Jersey City Bike Infrastructure Analysis - 2022

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Introduction

In April 2012, Jersey City unveiled its first permanent bike lane (Little, 2012), stretching across the downtown street of Grove Street. Since then, Grove Street's bike lane has been transformed into a protected bike lane (Fry, 2019), and a total of 9.4 miles of protected bike lanes will stretch throughout the city (Jersey City City Hall, 2020). From the vast redevelopment of Jersey City and its Master Plan containing a Bike Plan as one of its seven core elements (Brown, 2020) it appears that biking in Jersey City is becoming an embedded aspect of the city.

Alongside the development of this public infrastructure, the privately owned bike-share service Citi Bike has also been growing within Jersey City. In 2015, Citi Bike launched 35 stations in Jersey City (Chaban, 2015). Since then, it has grown to over 80 stations, and has already accumulated over 800,000 trips in 2022 (*Citi Bike System Data - NYC*, 2022). While Citi Bike is a privately-owned service, Jersey City lists its services and availability on its official government resources as a means of transportation, showcasing its broad adoption by the City. With the vast growth of both rides and stations, Citi Bike is also becoming an embedded system, as it offers an alternative form of transportation for both commuting and recreation within and outside the city.

However, it is apparent that this growth of cycling infrastructure is not equally distributed nor is it at a complete phase. Currently, there are under 60 miles of bike lanes compared to 218 road miles (Patel, 2019). A quick view of Citi Bike's station locations reveals a concentration in the newly redeveloped downtown areas, while largely absent elsewhere. The current Bike Plan contains two priorities: Network and Equity (Patel, 2019). In this paper, we examine these priorities by looking into how current bike infrastructure supports the residents in terms of the connectedness (Network) and who is being served (Equity) by current bike infrastructure. Based on our findings, we also suggest sites for both future bike lanes and Citi Bike stations in order to address observations in the current status.

Methodology & Analysis

Bike Lane Review:

There are now 123 bike lanes in Jersey City, categorized into four types, including 87 bike lanes, 19 protected bike lanes, 4 shared-use lanes, and 13 shared-use paths. Their total length is approximately 58 miles. In addition, there are 7 more protected bike lanes that are planned to be built in the future (Jersey City City Hall, 2020). Specifically, a protected bike lane is a transportation pathway that physically separates and protects riders from the right-of-way using a range of techniques, such as planters, curbs, parked cars, or bollards. Protected bike lanes come in many forms, depending on factors such as roadway dimensions, community needs, and safety. And shared-use lanes are generally lanes where bicycles share an environment with vehicles, usually with bicycle signs to remind cyclists of the general area in which they should be riding and also to alert drivers of vehicles to the potential presence of cyclists. Finally, shared-use paths are mainly paths used by pedestrians and cyclists and are either designed to allow them to mix freely within the space (unsegregated) or are allocated to each group by surface marking and signage (segregated) (Delaney et al., 2017).

To analyze the distribution of bike lanes in Jersey City on a macro level, we calculated the numbers and miles of bike lanes in different areas of Jersey City. Bike lanes are most well-established in Downtown Jersey City, with a total of 45 bike lanes covering a distance of 22 miles, followed by Bergen-Lafayette with nearly 20 miles and 22 bike lanes. Conversely, Journal Square has the fewest bike lanes, with only seven and under two miles long. We also observe that current bike lanes are present in nearly all forms of zoning except industrial zoning, but expect that many industrial zones to be recategorized due to mass replanning and redevelopment projects across the city.

To measure the accessibility of the areas where people live close to the bike lanes, we obtained and mapped the Census Block groups neighboring the bike lanes by spatial join. 156 Census Block groups are close to the bike lanes, while 58 Census Block groups do not have good access to the bike lanes. Most of these 58 block groups are concentrated in the central area and northern area of Jersey City.

Citi Bike Review:

Citi Bike is a bike-sharing system that operates in several cities in the United States, including Jersey City, New Jersey. It is likely that popular trips for Citi Bike users in Jersey City would depend on the specific location of docking stations and the destinations that are most convenient and popular for bike travel in the area. Some popular destinations in Jersey City might include parks, recreational areas, cultural attractions and commercial districts. It is also possible that Citi Bike users in Jersey City may use the system for commuting to work or school, or for running errands around the city. To find out more about the most popular trips for Citi Bike users in Jersey City, we looked at data that included Citi Bike trip history, public transit data, bike lane data and more. To get a better understanding of how Citi Bike was performing, we mapped out the ridership data provided by Citi Bike where we observed that the most popular station was the Grove St. PATH station. A majority of the trips between the years 2019 and 2022 centered around the Grove St. PATH station, with the highest One-way, Commuter and Day trips being at 15,311, 9,027, and 13,559 respectively in that time span (Table 1).

Additionally, observing the relationship with transit stations, it is seen that many NJ Transit stations have Citi Bike stations nearby, especially at Downtown, Liberty Harbor, The Village, and the Waterfront, with the median distance from a Citi Bike station being less than 600 ft (Figure 4). On assessing commuter ridership, it is noticed that many trips occurred between stations near Light Rail and PATH stations. Bike shares and public transit complement each other as biking can provide easy access between different transit services and transit stations are often in popular areas. Transit also offers an alternative for those who only wish to bike part way and use transit to complete their trip. While there are areas with plenty of Citi Bike stations, there are also places where the density of stations is low to none. Although the areas of Greenville and Bayonne contain multiple public transit stations for the Light Rail and Ferry, there is currently no Citi Bike infrastructure.

Collision Review:

While observing where bike lanes and Citi Bike stations are provides an idea of where Jersey City residents choose to ride bicycles, it does not provide a full picture of all routes taken. To improve our understanding of where cyclists decide to ride, we explore motor vehicle collision data provided by New Jersey Department of Transportation (NJDOT), where bicycle-related collisions data from 2006-2019 have been released. After filtering and processing this data, 1,421 bicycle-related collisions could be mapped for analysis. Hot spots of these crashes were calculated and then overlaid by bike infrastructure.

Many of these high collision hotspots occur within areas of bike lane coverage or areas that correspond to major Citi Bike routes such as around Grove St. and McGinley Square. Though this is counterintuitive as bike lanes should provide safety, this could be easily explained by cyclists choosing roads with bike lanes opposed to streets without bike lanes, resulting in increased collisions when bike infrastructure is present.

Collision hotspots are also found in areas without any bike infrastructure. Going northeast from the cluster of bike lanes in Greeneville, it appears that a consistent stream of collisions have occurred in the 2006-2019 span going along Bergen Ave and Martin Luther King Drive. Our understanding is that these are major routes that Jersey City cyclists take but lack key bike infrastructure. Future analysis could look into how the introduction of a bike lane impacts safety but currently the NJDOT data quality is poor

both in terms of records and accuracy, only recording 1 of 9 fatalities in 2008-2017 (Jersey City Vision Zero, 2019) and having the closest street intersection instead of coordinates available for 98% of records.

Demographic Review:

To analyze the Equity priority of the city's Bike Plan, it is necessary to look at what demographics and areas are being focused on by current infrastructure. Utilizing Census Block Group-level information, we look into which communities are being prioritized and which are under-served. In the current Bike Plan goals, it is stated that all residents should have access to a bike plane within a quarter mile and that there should be a focus on erasing racial discrimination and investment in Communities of Concern, or under-served communities that notably rely on affordable transportation (Ezike et al., 2020, 1).

To quantify accessibility, we define access to a bike lane by a resident if that resident's Block Group contains a bike lane and access to a Citi Bike station if that Block Group is a quarter mile away from a station. We then explore which Census Block Groups and their associated populations have access and breakdown demographic coverage to identify discrepancies.

Breakdown by Race		
Race	Bike Lane Access	Citi Bike Access
Overall	207,232 (70.86%)	217,933 (74.52%)
Hispanic	52,240 (71.78%)	50,560 (69.47%)
White	51,495 (73.96%)	59,993 (86.17%)
Black	37,065 (68.39%)	30,865 (56.95%)
Asian	56,111 (68.91%)	66,301 (81.43%)

Breakdown by Age		
Age Bucket	Bike Lane Access	Citi Bike Access
Overall	201,424 (70.15%)	210,822 (73.42%)
Ages 0-19	44,418 (68.65%)	44,057 (68.09%)
Ages 20-29	33,794 (71.09%)	37,131 (78.11%)
Ages 30-39	44,361 (71.43%)	50,616 (81.50%)
Ages 40-49	26,656 (72.93%)	26,489 (72.47%)
Ages 50-59	20,665 (67.28%)	21,392 (69.65%)
Ages 60+	31,530 (69.24%)	31,137 (68.38%)

Breakdown by Household Income		
Income Bucket	Bike Lane Access	Citi Bike Access
Overall	207,232 (70.86%)	217,933 (74.52%)
$0-30K	118,33 (78.14%)	5,622 (37.13%)
$30K-70K	70,535 (69.54%)	69,011 (68.03%)
$70K-110K	53,614 (67.15%)	59,445 (74.45%)
$110K-150K	17,233 (65.60%)	20,257 (77.12%)
$150K-250K	41,263 (80.00%)	49,893 (97.74%)

Source: U.S. Census Bureau, 2020 Census Redistricting Data (Public Law 94-171); 2017-2021 American Community Survey 5-Year Estimates;

The city appears keen on keeping bike lane access equitable to everyone, never straying too far from the 70% average for any specific group except when it comes to income. Interestingly, it seems that middle-income households have the least access to a bike lane while those near poverty and the very wealthy have similar access. This may be due to the City staying faithful to its focus on Communities of Concern for the lower income group and a demand for such infrastructure by wealthier residents.

Contrastingly, Citi Bike does not seem to keep equity as a focus, which may be the drawback of relying on a private company to offer a public service. Despite being endorsed by the City as a form of transportation, it seems that Citi Bike shows clear preferences to certain communities. In terms of race, they significantly under-serve Black residents at only 57% coverage while White residents enjoy 86% coverage. For age and income, it seems that Citi Bike decides to expand in locations that will benefit its profits, such as focusing on areas where 20-39 years olds live as they seem to be the target demographic (Figure 3) and also prioritize covering wealthier neighborhoods as the wealthiest income bucket enjoys 98% coverage in comparison to 37% for the lowest. While it is logical that Citi Bike would only expand in areas where it finds its ideal customers, it comes at the cost of being an equitable public good. However, understanding that it both targets younger adults and higher income neighborhoods, this can be used to rectify some of the race coverage disparities, as seen later on.

We also look at Healthcare and Crime. For healthcare, we use the ESRI collected Market Potential Index for Regularly Exercising Adults and find that nearly all of Jersey City has an average or

higher than average index compared to the nation, which reveals a healthy customer base willing to use biking as a mode of transportation. For crime, we try to identify areas of high property and theft-related crimes by using 2017 crime data released by Jersey City and see if those areas are avoided by either form of infrastructure but find no noticeable pattern. This lack of pattern may be caused by a lack of recency in data but Jersey City has not provided any more recent crime data publicly.

Suggestions:

In order to address current gaps in both connectedness and equity, we provide 3 suggestions. The first suggestion is to add Citi Bike stations at Port Liberte Ferry Terminal and Danforth Ave Light Rail Station and then connect them with a bike lane via Chapel Ave. This would provide a form of transportation between the Light Rail and the Ferry, as there is currently no public option in that area.

The second is to add a Citi Bike station at the intersection of Warner Ave & Martin Luther King Drive in Greeneville. This would provide access to the predominantly Black community there, increasing Black resident coverage by an estimated 8,800, an increase of 16%. It also fits with Citi Bikes target demographic, having younger adults (30%-65% 20-39 years olds) and also wealthier households (60K-130K) in the area. Additionally, this station would sit next to a bus stop and also could connect to the first suggestions, providing access for Greeneville to the Light Rail and Ferry.

The third is to add two bike lanes that would extend connectedness to Downtown Jersey City. While there are clusters of bike lanes in the southwest and in the north, they lack a direct bike route to Downtown. Instead, many riders still make the decision to ride without a bike lane as seen in the collision report. We propose adding a bike lane from Bestwick Ave to Storms Ave via Martin Luther King Drive & Monticello Ave and from Carlton Ave to Pavonia Ave via Summit Ave to resolve this network gap.
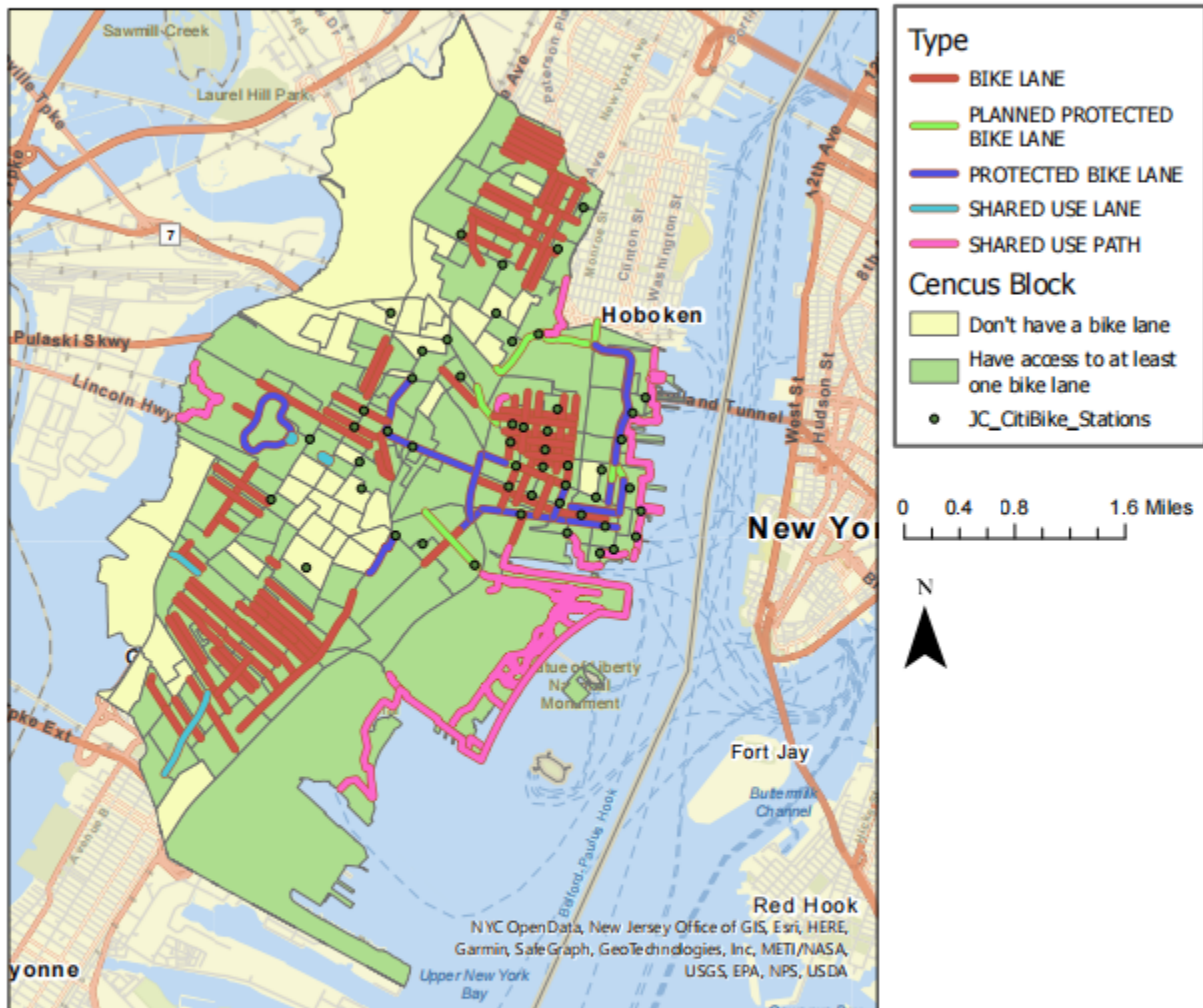
Conclusion:

Bike infrastructure such as dedicated bike lanes and bike-share programs can have a number of benefits for both individuals and communities. It provides a safe and convenient way to travel, leading to increased physical activity and improved health outcomes, and also is a cost-effective and environmentally friendly transportation alternative (Patel, 2019). As for communities, bike infrastructure stimulate economic development by attracting businesses and tourists (Brown, 2020).

After conducting a study to understand the biking infrastructure in Jersey City, here are our conclusions. Jersey City's bike lanes have covered most of the city and are relatively equal for all types of people. However, there is still room for improvement in the construction of bike lanes in Jersey City. About 30% of the population lives in census block groups that do not have bike lanes, and there are areas that have a high number of riders but do not have a bike lane, which leads to frequent collisions. For Citi Bike Jersey City, we found Grove St. PATH station is the busiest station in Jersey City, and the distribution of stations is highly correlated with the distribution of public transportation in Jersey City. As a private company, Citi Bike's station distribution was not equitable for all and seems more focused on profit. Their primary target demographics are found to be the 20-39 year old group and the high income households, and currently are very to White residents but under-serve minorities such as Black and Hispanic residents.

Uncovering these concerns, we make 3 infrastructure suggestions that would help alleviate these issues and promote both connectedness and equity in biking. The first serves to connect more public transit with each other, the second attempts to increase accessibility to Black residents, and the third produces bike lanes to protect riders on an existing route. While these may not be feasible for other reasons such as costs or residential opposition, we hope that they highlight what Jersey City needs to focus on to continue to grow a connected and equitable biking infrastructure.

Different Types of Bike Lanes &
Bike Lane Accessibility of Census Block Groups

Type

— BIKE LANE
— PLANNED PROTECTED BIKE LANE
— PROTECTED BIKE LANE
— SHARED USE LANE
— SHARED USE PATH

Cencus Block

Don't have a bike lane
Have access to at least one bike lane
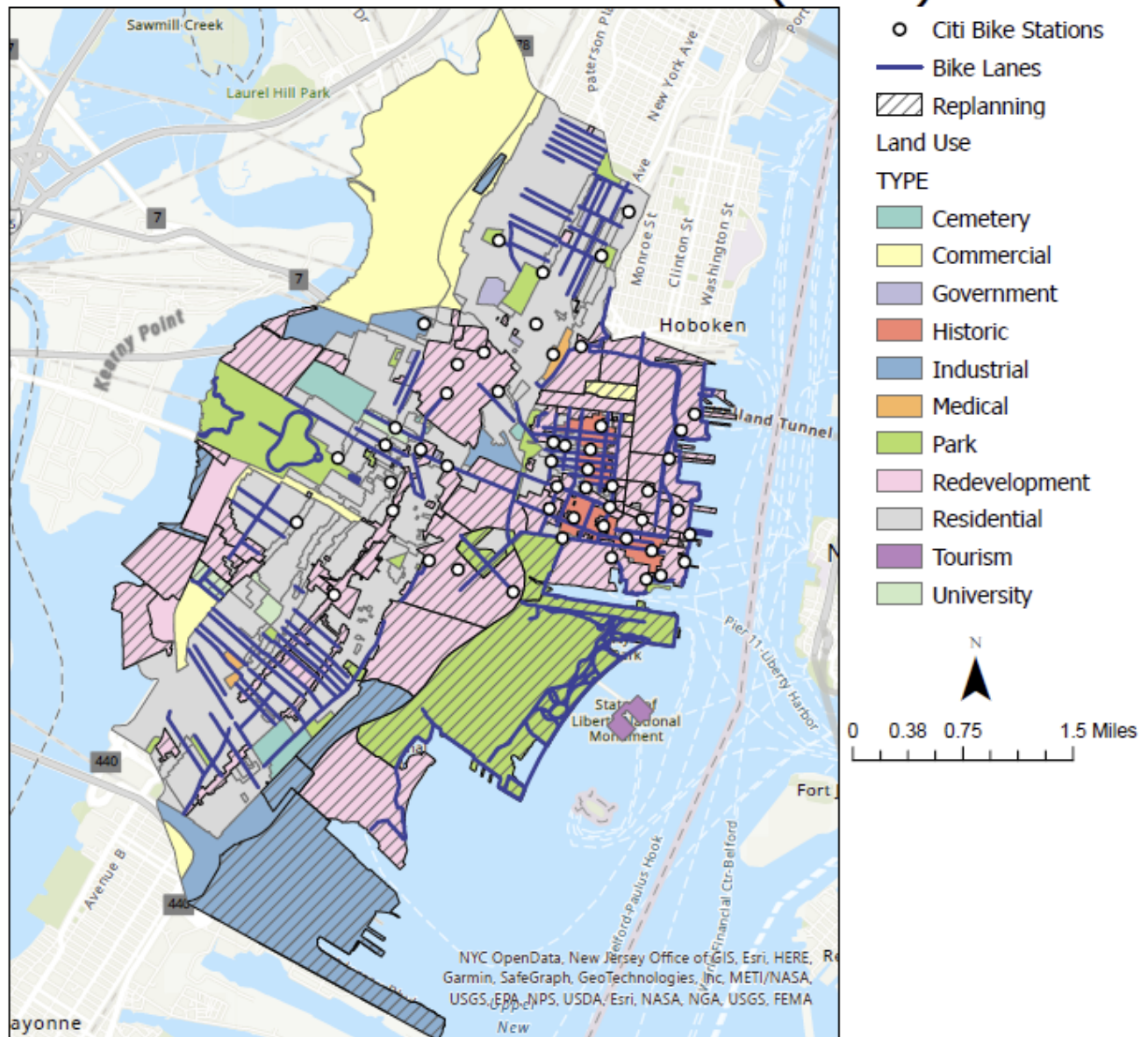• JC_CitiBike_Stations

0   0.4   0.8   1.6 Miles

N

This map shows the distribution of bike lanes of different types in Jersey City, and people's accessibility to bike lanes in all the Census Block groups. 156 out of 214 Census Block groups have access to bike lanes in Jersey City.

Data Source: Jersey City Open Data

Jersey City, NJ Land Use
# & Current Bike Infrastructure (2021)

Current Jersey City Land Use has many moving parts. With many of the zones now considered in the replanning phase, original land uses are now being replaced by multi-use areas. Even formally industrial, parks, and commercial areas are now finding themselves be re-evaluated by land use.

Current Bike Infrastructure seems to be built nearly every where regardless of land use, showcasing that land use should not prevent the construction of future bike infrastructure.
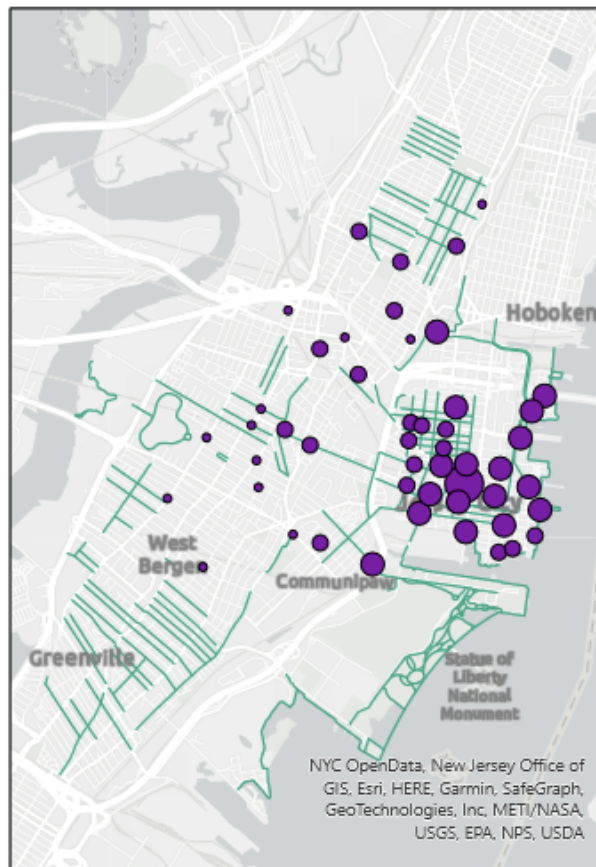
Source: Jersey City - Division of City Planning

October 2022 Citi Bike Trip Start and End Locations
Jersey City, NJ

Trip Starts Locations
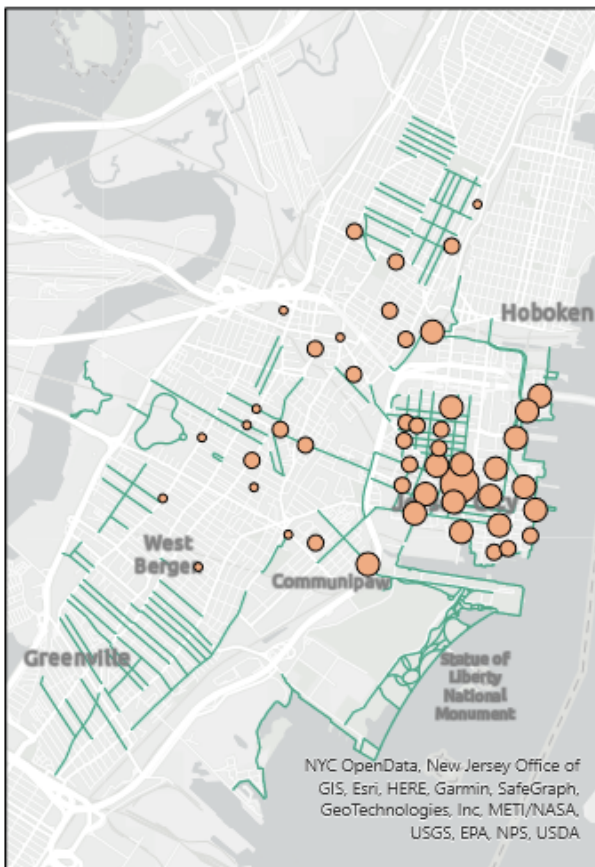
Trip End Locations

To observe how active current Citi Bike stations are, we look how often stations are used to start and end trips. From what we observe, these values are highly correlated (r=0.99) so that stations with a large number of trip starts have a large number of trip ends. This may help simplify further analysis by only looking at one set of numbers, either the starts or the ends.

It is also seen that stations closer to the shore have many more trips in comparison to the northern and western stations. This may just follow population trends and would need further analysis to factor that effect out.

N

0   0.38 0.75   1.5 Miles

Start Locations
Trip Counts
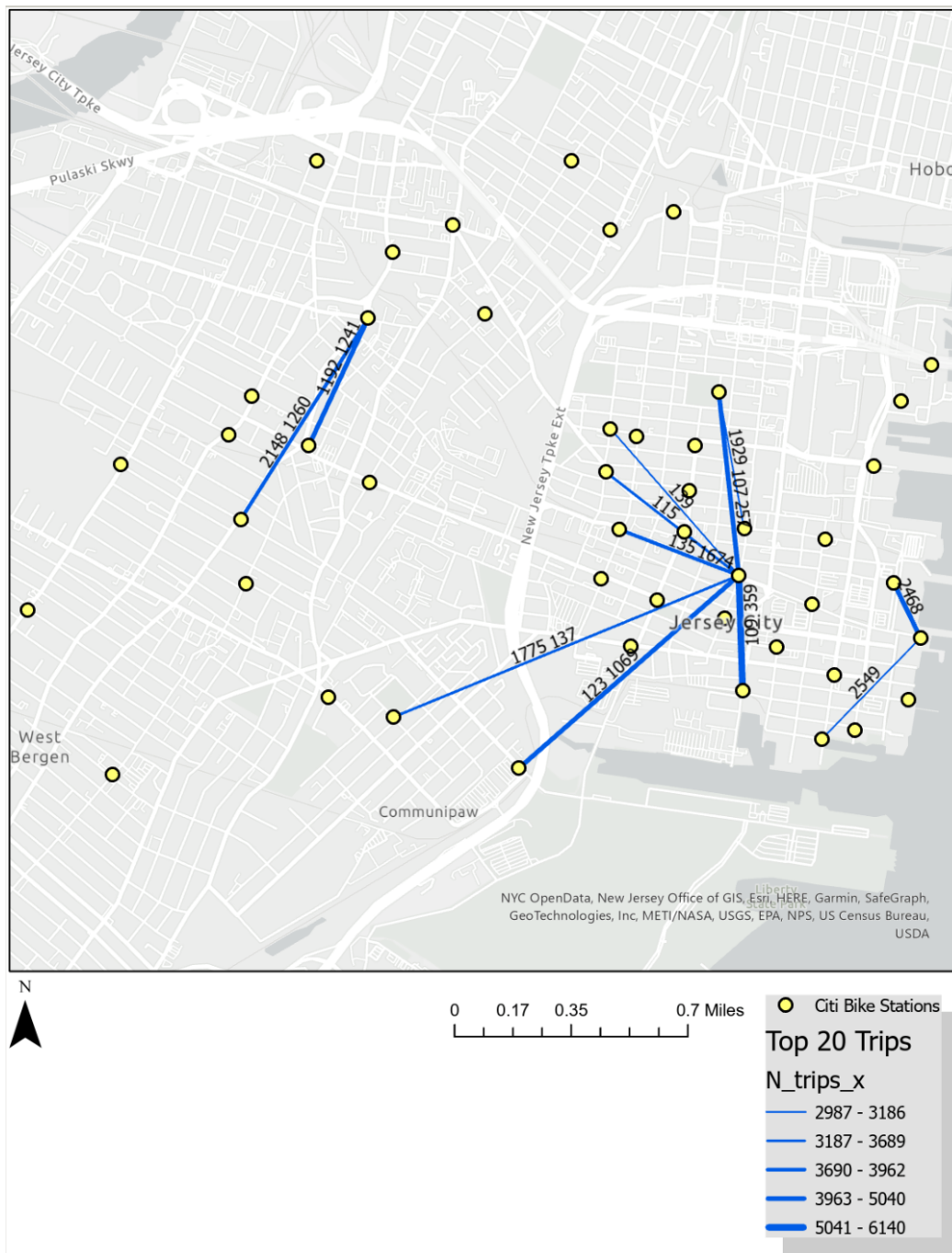
- 167 - 500
- 501 - 1000
- 1001 - 2500
- 2501 - 5000

End Locations
Trip Counts

- 151 - 500
- 501 - 1000
- 1001 - 2500
- 2501 - 5000

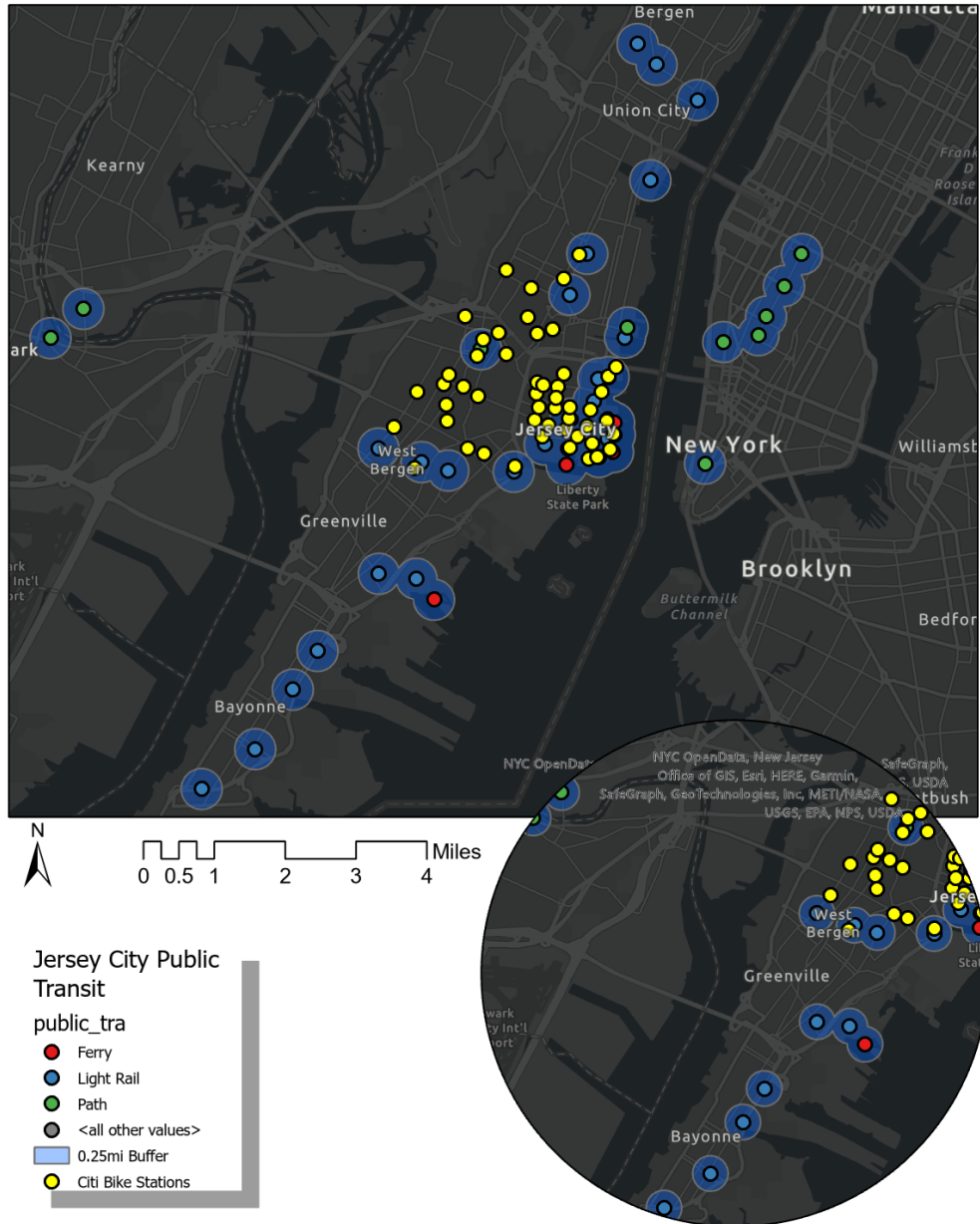Source: Citi Bike, Jersey City - Department of Transportation

Citi Bike Ridership

To map the most popular trips, we used the ridership data from Citi Bike. Data was cleaned since a lot of it was in different formats. Once we got the dataset with both Start Station ID, End Station ID, and their respective geometries, we filtered out the top 20 trips and used the Geoprocessing tool 'XY to Line' to plot trips between popular stations. Here, we found that the Grove St. PATH station had one of the highest number of trips.
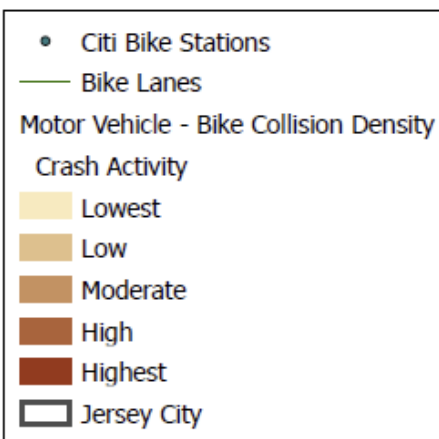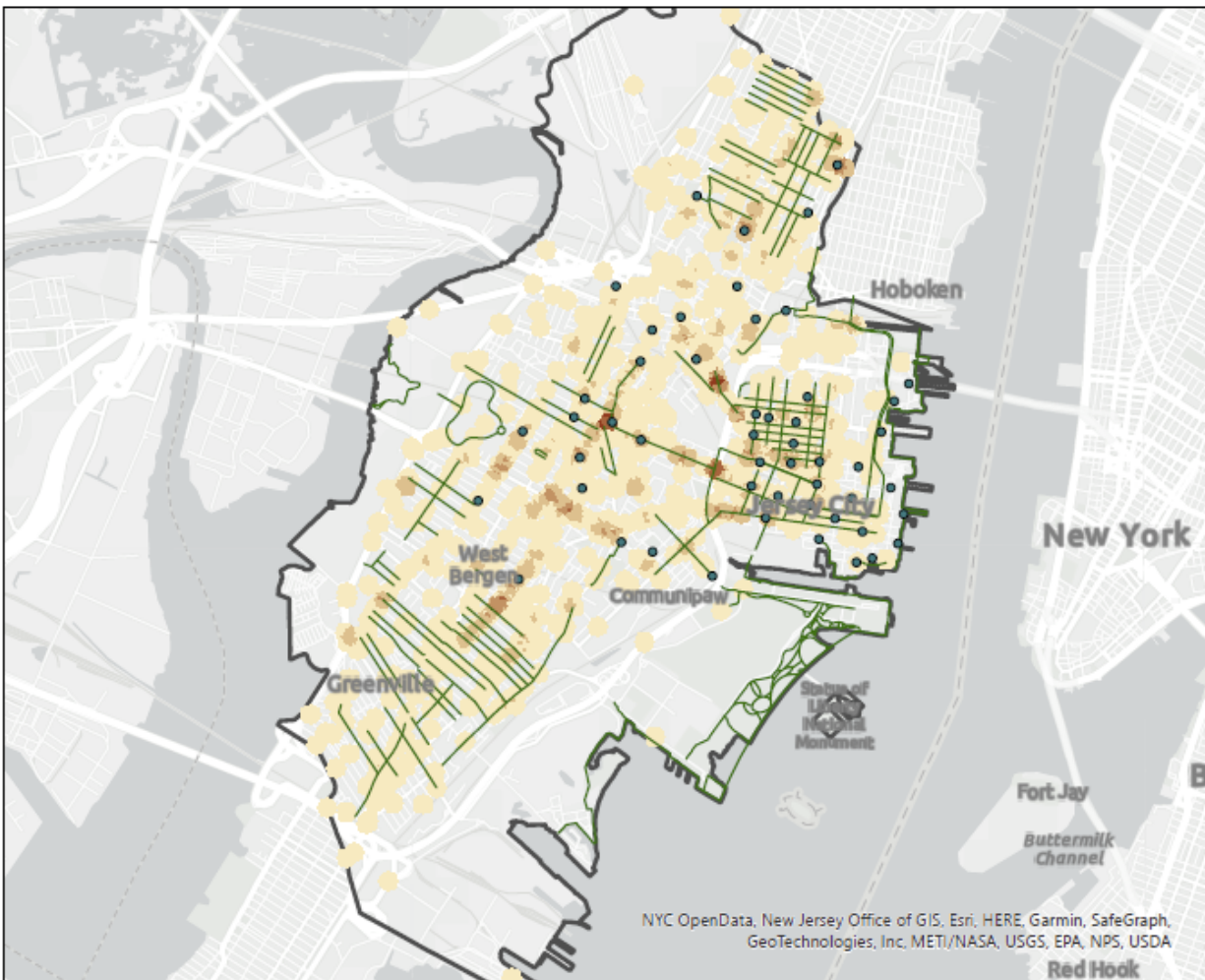
Source - Citi Bike

Citi Bike stations with respect to NJ Transit

Jersey City Public Transit

public_tra
- ● Ferry
- ● Light Rail
- ● Path
- ● <all other values>
- ▭ 0.25mi Buffer
- ● Citi Bike Stations

To get a better understanding of how Citi Bikes are being used in the city of Jersey, we looked at the New Jersey public transit stations. We wanted to have a look at the proximity between the Citi Bike stations and transit stations and to do this, we applied a simple buffer with a distance of 0.25 miles. We figured 0.25 miles is a good distance as people would be willing to walk for 5 minutes as opposed to 20 minutes. After applying the buffer, it was found that the majority of Citi Bike stations were located in and around the areas of Downtown Jersey City, Liberty Harbor, The Village, and The Waterfront. It was also observed that there was a lack of Citi Bike stations in the Southwest part of Jersey City while there were a few transit stations.

Source - Jersey City - Open Data Portal

Motor Vehicle-Bicycles Collision Density in Jersey City (2006-2019)

Legend

- • Citi Bike Stations
- — Bike Lanes

Motor Vehicle - Bike Collision Density

Crash Activity
- Lowest
- Low
- Moderate
- High
- Highest
- ☐ Jersey City

Utilizing Motor Vehicle Collision 2006-2019 records from NJDOT, over 1421 collisions involving bicycles were identified as being within Jersey City. Once geocoded via the Google Maps API and then passed through a density function, several high collision areas are identified.

While it is not possible in this study to identify the effect of bike lanes and the safety due to both perceived low quality in the collision records(fewer records than expected, missing longitude and latitudes and/or addresses) and missing attributes in the Bike Lane data (missing year completed), it is however possible to identify that while bike lanes do exist in many collision hot spots, many other high collision areas exist outside of bike lane areas. 835 (59%) of the recorded collisions are observed to be 100 feet or more away from a bike lane.

Source: NJDOT, Jersey City DOT, Google Maps Geocoding API

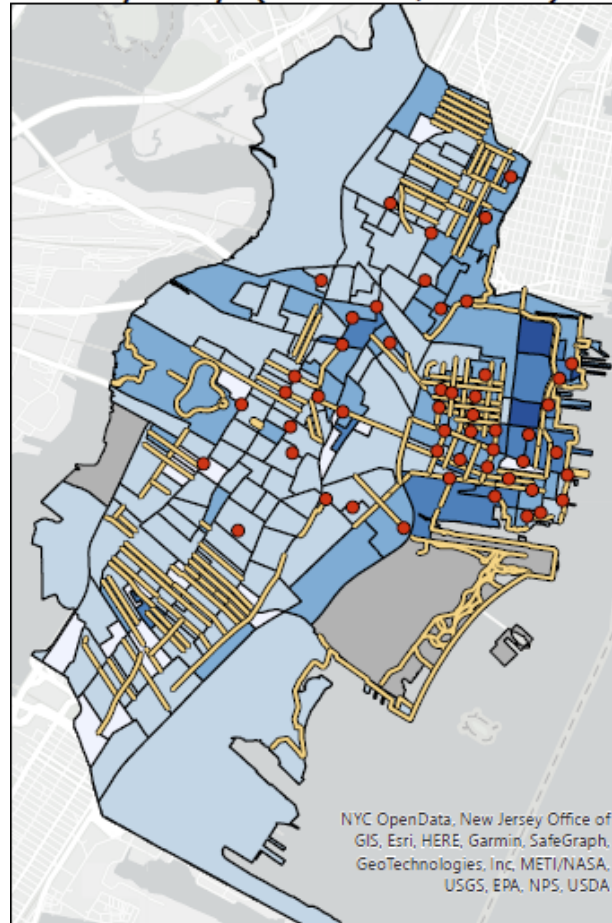# Citi Bike Stations & Bike Lanes Overlaying Jersey City, NJ Census Block Groups - White Population, 2020
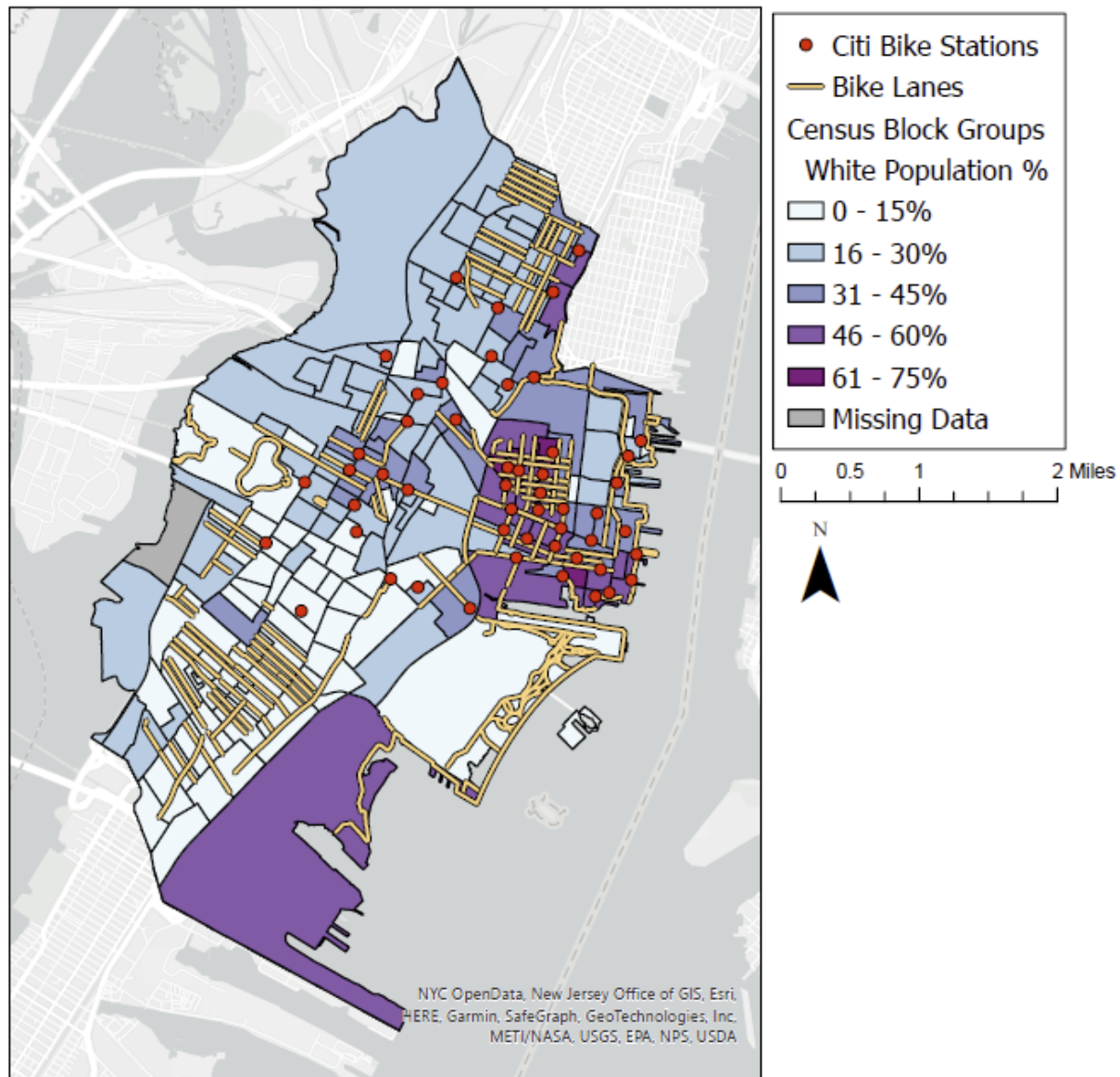
When analyzing bike infrastructure by race, there seems to be significant discrepancies. While bike lanes generally have strong coverage overall, doing a spatial join reveals that proportionally, Black residents are served 5% less than White residents. Citi Bike is an even more significant difference, where it is shown that 86% of White residents live in a Census block group within a Citi Bike station's quarter mile buffer, but only 57% of Black residents enjoy that coverage. Hispanic and Asian residents have 69% and 81% Citi Bike coverage respectively.
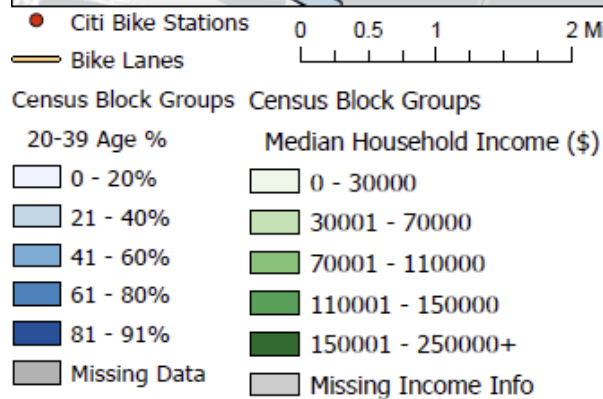
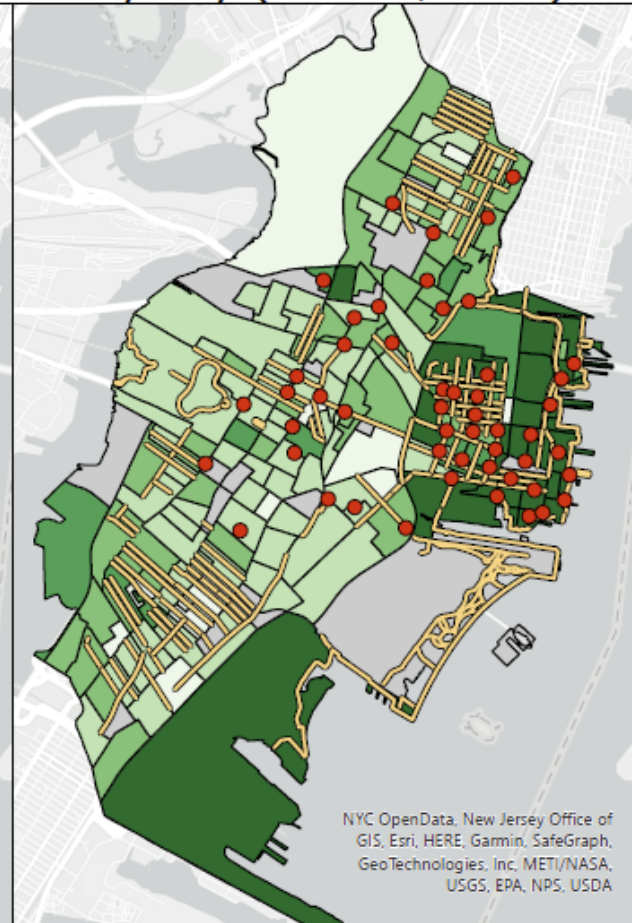This reveals a significant racial discrepancy that the Jersey City Master Bike Plan declares it will eliminate. While Citi Bike is a privately-owned entity, it is regularly mentioned by the City on its resources as a transportation option and should be held to a similar standard as its own infrastructure planning and more should be done by the City to rectify this.

Source: Citi Bike, 2020 Census Redistricting Data, Jersey City DOT

Bike Infrastructure by Age
Jersey City (Census, 2020)

Bike Infrastructure by Income
Jersey City (Census, 2021)

NYC OpenData, New Jersey Office of GIS, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA

NYC OpenData, New Jersey Office of GIS, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA

- • Citi Bike Stations
- — Bike Lanes

0   0.5   1   2 Miles

Census Block Groups
20-39 Age %
- 0 - 20%
- 21 - 40%
- 41 - 60%
- 61 - 80%
- 81 - 91%
- Missing Data

Census Block Groups
Median Household Income ($)
- 0 - 30000
- 30001 - 70000
- 70001 - 110000
- 110001 - 150000
- 150001 - 250000+
- Missing Income Info

N

Source: U.S. Census Bureau, 2020 Census
2017-2021 American Community Survey 5-Year Estimates, JC DOT, Citi Bike

Utilizing Census Block Group data and creating two choropleths on Age and Income, it is easy to observe the differences in how Jersey City approaches bike infrastructure and how Citi Bike does so.

The City appears to focus on providing bike lanes to the general good, not particularly focusing on one demographic and trying to enable accessibility to as many as possible.

Citi Bike, as a private company, strives for profit. It focuses its expansions in areas where income is higher and also where it can find adults in the 20s and 30s to keep its customer base high.

If Citi Bike is a core bike infrastructure for Jersey City, the City must advocate for the communities that currently are underserved by Citi Bike as there are major discrepancies. This view also aids in locating potential sites for future expansions that are in align with current customer demographics, such as high income and a young population.

Citi Bike Stations & Bike Lanes Overlaying Census Block Groups of Jersey City, NJ
Exercise Index (2022) & Property and Theft Crimes (2017)
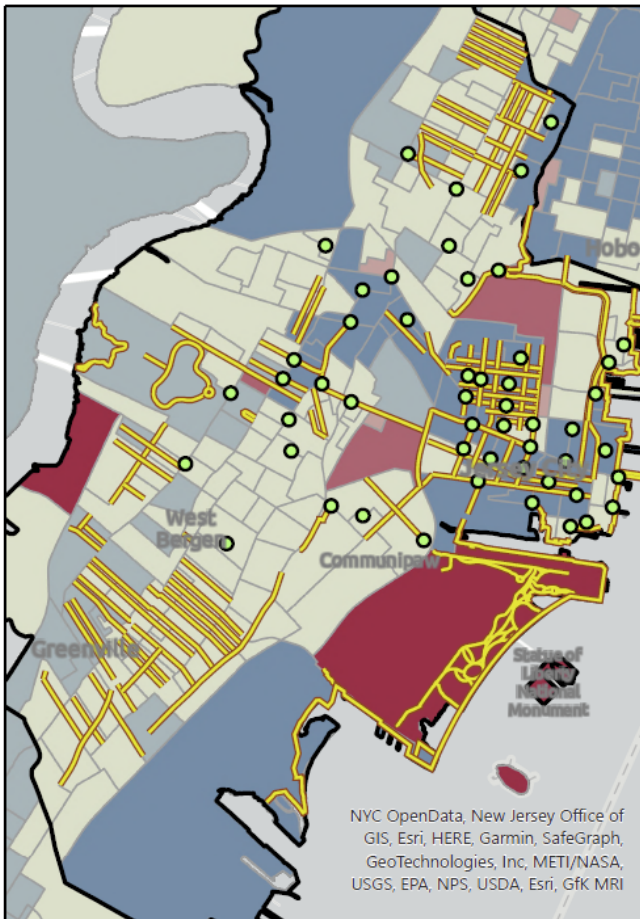
○ Citi Bike Stations

— Bike Lanes

▭ Jersey City

Block Group

2022 Make Sure I Exercise Regularly: 4-Agree Completely: Index

■ 0 - 66 (Lowest Potential)

■ 66 - 81

■ 81 - 90

■ 90 - 110 (Average Potential)

■ 110 - 119

■ 119 - 134

■ 134 - 161 (Highest Potential)

Block Group

2017 Property or Theft Crimes Rate Per Person
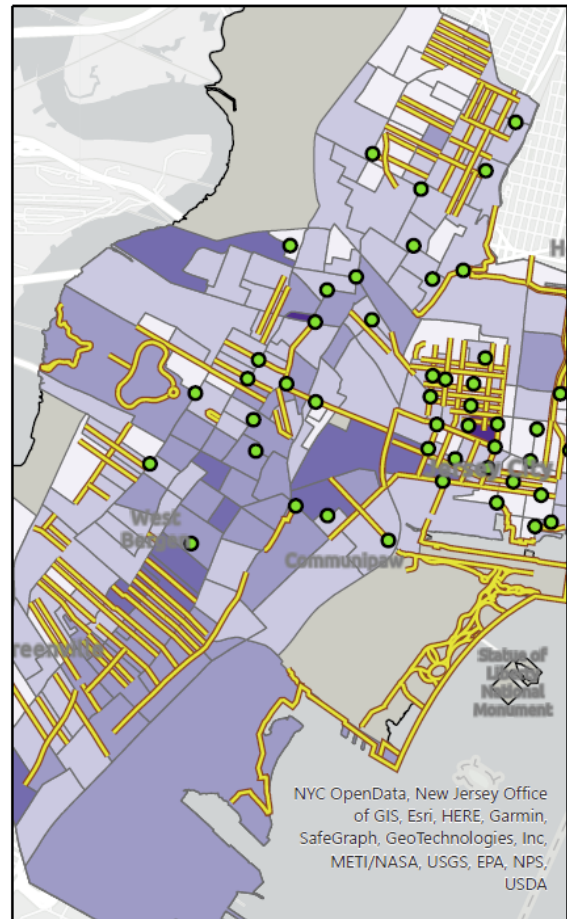
■ 0.0000 - 0.0459

■ 0.0460 - 0.1138

■ 0.1139 - 0.2355

■ 0.2356 - 0.4030

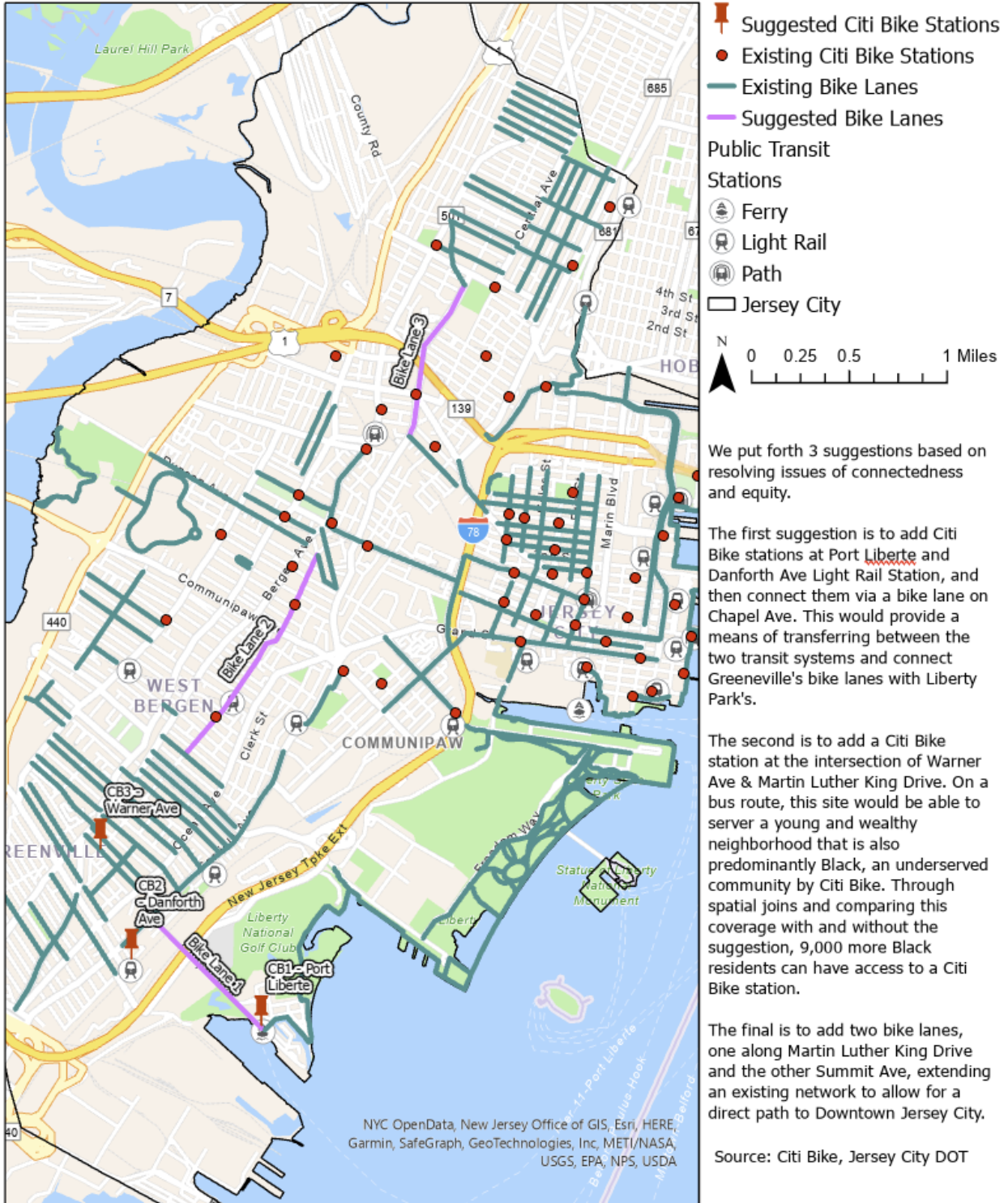■ 0.4031 - 0.8558

▭ Missing Info

The health data provided by ESRI in their Market Potential Index, reveals that many residents of Jersey City consider themselves regularly active, which aids in the expansion of the Citi Bike program by ensuring that there is at least one shared commonality between current and future customers.

The crime data provided by Jersey City surprisingly does not show any strong correlation between the current location of Citi Bike stations and low crime areas, and in fact some Citi Bike stations are near high crime block groups.
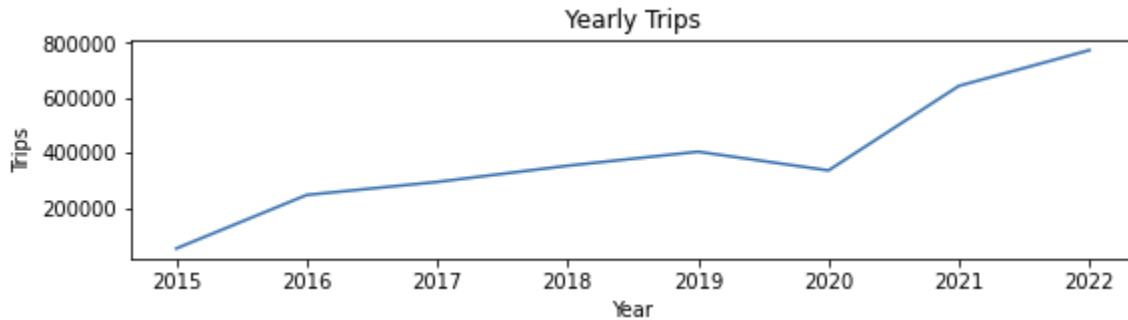
Sources: ESRI, Census, Jersey City Open Data

# Suggestion Locations for Bike Lanes and Citi Bike Stations

Suggested Citi Bike Stations

Existing Citi Bike Stations

Existing Bike Lanes

Suggested Bike Lanes

Public Transit Stations

Ferry

Light Rail

Path

Jersey City

N

0   0.25   0.5   1 Miles

We put forth 3 suggestions based on resolving issues of connectedness and equity.

The first suggestion is to add Citi Bike stations at Port Liberte and Danforth Ave Light Rail Station, and then connect them via a bike lane on Chapel Ave. This would provide a means of transferring between the two transit systems and connect Greeneville's bike lanes with Liberty Park's.

The second is to add a Citi Bike station at the intersection of Warner Ave & Martin Luther King Drive. On a bus route, this site would be able to server a young and wealthy neighborhood that is also predominantly Black, an underserved community by Citi Bike. Through spatial joins and comparing this coverage with and without the suggestion, 9,000 more Black residents can have access to a Citi Bike station.

The final is to add two bike lanes, one along Martin Luther King Drive and the other Summit Ave, extending an existing network to allow for a direct path to Downtown Jersey City.

Source: Citi Bike, Jersey City DOT

NYC OpenData, New Jersey Office of GIS, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA

Citi Bike Trends
Figure 1

Yearly trips continue to grow after a slight dip due to the 2020 pandemic, and the 2022 increase over 2021 outpaces the growth from any previous years, even though 2022 only contains up to October 2022.

Figure 2
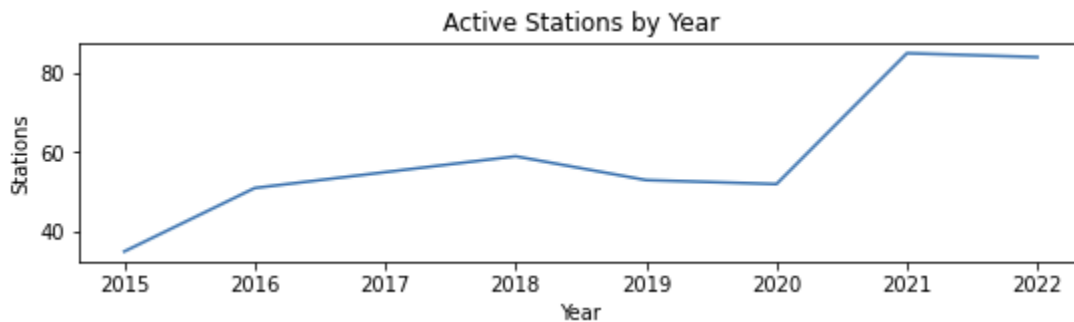
An active station refers to a station that was used at least once to start a trip in Jersey City. From 35 initial stations in 2015, there are now over 80 active stations.

Figure 3
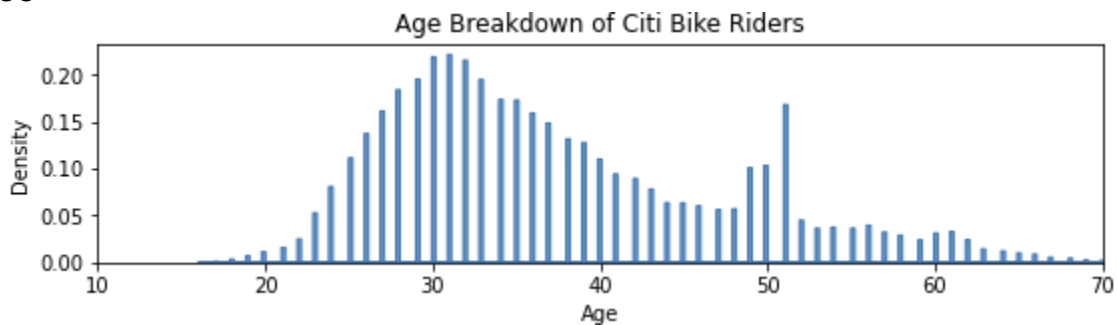
To understand the core users of Citi Bike, we look at the age breakdown, however it should be noted that after 2019, Citi Bike stopped publishing ages or gender. We also expect that the bump at 51 years old is either a default value or an error in data collection.
All data from Citi Bike (Citi Bike System Data - NYC, 2022.).
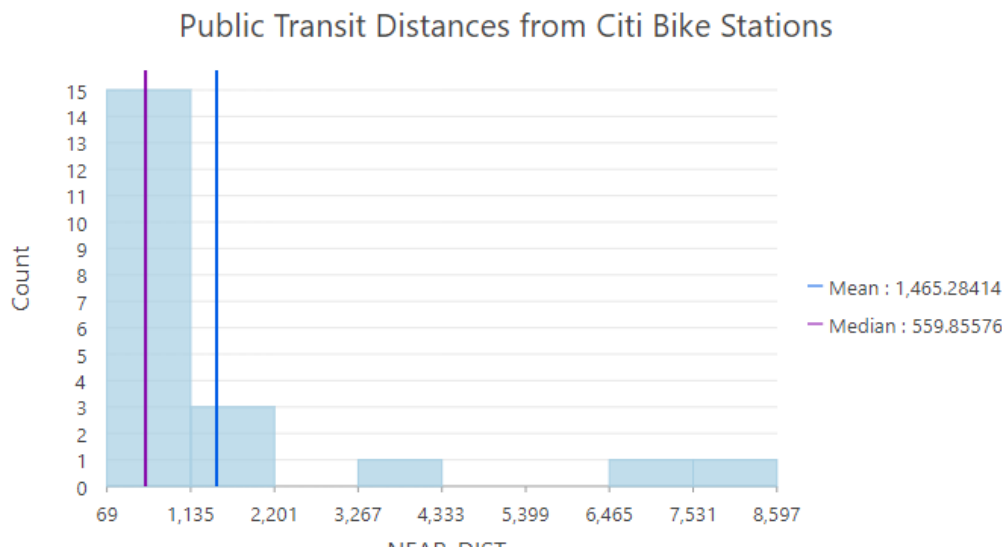
Figure 4

Public Transit Distances from Citi Bike Stations

— Mean : 1,465.28414
— Median : 559.85576

Table 1

All Trips	One-Ways	Commuters	Day Trips	Night Trips
Liberty Light Rail → Liberty Light Rail (17,750)	Hamilton Park → Grove St PATH (15,311)	Hamilton Park → Grove St PATH (9,027)	Hamilton Park → Grove St PATH (13,559)	Sinatra Dr & 1st → Sinatra Dr & 1st (6,802)
Hamilton Park → Grove St PATH (15,311)	Marin Light Rail → Grove St PATH (12,556)	Brunswick & 6th → Grove St PATH (5,565)	Liberty Light Rail → Liberty Light Rail (12,923)	Grove St PATH → Hamilton Park (6,339)
Newport Pkwy → Newport Pkwy (13,230)	Grove St PATH → Hamilton Park (12,357)	Grove St PATH → Hamilton Park (4,999)	Marin Light Rail → Grove St PATH (9,835)	Newport Pkwy → Newport Pkwy (6,021)
Marin Light Rail → Grove St PATH (12,556)	Grove St PATH → Marin Light Rail (11,612)	Marin Light Rail → Grove St PATH (4,934)	McGinley Square → Sip Ave (9,475)	Grove St PATH → Marin Light Rail (5,835)
Grove St PATH → Hamilton Park (12,357)	McGinley Square → Sip Ave (11,357)	Brunswick St → Grove St PATH (4,922)	Brunswick & 6th → Grove St PATH (8,650)	Liberty Light Rail → Liberty Light Rail (4,827)

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