

Gentrification in Williamsburg

: How rezoning changed the neighborhood

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An aerial photograph of the Manhattan Bridge in New York City. The bridge's massive steel towers and suspension cables are prominent, spanning the East River. Below the bridge, the city's dense urban landscape is visible, including various buildings, streets, and a body of water with some boats. The sky is clear and blue.

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Background

Where is Williamsburg?

Location

Brooklyn Borough (Kings County)

Size

7.40 square kilometers (km²)

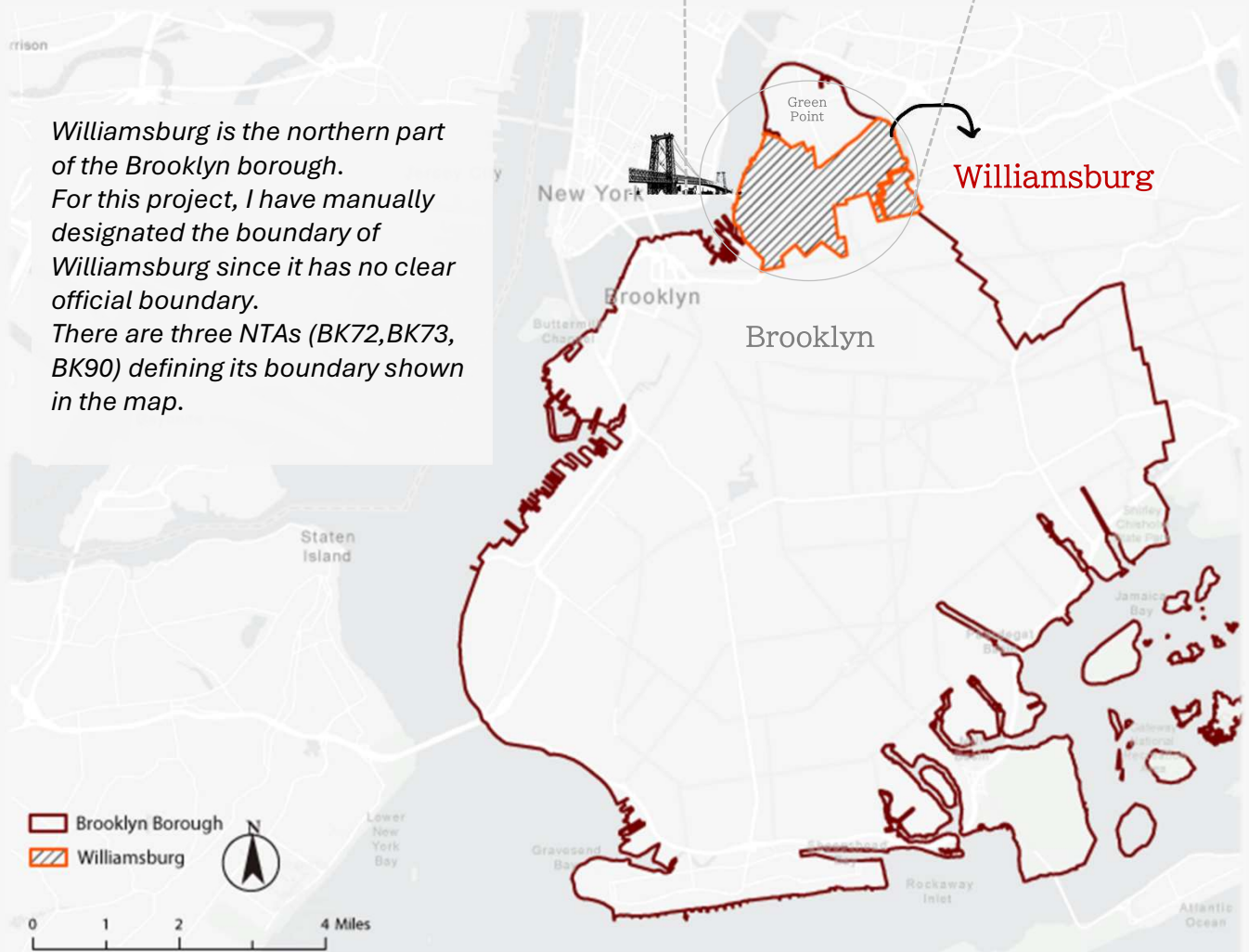
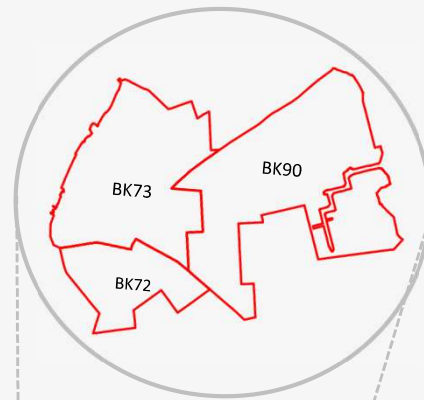
Boundary

Neighborhood Tabulation Area (NTA)

BK73 North Side-South Side

BK90 East Williamsburg

BK72 Williamsburg

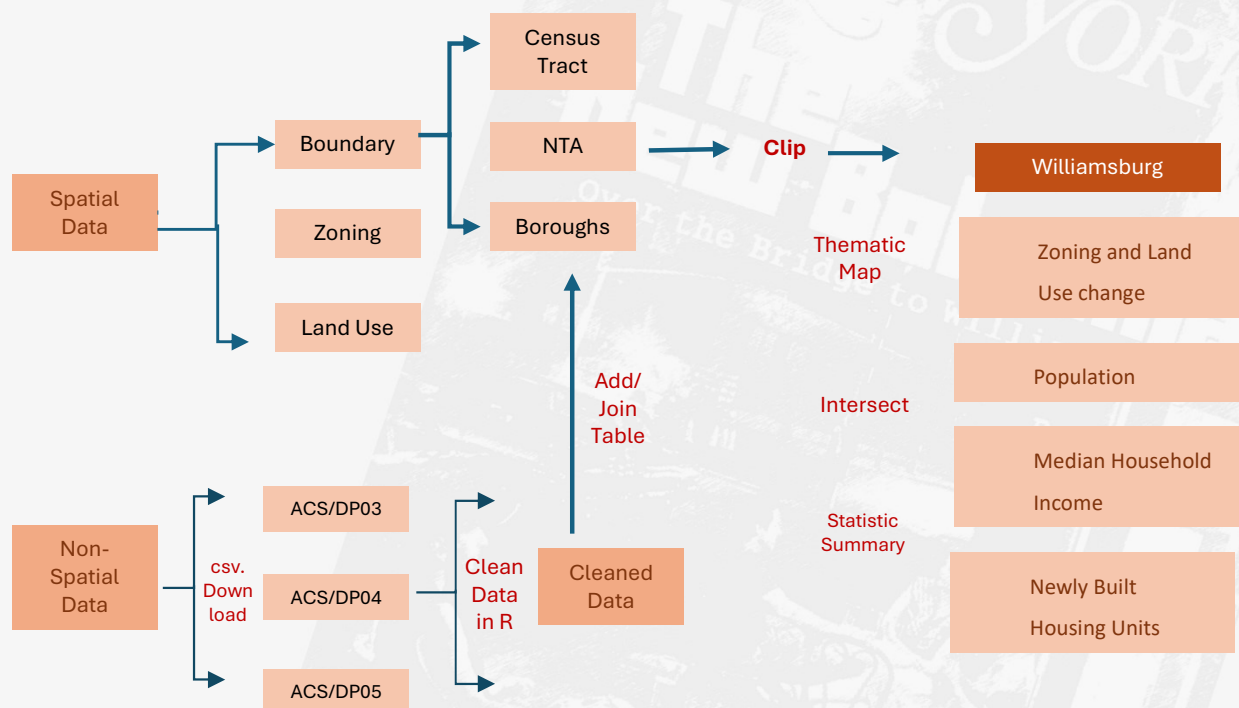


Research Questions

Through the project, I wanted to explore the critical initiative that brought gentrification in Williamsburg and its impacts looking at physical and socio-economic changes throughout the timeline from 2010 to 2020. My methodology is to compare every 5 year of major selected attributes and observe the changes along the gentrification.

- ① What was the *critical initiative* for the gentrification? Was there any major zoning change?
- ② Since then, what were changes in built environment of Williamsburg during 2010- 2020? What kind of Land Use has increased or decreased?
- ③ What were the socio-economic attributes change during 2010- 2020? How the Median Houshold Income and Industry of occupation have changed?

Methodology Diagram



Limitation

It acknowledges that this research is based on quantitative data and Census Tract unit. Which is heavily relying on ACS data for studying socioeconomic attribute. In addition, the researcher is not experienced with New York and Williamsburg. Therefore, the research could miss reality that is beyond the number.

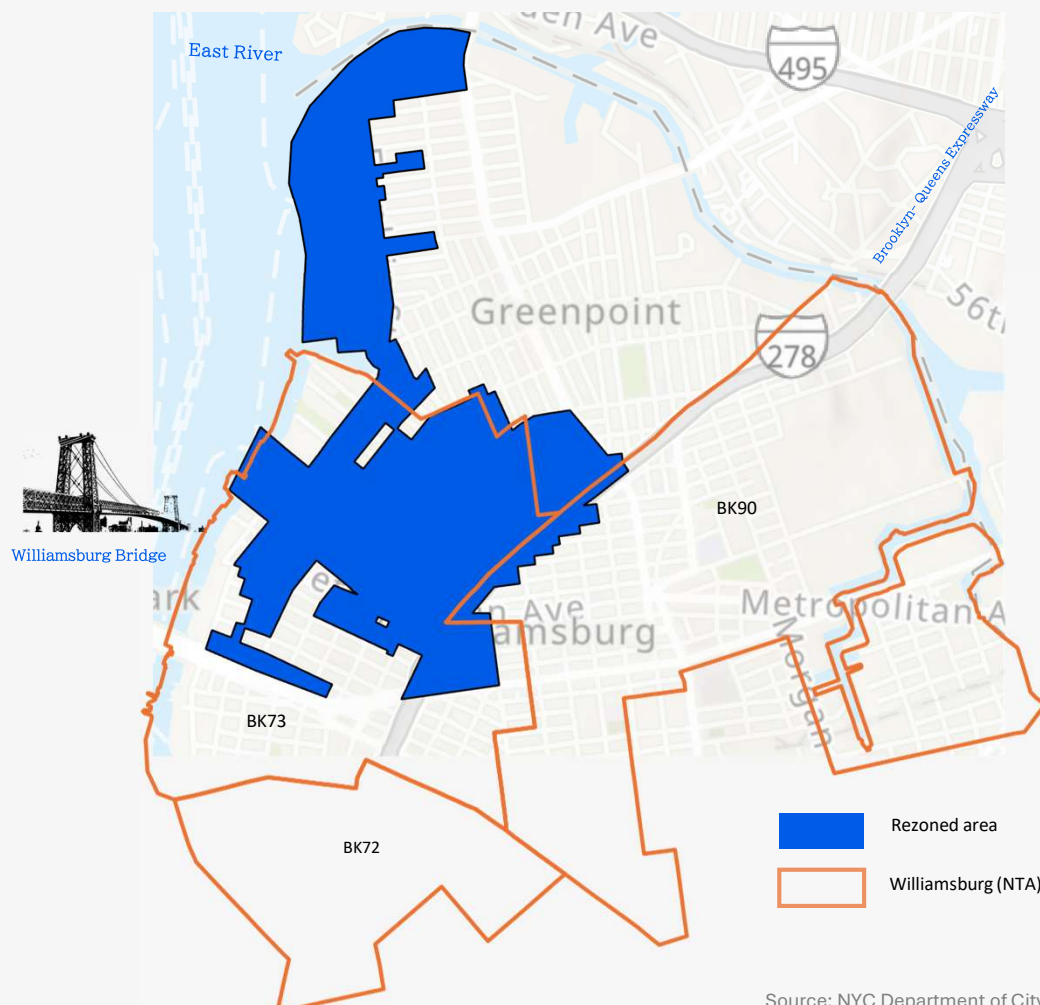
Zoning Change Green Point –Williamsburg Rezoning

The Rezoning of the Greenpoint-Williamsburg area in 2005 marked a significant turning point in the gentrification of the neighborhood.

Over the last two decades, Greenpoint and Williamsburg have experienced substantial population growth, resulting in a *housing shortage and heightened demand for new residential units*. While the residential population surged, *the industrial sector sharply declined, leaving many large properties vacant or underutilized*. This decline in industrial activity has paved the way for the transformation of Greenpoint and Williamsburg into residential and commercial hubs.

Proposed by the government in 2004 and effective **on May 11, 2005**, the rezoning action covered approximately 184 blocks of Greenpoint and Williamsburg. The area is bounded by the East River, the Williamsburg Bridge, the Brooklyn-Queens Expressway, and McGuinness Boulevard.

The initiative aimed to utilize abandoned or vacant industrial districts and encourage new residential and commercial development, along with the enhancement of waterfront areas by introducing parkland for waterfront access and recreational opportunities.



Source: NYC Department of City Planning

Background

History of Williamsburg

Williamsburg was incorporated as a village in 1827. In the 19th century, it was one of the active manufacturing areas. In the 1920s, Jews from Eastern Europe arrived, and during the 1940s to 1960s, many Puerto Rican immigrants settled down in Williamsburg. Lastly, in the 1990s, it was famous for bohemian and hippies village that ran away from the crazy rent in Manhattan. These are history that formed the cultural identity of Williamsburg.

Industrial/Manufacturing

Oil, glass, sugar and pharmaceutical industry grew since the late 19th century



Source: Adobe New York

Immigrants

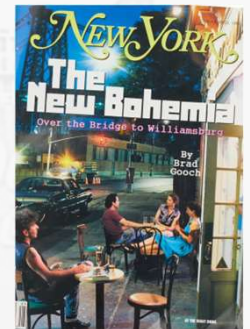
1903, Williamsburg Bridge was constructed. Jewish Immigrants arrived from Eastern Europe during 1920s. During 1940s to 1990s, Puerto Rican settled down in South of Williamsburg.



Source: South Williamsburg Project

Bohemian Culture

Artists and Young people moving away from Manhattan for affordable Rent in Williamsburg



Source: New York Magazine

What is Gentrification?

Neil Smith (1996) The New Urban Frontier: Gentrification and the Revanchist City (1996)

An economic process that occurs when the potential value of land exceeds its current value, incentivizing redevelopment.

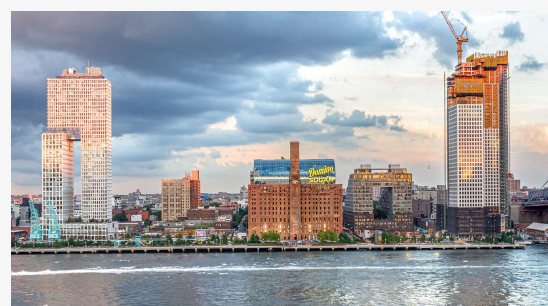
So did it happen in Williamsburg

The neighborhood experienced change and became wealthier through developments losing its original culture through continuous gentrification.

(New York Times)



Photos taken during different decades show Williamsburg's transformation. Mara Catalan (then); Tony Cenicola/The New York Times (now)

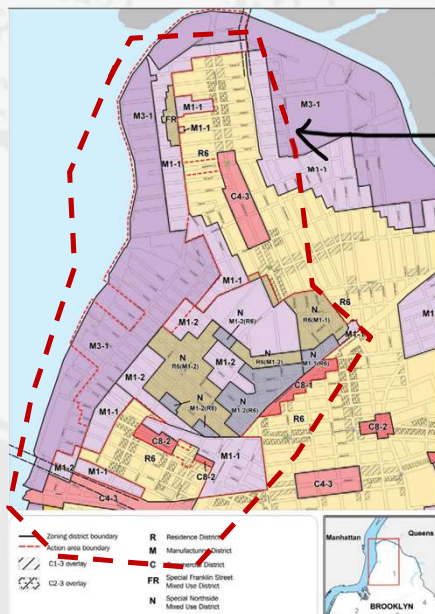


Source: Domino Campus

Zoning Proposal (2004)

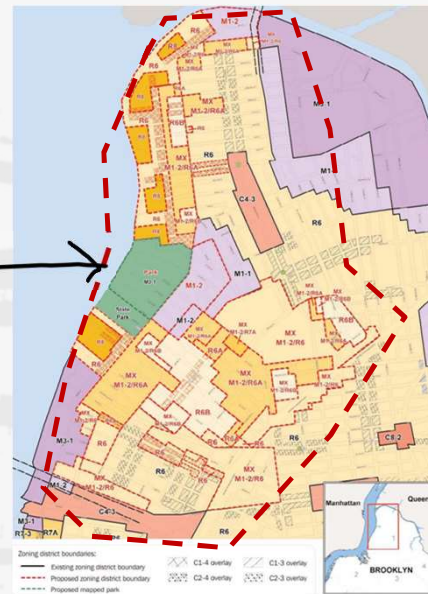
Green Point -Williamsburg Rezoning

The rezoning proposal primarily focused on transforming the waterfront area, which was predominantly industrial, into residential districts. A comparison between the existing zoning map of 2004 and the proposed zoning map reveals significant differences in the district designations. The existing zoning map highlights industrial zones in purple, whereas the proposed zoning map features yellow to indicate residential zoning for the same area.



Existing Zoning (2004)

Manufacturing
↓
Residential area



Proposed Zoning (2004)

Source: NYC Department of Planning Executive Summary of Greenpoint-Williamsburg Rezoning (July 2004)

Analysis

Zoning Application

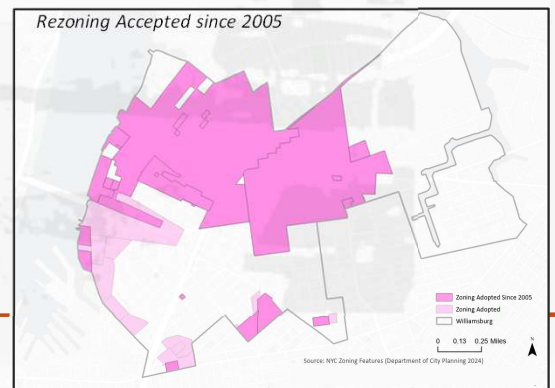
Zoning Adopted in Williamsburg	Count	Sum of Area (km2)
Zoning Adopted after 2005	28	3.12
Zoning Adopted	51	3.87

81%

Applying Summary Statistics, 81% of Adopted Zoning Application were recorded after 2005 showing the rezoning brought drastic increase in developments



Analysis Zoning Districts (2024)

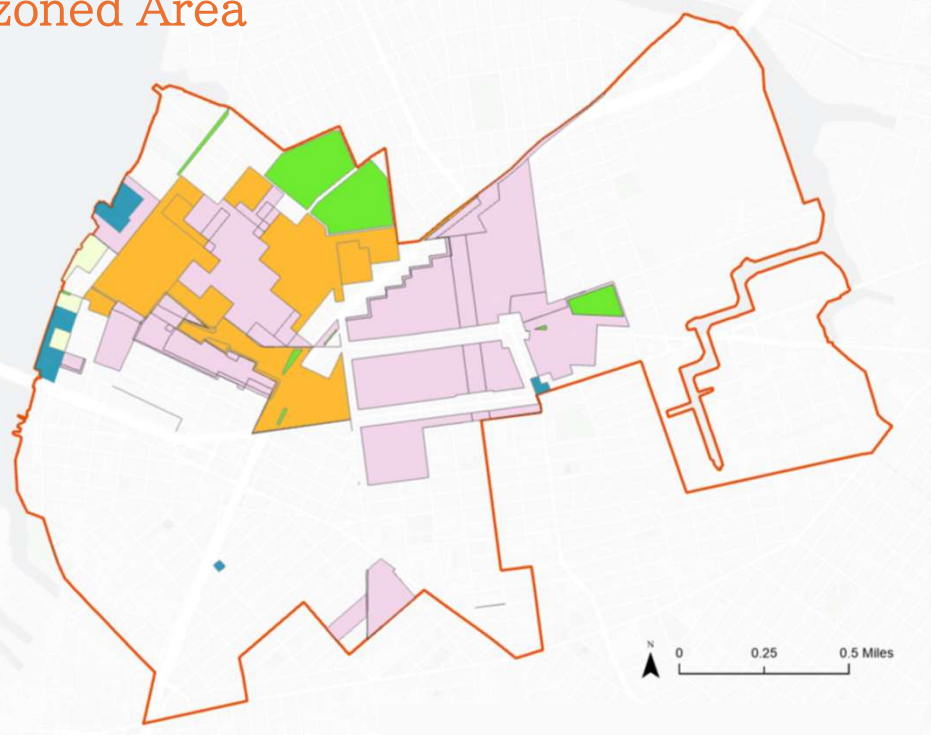


Analysis Highlights of Rezoned Area

Highlighting intersection of Rezoning Accepted since 2005 and current Zoning in Williamsburg, M1-2/R6, Parks, R6 and R8 are featured.

The highlighted zoning shows that Williamsburg changed from industrial to residential with parks as planned in the rezoning proposal in 2005.

*R6 and R8 are Mid-rise Residential
*M1-2/R6: Mixed Commerce/Residential



Analysis Land Use Change

Land Use / Year	2010		2015		2020	
	Count	% of Total	Count	% of Total	Count	% of Total
Industrial /Manufacturing	745	26%	595	22%	465	19%
Mixed Commercial/ Residential Buildings	1627	10%	1737	12%	1887	15%

2010

Using Summary Statistics, the Manufacturing area continuously decreased while Mixed Commercial/Residential grown up to 15%.

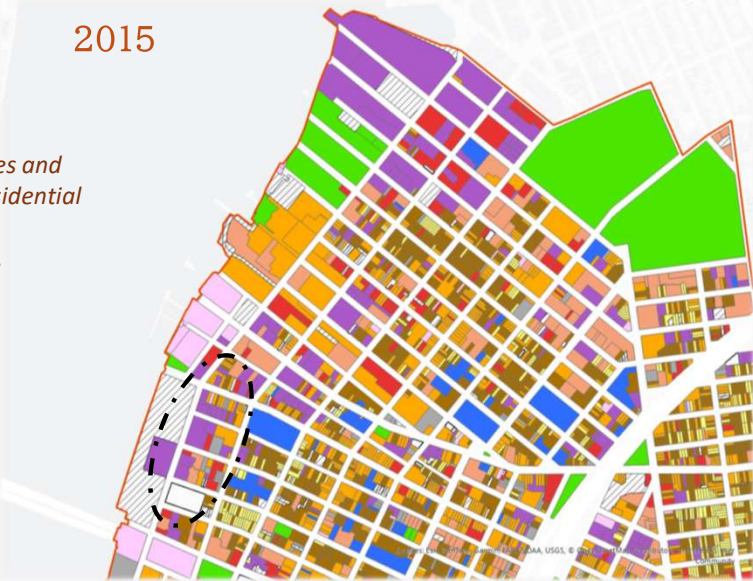
As time passes, the industrial/ purple area disappears and become orange (residential) and green (parks) areas along the waterfront.



Summary Statistics

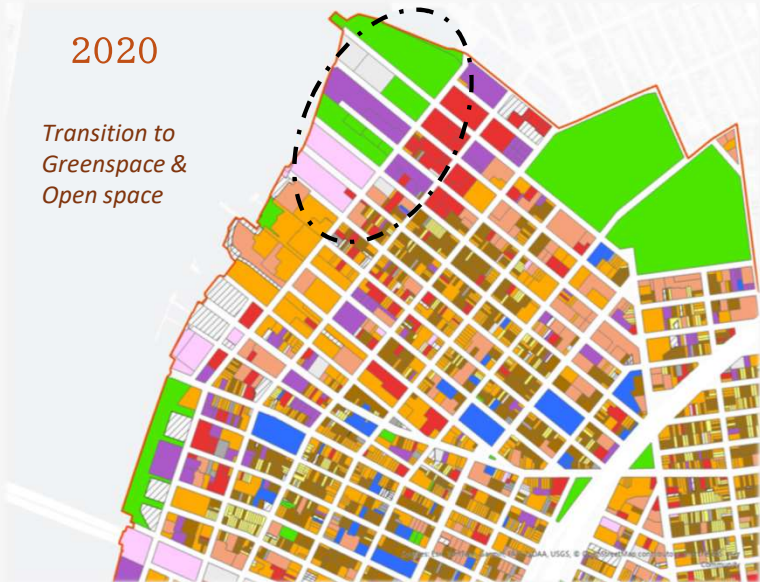
2015

Disappearance of manufacturing zones and increased mixed residential
Still manufacturing Zoning are remined



2020

Transition to Greenspace & Open space



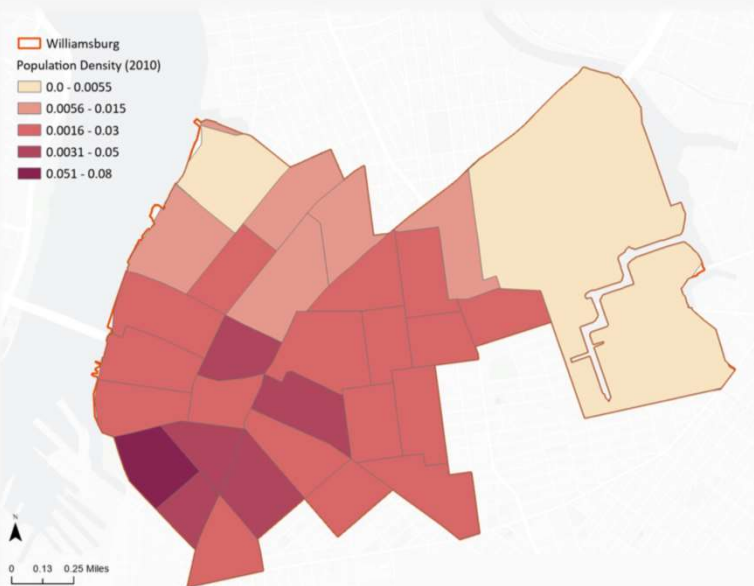
Analysis Population

	2010	2015	2020
Total population	158,545	175,527	173,345

2010

Williamsburg
Population Density (2010)

0.0 - 0.0055
0.0056 - 0.015
0.016 - 0.03
0.031 - 0.05
0.051 - 0.08

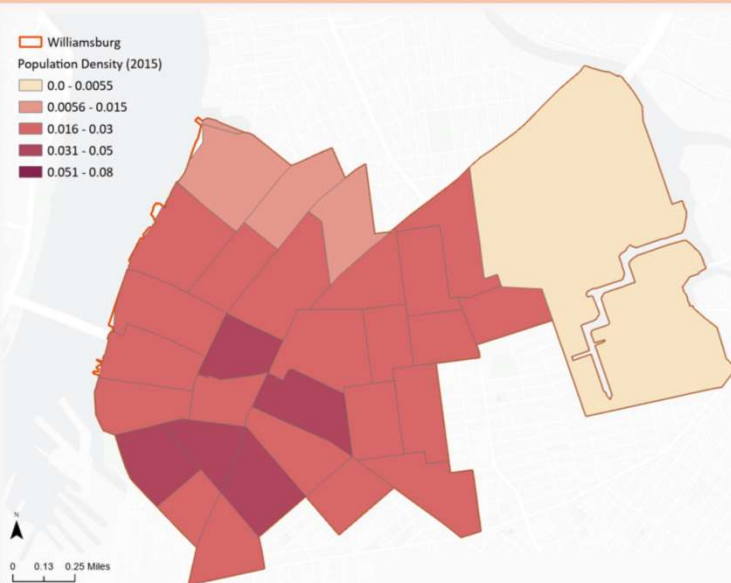


As a trend, Total population is slightly decreasing since 2015, but there are increase in highly populated areas.

2015

Williamsburg
Population Density (2015)

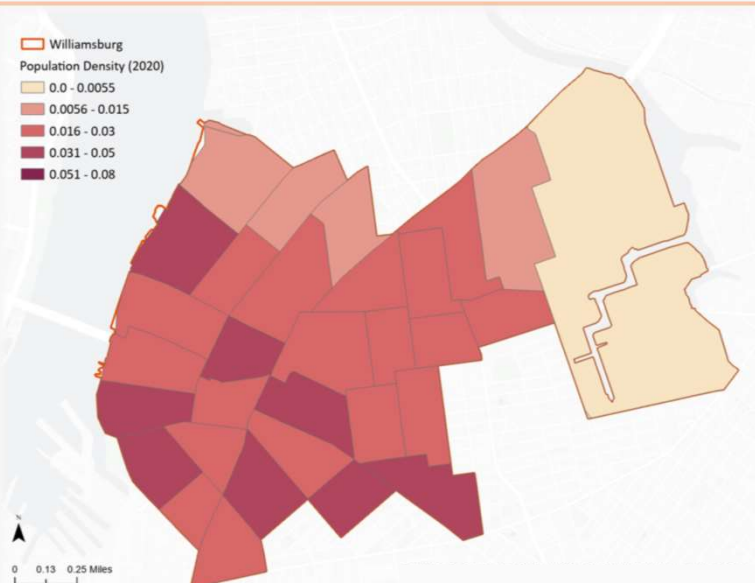
0.0 - 0.0055
0.0056 - 0.015
0.016 - 0.03
0.031 - 0.05
0.051 - 0.08



2020

Williamsburg
Population Density (2020)

0.0 - 0.0055
0.0056 - 0.015
0.016 - 0.03
0.031 - 0.05
0.051 - 0.08

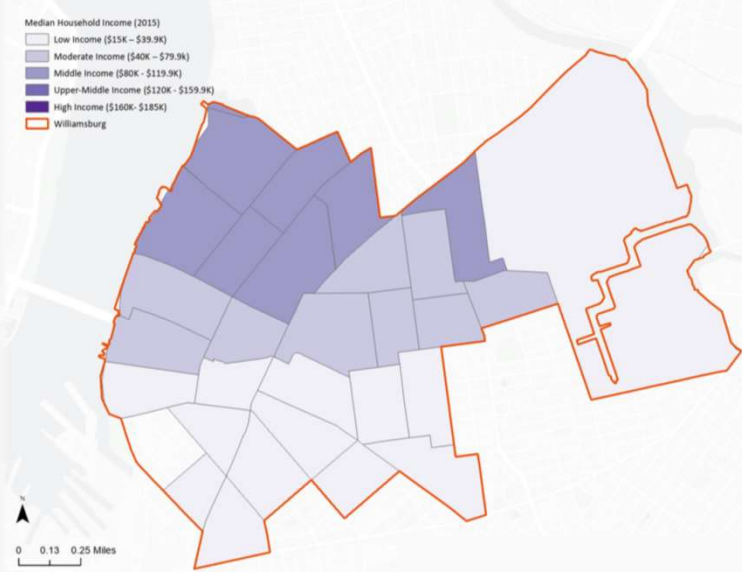


Analysis Median Household Income

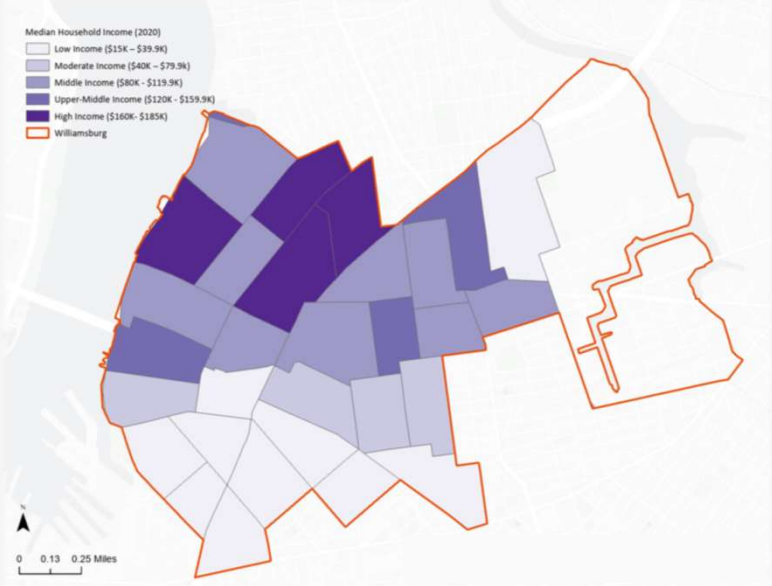
	9.08%		3.5% *Inflation rate: Bureau of Labor Statistic
MHI	2010	2015	2020
Min.	9,001	9,829	11,484
Median	43,616	48,399	64,700
Mean	48,829	54,265	71,143
Max.	163,147	208,036	232,302

2010

As a trend, median household income keeps increasing throughout the timeline. The high-income group started to appear in 2020.



2015

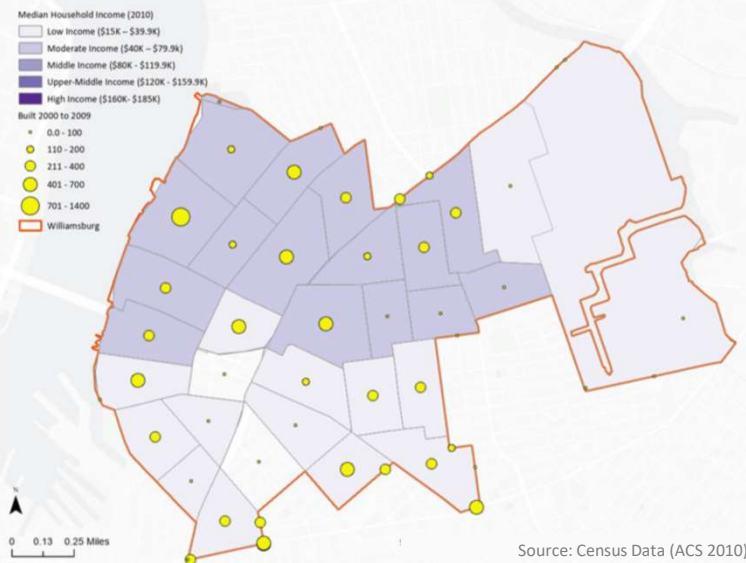


2020

Analysis Median Household Income & Newly Built Housings

As a trend, it shows the development of housings are gradually moving toward north-western part and Waterfront area.

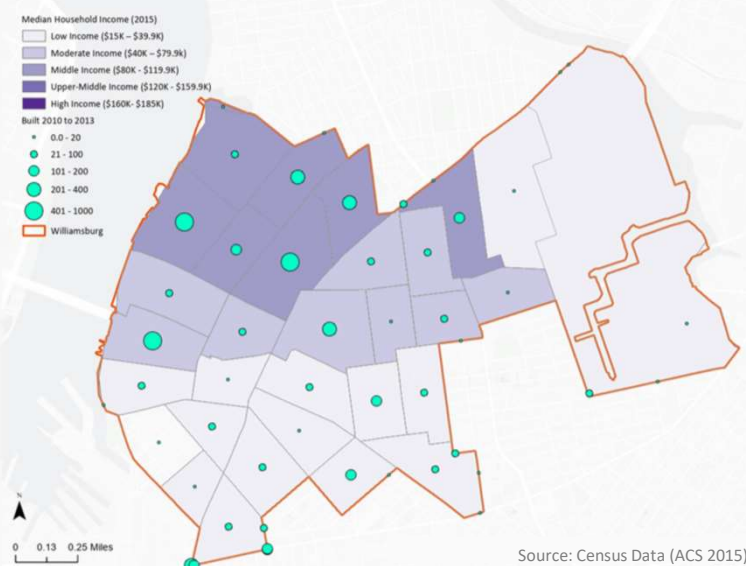
2010



2000 to 2009

Housings were built mostly in the southern part where the low-income population is highly populated

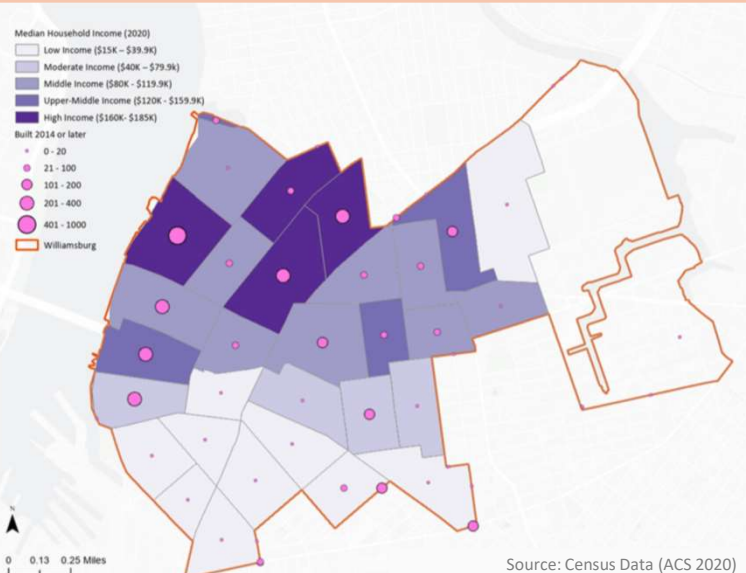
2015



2010 to 2013

Overlaying with Graduated Color map of Median Household Income, newly built housings are concentrated along waterfront and northern part of Williamsburg where overlaps with upper middle-income area during 2010 – 2013.

2020



2014 and after

Newly built housing units are obviously concentrated in the waterfront area overlapping with high income population of Williamsburg

Analysis Working Industry

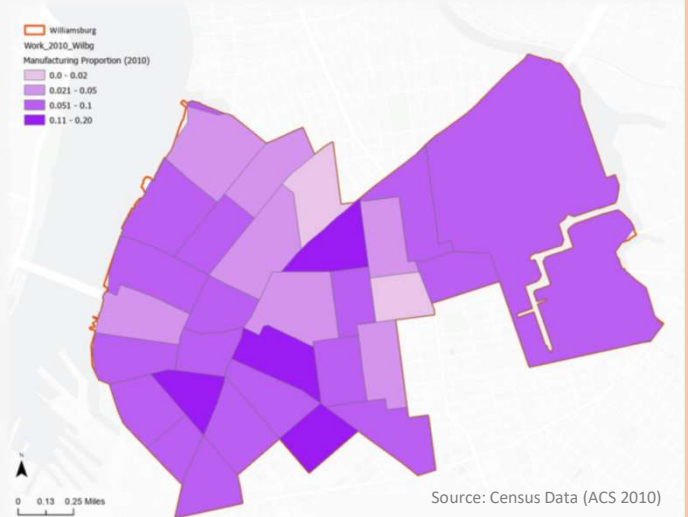
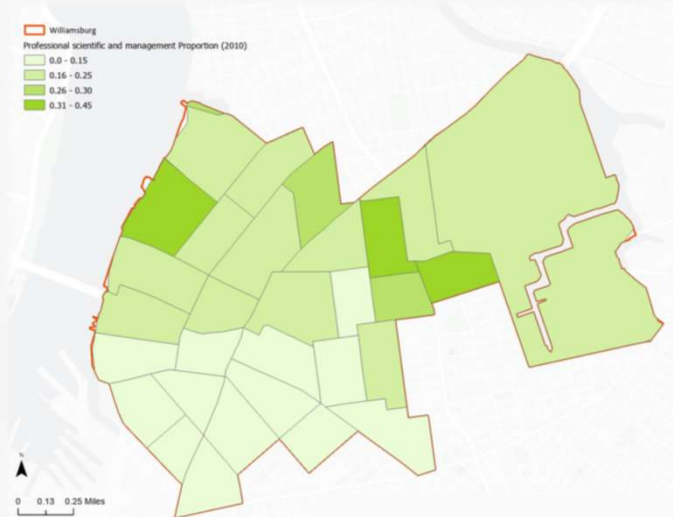
*Drastic decrease in manufacturing population proportion across Williamsburg.
Still remained in southern part and relocated to the **northern part in 2020***

Population Working Industry	2010	2015	2020
Manufacturing	50,949	46,594	7,448
Professional	129,028	146,502	175,057

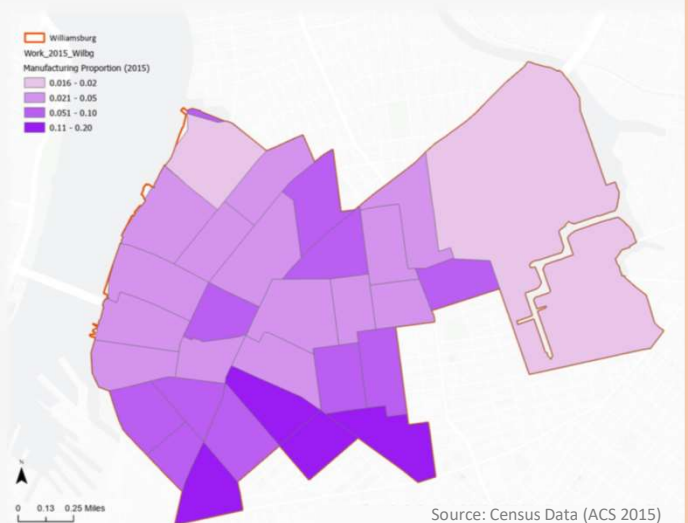
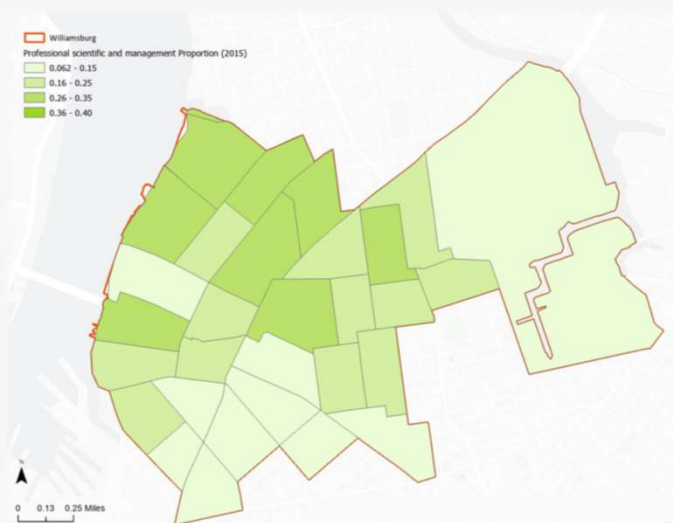
2010

Professional Scientific/ Management

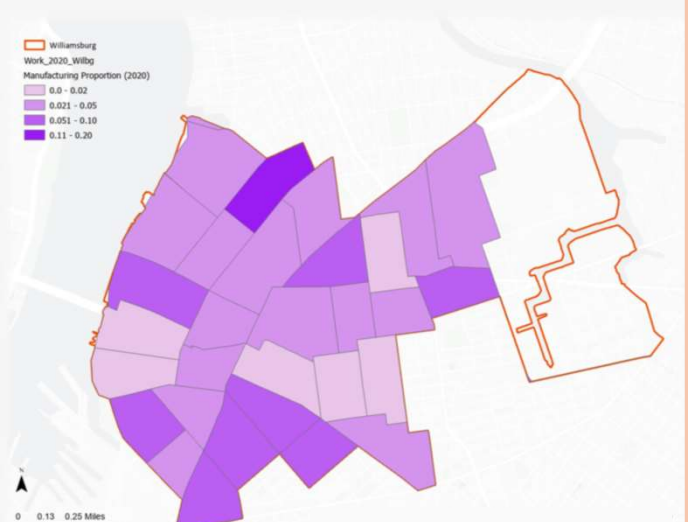
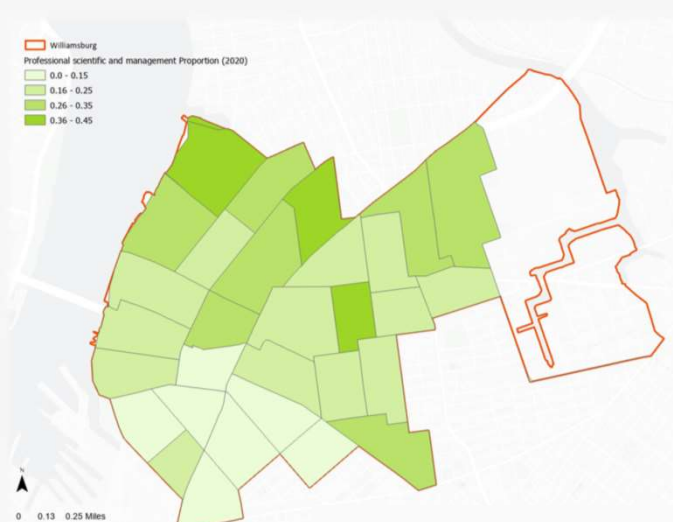
Manufacturing



2015



2020



Findings and Summary

The large-scale rezoning plan for Williamsburg has significantly transformed the neighborhood, making it more residential-friendly. A notable 81% of Williamsburg's adopted zoning applications were recorded after the rezoning went into effect in May 2005. Newly constructed housing developments are primarily concentrated in the waterfront and northern areas, where the changes have been most pronounced.

In terms of socio-economic and built environment impacts, the northern and waterfront areas have experienced extensive development from 2010 to 2020. These areas now feature expanded open spaces and commercial hubs, such as Domino Park, which have attracted high-income and professional populations. However, analysis shows that the southern part of Williamsburg, located below the subway line, remains underinvested, with fewer new housing developments. This southern area is characterized by a lower median household income and a population still connected to manufacturing industries, either residing there or having relocated from other parts of the neighborhood.

The contrasting patterns in development between the northern and southern areas highlight a growing socio-economic divide within Williamsburg, driven in part by the uneven effects of rezoning and investment.

Summary Statistics

Recommendations

Development is highly concentrated in the waterfront and northern areas, featuring parks and upscale, mixed-use residential housing. Therefore, it is necessary to review the zoning and planning for the southern part of Williamsburg to address and minimize inequality and disparity within the neighborhood.

Data Sources

Data Type	Data source	Description	Format	Unit
Median Household Income	American Community Survey (ACS)	DP03: Economic Characteristics	csv	Census Tract
Working Industry	American Community Survey (ACS)	DP03: Economic Characteristics	csv	Census Tract
Race/Population	American Community Survey (ACS)	DP05: Demographic Characteristics	csv	Census Tract
Year Move-In	American Community Survey (ACS)	DP04: Housing Characteristics	csv	Census Tract
Year Built	American Community Survey (ACS)	DP04: Housing Characteristics	csv	Census Tract
Land Use	NYC Department of City Planning	PLUTO/MapPLUTO	csv/shp	Tax lot
Zoning	NYC Department of City Planning	NYC GIS Zoning Features	shp	Zoning Districts

Boundary and Shape Data

Data Type	Data source	Format
Census Tract	NYC Open Data	shp
NTA	NYC Department of City Planning	shp
Borough Boundaries	NYC Open Data	shp

References

Times, N. Y. (2024, February 22). Williamsburg, Brooklyn: A historical timeline of the NYC neighborhood. *The New York Times*. <https://www.nytimes.com/interactive/2024/01/29/style/williamsburg-brooklyn-history-timeline.html>

NYC Open Data: ACS of NTA level

<https://www.nyc.gov/site/planning/data-maps/open-data/dwn-acs-nta.page>

Census Tract

<https://www.census.gov/>

NYC Department of Finance: Property Valuation and Assessment Data Tax Classes 1,2,3,4

https://data.cityofnewyork.us/City-Government/Property-Valuation-and-Assessment-Data-Tax-Classes/8y4t-faws/about_data

NYC Planning: ZoLA (New York City's Zoning and Land Use Map)

<https://zola.planning.nyc.gov/>

Zoning

<https://www.nyc.gov/site/planning/zoning/districts-tools/residence-districts-r1-r10.page>

Zoning change (Executive Summary)

https://www.nyc.gov/assets/planning/download/pdf/plans/greenpoint-williamsburg/feis_exec_sum.pdf

History of Williamsburg

<https://abode-newyork.com/blogs/news/williamsburg-brooklyn-a-focused-history?srltid=AfmBOophbgxZ4T-sA9FcEZ4LDIYaLStquPztNIA5wPg0uK0G6t1qNcIV>