

ISM 6155 Project User Guide –Group 7

Introduction

The main objective of the project is to perform an in-depth research and provide a visual representation of property values in the South St. Petersburg Community Redevelopment Area (CRA), with a particular emphasis on properties situated on/north of 5th Avenue South in comparison to those located on/south of 5th Avenue South. The comparison between property values on/north of 5th Avenue South and those south of 5th Avenue South is the primary focus of this project. In addition to providing insights into historical patterns, mean and median property values, as well as percentage increases for a variety of property kinds, the analysis also offers recommendations. The findings of this project are expected to significantly influence the City's strategy for development and revitalization in the South St. Petersburg Community Redevelopment Area, with the end goal of improving the quality of life for individuals and promoting economic growth.

Methodology

We have used all three key datasets that provided insights into property details for the years 2015 and 2022.

1. *Property Appraiser/Department of Review Data (2015) – [POA DOR 2015FINAL 2.xlsx](#)*
2. *Property Appraiser/Department of Review Data (2022) – [POA DOR 2022FINAL 3.xlsx](#)*
3. *Property Count by Use - [2015 v 2022 Property Use.xlsx](#)*

Using these datasets, we were able to conduct an in-depth analysis of how properties changed over time, looking at things like changes in property prices, the characteristics of the neighborhoods, and how properties were used from 2015 to 2022.

Data Description: The datasets include property information for the years 2015 and 2022 gathered from the South St. Petersburg Community Redevelopment Area (St. Petersburg, Florida). They include information such as the property use, land square footage, neighborhood, total gross square footage, and the taxable values. The information has been separated into categories according to whether a property is located on/north of 5th Avenue South or south of 5th Avenue South. This dual-year dataset enables comparison analysis, which in turn allows the evaluation of change in property values over time and supports informed investment decisions made inside the CRA.

Data Cleaning: We have removed any instances of null values that were present in the property usage column of the property appraiser data for the years 2015 and 2022. There are certain values that are missing in the assessment year across all of the sheets. Because the cells belonged to the same years, we filled them with the same year in accordance with that. Additionally, the values for some of the attributes, such as the physical city and the zip code, are missing from the property appraiser data for the years 2015 and 2022; however, these gaps have been filled up with the same attribute. Following the completion of the data cleaning process, we consolidated the data from the previous two years into a single CSV file in order to more easily get superior outcomes.

Data analysis: We built interactive bar charts and pie charts using Tableau, which is a popular data visualizing tool. We were able to effectively show the mean and median property values in 2015 and 2022 for all properties, non-residential and mixed-use properties. Also, we shown the increase in property values(in terms of percentage) for all category of properties.

To determine the increase and change in percentage of property values for properties north/on 5th Avenue South compared to those of On/south of 5th Avenue South, we created the calculated fields.

% Change

```
(SUM(
    IF [Assessment Year] = '2022' THEN [Taxable Value - Non-School District] END
))
-
SUM(
    IF [Assessment Year] = '2015' THEN [Taxable Value - Non-School District] END
))
/
SUM(
    IF [Assessment Year] = '2015' THEN [Taxable Value - Non-School District] END
)
```

Fig:1 Calculated Field for %change of Taxable Value-Non School District in the year 2015 and the 2022

% Increased

```
(SUM(
    IF [Assessment Year] = '2022' THEN [Taxable Value - Non-School District] END
))
-
SUM(
    IF [Assessment Year] = '2015' THEN [Taxable Value - Non-School District] END
))
/
SUM(
    IF [Assessment Year] = '2015' THEN [Taxable Value - Non-School District] END
))*100
```

Fig:1 Calculated Field for % increase of Taxable Value-Non School District in the year 2015 and the 2022

With the help of these data analysis and visualizations, we can examine the % rise in property value for the regions on/north of 5th Avenue South and On/south of 5th Avenue South for the years 2015 and 2022. Using Tableau, we can make visualizations that are both engaging and insightful, appropriate for getting our results across to others. To guarantee that stakeholders and decision-makers can always find and use this information, it is important to document these processes and provide detailed descriptions.

Results

A. What is the mean/median property values in 2015 for properties on/north of 5th Avenue South compared to properties south of 5th Avenue South?

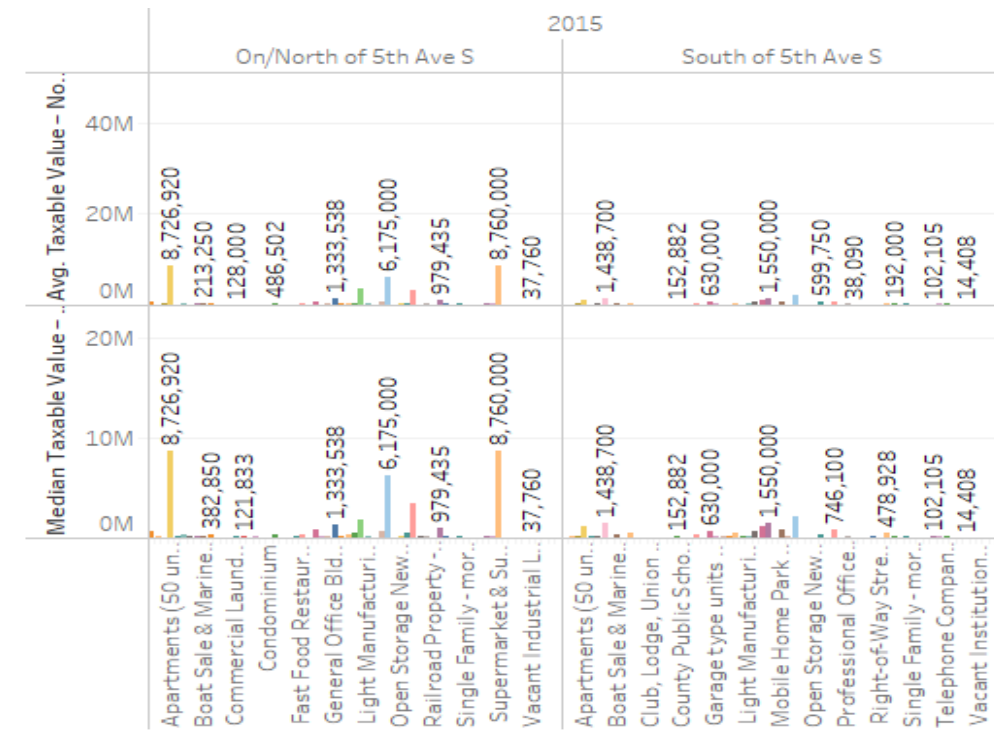
- For all properties?

- Mean Property Value:

- For all properties on/north of 5th Avenue South is 93,475.
 - For all properties south of 5th Avenue South is 27,159.

- Median Property Value:

- For all properties on/north of 5th Avenue South is 30,297.
 - For all properties south of 5th Avenue South is 15,227.



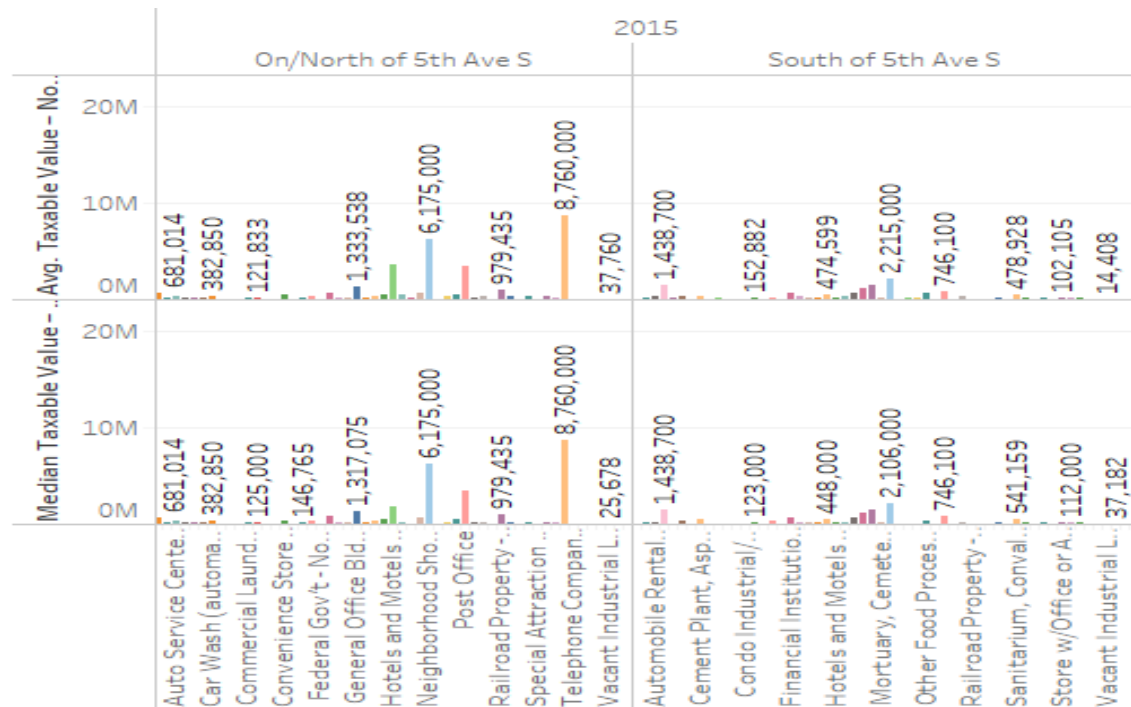
- For non-residential and mixed-use properties?

- Mean Property Value:

- For non-residential and mixed-use properties on/north of 5th Avenue South is 236,278.
 - For non-residential and mixed-use properties south of 5th Avenue South is 101,604.

- Median Property Value:

- For non-residential and mixed-use properties on/north of 5th Avenue South is 127,000.
 - For non-residential and mixed-use properties south of 5th Avenue South is 22,759.



B. What is the mean/median property values in 2022 for properties on/north of 5th Avenue South compared to properties south of 5th Avenue South?

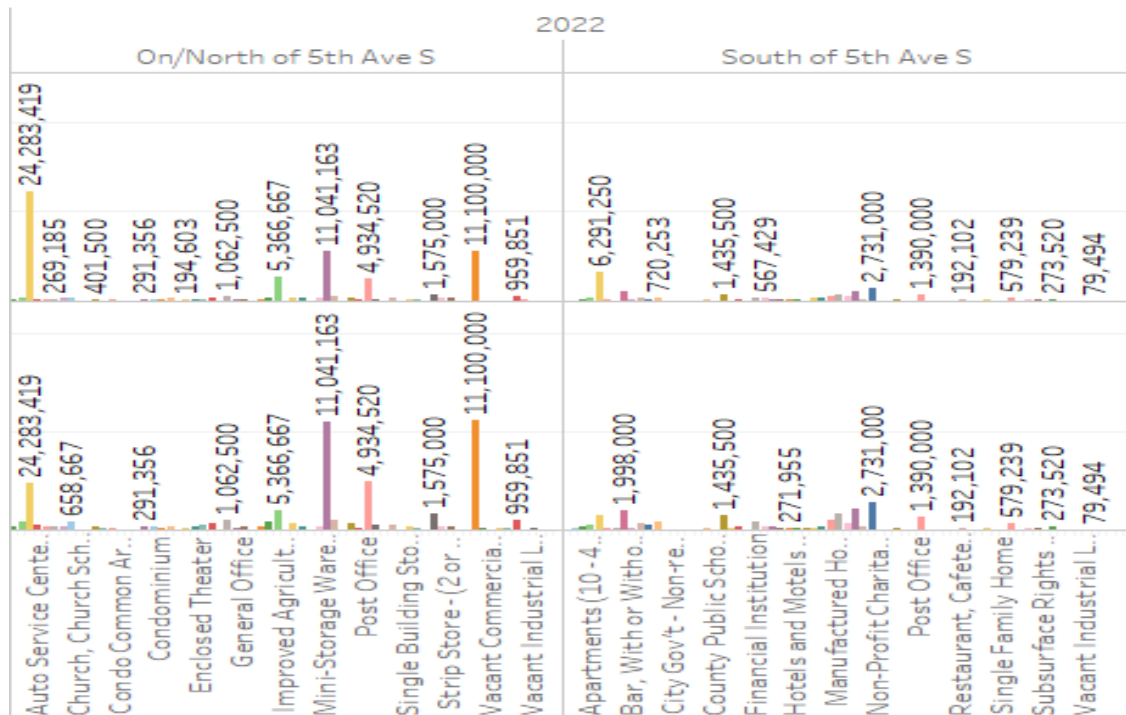
- For all properties?

- Mean Property Value:

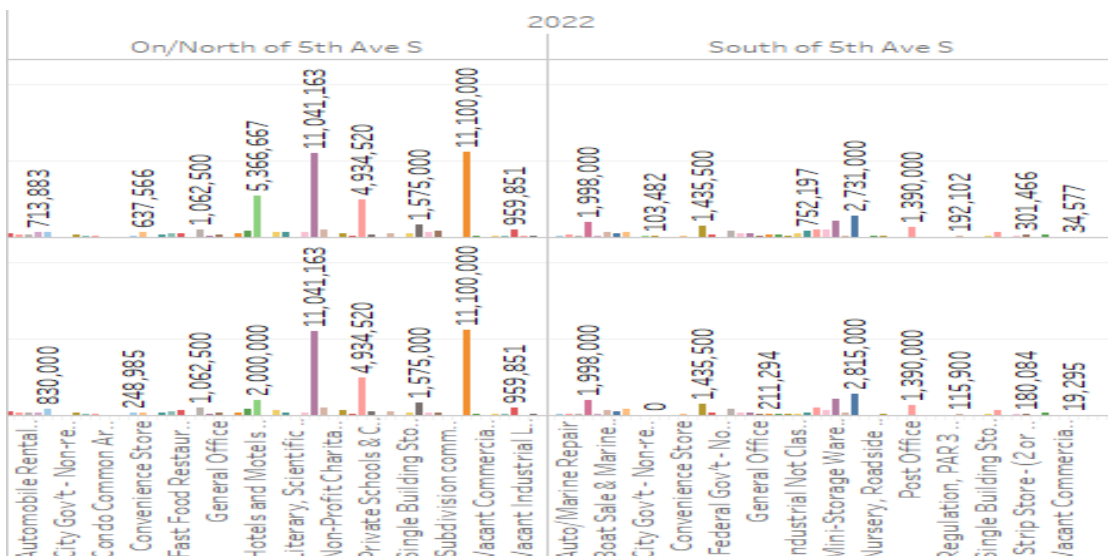
- For all properties on/north of 5th Avenue South is 263,530.
 - For all properties south of 5th Avenue South is 79,794.

- Median Property Value:

- For all properties on/north of 5th Avenue South is 118,297.
 - For all properties south of 5th Avenue South is 49,996.



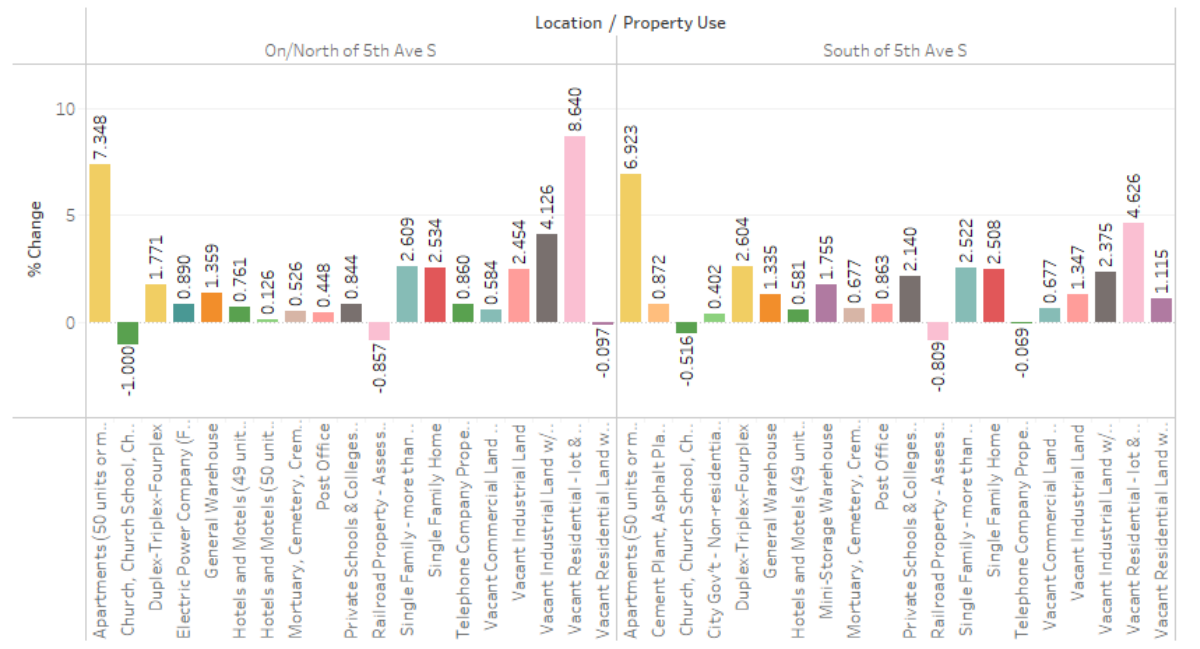
- For non-residential and mixed-use properties?
 - Mean Property Value:
 - For non-residential and mixed-use properties on/north of 5th Avenue South is 453,916.
 - For non-residential and mixed-use properties south of 5th Avenue South is 170,276.
 - Median Property Value:
 - For non-residential and mixed-use properties on/north of 5th Avenue South is 257,500.
 - For non-residential and mixed-use properties south of 5th Avenue South is 48,994.



C. Visualizations showing increases (%) in property values for properties north/on 5th Avenue South compared to those properties south of 5th Avenue South.

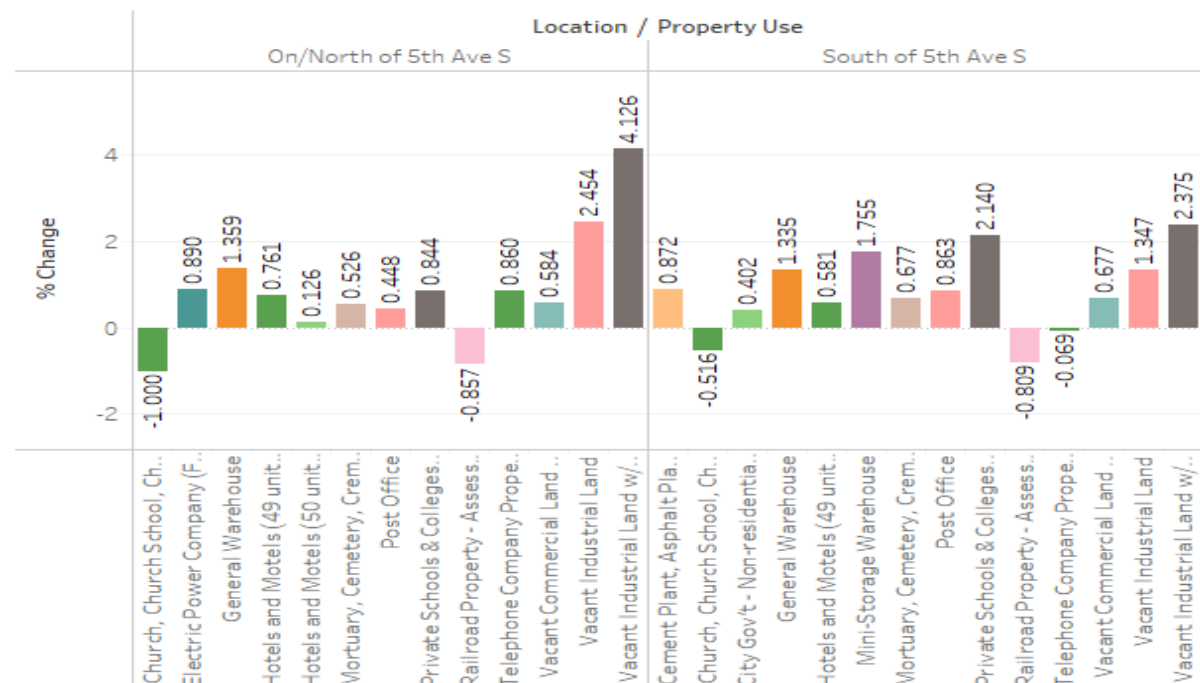
- For all properties?

- There was an increase of 5.6% for properties south of 5th Avenue South compared to those properties north/on 5th Avenue South.



- For non-residential and mixed-use properties?

- There was a decrease of 33.94% for properties south of 5th Avenue South compared to those properties north/on 5th Avenue South.



D. For properties On/north of 5th Avenue South:

What was the total taxable property value in 2015?

What was the total taxable property value in 2022?

How much has it increased over time?

- The total taxable property value (non-school district) in 2015 was about 24,16,33,640.
- In the year 2022, the total taxable value – Non-school district is about 68,80,75,564.
- From the year 2015 to 2022, we have seen that there is a considerable growth for the properties located on/north of 5th Avenue South, and the percentage increase is around 184.760%.

E. For properties south of 5th Avenue South:

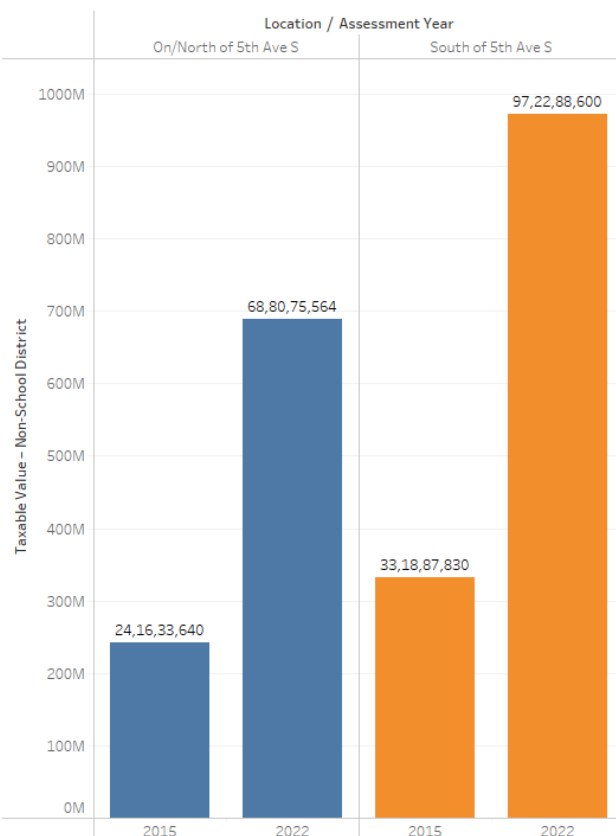
What was the total taxable property value in 2015?

What was the total taxable property value in 2022?

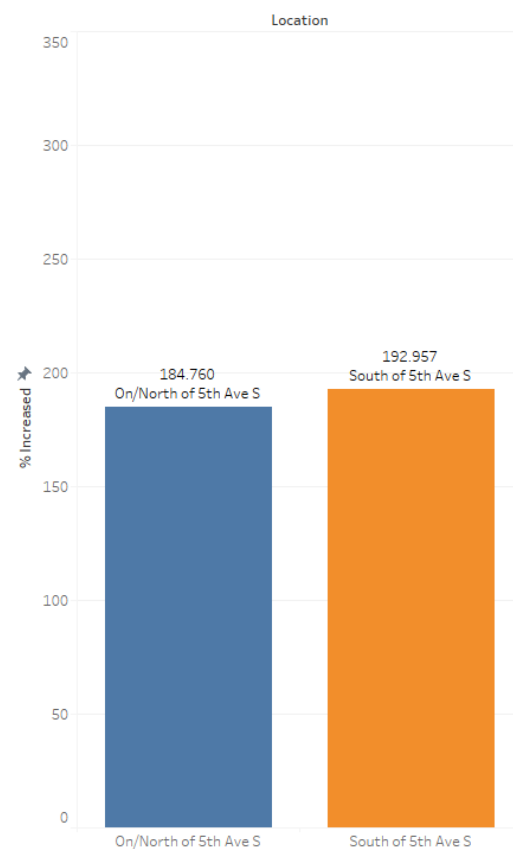
How much has it increased over time?

- During the year 2015, the total taxable property value in non-school districts was about 33,18,87,830.
- The total taxable property value of the Non-school district is approximately 97,22,88,600 in the year 2022.
- The properties on/south of 5th Avenue South have had significant growth from 2015 to 2022, with a projected rise in value of roughly 192.957%.

Total Taxable Property Value for 2015 and 2022



% increased from 2015 to 2022

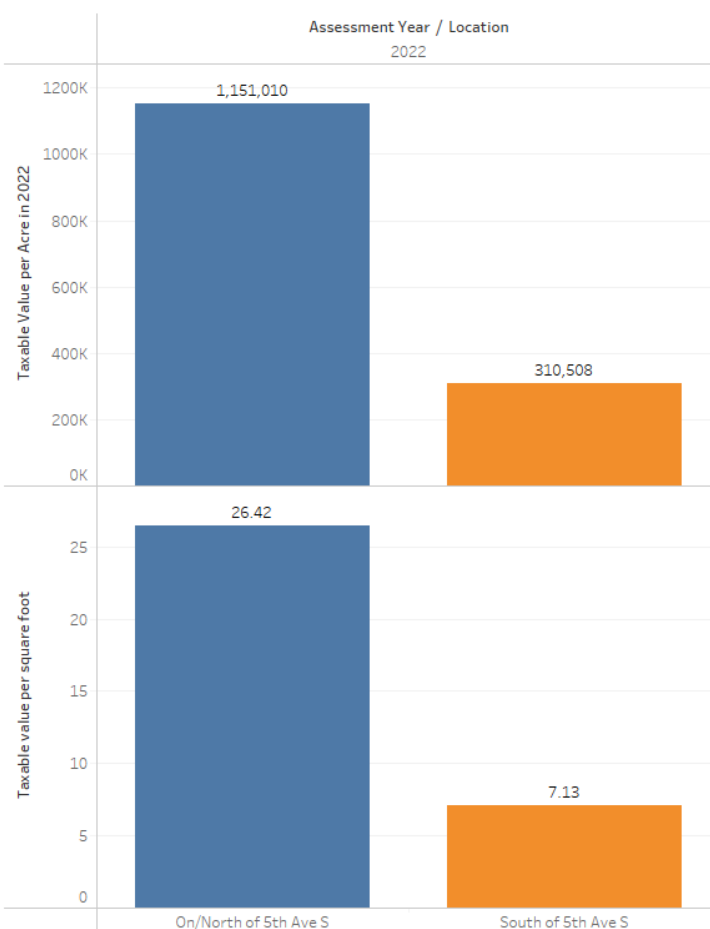


F. Create a visualization for property appraiser data (2022) comparing total taxable property value for properties north/on 5th Avenue S to properties South of 5th Avenue S.

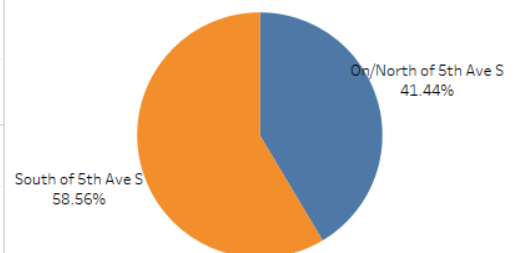
Please consider creating visualizations that consider (control for) the total number of properties/ acreage/land square footage.

- Here, for the properties of north/on of 5th Avenue South, the total taxable property value per acre is about 1,151,010 and for the properties of on/south of 5th Avenue South, the total taxable property value per acre is about 310,508.
- According to the 2022 property appraiser data, the total taxable property value per sq.ft in on/north of 5th Avenue South is about 26.42 and on/South of 5th Avenue South is about 7.13
- A pie chart was used to illustrate how the total taxable value was distributed throughout the various locations. On/north side of 5th Avenue South, the percentage of total taxable value is about 41.44%, and the taxable value is approximately 68,80,75,564. On the south side of 5th Avenue South, the percentage is approximately 58.56%, and the taxable value is approximately 97,22,88,600.
- This pie chart shows each of these as a percentage of the total property value of all properties in the CRA.

Total Taxable property value per Acre and Sqt.ft in 2022



Distribution of Total Taxable value per location



Conclusions

Comparison of Property Values in 2015:

All Properties:

- *Mean property values on/north of 5th Avenue South are significantly higher than those south of it, indicating a notable disparity.*
- *The median property values also show a similar pattern, with the north side having higher values.*

Non-Residential and Mixed-Use Properties:

- *Alike the case in all properties, there is a significant difference in mean and median property values between the north and south sides.*

Comparison of Property Values in 2022:

All Properties:

- *Mean and median property values on/north of 5th Avenue South have increased substantially compared to those on the south side.*

Non-Residential and Mixed-Use Properties:

- *The disparity in mean and median property values persists, with significant increases on both sides.*

Recommendation for Further Analysis:

- *Investigate the drivers of these increases, considering economic development, infrastructure improvements, or changes in property usage.*

Visualizations Showing Increases in Property Values:

All Properties:

- *There has been a 5.6% increase in property values on/north of 5th Avenue South compared to those on the south side.*

Non-Residential and Mixed-Use Properties:

- *A notable decrease of 33.94% in property values for non-residential and mixed-use properties on the north side compared to the south side.*

Recommendation for Further Analysis:

- *To be specific, properties such as Apartments and Vacant Residential land in all properties, and Vacant Industrial land in the quota of Non-Residential and Mixed-Use properties have experienced a considerable increase in their property values and are contributing to the observed trends.*

Total Taxable Property Value for Properties on/North of 5th Avenue South:

2015 vs. 2022:

- There is a substantial increase in total taxable property value (184.76%) from 2015 to 2022.

Total Taxable Property Value for Properties South of 5th Avenue South:

2015 vs. 2022:

- Significant growth (192.957%) in total taxable property value from 2015 to 2022.

Recommendation for Further Analysis:

- Assess the impact of public investments, policy changes, or community initiatives on property value growth. Investigate specific development projects or community changes contributing to the observed increase.

Visualization of Property Appraiser Data (2022):

Per Acre and Per Sq. Ft:

- Properties on/north of 5th Avenue South exhibit a higher total taxable property value per acre and per sq. ft. compared to those on the south side.

Recommendation for Further Analysis:

- Explore factors influencing the variation in total taxable property values per unit area, such as land use policies or property size.

Link to Visualizations

https://public.tableau.com/app/profile/ameer.basha.m/viz/EIS_GROUP7_PROJECT/Q12?publish=yes

Appendix

Optional Appendix – feel free to add an Appendix section to include any visualizations or project documentation you couldn't include in the summary. Label and describe each visualization you add in the Appendix section.