Background
Better Buses Action Plan

• Mayor’s 2019 State of the City
  • Improve bus speeds 25% by 2020

• Better Buses Action Plan released April 2019
  • 24 priority projects announced for 2019 to improve bus service across all 5 boroughs
Better Buses Action Plan

2019 Priority Projects

• Main Street and Union Turnpike identified as priority 2019 project due to:
  • Pedestrian safety issues at a busy commercial intersection
  • Main St at Union Turnpike is a consistent source of delay for buses
Project Area

Main Street & Union Turnpike

---

The Mall at Bay Plaza Project Area

Grand Central Pway

Union Tpk

Main St

I-678

Project Area
Bus Service

- Stops served:
  - Q44 SBS: Service between Jamaica, Queens, and Bronx Park South, Bronx
  - Q20 A/B: Service between Jamaica and College Point, Queens via 20 Av (A) and via 14 Av (B)
Q44 Select Bus Service (SBS)

- Q44 Select Bus Service (SBS) launched in November 2015, with pedestrian safety and transit improvements installed corridor-wide.
- Improvements resulted in:
  - 4% increase in corridor (including Q20A/B) average weekday ridership, compared to a 1% decrease borough-wide.
  - Reduced bus bunching and improved schedule adherence.
  - For sections of Main St with bus lanes, 12% improvement in Q44 SBS travel times NB (2015-2019).
  - 4-11% improvement in Q44 SBS travel times overall compared to previous local service, however since launch speeds have slowed on some parts of the corridor.
Existing Issues

Main St at Union Turnpike is a Vision Zero Priority Intersection

Main St is a Vision Zero Priority Corridor

Main St at Union Turnpike is a consistent source of delay for the Q44 SBS

Bus delays and traffic problems coincide with middle segment of corridor without bus lanes or signal timing improvements

Additional safety requests made for intersection of Main St and Grand Central Pway
Existing Issues

- Long crossing distances
- Lack of pedestrian refuge

Grand Central Pkwy to Union Tpk, Main St, QN
Injury Summary, 2013-2017 (5 years)

<table>
<thead>
<tr>
<th></th>
<th>Total Injuries</th>
<th>Severe Injuries</th>
<th>Fatalities</th>
<th>KSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedestrian</td>
<td>13</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Bicyclists</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Motor Vehicle Occupant</td>
<td>104</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>119</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

- 119 traffic injuries (2013-2017), including 5 severe injuries to pedestrians and cyclists

Source: Fatalities: NYCDOT
Injuries: NYSDOT
KSI: Persons Killed or Severely Injured
Buses and Traffic

- During rush hour, the Q44SBS, Q20A, and Q20B carry between 33% and 44% of all people traveling northbound.

- Buses on Main St carry over 11,500 daily riders at Union Tpk stop (5,000+ northbound, 6,500+ southbound).

- Buses currently have no dedicated space on this stretch of Main St.

- In recent years (since launch of SBS), bus speeds on Main St the area near Union Turnpike have declined.

- Despite heavy volumes, there is no dedicated northbound right turn lane.

*Source: February 2019 traffic counts. MTA Ridership Data. Occupancy factors: 1.3 persons/veh
Proposed Improvements
Proposed Improvements

Median Tip Extension at Main St & Union Turnpike

• Painted or concrete median tip extension improves pedestrian safety

• Shortens crossing distances

• Traffic calming benefits
Proposed Improvements

Southbound Left Turn Restriction On Main St

- Lowest volume left turn at intersection

- Turn restriction allows for both pedestrian safety enhancements and traffic flow improvements

*Source: February 2019 traffic counts. MTA Ridership Data. Occupancy factors: 1.3 persons/veh

Reroutes 65 vehicles in AM Peak Hour, 80 vehicles in PM Peak Hour

Benefits 1,400 commuters during AM Peak Hour, 1,130 commuter during PM Peak Hour

AM Peak (veh/hr): 350 Thru, 140 Right
PM Peak (veh/hr): 305 Thru, 175 Right
Proposed Improvements

Signal Adjustments

• Adds 11 seconds of green time for northbound thru and right, while maintaining NB left turn green arrow phase

• Additional 11 seconds per 2 minute (120 sec) cycle (9% increase):
  ▪ 5.5 minutes / hour
  ▪ 132 minutes / day

• Increases pedestrian crossing time in east crosswalk by 11 seconds

Saves northbound commuters 7,700 minutes per hour in the AM Peak Hour and 6,215 minutes in the PM Peak Hour

*Source: February 2019 traffic counts. MTA Ridership Data. Occupancy factors: 1.3 persons/veh
Current Left Turn Counts - AM Peak Hour

<table>
<thead>
<tr>
<th>Location</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>North of Jewel Av</td>
<td>17</td>
</tr>
<tr>
<td>Between Jewel Av and 73 Av</td>
<td>8</td>
</tr>
<tr>
<td>Between 73 Av and 78 Av</td>
<td>22</td>
</tr>
<tr>
<td>Local Traffic (South of 78 Av)</td>
<td>15</td>
</tr>
</tbody>
</table>

*Sources: February 2019 traffic counts and Streetlight*

- An analysis was completed to better understand where vehicles traveling southbound on Main St and turning left at Union Turnpike originate.
- Majority of vehicles making left turn would have multiple alternate routes available.
Current Left Turn Counts - PM Peak Hour

<table>
<thead>
<tr>
<th>Location</th>
<th>Vehicle Counts</th>
</tr>
</thead>
<tbody>
<tr>
<td>North of Jewel Av</td>
<td>20</td>
</tr>
<tr>
<td>Between Jewel Av and 73 Av</td>
<td>15</td>
</tr>
<tr>
<td>Between 73 Av and 78 Av</td>
<td>28</td>
</tr>
<tr>
<td>Local Traffic (South of 78 Av)</td>
<td>19</td>
</tr>
</tbody>
</table>

*Sources: February 2019 traffic counts and Streetlight

- Vehicle counts are higher in PM peak hour can also be accommodated in the larger neighborhood traffic network
Traffic Diversions

- Numerous alternatives for southbound left turn
- Traffic analysis shows minimal traffic impact on adjacent streets
Existing Configuration

- Southbound Main St approaching Union Turnpike
- Northbound Main St approaching 79 Ave

Looking north

- 8' Bus Stop/Parking/Travel Lane
- 10' Travel Lane
- 11' Travel Lane
- 9' Turn Lane
- 11' Travel Lane
- 11' Travel Lane
- 8' Bus Stop/Parking Lane

Dimensions: 720.0x540.0
Proposed Configuration

Southbound Main St approaching Union Turnpike

Existing

- 8’ Bus Stop/Parking/Travel Lane
- 10’ Travel Lane
- 11’ Travel Lane
- 9’ Turn Lane

Proposed

- Increased lane widths
- Wider median
- Bus stop can be utilized as moving/turn lane

Northbound Main St approaching 79 Ave

- 8’ Bus Stop/Parking Lane
- 11’ Travel Lane
- 11’ Travel Lane

Additional notes:
- Increased lane widths
- Wider median
- Bus stop can be utilized as moving/turn lane
Existing Configuration

Southbound Main St approaching Grand Central Pkwy

Northbound Main St approaching Union Turnpike

Existing

Looking north
Proposed Configuration

Existing

Southbound Main St approaching Grand Central Pkwy

Northbound Main St approaching Union Turnpike

Proposed

Dedicated bus / bike lane

Turn lane for 140-175 veh/hr
Proposed Configuration

- Left Turn Restriction
- Dedicated Bus/Bike Lane
- Right Turn Lane
- Median Tip Extension
- Additional 11 Seconds for Northbound Thru/Right and East Crosswalk
Main St and Grand Central Parkway

New pedestrian crossings

Painted median extensions

Grand Central Pkwy

Main St
Main St and Grand Central Parkway

New pedestrian crossing

Painted median extensions

New pedestrian crossing
Full Proposal

Benefits

• Improves bus speeds and reliability
• Enhances pedestrian safety
• Improves traffic flow
Project Schedule

Spring 2020
• CB8 outreach
• Elected Official briefing
• Finalize design based on stakeholder feedback

Later 2020
• Implement project as conditions allow
• Concrete, markings, signage, and signals implementation
Thank You!

Questions?