GOVERNMENT OF THE DISTRICT OF COLUMBIA
MURIEL BOWSER, MAYOR

Left Turn Traffic Calming

December 18, 2018

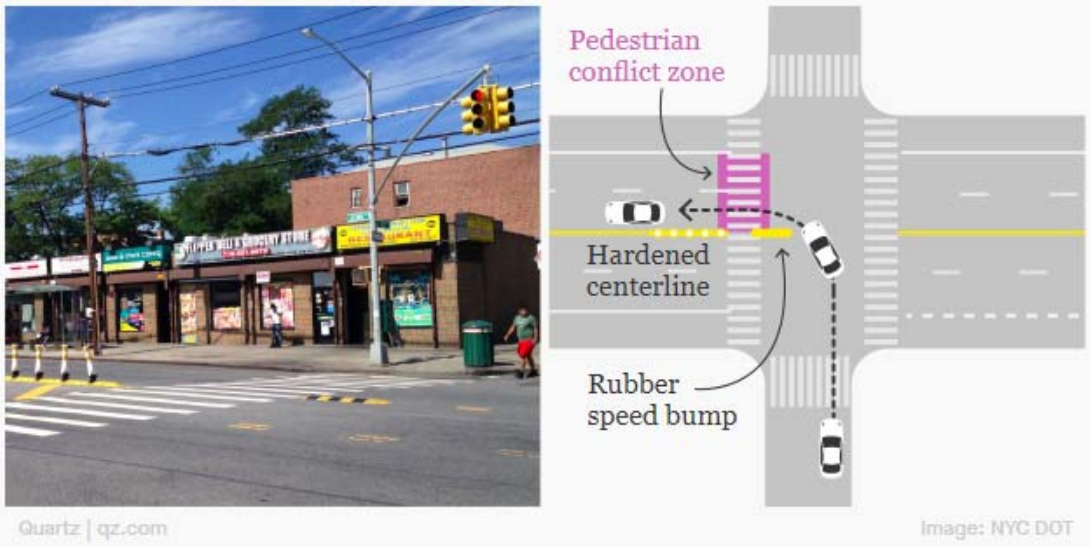
Background

- NYCDOT program started as part of Left Turn Study Action Plan
  - Addresses failure-to-yield crashes
  - Reduces Turning Speeds
  - Reduces Conflict Areas
- NYCDOT Locations Selected based on:
  - Crash injury numbers
  - Lane configurations
  - Effect on large vehicle movements
- Primary Treatments:
  - Basic Hardened Centerline
  - Complete Hardened Centerline
  - Slow Turn Wedge

Source: NYCDOT

Treatments

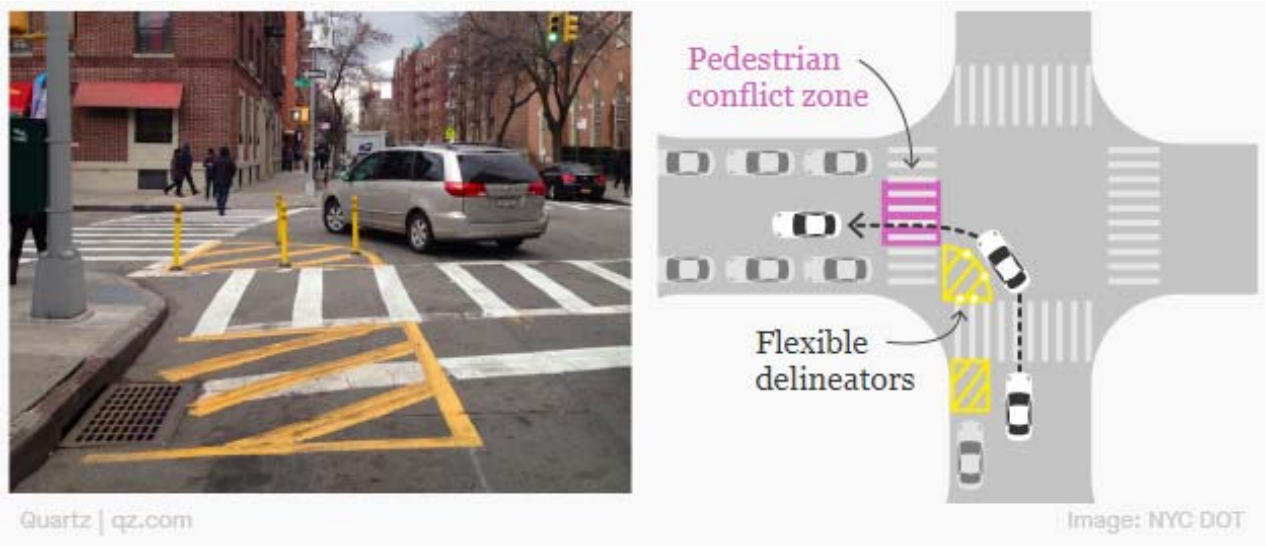
- Basic Hardened Centerline
  - Can be installed where a one-way or a two-way meets a two-way
  - Rubber Curb / Flex Posts along receiving center line
    - Can extend to stop bar, to crosswalk, and/or extend into intersection
  - NCYDOT has installed 129 of these starting from 2016



Source: NYCDOT

Treatments

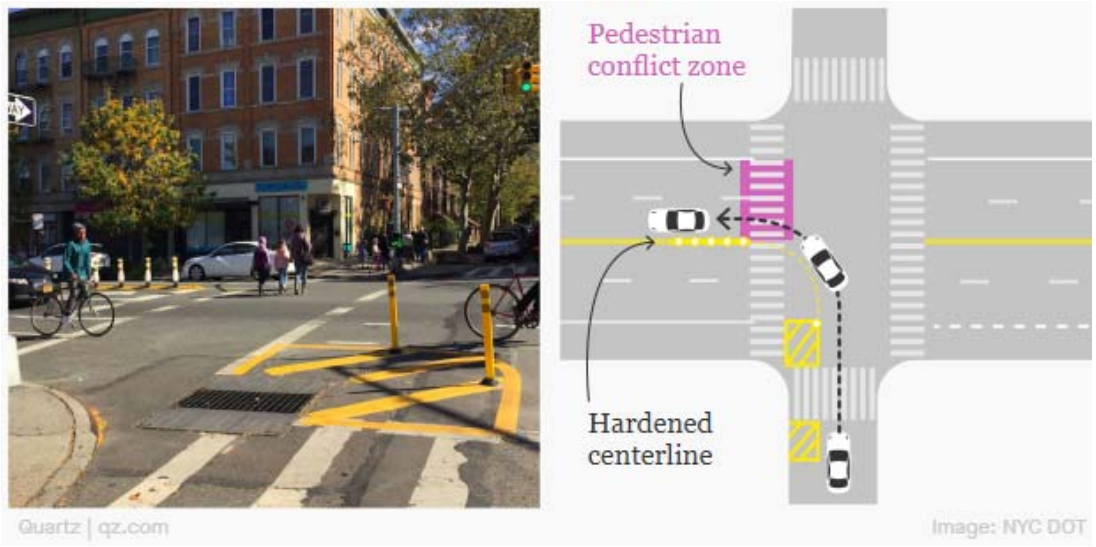
- Slow Turn Wedge
  - Can be installed where a one-way meets a one-way
  - Painted wedge/boxes with flex posts or rubber bumper
  - NCYDOT has installed 38 of these starting from 2016



Source: NYCDOT

Treatments

- Complete Hardened Centerline
  - Can be installed where a one-way meets a two-way
  - Rubber Curb / Flex Posts along receiving center line
  - Painted wedge/boxes with flex posts or rubber bumper and painted guidelines
  - NCYDOT has installed 37 of these starting from 2016



Source: NYCDOT

Treatments

- Modifications to these treatments may be necessary to accommodate:
  - Nearside bus stops
  - Peak-hour parking restrictions
  - Heavy vehicle turning radius
  - Presence of bike lanes
  - Skewed or complex geometry
  - Other special conditions
- LPIs should be evaluated/ implemented in conjunction where feasible

Effectiveness

- NYCDOT Performed Initial Before/After Analysis
- Left Turn Speeds
  - Median left turn speeds reduced by 19.9%
  - Average left turn speeds reduced by 20.5%
  - 85th Percentile left turn speeds reduced by 16.7%
- Crossing of Double Yellow Lines
  - Reduced by 78.9% where hardened centerline extends to stop bar
  - Reduced by 100% where hardened centerline extends to crosswalk
- Crash Data
  - Not enough data available yet

Source: NYCDOT

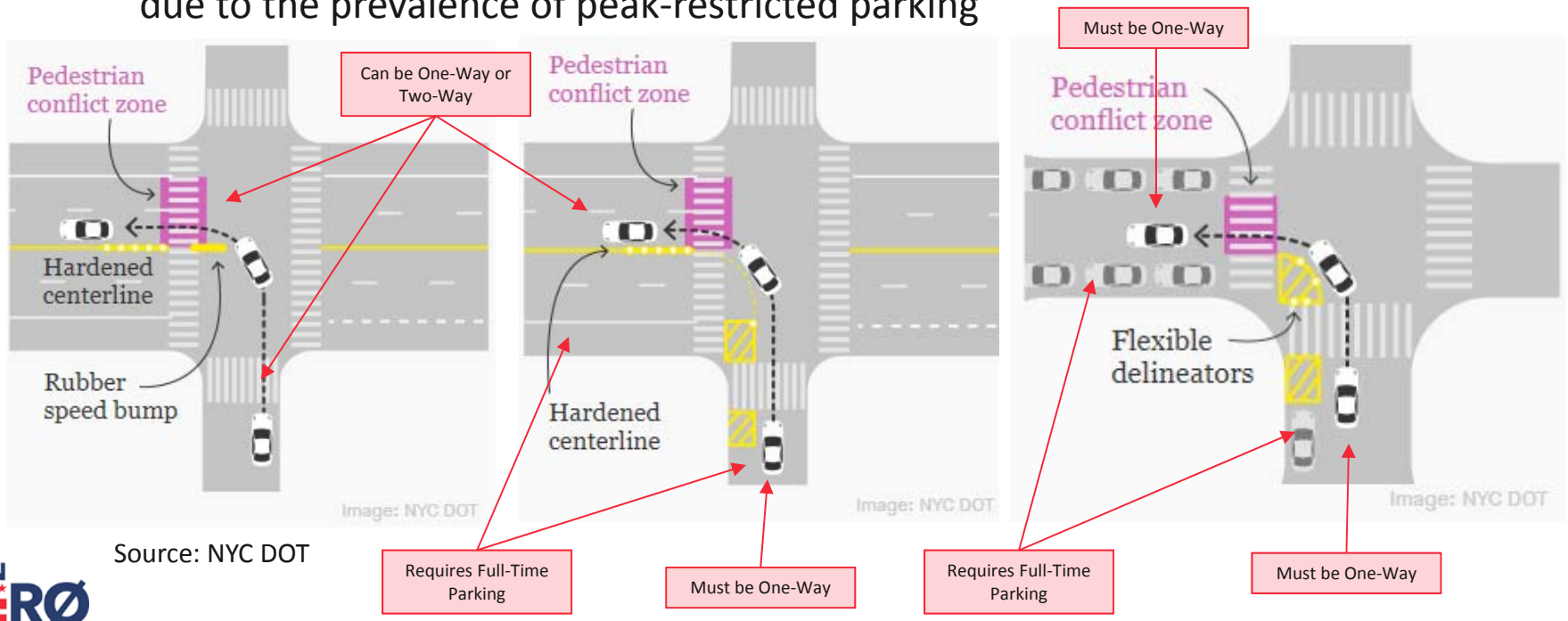
Data Analysis

- Data collected for each approach included:
  - AM and PM peak vehicle volumes
  - AM and PM peak pedestrian volumes
  - Number of travel lanes on receiving leg
  - Presence of school zone
  - Flow direction of intersecting streets (i.e. one-way or two-way)
  - Presence of full-time parking

Source: Flickr

Maximum Treatment Possible

- Locations were filtered based on maximum treatment possible
  - Treatment depends on flow direction and parking restrictions on both the approach and receiving legs
  - A majority of locations are only eligible for the hardened centerline treatment, due to the prevalence of peak-restricted parking



Source: NYC DOT

GOVERNMENT OF THE DISTRICT OF COLUMBIA
MURIEL BOWSER, MAYOR

Dual Turn Mitigation

December 18, 2018

Background

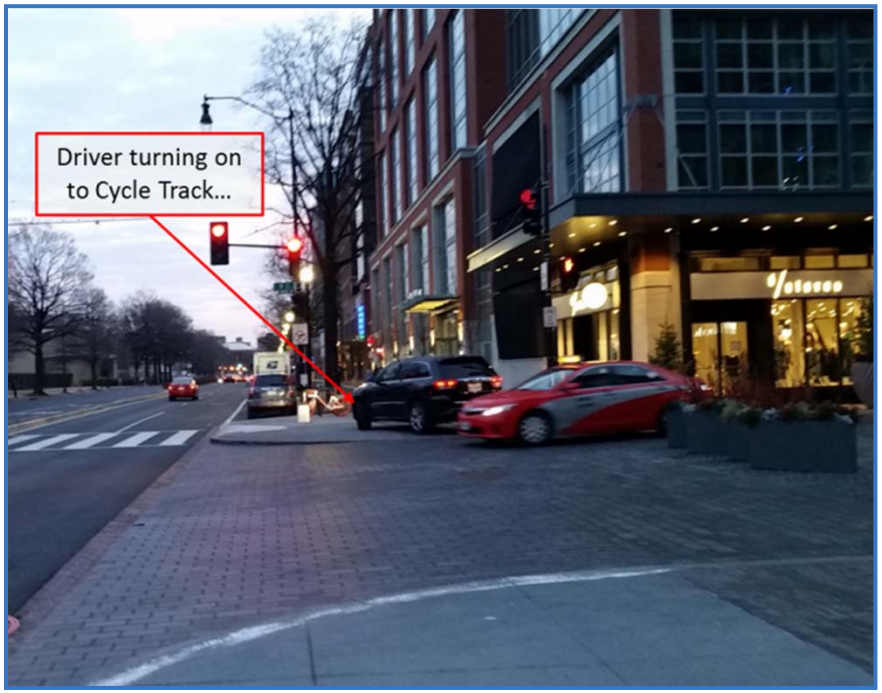
- Dual Turn / Pedestrian Conflict Elimination
  - Identification of permissive dual left/right turn pedestrian conflicts
  - Field investigation of existing conditions
  - Alternatives analysis and selection
  - Development of countermeasure work order and signal operations
  - Construction/Deployment & observation
  - 44 approaches have been identified for improvement

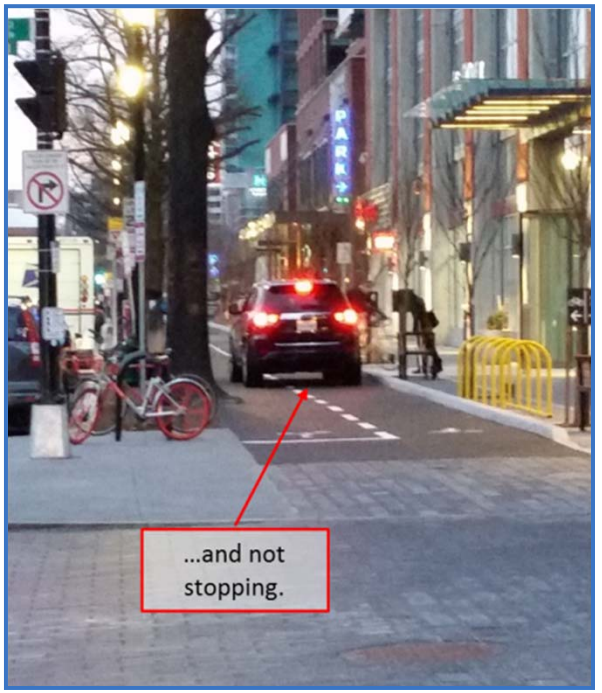
Example:
9th & Maine SW

- Before:

Example:
9th & Maine SW

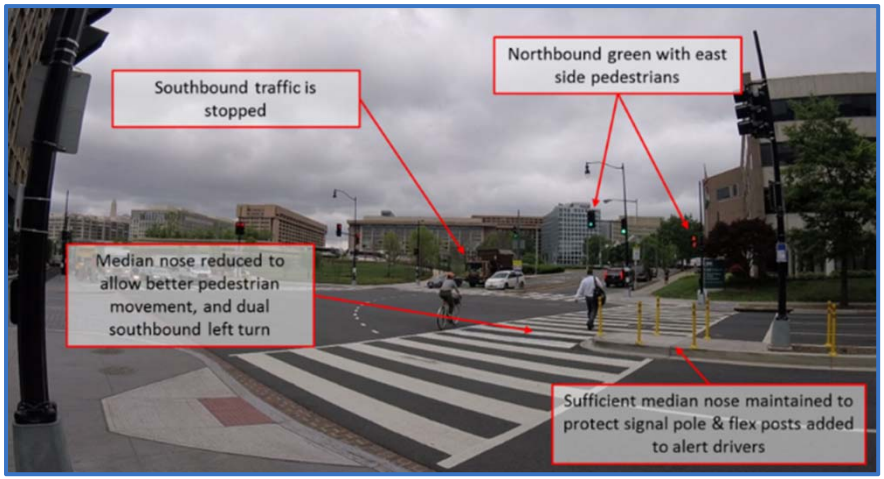
- Before:

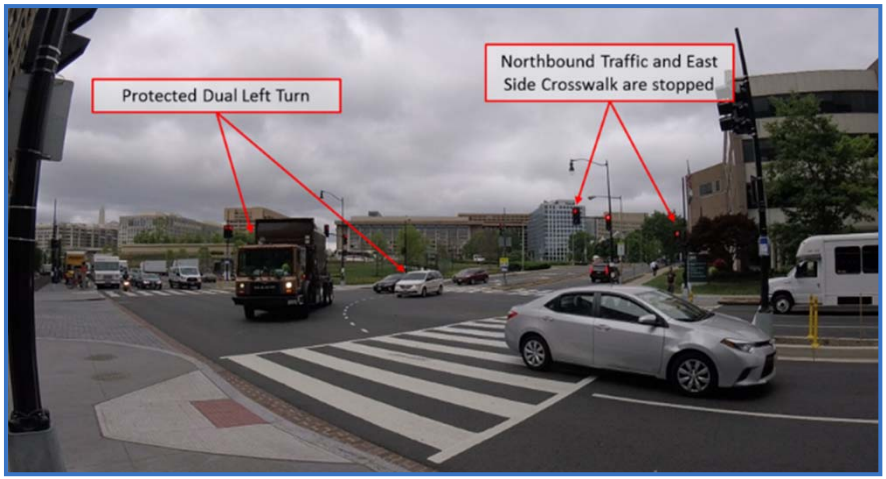




Example:
9th & Maine SW

- After:





Example:
9th & Maine SW

- After:

Example:
Mass & NJ, NW

- Before:
  - WB Approach had Thru + Thru/Right + Right Only
  - Volumes did not justify this lane configuration

Example:
Mass & NJ, NW

- After:
  - Re-striped & signed as two Thru Only + Right Only
  - Upgraded to high visibility crosswalks
  - Installed Leading Pedestrian Intervals