (2,000 SF FOOTPRINT)
 Lot Dimensions: 50 ft x 100 ft (0.115 Acres)
 Lot Coverage: 40%
 Appraised Value: \$210,000
 Property Tax Revenue** (Levy): \$1,050
Revenue per Acre: \$9,130



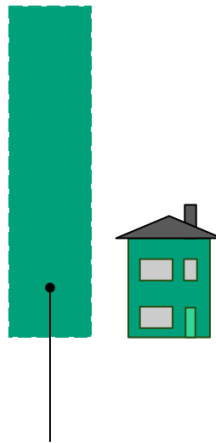
2 STORY HOME (2,000 SF FOOTPRINT)
 Lot Dimensions: 50 ft x 100 ft (0.115 Acres)
 Lot Coverage: 40%
 Appraised Value: \$310,000
 Property Tax Revenue** (Levy): \$1,550
Revenue per Acre: \$13,478

* Shapes are drawn to scale ** Conceptual tax rate of 0.50 used to find Levy

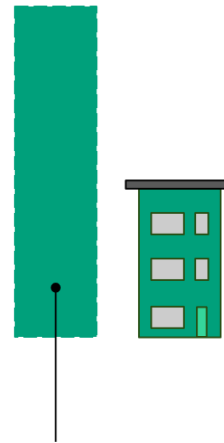
2,500 SF Lot with 1, 2, and 3 Story Buildings with Same Footprint



1 STORY BUILDING
 Lot Dimensions: 25 ft x 100 ft (0.057 Acres)
 Lot Coverage: 100%
 Appraised Value: \$150,000
 Property Tax Revenue** (Levy): \$750
Revenue per Acre: \$13,158



2 STORY BUILDING
 Lot Dimensions: 25 ft x 100 ft (0.057 Acres)
 Lot Coverage: 100%
 Appraised Value: \$250,000
 Property Tax Revenue** (Levy): \$1,250
Revenue per Acre: \$21,930

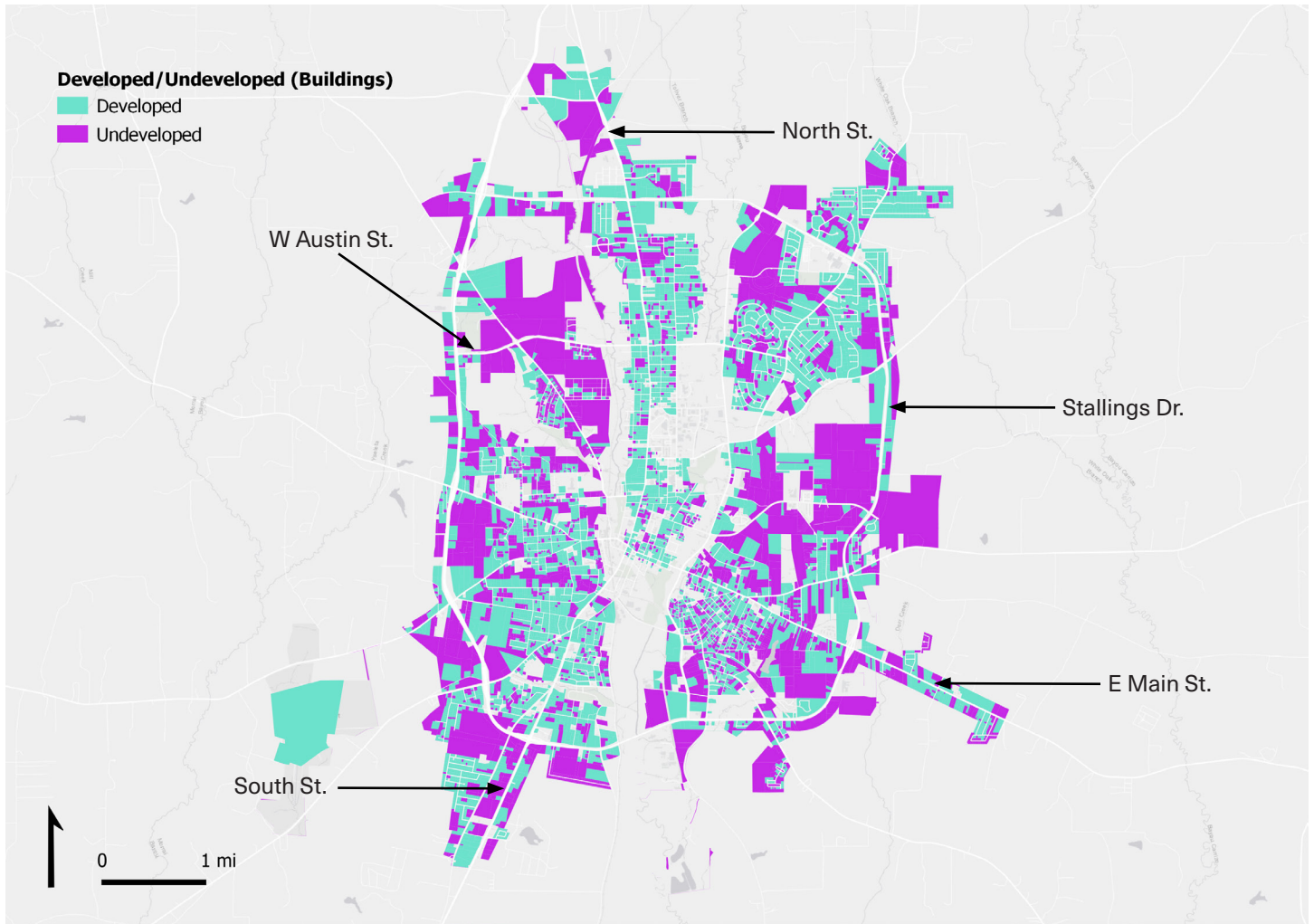


3 STORY BUILDING
 Lot Dimensions: 25 ft x 100 ft (0.057 Acres)
 Lot Coverage: 100%
 Appraised Value: \$350,000
 Property Tax Revenue** (Levy): \$1,750
Revenue per Acre: \$30,702

* Shapes are drawn to scale

** Conceptual tax rate of 0.50 used to find Levy

Developed/Undeveloped Revenues & Costs



Total Measured Levy (Developed & Undeveloped)

\$8,566,051

Total Measured Acreage

10,712 Acres

Developed & Undeveloped Areas/Proportions

Developed: 5,424 Acres 50.6%

Undeveloped: 5,288 Acres 49.4%

Developed & Undeveloped Proportionate Revenue

Developed: \$7,528,872 87.9%

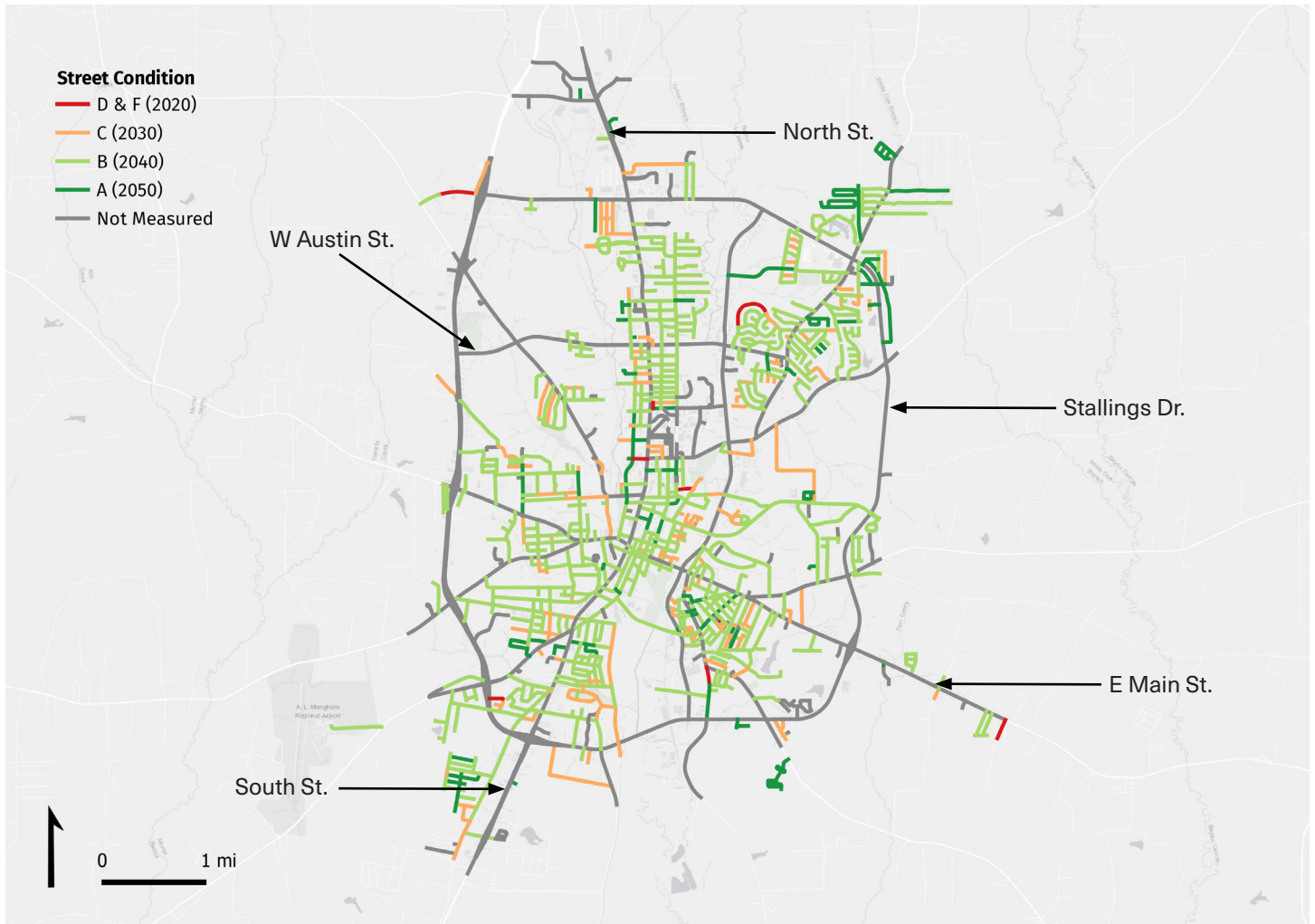
Undeveloped: \$1,037,180 12.1%

$$\text{Cost/Parcel} = \frac{\text{Parcel Acreage}}{\text{Developed/Undeveloped Acreage}} \times (\text{Developed/Undeveloped Costs})$$

The city's developable area (area within the city limits excluding exempt parcels and floodplain) is split roughly 50/50 between developed and undeveloped. Developed parcels generate nearly 90% of the city's property tax revenue.

For this model, general fund service costs were allocated to parcels using this same ratio so that developed parcels carry a higher percentage of costs than undeveloped parcels.

Street Condition & Replacement Costs

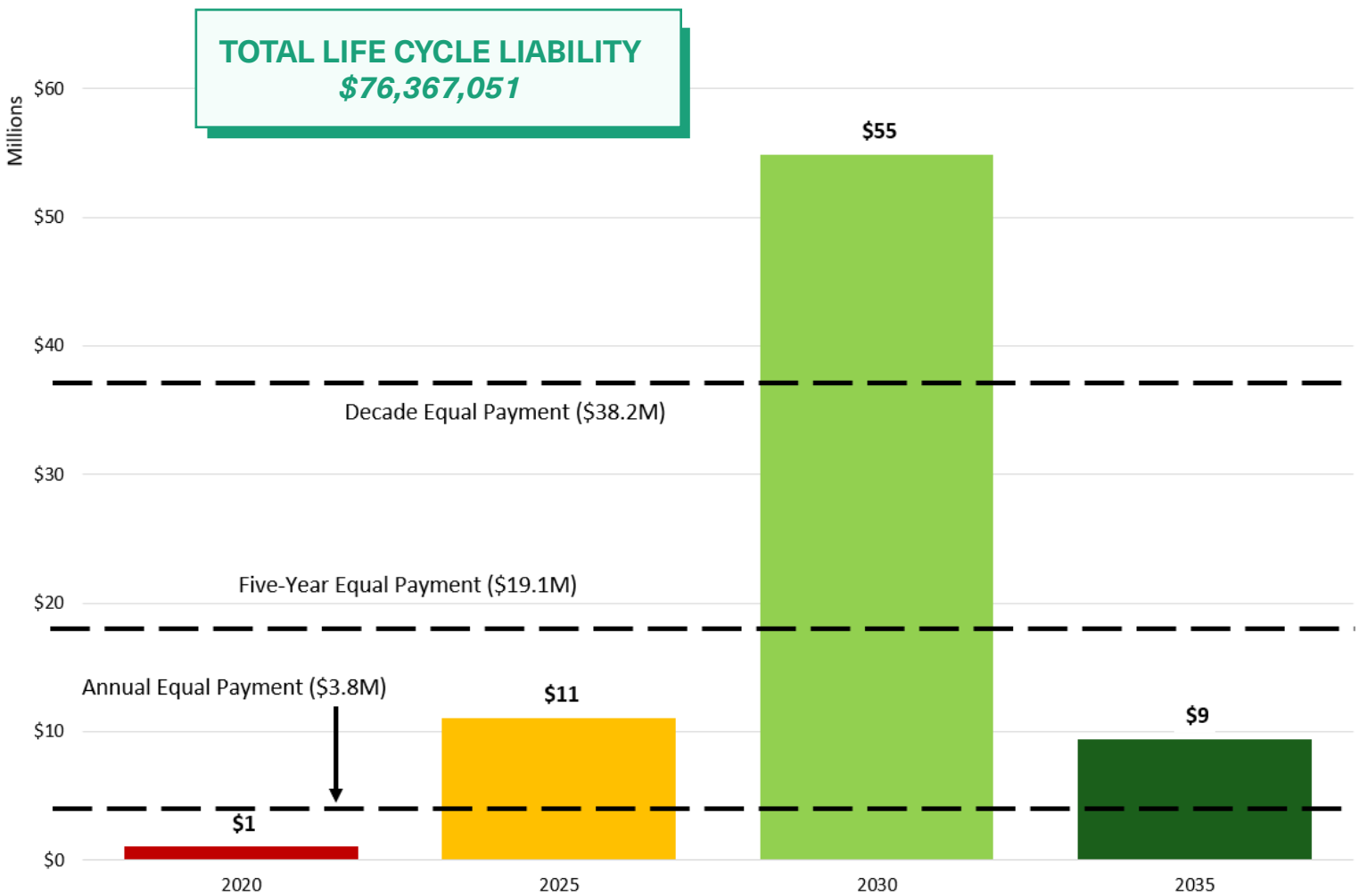


Police	\$	8,594,193	33%
Fire	\$	6,041,206	23%
General Government	\$	6,357,688	25%
Cultural & Recreational	\$	2,707,682	10%
Streets	\$	1,164,837	4%
Animal Control	\$	500,504	2%
Inspection	\$	425,482	2%
Public Works Admin	\$	123,948	0%
TOTAL EXPENDITURES	\$	25,915,540	

Nacogdoches has 144 miles of existing roadways to maintain. Using the city's provided average cost of \$210,000 per 11' lane-mile for full street replacement, this equates to roughly \$76.3M of street liabilities. This would require the city to spend on average \$3.8M per year for 20 years to replace all of the existing streets at the end of their life cycle.

The City currently spends \$1.16M per year (4% of the general fund budget) on street maintenance. Additional funds for street reconstruction projects have been secured through bond elections and occasional fund transfers, but this is not a sustainable model.

Projected Street Replacement Costs



Grade	Associated Cost	Year Replacement
D, & F	\$ 1,046,069	2020
C	\$ 11,080,753	2025
B	\$ 54,897,812	2030
A	\$ 9,444,157	2035

* Reference pavement study

A recent pavement condition study completed for the city revealed that the majority of the city's streets are in good condition (grades of A and B) and will not require full reconstruction until 2030 and beyond. Based on current funding allocations, the city should be able to address its lowest rated streets in the next decade, but additional funding will need to be secured to fund the larger replacement needs that will be coming due in 2030 and beyond.

Annual Street Cost Liability

\$76,367,051 / 20 years = \$3.8 million / year

Police	\$	8,594,193	33%
Fire	\$	6,041,206	23%
General Government	\$	6,357,688	25%
Cultural & Recreational	\$	2,707,682	10%
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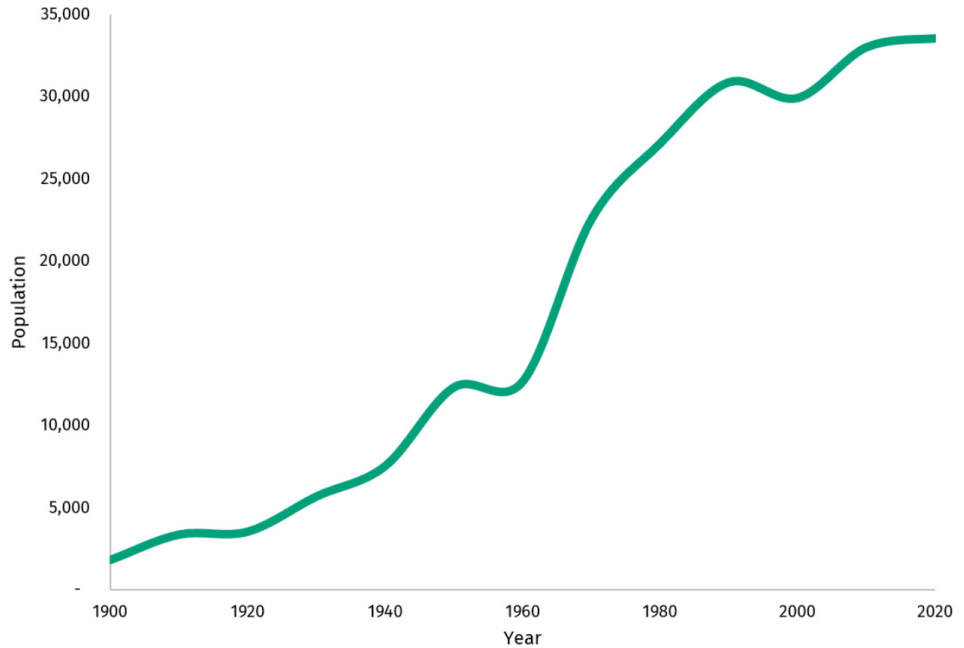
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***POPULATION &
BUDGET
ASSESSMENT***

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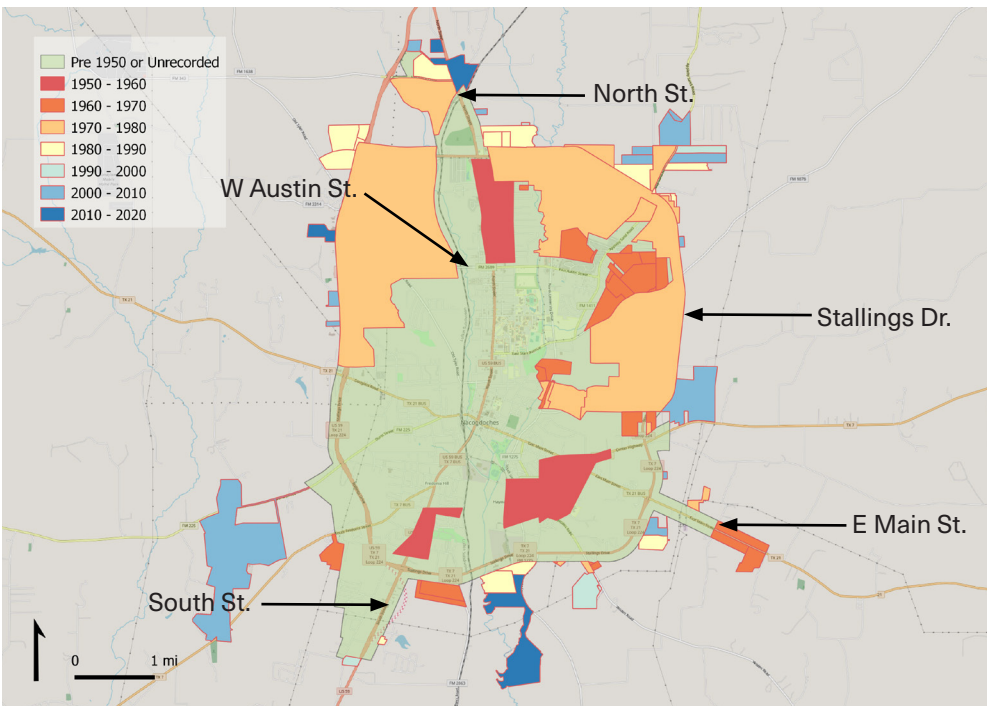
Population Growth Over Time

Year	Population	Growth Rate
1900	1,827	-
1910	3,369	46%
1920	3,546	5%
1930	5,687	38%
1940	7,538	25%
1950	12,327	39%
1960	12,674	3%
1970	22,544	44%
1980	27,149	17%
1990	30,872	12%
2000	29,914	-3%
2010	32,996	9%
2020	33,542	2%



A city's service area and population density have a direct impact on city finances and the cost burden per capita and household. A larger service area requires more infrastructure, public safety, and other city services.

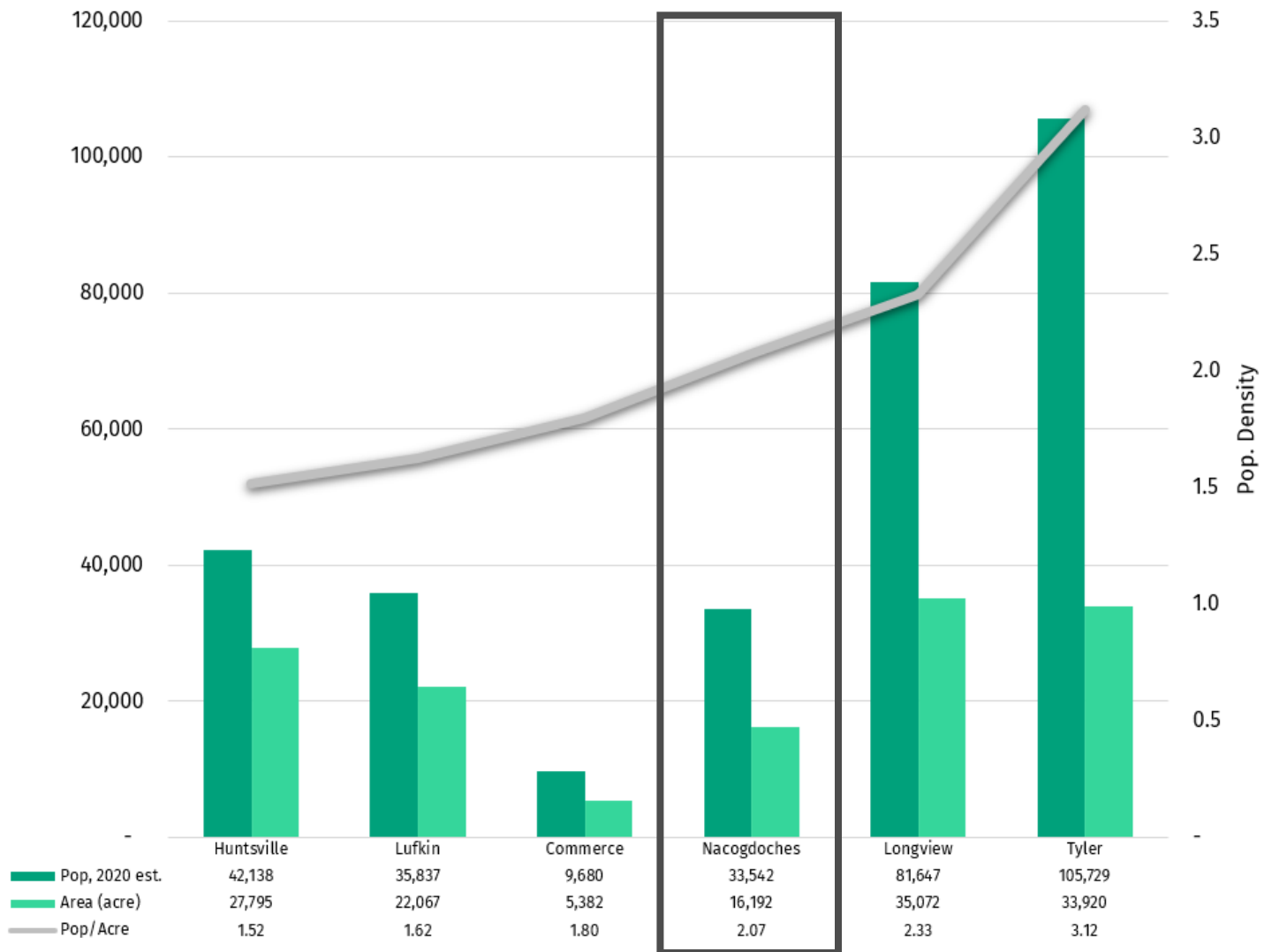
The city's land area grew by roughly double between 1950 and 2020. During this same time, the population grew by 2.7 times. This increased population density helps distribute the cost burden of the city across more properties (and their owners). However, the city's density is still relatively low.



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Benchmarks: Population and Density

These charts show how Nacogdoches' population and density compares to other cities. These benchmarks are helpful when evaluating the impacts service area and population density have on service costs, tax rates, and required home values.



City	Pop, 2020 est.	GF Revenue, 2020	Area (acre)	Pop/Acre
Huntsville	42,138	\$ 25,843,684	27,795	1.52
Lufkin	35,837	\$ 34,583,041	22,067	1.62
Commerce	9,680	\$ 7,073,761	5,382	1.80
Nacogdoches	33,542	\$ 26,180,909	16,192	2.07
Longview	81,647	\$ 73,350,490	35,072	2.33
Tyler	105,729	\$ 68,259,770	33,920	3.12

City	Tax Rate	GF/Capita	GF/Acre	GF/Household
Huntsville	0.314800	\$ 613.31	\$ 929.80	\$ 1,545.54
Lufkin	0.531135	\$ 965.01	\$ 1,567.18	\$ 2,431.82
Commerce	0.820000	\$ 730.76	\$ 1,314.34	\$ 1,841.52
Nacogdoches	0.616000	\$ 780.54	\$ 1,616.90	\$ 1,966.96
Longview	0.509900	\$ 898.39	\$ 2,091.43	\$ 2,263.93
Tyler	0.244452	\$ 645.61	\$ 2,012.38	\$ 1,626.94

** Sourced from the US Census Population Estimation

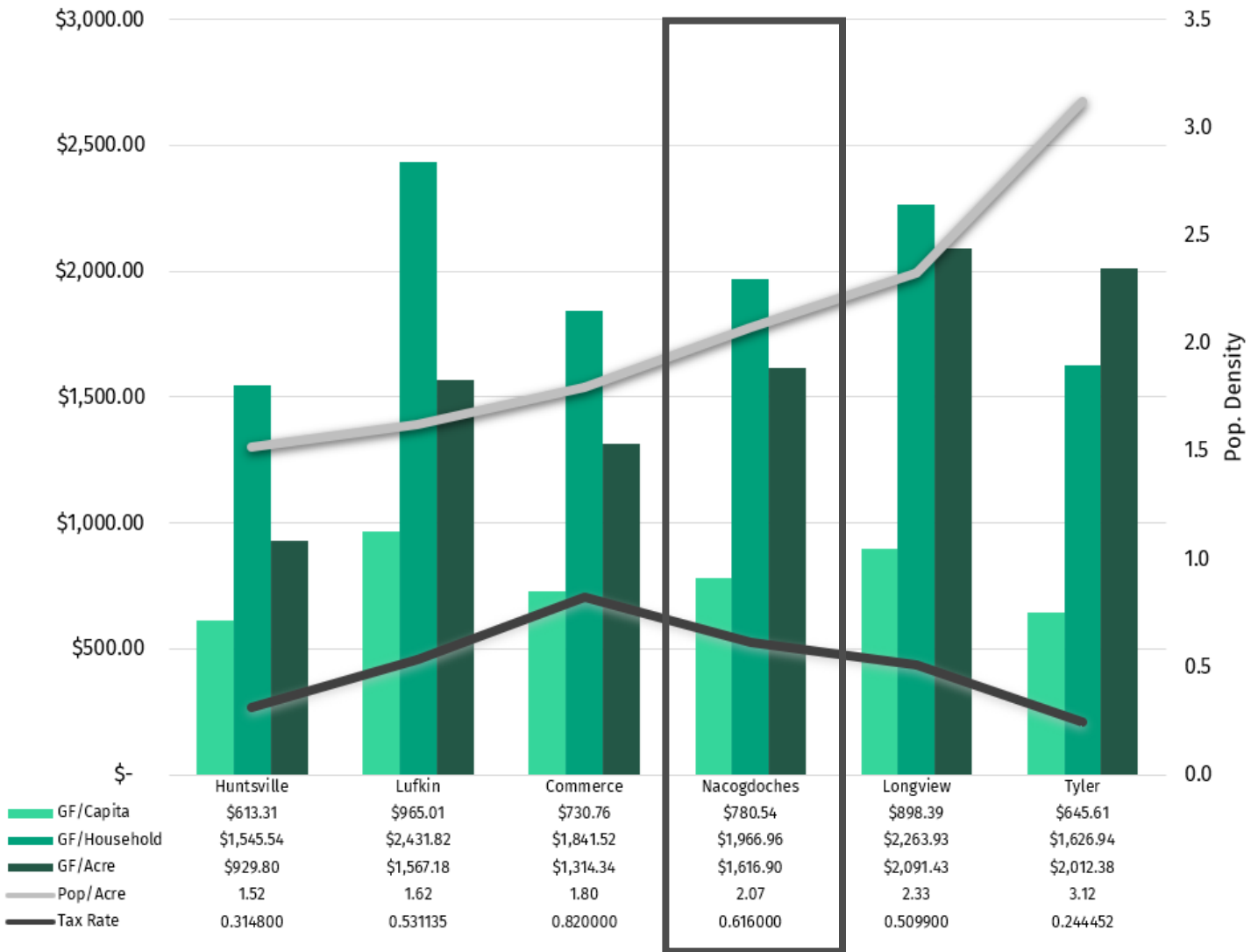
Benchmarks: General Fund (per Capita, Household, Acre)

These charts show how Nacogdoches' general fund compares to other cities in terms of per capita, per household, and per acre. Typically, cities that are older and/or larger tend to have higher general fund per acre costs. This reflects the additional staff, infrastructure, and amenities that are required to serve larger geographic areas, larger populations, and older infrastructure.

General Fund per Acre

Current: \$1,617

Portion paid by property tax: \$598

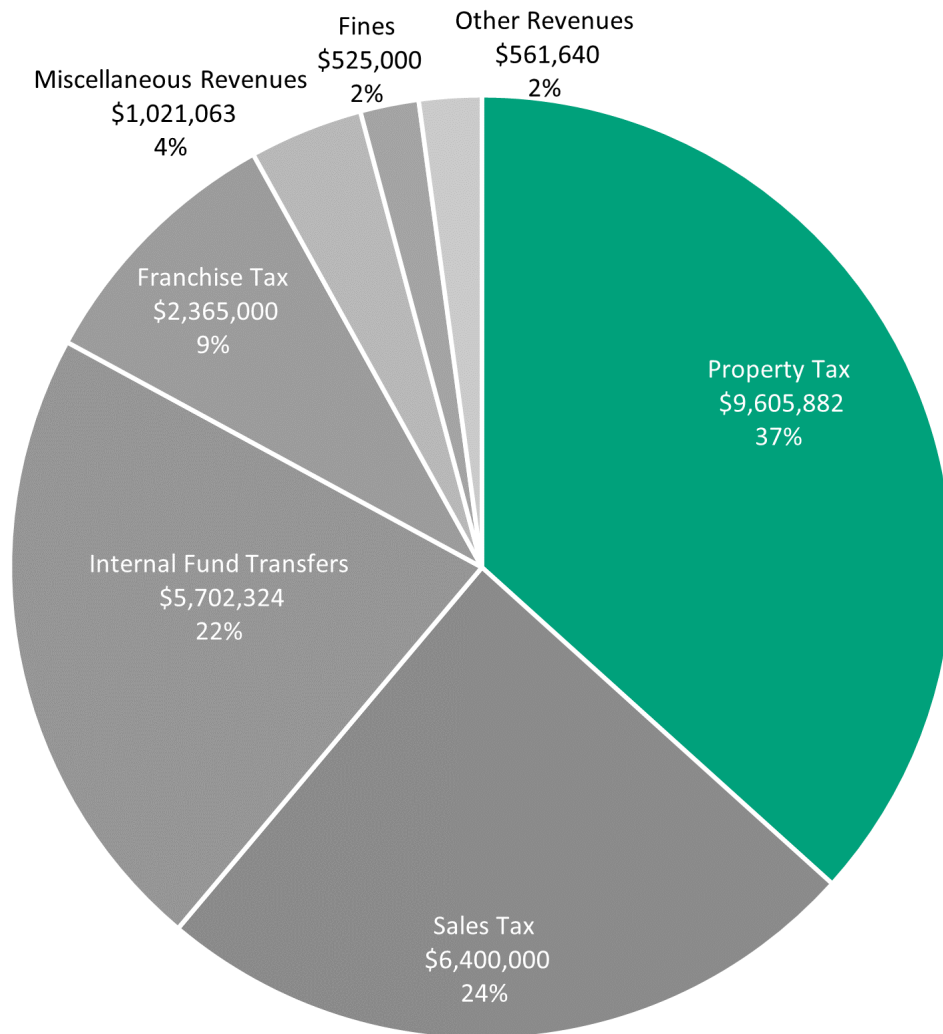


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** Sourced from the US Census Population Estimation

General Fund Revenue (FY 20/21 Budget)

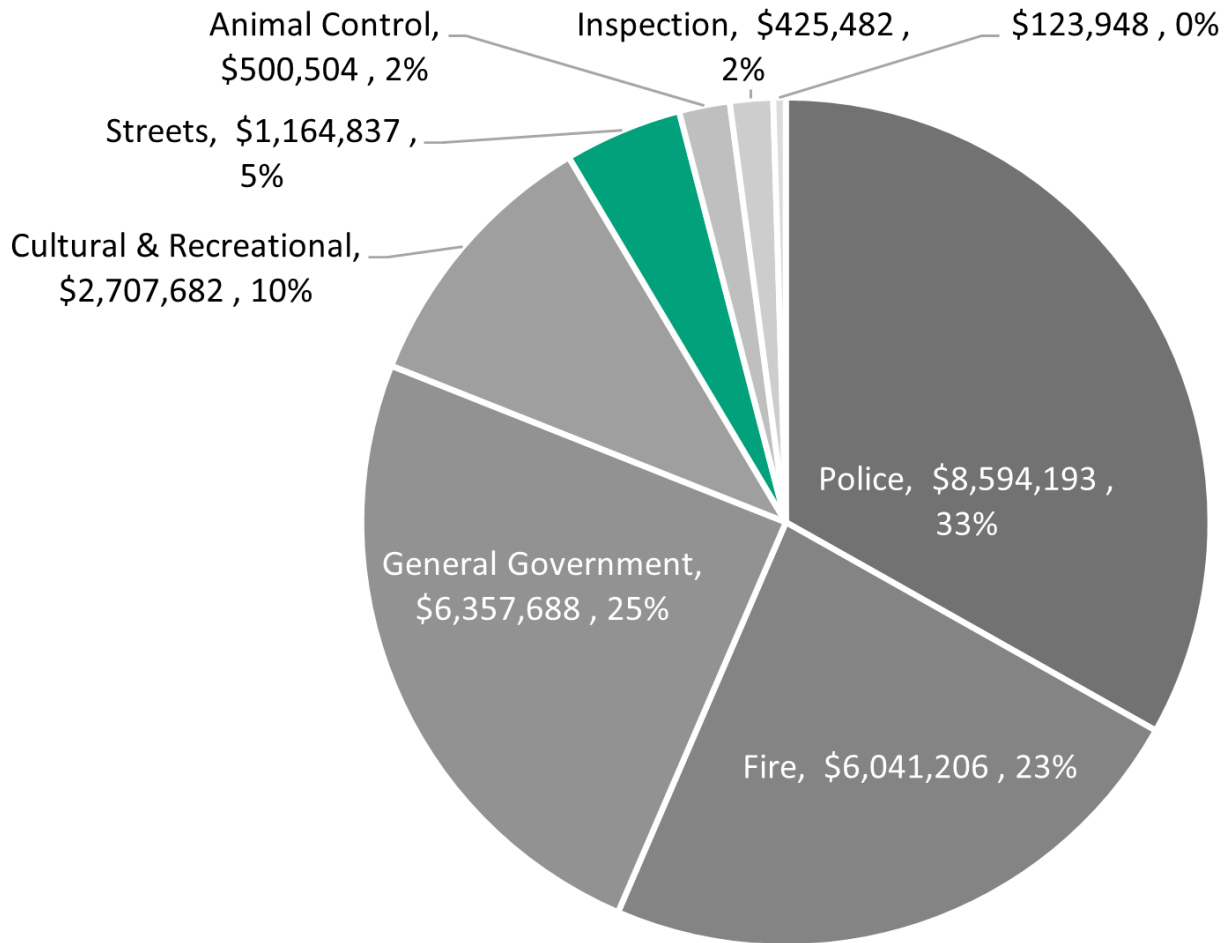


This chart shows how the general fund for the current budget year is split by revenue sources. **Property tax makes up 37% of the general fund revenue.** Unlike sales tax and other development related fees that can vary widely, property tax revenues are fairly stable and predictable. When property tax revenue can cover a larger percentage of basic needs, it frees up sales tax revenue to be invested in quality of life amenities and growth opportunities, as opposed to being relied on to cover basic city operations and services. The common way to raise property tax revenue is by raising the tax rate, but additional revenues can also be generated by building more fiscally productive development that generates higher property tax revenue per acre.

Property Tax	\$ 9,605,882	37%
Sales Tax	\$ 6,400,000	24%
Internal Fund Transfers	\$ 5,702,324	22%
Franchise Tax	\$ 2,365,000	9%
Miscellaneous Revenues	\$ 1,021,063	4%
Fines	\$ 525,000	2%
Other Revenues	\$ 561,640	2%
TOTAL RESOURCES	\$ 26,180,909	

*Information sourced from City of Nacogdoches 2020-2021 Draft Budget ** Other includes Permits, Current Service Charges, Interest, and Intergov Receipts

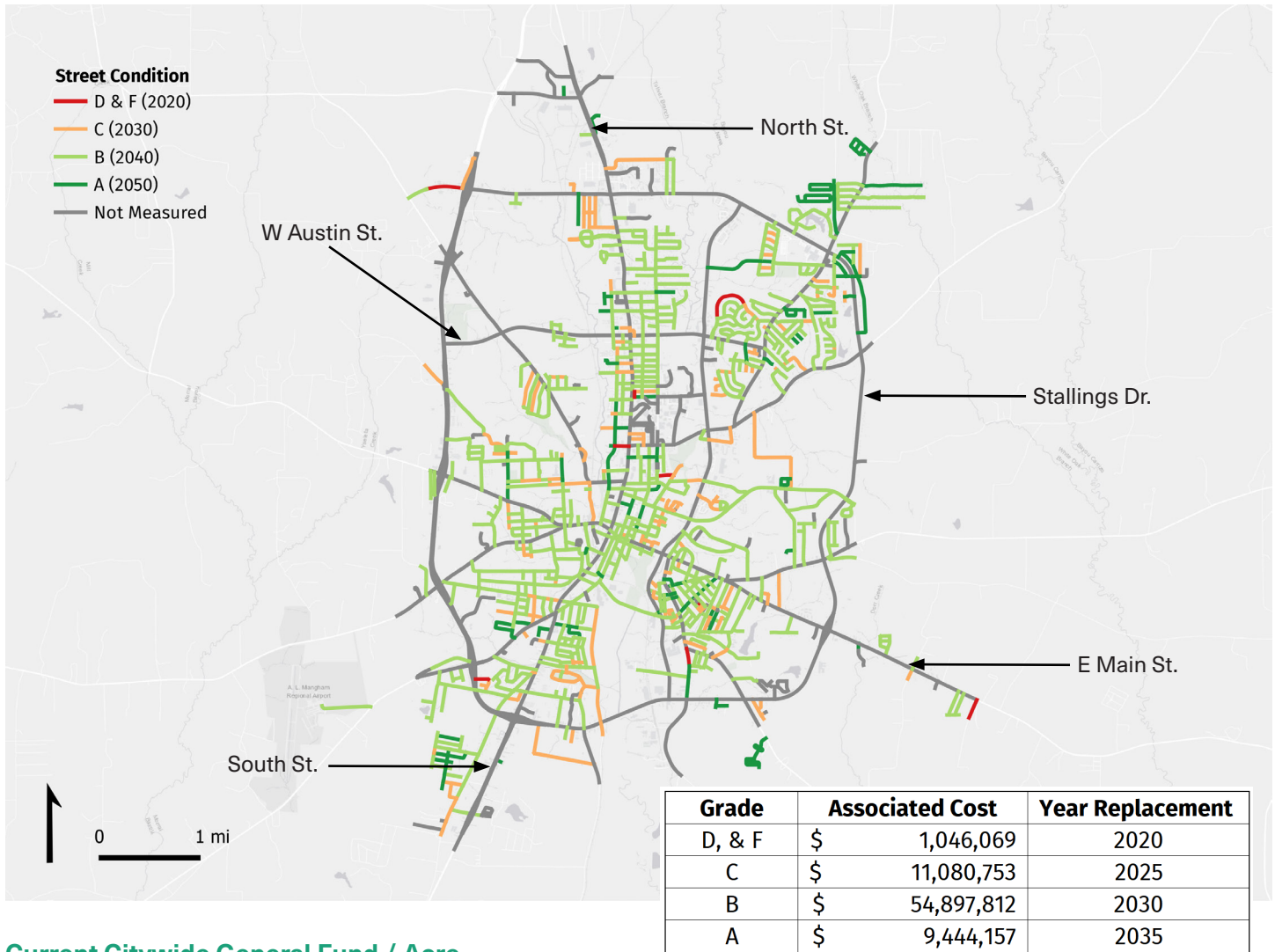
General Fund Expenditures (FY 20/21 Budget)



This chart shows how the general fund expenditures for the current budget year are broken out by categories. 57% is allocated to public safety. The street budget, highlighted in green, is \$1.34 million, or 5% of the city's annual general fund expenditures. Like most communities, this is well below the funding required to cover ongoing maintenance and replacement of all of the city's thoroughfares and residential streets.

Police	\$	8,594,193	33%
Fire	\$	6,041,206	23%
General Government	\$	6,357,688	25%
Cultural & Recreational	\$	2,707,682	10%
Streets	\$	1,164,837	4%
Animal Control	\$	500,504	2%
Inspection	\$	425,482	2%
Public Works Admin	\$	123,948	0%
TOTAL EXPENDITURES	\$	25,915,540	

Est. General Fund / Acre to Break Even



Current Citywide General Fund / Acre

\$26.18 million (General Fund) / 16,192 Acres (City Limits) = **\$1,617 General Fund / Acre**

Average GF / Acre sourced from Property Tax

\$1,617 (GF/Acre) x 0.37 (Percent of GF from Prop. Tax) = **\$598 Avg. GF/Acre from Prop. Tax**

Annual Street Cost Deficit / Acre

\$3,818,853 (Annual Street Cost) / 16,192 Acres = **\$236 Deficit /Acre**

Break Even Property Tax Revenue / Acre (Parcel Average)

\$598 + \$236 = **\$834 Prop. Tax / Acre**

Break Even General Fund / Acre (Citywide)

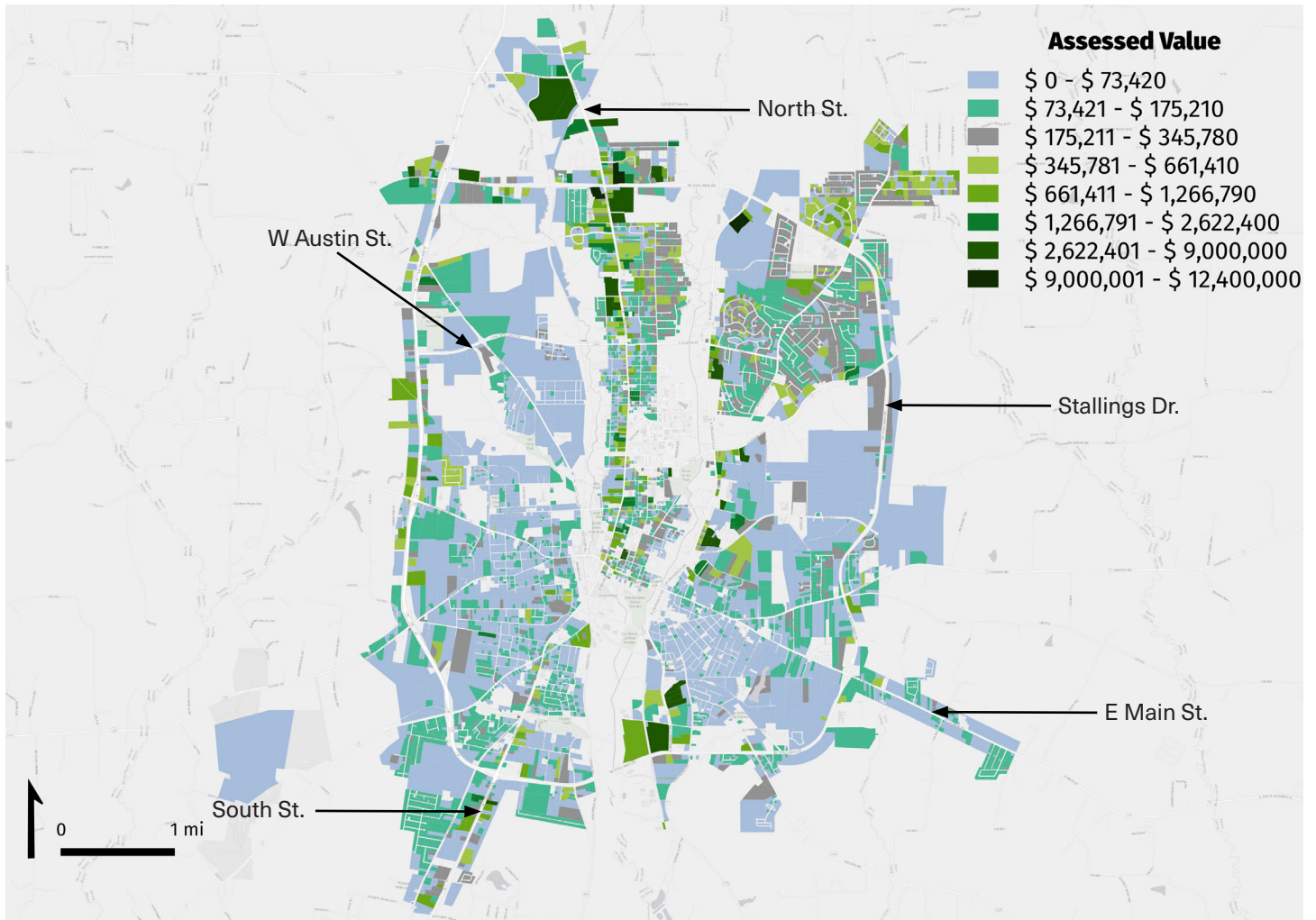
\$1,617 + \$236 = **\$1,853 General Fund / Acre (Amount estimated to break even with street costs)**

3.

LAND USE FISCAL ANALYSIS

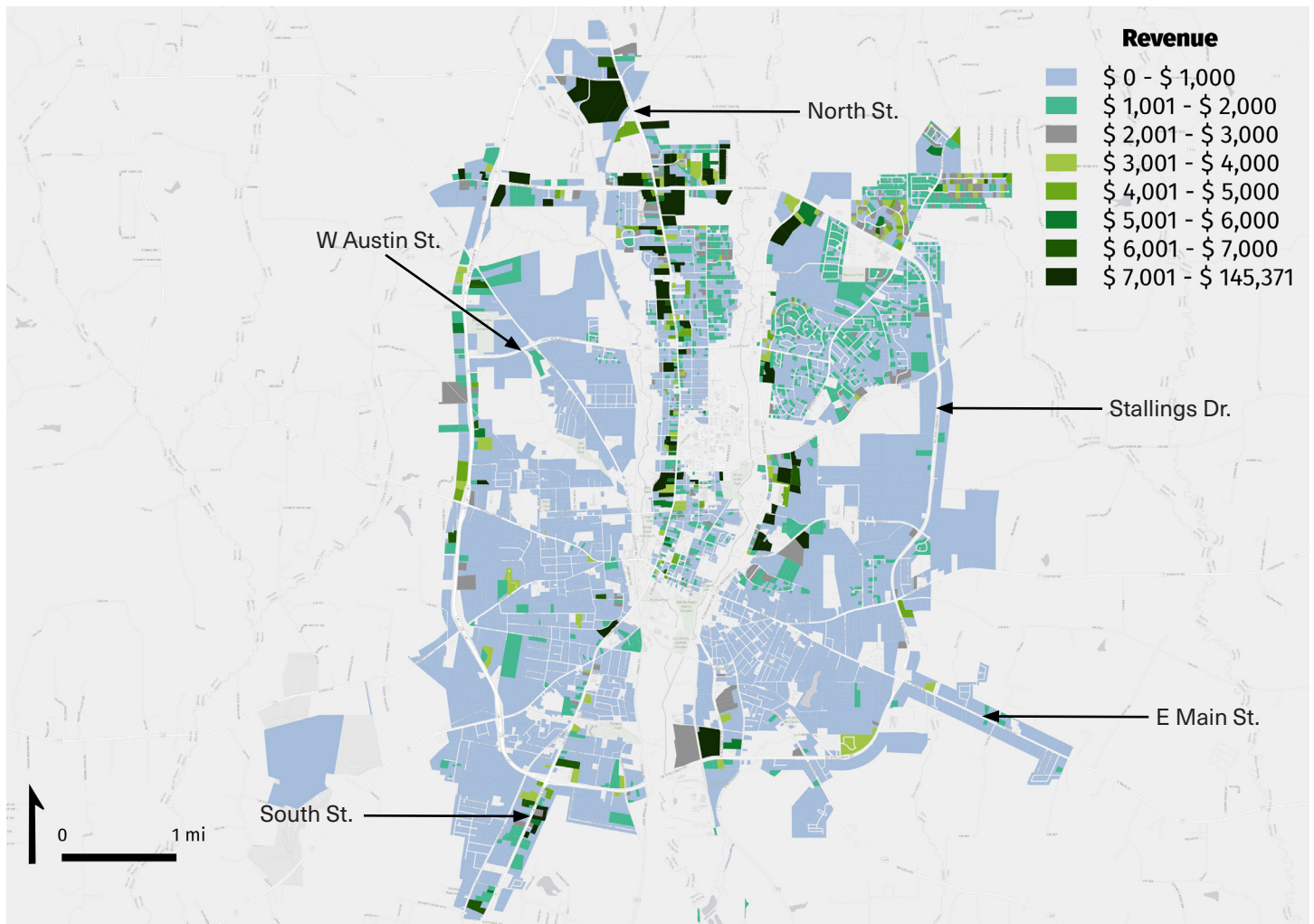
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Assessed Value (2019)



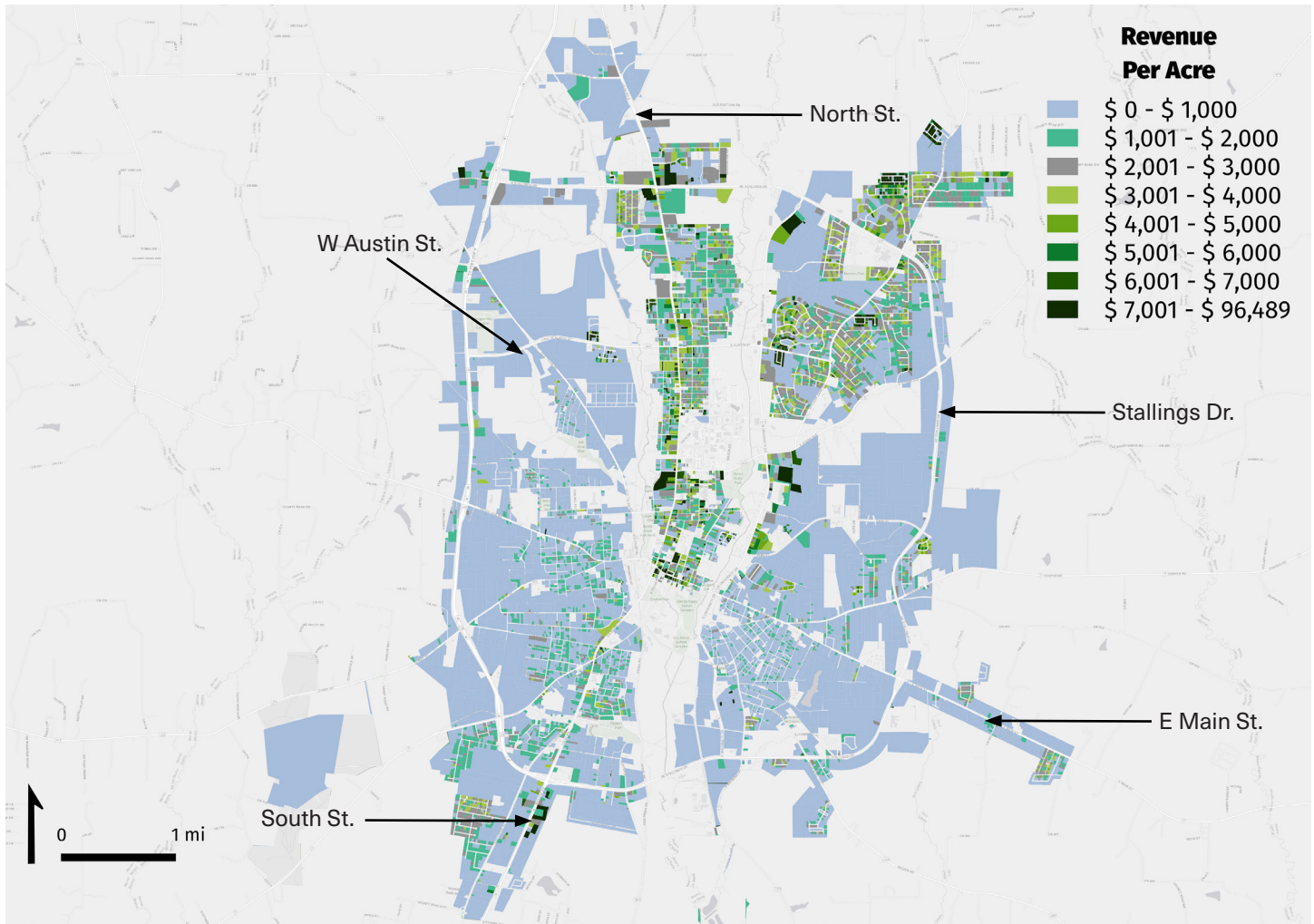
This map illustrates the assessed value for parcels in the city according to the 2019 certified tax rolls. Parcels with very low values (shown in light blue) tend to be undeveloped parcels.

Property Tax Revenue by Parcel (2019)



This map shows the property tax revenue for each parcel. A significant amount of parcels in Nacogdoches have a prop. tax revenue value under \$1,000.

Property Tax Revenue Per Acre (2019)



The property tax revenue per acre metric allows a more “apples to apples” comparison of development patterns. This map shows the property tax revenue per acre for each parcel. Properties that are exempt from property tax (such as civic buildings and churches) generate no revenue for the city, but do consume services. These properties are excluded from this map.

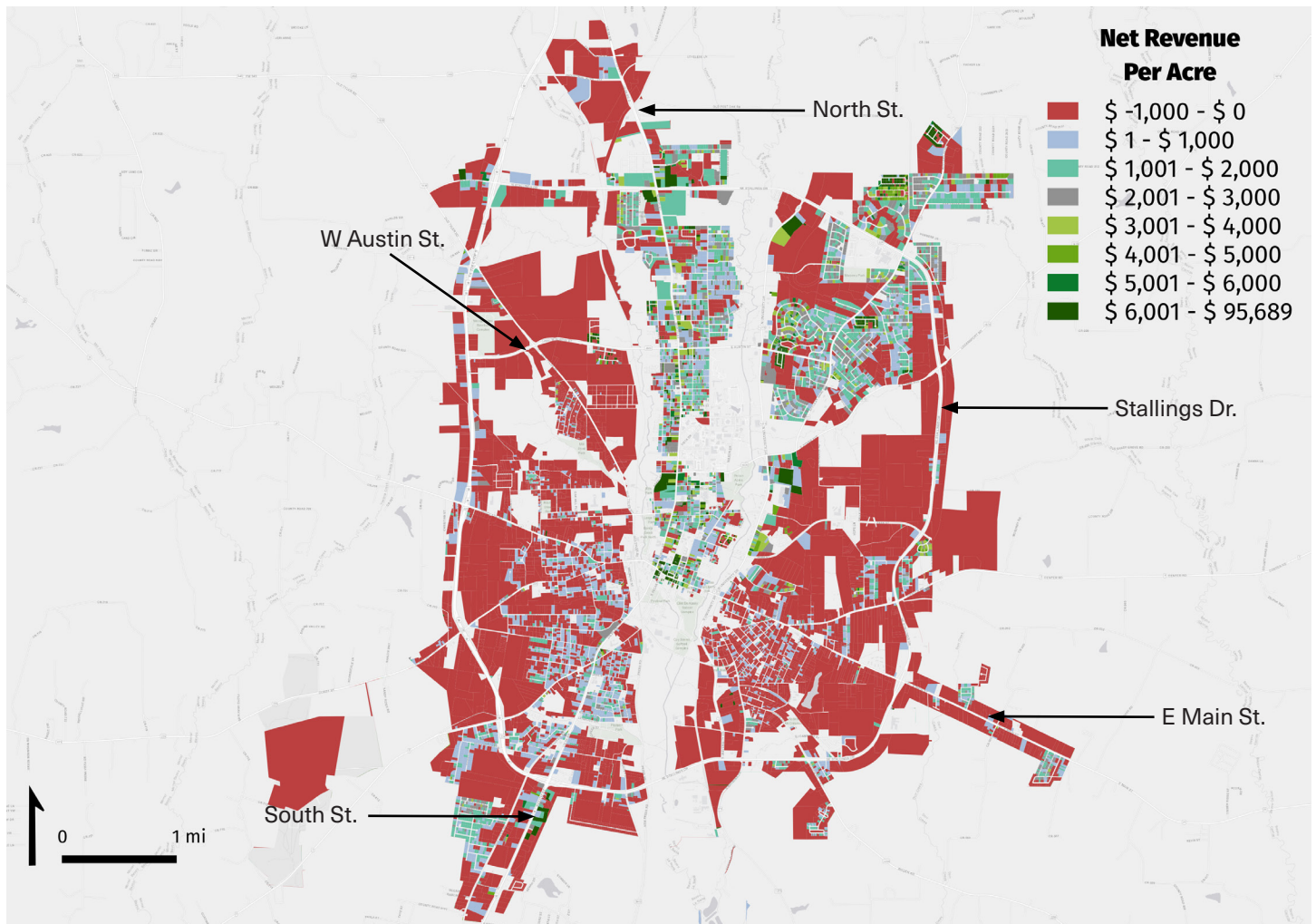
There are a few numbers that will help evaluate this map.

- Nacogdoches’ current general fund per acre is around \$1,600, with 37% of this coming from property taxes. This means in current conditions, properties must generate roughly \$600/acre to “break even.”
- A reasonable target for Nacogdoches to work toward in order to cover future liabilities such as infrastructure and additional services would be to have parcels generating

\$1,000 or higher in property tax revenue per acre. If you review the revenue per acre map and analysis table with the \$1,000 target in mind, this means that 78% of parcels and 63% of the city’s land area is not generating enough property tax revenue to cover current and anticipated costs.

Value Ranges	Count	% Parcel	Acreage	% Area
\$0 - \$1,000	7288	78%	3871.74	63%
\$1,000 - \$2,000	1570	24%	1082.65	12%
\$2,000 - \$3,000	258	4%	264.12	3%
\$3,000 - \$4,000	123	2%	228.94	3%
\$4,000 - \$5,000	42	1%	101.60	1%
\$5,000 - 6,000	28	0%	65.75	1%
\$6,000 - 7,000	17	0%	57.67	1%
\$7,000 - \$145,371	73	1%	434.12	5%

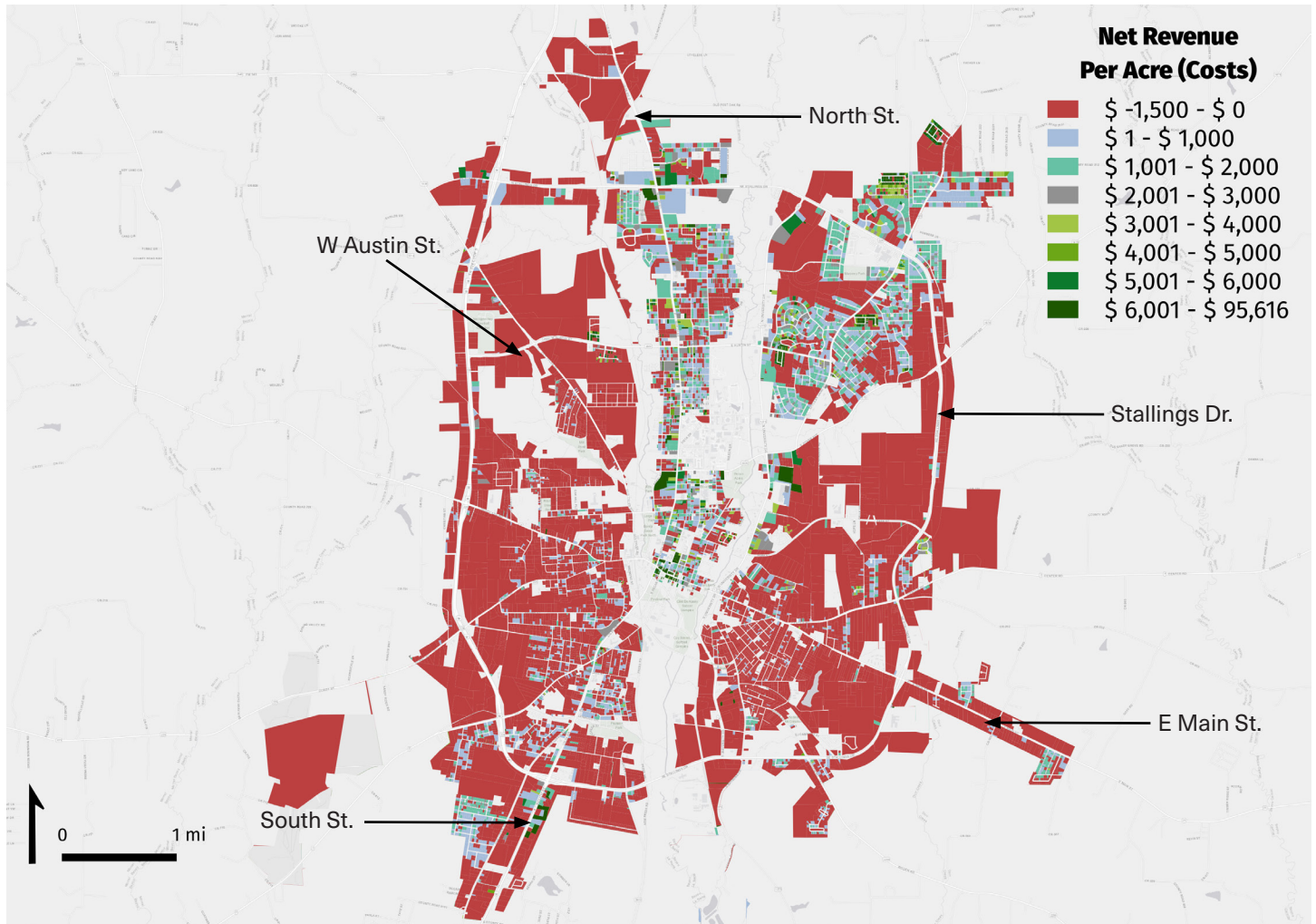
Net Revenue per Acre (Current Budget)



A more nuanced way to evaluate the performance of parcels under current budget conditions is to allocate general fund costs paid from property tax to the individual parcels. This map shows the net revenue per acre for current budget conditions. This is calculated by taking the levy/acre value for the parcel and then subtracting the portion of general fund costs that's been allocated to that parcel.

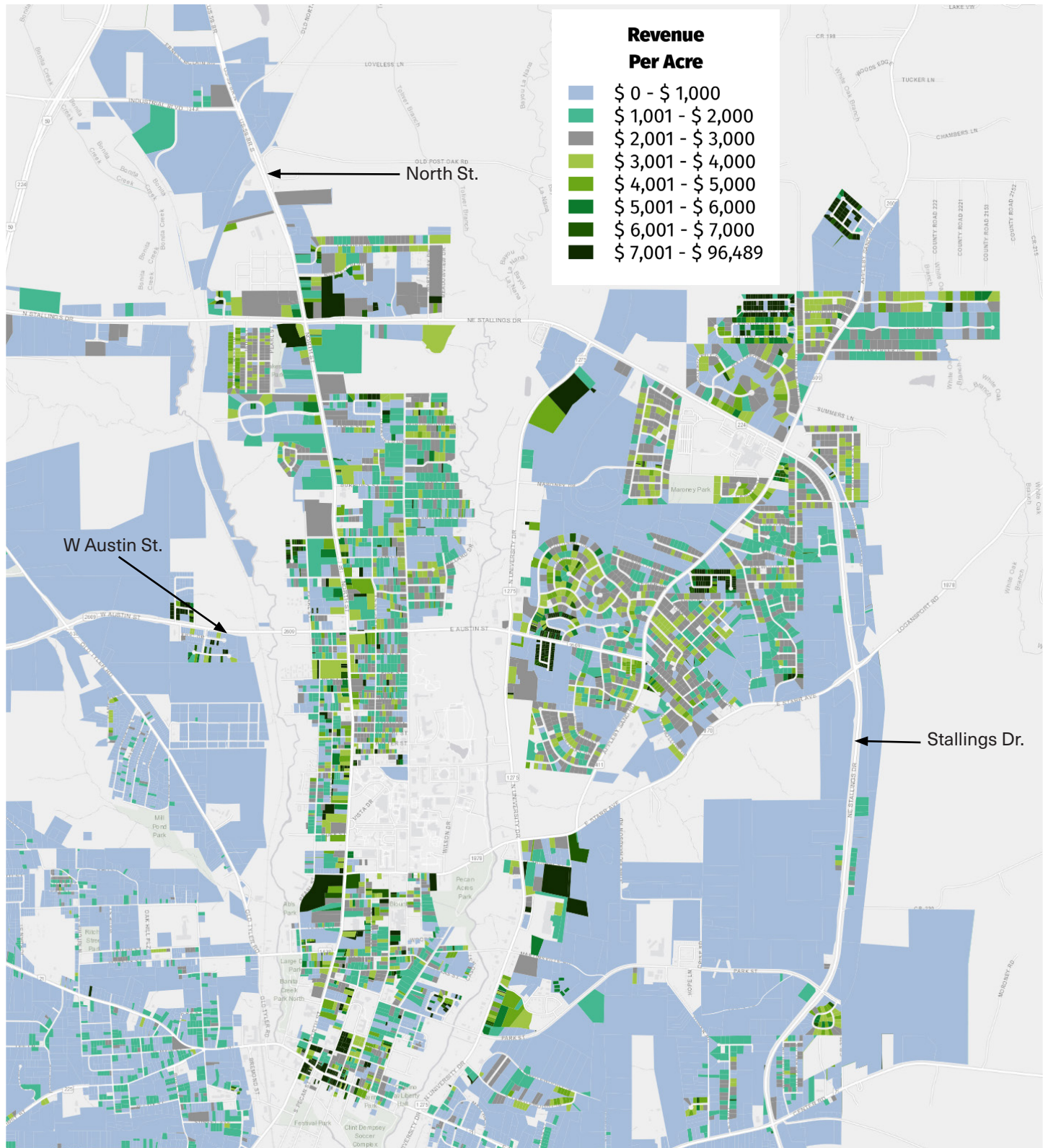
This map is essentially a "profit and loss" map for current budget conditions. Parcels shown in red cost more to serve than they generate in property taxes, while the parcels shown in blue and green generate more than they cost to serve.

Net Revenue per Acre (Budget + Costs)



This map reflects the final step in the analysis, which is to model how development patterns perform when unfunded street costs are factored in. This map reveals that when the full costs of development are considered, a very small percentage of the city's service area is generating positive cash flow.

Property Tax Revenue per Acre (2019): North Nacogdoches



Analysis Summary: State Land Use

Land Use Description	Acreage	Revenue	Rev / Acre	Average Imp Value	Current		Budget + St	
					Budget: Net / Acre	ROI	Costs: Net / Acre	Costs: ROI
Single Family	All	\$ 3,425,443	\$ 1,661	\$ 132,855	\$ 862	\$ 1.08	\$ 229	\$ 0.16
	0.02 - 0.2	\$ 204,825	\$ 2,300	\$ 78,729	\$ 1,501	\$ 1.88	\$ 868	\$ 0.61
	0.2 - 0.4	\$ 1,554,856	\$ 2,301	\$ 112,908	\$ 1,502	\$ 1.88	\$ 868	\$ 0.61
Acreage Sizes	0.4 - 0.75	\$ 973,477	\$ 1,871	\$ 152,919	\$ 1,072	\$ 1.34	\$ 438	\$ 0.31
	0.75 - 1.0	\$ 298,515	\$ 1,647	\$ 262,417	\$ 848	\$ 1.06	\$ 214	\$ 0.15
	> 1.0	\$ 393,770	\$ 661	\$ 252,632	\$ (138)	\$ (0.17)	\$ (771)	\$ (0.54)
Multifamily	All	\$ 1,609,223	\$ 1,326	\$ 112,358	\$ 527	\$ 0.66	\$ (107)	\$ (0.07)
	0.02 - 0.2	\$ 506,271	\$ 3,081	\$ 72,266	\$ 2,282	\$ 2.85	\$ 1,648	\$ 1.15
	0.2 - 0.4	\$ 445,175	\$ 1,507	\$ 80,996	\$ 708	\$ 0.89	\$ 75	\$ 0.05
Acreage Sizes	0.4 - 0.75	\$ 175,555	\$ 967	\$ 105,033	\$ 168	\$ 0.21	\$ (466)	\$ (0.33)
	0.75 - 1.0	\$ 38,097	\$ 630	\$ 138,816	\$ (169)	\$ (0.21)	\$ (802)	\$ (0.56)
	> 1.0	\$ 444,126	\$ 868	\$ 565,613	\$ 68	\$ 0.09	\$ (565)	\$ (0.39)
Commercial	All	\$ 2,212,094	\$ 1,700	\$ 243,662	\$ 901	\$ 1.13	\$ 267	\$ 0.19
	<= .25	\$ 249,909	\$ 3,104	\$ 118,182	\$ 2,305	\$ 2.89	\$ 1,672	\$ 1.17
	0.25 - 0.5	\$ 267,909	\$ 2,053	\$ 126,919	\$ 1,253	\$ 1.57	\$ 620	\$ 0.43
Acreage Sizes	0.5 - 1	\$ 253,513	\$ 1,579	\$ 162,326	\$ 780	\$ 0.98	\$ 146	\$ 0.10
	> 1	\$ 1,440,764	\$ 1,550	\$ 682,730	\$ 750	\$ 0.94	\$ 117	\$ 0.08
Undeveloped		\$ 1,037,180	\$ 196	\$ 88,457	\$ (604)	\$ (0.75)	\$ (676)	\$ (0.78)

This chart summarizes how the parcels in different land use categories and lot sizes perform for current budget conditions.

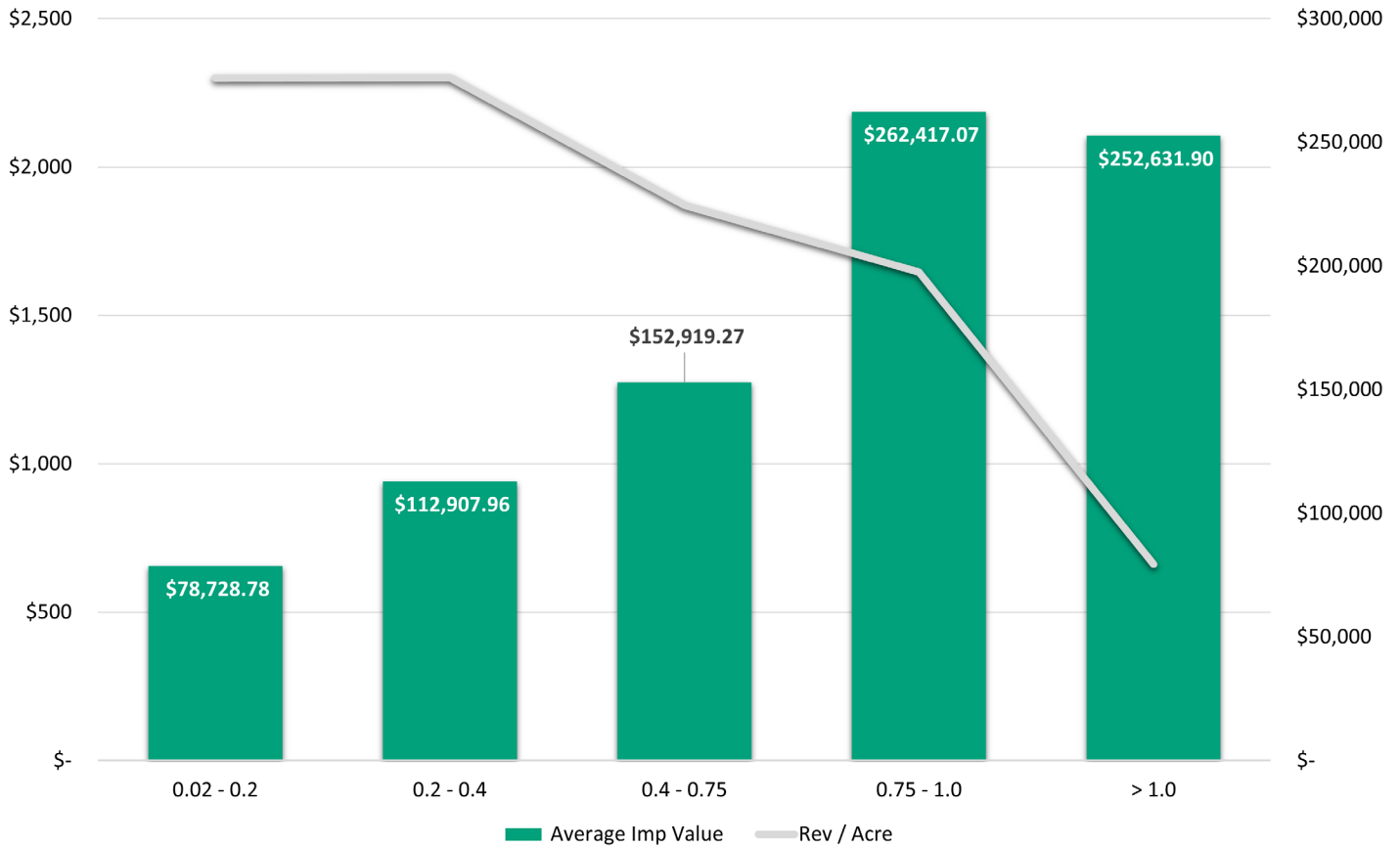
Analysis Summary: Zoning

Land Use Description	Acreage	Revenue		Average Imp Value		Current Budget:		Current Budget:		Budget + St Costs:		Budget + St Costs:	
		Rev / Acre	Net / Acre	Value	Net / Acre	ROI	ROI	Net / Acre	ROI	Net / Acre	ROI		
Single Family 1 (SF)	All	\$ 3,425,443	\$ 1,661	\$ 132,855	\$ 862	\$ 1.08	\$ 229	\$ 0.16					
Acreage Sizes	0.02 - 0.2	\$ 204,825	\$ 2,300	\$ 78,729	\$ 1,501	\$ 1.88	\$ 868	\$ 0.61					
	0.2 - 0.4	\$ 1,554,856	\$ 2,301	\$ 112,908	\$ 1,502	\$ 1.88	\$ 868	\$ 0.61					
	0.4 - 0.75	\$ 973,477	\$ 1,871	\$ 152,919	\$ 1,072	\$ 1.34	\$ 438	\$ 0.31					
	0.75 - 1.0	\$ 298,515	\$ 1,647	\$ 262,417	\$ 848	\$ 1.06	\$ 214	\$ 0.15					
	> 1.0	\$ 393,770	\$ 661	\$ 252,632	\$ (138)	\$ (0.17)	\$ (771)	\$ (0.54)					
Two Family (TF)	All	\$ 345,278	\$ 627	\$ 40,739	\$ (173)	\$ (0.22)	\$ (806)	\$ (0.56)					
Acreage Sizes	0.02 - 0.2	\$ 82,696	\$ 1,051	\$ 26,162	\$ 251	\$ 0.31	\$ (382)	\$ (0.27)					
	0.2 - 0.4	\$ 145,054	\$ 985	\$ 45,201	\$ 186	\$ 0.23	\$ (447)	\$ (0.31)					
	0.4 - 0.75	\$ 60,528	\$ 641	\$ 54,128	\$ (158)	\$ (0.20)	\$ (791)	\$ (0.55)					
	0.75 - 1.0	\$ 11,009	\$ 367	\$ 47,577	\$ (432)	\$ (0.54)	\$ (1,066)	\$ (0.74)					
	> 1.0	\$ 45,990	\$ 229	\$ 90,870	\$ (570)	\$ (0.71)	\$ (1,204)	\$ (0.84)					
Planned Development (PD)	All	\$ 579,162	\$ 4,132	\$ 189,797	\$ 3,333	\$ 4.17	\$ 2,699	\$ 1.88					
Acreage Sizes	0.02 - 0.2	\$ 345,137	\$ 7,364	\$ 162,028	\$ 6,565	\$ 8.21	\$ 5,931	\$ 4.14					
	0.2 - 0.4	\$ 126,016	\$ 3,552	\$ 162,129	\$ 2,753	\$ 3.44	\$ 2,119	\$ 1.48					
	0.4 - 0.75	\$ 37,949	\$ 2,628	\$ 239,266	\$ 1,829	\$ 2.29	\$ 1,196	\$ 0.83					
	0.75 - 1.0	\$ 14,069	\$ 2,318	\$ 863,341	\$ 1,519	\$ 1.90	\$ 886	\$ 0.62					
	> 1.0	\$ 55,991	\$ 1,501	\$ 594,451	\$ 702	\$ 0.88	\$ 68	\$ 0.05					
Multifamily (MF)	All	\$ 684,783	\$ 1,311	\$ 170,593	\$ 512	\$ 0.64	\$ (122)	\$ (0.09)					
Acreage Sizes	0.02 - 0.2	\$ 78,438	\$ 2,024	\$ 48,201	\$ 1,225	\$ 1.53	\$ 591	\$ 0.41					
	0.2 - 0.4	\$ 174,104	\$ 1,545	\$ 101,696	\$ 746	\$ 0.93	\$ 113	\$ 0.08					
	0.4 - 0.75	\$ 77,078	\$ 1,059	\$ 144,984	\$ 260	\$ 0.33	\$ (374)	\$ (0.26)					
	0.75 - 1.0	\$ 13,019	\$ 534	\$ 71,735	\$ (265)	\$ (0.33)	\$ (899)	\$ (0.63)					
	> 1.0	\$ 342,145	\$ 1,249	\$ 884,592	\$ 450	\$ 0.56	\$ (184)	\$ (0.13)					
Local Business (LB)	All	\$ 48,030	\$ 1,421	\$ 85,626	\$ 622	\$ 0.78	\$ (11)	\$ (0.01)					
Acreage Sizes	<= .25	\$ 30,975	\$ 2,541	\$ 78,882	\$ 1,742	\$ 2.18	\$ 1,109	\$ 0.77					
	0.25 - 0.5	\$ 10,699	\$ 2,061	\$ 119,469	\$ 1,262	\$ 1.58	\$ 629	\$ 0.44					
	0.5 - 1	\$ 1,106	\$ 402	\$ 38,118	\$ (397)	\$ (0.50)	\$ (1,030)	\$ (0.72)					
	> 1	\$ 5,250	\$ 384	\$ 139,408	\$ (415)	\$ (0.52)	\$ (1,049)	\$ (0.73)					
	All	\$ 2,071,030	\$ 1,657	\$ 265,785	\$ 858	\$ 1.07	\$ 224	\$ 0.16					
General Business (GB)	All	\$ 155,000	\$ 2,579	\$ 128,814	\$ 1,780	\$ 2.23	\$ 1,146	\$ 0.80					
Acreage Sizes	<= .25	\$ 238,367	\$ 1,954	\$ 122,818	\$ 1,155	\$ 1.45	\$ 522	\$ 0.36					
	0.25 - 0.5	\$ 242,150	\$ 1,585	\$ 162,776	\$ 786	\$ 0.98	\$ 152	\$ 0.11					
	> 1	\$ 1,435,514	\$ 1,569	\$ 691,336	\$ 770	\$ 0.96	\$ 136	\$ 0.10					

Analysis Summary: Zoning

Land Use Description	Acreage	Revenue	Rev / Acre	Average Imp Value	Current Budget: Net / Acre	Current Budget: ROI	Budget + St Costs: Net / Acre	Budget + St Costs: ROI
Central Business (CB)	All	\$ 93,034	\$ 5,230	\$ 133,848	\$ 4,431	\$ 5.55	\$ 3,797	\$ 2.65
	<= .25	\$ 63,934	\$ 7,787	\$ 106,270	\$ 6,989	\$ 8.75	\$ 6,355	\$ 4.44
Acreage Sizes	0.25 - 0.5	\$ 18,843	\$ 5,591	\$ 293,360	\$ 4,793	\$ 6.01	\$ 4,160	\$ 2.91
	0.5 - 1	\$ 10,257	\$ 2,027	\$ 212,218	\$ 1,227	\$ 1.53	\$ 593	\$ 0.41
	> 1	\$ -	\$ -	\$ 360,250	\$ (799)	\$ (1.00)	\$ (1,432)	\$ (1.00)
Light Industrial (LI)	All	\$ 96,071	\$ 227	\$ 405,599	\$ (573)	\$ (0.72)	\$ (1,206)	\$ (0.84)
	<= .25	\$ 251	\$ 865	\$ 16,295	\$ 59	\$ 0.07	\$ (581)	\$ (0.40)
Acreage Sizes	0.25 - 0.5	\$ 7,924	\$ 1,240	\$ 496,659	\$ 441	\$ 0.55	\$ (192)	\$ (0.13)
	0.5 - 1	\$ 10,186	\$ 1,562	\$ 319,120	\$ 763	\$ 0.96	\$ 130	\$ 0.09
	> 1	\$ 77,711	\$ 189	\$ 415,958	\$ (610)	\$ (0.76)	\$ (1,244)	\$ (0.87)
Heavy Industrial (HI)	All	\$ 69,073	\$ 413	\$ 211,416	\$ (386)	\$ (0.48)	\$ (1,020)	\$ (0.71)
	<= .25	\$ 1,483	\$ 1,267	\$ 34,404	\$ 470	\$ 0.59	\$ (163)	\$ (0.11)
Acreage Sizes	0.25 - 0.5	\$ 5,491	\$ 1,639	\$ 146,043	\$ 839	\$ 1.05	\$ 205	\$ 0.14
	0.5 - 1	\$ 996	\$ 417	\$ 28,977	\$ (384)	\$ (0.48)	\$ (1,018)	\$ (0.71)
	> 1	\$ 61,104	\$ 381	\$ 295,558	\$ (418)	\$ (0.52)	\$ (1,051)	\$ (0.73)
Medical (MED)	All	\$ 64,366	\$ 3,836	\$ 260,574	\$ 3,036	\$ 3.80	\$ 2,402	\$ 1.68
	<= .25	\$ 13,660	\$ 2,931	\$ 92,753	\$ 2,132	\$ 2.67	\$ 1,498	\$ 1.04
Acreage Sizes	0.25 - 0.5	\$ 19,729	\$ 3,647	\$ 238,195	\$ 2,848	\$ 3.56	\$ 2,214	\$ 1.55
	0.5 - 1	\$ 23,233	\$ 4,255	\$ 686,988	\$ 3,455	\$ 4.32	\$ 2,821	\$ 1.97
	> 1	\$ 7,744	\$ 6,195	\$ 1,144,250	\$ 5,395	\$ 6.75	\$ 4,761	\$ 3.32
Agricultural (AG)	All	\$ 48,272	\$ 204	\$ 89,801	\$ (595)	\$ (0.74)	\$ (1,228)	\$ (0.86)
	<= .25	\$ 2,406	\$ 2,207	\$ 86,721	\$ 1,408	\$ 1.76	\$ 775	\$ 0.54
Acreage Sizes	0.25 - 0.5	\$ 10,322	\$ 1,516	\$ 124,154	\$ 716	\$ 0.90	\$ 82	\$ 0.06
	0.5 - 1	\$ 8,214	\$ 661	\$ 82,507	\$ (138)	\$ (0.17)	\$ (772)	\$ (0.54)
	> 1	\$ 27,330	\$ 127	\$ 78,890	\$ (673)	\$ (0.84)	\$ (1,306)	\$ (0.91)
OUTSIDE	All	\$ 1,095	\$ 440	\$ 169,280	\$ (360)	\$ (0.45)	\$ (994)	\$ (0.69)
	<= .25	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Acreage Sizes	0.25 - 0.5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	0.5 - 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	> 1	\$ 1,095	\$ 440	\$ 169,280	\$ (360)	\$ (0.45)	\$ (994)	\$ (0.69)
Undeveloped		\$ 1,037,180	\$ 196	\$ 88,457	\$ (604)	\$ (0.75)	\$ (676)	\$ (0.78)

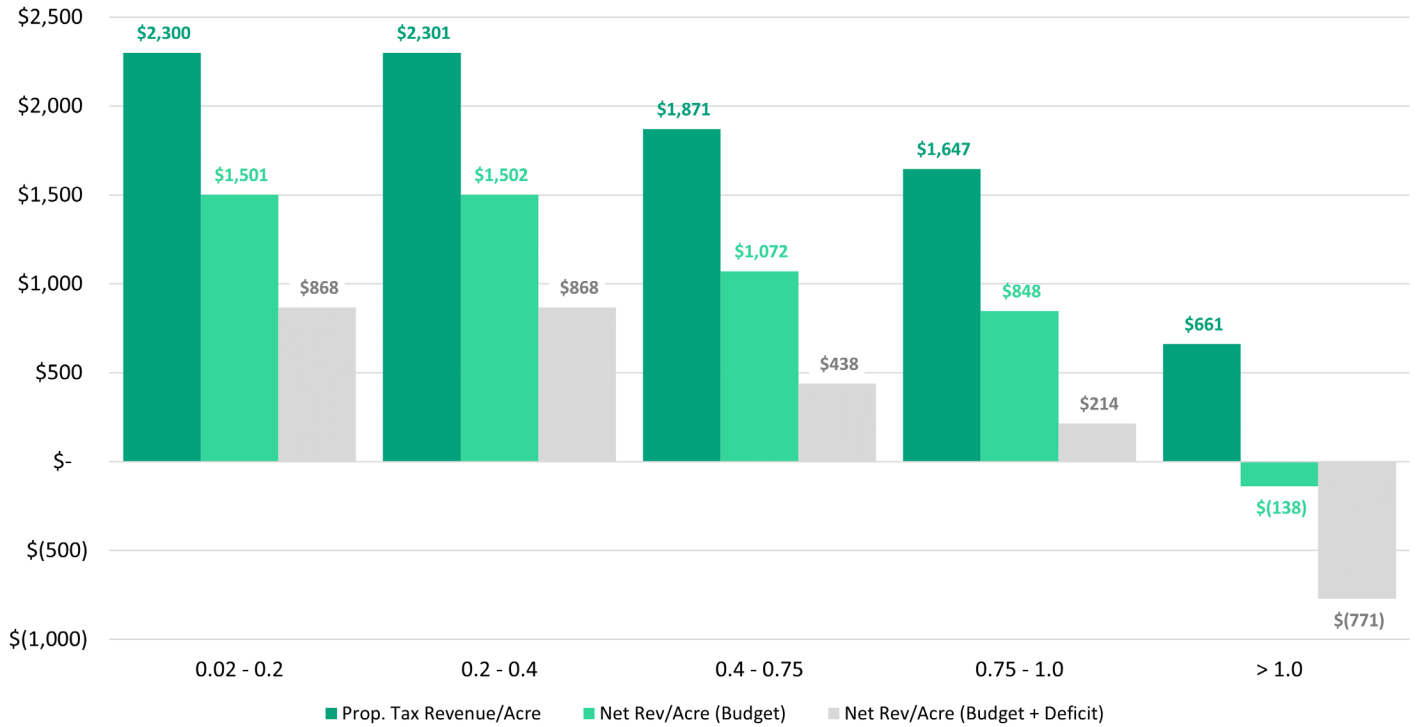
Single Family: Revenue/Acre by Lot Size



This chart illustrates that as lot sizes (and improvement values) go up, the property tax revenue per acre declines. This trend is true in every city we've modeled. If a city is looking to maximize property tax revenue per acre, the most effective strategy to implement would be to prioritize smaller lots. This is a very powerful chart when having conversations about the tradeoffs of lot sizes, service costs, and tax rates.

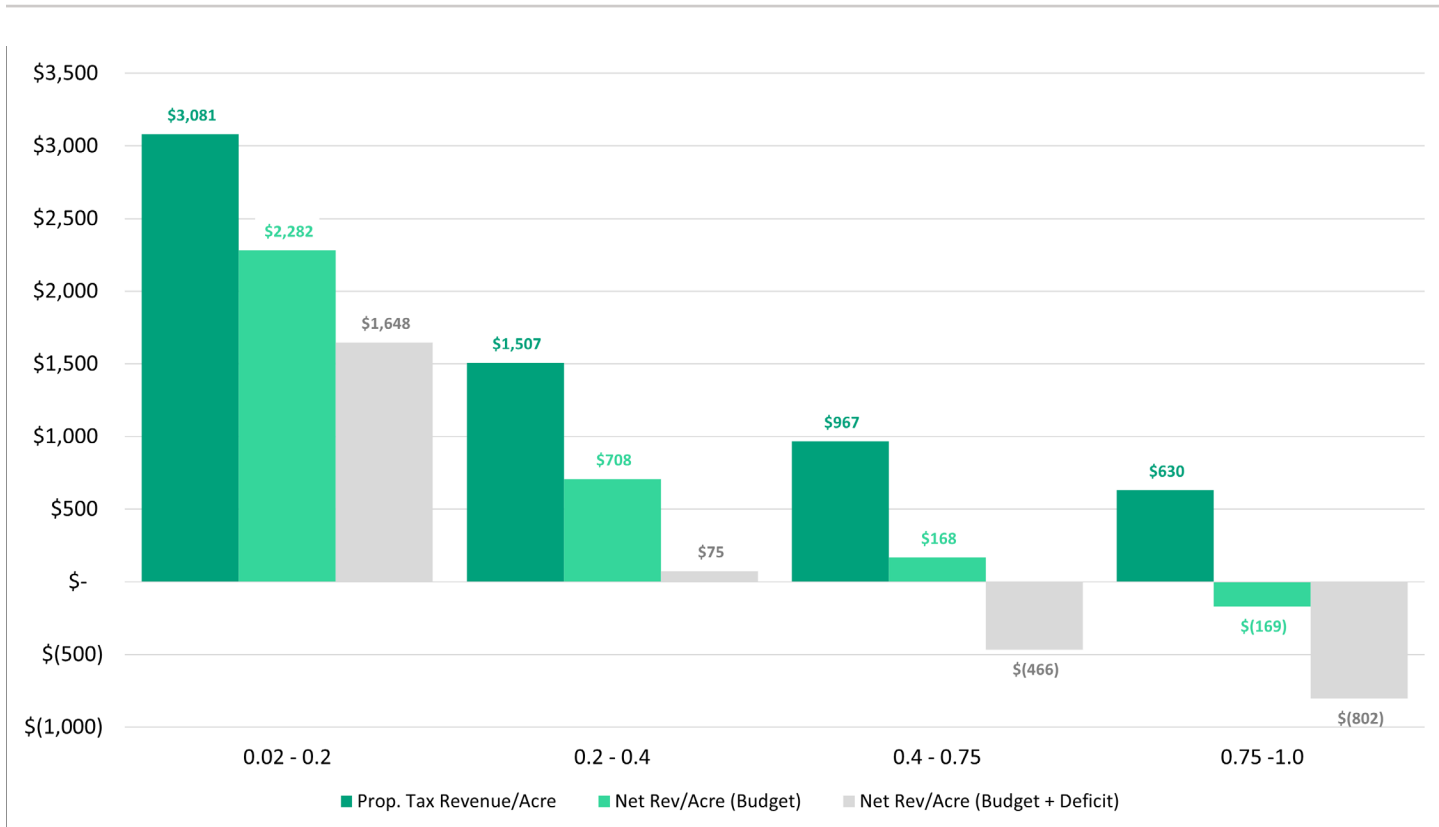
Land Use Description	Acreage	Rev / Acre	Average Imp Value
Single Family	All	\$ 1,661	\$ 132,855
	0.02 - 0.2	\$ 2,300	\$ 78,729
	0.2 - 0.4	\$ 2,301	\$ 112,908
Acreage Sizes	0.4 - 0.75	\$ 1,871	\$ 152,919
	0.75 - 1.0	\$ 1,647	\$ 262,417
	> 1.0	\$ 661	\$ 252,632

Single Family: Levy/Acre and Net/Acre by Lot Size



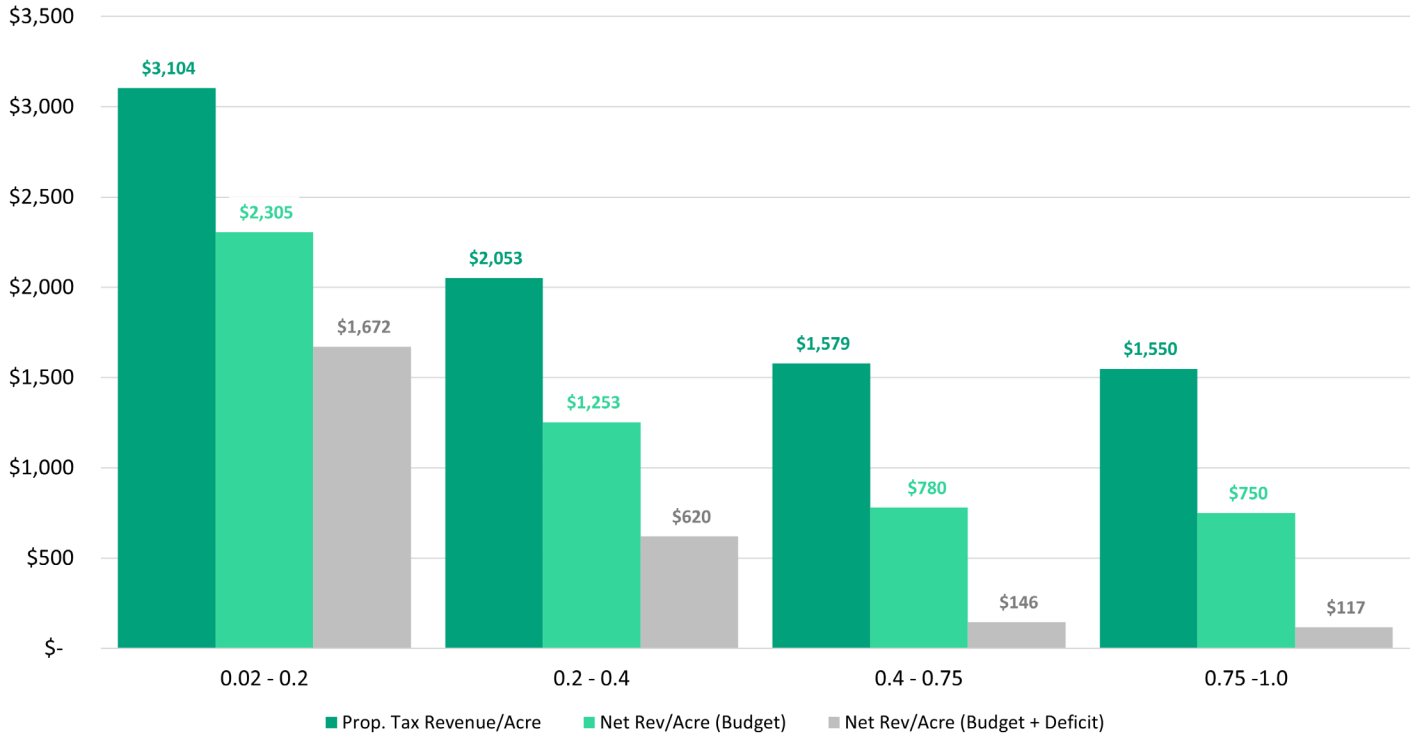
This plot shows the relationship between single family parcel size and fiscal performance in the property tax revenue/acre and net revenue/acre values. The trend that smaller lots typically perform much better than larger properties can be seen clearly here.

Multifamily: Levy/Acre and Net/Acre by Lot Size



This plot shows the relationship between multifamily parcel size and fiscal performance in the property tax revenue/acre and net revenue/acre values. Multifamily shows the same trend of smaller lots being more productive.

Commercial: Levy/Acre and Net/Acre by Lot Size

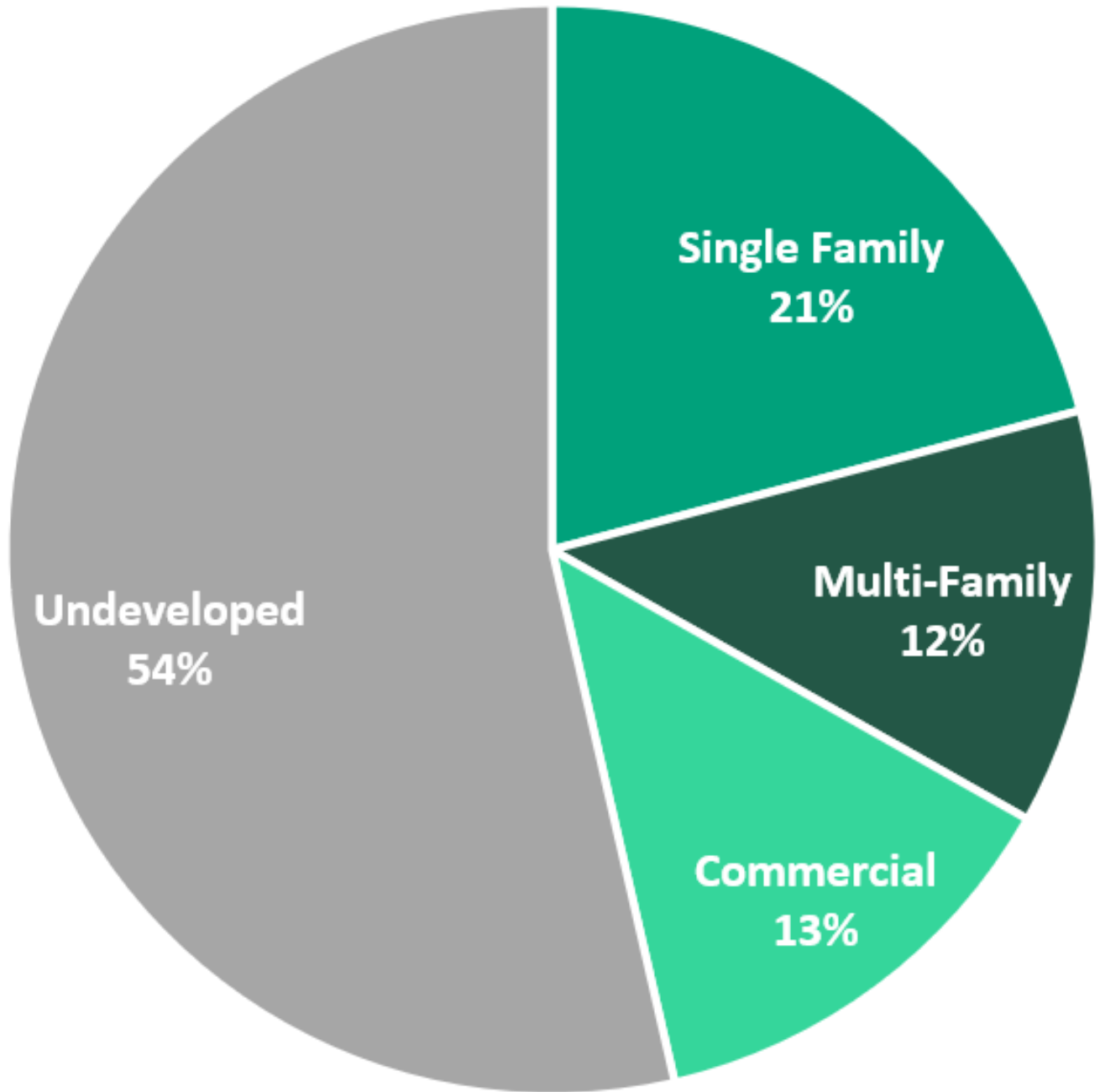


This plot shows the relationship between commercial parcel size and fiscal performance in the property tax revenue/acre and net revenue/acre values. As with single family and multifamily, the trend that smaller lots typically perform better than larger properties is also showing up for commercial properties.

Land Use Distribution (Acreage)

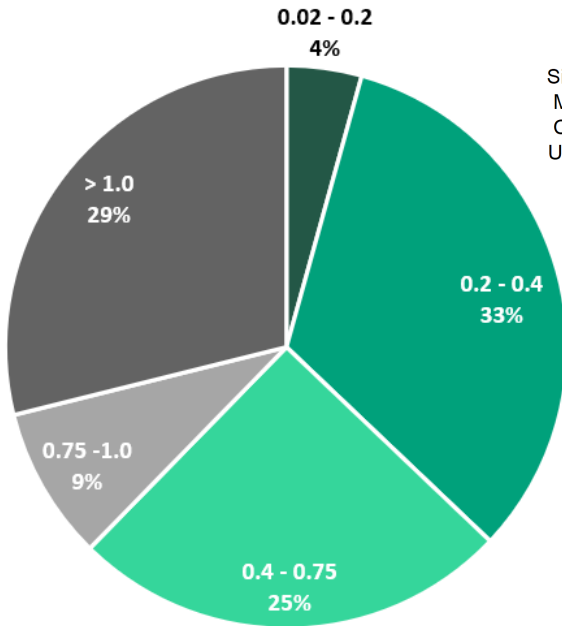
This chart shows the city's developable land (excludes exempt parcels and floodplain area). The area is reasonably split between single family residential, commercial, and multifamily. 54% of the city's land area has yet to be developed.

	% of Revenue
Single Family	41%
Multi-Family	19%
Commercial	27%
Undeveloped	13%

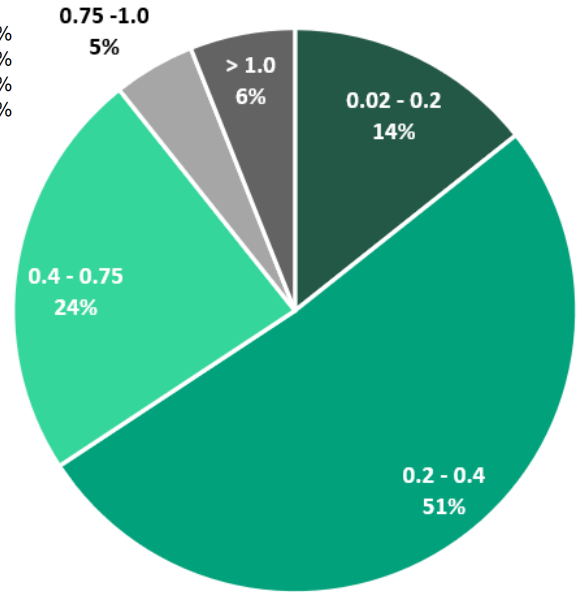


Land Use Distribution: Single Family

SF Footprint (Acreage)



SF Volume (# of Parcel Breakdown)



% of Revenue
 Single Family 41%
 Multi-Family 19%
 Commercial 27%
 Undeveloped 13%

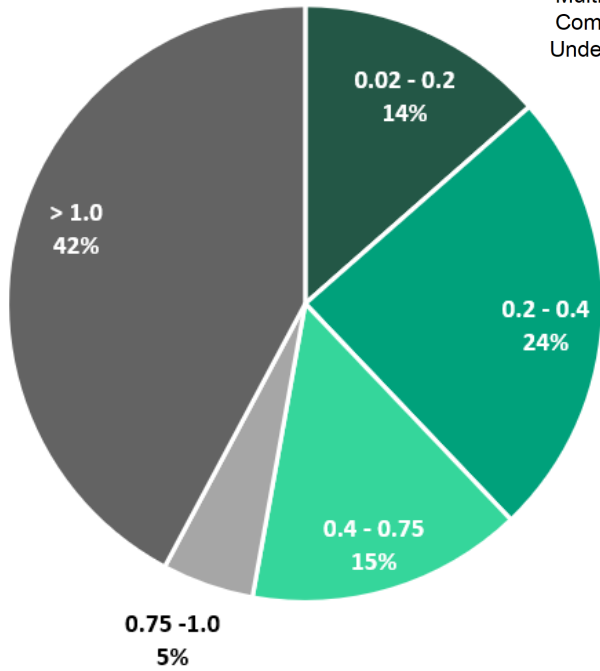
Land Use Description	Acreage	Revenue	Rev / Acre	Average Imp Value	Current Budget: Net / Acre	Current Budget: ROI	Budget + St Costs: Net / Acre	Budget + St Costs: ROI
Single Family	All	\$ 3,425,443	\$ 1,661	\$ 132,855	\$ 862	\$ 1.08	\$ 229	\$ 0.16
	0.02 - 0.2	\$ 204,825	\$ 2,300	\$ 78,729	\$ 1,501	\$ 1.88	\$ 868	\$ 0.61
Acreage Sizes	0.2 - 0.4	\$ 1,554,856	\$ 2,301	\$ 112,908	\$ 1,502	\$ 1.88	\$ 868	\$ 0.61
	0.4 - 0.75	\$ 973,477	\$ 1,871	\$ 152,919	\$ 1,072	\$ 1.34	\$ 438	\$ 0.31
	0.75 - 1.0	\$ 298,515	\$ 1,647	\$ 262,417	\$ 848	\$ 1.06	\$ 214	\$ 0.15
	> 1.0	\$ 393,770	\$ 661	\$ 252,632	\$ (138)	\$ (0.17)	\$ (771)	\$ (0.54)

These charts show a further breakdown of the 21% of the city's land area dedicated to single family residential. The chart on the left (footprint) shows the percentage of the city's single family area for each parcel size. The chart on the right (volume) shows the percentage of the single family parcels for each parcel size. The city's most financially productive single family parcel size is the 0.2-0.4 acre category. 33% of the city's single family acreage and 51% of the single family parcels are dedicated to this category. 29% of the city's land area and 6% of the parcels are in the over 1 acre category, which is the the least fiscally productive category.

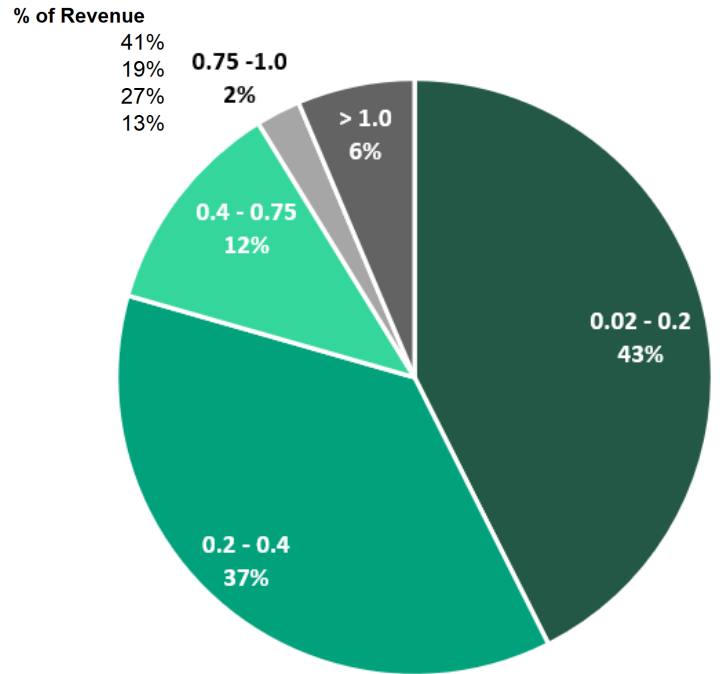
Also note that the average building improvement value for the smaller lot sizes is much lower (affordable) than the value of buildings on the >1 acre parcels. This is a win-win for the city and residents, as it provides more affordable housing options while also generating more value per acre to the city.

Land Use Distribution: Multifamily

MF Footprint (Acreage)



MF Volume (# of Parcel Breakdown)



Single Family
Multi-Family
Commercial
Undeveloped

% of Revenue

41%
19%
27%
13%

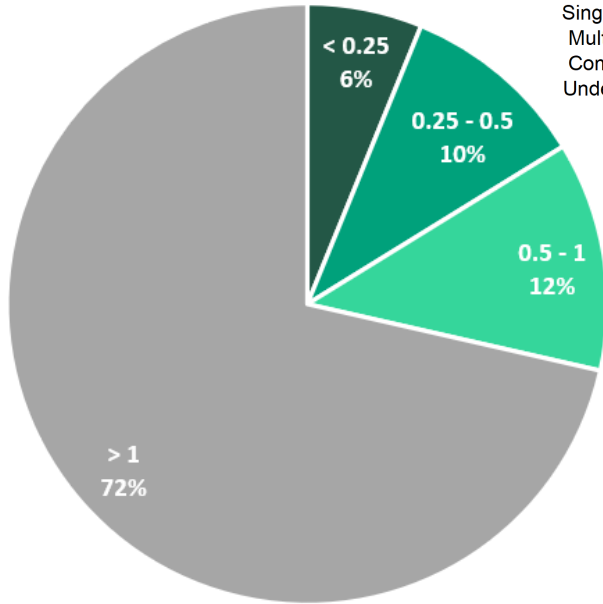
Land Use Description	Acreage	Revenue	Rev / Acre	Average Imp Value	Current Budget: Net / Acre	Current Budget: ROI	Budget + St Costs: Net / Acre	Budget + St Costs: ROI
Multifamily	All	\$ 1,609,223	\$ 1,326	\$ 112,358	\$ 527	\$ 0.66	\$ (107)	\$ (0.07)
Acreage Sizes	0.02 - 0.2	\$ 506,271	\$ 3,081	\$ 72,266	\$ 2,282	\$ 2.85	\$ 1,648	\$ 1.15
	0.2 - 0.4	\$ 445,175	\$ 1,507	\$ 80,996	\$ 708	\$ 0.89	\$ 75	\$ 0.05
	0.4 - 0.75	\$ 175,555	\$ 967	\$ 105,033	\$ 168	\$ 0.21	\$ (466)	\$ (0.33)
	0.75 - 1.0	\$ 38,097	\$ 630	\$ 138,816	\$ (169)	\$ (0.21)	\$ (802)	\$ (0.56)
	> 1.0	\$ 444,126	\$ 868	\$ 565,613	\$ 68	\$ 0.09	\$ (565)	\$ (0.39)

These charts show a further breakdown of the multifamily land use distribution. The chart on the left (footprint) shows the percentage of the city's multifamily area for each parcel size. The chart on the right (volume) shows the percentage of the multifamily parcels for each parcel size.

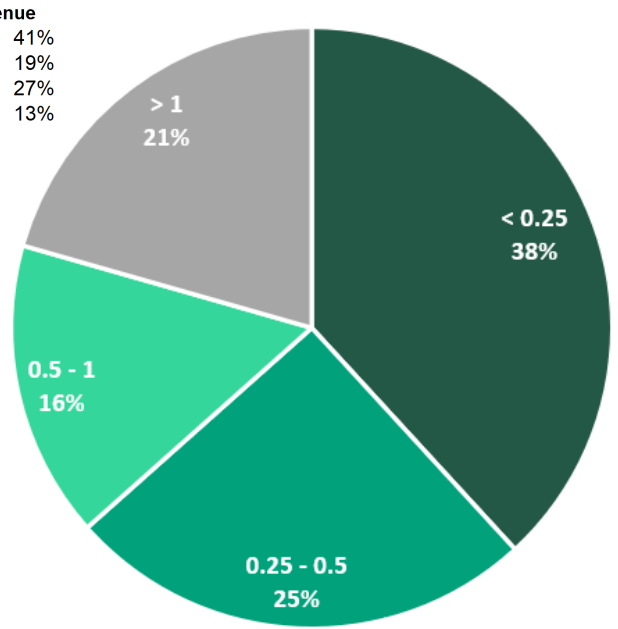
The city's most financially productive multifamily parcel size is the <0.2 acre category. 12% of the city's multifamily acreage and 14% of the multifamily parcels are dedicated to this category. Also note that the average building improvement value for the smaller lot sizes is much lower (affordable) than the value of buildings on the >1 acre parcels. This is a win-win for the city and residents, as it provides more affordable housing options while also generating more value per acre to the city.

Land Use Distribution: Commercial

Comm Footprint (Acreage)



Comm Volume (# of Parcel Breakdown)



% of Revenue
 Single Family 41%
 Multi-Family 19%
 Commercial 27%
 Undeveloped 13%

Land Use Description	Acreage	Revenue	Rev / Acre	Average Imp Value	Current Budget: Net / Acre	Current Budget: ROI	Budget + St Costs: Net / Acre	Budget + St Costs: ROI
Commercial	All	\$ 2,212,094	\$ 1,700	\$ 243,662	\$ 901	\$ 1.13	\$ 267	\$ 0.19
	<= .25	\$ 249,909	\$ 3,104	\$ 118,182	\$ 2,305	\$ 2.89	\$ 1,672	\$ 1.17
Acreage Sizes	0.25 - 0.5	\$ 267,909	\$ 2,053	\$ 126,919	\$ 1,253	\$ 1.57	\$ 620	\$ 0.43
	0.5 - 1	\$ 253,513	\$ 1,579	\$ 162,326	\$ 780	\$ 0.98	\$ 146	\$ 0.10
	> 1	\$ 1,440,764	\$ 1,550	\$ 682,730	\$ 750	\$ 0.94	\$ 117	\$ 0.08

These charts show a further breakdown of the commercial land use distribution. The chart on the left (footprint) shows the percentage of the city's commercial area for each parcel size. The chart on the right (volume) shows the percentage of the commercial parcels for each parcel size.

The city's most financially productive commercial parcel size is the <0.25 acre category. 13% of the city's commercial acreage and 5% of the commercial parcels are dedicated to this category. 72% of the city's commercial area and 21% of the commercial parcels are in the >1 acre category, which is the least fiscally productive category. Also note that the average building improvement value for the smaller lot sizes is much lower (affordable) than the value of buildings on the >1 acre parcels.

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4.

SITE & CONTEXT COMPARISONS

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Comparing the Value of Development Patterns



Main Street Mixed-Use

Property Tax Revenue/Acre: **\$13,306**



Suburban Pad Site

Property Tax Revenue /Acre: **\$2,596**

It's also important to look at the context of the development, and not just the parcel or building. This example compares the revenue/acre generated by a mixed-use block in downtown to the performance of a typical suburban pad site.

Comparing the Value of Development Patterns



Traditional Grid Downtown (13.14 Acres)

Property Tax Revenue /Acre: \$6,942



Auto Oriented Big Box (27.10 Acres)

Property Tax Revenue /Acre: \$1,952

Taking it further, a stretch of downtown street is able to produce more than three times the revenue of a big box store while occupying less than half the footprint.

Comparing the Value of Development Patterns



Big Box - Walmart

Improvement Value: \$5,853,220
Assessed Value: \$8,617,360
Revenue: \$52,911
Area: 27.10 Acres
Revenue per Acre: \$1,952



Big Box - Kroger

Improvement Value: \$1,672,470
Assessed Value: \$2,923,550
Revenue: \$17,951
Area: 6.99 Acres
Revenue per Acre: \$2,570



300 Block of Main Street

Improvement Value: \$1,318,630
Assessed Value: \$1,659,210
Revenue: \$8,602
Area: 0.65 Acres
Revenue per Acre: \$13,306

This example shows how a block of Main Street mixed-use development compares to two "big box" retail sites.

Top 10 Locations (Net Revenue/Acre for Budget)

#	PID	Address	Net Rev/Acre (B+S)
1	22926	209 E Main St	\$38,176
2	75229	222 Parrott #111*	\$33,851
3	79207	123 E Main St	\$28,200
4	22868	511 E Main St	\$23,108
5	22903	305 E Main St	\$21,711
6	24187	2023 North St	\$19,821
7	22989	107 S Church St	\$19,556
8	22922	201 E Main St	\$19,427
9	79637	207 E Main St	\$19,215
10	22965	116 S Pecan St	\$18,322

The majority of the highest performing parcels are either small lots/buildings downtown along Main Street, multifamily units, and apartment complexes. The highlighted parcels on this slide show an overview of where the highest performing parcels are located in Nacogdoches. The following examples show additional information on the highest performing properties in the city as well as examples from the city's most prominent zoning district categories.

* All multifamily units in this development had similar numbers



High Producing Parcels

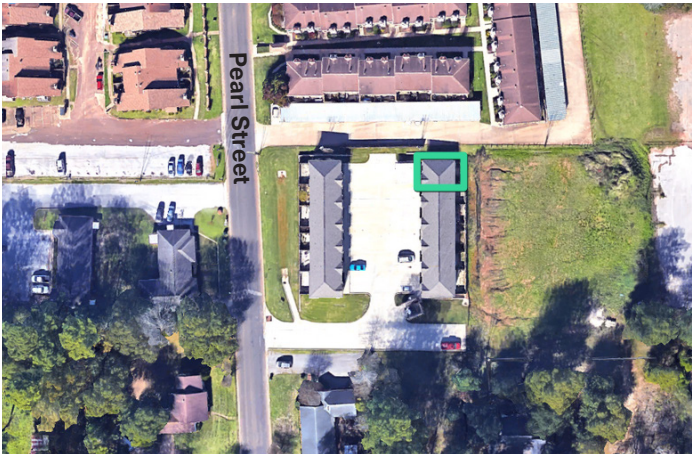


209 E Main Street

Acreage:	0.069
Levy:	\$2,743
Levy/Acre:	\$39,609/Acre
Net Rev/Acre (B):	\$38,807/Acre
Net Rev/Acre (B+S):	\$38,176/Acre



High Producing Parcels



222 Parrot Drive

Acreage:	0.019
Levy:	\$680
Levy/Acre:	\$36,376/Acre
Net Rev/Acre (B):	\$34,485/Acre
Net Rev/Acre (B+S):	\$33,851/Acre



Zoning Comparison: SF (Single Family)



305 Wettermark Street

Acreage: 0.12 Acres
Prop. Tax Rev: \$225
Prop. Tax Rev/Acre: \$1,888/Acre
Average Performance \$2,071/Acre



Zoning Comparison: MF (Multifamily)



1403 Garner Street

Acreage: 0.15
Prop. Tax Rev: \$334
Prop. Tax Rev/Acre: \$2,248/Acre
Average Performance \$1,699/Acre



Zoning Comparison: GB (General Business)



1315 North Street

Acreage: 1.23
Prop. Tax Rev: \$5,879
Prop. Tax Rev/Acre: \$4,785/Acre
Average Performance \$2,054/Acre

**Possibility this establishment has been permanently closed*



Zoning Comparison: LB (Local Business)



305 E College Street

Acreage: 0.10
Prop. Tax Rev: \$842
Prop. Tax Rev/Acre: \$8,380/Acre
Average Performance \$2,550/Acre



Zoning Comparison: CB (Central Business)

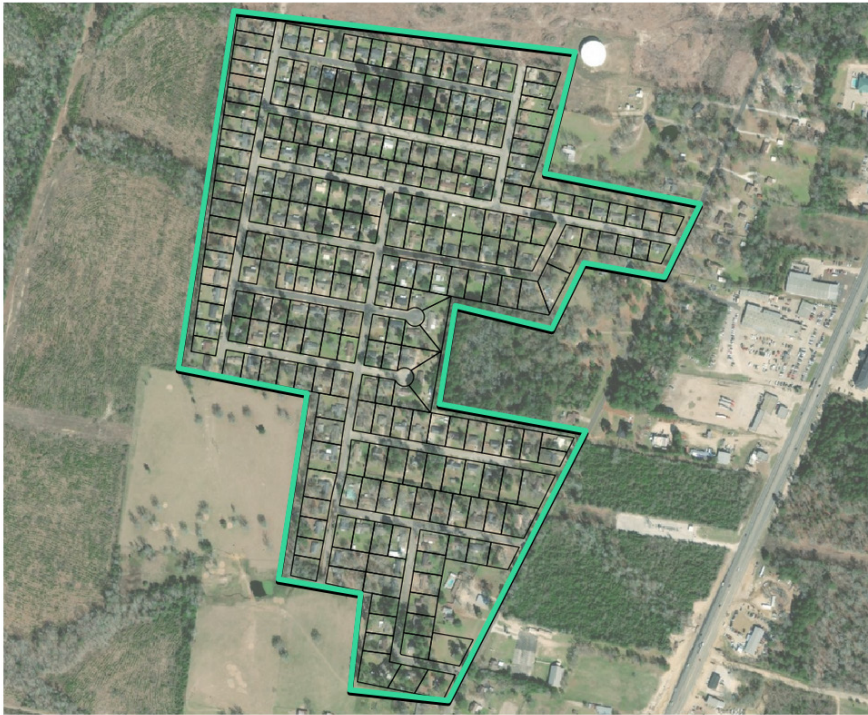


209 E Main Street

Acreage: 0.069
Prop. Tax Rev: \$2,743
Prop. Tax Rev/Acre: \$39,609/Acre
Average Performance \$7,621/Acre



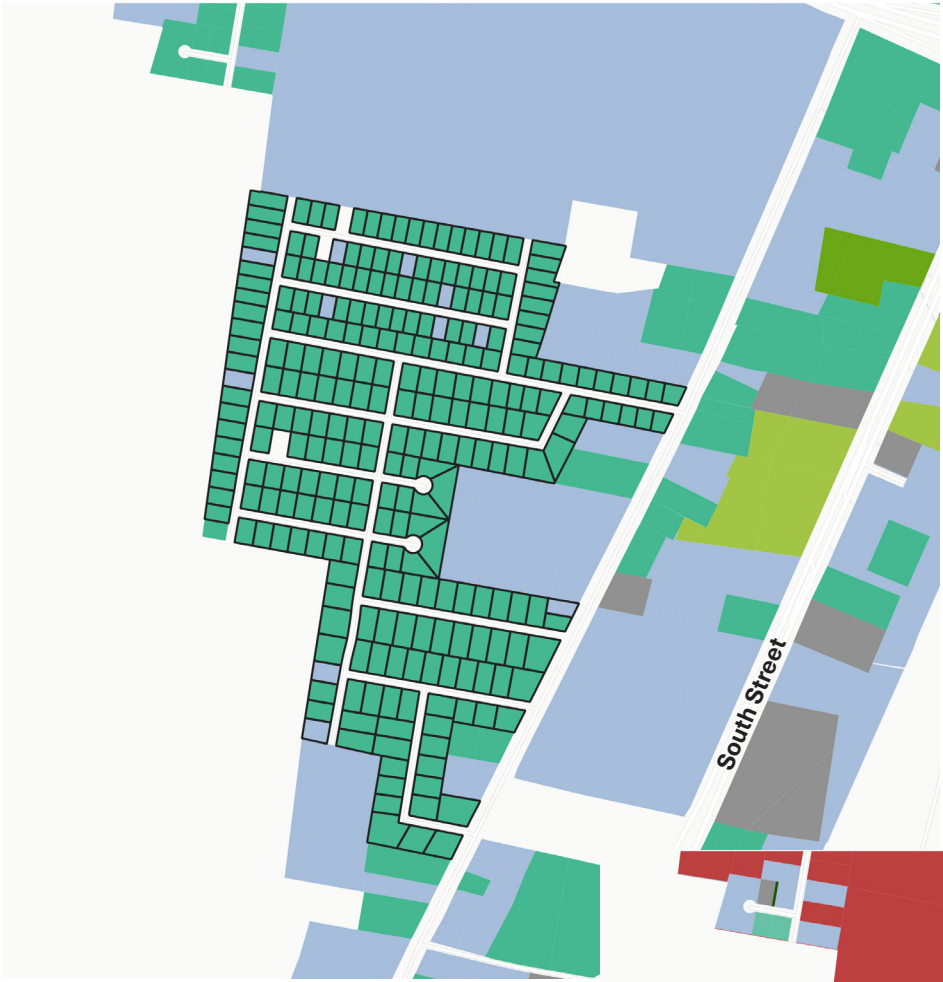
Neighborhood Comparison



Arbor Oaks

Avg. Lot Size:	0.30 Acres
Avg. Assessed Value:	\$110,835
Avg. Prop. Tax Revenue/Acre	\$2,168





Assessed Value

- \$ 0 - \$ 73,420
- \$ 73,421 - \$ 175,210
- \$ 175,211 - \$ 345,780
- \$ 345,781 - \$ 661,410
- \$ 661,411 - \$ 1,266,790
- \$ 1,266,791 - \$ 2,622,400
- \$ 2,622,401 - \$ 9,000,000
- \$ 9,000,001 - \$ 12,400,000

**Net Revenue
Per Acre (Costs)**

- \$ -1,500 - \$ 0
- \$ 1 - \$ 1,000
- \$ 1,001 - \$ 2,000
- \$ 2,001 - \$ 3,000
- \$ 3,001 - \$ 4,000
- \$ 4,001 - \$ 5,000
- \$ 5,001 - \$ 6,000
- \$ 6,001 - \$ 95,616

incorporates budget & unfunded infrastructure costs

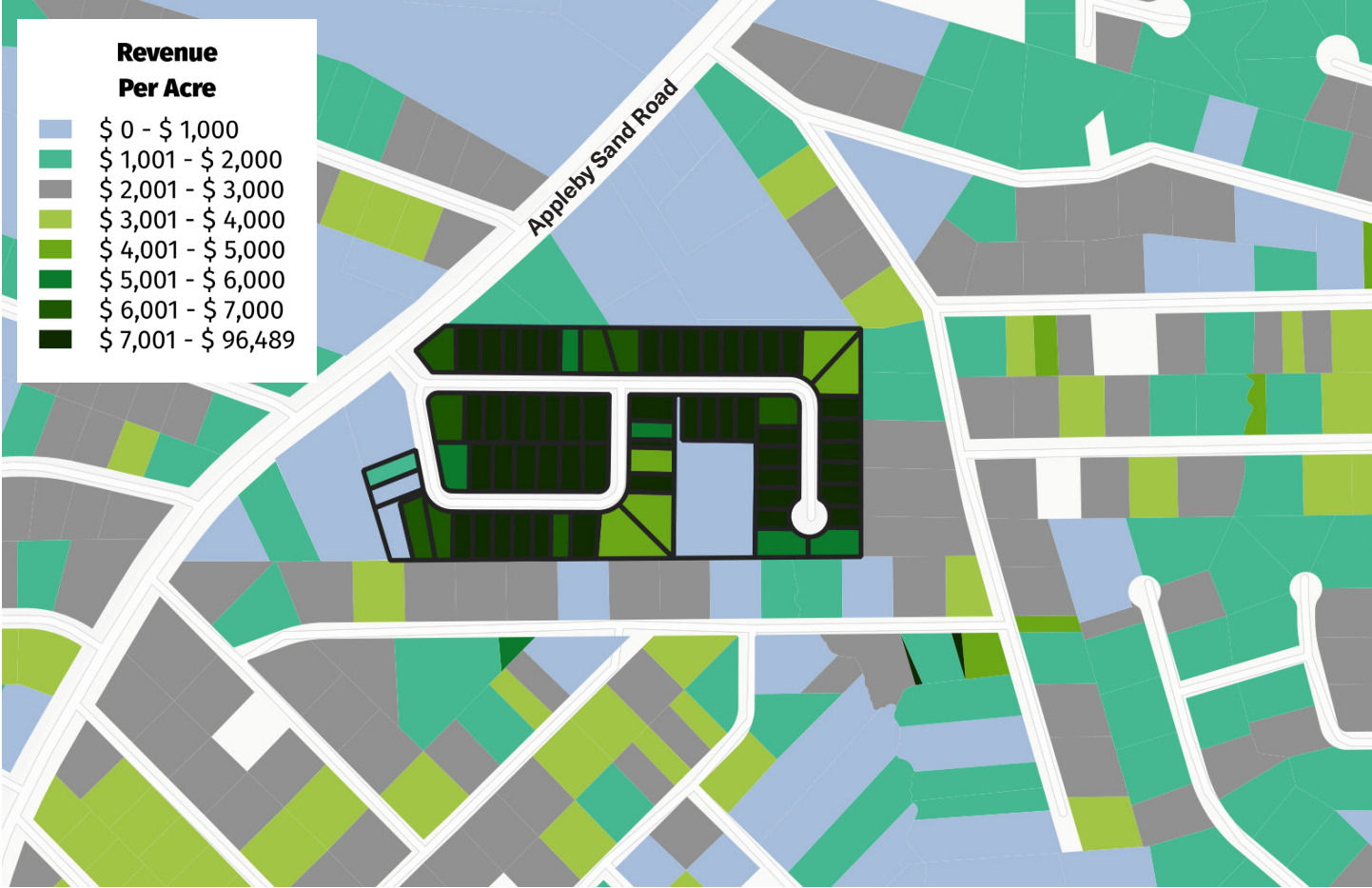


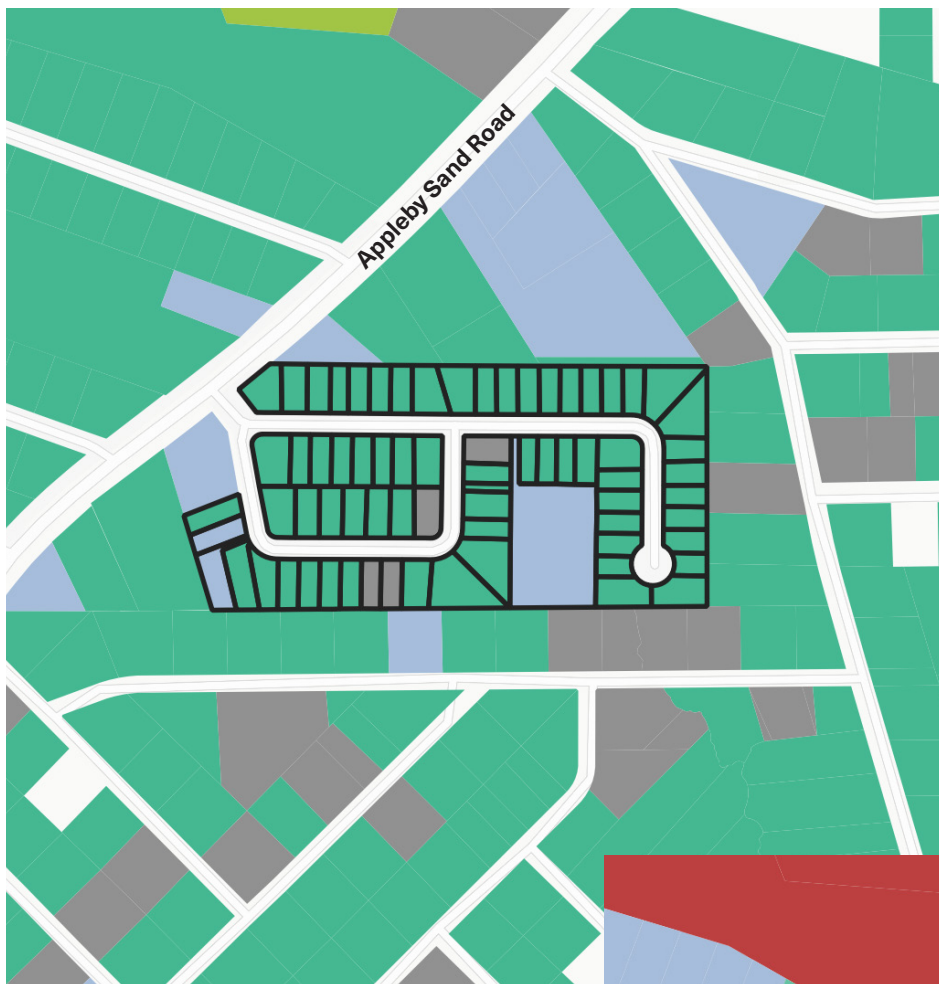
Neighborhood Comparison



Ashbury Court

Avg. Lot Size:	0.17 Acres
Avg. Assessed Value:	\$191,651
Avg. Prop. Tax Revenue/Acre	\$7,851





Assessed Value

- \$ 0 - \$ 73,420
- \$ 73,421 - \$ 175,210
- \$ 175,211 - \$ 345,780
- \$ 345,781 - \$ 661,410
- \$ 661,411 - \$ 1,266,790
- \$ 1,266,791 - \$ 2,622,400
- \$ 2,622,401 - \$ 9,000,000
- \$ 9,000,001 - \$ 12,400,000

**Net Revenue
Per Acre (Costs)**

- \$ -1,500 - \$ 0
- \$ 1 - \$ 1,000
- \$ 1,001 - \$ 2,000
- \$ 2,001 - \$ 3,000
- \$ 3,001 - \$ 4,000
- \$ 4,001 - \$ 5,000
- \$ 5,001 - \$ 6,000
- \$ 6,001 - \$ 95,616

*incorporates budget &
unfunded infrastructure costs*

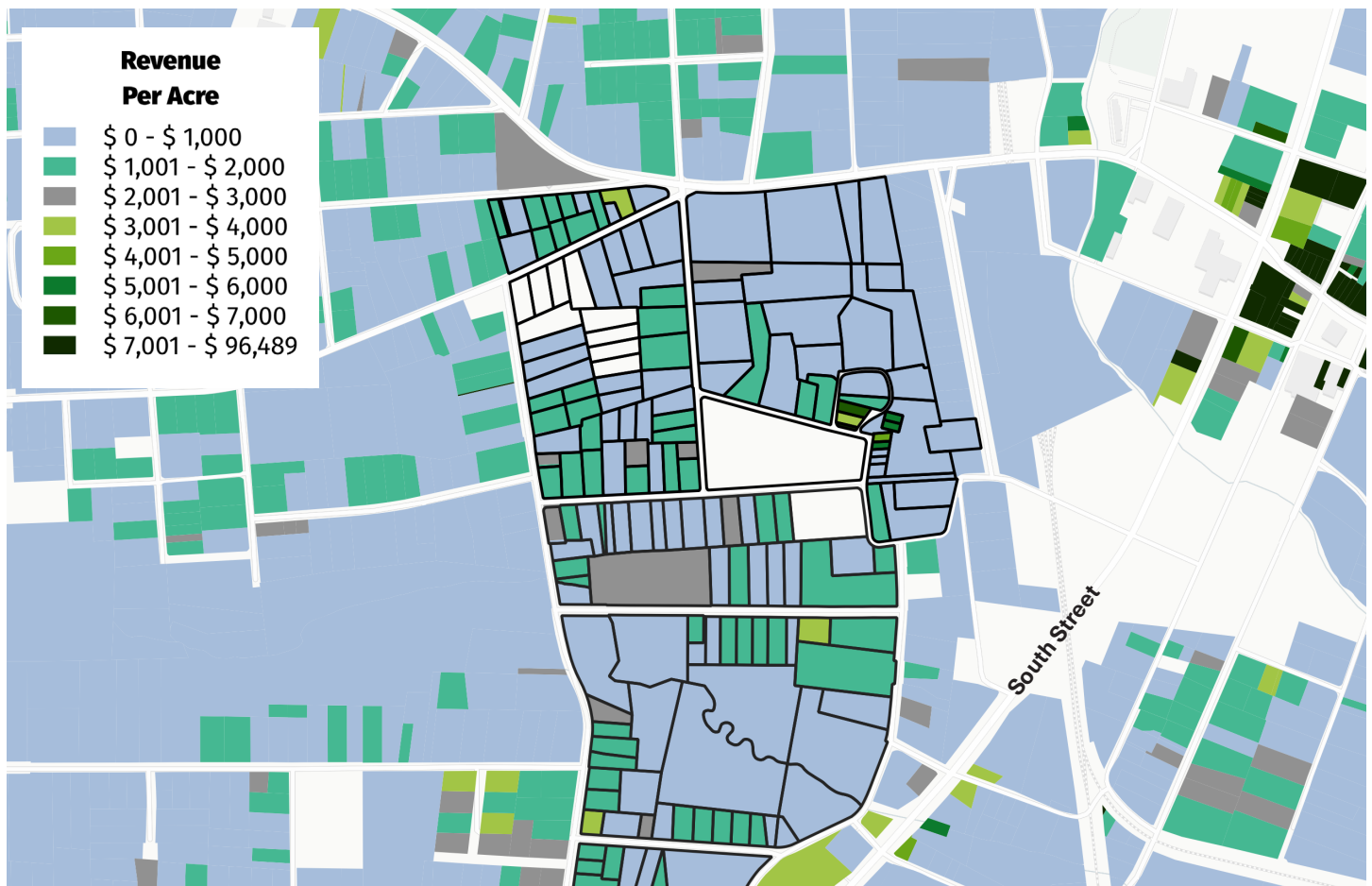


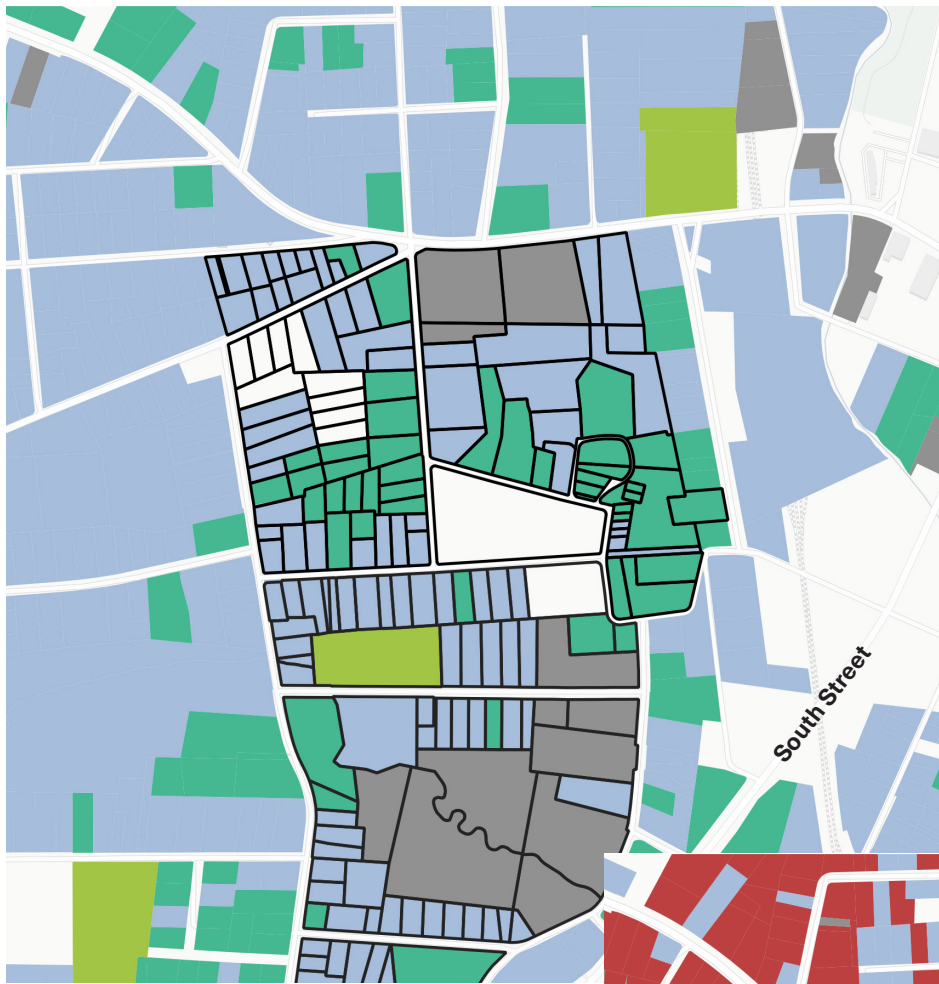
Neighborhood Comparison



Nettle Marshall Area

Avg. Lot Size:	0.44 Acres
Avg. Assessed Value:	\$85,939
Avg. Prop. Tax Revenue/Acre	\$1,332





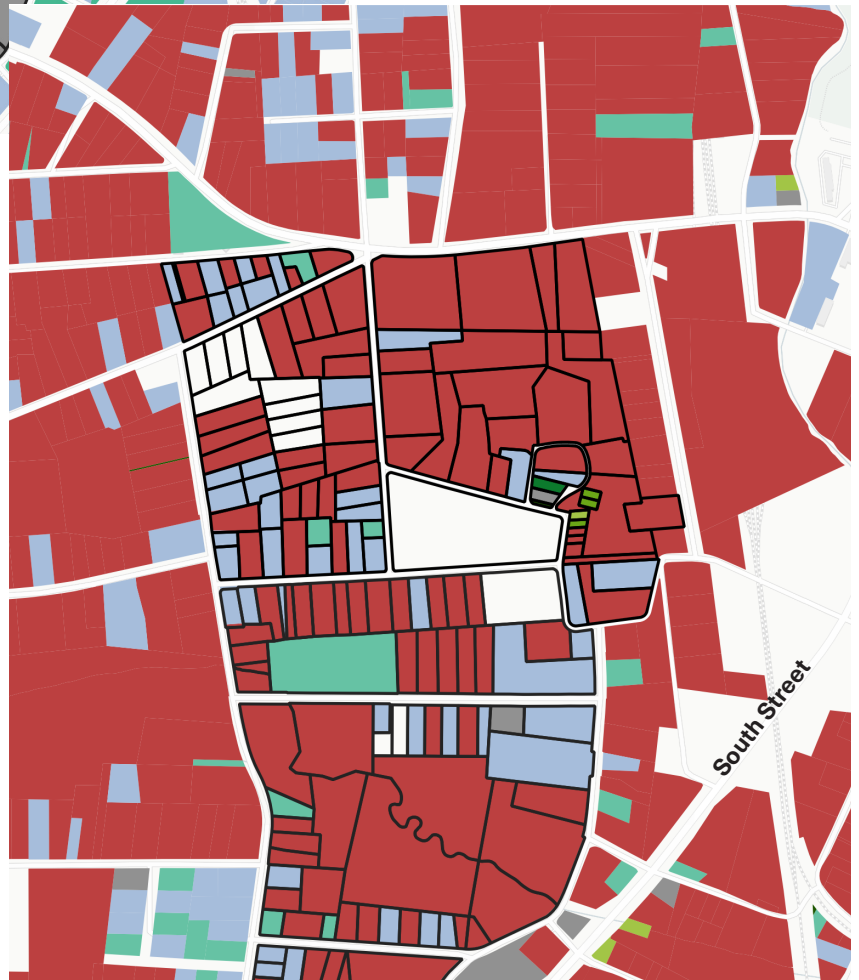
Assessed Value

- \$ 0 - \$ 73,420
- \$ 73,421 - \$ 175,210
- \$ 175,211 - \$ 345,780
- \$ 345,781 - \$ 661,410
- \$ 661,411 - \$ 1,266,790
- \$ 1,266,791 - \$ 2,622,400
- \$ 2,622,401 - \$ 9,000,000
- \$ 9,000,001 - \$ 12,400,000

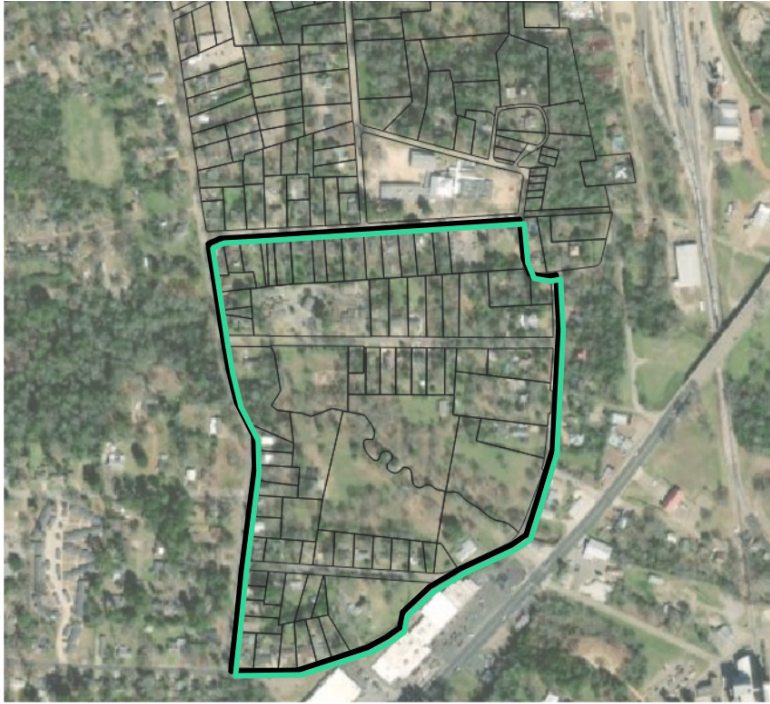
**Net Revenue
Per Acre (Costs)**

- \$ -1,500 - \$ 0
- \$ 1 - \$ 1,000
- \$ 1,001 - \$ 2,000
- \$ 2,001 - \$ 3,000
- \$ 3,001 - \$ 4,000
- \$ 4,001 - \$ 5,000
- \$ 5,001 - \$ 6,000
- \$ 6,001 - \$ 95,616

*incorporates budget &
unfunded infrastructure costs*



Neighborhood Comparison



Sunset & Harris

Avg. Lot Size:	0.55 Acres
Avg. Assessed Value:	\$100,801
Avg. Prop. Tax Revenue/Acre	\$1,116





Assessed Value

- \$ 0 - \$ 73,420
- \$ 73,421 - \$ 175,210
- \$ 175,211 - \$ 345,780
- \$ 345,781 - \$ 661,410
- \$ 661,411 - \$ 1,266,790
- \$ 1,266,791 - \$ 2,622,400
- \$ 2,622,401 - \$ 9,000,000
- \$ 9,000,001 - \$ 12,400,000

**Net Revenue
Per Acre (Costs)**

- \$ -1,500 - \$ 0
- \$ 1 - \$ 1,000
- \$ 1,001 - \$ 2,000
- \$ 2,001 - \$ 3,000
- \$ 3,001 - \$ 4,000
- \$ 4,001 - \$ 5,000
- \$ 5,001 - \$ 6,000
- \$ 6,001 - \$ 95,616

*incorporates budget &
unfunded infrastructure costs*



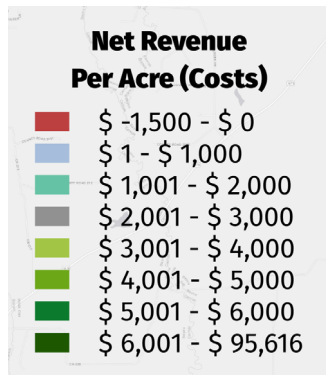
Neighborhood Comparison



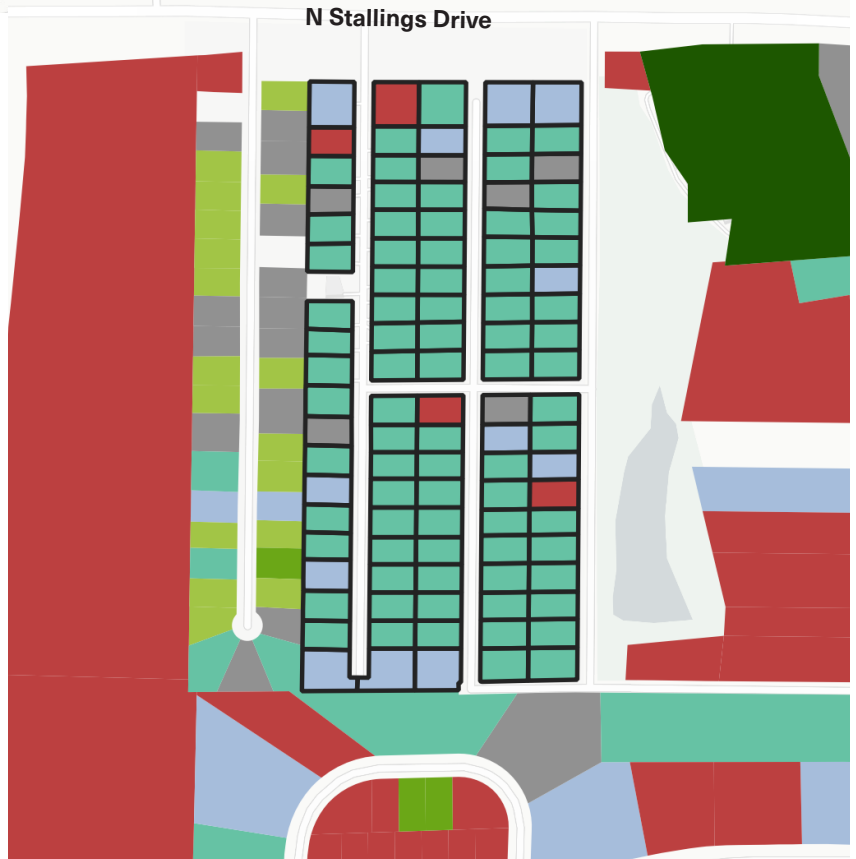
Lakewood Addition

Avg. Lot Size:	0.19 Acres
Avg. Assessed Value:	\$21,268
Avg. Prop. Tax Revenue/Acre	\$599





incorporates budget & unfunded infrastructure costs



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5.

***STREET CIP
PROJECT
EVALUATION***

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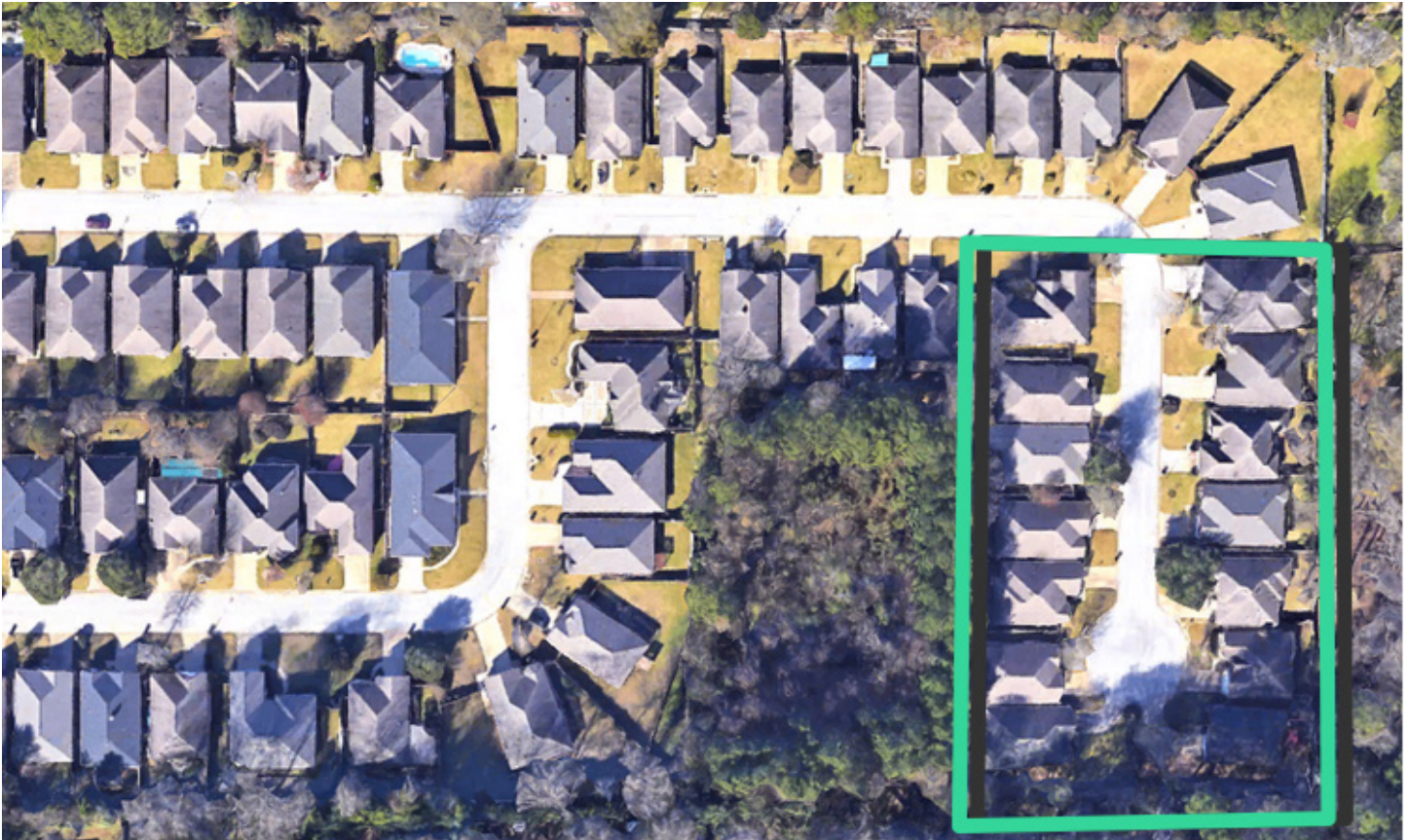
Street Replacement Fiscal Analysis

One of the primary causes of the resource gap in cities is that the developed properties do not generate sufficient tax base to cover the cost of the infrastructure serving them. Said another way, our cities are investing in infrastructure under the premise that it will support residents and businesses that will in turn provide the tax base to pay for city services, but when the numbers are crunched, it turns out that this presumption is flawed.

Here are three examples to illustrate the infrastructure gap:

Ashbury Court

Cost of Repairs:	\$36,330	Time to Pay Off Project
Life Cycle:	20 Years (Asphalt)	
Total Taxable Value of Area:	\$2,716,480	100% of Property Tax Revenue Dedicated to Project:
Average Property Value:	\$194,743	2 Years
Tax Rate:	0.614000	
Annual Property Tax Rev:	\$16,679	Current Budget Conditions:
4% to Streets (Budget):	\$1,164,837	44 Years



This example shows a fairly new street with a cul-de-sac and all of the lots built out. The cost of the street was \$36,330 and the expected life of the project is 20 years. The property tax revenue generated by the adjacent properties is \$16,679 per year. Based on this annual revenue, it will take just 2 years to pay off the project if 100% of the property tax revenue from these properties is dedicated to paying for this street project. This is never the case though, as property tax revenue is also used to fund other general fund services including staff and public safety. Using the city's current tax rate and budget allocations for street funding, it will take approximately 44 years to accumulate enough property tax revenue from adjacent development to pay off the street investment - more than 2 times the life of the project. A modest increase in the percentage of the general fund budget allocated to streets combined with moderate property value increases could close this gap.

Street Replacement Fiscal Analysis

West Cox Street

Cost of Repairs: \$130,683
Life Cycle: 20 Years (Asphalt)
Total Taxable Value of Area: \$1,222,940
Average Property Value: \$55,303
Tax Rate: 0.614000
Annual Property Tax Rev: \$7,509
4% to Streets (Budget): \$1,164,837

Time to Pay Off Project

100% of Property Tax Revenue Dedicated to Project:
18 Years

Current Budget Conditions:
348 Years



This example illustrates the other end of the spectrum. Based on current property values and budget allocations for street funding, it will take roughly 348 years to accumulate enough property tax revenue from adjacent development to pay off this street investment! Even if 100% of the property tax revenue was dedicated solely to this project, it would still take 18 years to recoup the investment.

Street Replacement Fiscal Analysis

Powers Street

Cost of Repairs:	\$281,389	Time to Pay Off Project
Life Cycle:	20 Years (Asphalt)	
Total Taxable Value of Area:	\$2,341,000	100% of Property Tax Revenue Dedicated to Project:
Average Property Value:	\$26,562	20 Years
Tax Rate:	0.614000	
Annual Property Tax Rev:	\$14,374	Current Budget Conditions:
4% to Streets (Budget):	\$1,164,837	392 Years



This example illustrates the impact that vacant properties can have on recouping infrastructure investments. The clock to replace a street starts the day it is constructed, so the best and fastest way to pay for the investment is to make sure all of the lots on the street have buildings on them. When multiple lots along a street are vacant, this puts an extra burden on the developed properties to pay for the street and often results in an even longer payback period.

It's important to understand the relationship between the value of development and the cost of the streets and infrastructure serving them. Building more fiscally productive development patterns as outlined in this report, combined with more financially-conscious roadway design and investment prioritization can help the city close its infrastructure funding gap over time.

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6.

***SUMMARY &
RECOMMENDATIONS***

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Summary & Recommendations

Common Themes from Our Analysis Work

We have completed similar land use fiscal assessment work for cities across the state. A few of the common themes this work has revealed include:

- Most cities have a significant resource gap when you consider the amount of money they need to rebuild aging streets and provide basic services and expected quality of life amenities to current and future residents
- A large percentage of parcels are not generating enough property tax revenue to cover the costs it will require to serve them over time.
- Not all development is good development when it comes to long-term fiscal sustainability and a city's ability to provide services and maintain neighborhoods over time.
- Older "traditional grid" neighborhoods and downtowns typically outperform suburban style development
- High ROI parcels and developments typically have the following characteristics:
 - High ratio of building footprint to lot size
 - Multi-story structures
 - Narrow lot frontage
 - Smaller lots (higher density)
 - OR: Large rural estate lots with high value homes and minimal infrastructure
- "Traditional grid" neighborhoods and downtowns typically outperform auto-centric suburban style development with bigger lots, wider streets, and cul-de-sacs.

Prioritizing and coordinating economic development, housing, and CIP investments into infill and redevelopment in downtown and the surrounding area is the fastest way to close the city's resource gap.

Takeaways and Recommendations

Some of the specific findings for Nacogdoches include:

- Property tax share of general fund revenues is only 37%. This puts extra pressure on sales tax and other funding sources to cover basic services.
- Goal: property tax revenue \geq 50% of general fund revenue
- General Fund per acre is low when compared to what it will likely need to be to sustain services and quality of life amenities in the future
 - Current GF/acre is \$1617/acre
 - At current tax rate and general fund revenue source ratios, it would require approximately \$1850/acre to cover existing street infrastructure liabilities
 - To accommodate future increases in service costs that come with horizontal expansion and population growth, the city will likely need to get closer to \$2K/acre on average, with 50% of general fund from property tax (\$1K/acre in levy/acre).
- Just 22% of the city's parcels (37% of the city's area) are currently generating \$1000/acre and higher in property tax revenue.
- 51% of the city's service area is developed. Developed parcels generate 88% of the city's property tax revenue.
- The small lots are the highest producing parcels. The two smallest lot segments (< 0.2ac and 0.2 - 0.4ac) both net well over \$1000/acre even after budget and unfunded street costs are considered.
- A large majority of the city has a traditional grid pattern with small narrow lots, which is the framework for the higher producing development patterns.
- Prioritizing and coordinating economic development, housing, and CIP investments into infill and redevelopment in downtown and the surrounding area is the fastest way to close the city's resource gap.
- Promote and incentivize growth and infill in the City center and existing neighborhoods to maximize return on infrastructure investment.
- The City should evaluate the fiscal impact of new development so decision makers can have a better understanding of long-term costs and service impacts.

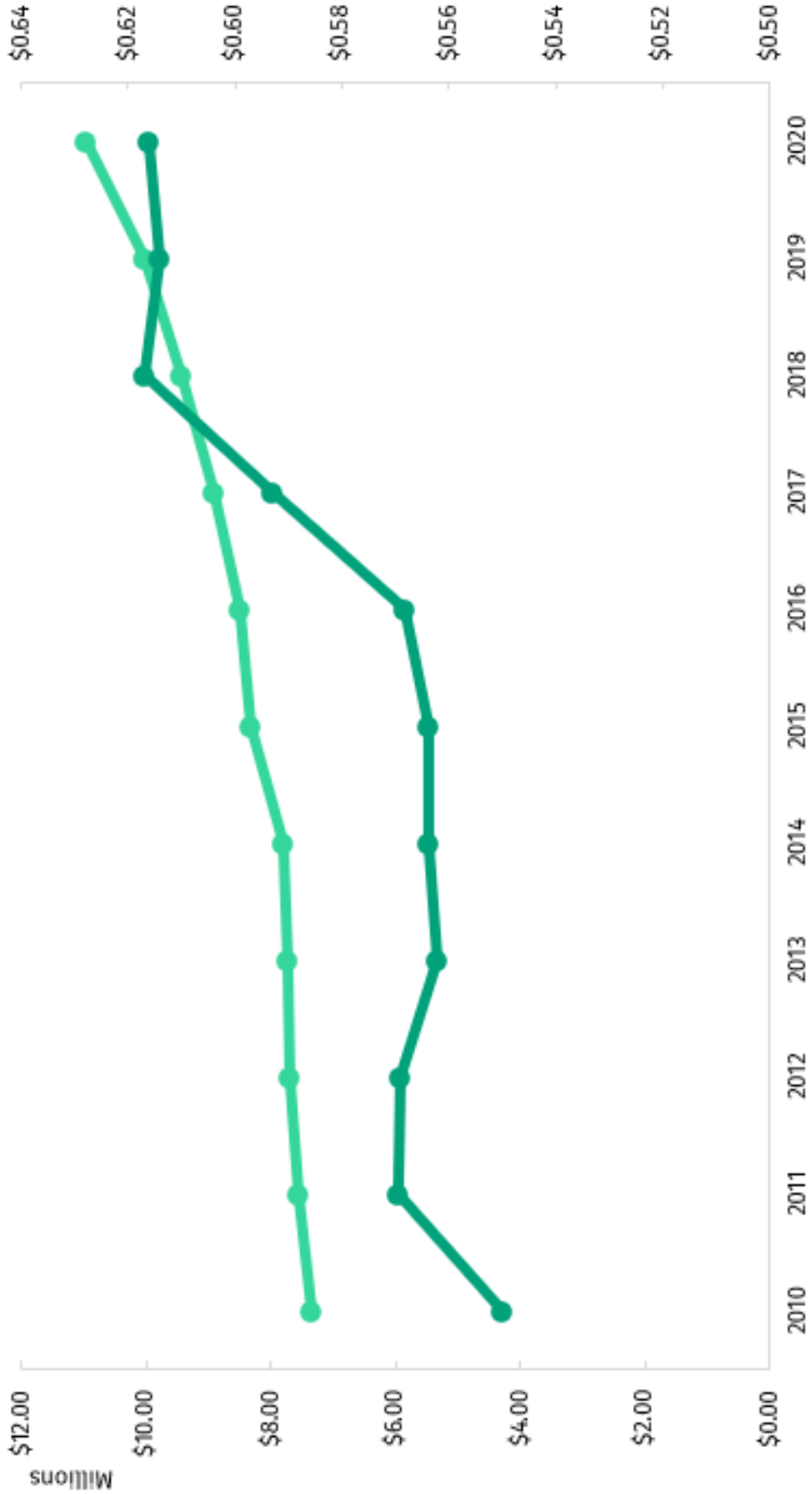
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7.

APPENDIX

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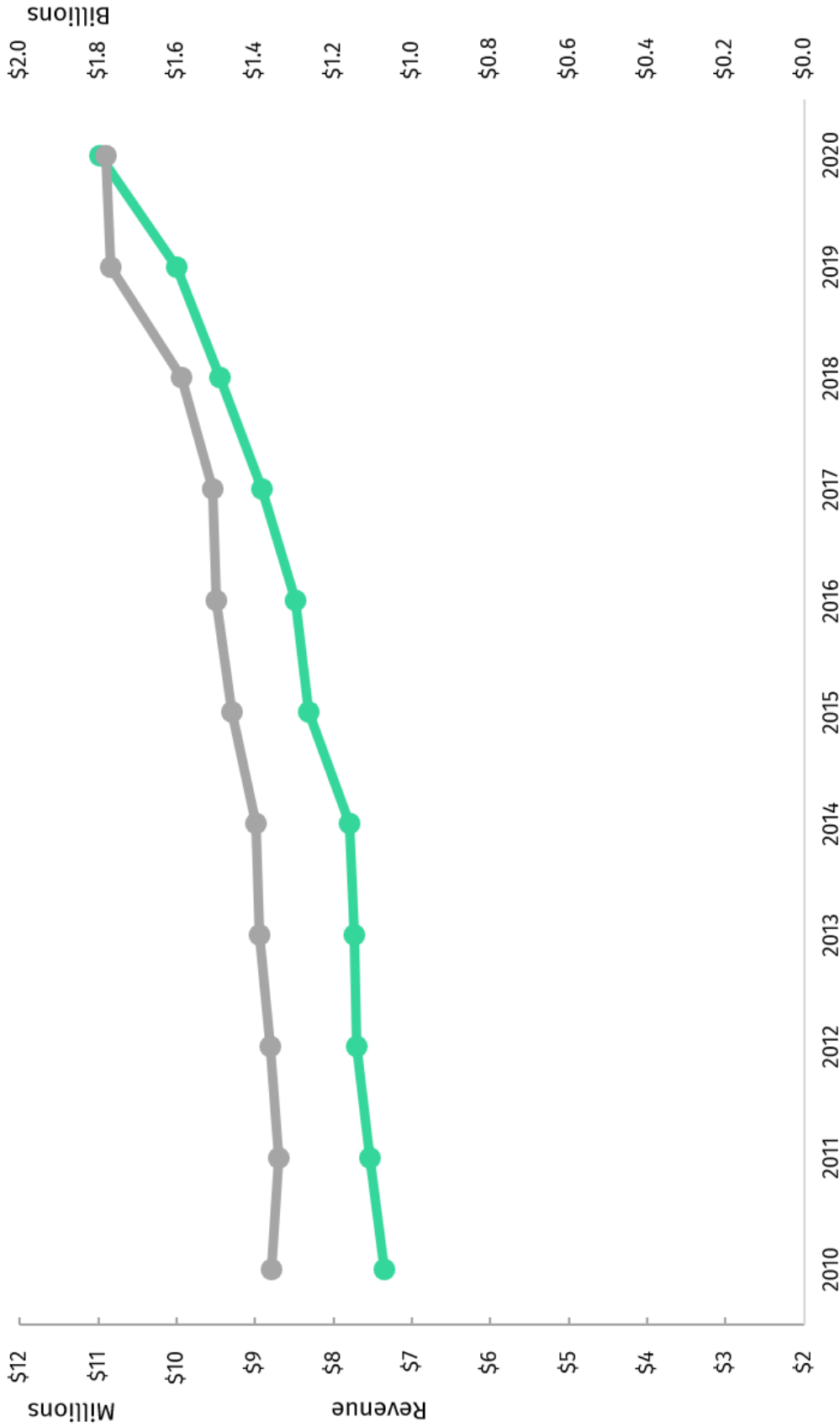
Prop. Tax Rate vs. GF Revenue Over Time



Fiscal Year	Tax Rate	Revenue	Total Assessed
2010	\$ 0.55000	\$ 7,349,890	\$ 1,357,576,310
2011	\$ 0.56937	\$ 7,537,329	\$ 1,339,582,970
2012	\$ 0.56900	\$ 7,703,315	\$ 1,360,959,860
2013	\$ 0.56200	\$ 7,734,895	\$ 1,388,744,440
2014	\$ 0.56390	\$ 7,802,983	\$ 1,399,648,260
2015	\$ 0.56390	\$ 8,323,689	\$ 1,460,125,810
2016	\$ 0.56810	\$ 8,485,231	\$ 1,499,480,355
2017	\$ 0.59280	\$ 8,908,920	\$ 1,508,553,230
2018	\$ 0.61690	\$ 9,447,895	\$ 1,588,601,620
2019	\$ 0.61400	\$ 10,006,617	\$ 1,768,164,370

This chart shows how the city's tax rate and general fund revenue have changed over time.

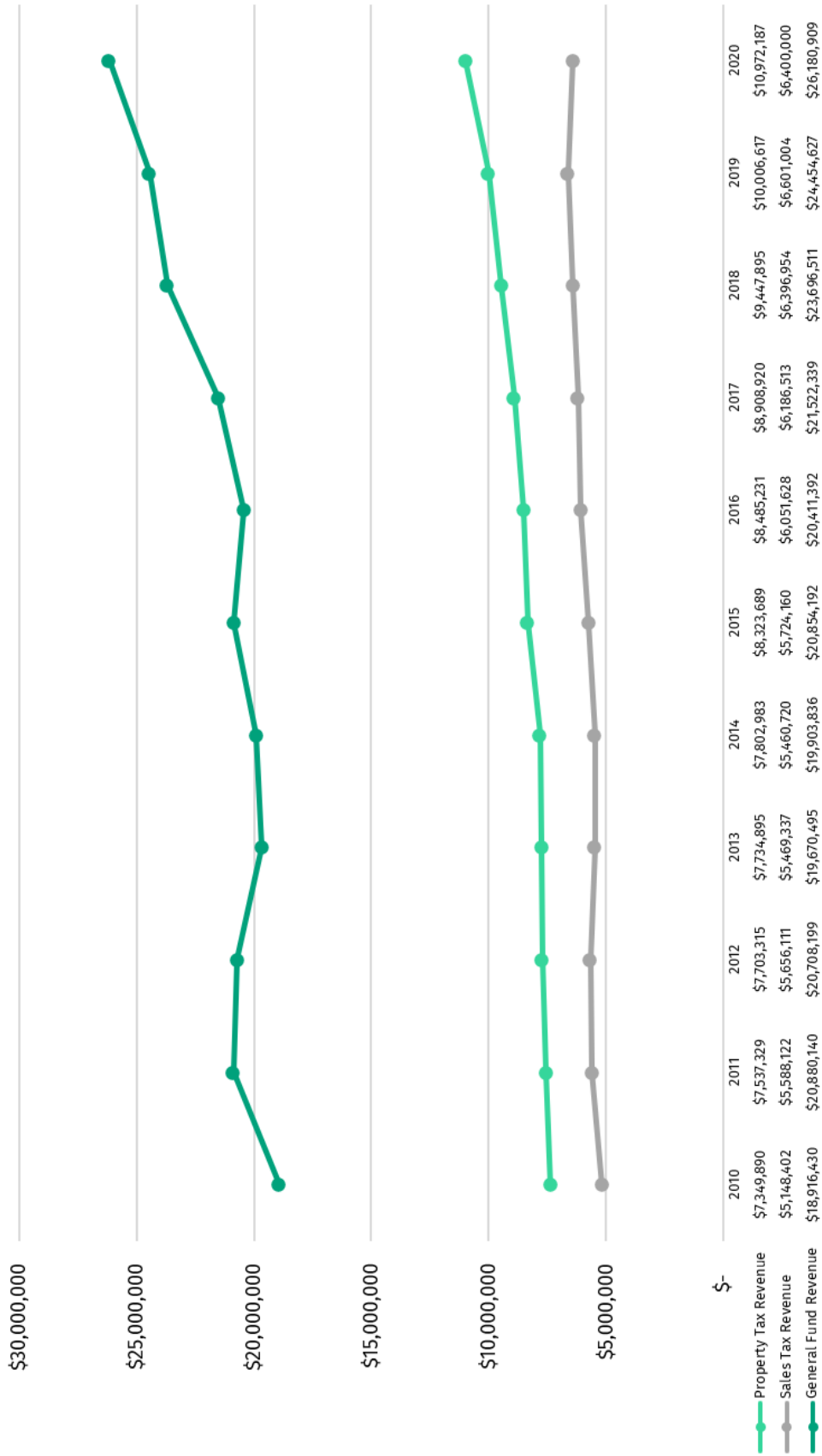
Total Assessed Value vs. GF Rev. Over Time



Fiscal Year	Tax Rate	Revenue	Total Assessed
2010	\$ 0.55000	\$ 7,349,890	\$ 1,357,576,310
2011	\$ 0.56937	\$ 7,537,329	\$ 1,339,582,970
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2020			

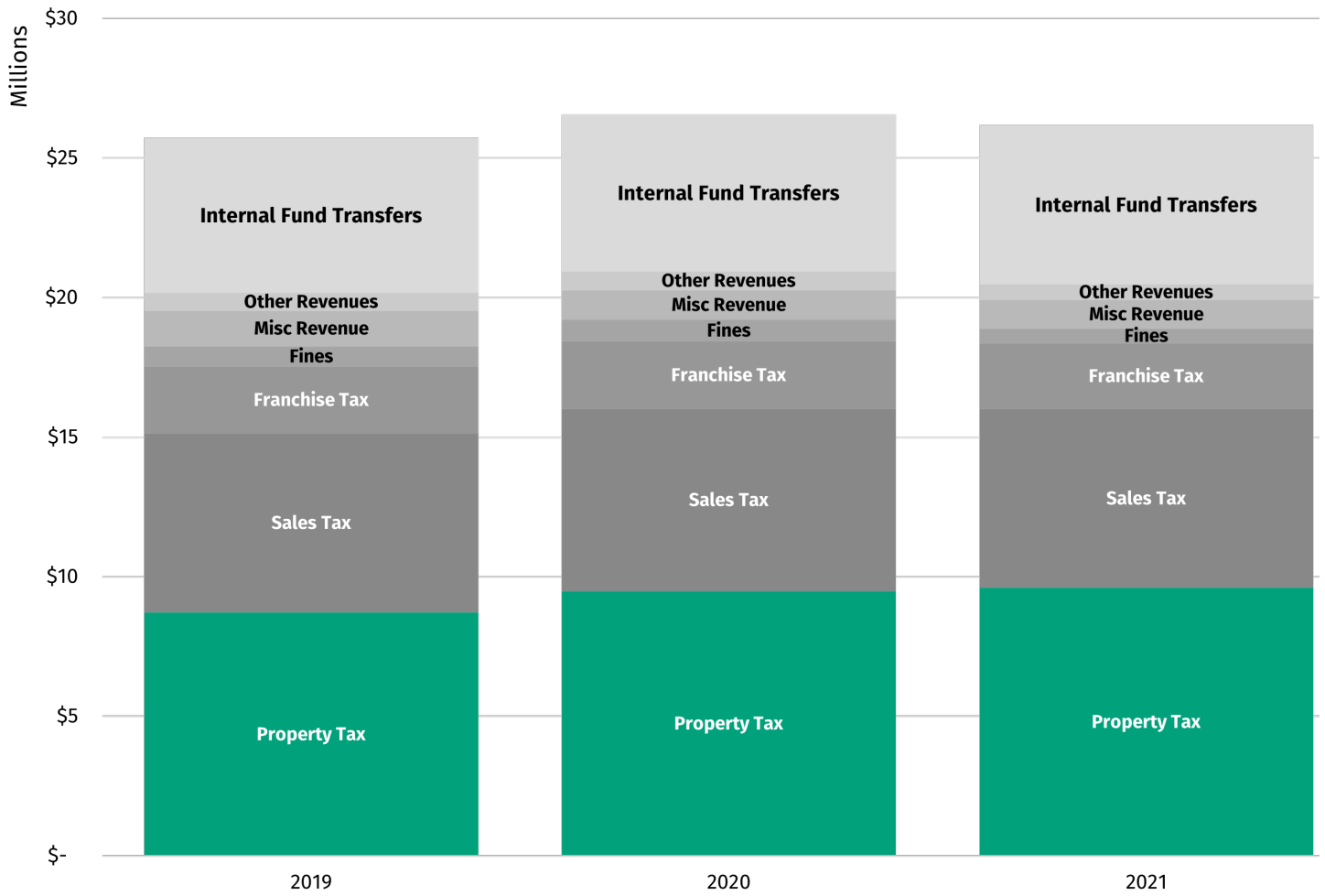
This chart compares assessed values to tax rate and property tax revenue over time.

Property Tax Rate vs. GF Revenue Over Time



This graph shows how the general fund revenue is trending in relation to the city's sales tax and property tax revenue numbers over the years.

General Fund Revenue Breakdown (2019-21)



This chart shows how the general fund is split by revenue sources in 2019, 2020, and the adopted budget for 2021.

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Nacogdoches 
the oldest town in Texas

