COVID19 IMPACTS ON TRANSPORTATION

Produced by the NYC Department of City Planning's Transportation Division
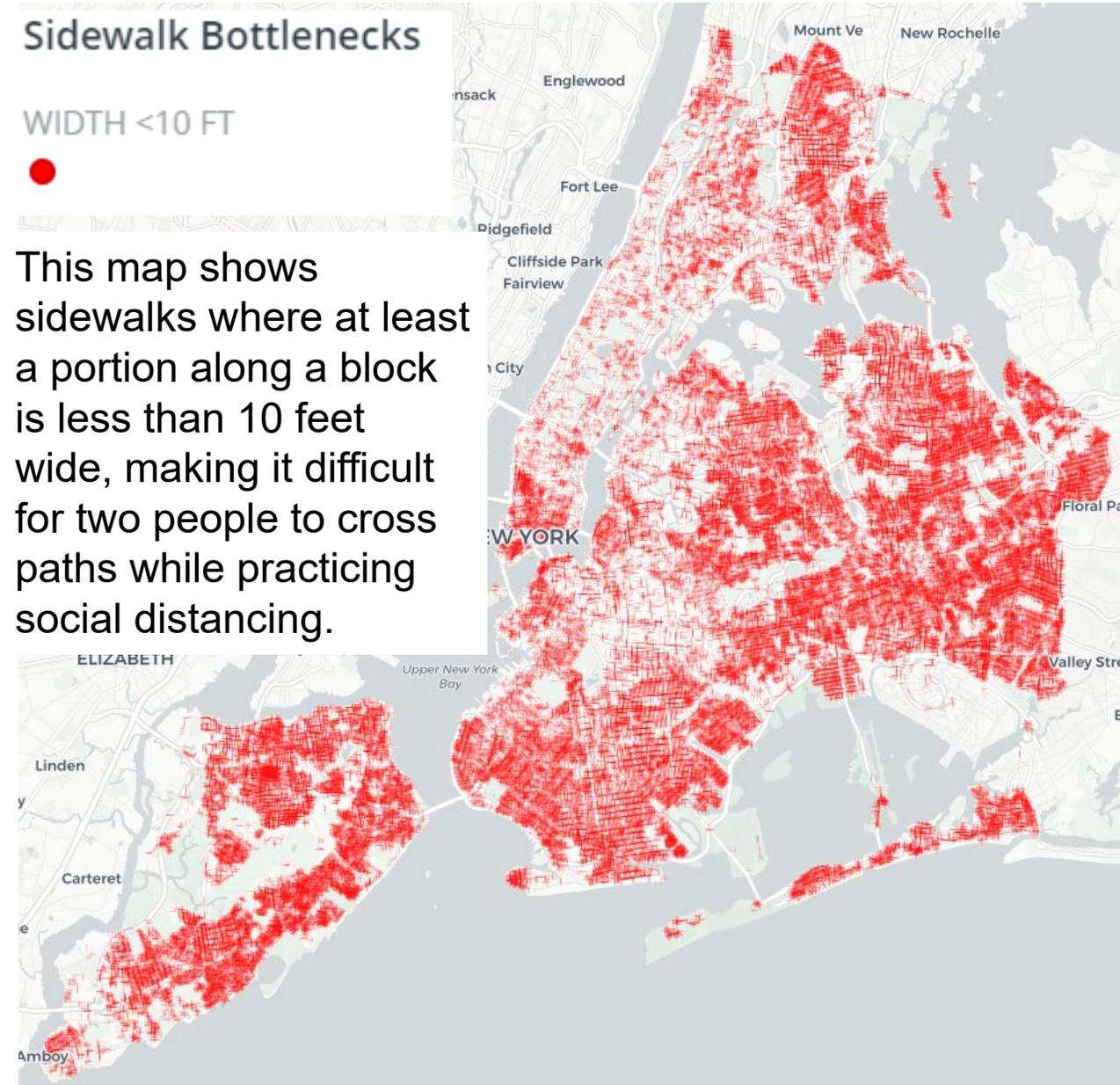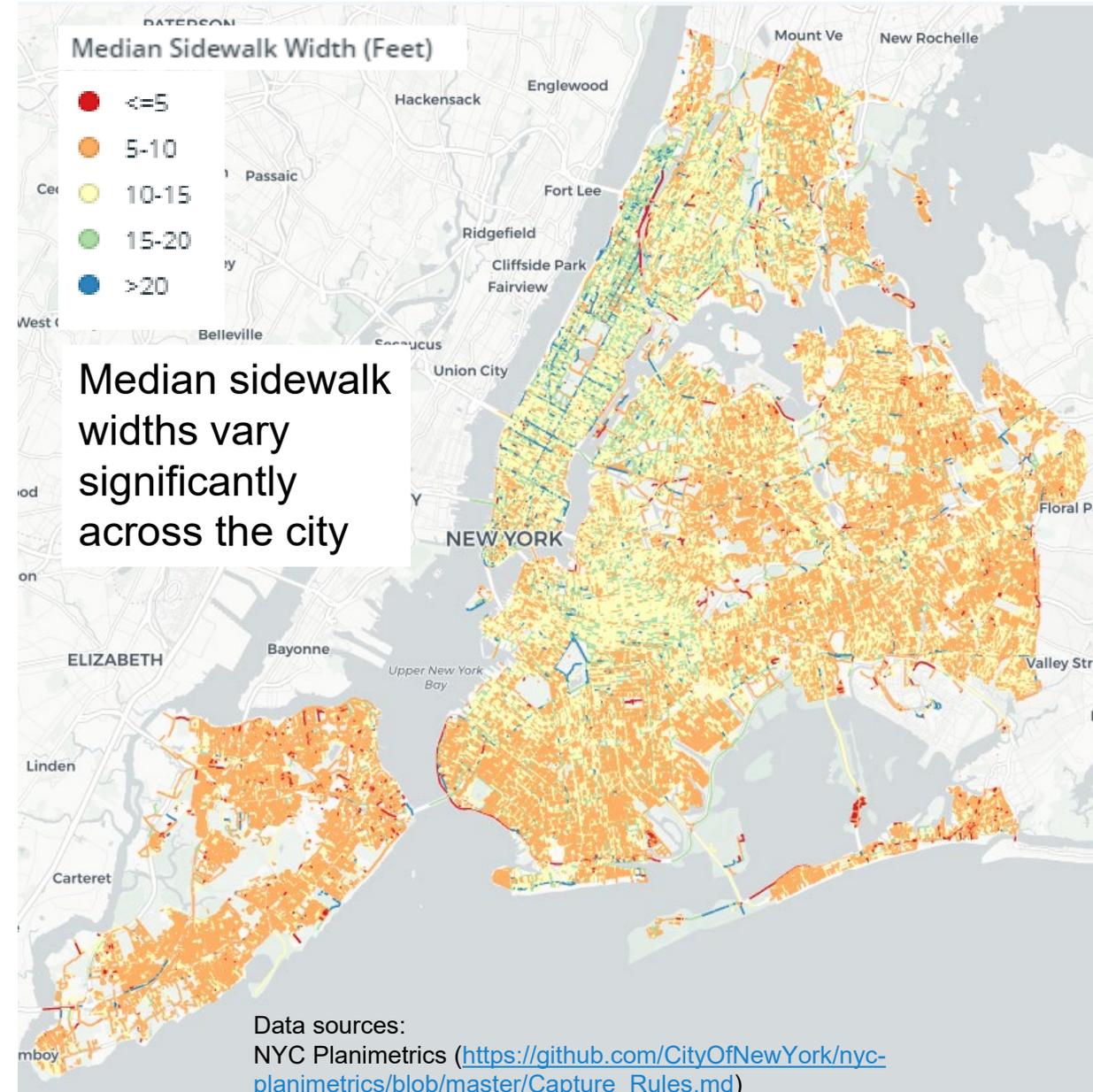
April 21, 2020

NYC
PLANNING

- The NYC Department of City Planning's Transportation Division is compiling data to help understand the effects of COVID19 on the transportation network. This is our fourth weekly report.

- This week's report includes the following information:
    1. Executive Summary
    2. Sidewalks
    3. Ferries
    4. MTA Bridge and Tunnel Crossings
    5. Subway
    6. Pre-COVID Workforce
    7. Timeline and Appendix

- We will be expanding the content of these weekly reports as new data become available to us, and are prioritizing work around understanding how subway travel trends relate to the economic and employment landscape. We have moved much of the material from previous weeks into the appendix if no new takeaways are apparent.

- This report may serve to help in pandemic response and longer-term recovery. We are eager for feedback in how to make this more useful. Feel free to reach out to Laura Smith (lsmith@planning.nyc.gov) with questions or comments.
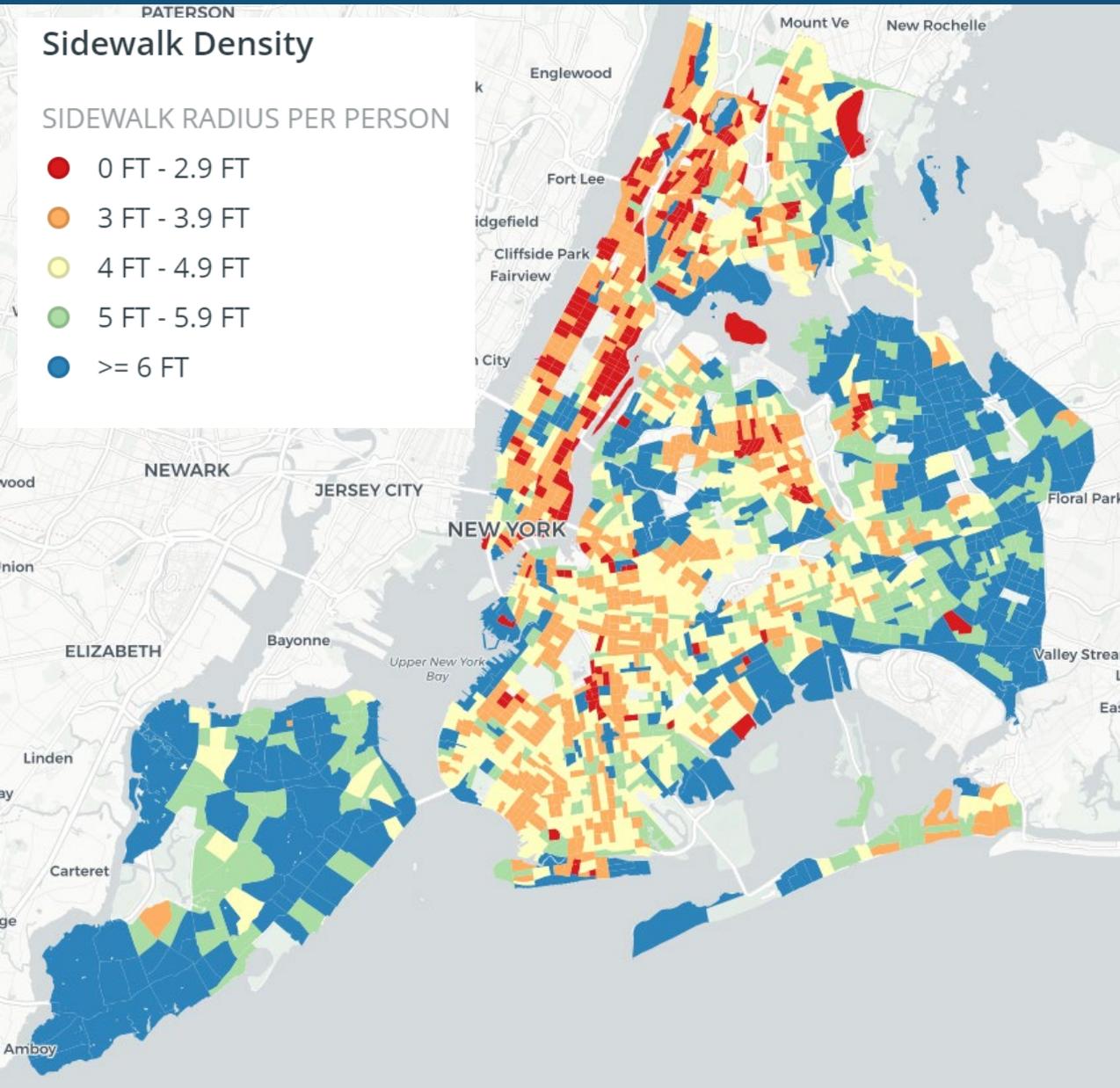
Executive Summary

- Sidewalk bottlenecks are a problem citywide. Many sidewalks are unable to accommodate two pedestrians crossing paths while maintaining social distance. Residential densities in some neighborhoods make it extremely difficult to avoid overburdening the sidewalks.

- Lower sidewalk capacity and nice weather are correlated with higher rates of 311 calls related to social distancing on streets and sidewalks.

- Staten Island Ferry and NYC Ferry ridership is extremely low. Weekday peak hour inbound trips from SI to MN changed from 7am in February to 6am in March, but volumes are 20% of what they were. While overall ridership has plummeted, the percent of passengers travelling with a bike on the SI Ferry from St. George to Bowling Green increased.

- MTA Bridge and Tunnel crossing volumes are down by at least 50% during the first week in April 2020 over the same period in 2019. Crossings connecting Manhattan with other boroughs have seen greater declines than those connecting other boroughs with each other.

- Subway ridership remains low, but even 2 weeks into the PAUSE ridership continues to fall week over week, indicating ongoing changes to how and whether people are traveling.

- Pre-COVID19 commuter patterns indicate differing dependence on public transportation across different sectors of the economy. Looking only at a subset of the essential workforce, we can see that food service workers and health care aides seem reliant on public transportation for getting to work, while medical staff, police, firefighters, etc. are less reliant on public transportation.

Sidewalks

Sidewalk Width Analysis

Median Sidewalk Width (Feet)
- <=5
- 5-10
- 10-15
- 15-20
- >20

Median sidewalk widths vary significantly across the city

Sidewalk Bottlenecks

WIDTH <10 FT

This map shows sidewalks where at least a portion along a block is less than 10 feet wide, making it difficult for two people to cross paths while practicing social distancing.

Data sources:
NYC Planimetrics (https://github.com/CityOfNewYork/nyc-planimetrics/blob/master/Capture_Rules.md)
Caveat: No obstacles on the sidewalks are being excluded from the sidewalk widths.

Sidewalk Square Footage and Residential Density

Sidewalk Density

SIDEWALK RADIUS PER PERSON

- 🔴 0 FT - 2.9 FT
- 🟠 3 FT - 3.9 FT
- 🟡 4 FT - 4.9 FT
- 🟢 5 FT - 5.9 FT
- 🔵 >= 6 FT

- If we allow everyone a 3-foot radius "bubble" in order to maintain a 6-foot social distance from one another, we require approximately 28 square feet each.

- Looking at total sidewalk square footage and residential density by Census Tract, we can see where sidewalks have a higher residential pedestrian load.

- Tracts in red are those where there is the least amount of total sidewalk square footage per resident.

  - An analysis that incorporates worker density will highlight areas to focus on as the economy reopens.

Note: this analysis does not consider sidewalk impediments, such as street trees, bus stops, benches, newsstands, etc. Actual sidewalk square footage per person will be lower when these are accounted for.
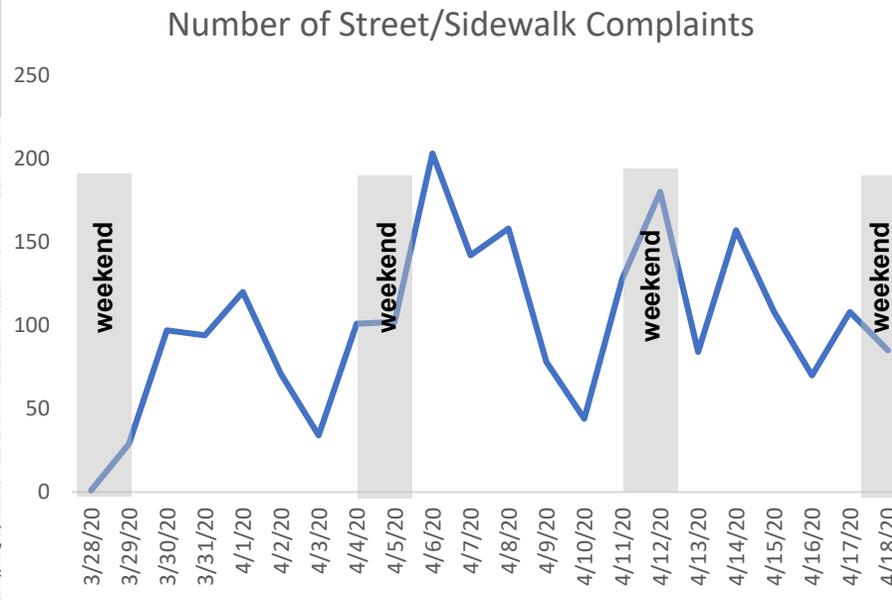
- "Social Distancing" was the most common complaint (13896 records) out of all 311 service complaints during this time period, with a growth rate of 48% compared to last week.

- Areas that have a lower area of sidewalk per population tend to have a higher concentration of 311 social distancing complaints.
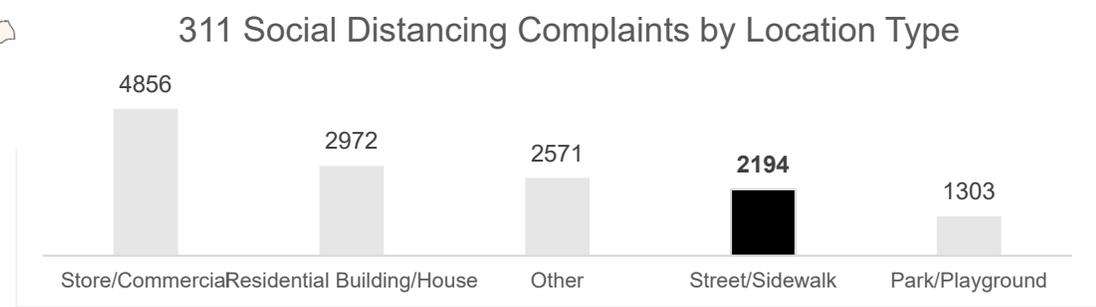
Percent of 311 Social Distancing Complaints that were Street/Sidewalk Locations by Zip Code

- 1% - 9%
- 10% - 15%
- 16% - 22%
- 23% - 32%
- 33% - 41%
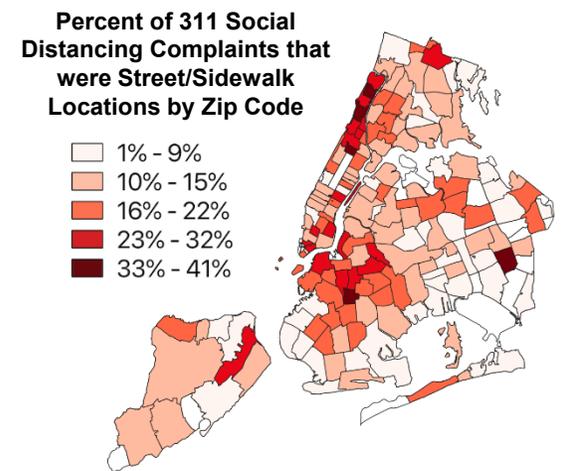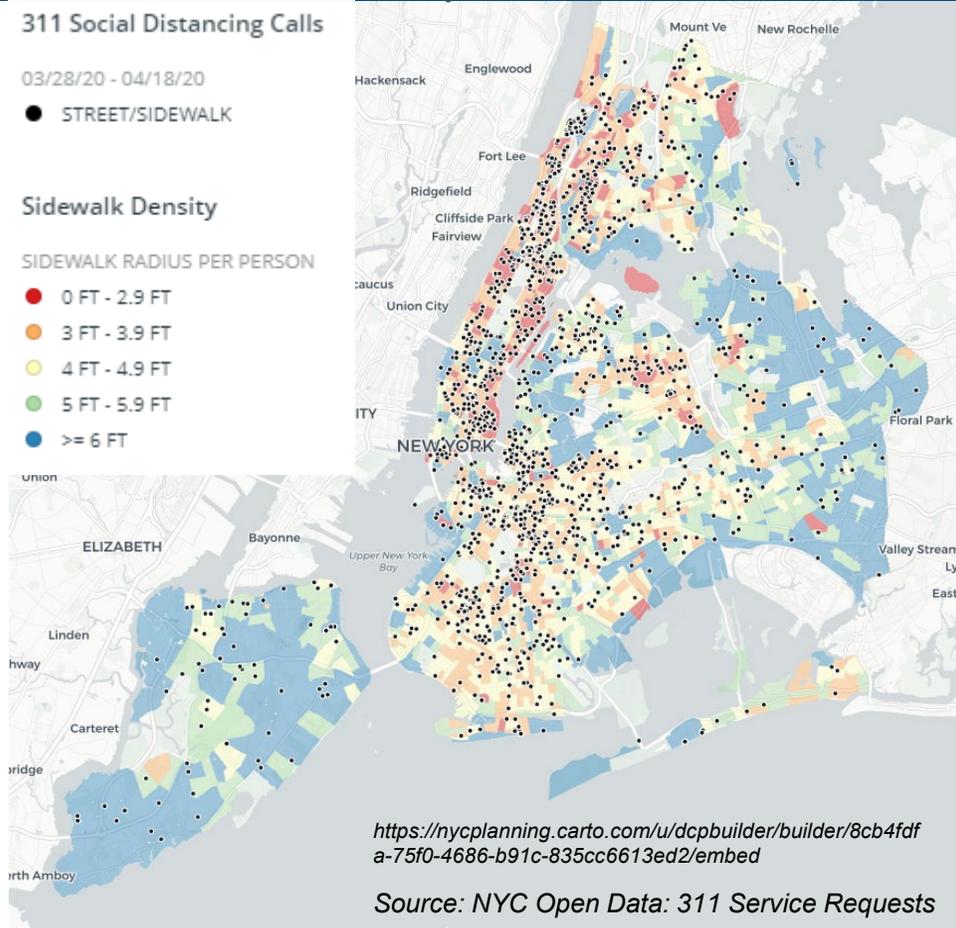
- Areas with a high number of 311 social distancing complaints, usually had a high percent of complaints dealing with "Street/Sidewalk"

311 Social Distancing Calls

03/28/20 - 04/18/20

● STREET/SIDEWALK

Sidewalk Density

SIDEWALK RADIUS PER PERSON

- 0 FT - 2.9 FT
- 3 FT - 3.9 FT
- 4 FT - 4.9 FT
- 5 FT - 5.9 FT
- >= 6 FT

https://nycplanning.carto.com/u/dcpbuilder/builder/8cb4fdfa-75f0-4686-b91c-835cc6613ed2/embed

Source: NYC Open Data: 311 Service Requests

311 Social Distancing Complaints by Location Type

- Store/Commercial: 4856
- Residential Building/House: 2972
- Other: 2571
- Street/Sidewalk: **2194**
- Park/Playground: 1303

Number of Street/Sidewalk Complaints

Weather, not day of week, seems to be the greatest predictor of 311 complaints for street/sidewalk social distancing:
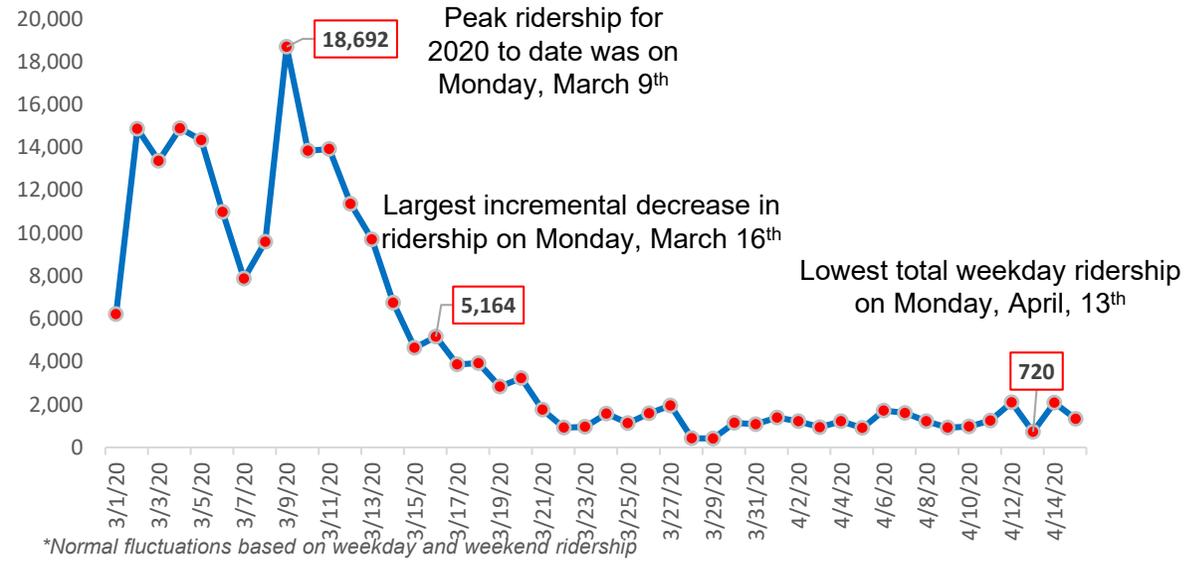
- Lowest number 311 complaints for street/sidewalk were see on days that had poor weather (rainy and/or cold) i.e. 04/3/20, 04/10/20, 04/16/20.

- Highest number 311 complaints for street/sidewalk were seen on days that had April temperature highs (66 degrees Fahrenheit) and were sunny, i.e. 04/06/20, 04/07/20, 04/12/20
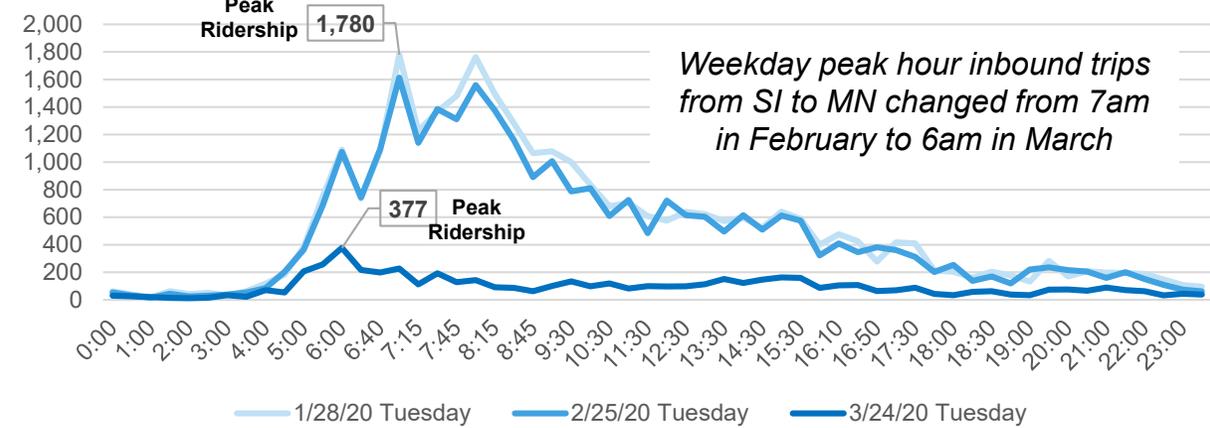
# Ferries

NYC Ferry Daily Ridership: 3/1/20 - 4/14/20

18,692 Peak ridership for 2020 to date was on Monday, March 9th

Largest incremental decrease in ridership on Monday, March 16th

5,164 Lowest total weekday ridership on Monday, April, 13th

720

Normal fluctuations based on weekday and weekend ridership

2020 Staten Island Ferry Inbound Weekday Ridership by Service

Peak Ridership **1,780**

Weekday peak hour inbound trips from SI to MN changed from 7am in February to 6am in March

377 Peak Ridership
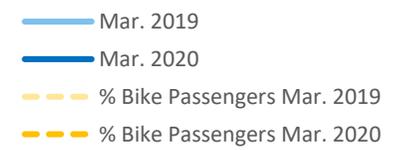
1/28/20 Tuesday   2/25/20 Tuesday   3/24/20 Tuesday

Staten Island Ferry Weekday Total Ridership: March 2019 vs. March 22

Staten Island Ferry Weekday Total Ridership & Percentage of Weekday Bike Passengers on the Staten Island Ferry: March 2019 vs. March 20202
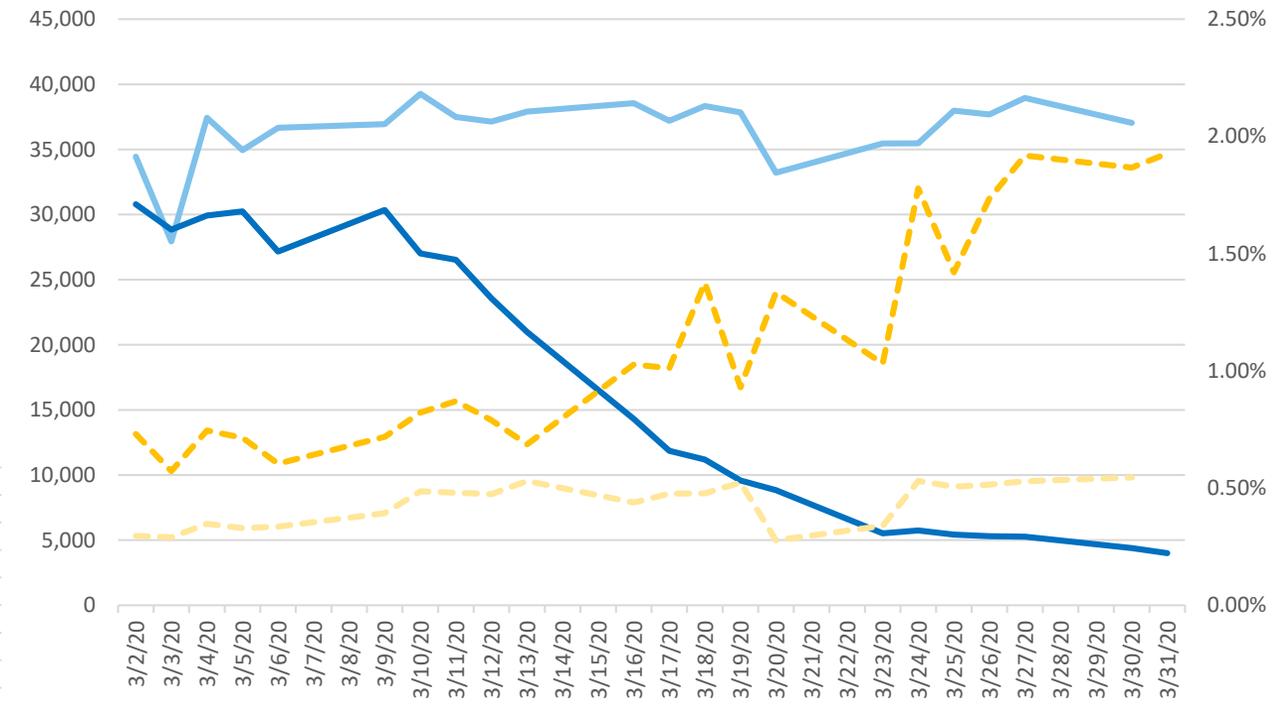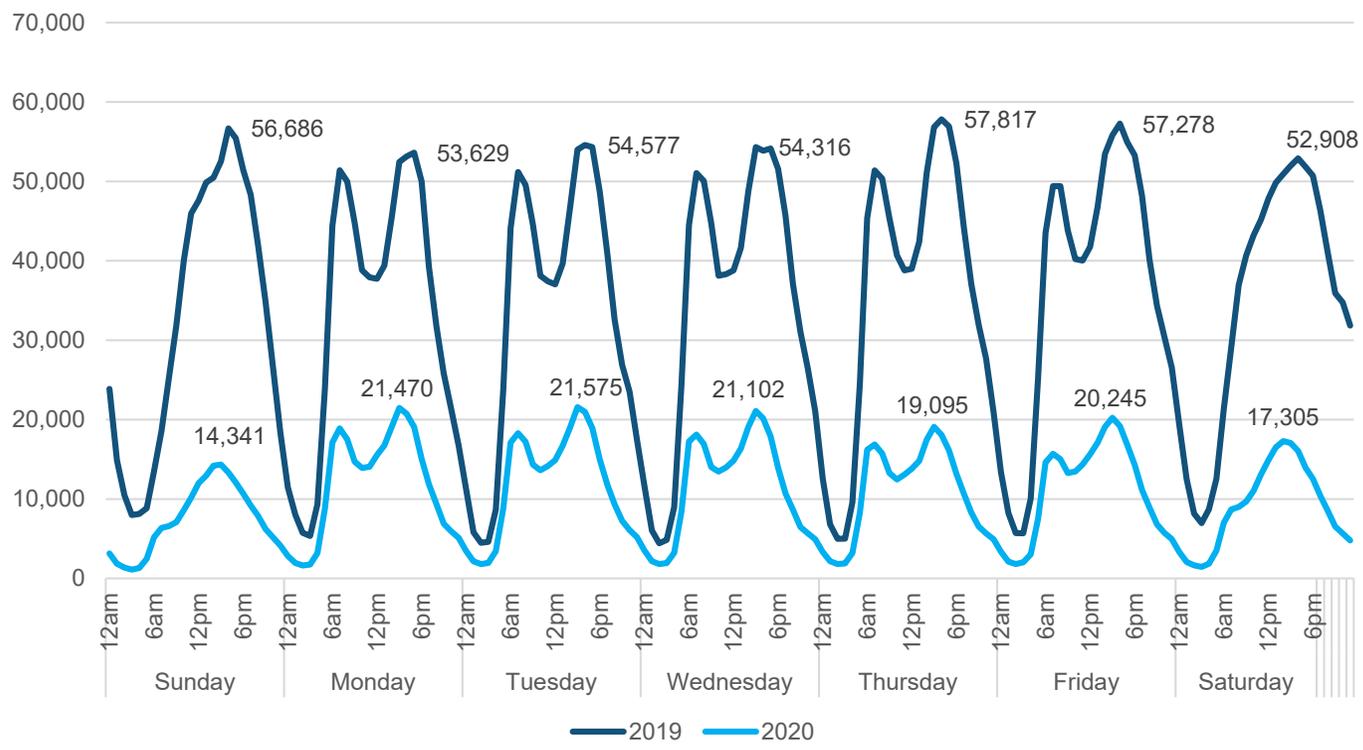

While overall ridership has plummeted, the percent of passengers travelling with a bike increased.

Mar. 2019
Mar. 2020
% Bike Passengers Mar. 2019
% Bike Passengers Mar. 2020

MTA Bridge and Tunnel Crossings

MTA Bridge and Tunnel Crossings


MTA Bridge and Tunnel Crossings

- Traffic volumes at all MTABT crossings during the first full week in April 2020 are down by over 50 percent from what they were the same week in 2019.
- The map at the right shows the percentage decline in volume for each bridge on Wednesday of the corresponding week.
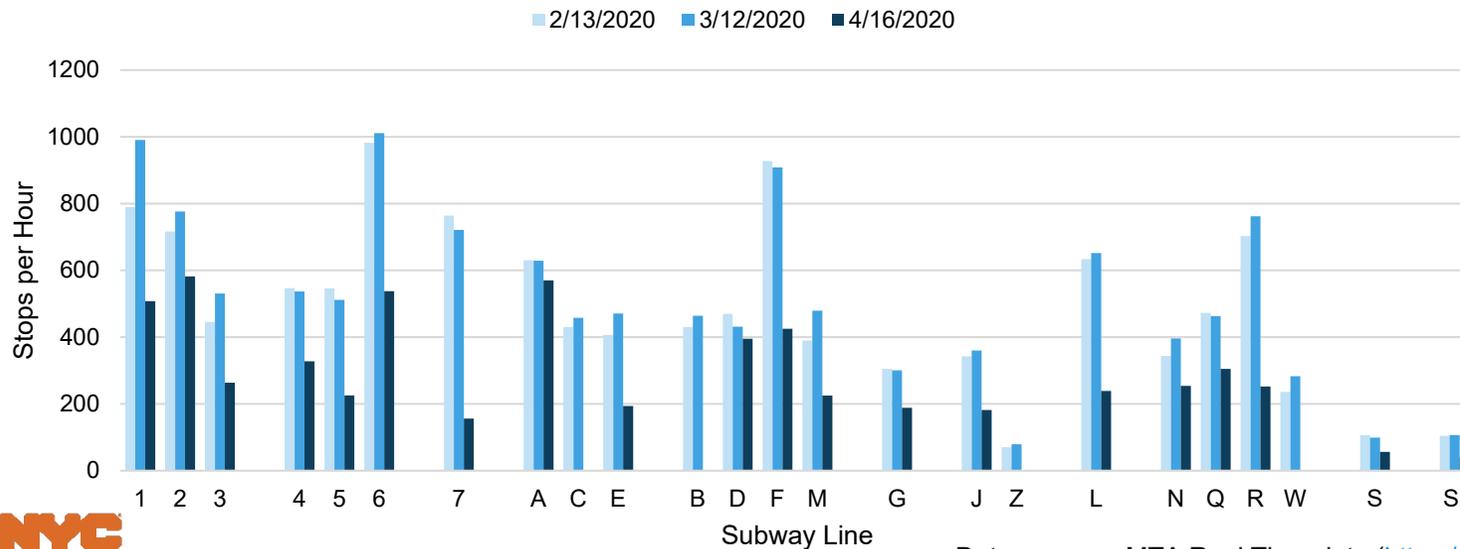
Subway

Subway System Service Changes

System-wide Weekday Service Change by Hour

Legend: 2/13/2020, 3/12/2020, 4/16/2020
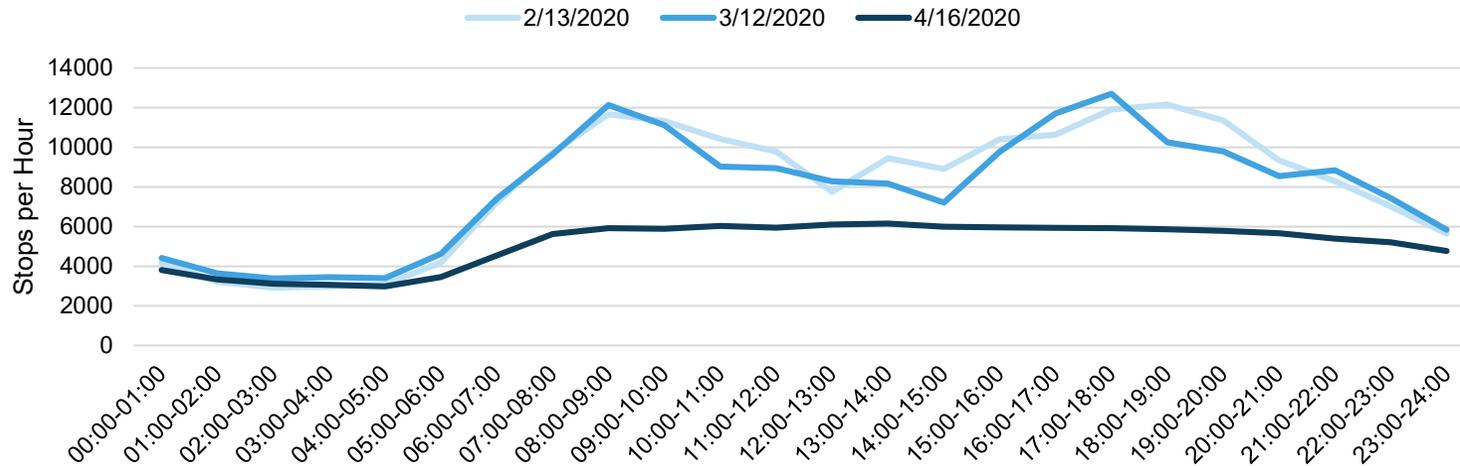
Weekday Peak Hour Service Change

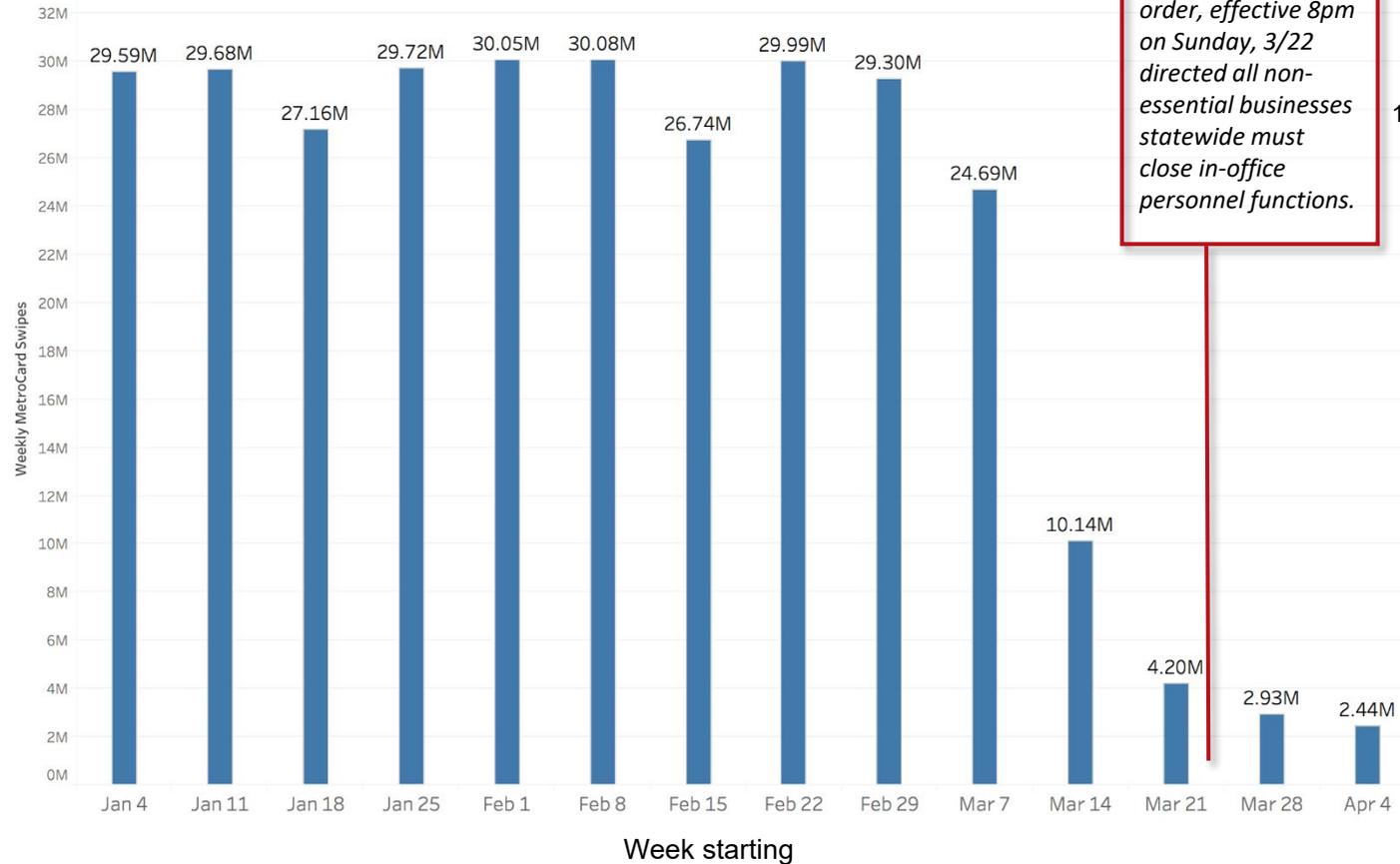Legend: 2/13/2020, 3/12/2020, 4/16/2020

- MTA Subway started operating the essential service on March 25, 2020.

- The weekday peak hour services have been cut down to about 50% capacity, resulting in no distinction between daytime peak and daytime off-peak service.

- Stops per hour signifies the aggregated number of stops made by every train running (in the system on the top chart, and broken down by line, in the bottom chart)

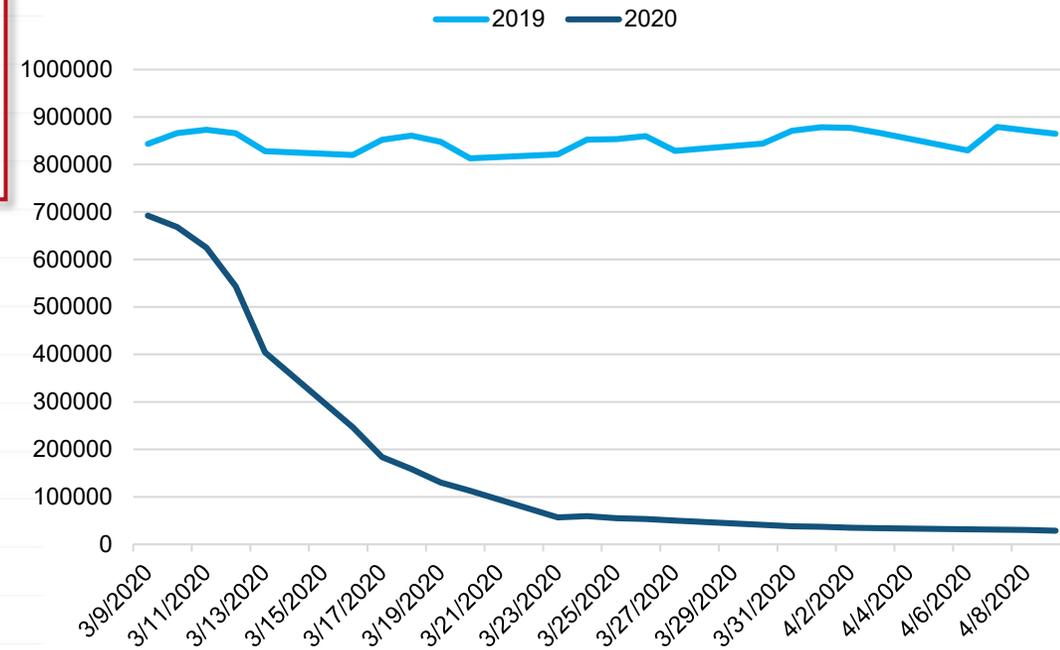Data sources: MTA Real Time data (https://api.mta.info/#/landing)

Subway System-wide Ridership Changes

- The citywide percent change of MetroCard swipes during Apr 4-10 vs weekly average of Jan 4- Feb 28 is **-91.61%.**
- There were still more than 2 million subway trips in the week of Apr 4-10, but **even two weeks into the PAUSE ridership continues to drop, indicating ongoing changes to how and whether people are travelling.**
- Trips to and from the Manhattan Central Business District remain extremely low.
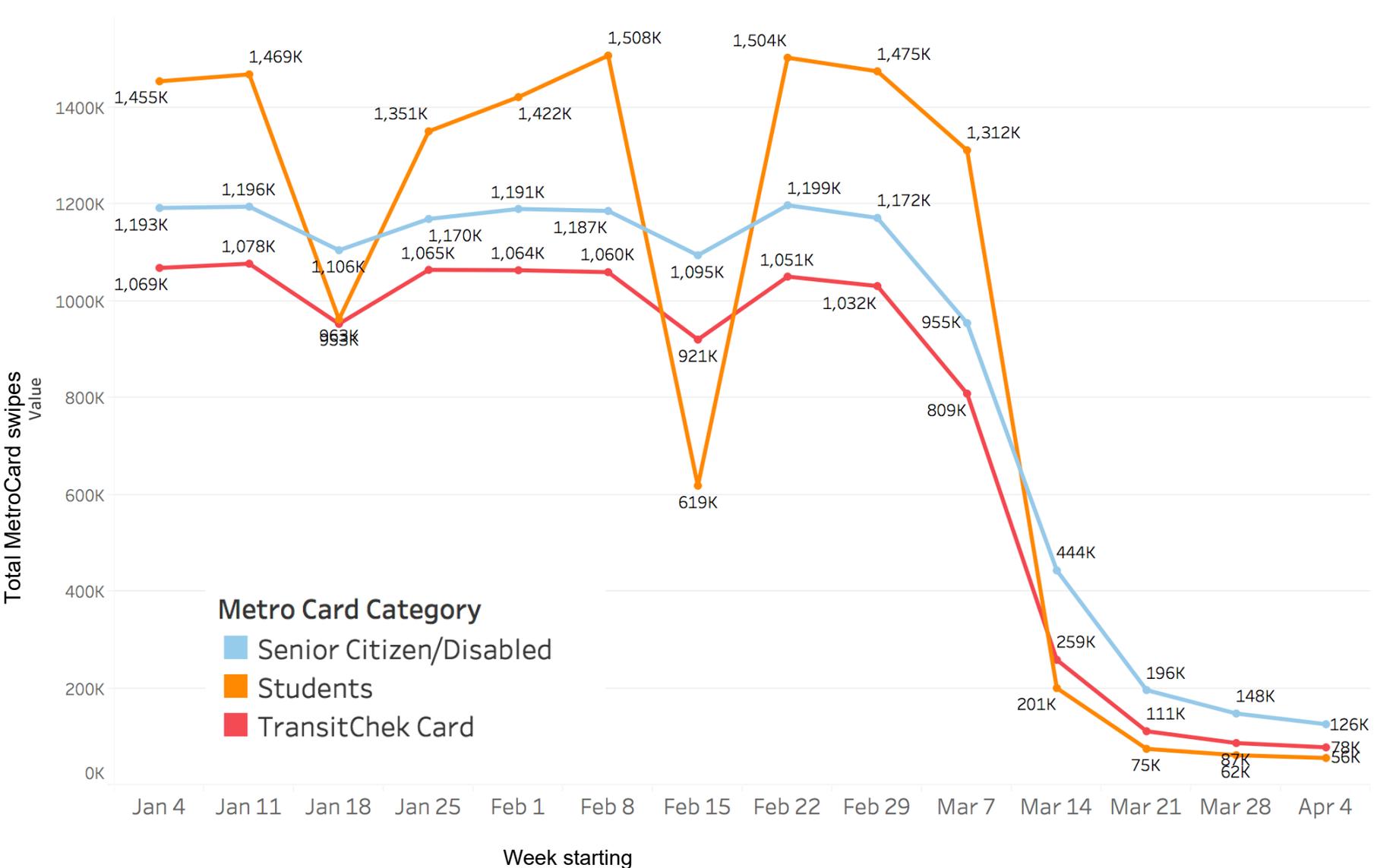
Weekly MetroCard Swipe Trends (Jan 4 - Apr 10)

"New York State on PAUSE" executive order, effective 8pm on Sunday, 3/22 directed all non-essential businesses statewide must close in-office personnel functions.

Weekly MetroCard Swipes:
- Jan 4: 29.59M
- Jan 11: 29.68M
- Jan 18: 27.16M
- Jan 25: 29.72M
- Feb 1: 30.05M
- Feb 8: 30.08M
- Feb 15: 26.74M
- Feb 22: 29.99M
- Feb 29: 29.30M
- Mar 7: 24.69M
- Mar 14: 10.14M
- Mar 21: 4.20M
- Mar 28: 2.93M
- Apr 4: 2.44M

Week starting

Manhattan CBD PM Peak Subway Station Entries

2019 — 2020

Interactive dashboard link:
https://public.tableau.com/profile/dcptransportation#!/vizhome/MetroCardSwipes/PercentChange Data sources: MTA Fare Data (http://web.mta.info/developers/fare.html) MTA Turnstile data (http://web.mta.info/developers/turnstile.html)

Notes: Holidays might lead to low subway swipes in the pre-COVID19 period. (Jan 18,2020: Martin Luther King Jr. Day; February 17, 2020: Presidents Day)

NYC PLANNING

MetroCard Swipes by Card Type: TransitChek/ Students/ Senior & Disabled

Though drastically reduced over typical time periods, there were still more than 120,000 MetroCard swipes by reduced-fare cards for senior citizens, and people with disabilities, the week of April 4-10.
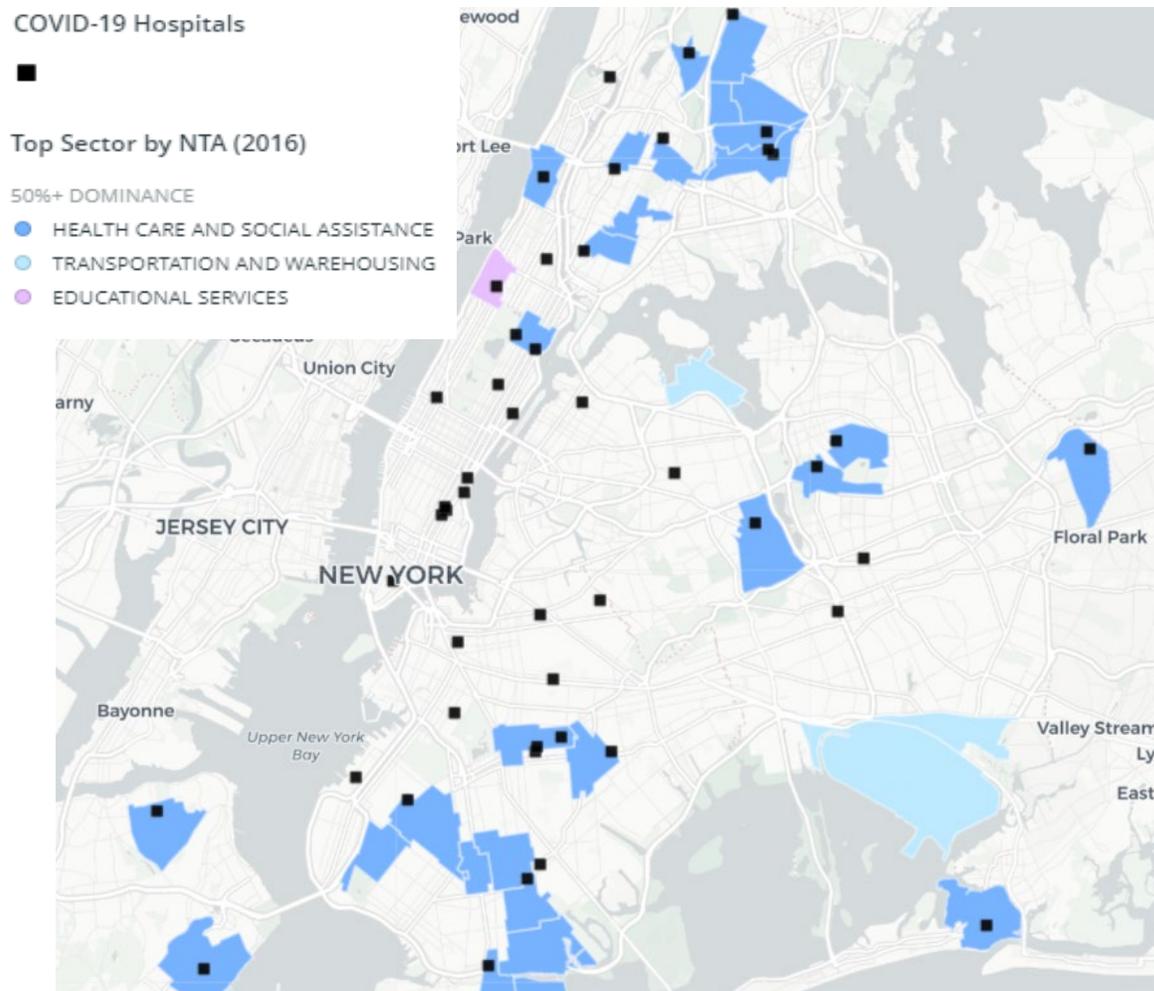
During this same PAUSE period, there were more than 50,000 MetroCard swipes by student cards.

Interactive dashboard for these and other types of MetroCard swipes:
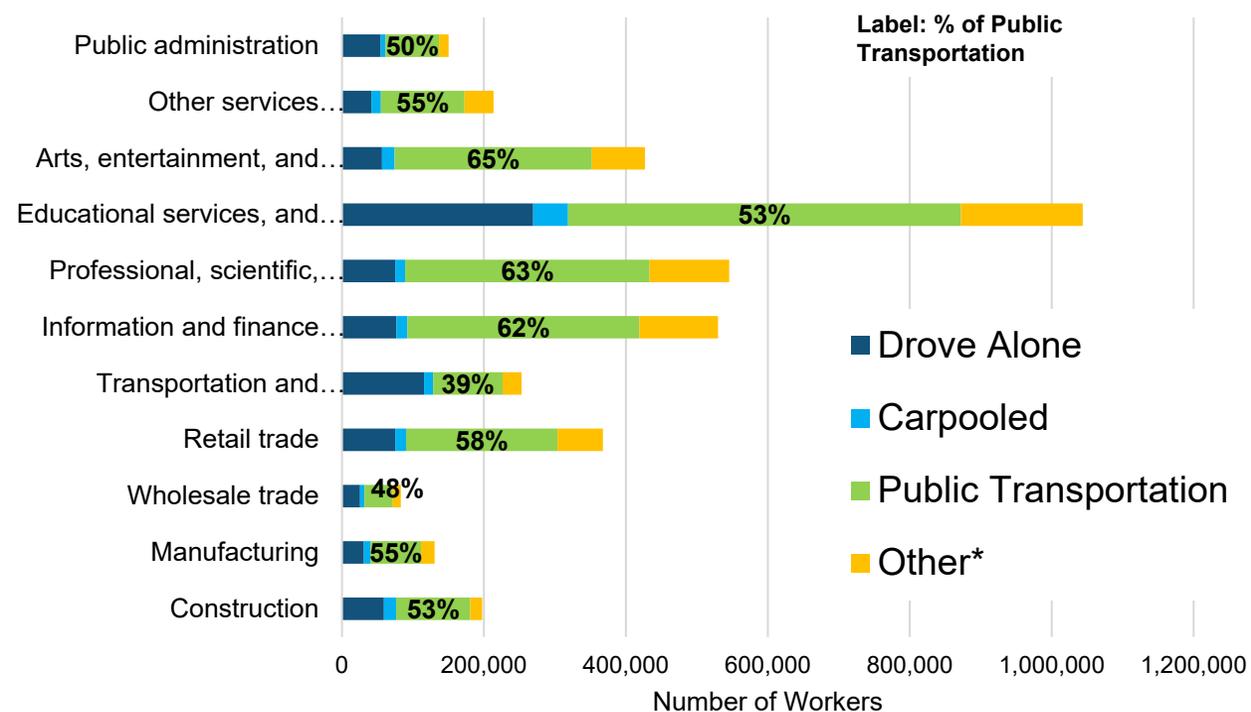https://public.tableau.com/profile/dcptransportation#!/vizhome/MetroCardSwipes-CardTypes/CardTypes?publish=yes

Data sources: MTA Fare Data (http://web.mta.info/developers/fare.html)

Workforce

Although the percentage of **educational service, health care and social assistance** workers who typically commute by public transportation to work (53%) is slighter lower than total worker average (56%), the actual number in that industry is still larger than any other industries in the City – **more than 500,000 workers (<u>pre-COVID19</u>).**

COVID-19 Hospitals

■

Top Sector by NTA (2016)

50%+ DOMINANCE

● HEALTH CARE AND SOCIAL ASSISTANCE
● TRANSPORTATION AND WAREHOUSING
● EDUCATIONAL SERVICES

**Means of Transportation to Work by Industry
(Universe: NYC Residents)**

Label: % of Public Transportation

Industry	% of Public Transportation
Public administration	50%
Other services…	55%
Arts, entertainment, and…	65%
Educational services, and…	53%
Professional, scientific,…	63%
Information and finance…	62%
Transportation and…	39%
Retail trade	58%
Wholesale trade	48%
Manufacturing	55%
Construction	53%

Legend:
■ Drove Alone
■ Carpooled
■ Public Transportation
■ Other*

Number of Workers (0 – 1,200,000)

Note: Other mode is derived from total workers and workers using the 3 other modes.

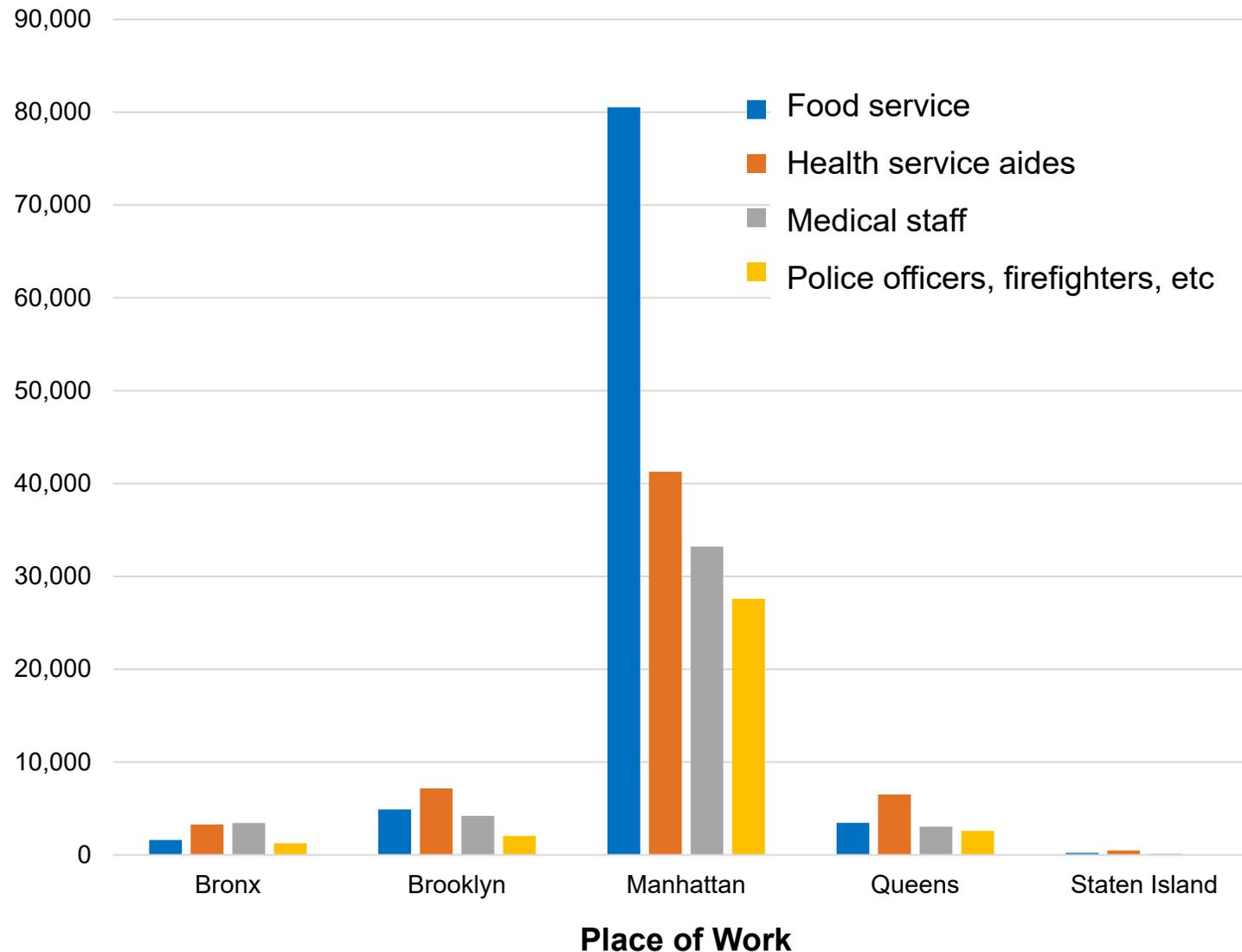# Essential Workers Commuting by Public Transportation *Pre-COVID 19*

% Workers Commuting by Public Transportation, by place of residence
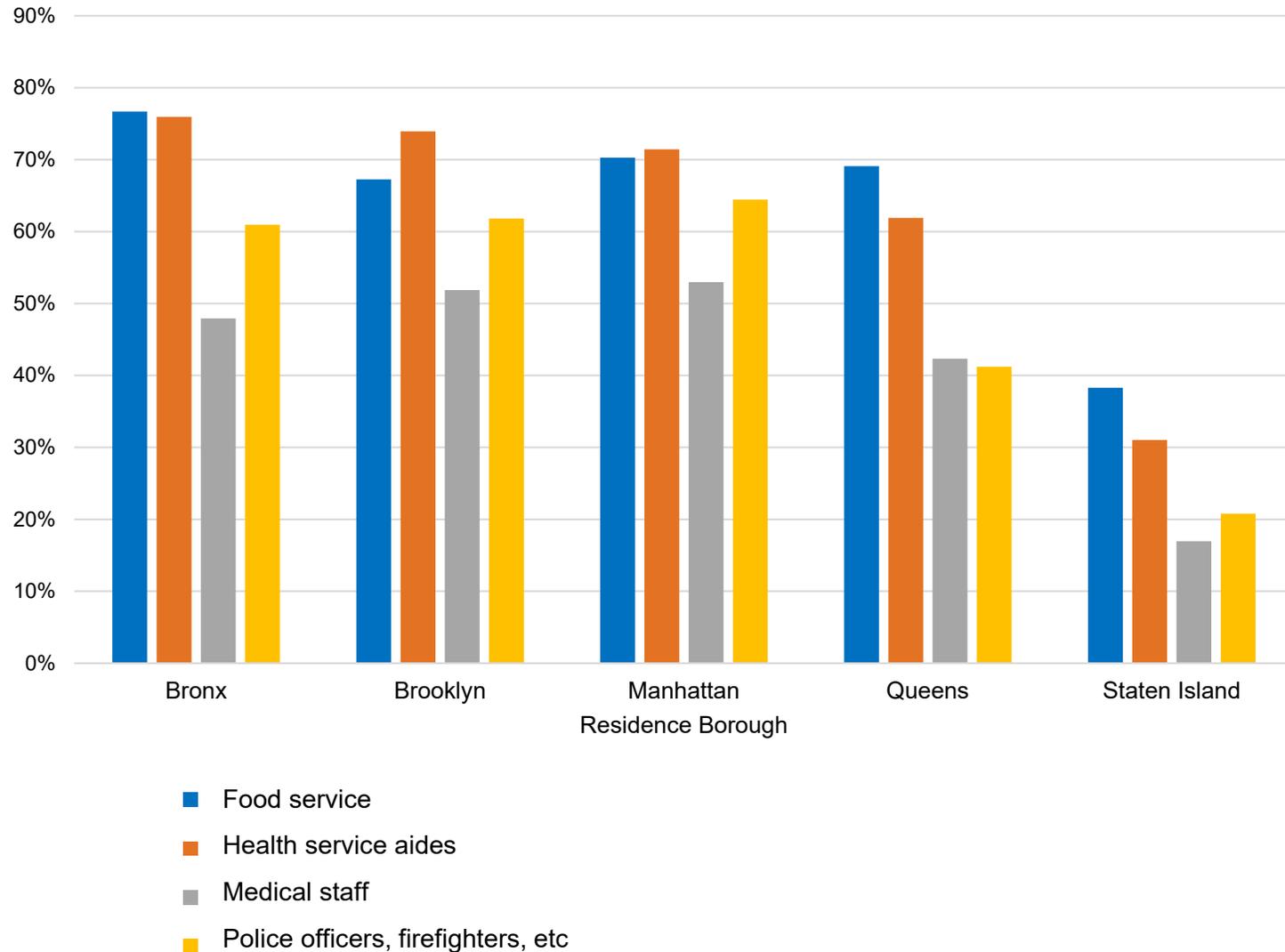
Legend:
- Food service
- Health service aides
- Medical staff
- Police officers, firefighters, etc

- Pre-COVID19 commuter patterns indicate differing dependence on public transportation across different sectors of the economy.

- Looking only at a subset of the essential workforce, we can see that food service workers and health care aides seem reliant on public transportation for getting to work, while medical staff, police, firefighters, etc. are less reliant on public transportation.

- This subset of workers who live on Staten Island appear least reliant on public transportation

- Expanding this analysis to include other non-essential sectors will help us plan for an economic reopening.

NYC Resident Essential Workers Commuting to A Non-Home Borough by Subway, by place of work

Legend:
- **Food service** (blue)
- **Health service aides** (orange)
- **Medical staff** (gray)
- **Police officers, firefighters, etc** (yellow)

X-axis: **Place of Work** — Bronx, Brooklyn, Manhattan, Queens, Staten Island

Y-axis: 0 to 90,000

- Pre-COVID19, nearly 200,000 workers in this subset of essential sectors commuted via subway to Manhattan from another borough.

- Among these selected sectors, food service workers constituted the majority of Manhattan-bound subway commuters from other boroughs, while health service aides were the most numerous inter-borough subway commuters with destinations outside of Manhattan.

Data sources: 2014-2018 PUMS

Timeline

New York COVID-19 Pandemic Timeline

- March 1st, 2020: **First confirmed case** in New York (Manhattan healthcare worker) https://www.wsj.com/articles/first-case-of-coronavirus-confirmed-in-new-york-state-11583111692

- March 3rd, 2020: Second confirmed case https://www.businessinsider.com/new-york-second-coronavirus-case-attorney-law-firm-grand-central-2020-3?r=US&IR=T,

- March 5th, 2020: Mayor De Blasio says that a virus fears shouldn't keep New Yorkers off the subway https://www.nydailynews.com/coronavirus/ny-coronavirus-bill-de-blasio-coronavirus-subway-20200305-vmjdxjudbndlrjekashqs3hfou-story.html

- March 7th, 2020: Governor Cuomo **declares state of emergency** https://www.nytimes.com/2020/03/07/nyregion/coronavirus-new-york-queens.html

- March 8th, 2020: City and State implement **new travel guidelines**, asking sick people to stay off transit https://www.nbcnewyork.com/news/local/nyc-issues-new-commuter-guidelines-to-combat-coronavirus-spread/2317584/

- March 9th: **NYU** announces **suspension of in-person classes,** moving all classes online effective Wednesday 3/11 https://www.nydailynews.com/new-york/ny-nyu-coronavirus-online-instruction-20200310-jov5akxr4ngwjhxtv4zrz2ypea-story.html

- March 10th, 2020: Governor Cuomo declares **containment zone in New Rochelle** from March 12th through 25th https://www.nytimes.com/2020/03/10/nyregion/coronavirus-new-york-update.html

- March 11th, 2020: Governor Cuomo announces **closures of CUNY and SUNY schools** from March 12th-19th, moving to online classes after that for the rest of the semester

- March 12th, 2020: Governor Cuomo announces **restrictions on mass gatherings**, directing events with more than 500 people to be cancelled or postponed and any gathering with less than 500 people in attendance to cut capacity by 50 percent. In addition, only medically necessary visits would be allowed at nursing homes. **Broadway theaters** were also shut down effective that night. https://www.governor.ny.gov/news/during-novel-coronavirus-briefing-governor-cuomo-announces-new-mass-gatherings-regulations

- March 15th, 2020: **NYC school closures announced.** https://www.nytimes.com/2020/03/15/nyregion/nyc-schools-closed.html DeBlasio announces the **closure of schools, bars, and restaurants** (except takeout/delivery) effective the morning of the 17th https://www.nytimes.com/2020/03/15/nyregion/new-york-coronavirus.html

- March 16th: **Columbia University** reduces to **essential staff** and operations only https://preparedness.columbia.edu/news/update-covid-19-0

- March 18th: Governor Cuomo announces that **50% of non-essential employees** must work from home

- March 19th: The Governor announces that **75% of non-essential employees** must work from home. https://www.thestreet.com/lifestyle/health/ny-governor-cuomo-workers-must-stay-h

- March 20th: Governor Cuomo announces **statewide stay at home rules**, effective the evening of the 22nd. **100% of non-essential workers** must stay home. https://www.npr.org/sections/coronavirus-live-updates/2020/03/20/818952589/coronavirus-n-y-gov-cuomo-says-100-of-workforce-must-stay-home, travel on transit only when necessary

- March 23rd: NYC Ferry modified weekday service

- March 25th: MTA announces service reduction to **Essential Service** plan https://abc7ny.com/6047040/

- March 27th: The Governor halts **non-essential construction** https://thecity.nyc/2020/03/cuomo-calls-off-non-essential-construction-statewide.html

- March 30th: Staten Island Ferry reduced service to every hour
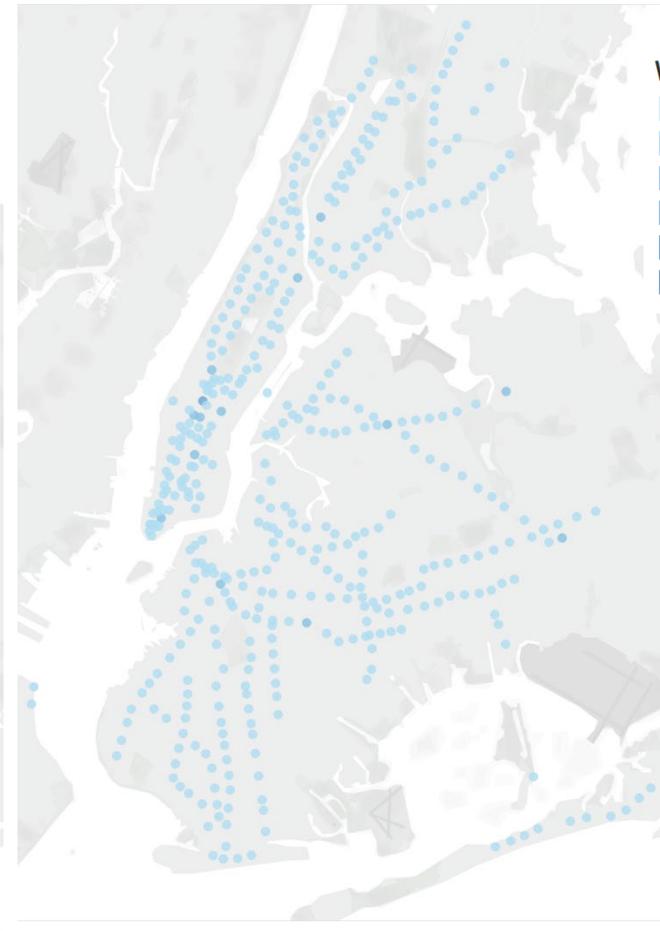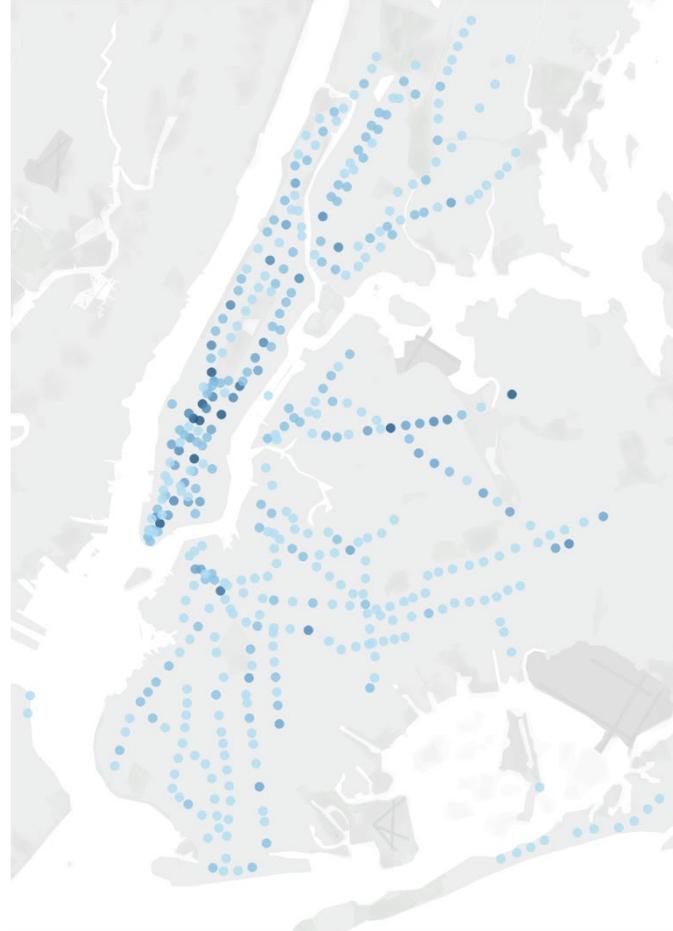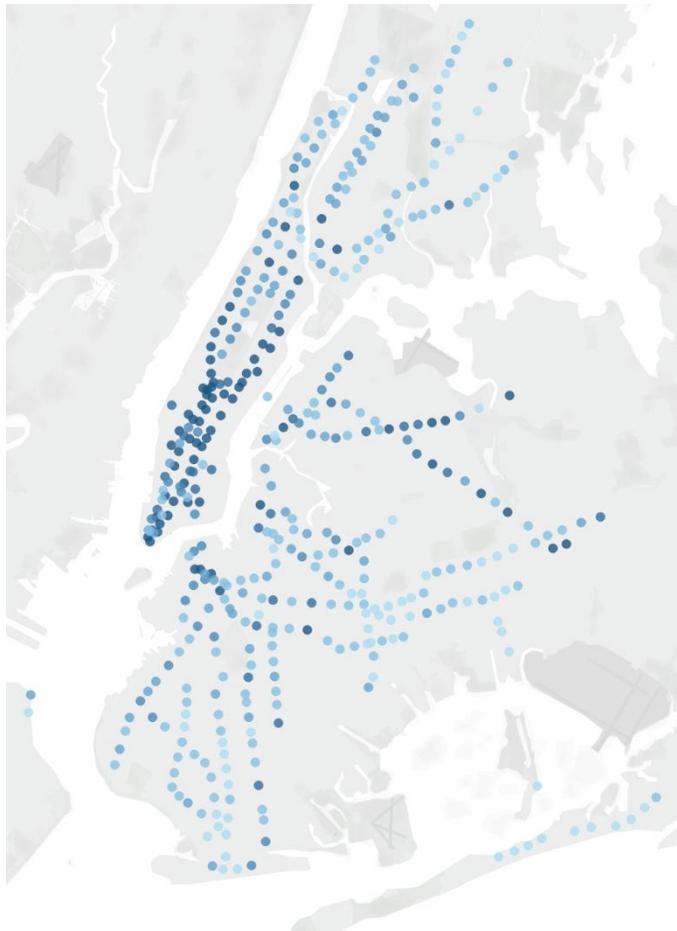
APPENDIX

The following slides have appeared in previous reports and may contain updated information but no new trends

MetroCard Swipes: Week of Jan 4-10 vs Mar 14-20 vs Apr 4-10

January 4-10 2020

March 14-20 2020

April 4-10 2020

Weekly MetroCard Swipes by Station

- <20K
- 20K-40K
- 40K-60K
- 60K-80K
- 80K-100K
- >100K

MetroCard Swipe Change Jan/Feb 2020 vs Apr 4-10 2020

15 stations with most and least dramatic declines in ridership

Station (Route)	Perc Change	Station (Route)	Perc Change
Aqueduct Racetrack (A)	-99.03%	Gun Hill Rd (5)	-69.79%
5 Av/53 St (E M)	-98.54%	Van Siclen Av (3)	-72.02%
Prince St (R W)	-98.34%	138 St - Grand Concourse (4 5)	-72.09%
Franklin St (1)	-97.74%	New Lots Av (L)	-72.18%
Eastern Pkwy - BK Museum (2 3)	-97.64%	Alabama Av (J)	-72.40%
Rector St (1)	-97.46%	New Lots Av (3)	-73.35%
Spring St (C E)	-97.45%	Beach 60 St (A)	-74.18%
47-50 Sts - Rockefeller Ctr (B D F M)	-97.45%	Sutter Av (L)	-74.59%
28 St (R W)	-97.35%	Livonia Av (L)	-74.80%
18 St (1)	-97.32%	E 143 St - St Mary's St (6)	-75.16%
57 St (F)	-97.23%	Junius St (3)	-75.42%
8 St - NYU (R W)	-97.22%	Wakefield - 241 St (2)	-75.49%
Spring St (6)	-97.18%	Far Rockaway - Mott Av (A)	-75.53%
Rector St (R W)	-97.18%	Rockaway Av (3)	-75.83%
Wall St (2 3)	-97.17%	E 105 St (L)	-75.97%

Pct Change of Swipes (Apr 4-10 2020 vs. Weekly Average of Jan 4 to Feb 28 2020)

Percent Change
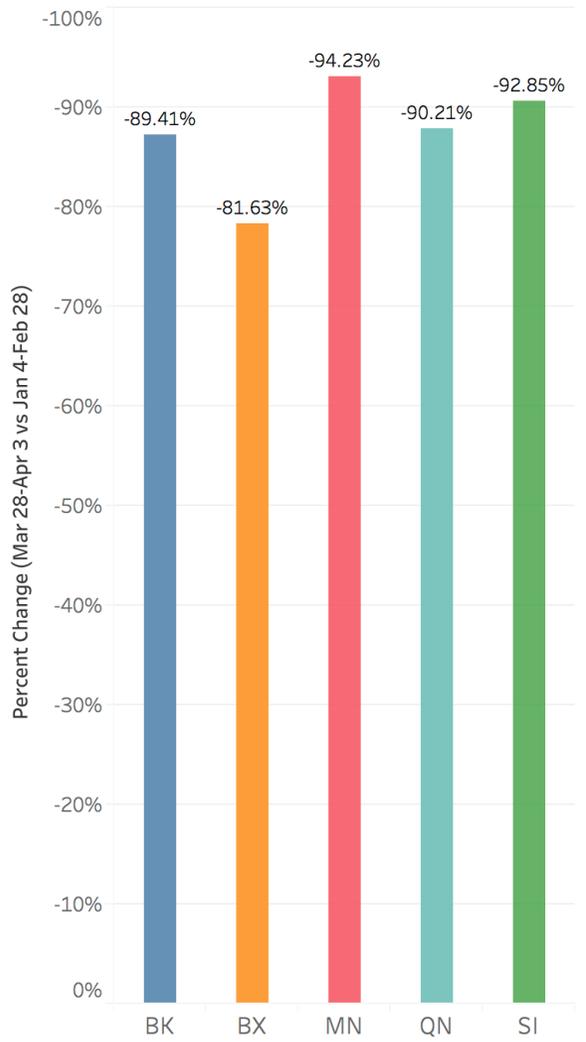- -70% ~ -60%
- -80% ~ -70%
- -90% ~ -80%
- -100% ~ -90%
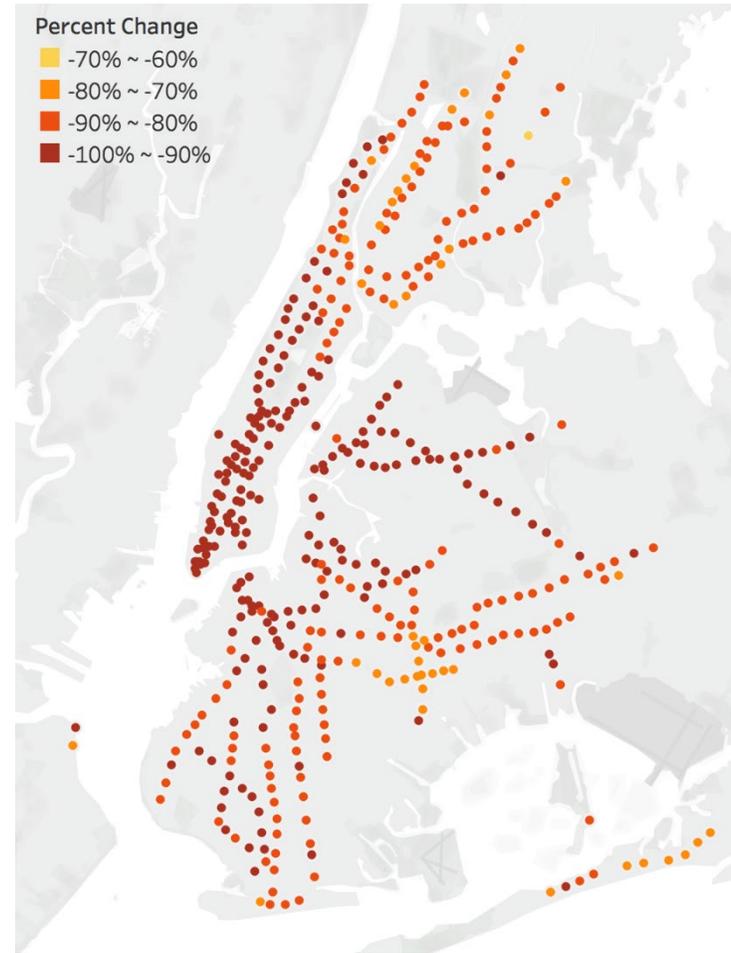
- The week of Apr 4, the third week where 100% of the nonessential workforce was required to stay home, every subway station in the system saw MetroCard swipe declines of at least 70%.

- Outer borough stations experienced a less dramatic decline in ridership than Manhattan Core stations

- The Bronx, eastern Brooklyn and the Rockaways in particular still show a relatively high number of riders compared to pre-PAUSE.

Interactive dashboard link:
https://public.tableau.com/profile/dcptransportation#!/vizhome/MetroCardSwipes/PercentChange
Data sources: MTA Fare Data (http://web.mta.info/developers/fare.html)

NYC PLANNING

Degrees of Ridership Change by Station Activity

Busiest pre-Covid stations and greatest decline in MetroCard swipes

*Quietest pre-Covid stations and lowest decline in MetroCard swipes*
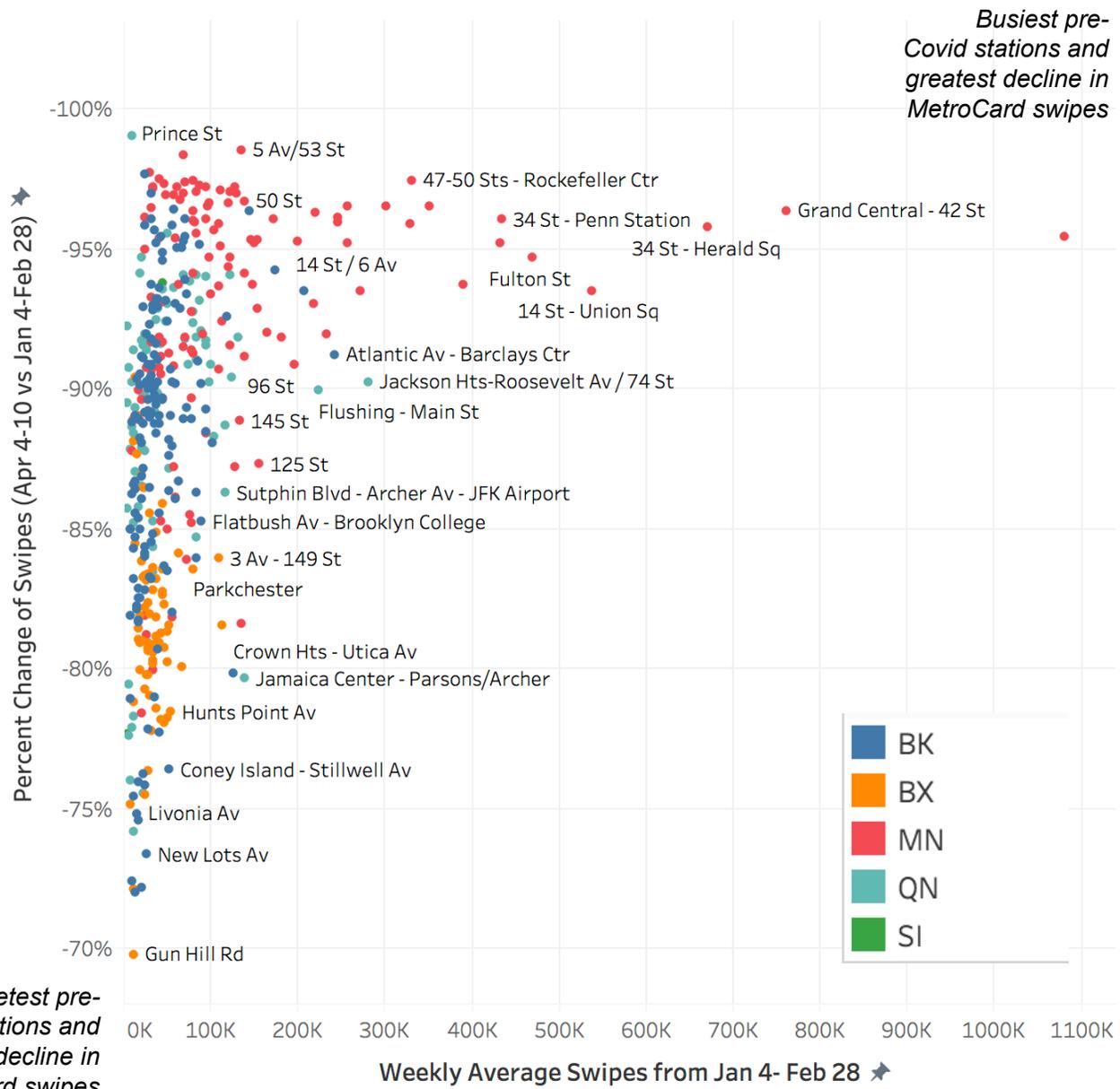
The scatter plot compares the average station activity with the scale of its ridership decline.

Overall, busier stations saw more dramatic declines, particularly in the central business districts.

In the Bronx, relatively quiet stations on average saw less dramatic declines; a greater share of its riders continued riding.

Change is measured by comparing the weekly average of January 4 – February 28th against the week of Apr 4-10.

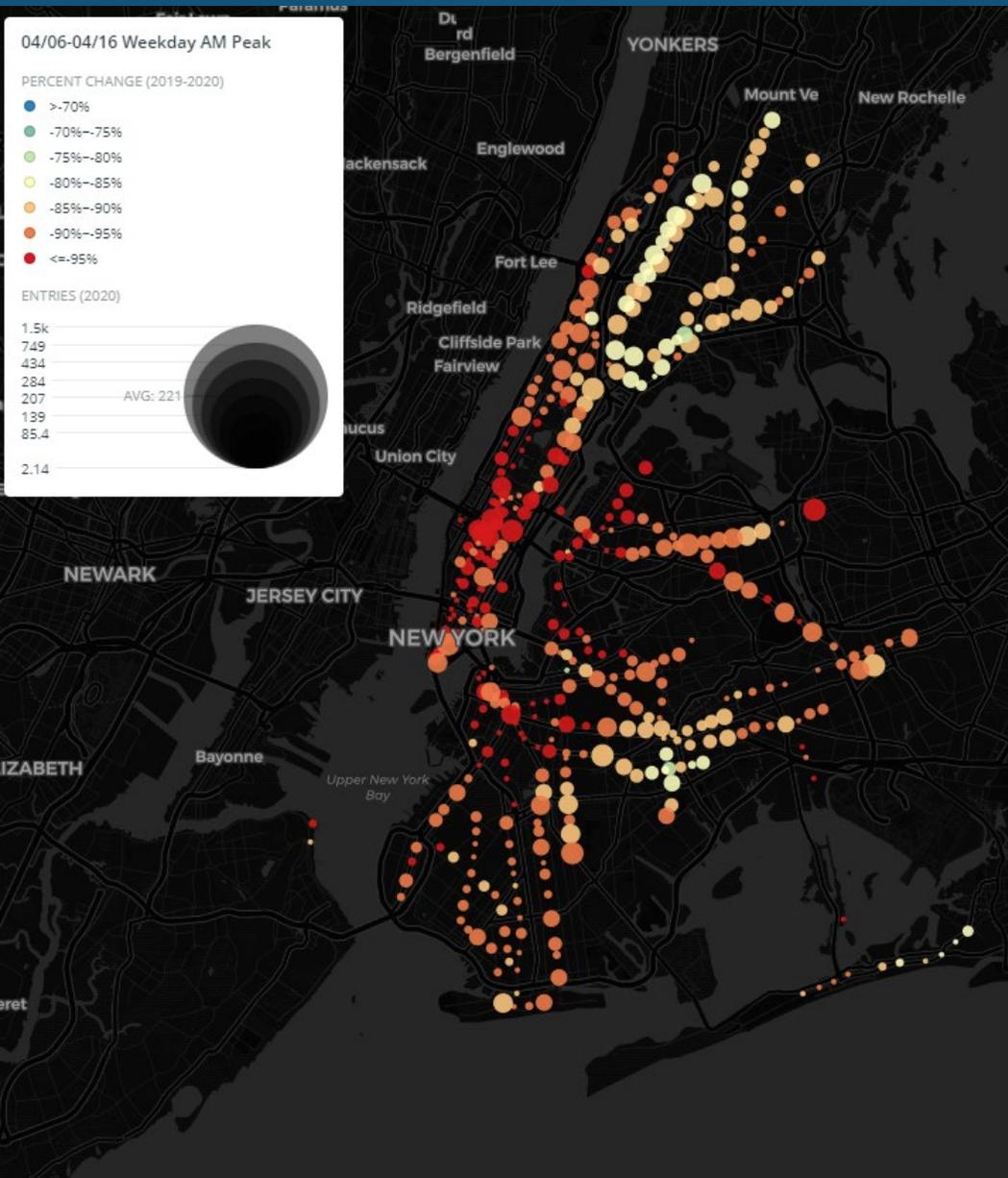# MetroCard Swipes Percent Change by Distance to The Core
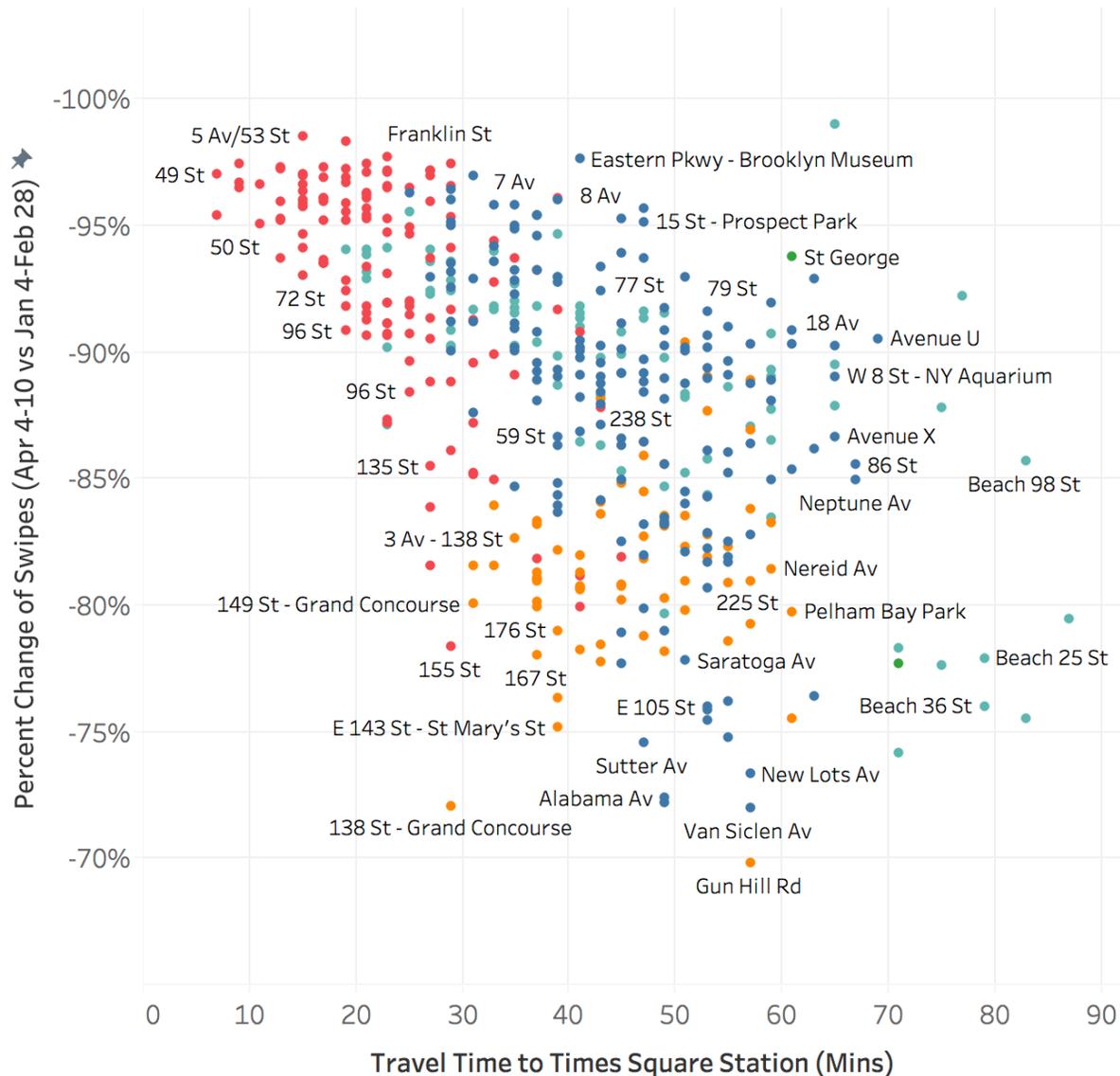
The scatter plot shows the relationship between ridership declines, and distance to the Manhattan Core (travel time to Times Square, under normal AM peak subway schedules)

The stations furthest from the Core have generally seen the least amount of ridership decline.

Change is measured by comparing the weekly average of January 4 – February 28th against the week of April 4-10.

Legend:
- BK
- BX
- MN
- QN
- SI

https://public.tableau.com/profile/dcptransportation#!/vizhome/MetroCardSwipes-Distance/Dashboard1

04/06-04/16 Weekday AM Peak

PERCENT CHANGE (2019-2020)
- ● >-70%
- ● -70%--75%
- ● -75%--80%
- ● -80%--85%
- ● -85%--90%
- ● -90%--95%
- ● <=-95%

ENTRIES (2020)

1.5k
749
434
284
207
139
85.4

AVG: 221

2.14

AM peak hour trips generally indicate where people are commuting *from*:

- The largest AM peak ridership declines are observed in the Manhattan Core and Inner Ring, and along the B/Q and E train lines.
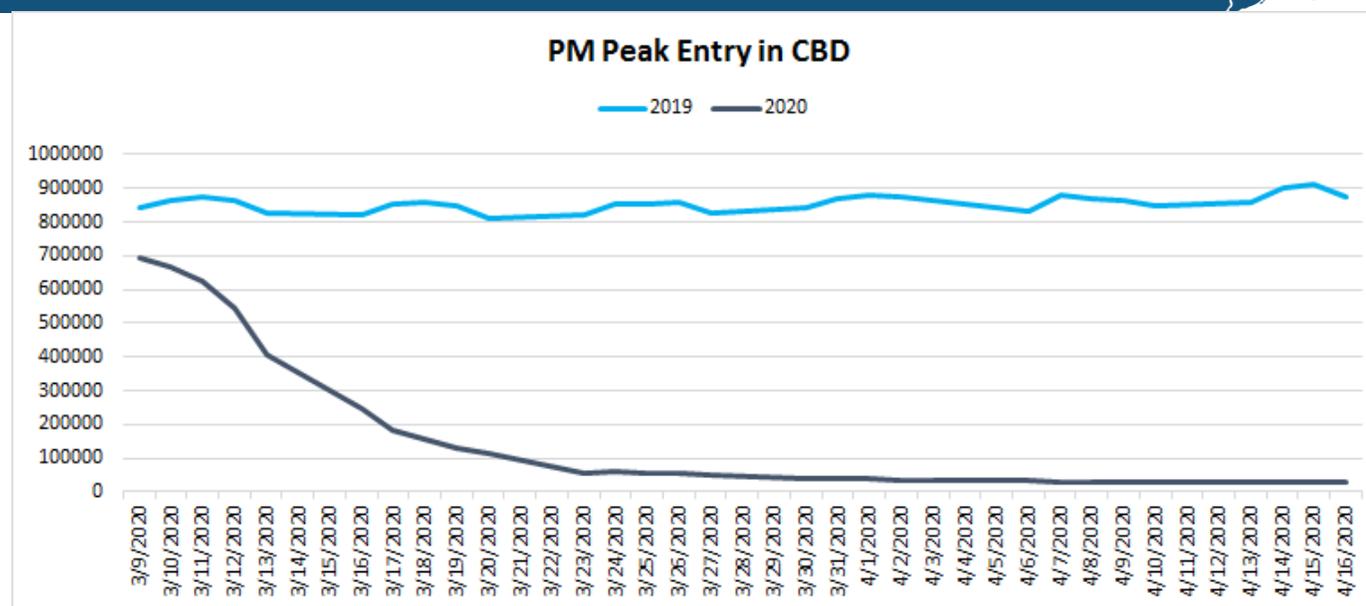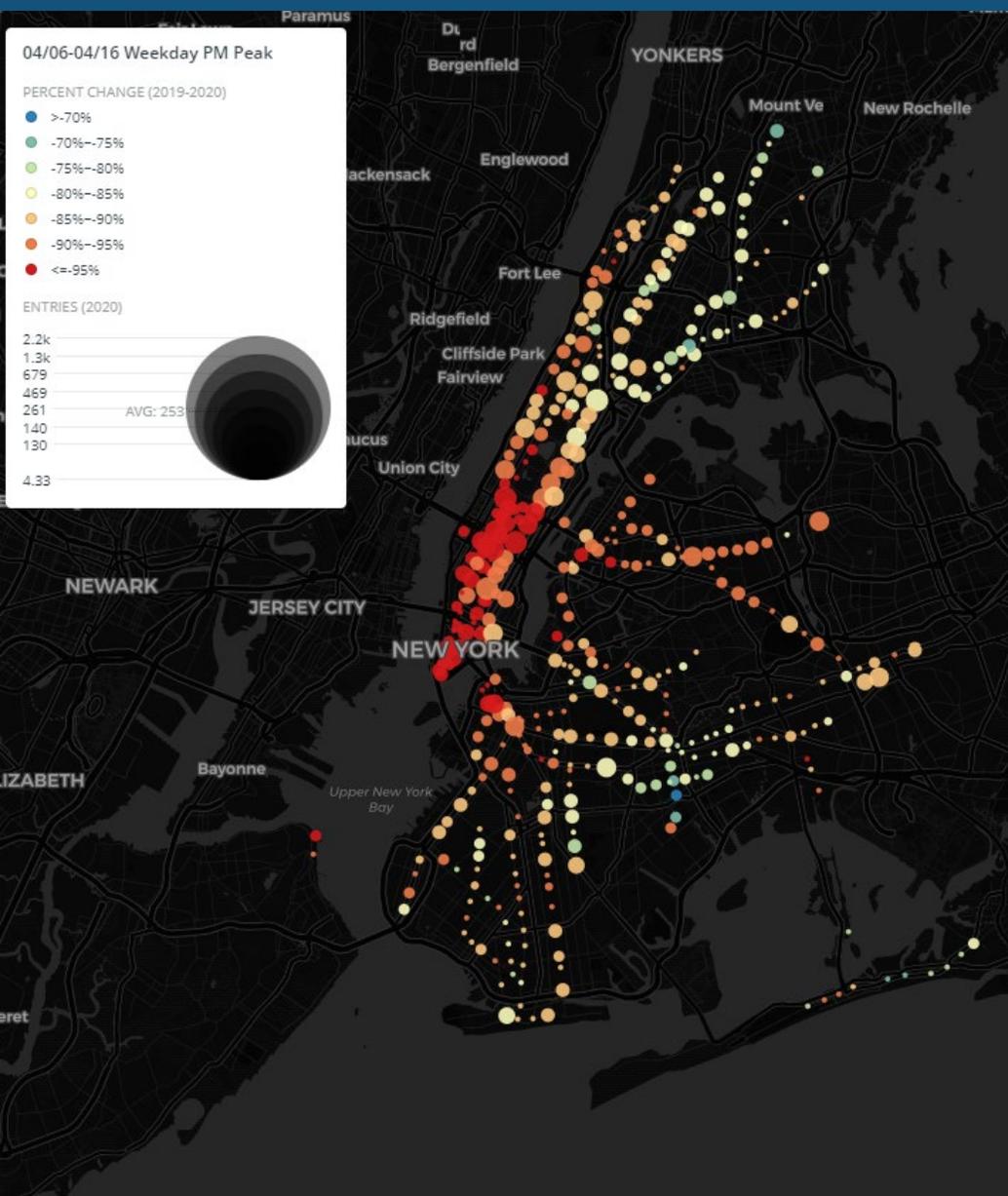
Turnstile Data:

- MTA turnstile data map compares weekday ridership during the second and third weeks of April in 2019 vs those same weeks in 2020. It considers riders only travelling during the AM peak 4-hour travel window*.

- Size is the actual ridership during the third week of April 2020 and the color is the percent change.

- MetroCard Swipe/Fare data is the cleaned weekly ridership data provided by MTA for each station. Although turnstile data is also published by MTA, it is the raw cumulative entry register data for each turnstile recorded every 4 hours. Turnstile data can be affected by broken turnstile, maintenance, register reset, etc. and thus **requires extra caution when using the data.**

*the 4-hour window of aggregated data varies by station but the map reflects whichever window encompassed the typical morning peak.
Data sources: MTA Turnstile data (http://web.mta.info/developers/turnstile.html)

PM Peak Weekday Turnstile Data: Apr 6-Apr 16 2020 vs 2019

04/06-04/16 Weekday PM Peak

PERCENT CHANGE (2019-2020)
- >-70%
- -70%–-75%
- -75%–-80%
- -80%–-85%
- -85%–-90%
- -90%–-95%
- <=-95%

ENTRIES (2020)
2.2k
1.3k
679
469
261 — AVG: 253
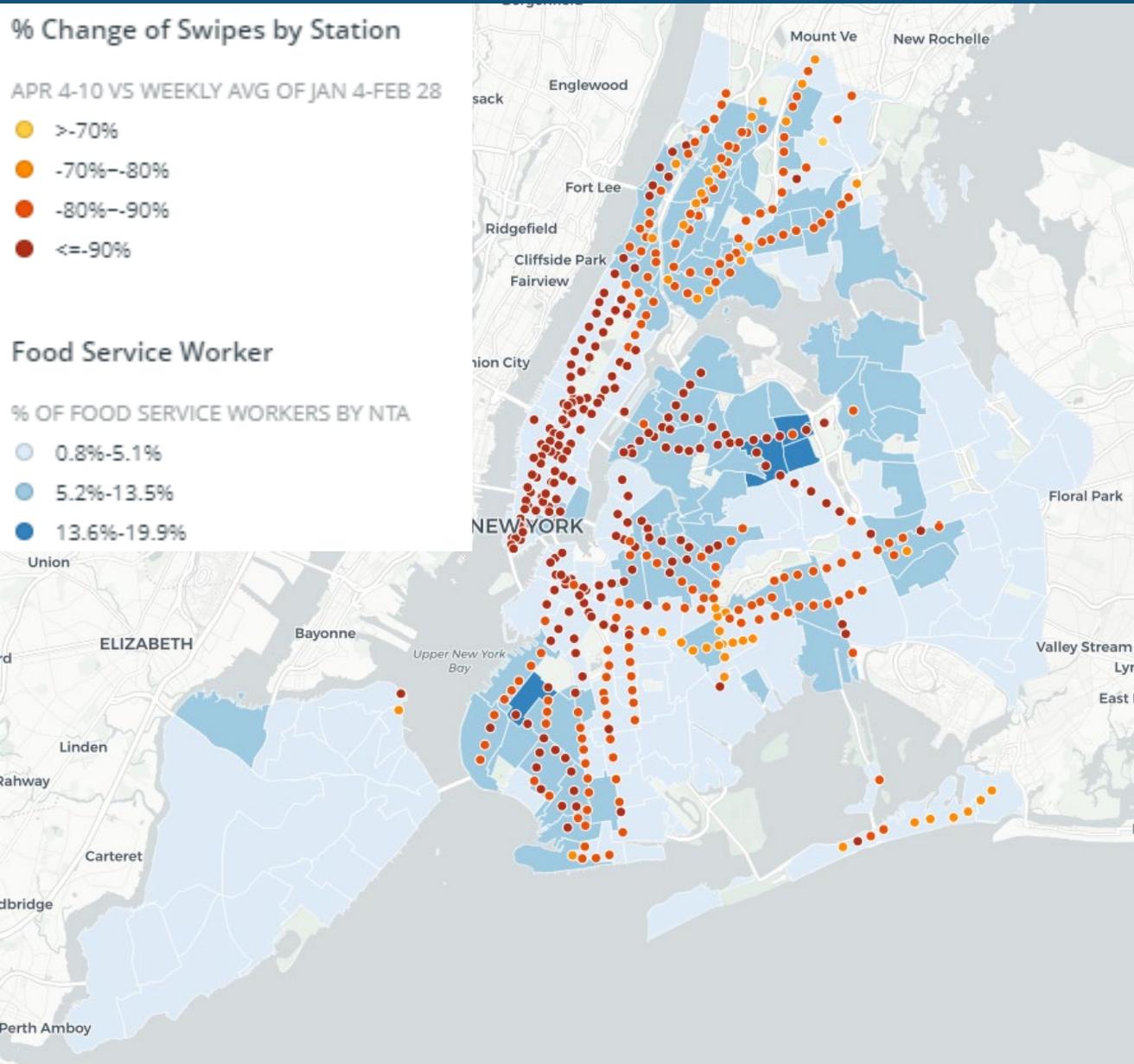140
130
4.33

PM Peak Entry in CBD
— 2019 — 2020

PM peak hour trips generally indicate where people are commuting *to*:

- The CBD area has seen the largest decreases in weekday entries during the PM peak 4-hour window*. The ridership has dropped approximately 97%.

- However, the CBD stations continue to have the highest ridership across the city, with about 30,000 entries per 4 hours in total in the PM peak.

*the 4-hour window of aggregated data varies by station but the map reflects whichever window encompassed the typical morning peak.
Data sources: MTA Turnstile data (http://web.mta.info/developers/turnstile.html)

MetroCard swipes and where food service workers live

% Change of Swipes by Station

APR 4-10 VS WEEKLY AVG OF JAN 4-FEB 28

- ○ >-70%
- ○ -70%–-80%
- ● -80%–-90%
- ● <=-90%

Food Service Worker

% OF FOOD SERVICE WORKERS BY NTA
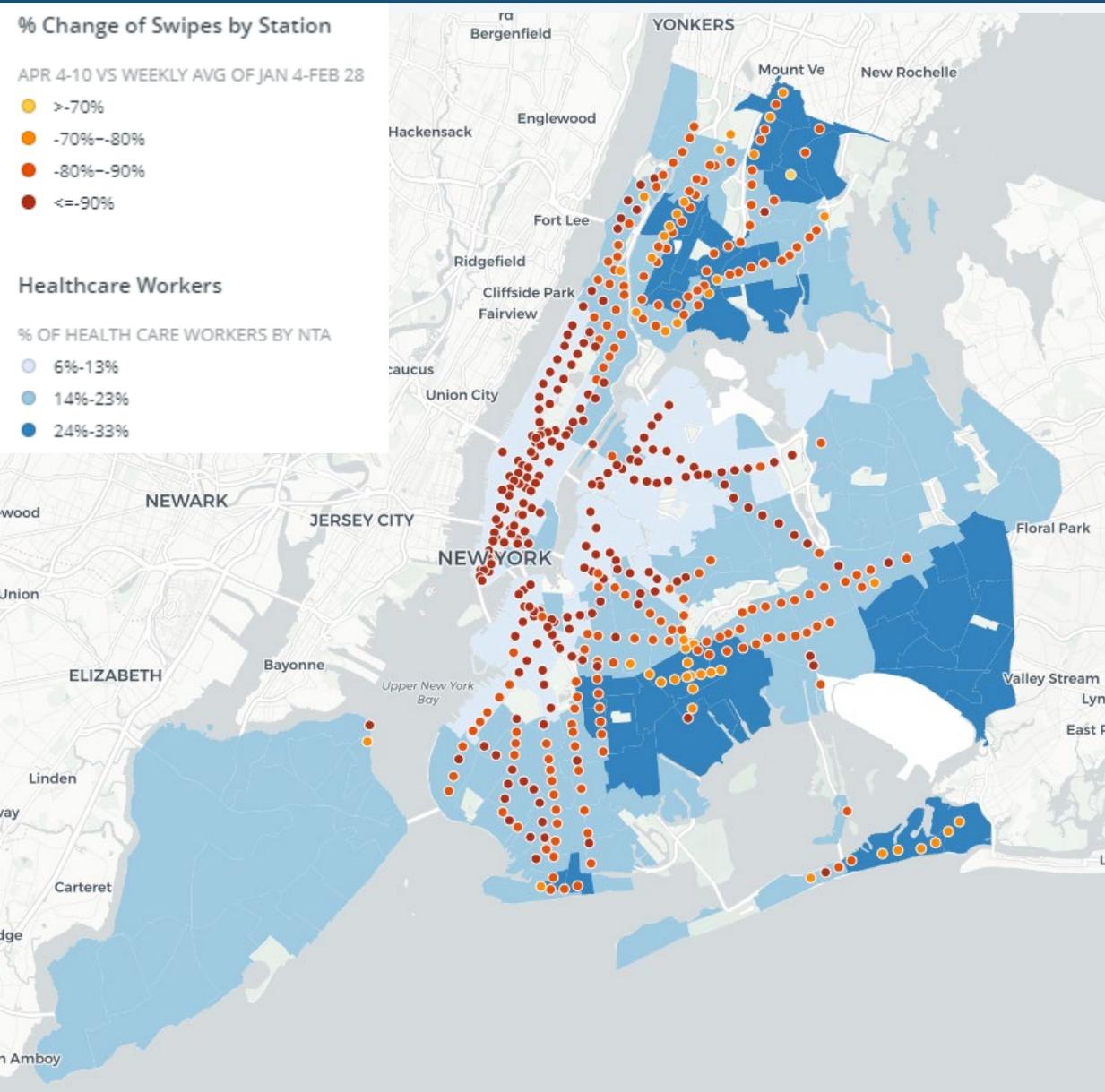
- ○ 0.8%-5.1%
- ● 5.2%-13.5%
- ● 13.6%-19.9%

- Areas where concentrations of food workers live do not appear to connected with higher rates of subway ridership under the pandemic.

- Nevertheless, we do see concentrations of food workers in the same neighborhoods as, or adjacent to, concentrations of confirmed positive COVID19 cases.

- Corona, Queens and Borough Park, Brooklyn are particularly notable. More detail is shown in a subsequent slide.

Positive Tests by ZCTA (4/20)

14 — 2.9k

746 AVG
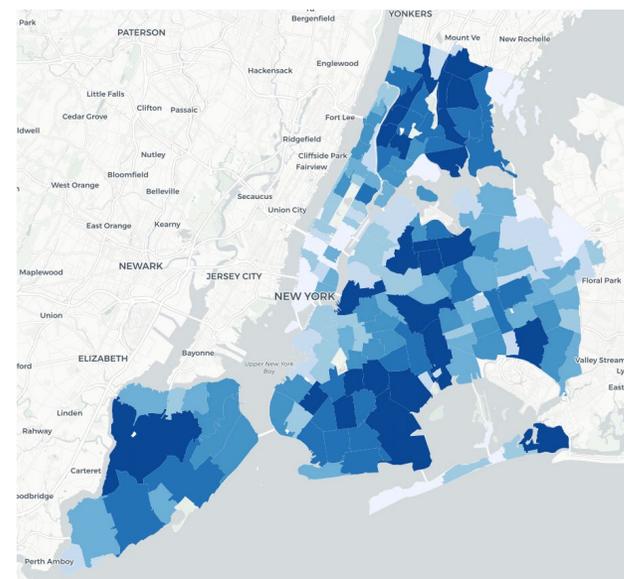
Data source: 2014-2018 ACS. Table S2401: OCCUPATION BY SEX FOR THE CIVILIAN EMPLOYED POPULATION 16 YEARS AND OVER

MetroCard swipes and where healthcare workers live

% Change of Swipes by Station

APR 4-10 VS WEEKLY AVG OF JAN 4-FEB 28

- ● >-70%
- ● -70%--80%
- ● -80%--90%
- ● <=-90%

Healthcare Workers

% OF HEALTH CARE WORKERS BY NTA

- ● 6%-13%
- ● 14%-23%
- ● 24%-33%

- We're beginning to explore the economic and demographic landscape of where subway ridership is relatively high.

- Certain neighborhoods of the city have particularly high rates of the workforce employed in essential industries.

- Parts of the Bronx, eastern Queens, and eastern Brooklyn have up to a third of all workers employed in healthcare. These areas coincide with areas where subway ridership declines have been less dramatic.

- Healthcare workers may be employed in hospitals, or may be continuing to report to work at nursing homes, as home health aides, or in other medical settings.
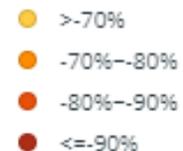
MetroCard Swipes and Healthcare Jobs – place of work

COVID-19 Hospitals

■

% Change of Swipes by Station

APR 4-10 VS WEEKLY AVG OF JAN 4-FEB 28

- ● >-70%
- ● -70%–-80%
- ● -80%–-90%
- ● <=-90%

Top Sector by NTA (2016)

50%+ DOMINANCE

- ● HEALTH CARE AND SOCIAL ASSISTANCE
- ● TRANSPORTATION AND WAREHOUSING
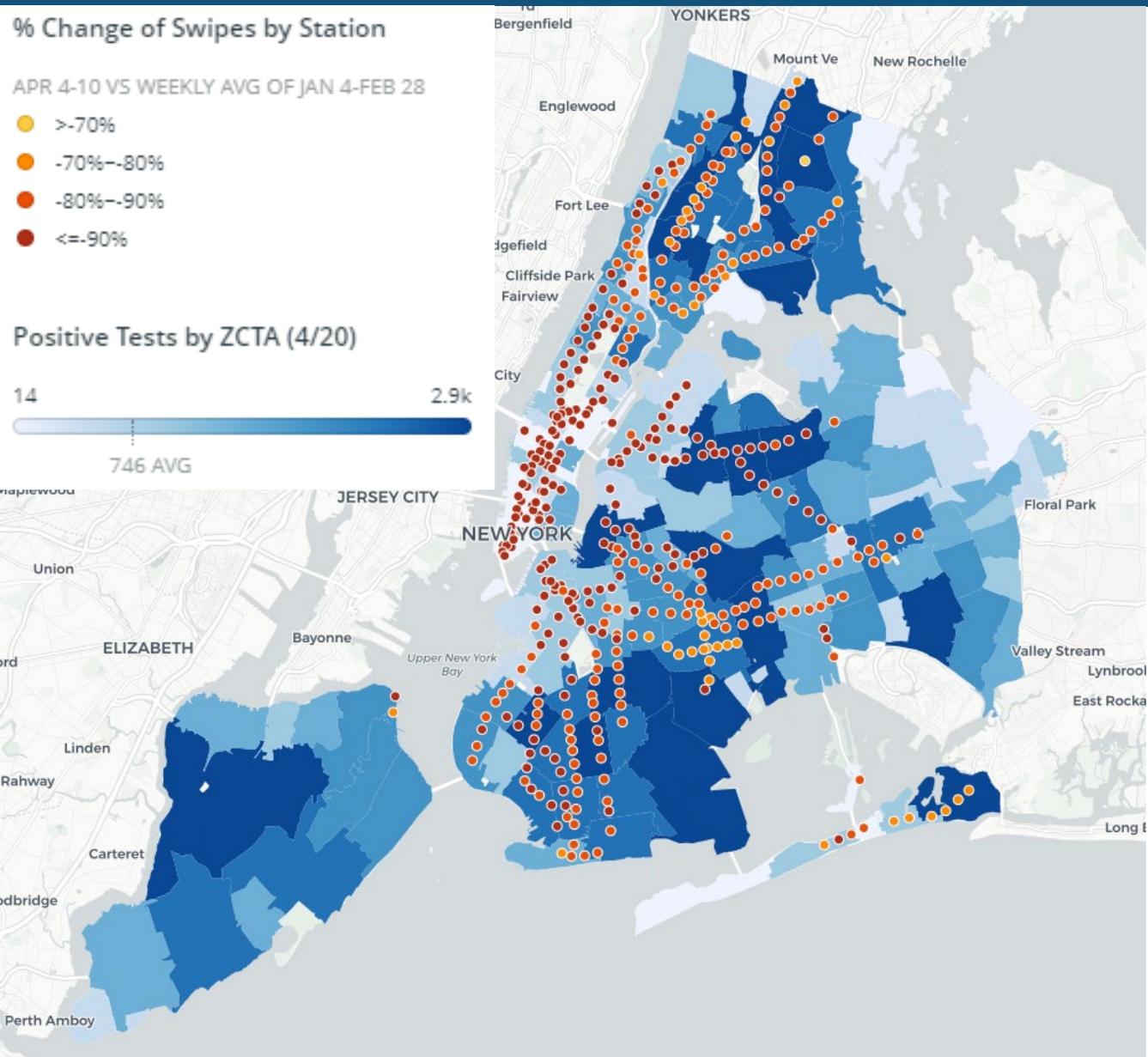- ● EDUCATIONAL SERVICES
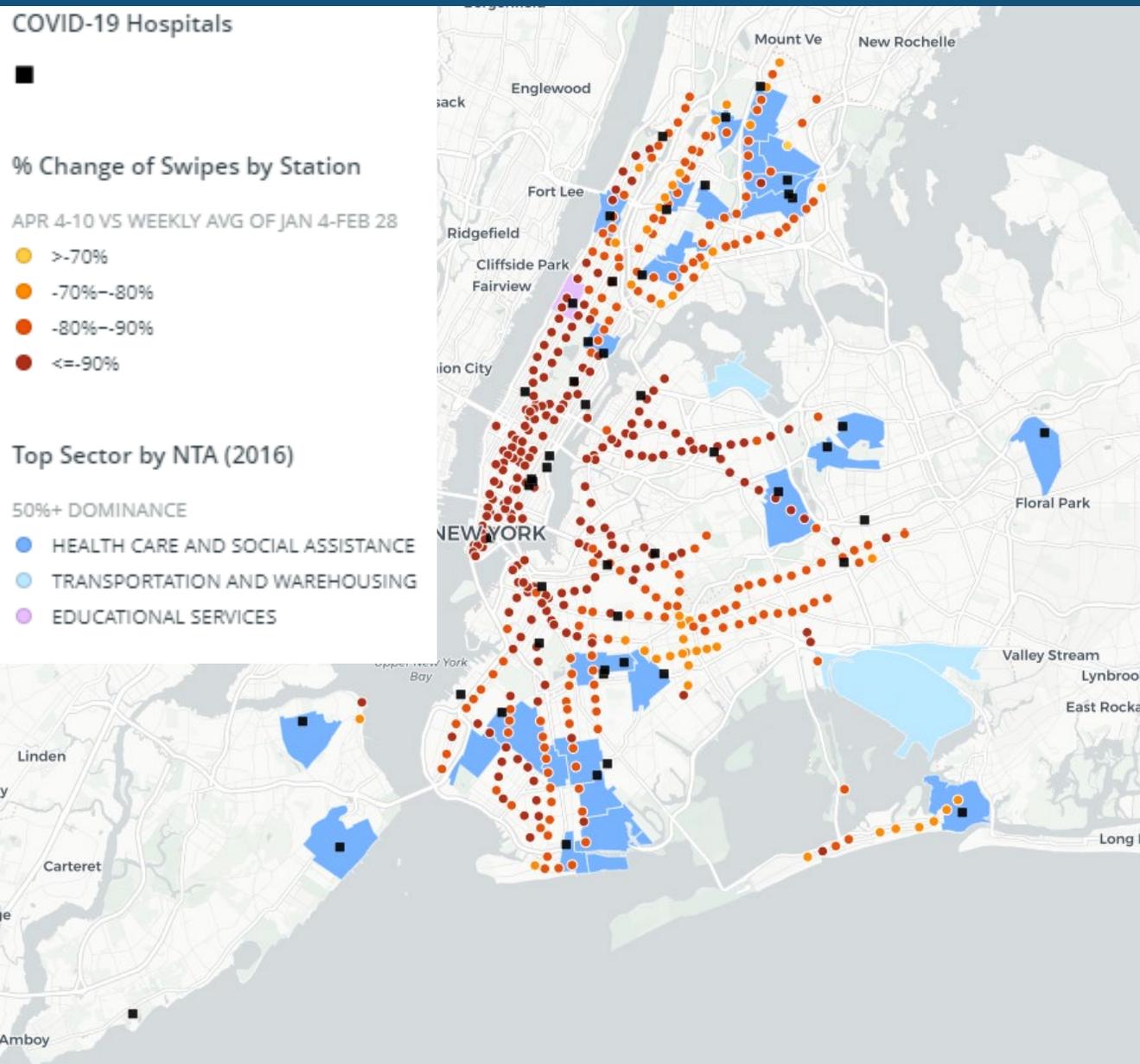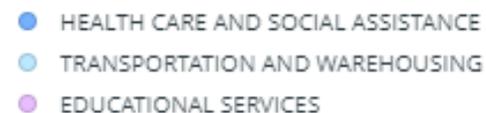
- This map shows neighborhoods where more than half of the jobs within the neighborhood are within a single sector. Most of these are in healthcare or social assistance.

- These neighborhoods contain or are near hospitals that are currently accepting suspected COVID19 patients.

- As essential workers continue to travel to work, subway ridership declines have been extreme, but still less pronounced, in many of these neighborhoods.

% Change of Subway Swipes by Dominant Sectors in NTAs

HealthCare and Social Assistance	-83%
Educational Services	-89%
All Sectors	-90%

Data sources: MTA Fare Data (http://web.mta.info/developers/fare.html); DCP Housing Economic Development division, QCEW 2016 (3rd Quarter), geocoded private, non-headquartered firms

Transit Ridership and COVID19 Positive Tests

% Change of Swipes by Station

APR 4-10 VS WEEKLY AVG OF JAN 4-FEB 28

- >-70%
- -70%--80%
- -80%--90%
- <=-90%

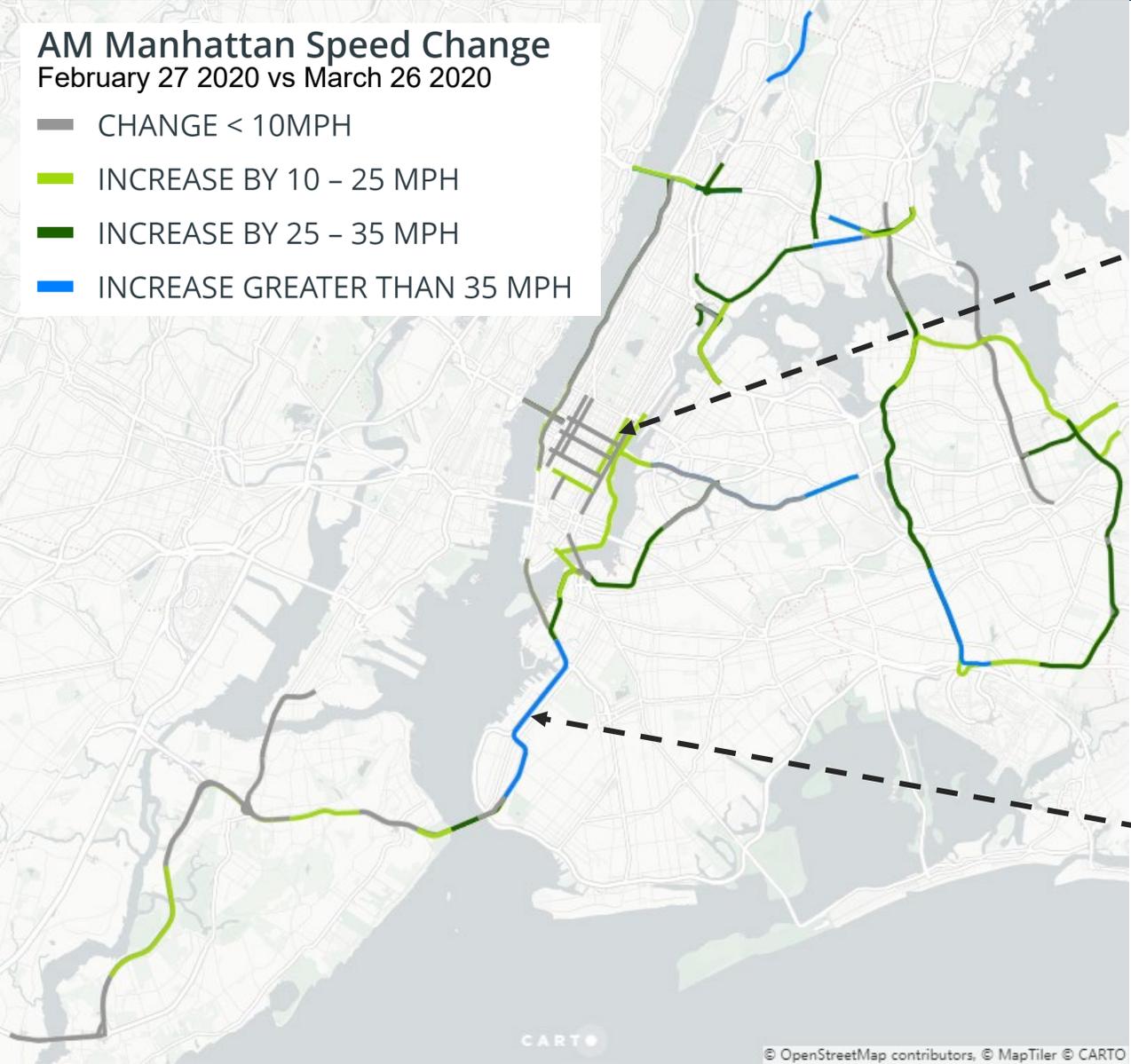Positive Tests by ZCTA (4/20)

14   2.9k

746 AVG

- Some neighborhoods in the city with the lowest decline in subway ridership also show the highest numbers of confirmed positive COVID19 cases.

- Areas with the highest number of confirmed cases (shown in dark blue) and the least change in ridership (shown in lighter orange) include Borough Park and East New York in Brooklyn, and the Morris Heights and Williamsbridge areas in the Bronx.
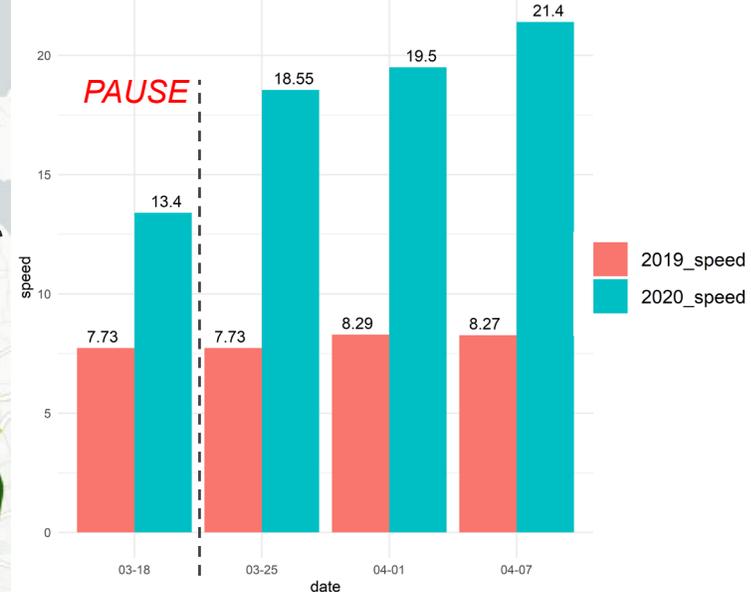
Source: DOH – COVID Data from 4/20 MTA Fare Data (http://web.mta.info/developers/fare.html)

NYC AM Peak Road Speed Change

AM Manhattan Speed Change
February 27 2020 vs March 26 2020

— CHANGE < 10MPH

— INCREASE BY 10 – 25 MPH

— INCREASE BY 25 – 35 MPH

— INCREASE GREATER THAN 35 MPH

© OpenStreetMap contributors, © MapTiler © CARTO

Data Source: NYC DOT

(The date represent that week. For Manhattan data, the baseline is Q1 2019 average speed)

MN 2nd Ave btwn 57th and 23rd streets (SB)

PAUSE

2019_speed
2020_speed

7.73 / 13.4 — 03-18
7.73 / 18.55 — 03-25
8.29 / 19.5 — 04-01
8.27 / 21.4 — 04-07

BK BQE btwn N7th and 9th streets (NB)

PAUSE

10.56 — 02-05
11.18 — 02-12
9.94 — 02-19
11.8 — 02-26
8.69 — 03-11
14.91 — 03-18
48.46 — 03-25
49.7 — 04-01
49.7 — 04-08
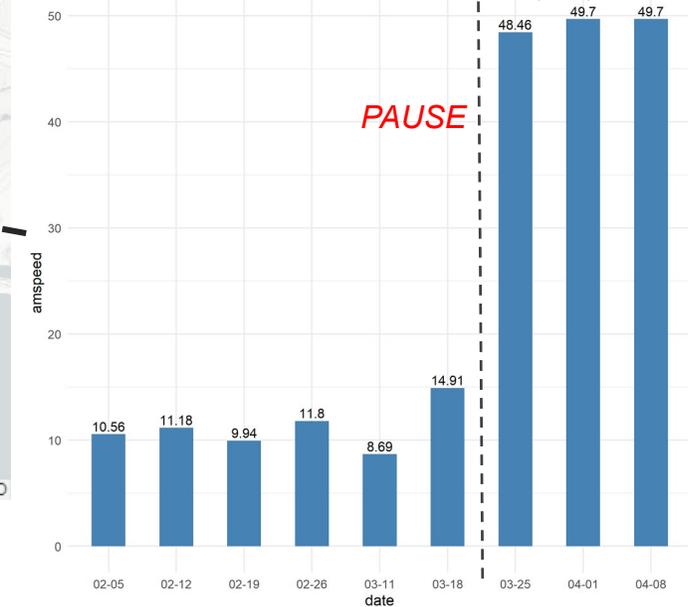
AM Peak (6:30-9:30)

Since the stay at home order was put in place, there has been an average 57% increase in speeds* for the roads shown on the map.

Manhattan's 2nd Avenue speeds averaged more than 21mph on April 7 2020 versus only 8mph one year ago.
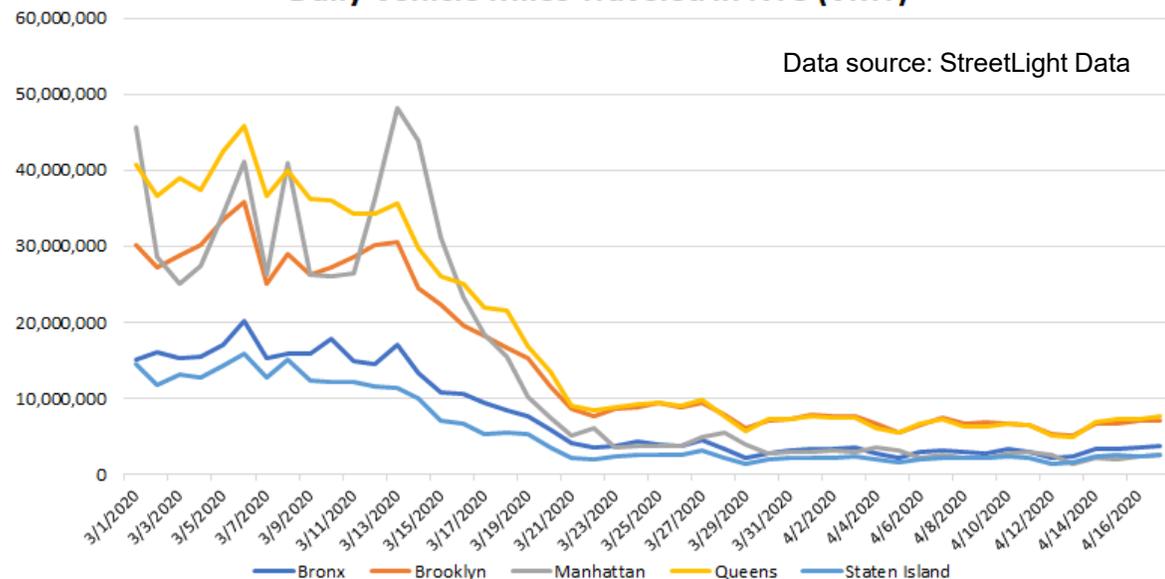
Speeds on the BQE jumped from about 15mph to nearly 50mph pre- and post-PAUSE (3/22/2020).

(Weighted speed=Sum (speed 1st length 1st+......+speed nth*length nth)/Sum(length 1+.....+length nth).

Interactive map: NYC Road Speed Change(03-26 vs 02-27)

April 21, 2020
33

Daily Vehicle Miles Traveled in NYC (VMT)
Data source: StreetLight Data
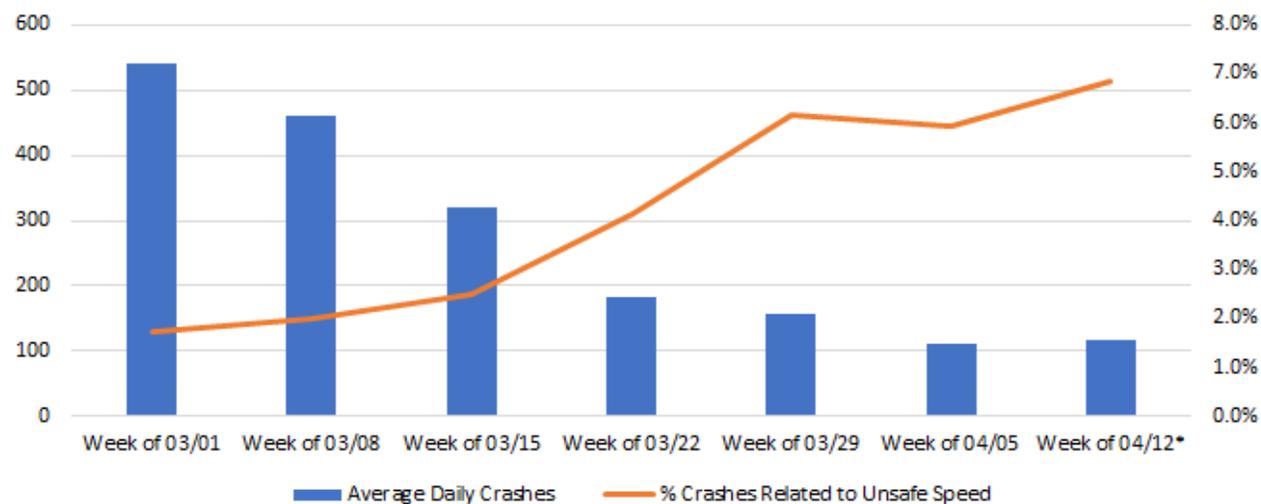(Legend: Bronx, Brooklyn, Manhattan, Queens, Staten Island)

- There were significant declines in vehicle miles travelled (VMT) as the City and State progressively enacted stay-at-home measures.

- The VMT peak after Friday, March 13 may reflect people leaving the city in their cars.

- Although numbers of motor vehicle collisions, injuries and fatalities have plummeted since mid-March, the percentage of crashes related to unsafe speed went up.

- The number of collisions per VMT has first increased right after PAUSE but started to level off in the most recent weeks.

Number of Motor Vehicle Collisions Per VMT
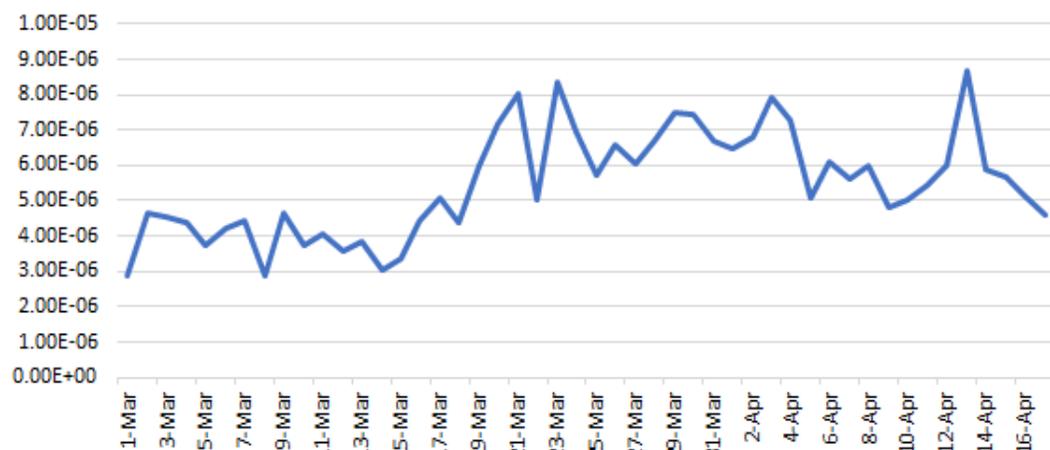
Average Daily Crashes vs. % Crashes Related to Unsafe Speed
(Legend: Average Daily Crashes, % Crashes Related to Unsafe Speed)

*Week of 04/21 is a 6-day average as the data for 04/18 has not been released.

Data source: NYPD Motor Vehicle Collisions (https://data.cityofnewyork.us/Public-Safety/Motor-Vehicle-Collisions-Crashes/h9gi-nx95)