

# 14TH STREET TRANSIT & TRUCK PRIORITY PILOT PROJECT

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PRELIMINARY REPORT | FALL 2019



**Sam Schwartz**



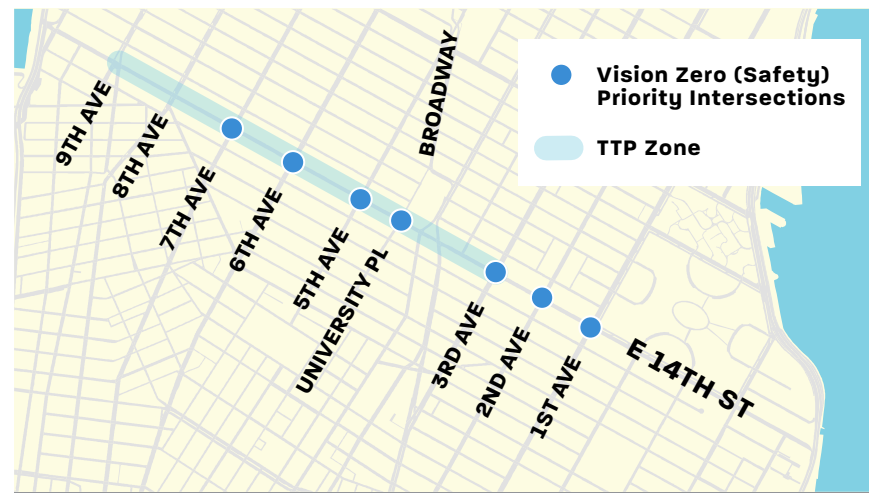
## Pilot Project Background

The 14th Street Transit & Truck Priority (TTP) Pilot Project was implemented by the New York City Department of Transportation (NYCDOT) in October 2019, aiming to improve operations of the M14A/D Select Bus Service. The TTP Pilot Project also aims to increase safety on this Vision Zero Priority Corridor while maintaining the street as an important truck route.

From 6 AM–10 PM, only buses, trucks, and emergency vehicles are allowed to drive on 14th Street from 3rd Avenue to 8th Avenue heading westbound, and 9th Avenue to 3rd Avenue heading eastbound. Other vehicles are allowed to drive on 14th Street for local trips and garage access but must make the next available right turn off of 14th Street. All left turns are restricted off of the TTP corridor, except for MTA buses at certain intersections. Updates to the curb regulations along the TTP corridor were implemented to prioritize drop-off and pick-up activity and commercial loading.

Additional elements of the pilot include new pedestrian space around Union Square, painted curb extensions to shorten pedestrian crossings, and bus boarding platforms, which are in the process of being installed as of November 2019.

## Vision Zero



## Monitoring Plan

Sam Schwartz is monitoring the performance of the 14th Street TTP Pilot Project and its effects on adjacent roadways. For this project, Sam Schwartz is partnering with Traffic Databank for data collection and Public Works Partners for public engagement. The monitoring plan includes tracking and evaluation of Metropolitan Transportation Authority New York City Transit (MTA NYCT) bus performance; vehicle speeds and volumes on area roadways; and bicycle and curbside activity. Data was collected by the Sam Schwartz team and gathered from a variety of sources including MTA NYCT, INRIX, NYCDOT, and Citi Bike, among others. As a Vision Zero Priority Corridor, crash data will be reported in subsequent reports.

In addition, the team will conduct in-person and online surveys to collect feedback throughout the project, beginning in Winter 2019.

Sam Schwartz will create and release periodic monitoring reports and the final Pilot Evaluation Report about the performance of the TTP Pilot Project.

### REPORT RELEASE SCHEDULE:

**Preliminary Report:** Fall 2019  
**Quarterly Report:** Winter 2020  
**Quarterly Report:** Spring 2020  
**Quarterly Report:** Summer 2020  
**Quarterly Report:** Fall 2020  
**Quarterly Report:** Winter 2021  
**Final Evaluation:** Spring 2021

## Fall 2019 Study Area Activity

- **TTP Pilot Project implemented on Thursday, October 3**
- **Since April 2019, L Train has operated with reduced service between Manhattan and Brooklyn, after 8pm on weekdays and all day on weekends**
- **October-November 2019: painting and delineation of pedestrian space around Union Square**
- **November-December 2019: 14th Street bus boarding platform installation**
- **Street Closures**
  - » **October 6:**  
*Avenues for Justice 4th Avenue Festival*  
4th Avenue between 9th Street and 14th Street
  - » **October 12:**  
*Second Avenue Street Fair*  
2nd Avenue between 6th Street and 14th Street
  - » **October 31:**  
*Halloween Parade*  
6th Avenue between Spring Street and 16th Street
- **Traffic Enforcement Agent Presence**
  - » **October 3 – October 23:**  
55 agents deployed
  - » **October 24 – November:**  
16 agents deployed

# HIGHLIGHTS



## M14 A/D SBS<sup>1</sup>

### WEEKDAY AVERAGE TRAVEL TIME



**36% improvement  
in travel times**  
**5.3 minutes faster**

Both directions:  
3rd Avenue to 8th Avenue

### WEEKDAY RIDERSHIP



**24%** increase in bus ridership from  
November 2018 to November  
2019, up to 31,461

**6,057 riders**



## BICYCLE VOLUMES<sup>2</sup>

### BIKE RIDERSHIP



**26%** increase in ridership on  
12th Street during Weekday  
PM peak hour



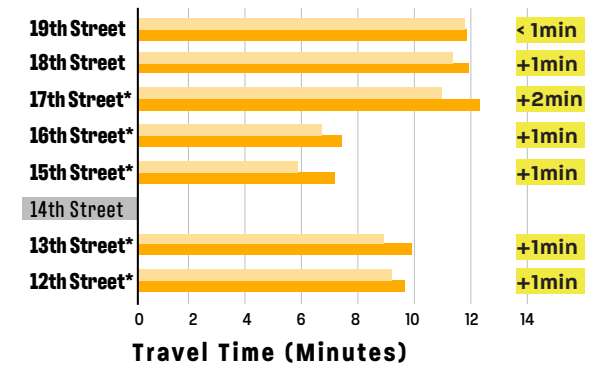
**50%** increase in ridership on  
13th Street during Weekday  
PM peak hour



## VEHICLE TRAVEL TIMES<sup>3</sup>

### WEEKDAY PM (5-6PM)

PRE-IMPLEMENTATION (October 2018 / May 2019)  
POST-IMPLEMENTATION (October 2019)



\* OCTOBER 2018 DATA NOT AVAILABLE. MAY 7-9 & 14-16, 2019 USED FOR PRE-IMPLEMENTATION DATA.



## VEHICLE VOLUMES<sup>4</sup>

### WEEKDAY PM (5-6PM)

PRE-IMPLEMENTATION (May/June 2015 and June 2016)  
POST-IMPLEMENTATION (October/November 2019)



\* BETWEEN 7TH AVE & 8TH AVE  
^ BETWEEN 5TH AVE & UNIVERSITY PL

#### DATA SOURCES

1. Data provided by MTA NYCT
2. Data provided by NYCDOT

3. Data provided by INRIX
4. Data provided by NYCDOT, Sam Schwartz team

# MTA BUS OPERATIONS

14th Street buses are more reliable, faster, and have higher ridership

## ROUTE MAP



Note: Standard bus lanes are located on 14th Street from 1st Avenue to 3rd Avenue in both directions and 8th Avenue to 9th Avenue in the westbound direction. Additional bus priority treatments to be implemented in 2020.

## SUMMARY

- ➔ During Weekday peak hours, westbound M14 A/D SBS buses travel 22-29% faster, and eastbound buses travel 36-47% faster.
- ➔ M14 A/D SBS buses on average performing more reliably than systemwide buses.
- ➔ Ridership has increased 24% on weekdays and 30% on Saturdays.

### DATA SOURCES

1. Data provided by MTA NYCT

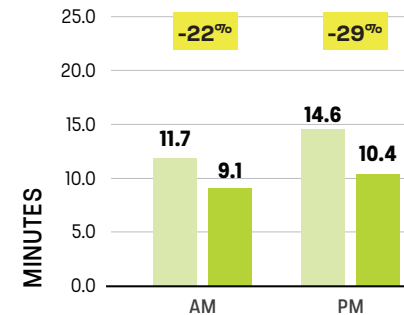
## AVERAGE BUS TRAVEL TIME<sup>1</sup>



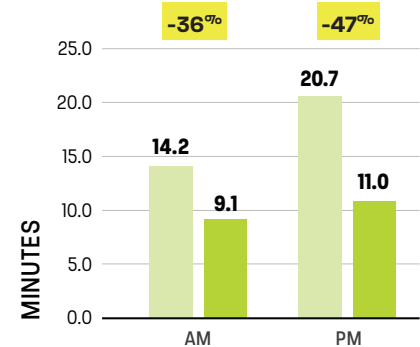
**M14 A/D SBS:**  
14th Street between  
3rd Avenue & 8th Avenue

- PRE-IMPLEMENTATION M14 A/D (November 2018)<sup>1</sup>
- POST-IMPLEMENTATION M14 A/D SBS (November 2019)<sup>1</sup>

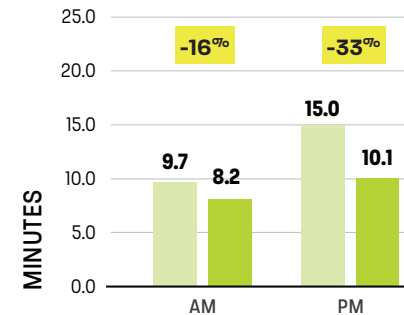
### Weekday Westbound



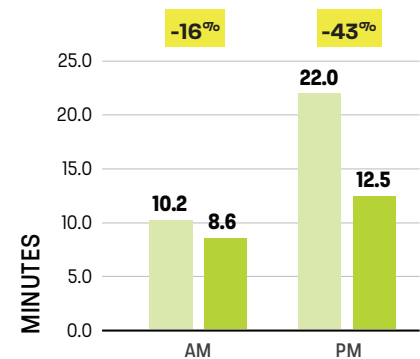
### Weekday Eastbound



### Saturday Westbound



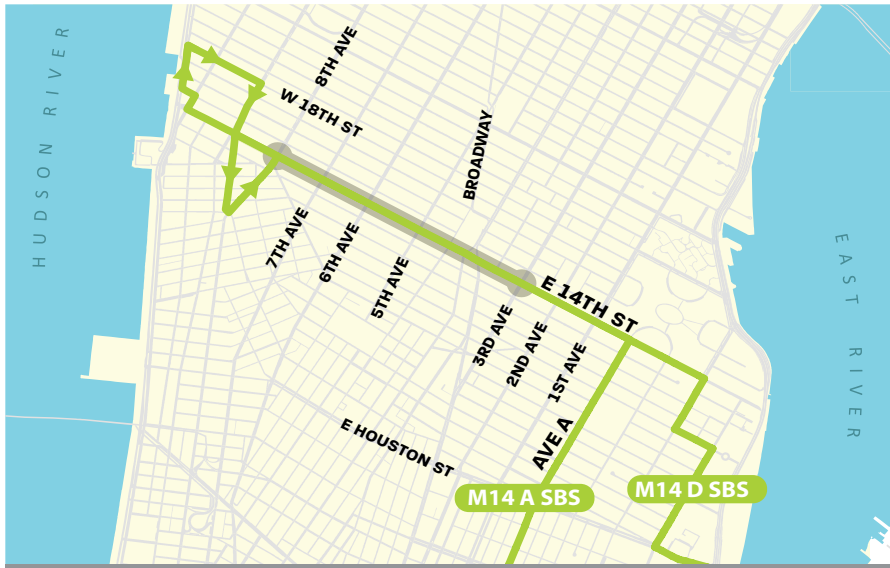
### Saturday Eastbound



Note: M14 A/D SBS services started in July 2019

# MTA BUS OPERATIONS

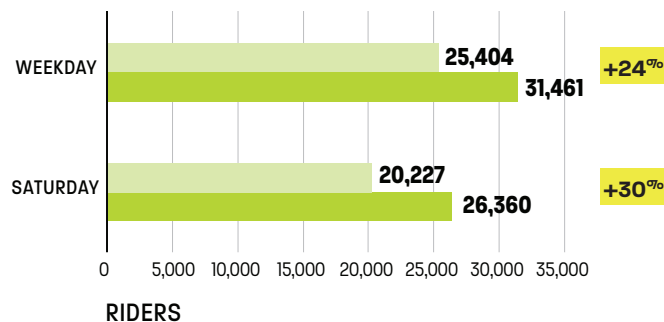
## ROUTE MAP



Note: Standard bus lanes are located on 14th Street from 1st Avenue to 3rd Avenue in both directions and 8th Avenue to 9th Avenue in the westbound direction. Additional bus priority treatments to be implemented in 2020.

## M14 A/D SBS RIDERSHIP

Average Daily Customers



Note: M14 A/D SBS services started in July 2019

### DATA SOURCES

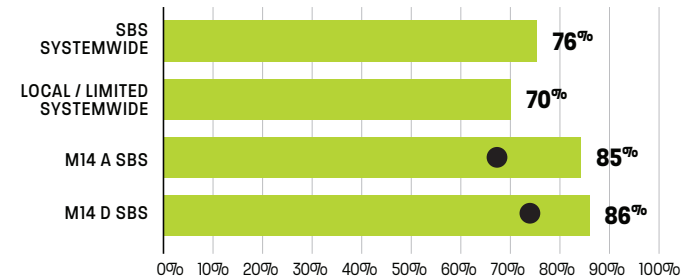
1. Data provided by MTA NYCT

## CUSTOMER JOURNEY TIME PERFORMANCE

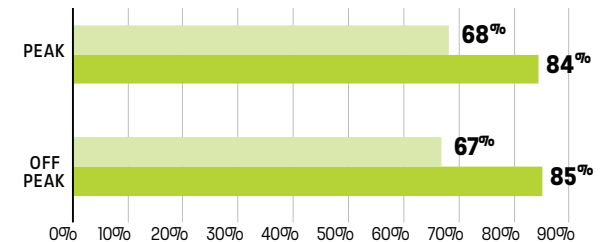
Customer Journey Time Performance is the percentage of customers whose journeys are completed within 5 minutes of the scheduled time.

- PRE-IMPLEMENTATION M14 A/D (November 2018)<sup>1</sup>
- POST-IMPLEMENTATION M14 A/D SBS (November 2019)<sup>1</sup>
- November 2018 Customer Journey Time Performance

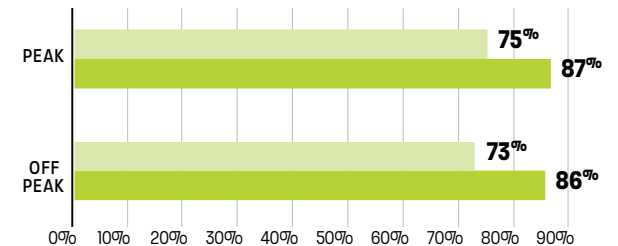
### November 2019 Average



### M14 A SBS: Full Route



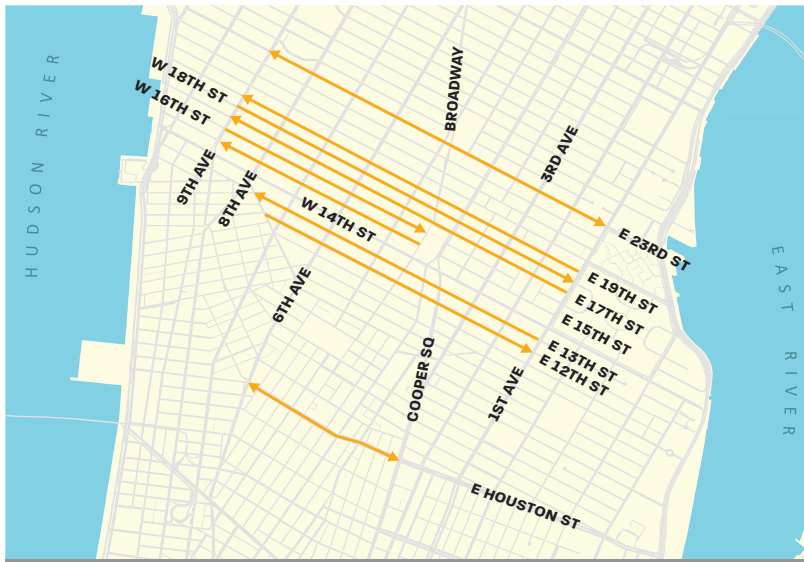
### M14 D SBS: Full Route



# VEHICLE TRAVEL TIMES

Varying changes in vehicle travel times on most east-west streets

## STREETS MONITORED

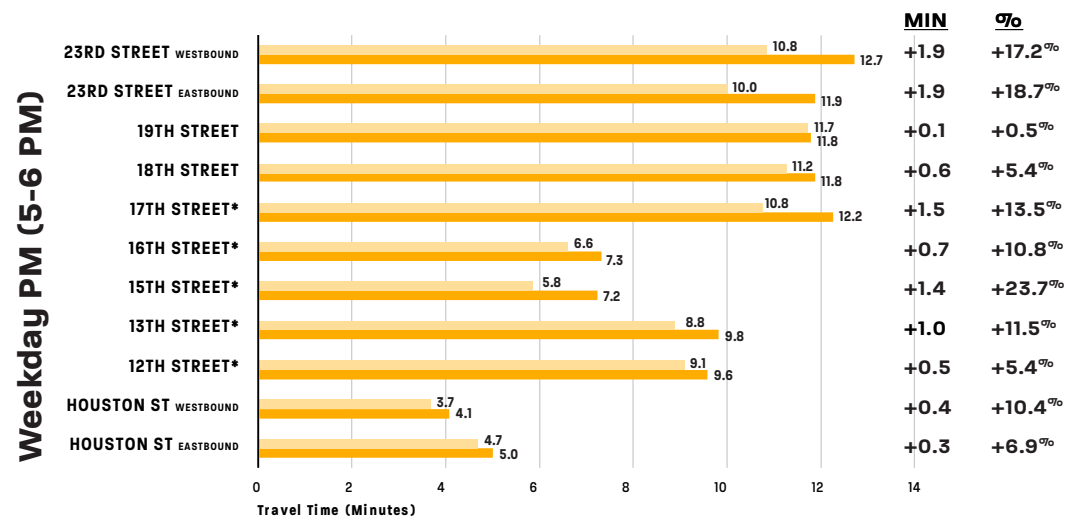
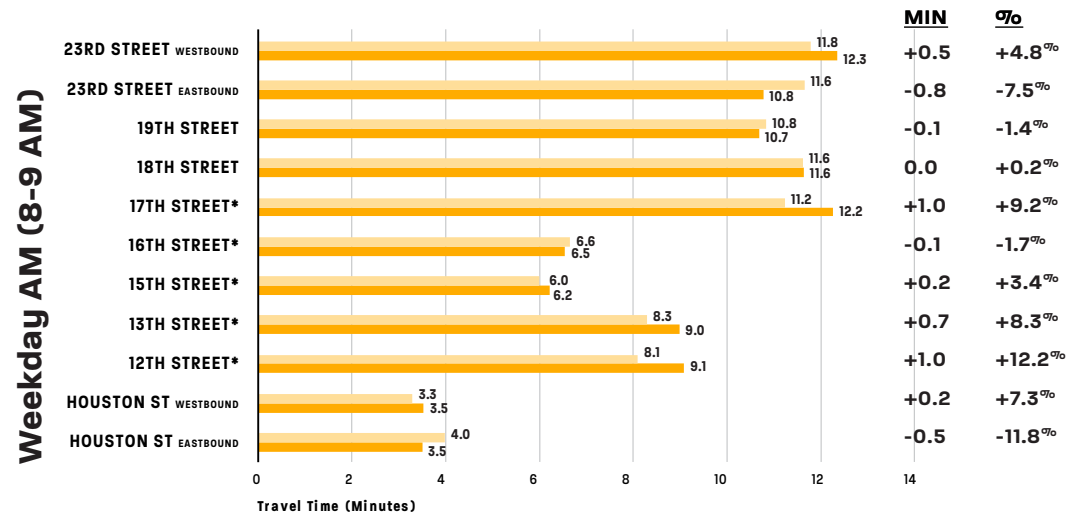


## SUMMARY

- ➔ During the Weekday AM and PM peak hours, 12th and 13th Streets travel times increased by approximately 1 minute.
- ➔ During the Weekday AM and PM peak hours, 17th Street travel times increased by 1 minute and 3.4 minutes, respectively.
- ➔ During the Weekday PM peak hour, 23rd Street travel times increased up to 18.7%.

## PEAK HOUR AVERAGE TRAVEL TIMES

PRE-IMPLEMENTATION (October 2018/May 2019)<sup>1</sup>  
POST-IMPLEMENTATION (October 2019)<sup>1</sup>



### DATA SOURCES

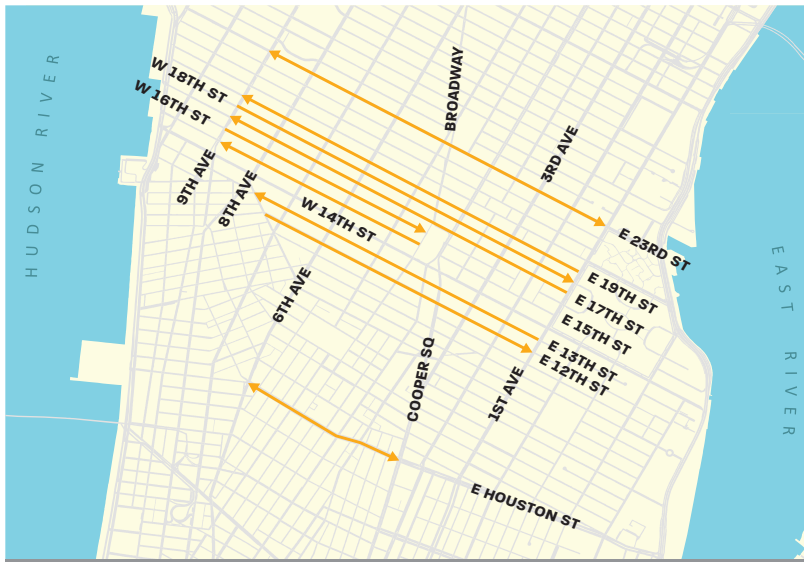
1. October 16-18 & 23-25, 2018; October 15-17 & 22-24, 2019: Data retrieved from INRIX. Pre-implementation travel times during the Weekday PM peak hour for 13th and 17th Streets have been adjusted from the version of this report initially released to correct for a calculation error.

\* October 2018 data not available. May 7-9 & 14-16, 2019 used for pre-implementation data.

# VEHICLE SPEEDS

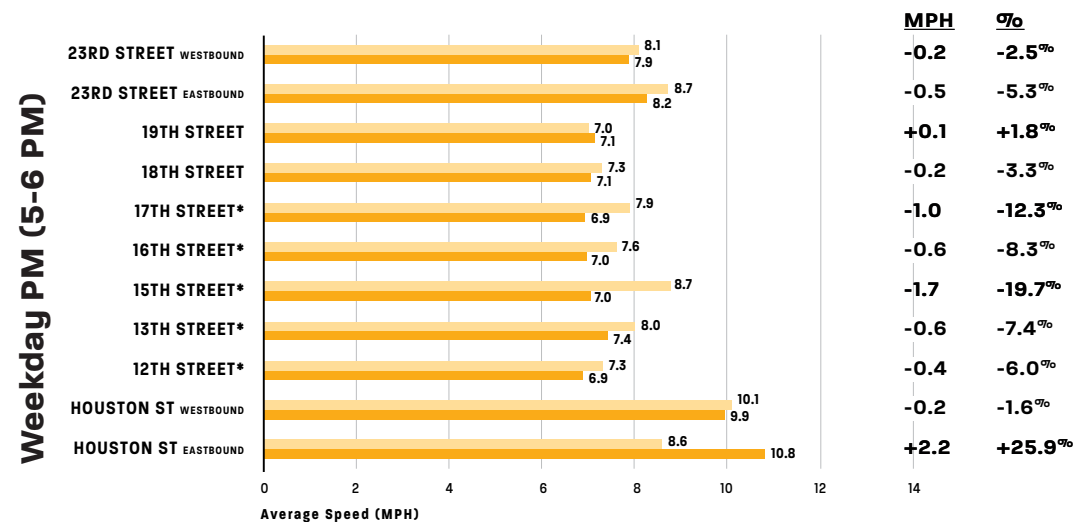
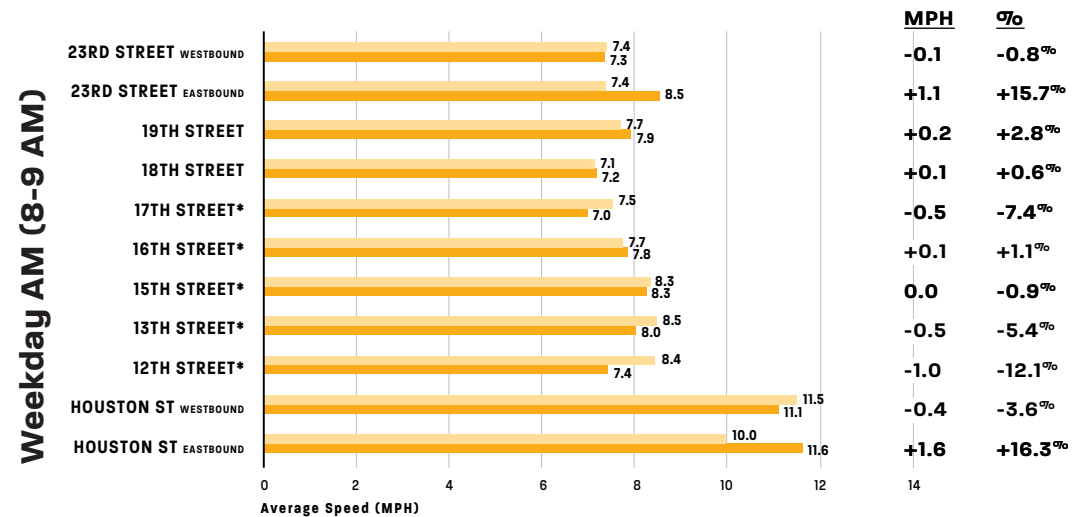
Varying changes in vehicle speeds on most east-west streets

## STREETS MONITORED



## PEAK HOUR AVERAGE SPEEDS

PRE-IMPLEMENTATION (October 2018/May 2019)<sup>1</sup>  
POST-IMPLEMENTATION (October 2019)<sup>1</sup>



## SUMMARY

- ➔ During Weekday AM and PM peak hours, 12th and 13th Streets vehicle speeds decreased between 5% and 12% (between 0.4 and 1.0 mph).
- ➔ During the Weekday AM and PM peak hours, 17th Street vehicle speeds decreased 7% to 12%.
- ➔ Houston and 23rd Streets, the closest east-west arterials to 14th Street, experienced variable changes in speed. Decreases in speed were between 0.1 mph and 0.4 mph; increases in speed were up to 2.2 mph.

### DATA SOURCES

1. October 16-18 & 23-25, 2018; October 15-17 & 22-24, 2019: Data retrieved from INRIX.

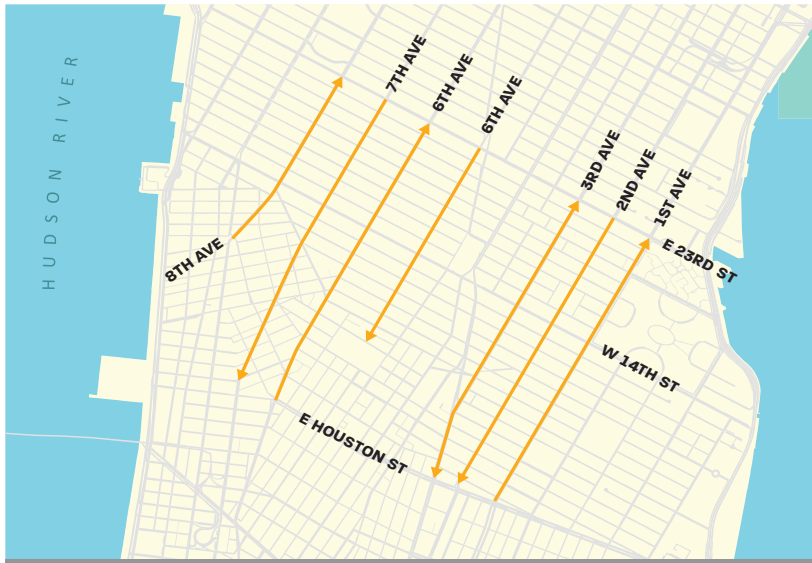
\* October 2018 data not available. May 7-9 & 14-16, 2019 used for pre-implementation data.



# VEHICLE TRAVEL TIMES

Most north-south avenues experienced decreases in travel times

## AVENUES MONITORED



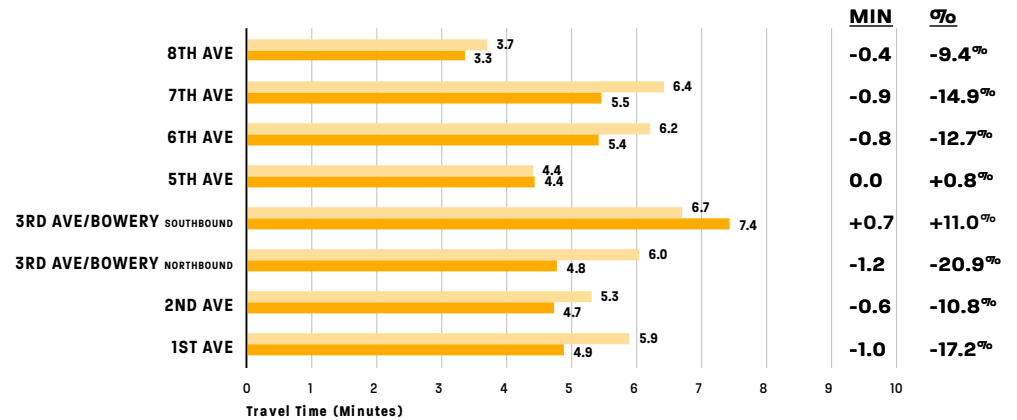
## SUMMARY

- ➔ During the Weekday AM peak hour, most north-south avenues experienced decreases in travel times.
- ➔ During the Weekday PM peak hour, most north-south avenues experienced only minor changes in travel times, with the exception of 3rd Avenue southbound, which experienced an increase.

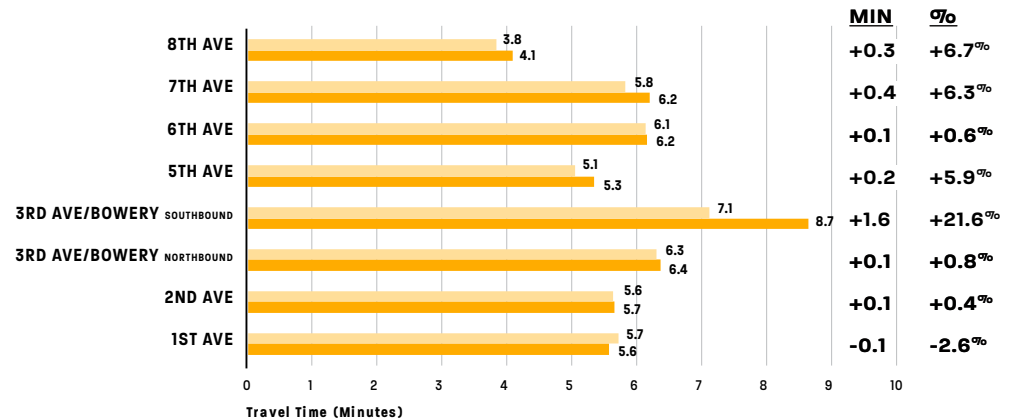
## PEAK HOUR AVERAGE TRAVEL TIMES

PRE-IMPLEMENTATION (October 2018)<sup>1</sup>  
POST-IMPLEMENTATION (October 2019)<sup>1</sup>

### Weekday AM (8-9 AM)



### Weekday PM (5-6 PM)



## DATA SOURCES

1. October 16-18 & 23-25, 2018; October 15-17 & 22-24, 2019:  
Data retrieved from INRIX.

# VEHICLE SPEEDS

Most north-south avenues experienced increases in speed during Weekday AM peak

## AVENUES MONITORED



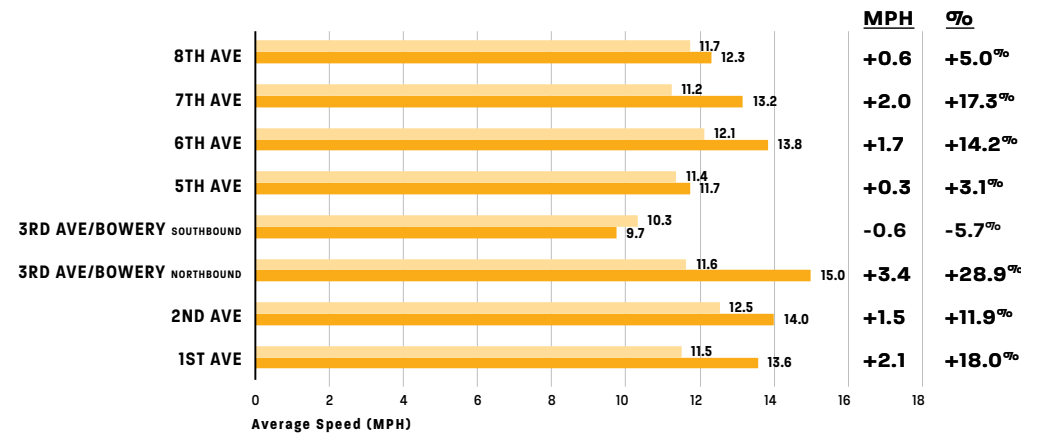
## SUMMARY

- ➔ During the Weekday AM peak hour, most north-south avenues experienced significant increases in vehicle speeds.
- ➔ During the Weekday PM peak hour, most north-south avenues experienced only minor changes in vehicle speeds, with the exception of 3rd Avenue southbound, which experienced a significant decrease.

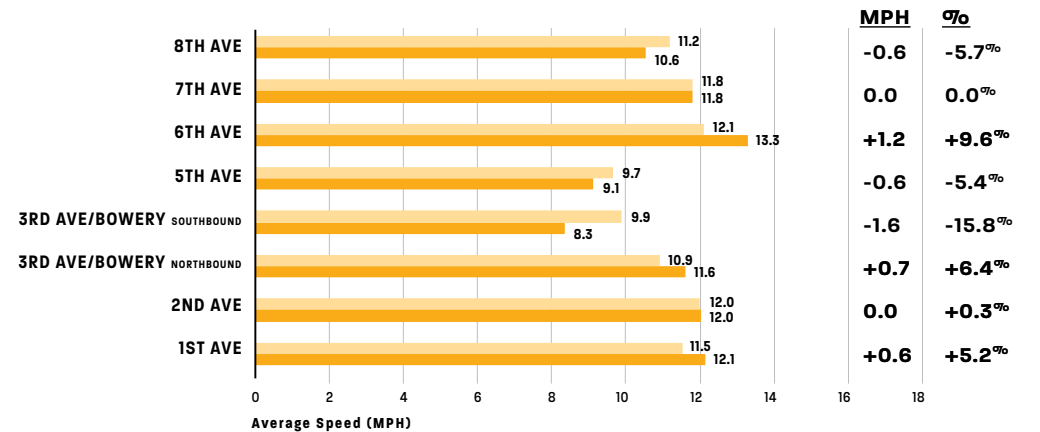
## PEAK HOUR AVERAGE SPEEDS

PRE-IMPLEMENTATION (October 2018)<sup>1</sup>  
POST-IMPLEMENTATION (October 2019)<sup>1</sup>

### Weekday AM (8-9 AM)



### Weekday PM (5-6 PM)



## DATA SOURCES

1. October 16-18 & 23-25, 2018; October 15-17 & 22-24, 2019:  
Data retrieved from INRIX.

# VEHICLE VOLUMES

Vehicle volumes in the area are generally lower

## AVERAGE PEAK HOUR VOLUMES

### SUMMARY

- On 14th Street, vehicle volumes decreased substantially (~50%) after the TTP Pilot Project was implemented.
- During the Weekday PM and Saturday PM peak hours, vehicle volumes on 12th Street saw almost no change and vehicle volumes on 13th Street decreased ~25%.
- 5th Avenue and 7th Avenue experienced reductions in vehicle volumes, while other north-south avenues experienced no significant or no consistent changes.

### Saturday PM (8-9 PM)

Block		Pre-Implementation <sup>1</sup>	Post-Implementation <sup>2</sup>	Diff.	% Change
16th St between 7th Ave & 8th Ave	Eastbound	346	385	+39	+11%
15th St between 7th Ave & 8th Ave	Westbound	290	283	-7	-3%
14th St between 7th Ave & 8th Ave	Eastbound	493	233	-260	-53%
14th St between 7th Ave & 8th Ave	Westbound	433	253	-180	-42%
13th St between 5th Ave & University Pl	Westbound	318	237	-81	-25%
12th St between 5th Ave & University Pl	Eastbound	302	304	+2	+1%
7th Ave between 13th & 14th St	Southbound	1,601	1,345	-256	-16%
6th Ave between 14th & 15th St	Northbound	1,872	1,825	-47	-3%
5th Ave between 13th & 14th St	Southbound	1,529	962	-567	-37%
3rd Ave between 13th & 14th St	Southbound	584	616	+32	+5%
3rd Ave between 13th & 14th St*	Northbound	938	1,002	+64	+7%

### Weekday AM (8-9 AM)

Block		Pre-Implementation <sup>1</sup>	Post-Implementation <sup>2</sup>	Diff.	% Change
16th St between 7th Ave & 8th Ave	Eastbound	252	307	+55	+22%
15th St between 7th Ave & 8th Ave	Westbound	254	219	-35	-14%
14th St between 7th Ave & 8th Ave	Eastbound	367	155	-212	-58%
14th St between 7th Ave & 8th Ave	Westbound	366	195	-171	-47%
13th St between 5th Ave & University Pl	Westbound	356	311	-45	-13%
12th St between 5th Ave & University Pl	Eastbound	289	289	0	0%
7th Ave between 13th & 14th St	Southbound	1,373	1,232	-141	-10%
6th Ave between 14th & 15th St	Northbound	1,187	1,590	+403	+34%
5th Ave between 13th & 14th St	Southbound	923	756	-167	-18%
3rd Ave between 13th & 14th St	Southbound	452	478	+26	+6%
3rd Ave between 13th & 14th St*	Northbound	799	1,023	+224	+28%

### Weekday PM (5-6 PM)

Block		Pre-Implementation <sup>1</sup>	Post-Implementation <sup>2</sup>	Diff.	% Change
16th St between 7th Ave & 8th Ave	Eastbound	345	401	+56	+16%
15th St between 7th Ave & 8th Ave	Westbound	234	236	+2	+1%
14th St between 7th Ave & 8th Ave	Eastbound	428	146	-282	-66%
14th St between 7th Ave & 8th Ave	Westbound	389	163	-226	-58%
13th St between 5th Ave & University Pl	Westbound	404	301	-103	-26%
12th St between 5th Ave & University Pl	Eastbound	337	340	+3	+1%
7th Ave between 13th & 14th St	Southbound	1,495	1,344	-151	-10%
6th Ave between 14th & 15th St	Northbound	1,593	1,467	-126	-8%
5th Ave between 13th & 14th St	Southbound	1,183	821	-362	-31%
3rd Ave between 13th & 14th St	Southbound	563	483	-80	-14%
3rd Ave between 13th & 14th St*	Northbound	815	951	+136	+17%

#### DATA SOURCES

1. Data provided by NYCDOT from May/June 2015 and June 2016 traffic counts.
2. Data collected by Sam Schwartz team in October/November 2019.

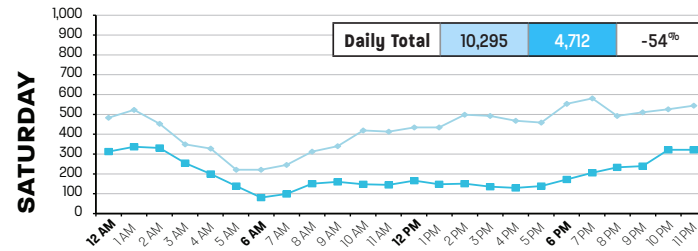
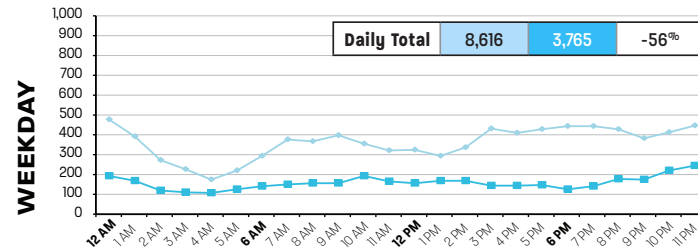
\*Pre-implementation data was collected between 13th & 14th Streets; post-implementation data was collected between 14th & 15th Streets.

# VEHICLE VOLUMES

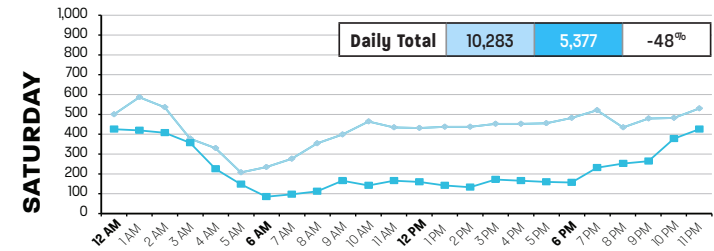
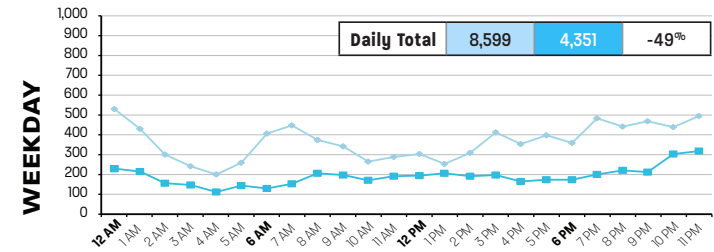
## AVERAGE HOURLY VEHICLE VOLUMES

- PRE-IMPLEMENTATION (May/June 2015 and June 2016) <sup>1</sup>
- POST-IMPLEMENTATION (October/November 2019) <sup>2</sup>

14th St Eastbound, between 7th Ave & 8th Ave



14th St Westbound, between 7th Ave & 8th Ave



### DATA SOURCES

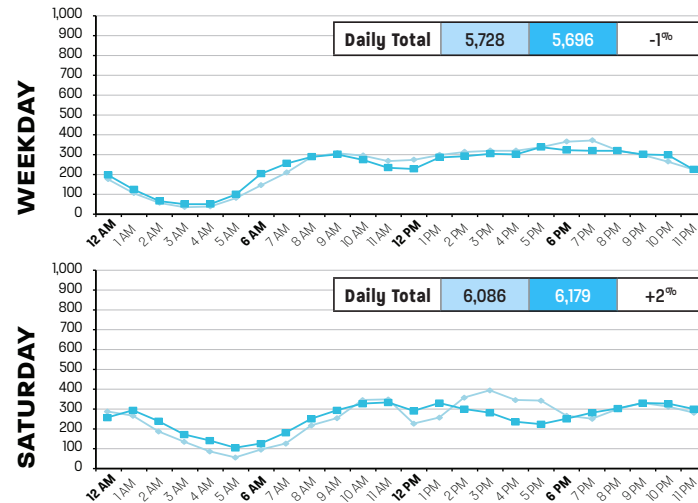
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# VEHICLE VOLUMES

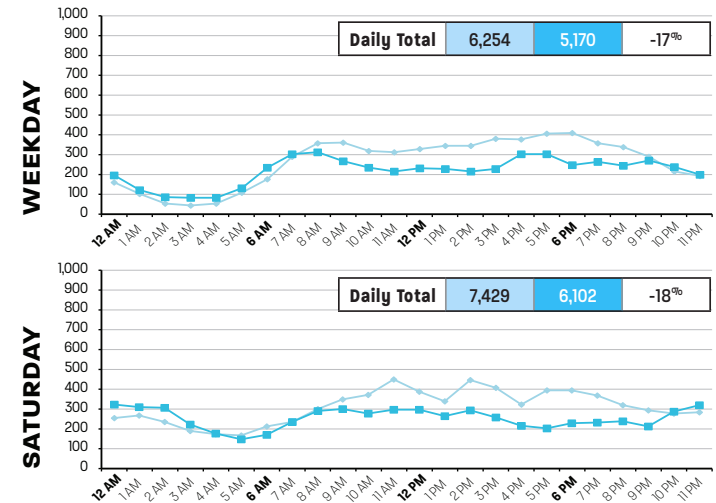
## AVERAGE HOURLY VEHICLE VOLUMES

- PRE-IMPLEMENTATION (May/June 2015 and June 2016) <sup>1</sup>
- POST-IMPLEMENTATION (October/November 2019) <sup>2</sup>

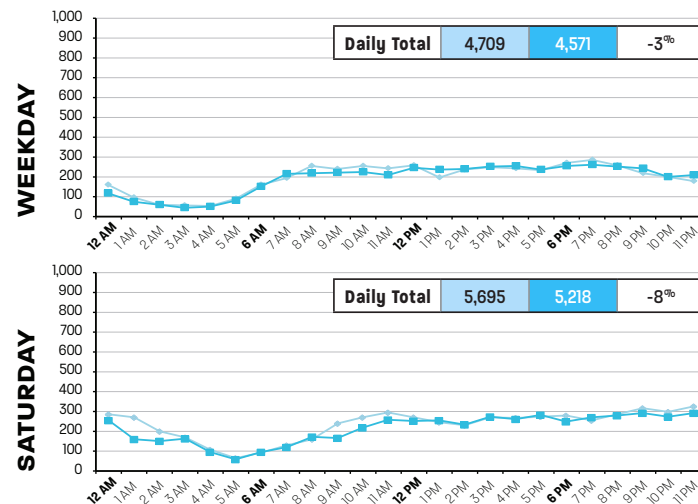
12th St Eastbound, between 5th Ave & University Pl



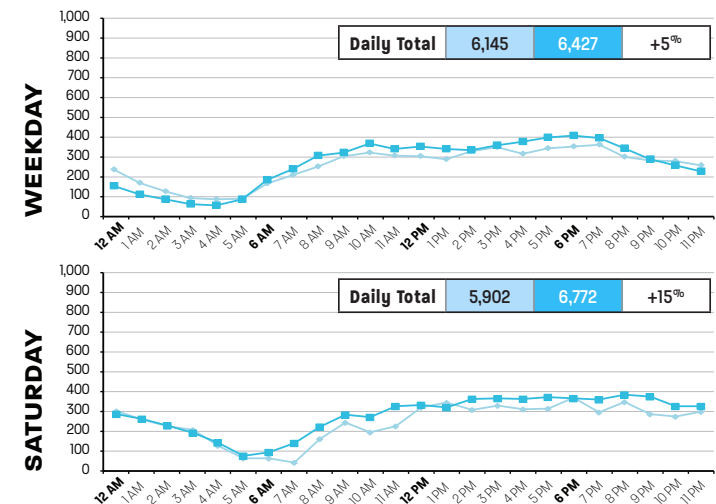
13th St Westbound, between 5th Ave & University Pl



15th St Westbound, between 7th Ave & 8th Ave



16th St Eastbound, between 7th Ave & 8th Ave



DATA SOURCES

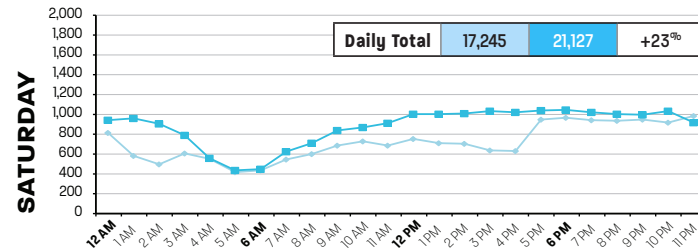
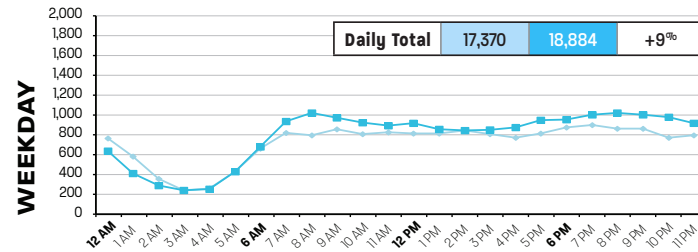
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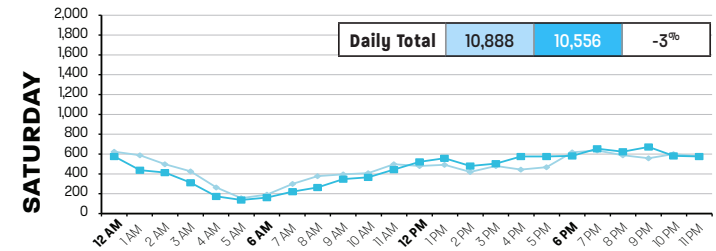
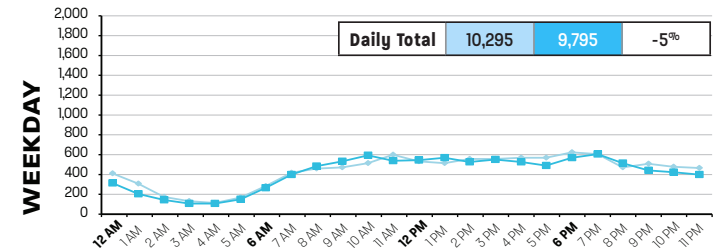
## AVERAGE HOURLY VEHICLE VOLUMES

- PRE-IMPLEMENTATION (May/June 2015 and June 2016) <sup>1</sup>
- POST-IMPLEMENTATION (October/November 2019) <sup>2</sup>

3rd Ave Northbound, between 13th St & 14th St<sup>3</sup>



3rd Ave Southbound, between 13th St & 14th St



### DATA SOURCES

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2. Data collected by Sam Schwartz team.

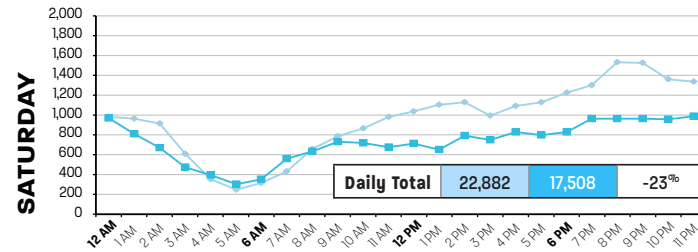
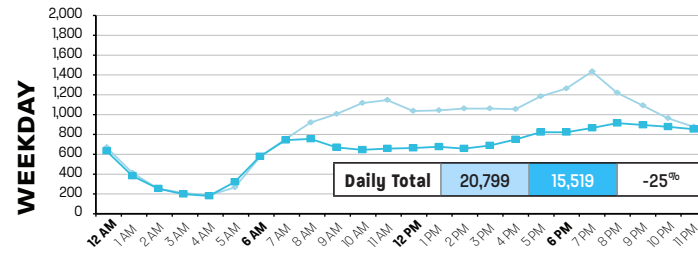
3. Pre-implementation data was collected between 13th & 14th Streets; post-implementation data was collected between 14th & 15th Streets.

# VEHICLE VOLUMES

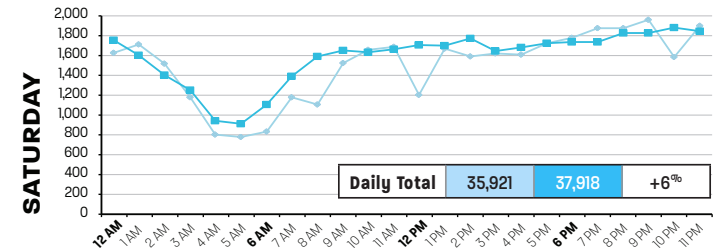
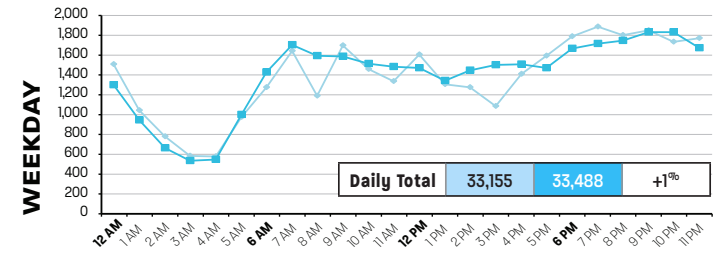
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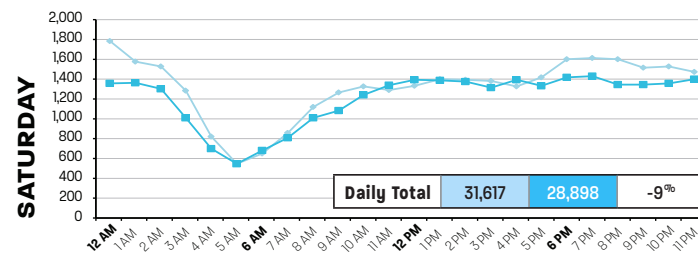
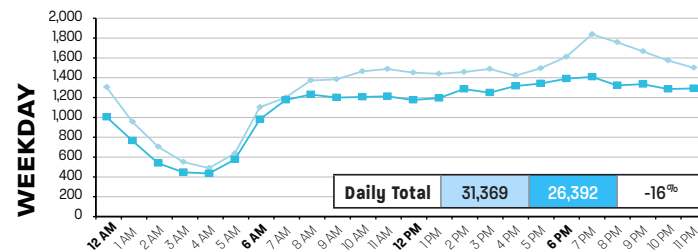
5th Ave Southbound, between 13th St & 14th St



6th Ave Northbound, between 14th St & 15th St



7th Ave Southbound, between 13th St & 14th St



DATA SOURCES

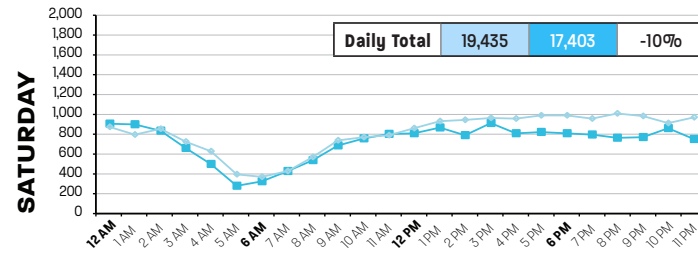
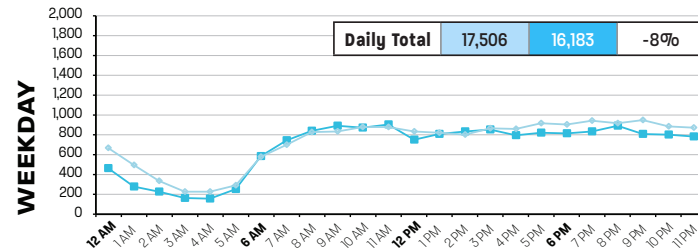
1. Data provided by NYCDOT from May/June 2015 and June 2016.
2. Data collected by Sam Schwartz team.

# VEHICLE VOLUMES

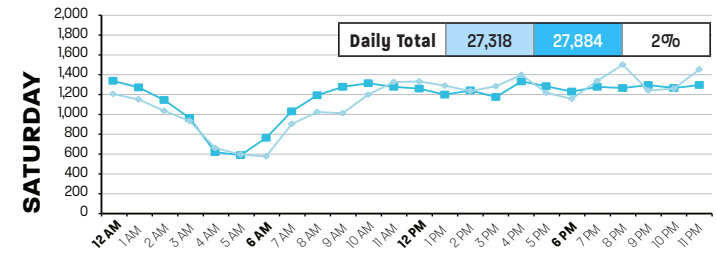
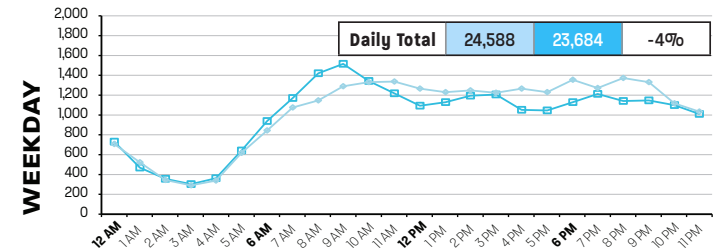
## AVERAGE HOURLY VEHICLE VOLUMES

- PRE-IMPLEMENTATION (October/November 2017) <sup>1</sup>
- POST-IMPLEMENTATION (October/November 2019) <sup>2</sup>

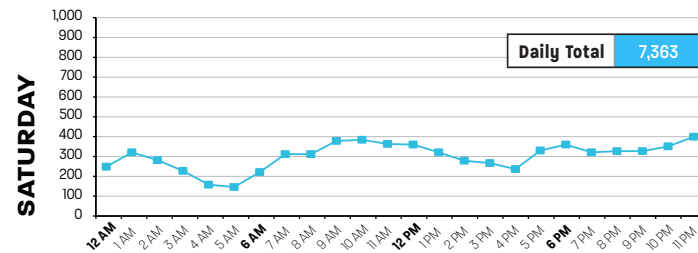
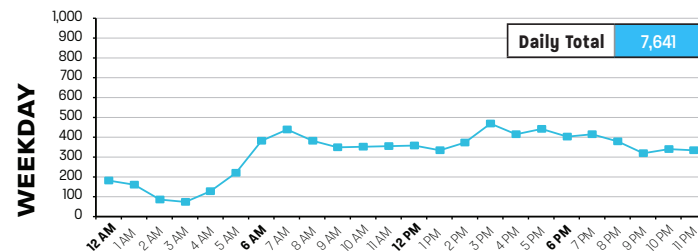
**Houston St Eastbound, between Elizabeth St & Bowery**



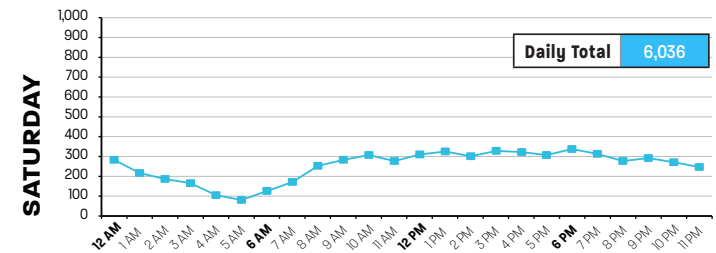
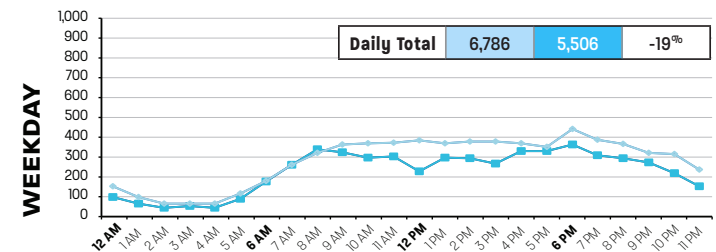
**Houston St Westbound, between 2nd Ave & Bowery**



**23rd St Eastbound, between 6th Ave & 7th Ave**



**23rd St Westbound, between 5th Ave & 6th Ave**



DATA SOURCES

- Data provided by NYCDOT from October/November 2017
- Data collected by Sam Schwartz team.

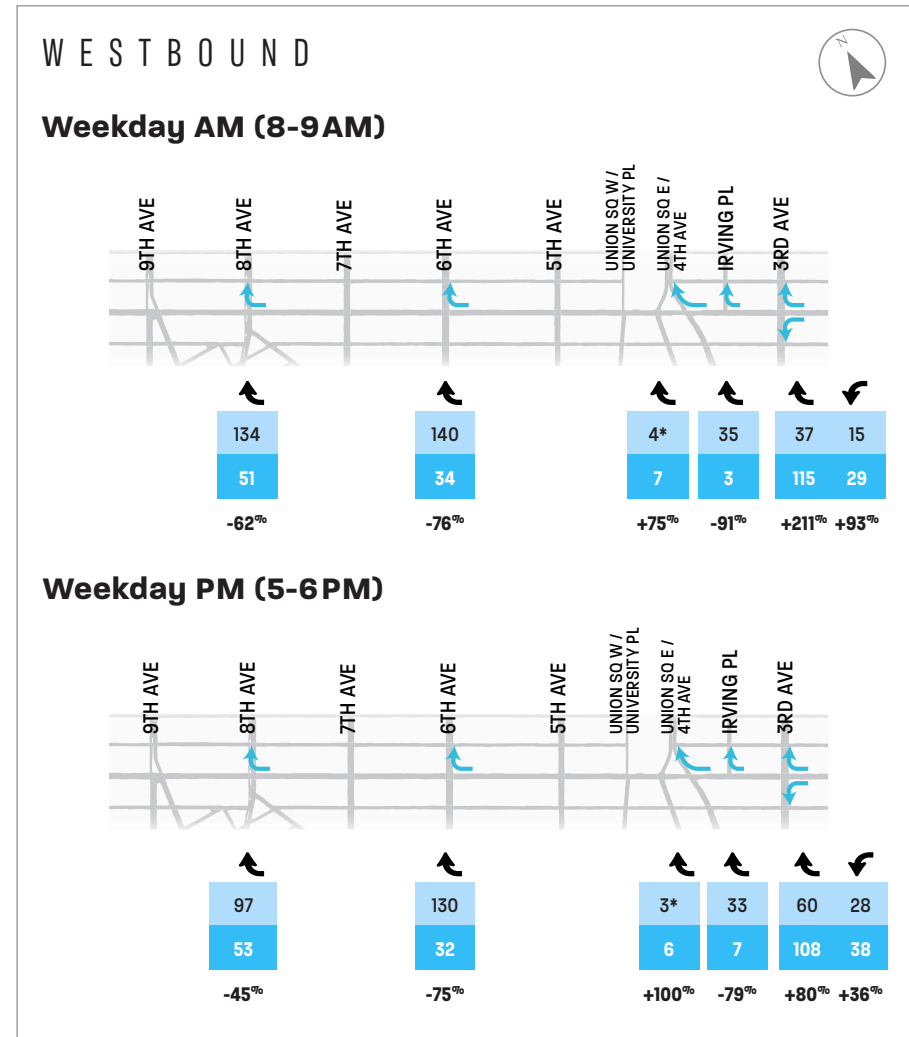
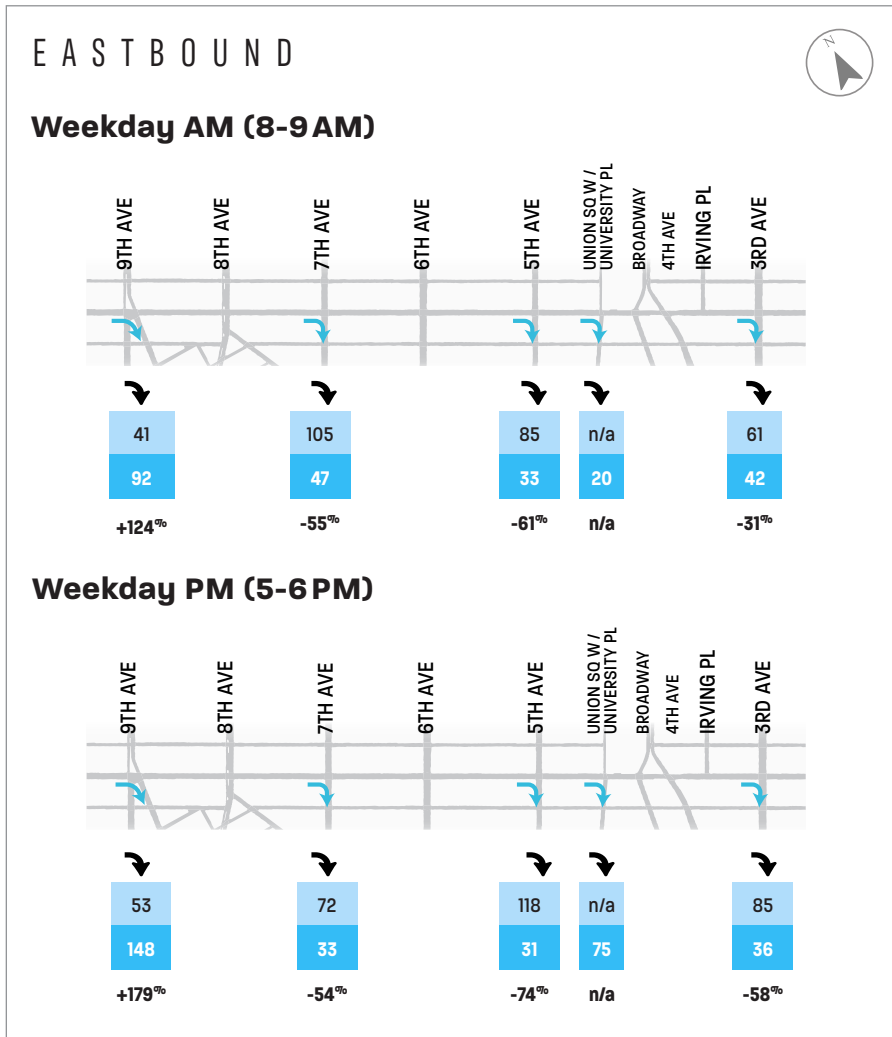


# VEHICLE TURNING MOVEMENTS

Sharp increases in turning volumes at edges of TTP corridor

## 14TH STREET - PEAK HOUR DATA

PRE-IMPLEMENTATION (June 2015) <sup>1</sup>  
POST-IMPLEMENTATION (October 2019) <sup>2</sup>



\* Turns prohibited at the time of data collection

### DATA SOURCES

- June 2015: Data provided by NYCDOT from June 2015
- October 2019: Data collected by Sam Schwartz team.

# BIKE VOLUMES

Sharp increases in bike volumes on 12th and 13th Streets

## BIKE NETWORK



## SUMMARY

- ➔ In the Weekday AM peak hour, westbound 13th Street bike volumes more than tripled.
- ➔ In the Weekday PM peak hour, eastbound 12th Street bike volumes more than doubled.

### DATA SOURCES

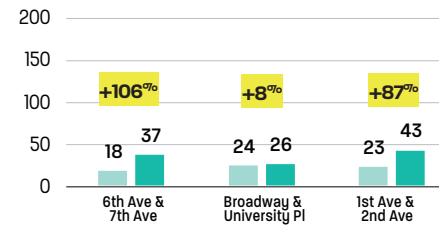
1. June & August 2018: Data provided by NYCDOT. Saturday PM data is from 6-7 PM.
2. October 2019: Data collected by Sam Schwartz team. Saturday PM data is from 8-9 PM.

## PEAK HOUR BIKE VOLUMES

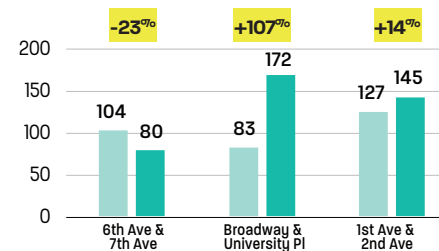
■ PRE-IMPLEMENTATION (June & August 2018) <sup>1</sup>  
■ POST-IMPLEMENTATION (October 2019) <sup>2</sup>

### 12TH STREET

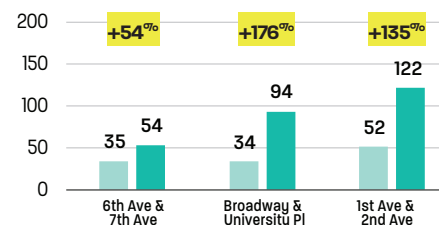
#### Weekday AM (8-9 AM)



#### Weekday PM (5-6 PM)

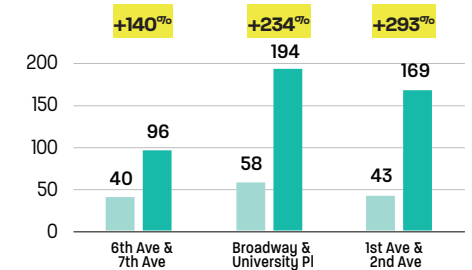


#### Saturday PM (6-7 PM<sup>1</sup> / 8-9 PM<sup>2</sup>)

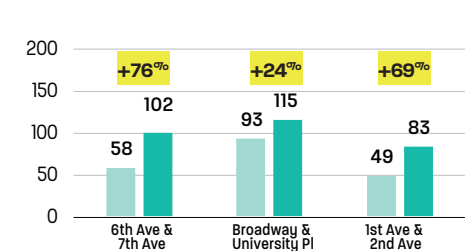


### 13TH STREET

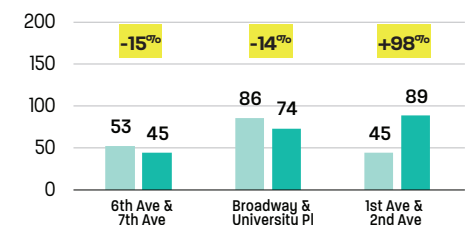
#### Weekday AM (8-9 AM)



#### Weekday PM (5-6 PM)



#### Saturday PM (6-7 PM<sup>1</sup> / 8-9 PM<sup>2</sup>)



# CITI BIKE RIDERSHIP

Citi Bike ridership in study area outpacing citywide growth

## 2019 CITI BIKE STATION - TRIP ORIGINS



\* Station data only available in 2019, excluded from 2018-2019 comparison

## 2019 CITI BIKE STATION - TRIP DESTINATIONS

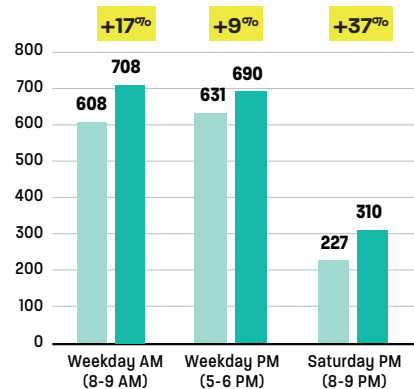


\* Station data only available in 2019, excluded from 2018-2019 comparison

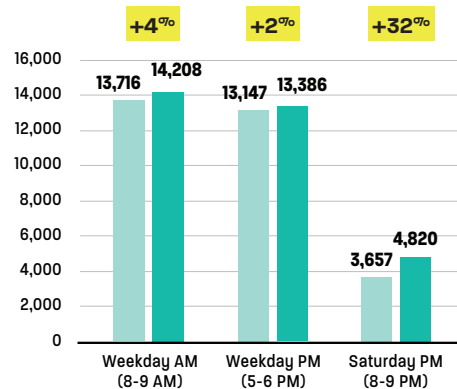
## PEAK HOUR RIDERSHIP

PRE-IMPLEMENTATION (OCTOBER 2018)<sup>1</sup>  
POST-IMPLEMENTATION (OCTOBER 2019)<sup>1</sup>

### Study Area<sup>2</sup>

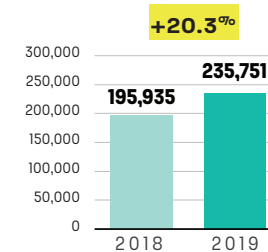


### Citywide

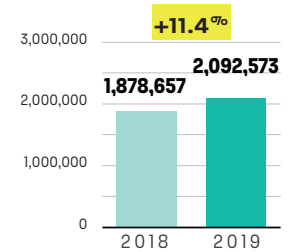


## MONTHLY RIDERSHIP

### STUDY AREA



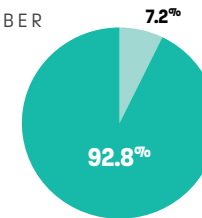
### CITYWIDE



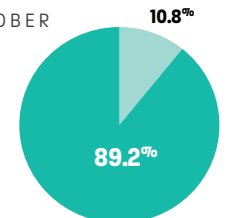
### Study Area - Membership Status

ANNUAL MEMBERSHIP  
24-HOUR OR 3-DAY PASS

OCTOBER 2018



OCTOBER 2019



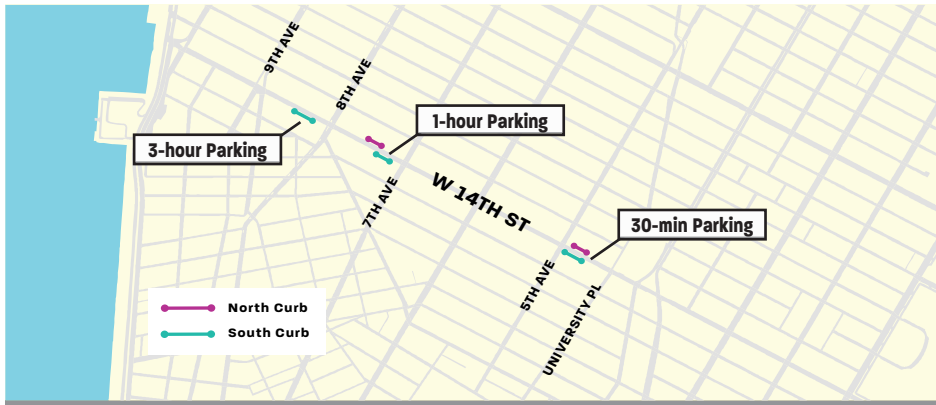
### DATA SOURCES

1. October 2018, October 2019: Data retrieved from Citi Bike.
2. Study Area data includes all Citi Bike stations between 10th & 16th Streets.

# CURBSIDE ACTIVITY

Commercial vehicles occupy majority of curbside space

## BLOCKS SURVEYED<sup>1</sup>

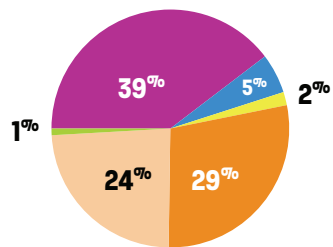


## SUMMARY

- ➔ More than half of all curbside activity consists of commercial vehicles, including trucks and vans; however, commercial spaces regularly occupied by non-commercial vehicles.
- ➔ Less than 2% of vehicles are double parked.

### Overall Vehicle Type

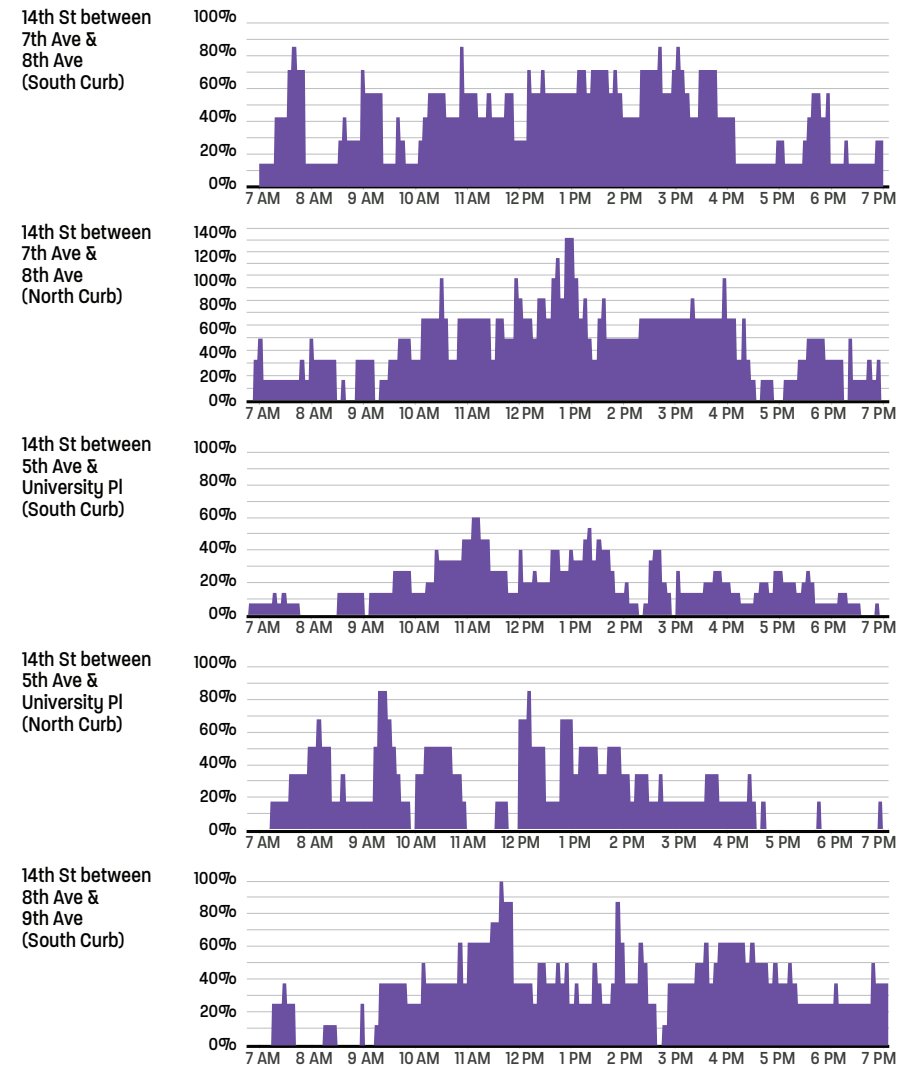
- PERSONAL AUTO / FHV<sup>2</sup>
- POLICE VEHICLE
- YELLOW TAXI
- TRUCK
- VAN
- BUS (NON-MTA)



### Average Time at Curb

VEHICLE TYPES	TIME IN COMMERCIAL VEHICLE METERED PARKING (MIN.)		
	30-Min Parking	1-Hour Parking	3-Hour Parking
Personal Auto / FHV <sup>2</sup>	17	39	18
Police Vehicle	23	15	5
Yellow Taxi	5	5	6
Truck	31	41	51
Van	37	18	50
Bus (non-MTA)	--	7	--

## CURBSIDE OCCUPANCY



### DATA SOURCES

- Wednesday, November 13, 2019 from 7am-7pm: Data provided by NYCDOT. Data collected for a segment of each block surveyed.
- FHV=For Hire Vehicles, consisting of Uber, Lyft, and other car services.

Note: Curbside occupancy based on legal parking spaces; occupancies over 100% indicate vehicles parked in illegal spaces (e.g. fire hydrants and No Standing zones).