Broadway: Union Square
Implemented September 2010:

- Converted E. 17th Street from two-way to one-way
- Installed 12,784 sq. ft. of pedestrian plaza space on Broadway and E. 17th Street
- Upgraded 1.3 miles of bicycle facilities
- Eliminated conflicting vehicle movements at USW and E. 14th Street
Implemented September 2010:

- Constructed landscaped pedestrian safety islands
- Added farmer’s market parking
- Implemented side street traffic mitigation measures, particular focus on 18th Street
- Restricted turns off Park Avenue
Signal timing adjustments to 22nd Street at Broadway and Park Avenue

Neckdown removed at 17th Street and Park Avenue

Neckdown radius altered for easier turns off Broadway at 22nd Street

New flexible delineators to clearly mark parking on Broadway from 23rd Street to 21st Street

Signal timing changes on 12th Street to improve traffic flow
Before: 28% of vehicles exceeded 30mph speed limit (average speed 27mph)

After: 12% of vehicles exceeded 30mph speed limit (average speed 25mph)

Before: radar speeds 7-9a and 8-10p July 27&29 2010, sample size 1300 vehicles

After: radar speeds 7-9a and 8-10p October 26&28 2010, sample size 400 vehicles
Combined southbound traffic volume of Broadway and Park Avenue was maintained.

**Average Vehicle Volume**

Park Ave between 19th and 18th, Broadway between 18th and 17th

<table>
<thead>
<tr>
<th></th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM Peak Hour</td>
<td>472</td>
<td>231</td>
</tr>
<tr>
<td>11am – 12pm</td>
<td>570</td>
<td>814</td>
</tr>
<tr>
<td>PM Peak Hour</td>
<td>431</td>
<td>195</td>
</tr>
<tr>
<td>8pm – 9pm</td>
<td>1,042</td>
<td>1,045</td>
</tr>
<tr>
<td>1,240</td>
<td>809</td>
<td></td>
</tr>
<tr>
<td>1,287</td>
<td>1,092</td>
<td></td>
</tr>
</tbody>
</table>

Before: Average midweek peak volume week of May 16, 2010
After: Average midweek peak volume week of October 24, 2010
Broadway: Union Square Plazas, Promenade and Bicycle Path

Mobility

- Median speed for trips taken on 18th Street within the project area (6th Avenue to Irving Place) improved by 14%
- Speeds on Park Avenue remained relatively unchanged in both the northbound and southbound direction
- Median speeds for trips on 5th Avenue between 26th and 13th Streets decreased modestly

Source: TLC GPS Data, Taxi Global Positioning System (GPS) data are provided by the Taxi and Limousine Commission (TLC) with results compiled by DOT. The GPS devices track the average speed of taxis in revenue service including time moving freely, stopped at traffic signals and delayed in congestion. Before results represent the median of average taxi travel speed taken Sun-Sat 7a-12p & 4p-9p from October 18th – 31st, 2009. After results represent the median of average taxi travel speed taken Sun-Sat 7a-12p & 4p-9p from October 17th – 30th, 2010.
• Vehicles traveling from 5th Avenue/24th Street to 14th Street/Park Avenue South who used Broadway via 17th (before) or 18th Street (after) saw no change in travel times, however those using Park Avenue via 23rd Street saw a 15% increase.

Note: Field travel time survey. Before results were taken in July 2010 while after results were taken in October 2010. In the before and after periods 78 runs were taken on both routes on a Tuesday, Wednesday and Thursday between 7am and 8pm.
Bicycle volumes on Broadway increased by 16% on weekdays and 33% on the weekends.

Note: Data from single weekday counts and single weekend counts between 7a & 7p on 6/2/2010, 6/5/2010, 7/21/2010, and 7/23/2010
Mobility

East Crosswalk of Broadway at 17th Street
- The crossing is 42% shorter (from 43ft to 25ft)
- “Walk” time more than doubled from 11 to 24 seconds
- Pedestrian wait time reduced by 45%

![Bar chart showing average wait times before and after the improvements. The chart shows a significant reduction in wait times.](chart.png)
The number of taxi pickups and drop offs in the project area were relatively unchanged before and after the project.

**Taxi Passenger Volume**

**Core Area**

<table>
<thead>
<tr>
<th>Day Period</th>
<th>Pick Up</th>
<th>Drop Off</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Area</td>
<td>3,467</td>
<td>3,290</td>
</tr>
<tr>
<td></td>
<td>3,155</td>
<td>3,148</td>
</tr>
</tbody>
</table>

4-Day Period

**Neighborhood Area**

<table>
<thead>
<tr>
<th>Day Period</th>
<th>Pick Up</th>
<th>Drop Off</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neighborhood Area</td>
<td>12,875</td>
<td>13,824</td>
</tr>
<tr>
<td></td>
<td>10,499</td>
<td>10,815</td>
</tr>
</tbody>
</table>

4-Day Period

Unions Square Partnership Survey Results:

- 74% of respondents reported that they like the new traffic configuration
- 20% of store owners/managers say the plazas have improved business and none have reported a negative impact

Greenmarket Response:
“Overall, having the pedestrian aisle along 17th Street has greatly benefited [the] Greenmarket.”
- Michael Hurwitz, Director

Sources: Union Square Partnership 4th Annual Community Opinion Survey and Union Square Business Survey
# Broadway: Union Square Plazas, Promenade and Bicycle Path

## Issues & Potential Enhancements

<table>
<thead>
<tr>
<th>Issues Being Monitored</th>
<th>Potential Enhancements</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Illegal left turns at Union Square West and 14&lt;sup&gt;th&lt;/sup&gt; Street</td>
<td>• Consider additional traffic network modifications</td>
</tr>
<tr>
<td></td>
<td>• Install flexible delineators on 14&lt;sup&gt;th&lt;/sup&gt; Street centerline</td>
</tr>
<tr>
<td>• Cross-town traffic congestion</td>
<td>• Install turn lanes at heavy turn locations</td>
</tr>
<tr>
<td>• Southbound express bus operations at Broadway &amp; 23&lt;sup&gt;rd&lt;/sup&gt; Street and Park Avenue &amp; 23&lt;sup&gt;rd&lt;/sup&gt; Street</td>
<td>• Explore new bus routes on alternate cross streets</td>
</tr>
<tr>
<td>• Longevity of existing plaza elements</td>
<td>• Prioritize capital funding to upgrade elements and enhance plazas</td>
</tr>
</tbody>
</table>
Thank You