

COVID19 IMPACTS ON TRANSPORTATION

Produced by the NYC Department of City Planning's Transportation Division

October 6, 2020



- The NYC Department of City Planning's Transportation Division is compiling data to help understand the effects of COVID19 on the transportation network. This report and all prior reports beginning in April 2020 can be found at <https://www1.nyc.gov/site/planning/planning-level/transportation/transportation-overview.page>
- This week's report includes the following information:
 1. Executive Summary
 2. Citywide Trends
 3. MTA: Subway and Bus
 4. MTA: Metro North Railroad, Long Island Rail Road, Access-A-Ride
 5. Ferry
 6. Traffic
 7. Citi Bike
 8. Timeline
- 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.

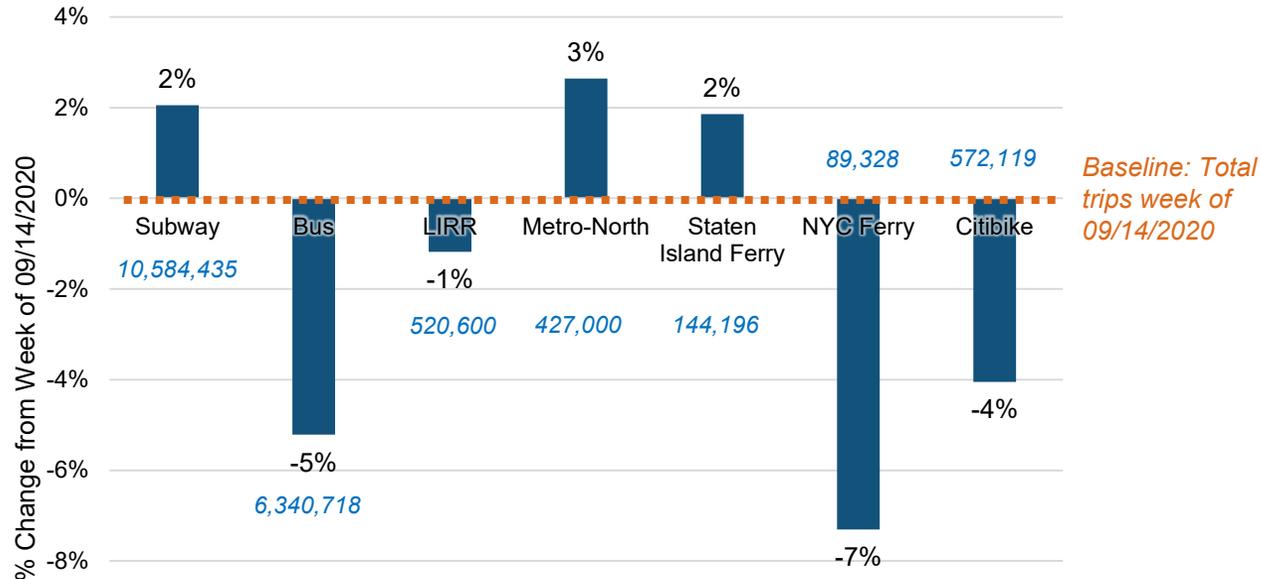
- **Gains in travel across different modes have been substantial, but distributed unevenly, since the mid-April low.** The modes showing the greatest gains since April are those that experienced the greatest declines at the start of the pandemic.
- After a substantial post-Labor day increase, **weekday subway ridership has stabilized**, and ridership during the week of September 28 was **up only 2 percent over** the week of September 14.
- The **city's business districts** in midtown and lower Manhattan, downtown Brooklyn, and Long Island City continue to see less than a quarter of their PM peak subway entries, indicating a **very limited return to work in those areas**.
- Year over year, the **greatest ridership differences are currently seen in neighborhoods with the strongest likelihood of having telework-capable populations**, including much of Manhattan, Downtown Brooklyn, Williamsburg, Long Island City, and Astoria.
- Since the start of September, the Staten Island Ferry has recovered an average of 36 percent of its daily ridership, compared to 2019 levels. Weekday peak hour ridership for the two-week period of September 21 to October 4 **remains an hour earlier than what it was last year at this time**.
- Total **average weekday daytime inbound vehicles** to Manhattan and the Manhattan central business district **are comparable to pre-pandemic levels**, while evening traffic volumes remain lower.
- From June through September 2020, Citi Bike ridership has been fairly consistent with ridership patterns during the same months in 2019. **Afternoon peak hour Citi Bike rides exceed 2019 volumes; morning peak hour rides remain lower.**

Citywide Trends

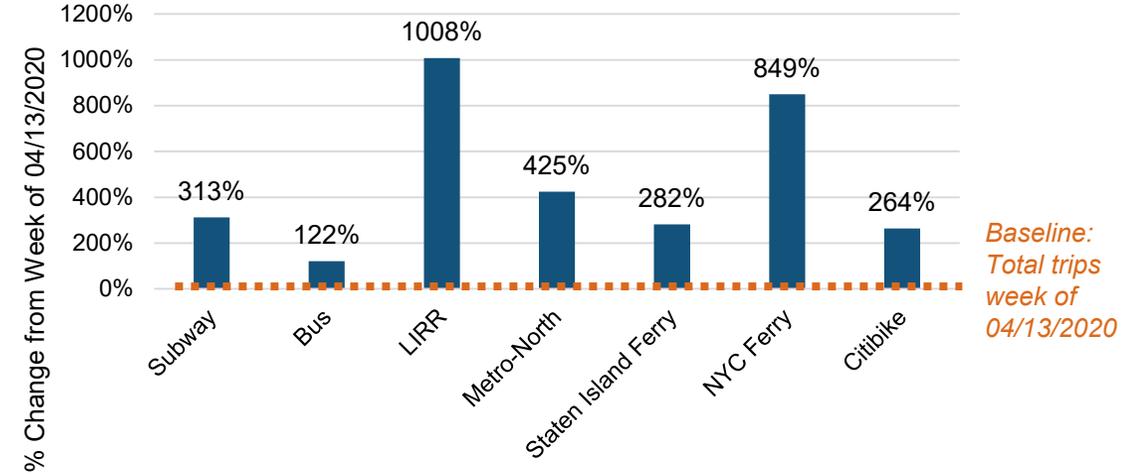
Citywide Trends

- Travel across all modes is up substantially over mid-April volumes. Ridership across all modes measured here is essentially stable. Public schools are only partially open for in-person learning, and office re-occupancy has been slow.
- Note: While bus ridership data had been estimated during the suspension of fare collection, bus ridership data from 10/1/20 onward is based on actual MetroCard and OMNY swipes and taps and an estimate of cash fares paid, which may account for some of the change observed this week over earlier in September.*

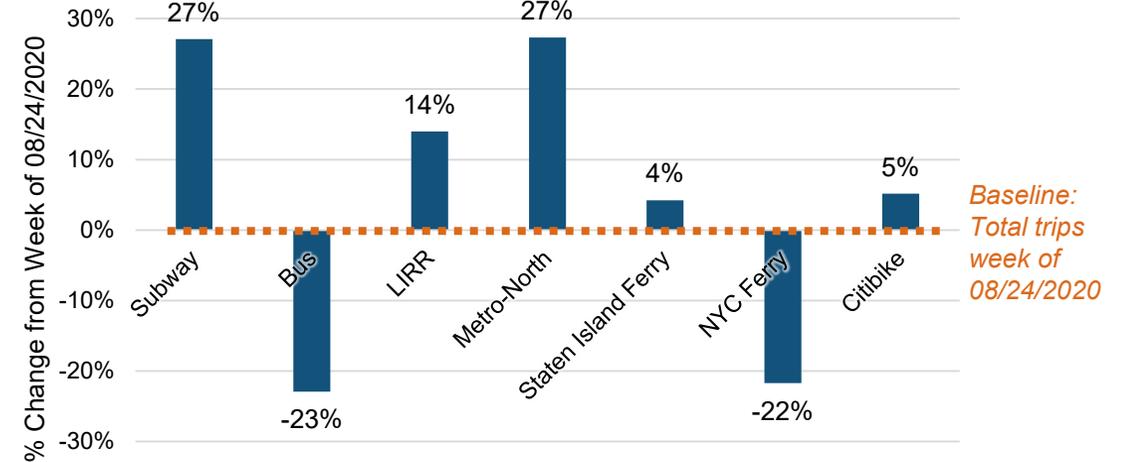
Week of 09/28/2020 Compared to Week of 09/14/2020 (Weekly Total)



Week of 09/28/2020 Compared to Week of 04/13/2020 (Weekly Total)



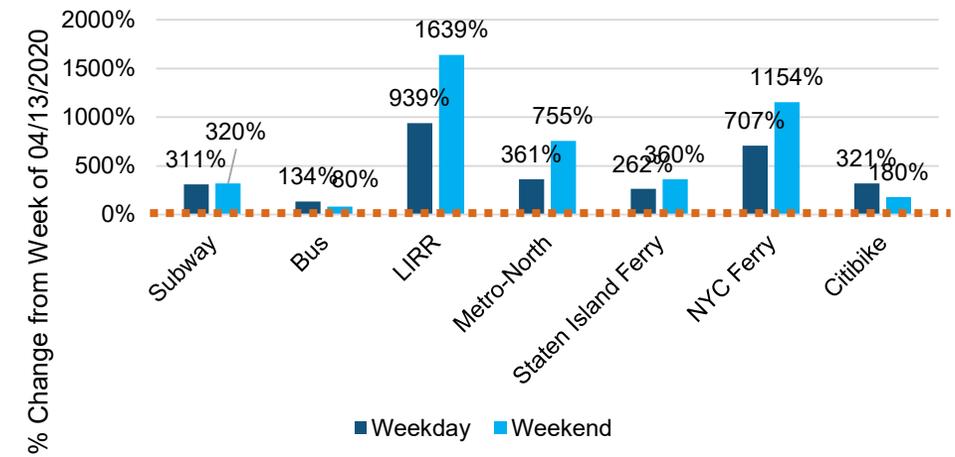
Week of 09/28/2020 Compared to Week of 08/24/2020 (Weekly Total)



Citywide Trends: Weekday vs Weekend

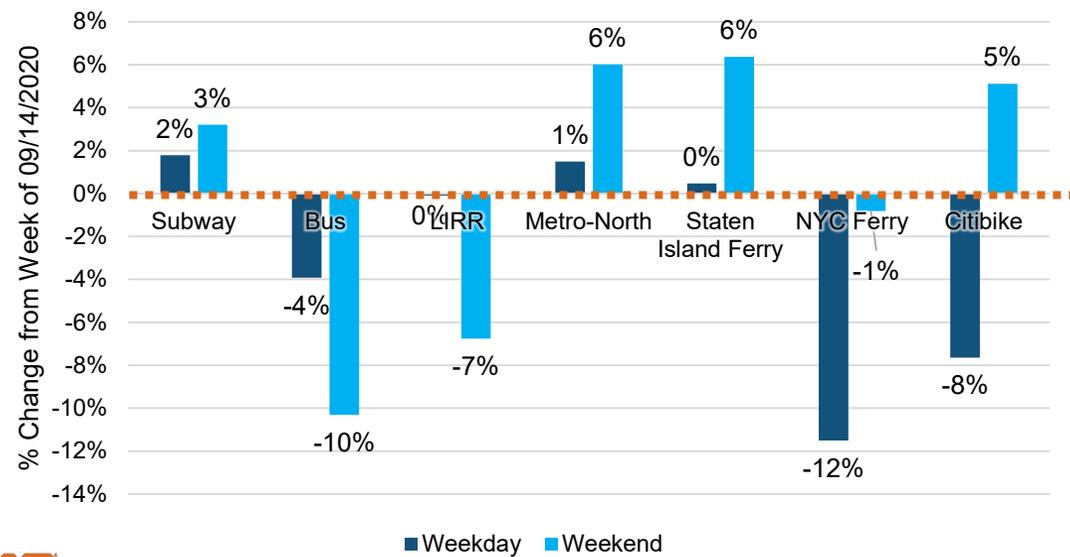
- Gains in travel across different modes have been substantial, but distributed unevenly since the mid-April low, and skewed more towards weekend travel. The modes showing the greatest gains since April are those that experienced the greatest declines at the start of the pandemic.
- This indicates a growing willingness to leave home, but perhaps not a return to places of work for many people who would typically be commuting.
- Note: While bus ridership data had been estimated during the suspension of fare collection, bus ridership data from 10/1/20 onward is based on actual MetroCard and OMNY swipes and taps and an estimate of cash fares paid and thus may be unreliable to compare against ridership counts from earlier this year.*

Week of 09/28/2020 Compared to Week of 04/13/2020 (Weekday vs. Weekend)



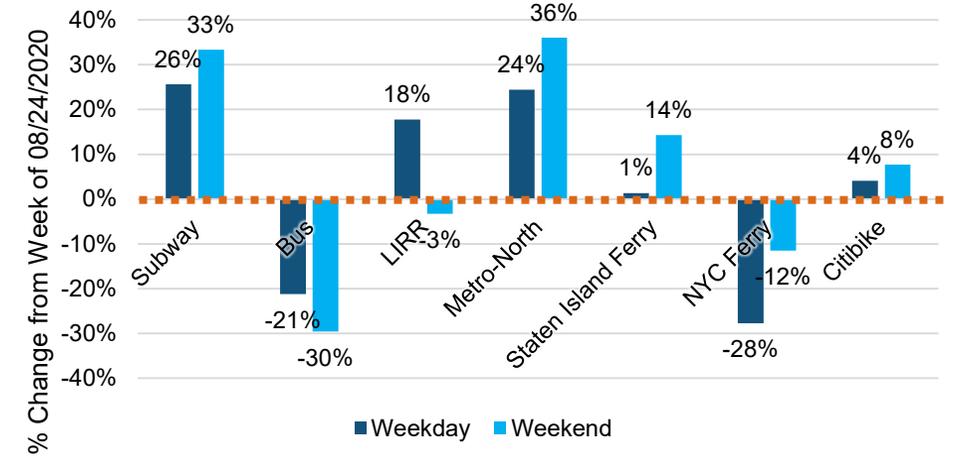
Baseline: Total trips week of 04/13/2020

Week of 09/28/2020 Compared to Week of 09/14/2020 (Weekday vs. Weekend)



Baseline: Total trips week of 09/14/2020

Week of 09/28/2020 Compared to Week of 08/24/2020 (Weekday vs. Weekend)

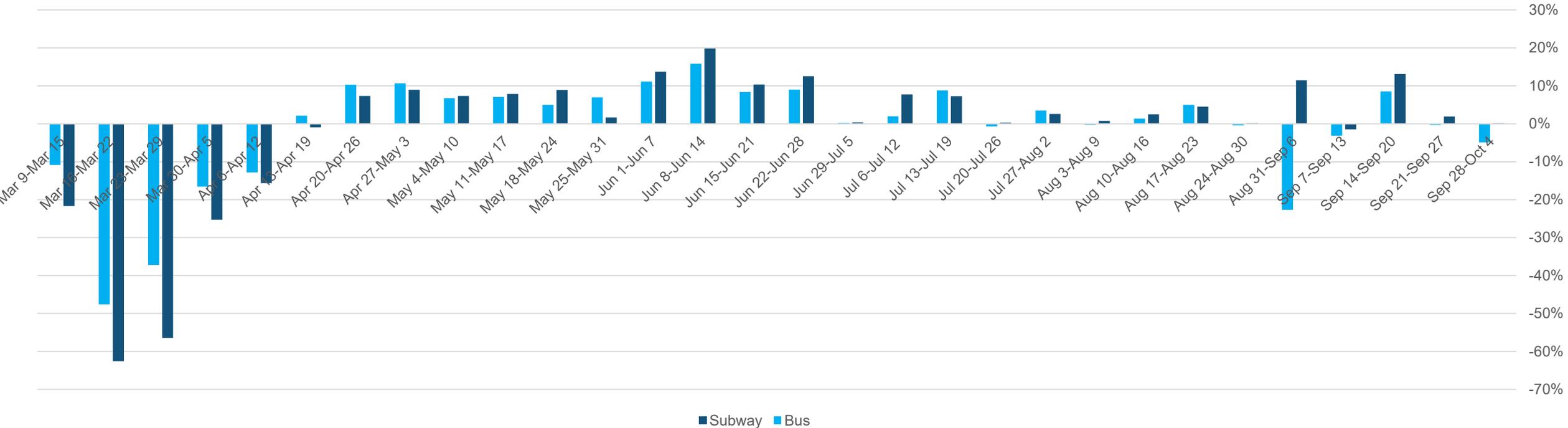


Baseline: Total trips week of 08/24/2020

MTA data: Subway and Bus

MTA Subway & Bus System-wide Ridership Changes

Percent Change of Estimated* MTA Subway & Bus Weekly Ridership
(March 1- October 4, 2020)

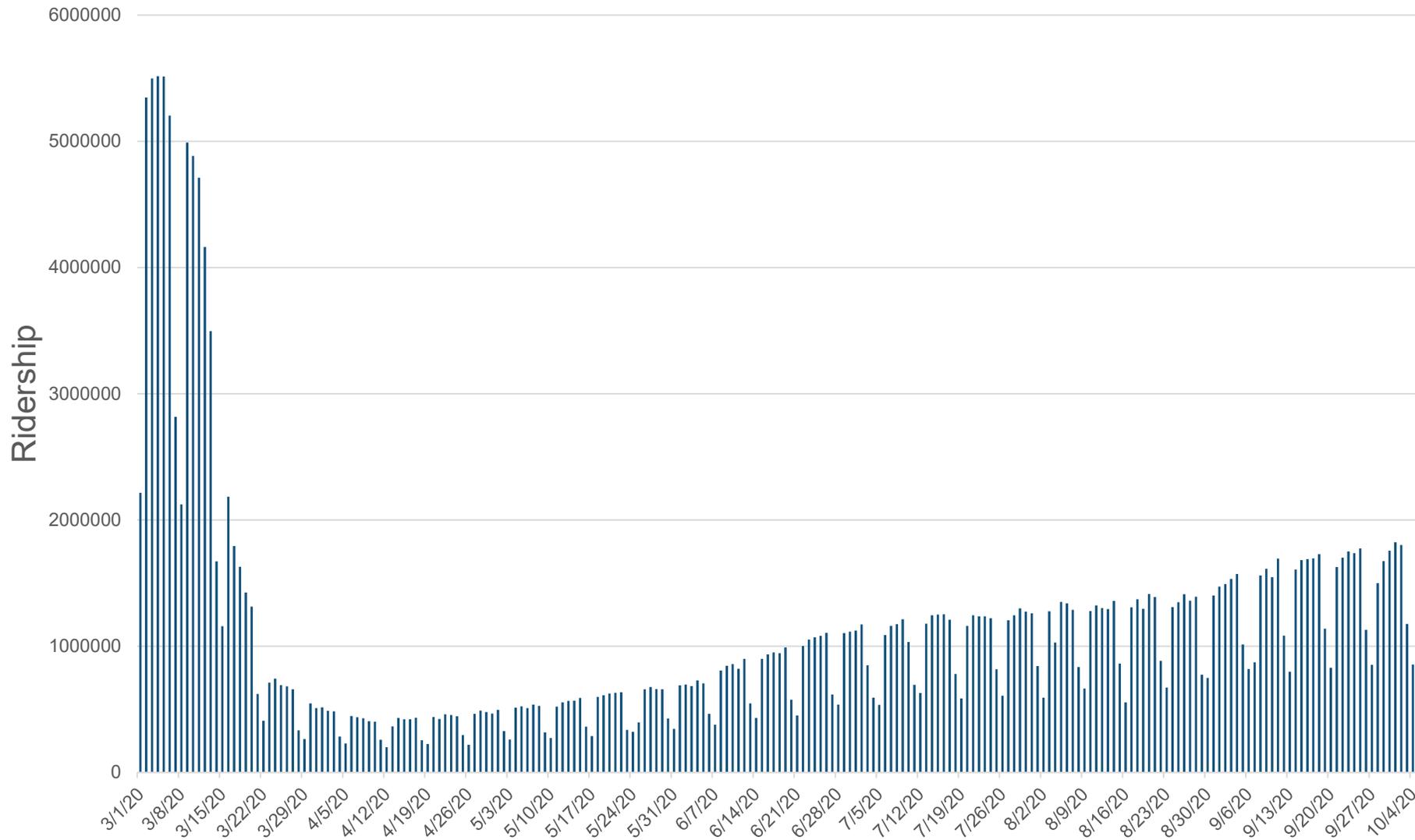


- On September 1, the MTA resumed fare collection on buses, after suspending collection on March 23, 2020. Bus ridership dropped by more than 22 percent that week, while subway ridership increased by more than 11 percent. The drop in bus riders and increase in subway riders during the first week of September likely reflects a resulting mode shift.
- While bus ridership appears to have fallen by nearly 5% over the past week, the MTA changed their methodology* in calculating ridership and includes the following note, which likely explains some if not all of the decline: *"Bus ridership data from 10/1/20 onward is based on actual MetroCard and OMNY swipes and taps and an estimate of cash fares paid."*

*Previously from the MTA: Current bus ridership figures are estimated from models that use MetroCard and OMNY swipes and taps and Automatic Passenger Counter data that is available on a portion of our bus fleet. These figures are indicative of ridership but not a precise count. Figures from recent days may be revised as reconciliation processes are carried out. Data sources: MTA (<https://new.mta.info/coronavirus/ridership>)

MTA Subway System-wide Ridership Changes

Estimated* MTA Subway Ridership (March 1- October 4, 2020)

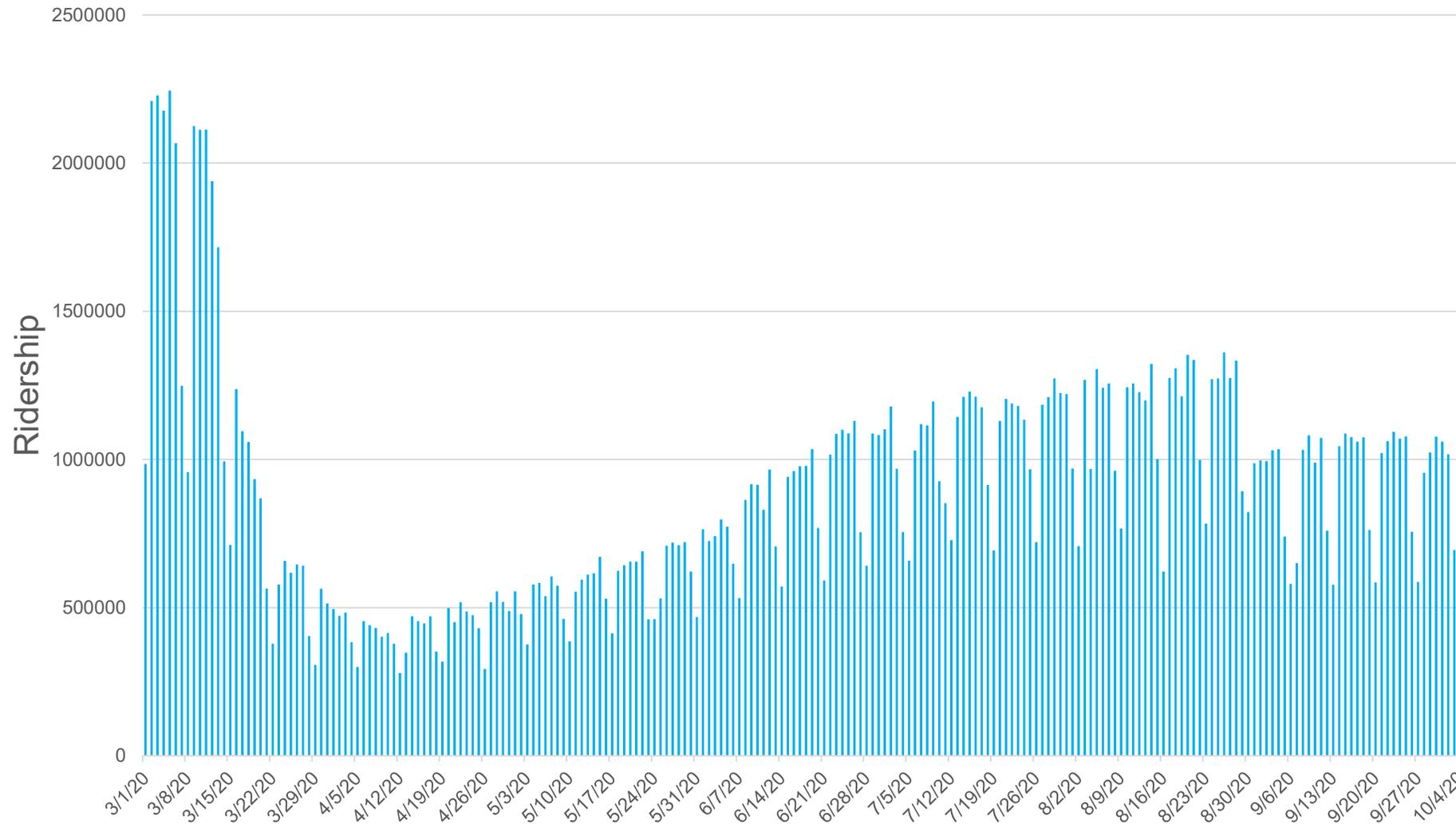


- Weekday subway ridership during the week of September 28 was up 2 percent over the week of September 14, and weekend ridership was up 3 percent over the week of September 14.
- Weekday subway ridership is now at nearly 35 percent of 2019 averages.

From the MTA: Subway ridership figures are determined from MetroCard and OMNY swipes and taps. Figures from recent days may be revised as data reconciliation processes are carried out. Data sources: MTA (<https://new.mta.info/coronavirus/ridership>)

MTA Bus System-wide Ridership Changes

Estimated * MTA Bus Ridership (March 1- October 4, 2020)

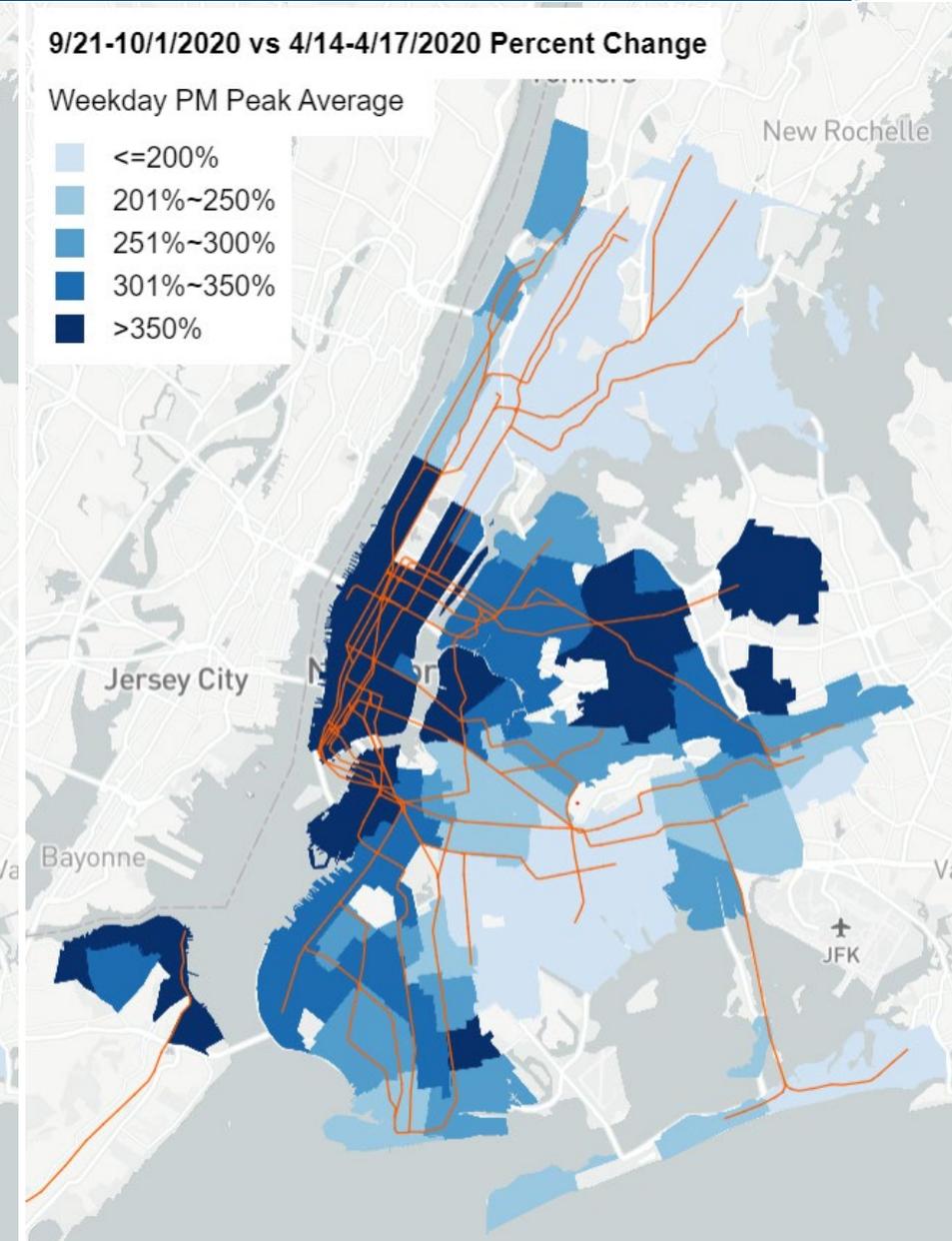
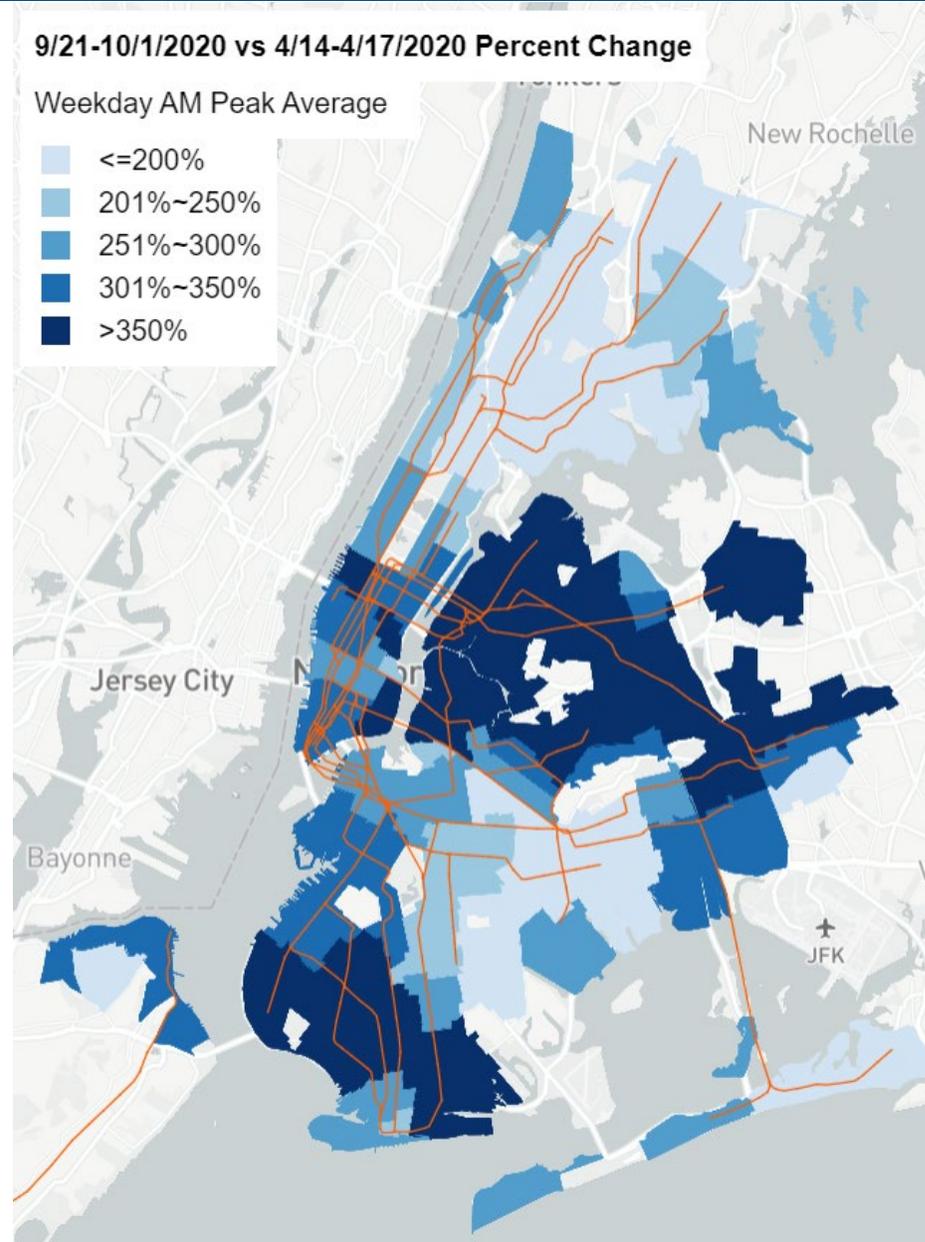


- Weekday bus ridership reportedly was down 4 percent during the week of September 28 from the week of September 14, while weekend ridership was down 10 percent compared to the week of September 14.
- However, the MTA changed how ridership is reported, noting on their website: *“Bus ridership data from 10/1/20 onward is based on actual MetroCard and OMNY swipes and taps and an estimate of cash fares paid.”*
- Weekday bus ridership is now at nearly half of 2019 averages.

From the MTA: Current bus ridership figures are estimated from models that use MetroCard and OMNY swipes and taps and Automatic Passenger Counter data that is available on a portion of our bus fleet. These figures are indicative of ridership but not a precise count. Figures from recent days may be revised as reconciliation processes are carried out. Data sources: MTA (<https://new.mta.info/coronavirus/ridership>)

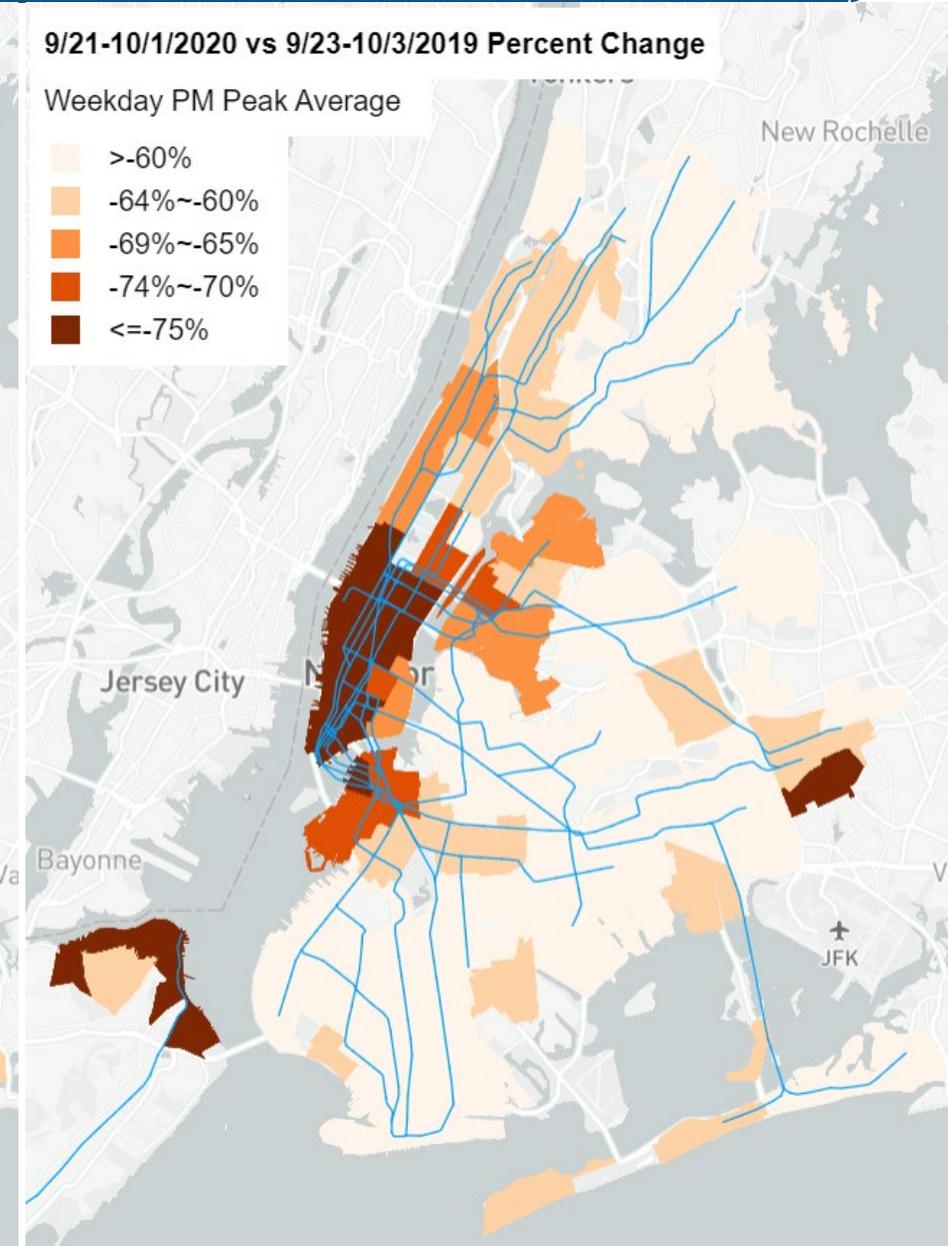
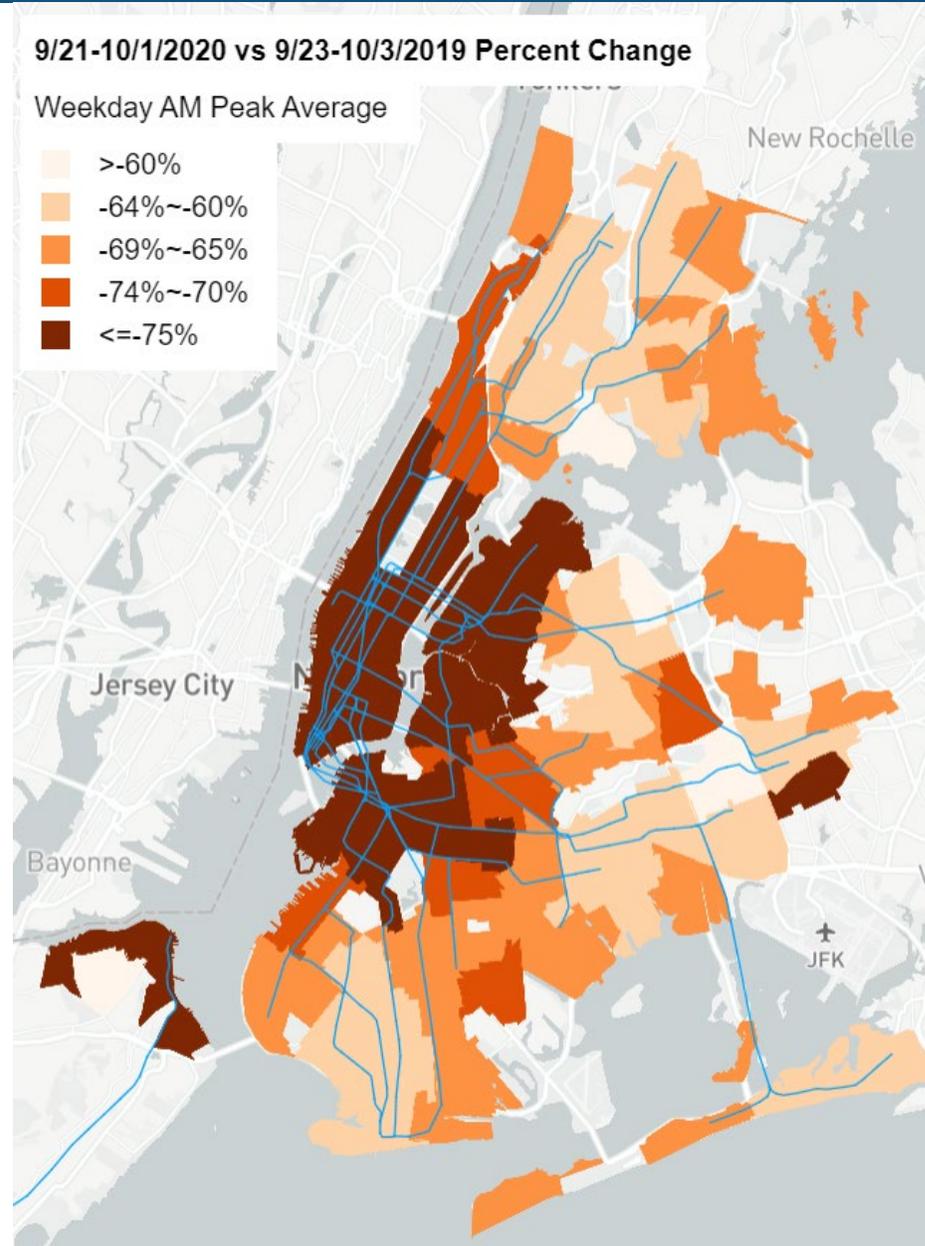
Weekday AM and PM Peak Turnstile Data – Comparisons with April 2020

- **In mid-April, subway travel was at its lowest.** Ridership has been increasing since then, to varying degrees across the city.
- The AM peak hour map may indicate where commuters are returning to the subway system, while the PM peak hour map may indicate where people are commuting home from.
- Much of Queens and south Brooklyn are seeing strong AM peak hour gains. The city's business districts have gained substantial PM peak ridership since mid-April.



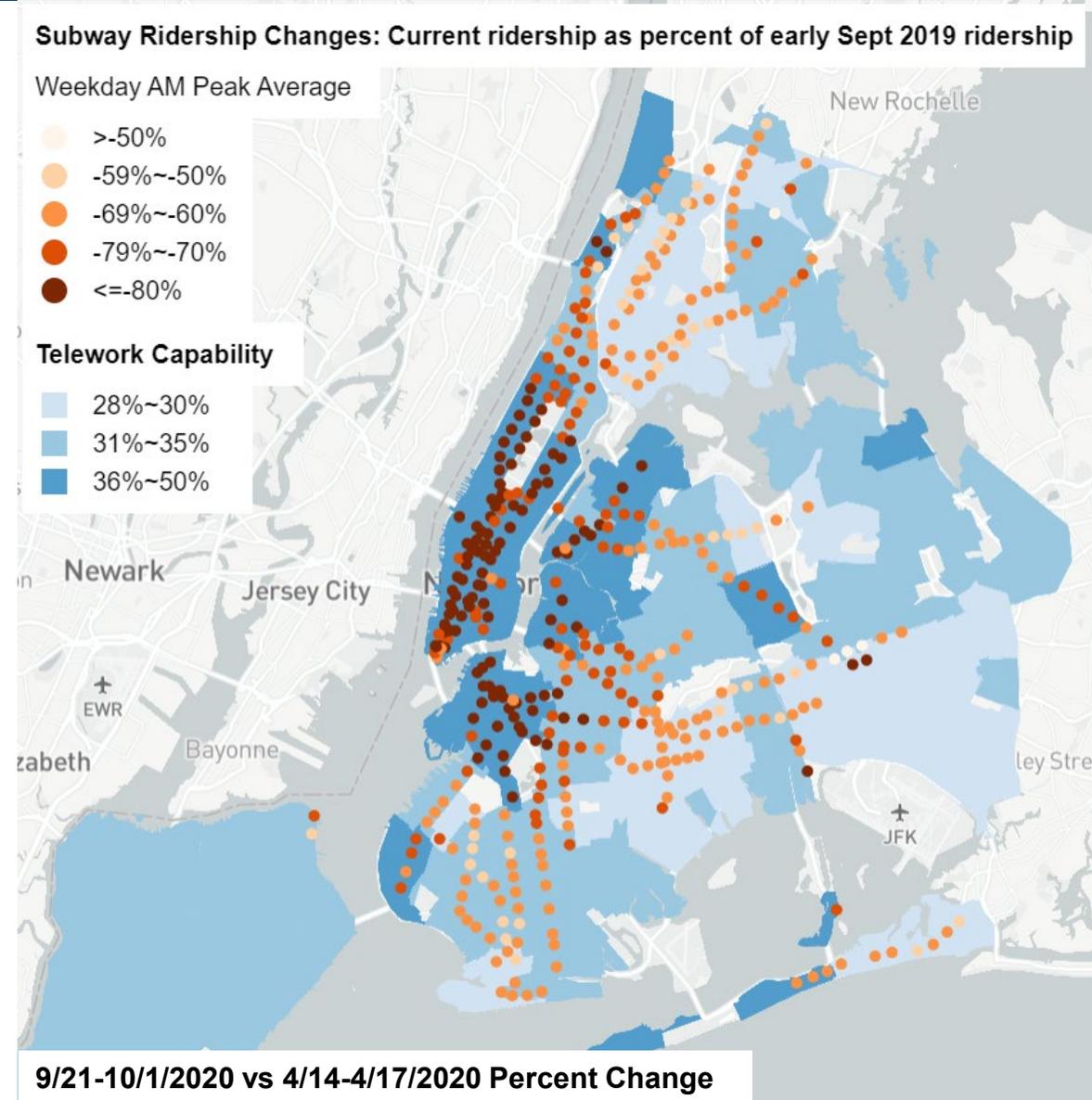
Weekday AM and PM Peak Turnstile Data – Comparisons with Sept 2019

- While subway ridership has been increasing in recent months, AM and PM peak hour trips in September 2020 remain substantially off from their volumes during the same weeks in 2019.
- **The city's business districts** in midtown and lower Manhattan, downtown Brooklyn, and Long Island City **continue to see less than a quarter of their PM peak subway entries**, indicating a very limited return to work in those areas.



Weekday AM Peak Subway Turnstile Data and Telework Capability

- A University of Chicago study estimated the “telework capability” of workers in different economic sectors. The map to the right shows the proportion of the residential labor force in a neighborhood that is able to work remotely from home based on these estimates.
- By mapping AM peak subway entries during the first two weeks of September 2020 and comparing them to entries over the same period in 2019, the **highest rates of ridership decreases are seen in neighborhoods with the strongest likelihood of having telework-capable populations**, including much of Manhattan, Downtown Brooklyn, Williamsburg, Long Island City, and Astoria.
- **Neighborhoods with the lowest share of residents able to work remotely show AM peak subway ridership at levels closer to the previous year as compared to other parts of the city.** These areas include much of the Bronx, eastern Queens, and central Brooklyn, where larger proportions of the city’s non-office-oriented and essential workers live.

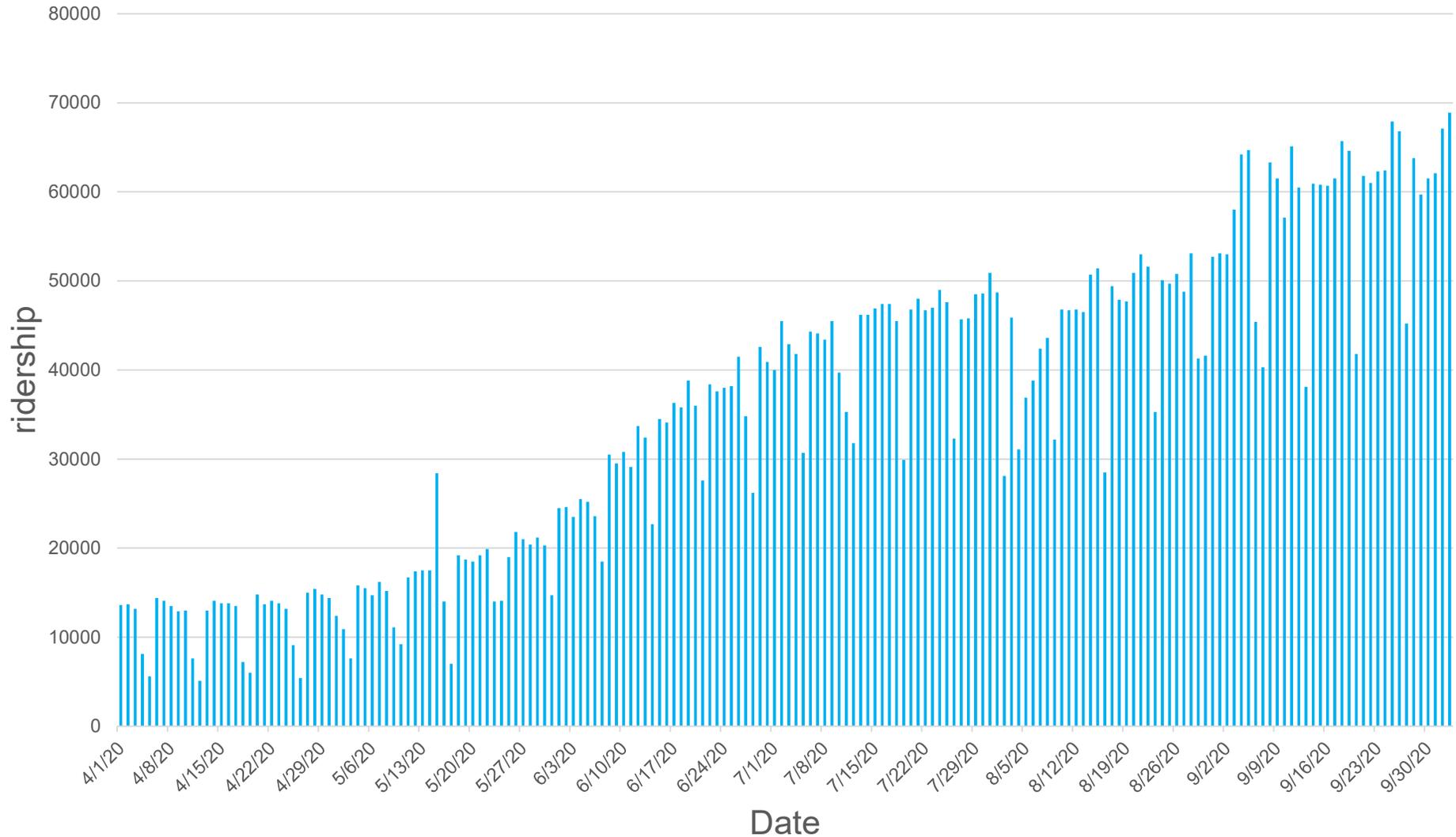




MTA data:
**Metro North Railroad, Long Island Rail
Road, Access-A-Ride**

Metro-North Railroad Ridership Changes

Estimated * MTA Metro-North Railroad (March 1- October 3, 2020)

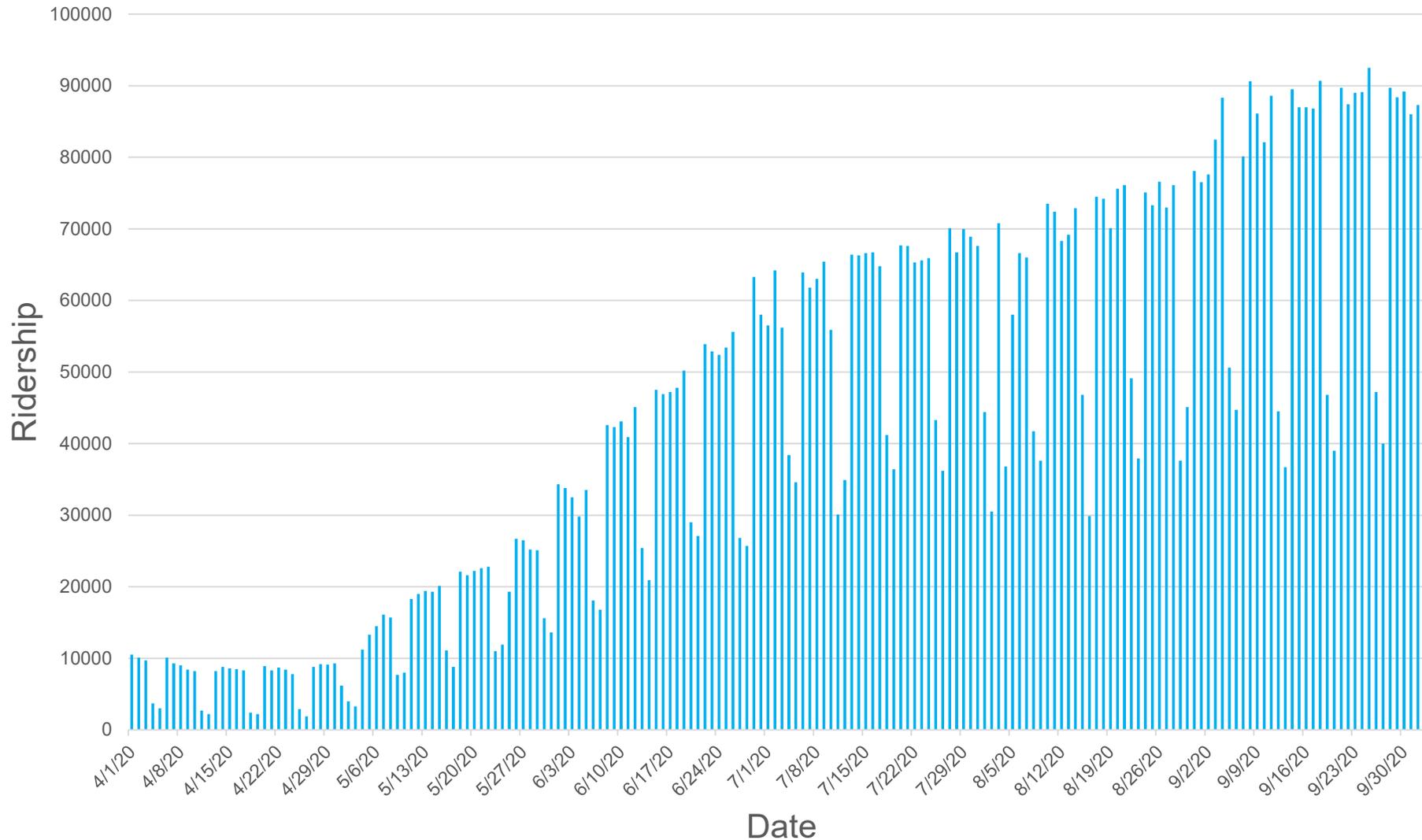


- Weekday and weekend MNR ridership for the week of September 28 was stable compared to the week of September 14.

From the MTA: Metro-North ridership is estimated by a model using monthly, weekly, ten-trip, and daily ticket sales. Percent change is calculated based on 2019 monthly average weekday/Saturday/Sunday ridership figures. Data sources: MTA (<https://new.mta.info/coronavirus/ridership>)

Long Island Rail Road Ridership Changes

Estimated * MTA Long Island Rail Road Ridership (April 1- October 4, 2020)

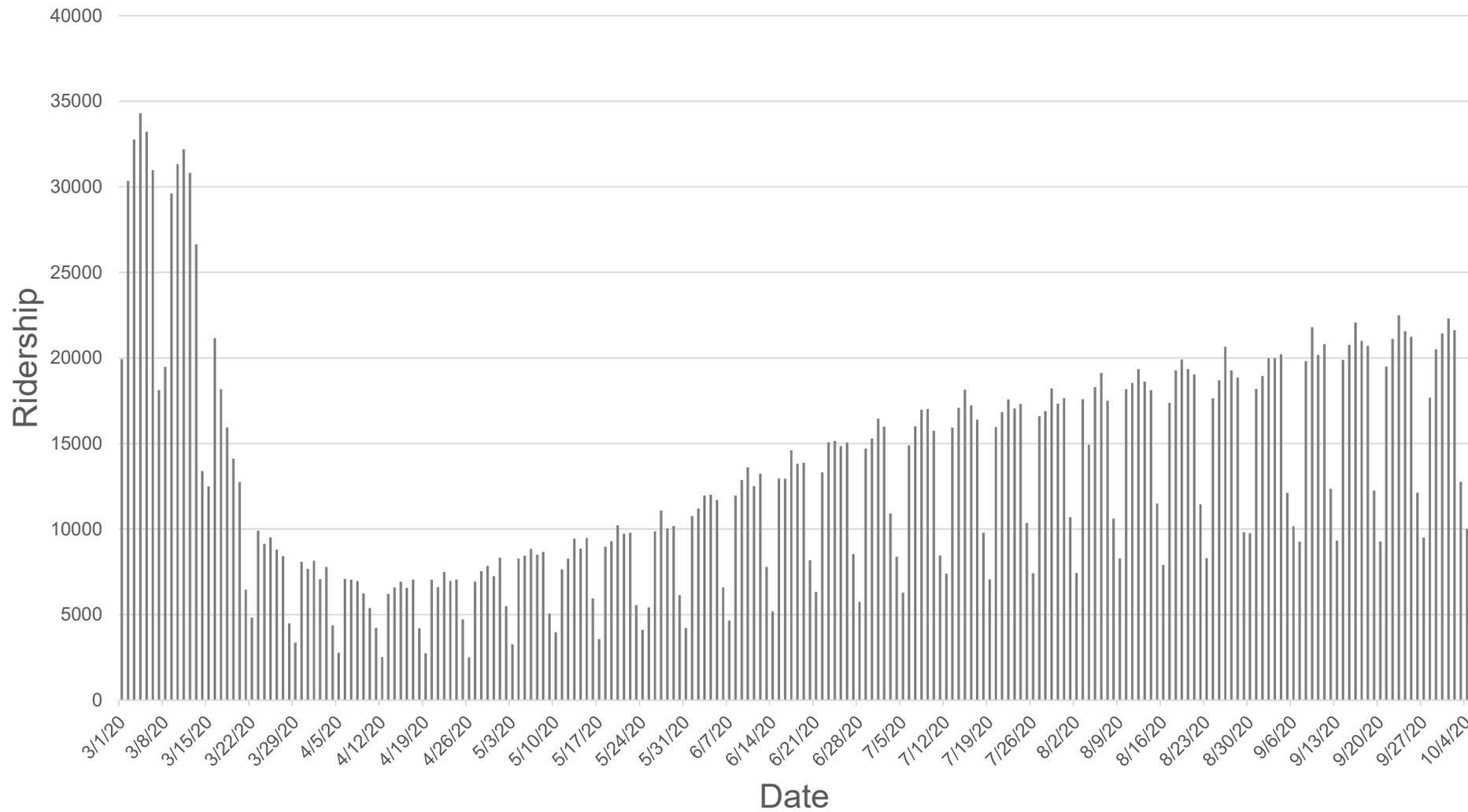


- Weekday LIRR ridership for the week of September 28 was nearly the same as the week of September 14, while weekend ridership was up 7 percent.

From the MTA: LIRR ridership is estimated by a model using monthly, weekly, ten-trip, and daily ticket sales. Percent change is calculated based on 2019 monthly average weekday/Saturday/Sunday ridership figures. Data sources: MTA (<https://new.mta.info/coronavirus/ridership>)

Access-A-Ride Scheduled Trip Changes

Estimated* MTA Access-A-Ride Scheduled Trips (March 1 - October 4, 2020)



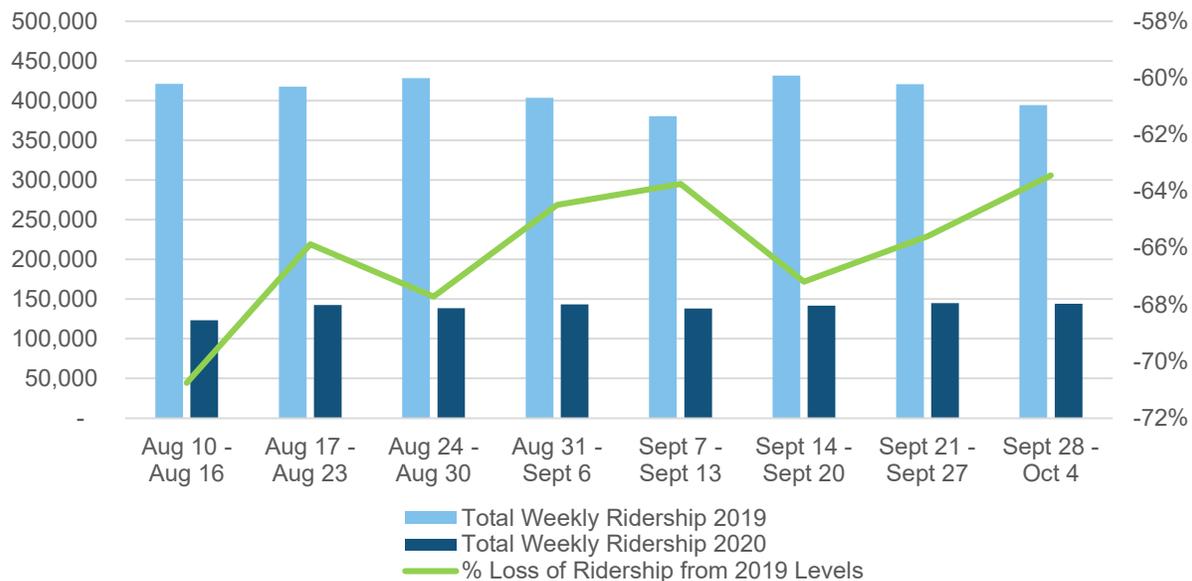
- Weekday Access-A-Ride scheduled trips for the week of September 28 were nearly same as the week of September 14, while the weekend scheduled trips were up 6 percent.

From the MTA: To provide timely updates, this data presents scheduled Access-A-Ride trips as an indicator of demand, rather than completed trips. The process to reflect completed trips, including adjusting for on-demand trips, cancellations, no shows, and on-street issues, would delay release of data for several weeks.. Data sources: MTA (<https://new.mta.info/coronavirus/ridership>)

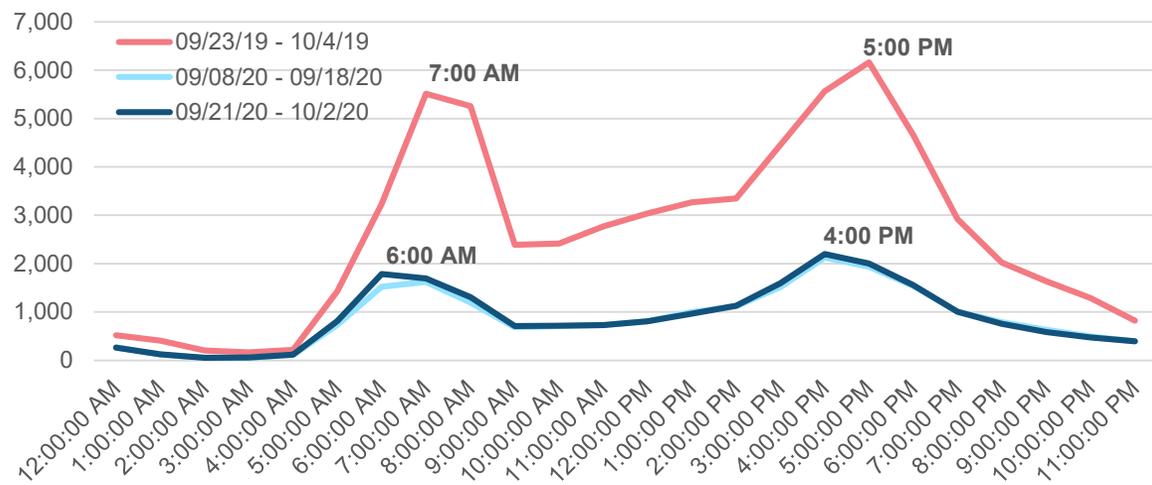
Ferry

The Staten Island Ferry and NYC Ferry

SIF Total Weekly Ridership

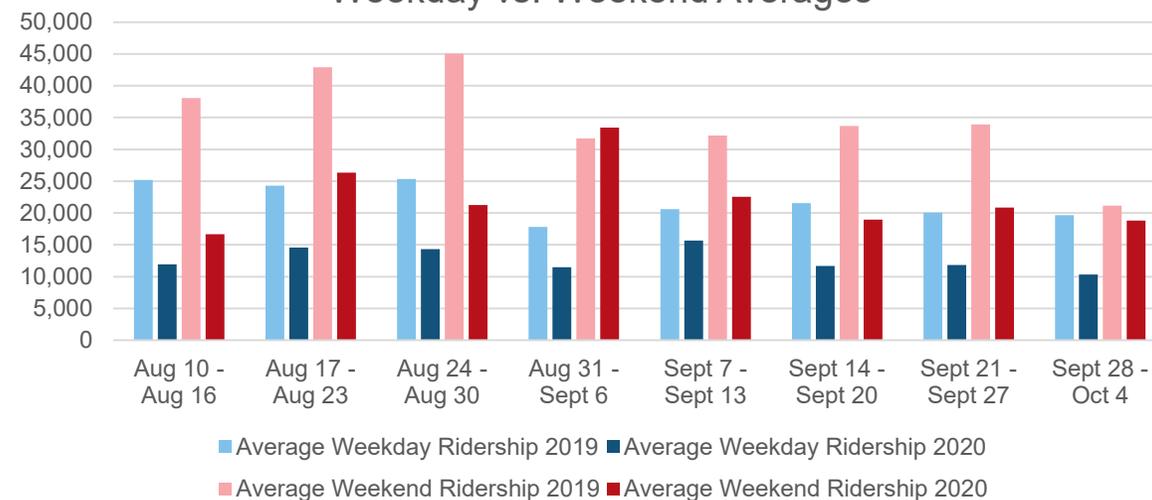


SIF Average Weekday Total Ridership Per Hour



- The two-week period of **September 21 to October 4** saw a daily weekday average of about **22,000 Staten Island Ferry riders**. During these two weeks, the SIF recovered an average of about **36 percent of its daily ridership**, compared to 2019 levels.
- For the SIF, weekday peak hour ridership for the two-week period of September 21 to October 4 **changed from 7:00 am to 6:00 am for the morning and remained at 4:00 pm for the afternoon**, compared to the previous two-week period.
- An updated NYC Ferry Fall 2020 schedule went into effect Saturday, September 26.
- The two-week period of September 21 to October 4 saw NYC Ferry weekly ridership recover an average of **56 percent of its weekday ridership**, and an average of **75 percent of its weekend ridership**, compared to 2019 levels.

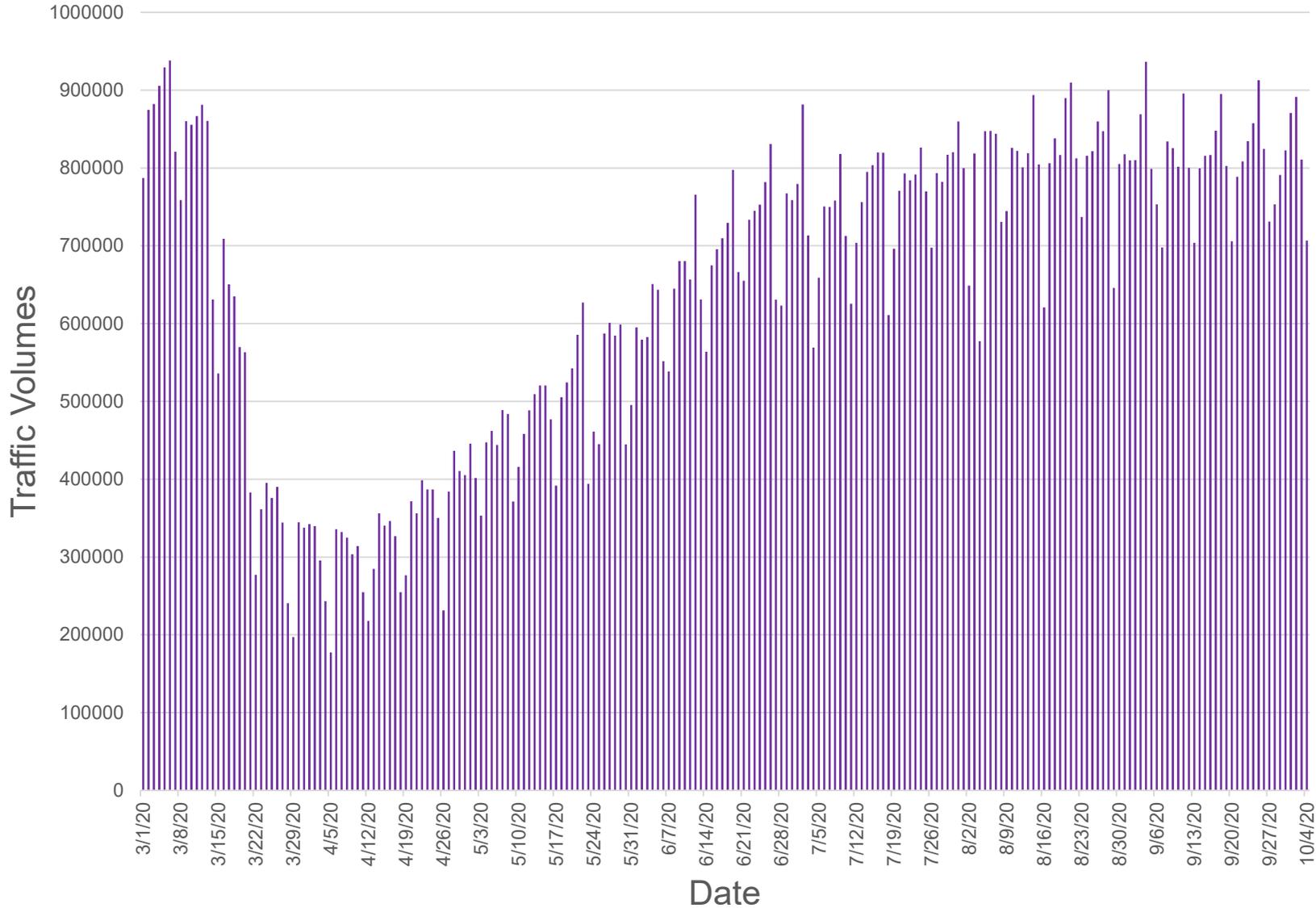
NYC Ferry Weekly Ridership Weekday vs. Weekend Averages



Traffic

MTA Bridge and Tunnel Traffic Volumes

Estimated * MTA Bridge and Tunnel Traffic Counts (March 1 - October 4, 2020)



- Weekday traffic counts on MTA bridges and tunnels during the week of September 28 were down 1 percent compared to the week of September 14. Weekend traffic counts remained steady.

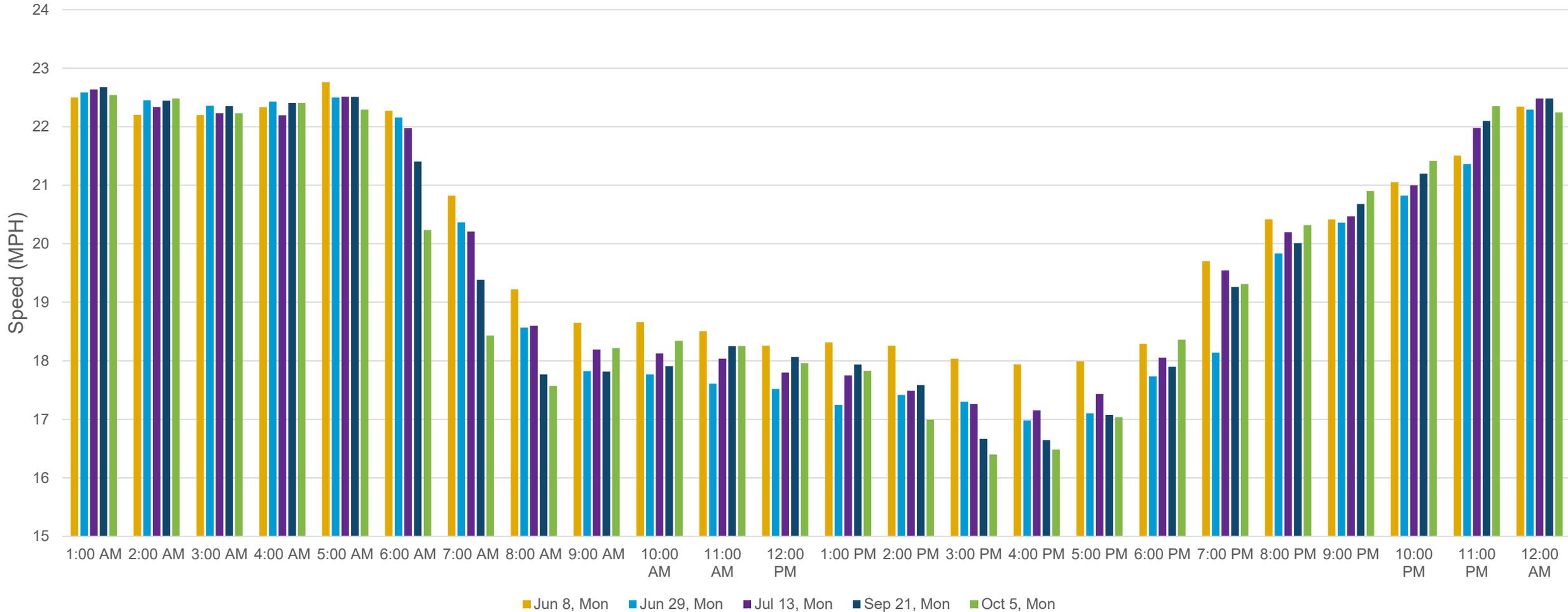
MTA crossings include:

- Bridges: Robert F. Kennedy, Throgs Neck, Verrazano Narrows, Bronx-Whitestone, Henry Hudson, Marine Parkway-Gil Hodges Memorial, and Cross Bay Veterans Memorial bridges.
- Tunnels: the Hugh L. Carey Tunnel and the Queens Midtown Tunnel.





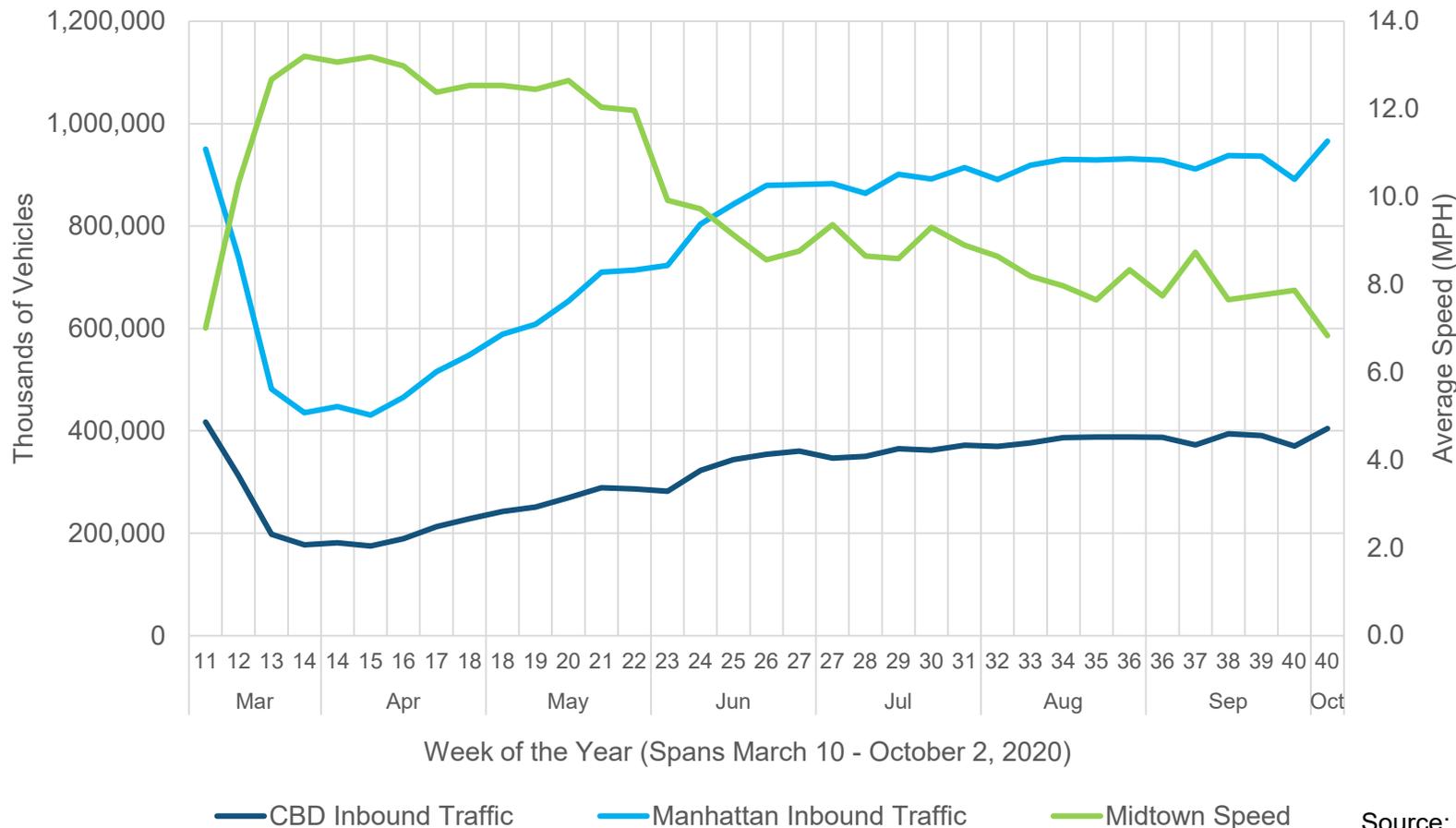
Real-time Traffic Flow Speed by Hour in NYC (Jun 8, Jun 29, Jul 6, Jul 13, Sep 21, Oct 5 2020)



- Compared to earlier weeks, average hourly traffic flow speeds on Monday, October 5 were generally consistent with mid September, and peak hour speeds were much slower than those observed in June.

Manhattan Inbound Traffic

Total average vehicles entering Manhattan CBD and Manhattan via river crossings and average weekday daytime travel speeds in Midtown

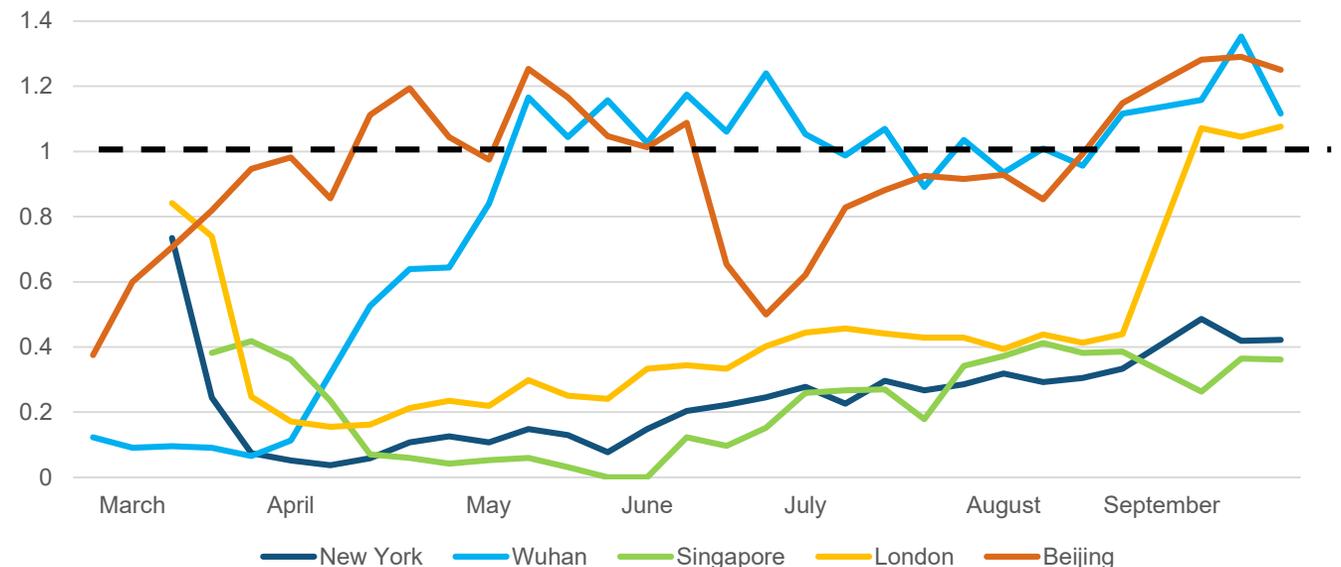
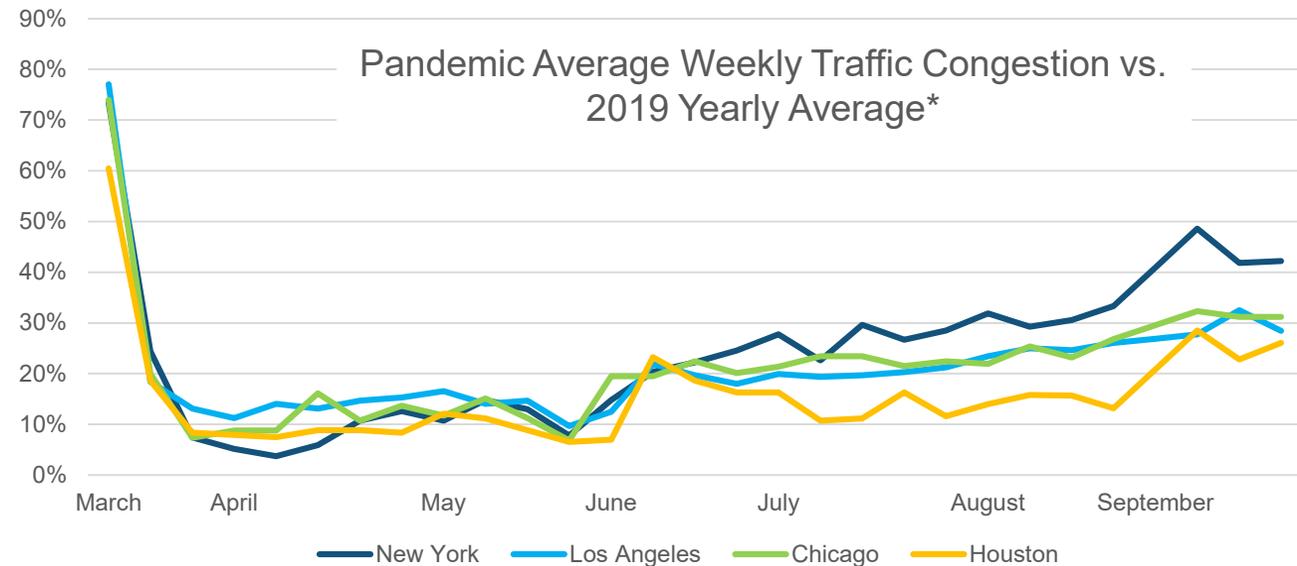


- Total average weekday daytime inbound vehicles to Manhattan and the Manhattan central business district are comparable to pre-pandemic levels.
- Evening traffic volumes (not shown here) remain lower.
- After peaking in early April at about 13 mph, average Midtown Manhattan speeds dropped sharply in early June and have continued to slowly decline. They currently average about 7.0 mph, close to their early March 2020 average.

Source: NYCDOT, providing data from NYCTLC, Port Authority, Triborough Bridge and Tunnel Authority

Traffic Congestion

- These charts show average citywide congestion during the morning peak hour between 7am and 8am.
- Congestion is a measure of the average amount of additional travel time needed to get to a destination anywhere in a city compared to free flow conditions. Zero percent represents free flow speeds; 100 percent represents 2019 yearly average congestion for each city.
- After a significant initial decline in congestion in March, congestion in NYC has been slowly increasing since June.
- Internationally, Beijing, Wuhan and London are currently seeing higher than normal levels of congestion.



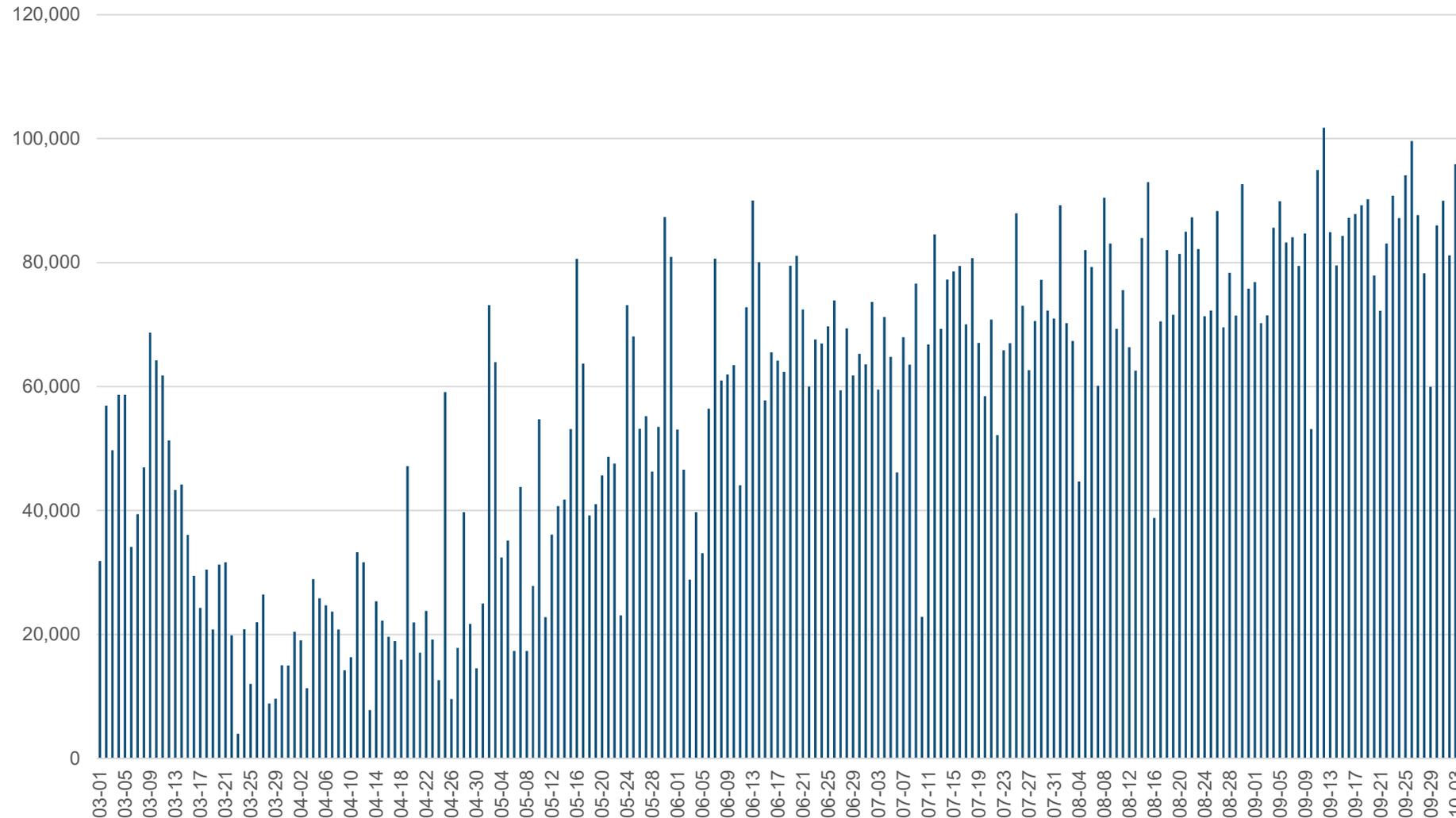
*Some weeks contain less than five days due to holidays and gaps in the data.

Data source: TomTom Traffic Index (https://www.tomtom.com/en_gb/traffic-index/)

Citi Bike

Citi Bike Ridership Changes

Citi Bike Ridership (Mar 1- Oct 4 2020)

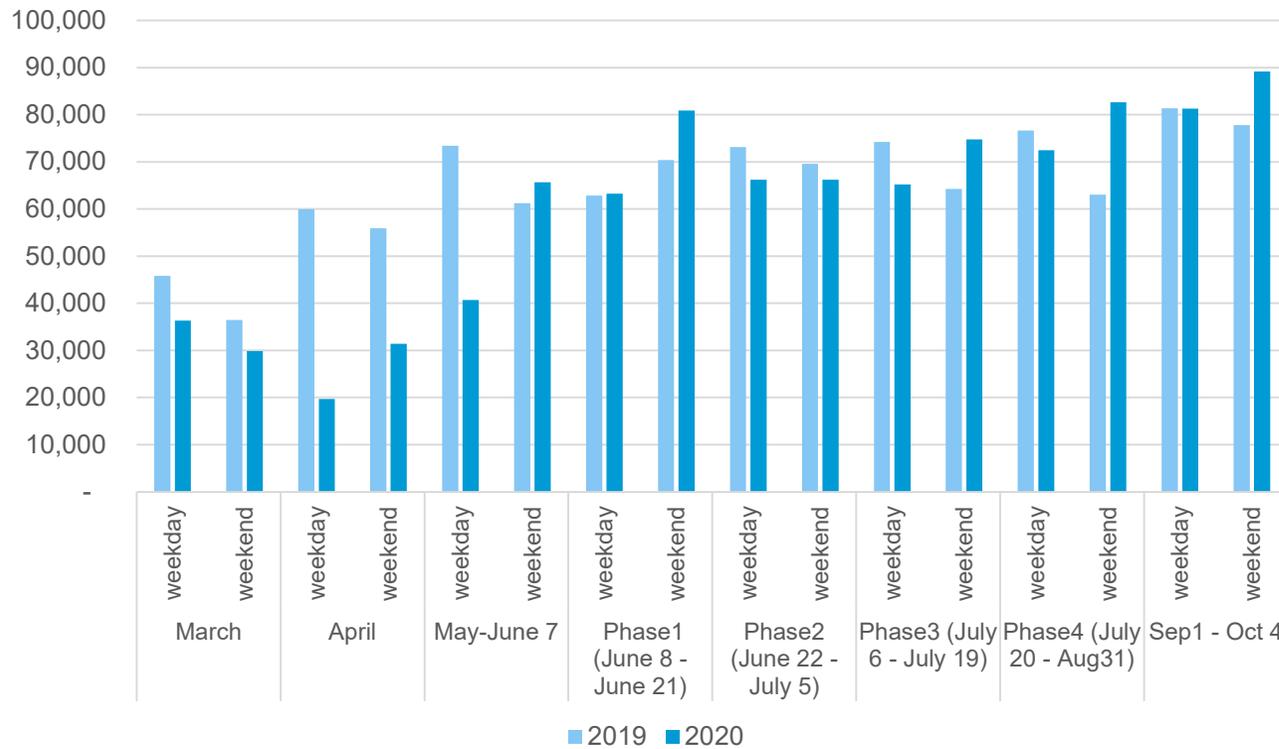


- Citi Bike ridership has been trending up since early March 2020, and ridership is highly correlated with weather.
- More than 100,000 trips were taken on Saturday, Sep 12 – the highest number recorded during the pandemic.

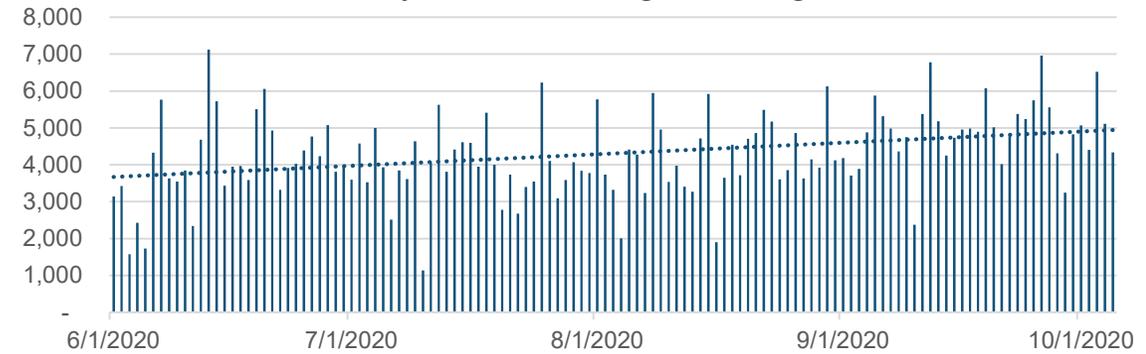
Citi Bike Ridership

- From June through early Oct 2020, Citi Bike ridership has been fairly consistent with ridership patterns during the same months in 2019.
- Citi Bike ridership on East River bridge crossings has been very slowly increasing, with peak travel occurring on weekends.
- The percentage of trips taken by Critical Workers has been declining, but nearly 18,000 members are part of the Critical Worker program.

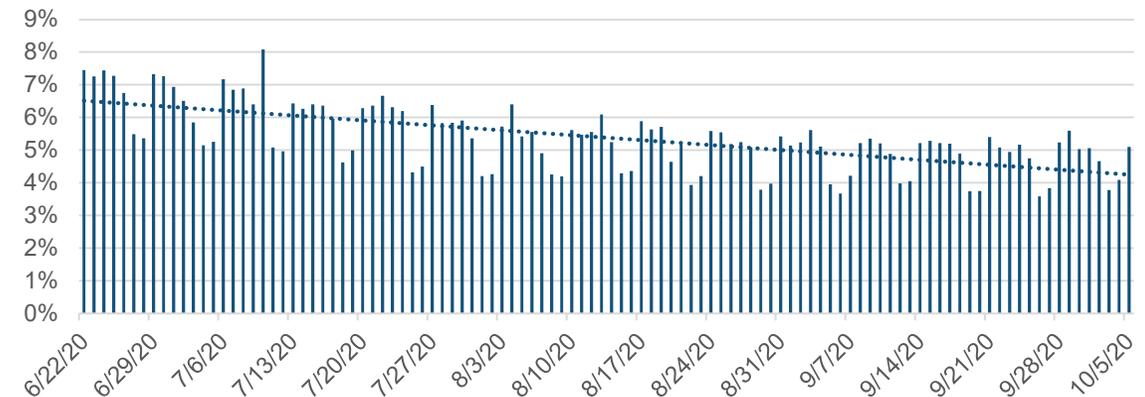
Citi Bike Average Daily Trips 2019 vs 2020 (Mar-Oct)



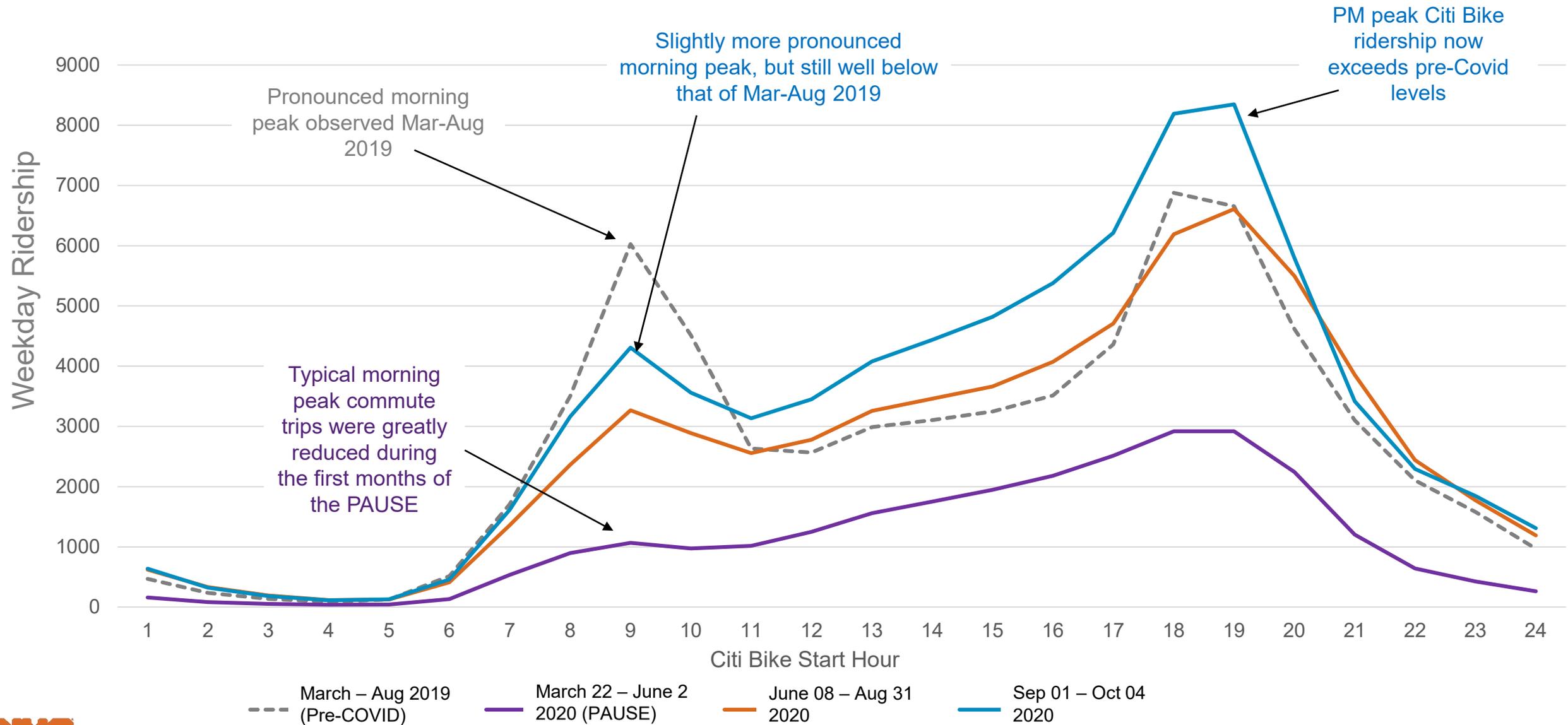
Daily East River Bridge Crossings



Percent of all trips taken by Critical Workers



Citi Bike Weekday Daily Ridership by Time of Day



Timeline



New York COVID19 Pandemic Timeline: First Case to End of PAUSE

- March 1st, 2020: **First confirmed case** in New York (<https://www.wsj.com/articles/first-case-of-coronavirus-confirmed-in-new-york-state-11583111692>)
- March 7th, 2020: Governor Cuomo **declares state of emergency** (<https://www.governor.ny.gov/news/novel-coronavirus-briefing-governor-cuomo-declares-state-emergency-contain-spread-virus>)
- 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. (<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://www1.nyc.gov/office-of-the-mayor/news/151-20/new-york-city-close-all-school-buildings-transition-remote-learning>) Mayor de Blasio announces the **closure of schools, bars, and restaurants** (except takeout/delivery) effective the morning of the 17th (<https://www1.nyc.gov/office-of-the-mayor/news/152-20/statement-mayor-de-blasio-bars-restaurants-entertainment-venues>)
- March 18th: Governor Cuomo announces that **50% of non-essential employees** must work from home (<https://www.governor.ny.gov/news/no-2026-continuing-temporary-suspension-and-modification-laws-relating-disaster-emergency>)
- 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.governor.ny.gov/news/governor-cuomo-issues-guidance-essential-services-under-new-york-state-pause-executive-order>), travel on transit only when necessary
- March 24th: MTA announces service reduction to **Essential Service** plan (<http://www.mta.info/press-release/mta-headquarters/mta-implements-%E2%80%99Cny-essential-service-plan%E2%80%9D-move-healthcare-workers>)
- March 27th: The Governor halts **non-essential construction** (<https://thecity.nyc/2020/03/cuomo-calls-off-non-essential-construction-statewide.html>)
- May 1st: Mayor de Blasio announces first seven miles of streets in **Open Streets NYC** program. (<https://www1.nyc.gov/office-of-the-mayor/news/306-20/open-streets-mayor-de-blasio-speaker-johnson-name-first-streets-be-used-social>)
- May 6th: Governor Cuomo enacts nightly 1am-5am subway shutdowns: (<http://www.mta.info/press-release/mta-headquarters/mta-announces-overnight-closure-subway-deep-cleaning-launches->)
- May 22nd: Mayor de Blasio announces 43 miles of **open streets**, the most in the nation, with the City to eventually reach 100 miles. (<https://www1.nyc.gov/office-of-the-mayor/news/370-20/mayor-de-blasio-surpasses-open-streets-target-13-more-miles-streets-be-opened-by>)
- May 29th: Governor Cuomo announces that New York City is expected to **begin Phase 1 of reopening on Monday, June 8th**. (<https://www.governor.ny.gov/news/governor-cuomo-announces-new-york-city-enter-phase-1-reopening-june-8-and-five-regions-enter>)
- June 1st: Governor Cuomo announces overnight curfew in NYC after a weekend of protests due to the death of George Floyd. No-non local vehicles permitted in Manhattan below 96th street, and Citi Bike is shut down during curfew hours. (<https://www.governor.ny.gov/news/governor-cuomo-and-mayor-de-blasio-announce-citywide-curfew-new-york-city-will-take-effect>)
- June 5th: The MTA lays out its 13-point **“Action Plan For a Safe Return”** in preparation for New York City’s reopening. (<https://new.mta.info/document/17751>)
- June 7th: Mayor de Blasio announces the end of protest-related curfews ahead of schedule, effective immediately. (<https://www1.nyc.gov/assets/home/downloads/pdf/executive-orders/2020/eo-122.pdf>)



New York COVID19 Pandemic Timeline: Phase 1 to Phase 4

- June 8th: New York City begins **Phase 1 of re-opening**. Manufacturing, non-essential construction, and non-essential retail via curbside pickup can resume operations (<https://www1.nyc.gov/office-of-the-mayor/news/420-20/transcript-mayor-de-blasio-appears-inside-city-hall>)
 - The Staten Island Ferry begins moving to a 20-minute rush hour schedule beginning with the 3:30 PM trip from St. George. (<https://www1.nyc.gov/html/dot/html/ferrybus/siferryschedule.shtml#SISchedule>)
 - Mayor De Blasio announces **five new busways** to be created throughout the city, modeled after the 14th Street Busway, which will be made permanent. More bus lanes will be added along major corridors. (<https://www1.nyc.gov/office-of-the-mayor/news/417-20/better-buses-restart-mayor-de-blasio-major-projects-speed-buses-during-city-s-phased>)
- June 18th: Mayor de Blasio announces guidance for the City's **Open Restaurants program**, which allows qualifying restaurants and bars to expand outdoor seating on sidewalks, curb lanes, backyards, patios, plazas, and Open Streets. (<https://www1.nyc.gov/office-of-the-mayor/news/449-20/open-restaurants-new-york-city-prepares-phase-2-reopening-mayor-de-blasio-announces>)
- June 19th: Governor Cuomo holds his **final daily coronavirus briefing**, saying “We have done the impossible.” He will continue to monitor the situation and hold press conferences as needed. (<https://www.governor.ny.gov/news/video-audio-photos-rush-transcript-111th-day-covid-19-briefings-governor-cuomo-delivers-address>)
- June 22nd: New York City begins **Phase 2** of re-opening, including in-store retail, offices, hair salons and barbershops, house of worship, and car sales. Social distancing and hygiene guidelines remain in place. (<https://www1.nyc.gov/office-of-the-mayor/news/456-20/transcript-mayor-de-blasio-holds-media-availability>)
 - Governor Cuomo says he is actively talking to Governor Murphy of NJ and Governor Lamont of Connecticut, and that the three governors are “seriously considering” implementing a **14-day isolation protocol for visitors** from Florida, which could be extended to travelers from Arizona, Texas, and several other states who are experiencing a rapid rise in Covid cases. (<https://www.governor.ny.gov/news/audio-rush-transcript-governor-cuomo-guest-cnns-newsroom-poppy-harlow-and-jim-sciutto>)
 - According to a survey conducted by the Partnership for New York City, while Phase 2 allows office workers to return to their offices, respondents from 60 companies predicted that only **10% of their employees would return to the office by August 15th**. Rudin Management Company said that, across its 14 offices in New York that reopened on Monday, it reached a collective **5.2 percent occupancy rate**. <https://www.nytimes.com/2020/06/22/nyregion/nyc-phase-2-reopening-coronavirus.html>
- June 24th: The state governments of New York, New Jersey, and Connecticut issue self-quarantine restrictions on **travelers returning from a list of 9 states** with high infection rates, with the ability to add more as the situation changes. (https://coronavirus.health.ny.gov/system/files/documents/2020/06/interimguidance_traveladvisory.pdf)
- June 29th: Mayor de Blasio announces that, while outdoor dining is “working” in New York City and that the city is moving on track for Phase 3 of reopening on July 6th, **the reopening of indoor dining may be delayed** due to ongoing coronavirus concerns. Governor Cuomo echoed these concerns. (<https://www1.nyc.gov/office-of-the-mayor/news/482-20/transcript-mayor-de-blasio-holds-media-availability>)
- July 6th: New York City **begins Phase 3** of re-opening. Originally, this was to include indoor dining at restaurants, but this element has been postponed in light of outbreaks in other states. (<https://www1.nyc.gov/office-of-the-mayor/news/497-20/transcript-mayor-de-blasio-holds-media-availability>)
 - The Staten Island Ferry resumes regular rush-hour service, with boats running every 15 minutes from 7:00 am – 9:00 am and 5:00 pm – 7:00 pm. <https://mms.tveyes.com/PlaybackPortal.aspx?SavedEditID=ea13aec9-00c3-46cf-998e-a31fa521b891>
- July 20th: New York City **enters Phase 4** of re-opening, which includes outdoor activities like zoos and botanical gardens, as well as professional sports without spectators. Indoor dining, originally part of Phase 3, is still prohibited. (<https://www1.nyc.gov/office-of-the-mayor/news/531-20/transcript-mayor-de-blasio-holds-media-availability>)
- August 7th: Governor Cuomo announces that schools in New York State can reopen in the fall, though it will be up to local districts to determine if and how to do so. (<https://www.governor.ny.gov/news/audio-rush-transcript-governor-cuomo-announces-based-each-regions-infection-rate-schools-across>)



New York COVID19 Pandemic Timeline: September 2020 – October 2020

- August 31st: MTA restarts front door bus loading and fare collection (<https://www.ny1.com/nyc/all-boroughs/transit/2020/08/18/mta-bringing-back-front-door-bus-boarding-and-fare-collection#:~:text=On%20August%2031%2C%20the%20MTA,the%20%242.75%20fare%20once%20again.>)
- September 9th: Governor Cuomo announces that restaurants can accommodate indoor dining a 25% capacity starting September 30th (<https://www.governor.ny.gov/news/governor-cuomo-announces-indoor-dining-new-york-city-allowed-resume-beginning-september-30-25>)
- September 12th: Citi Bike records over 100,000 rides in a single day, setting a record for the service
- September 16th: Mayor De Blasio announces that Open Restaurants will expand to weekdays citywide: (<https://www1.nyc.gov/office-of-the-mayor/news/660-20/mayor-de-blasio-open-streets-restaurants-will-expand-weekdays-40-locations-citywide>)
- September. 21st: 3-K, Pre-K and District 75 schools reopen, and all students who opted into the all-remote program start their first full day of instruction.
- September 26th: An updated NYC Ferry Fall 2020 Schedule went into effect.
- September 29th: K-5 and K-8 schools scheduled to reopen
- October 1st: Middle and high schools, as well as secondary schools and transfer/adult education, scheduled to reopen
- October 4th: Mayor Bill de Blasio sends a proposal to the New York State government to close non-essential businesses, including public and private schools, in nine new York City zip codes where Covid-19 rates have remained over 3\$ for the past seven days. This would also include closing down high-risk activities in 11 additional New York City zip codes of concern. (<https://www1.nyc.gov/office-of-the-mayor/news/693-20/mayor-de-blasio-sends-state-proposal-close-schools-non-essential-businesses-nine-new-york#/0>)
- October 6th: Governor Cuomo announces the Cluster Action Initiative, which will close or reduce capacity at non-essential businesses based on distance from Covid-19 infection hotspots. <https://www.amny.com/news/cuomo-to-enact-new-action-plan-to-target-covid-19-clusters/>