FORT HAMILTON PARKWAY PROTECTED BIKE LANE

Presented to Community Board 7 Transportation Committee

May 20, 2019

VISION ZERO
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NEW YORK CITY DOT

Project Area Location

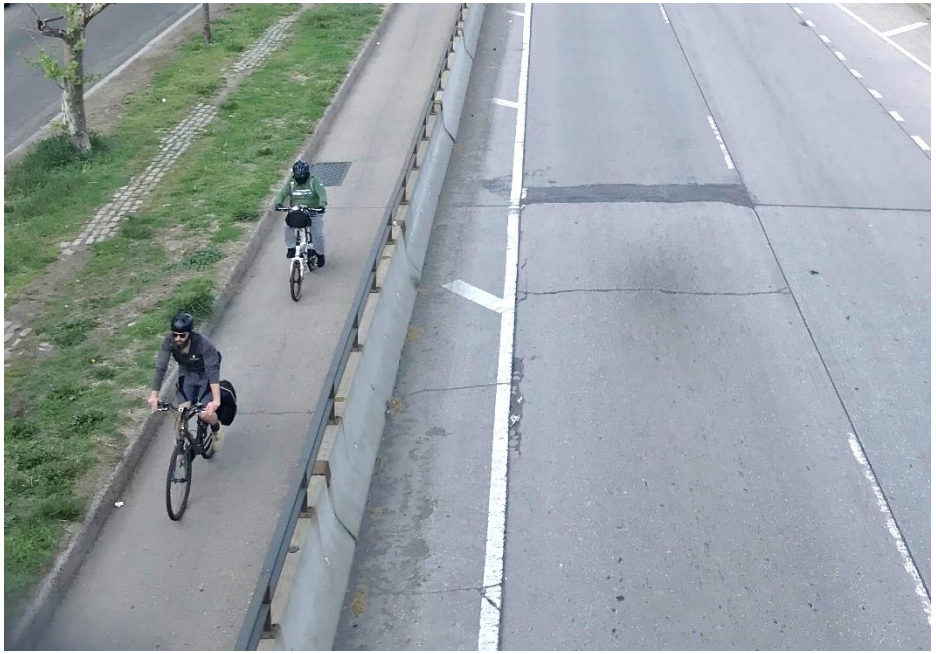
- Existing westbound Fort Hamilton Pkwy bike lane installed in 2010 is a key connection from Prospect Park
- Connection from Prospect Park draws people walking and biking
- Community request for two-way, protected bicycle facilities on Fort Hamilton Pkwy between E 5th St and Caton Ave by Brooklyn Prospect Charter School
- Community request for pedestrian improvements at Fort Hamilton Pkwy and McDonald Ave

Existing Conditions Bicycle Route

- Bike lanes installed in 2010
  - One-way buffered westbound bike lane
  - One-way protected lane on overpass
  - Eastbound bike lane is on Caton Ave
- Buffered lane vulnerable to double parking
- Moderate bike volumes
  - 225 bikes 12-hr weekend count
  - 363 bikes 12-hr weekday count

    July 2017, between E 2nd St and E 3th St
  - 366 bikes 12-hr weekend count
  - 368 bikes 12-hr weekday count

    August 2013, between E 2nd St and E 3th St



Ft Hamilton Pkwy at McDonald Ave

Project Area Safety

Fort Hamilton Parkway
Park Circle – McDonald Ave
Crash History 2012-2016

	Total Injuries	Severe Injuries	Fatalities	KSI
Pedestrian	5	0	0	0
Bicyclists	4	1	0	1
Motor Vehicle Occupant	32	2	0	2
Total	41	3	0	3

- One severe crash involving a person riding a bike occurred on E 4th Street and Fort Hamilton Parkway during the time period
- 22% of vehicles on Fort Hamilton Parkway are speeding mid-day

Issues Eastbound Bike Route

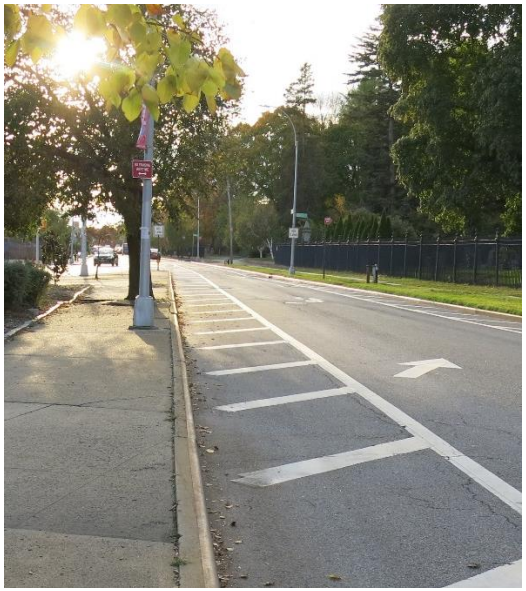
- Existing eastbound bike route on Caton Ave from McDonald Ave to Prospect Park is 0.5 miles longer than a Fort Hamilton Pkwy alternative
- Caton Ave bike route has twice as many severe injuries as proposed route
- Many eastbound cyclists ride against traffic on Fort Hamilton Pkwy as safer and shorter alternative to Caton Ave

Caton Ave / Ocean Parkway
Dahill Rd – Park Circle
Crash History 2012-2016

	Total Injuries	Severe Injuries	Fatalities	KSI
Pedestrian	9	1	0	1
Bicyclists	11	2	0	2
Motor Vehicle Occupant	56	3	0	3
Total	76	6	0	6

Issues Dahill Rd Connection

- Existing westbound route leads people bikes to McDonald Ave and Caton Ave to Dahill Rd
- Eastbound cyclists from Dahill Rd face heavy turn conflict on Caton Ave at McDonald Ave
- Vehicles frequently travel in bike lane when vehicles are queued to turn left onto SB Dahill Rd
- Cyclists unprotected from traffic as they wait for left turn onto SB Dahill Rd
- Not intuitive wayfinding
- Numerous conflict points



Issues School Access

- Protected bike lane requested by Brooklyn Prospect School
- Brooklyn Prospect School generates non-motorized traffic on Ft Hamilton Pkwy
- Lack of protected bike lane encourages younger and risk-averse cyclists to use sidewalk

Proposed Design Goals

- Improve pedestrian safety
  - Shorten crossing distances
  - Add crossing time, where feasible
  - Slow turns
- Create an eastbound bike route to Prospect Park
  - Formalize shorter route in current use
  - Provide alternative to Caton Ave
- Simplify connection to Sunset Park
  - Improve wayfinding
  - Reduce conflicts
- Improve cyclist safety and comfort
  - Reduce double parking in bike lane
- Maintain motor vehicle circulation
  - Reduce off-peak speeding

SAFETY – Protected Bike Lanes

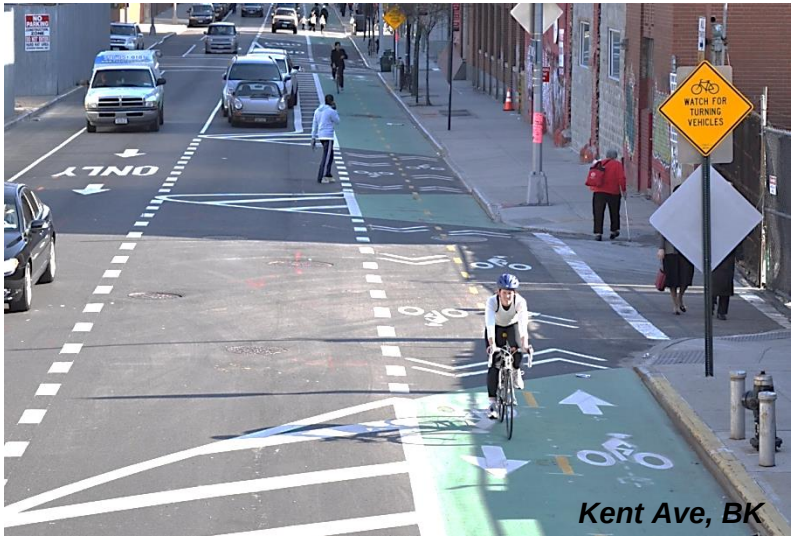
Street designs that include protected bike lanes increase safety for all users

-15% drop in all crashes with injuries

-21% drop in pedestrian injuries

on streets where protected bike lanes were installed 2007-2017

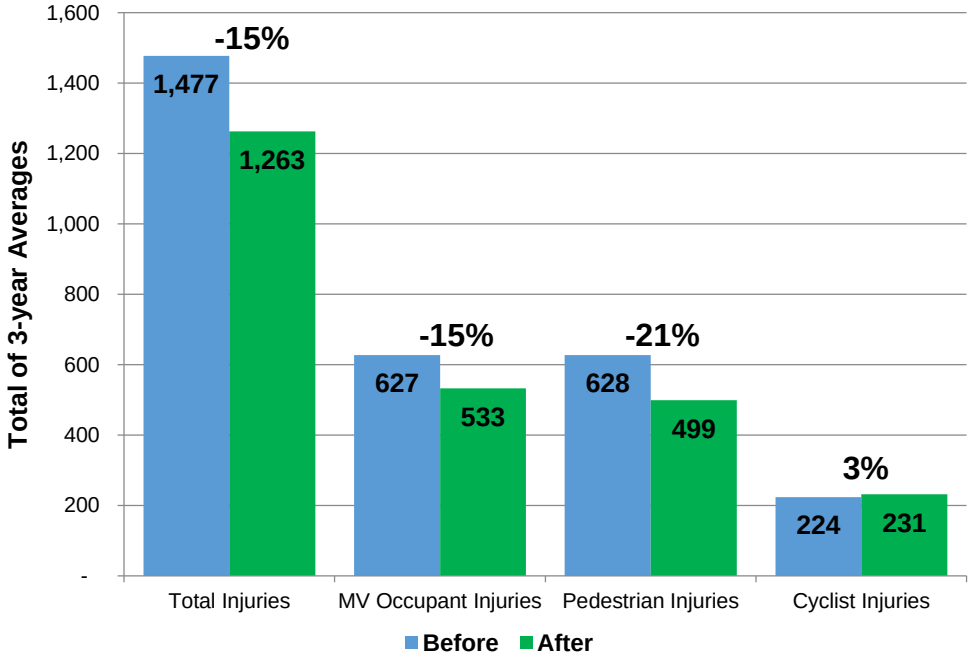
Injuries to cyclists increase only 3%,
*despite a **61% bike volume increase***



Kent Ave, BK

Protected Bike Lanes

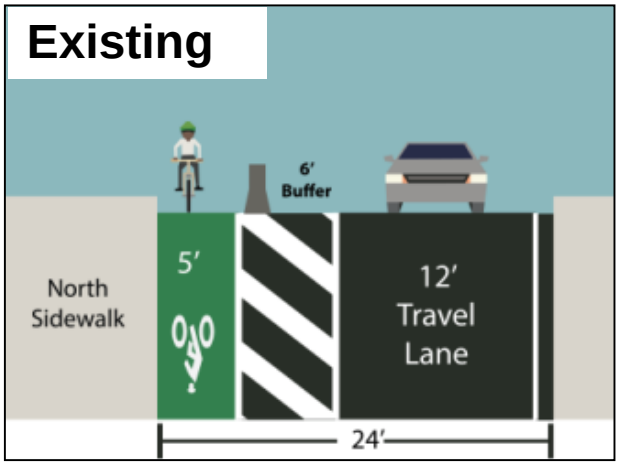
Before and After Crash Data, 2007 - 2017

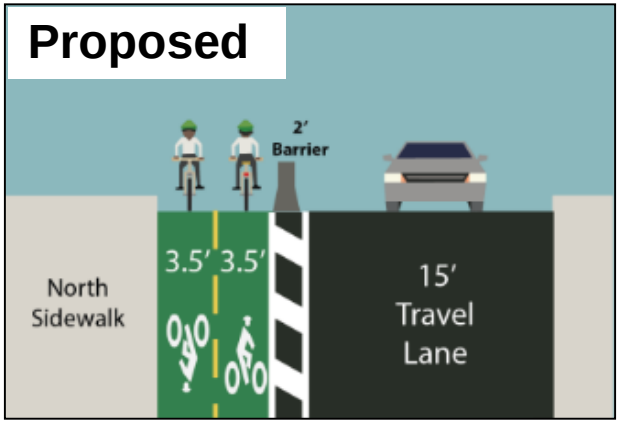



Prospect Park W, BK

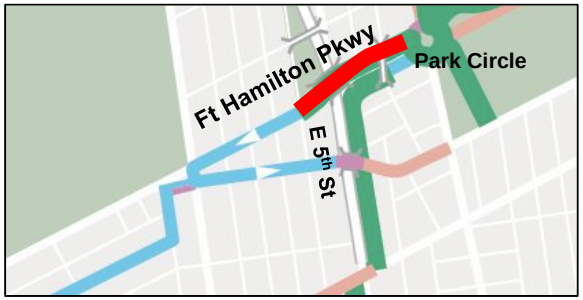
Data from 25 separate protected bicycle lane projects installed from 2007-2014 with 3 years of after data. Includes portions of 1 Ave, 2 Ave, 8 Ave, 9 Ave, Broadway, Columbus Ave, Hudson St, Lafayette St / 4 Ave, Sands St, Allen/Pike St, Kent Ave, Prospect Park West, Flushing Ave, Bruckner Blvd & Longfellow Ave, Imlay St / Conover St, Paerdegat Ave. Only sections of projects that included protected bike lanes were analyzed.
Source: NYPD AIS/TAMS Crash Database

Proposed Design Overpass

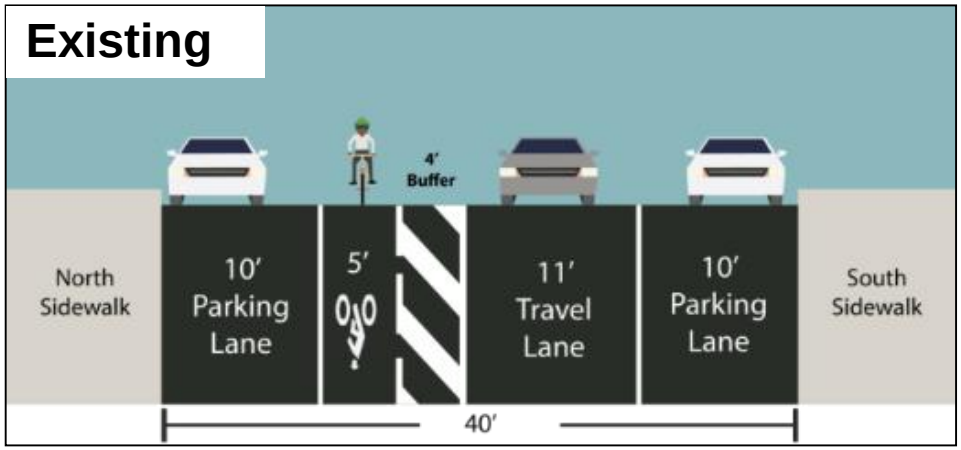


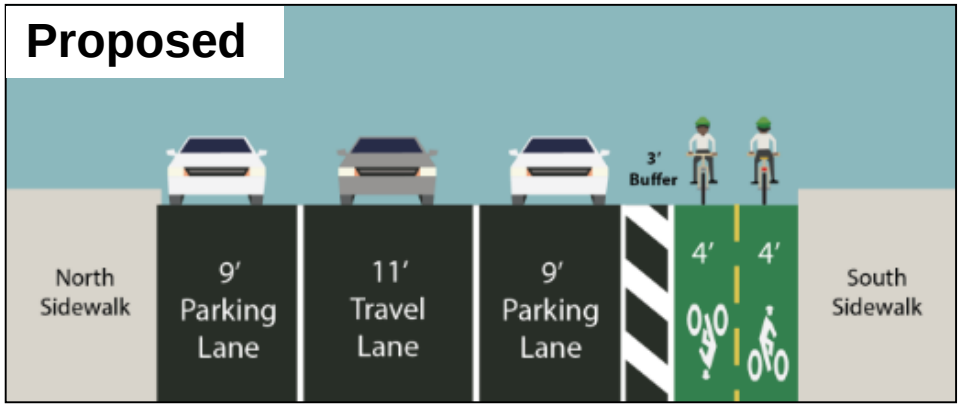


- Concrete barrier shifted to widen bike lane
- Eastbound bike lane will provide direct access to Prospect Park
- Moving lane continues to process westbound traffic

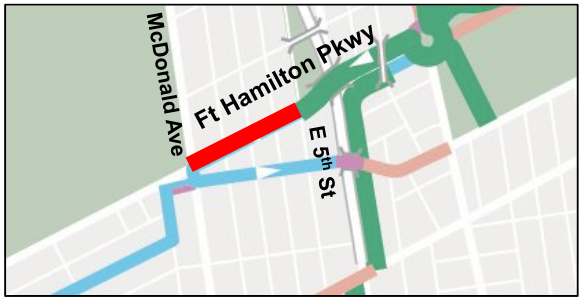


Proposed Design E 5th St – McDonald Ave



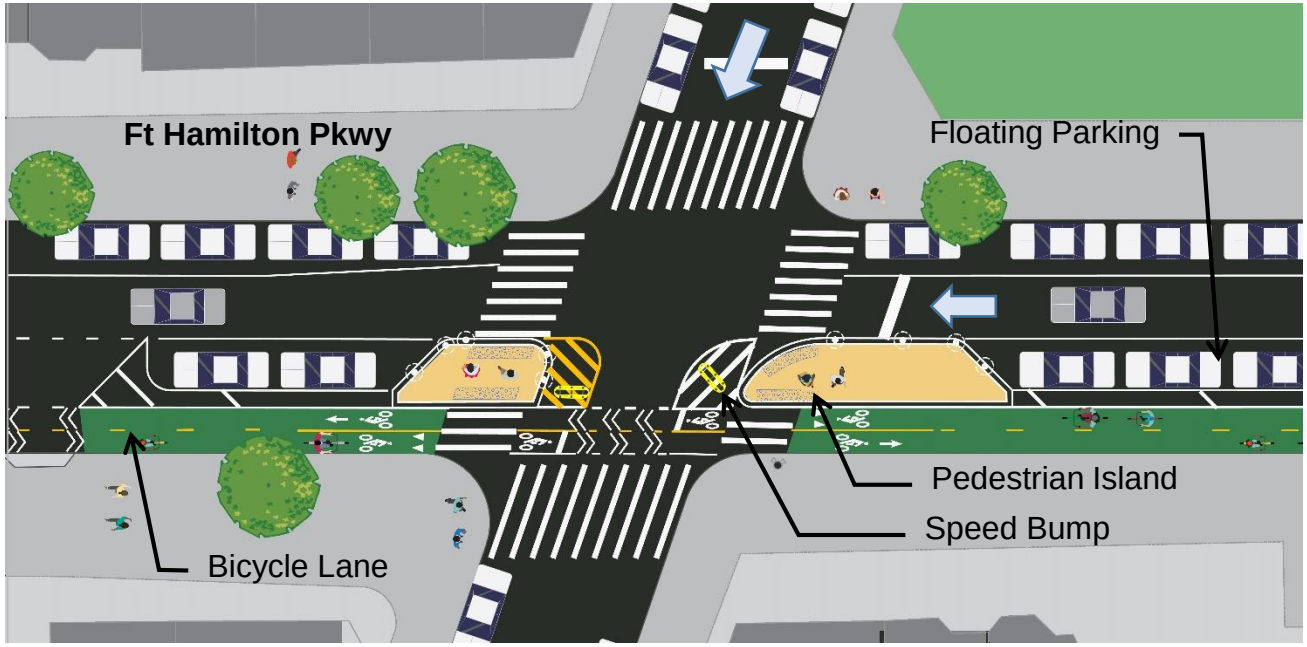


- Narrower roadway discourages off-peak speeding
- Parking lane discourages double parking and keeps bike lane clear of parked vehicles
- Reduces double parking in bike lane
- Shortens pedestrian crossing distances



Proposed Design Typical Intersection

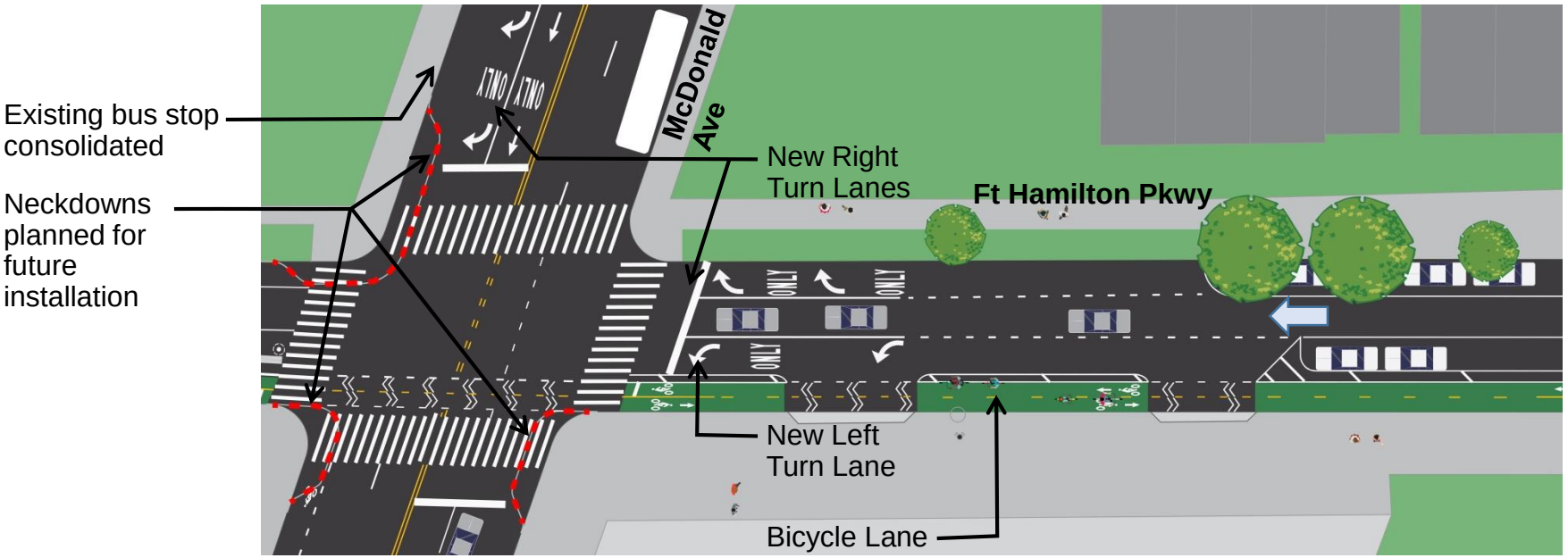
- Add pedestrian islands
- Reduce crossing distance from 40’ to 21’
- Slow left-turning vehicles
- Improve visibility of bike lane by daylighting intersection and re-orienting left-turning vehicles
- Minimize parking loss



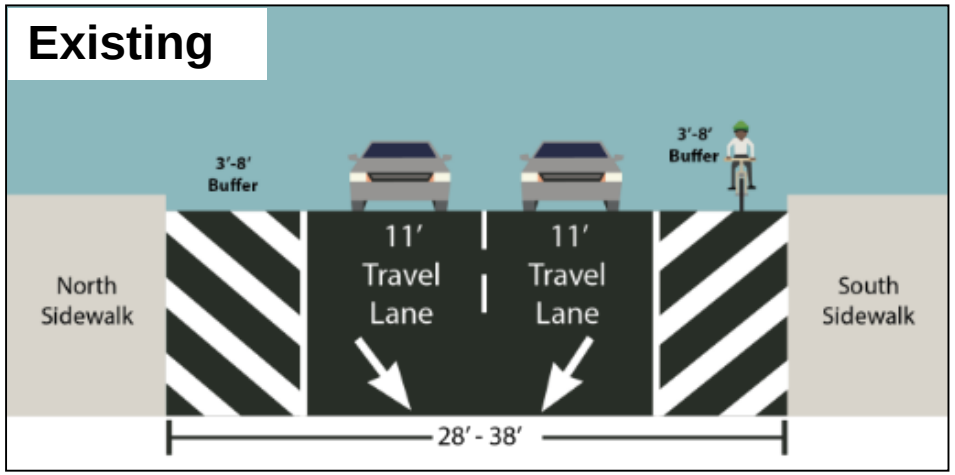
Typical intersection design

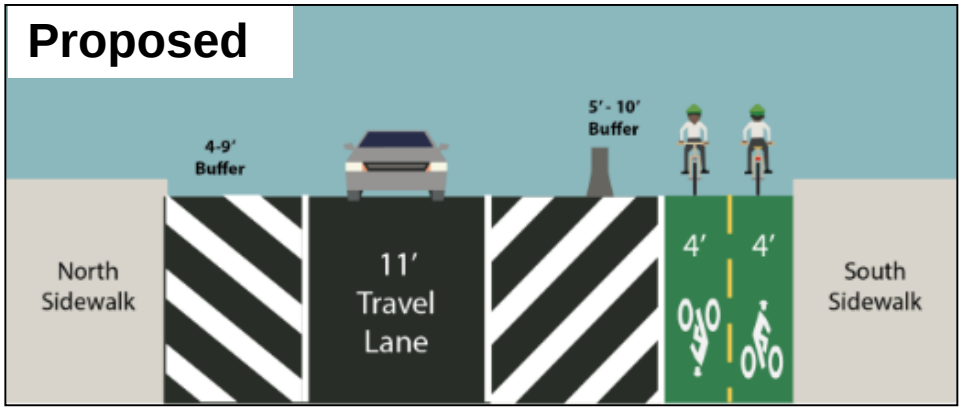
Proposed Design Ft Hamilton Pkwy at McDonald Ave

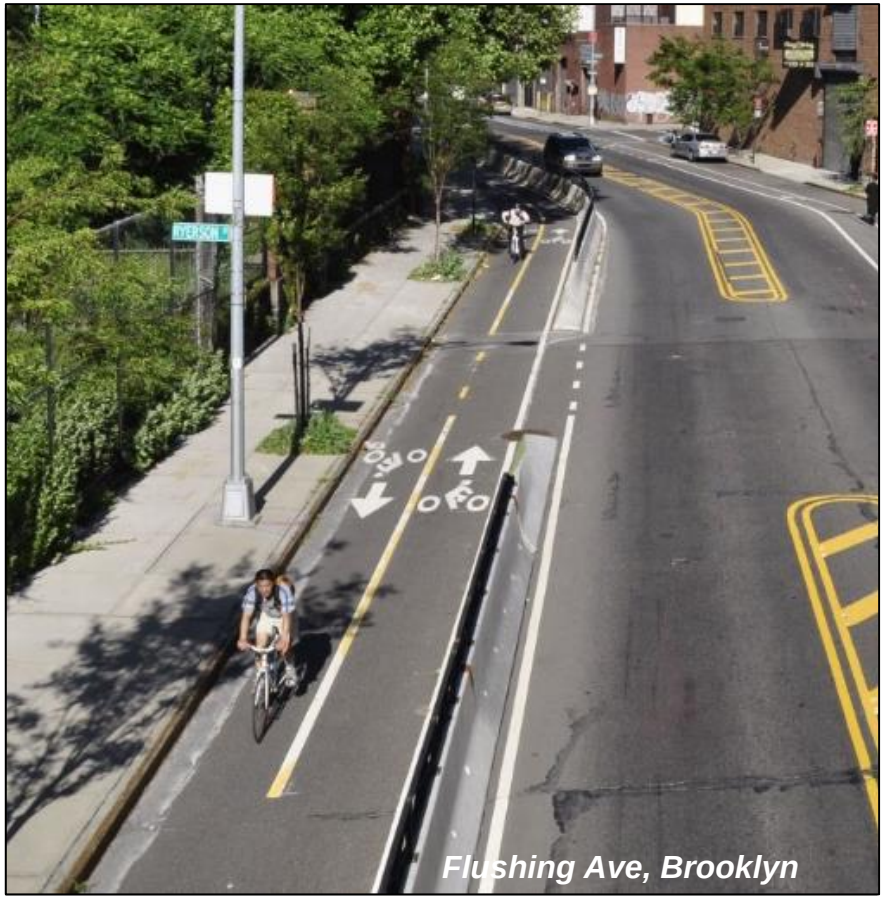
- 10 second LPI and WB left turn lane on Ft Hamilton Pkwy allows safe crossing for bikes and pedestrians
- SB right turn lane and protected turn on McDonald Ave reduces conflict between 360+ turning vehicles and pedestrians who get their own phase to cross Ft Hamilton Pkwy
- Banned NB left turn redirects vehicles to Caton Ave and provides time for SB right
- New neckdowns planned on northwest, southwest and southeast corners
- SB bus stop on the NW corner of McDonald Ave and Ft Hamilton Pkwy to be consolidated with bus stop on SW corner of McDonald Ave and Caton Ave



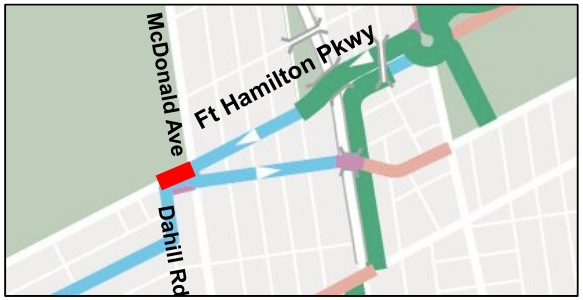
Proposed Design McDonald Ave – Dahill Rd





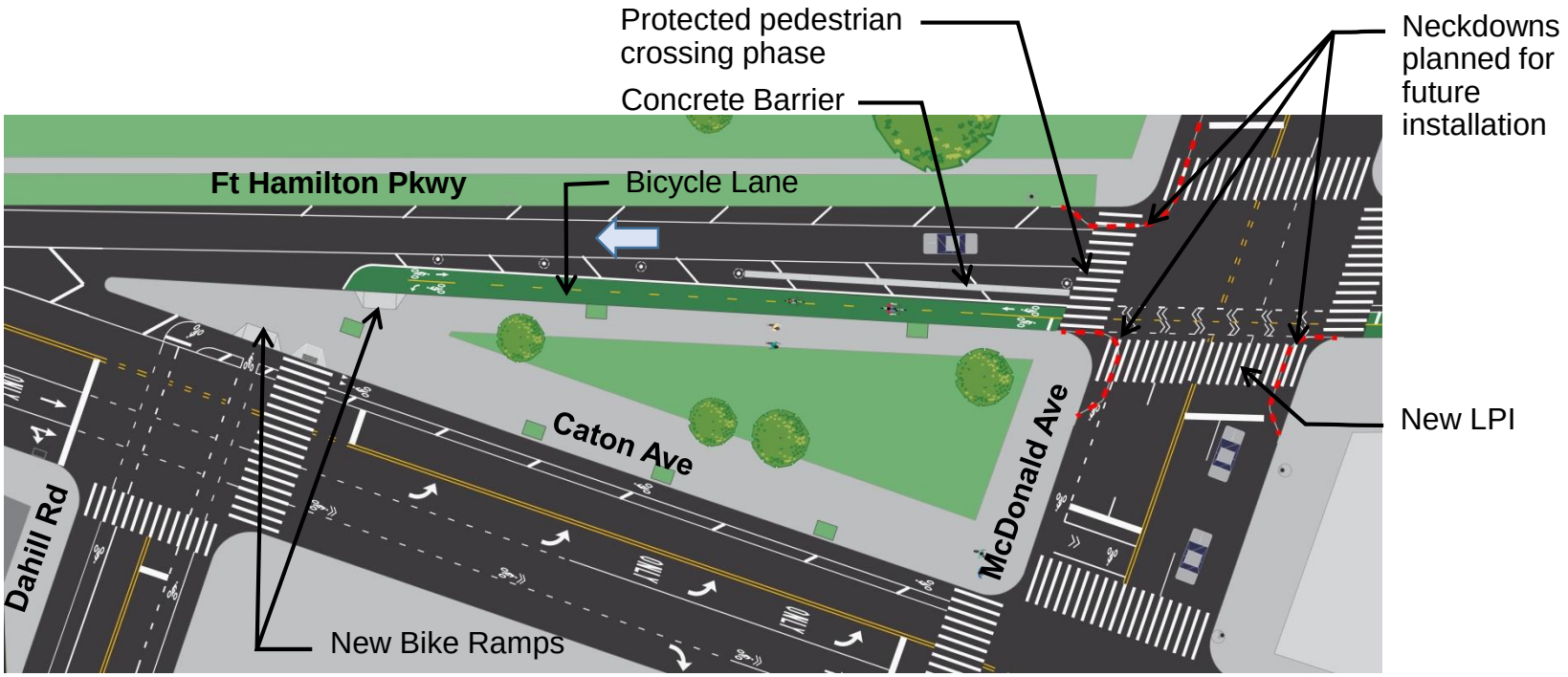


- Island cut-though connects Fort Hamilton Parkway to Dahill Rd
- Parking lane discourages double parking and keeps bike lane clear of parked vehicles
- Simplifies connection to Sunset Park

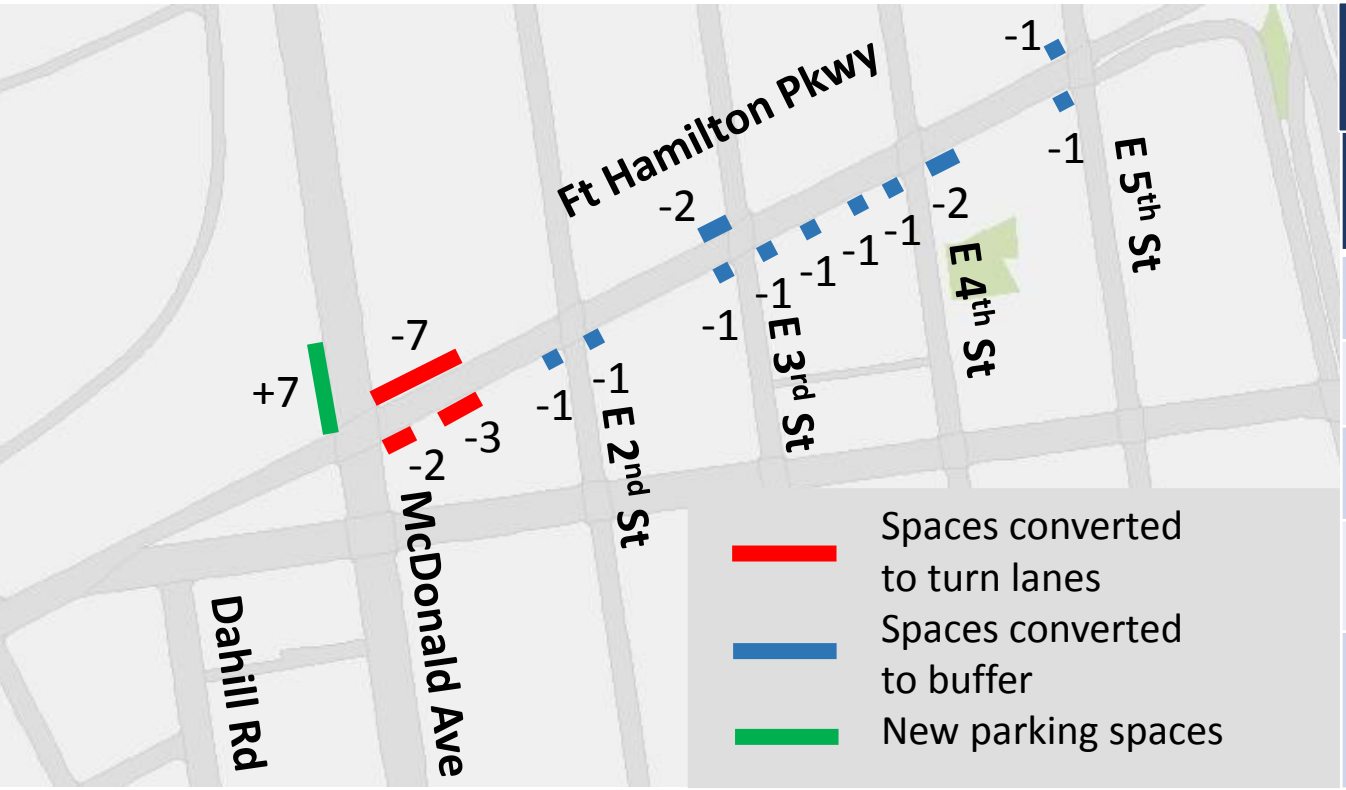


Proposed Design McDonald Ave to Dahill Rd

- Traffic volumes on Fort Hamilton Pkwy west of Dahill Rd are too high to accommodate lane removal and bike lane extension
- Install barrier-protected bike lane west of McDonald Ave
- Remove merge lane - unnecessary due to left turn lane
- Add new bike ramps on island between Dahill Rd and Fort Hamilton Pkwy



Proposed Design Parking



Fort Hamilton Parkway Parking Changes	
Street Block	**Approx. # of Spaces**
E 5th St – E 4th St	-4
E 4th St – E 3rd St	-4
E 3rd St – E 2nd St	-4
E 2nd St – McDonald Ave	-13
McDonald Ave, Greenwood Ave – Ft Hamilton Pkwy	+7

- Safety improvements require conversion of 25 spaces to “No Standing Anytime” between E 5th St and McDonald Ave
- Bus stop consolidation on McDonald Ave adds 7 spaces
- Net change is 18 spaces converted (out of ~71 spaces on Ft Hamilton Parkway)

Design

- Crosswalk that is raised to the same height of the curb – 3”-7”
- Similar to a speed hump, but with a flat top for the pedestrian crossing

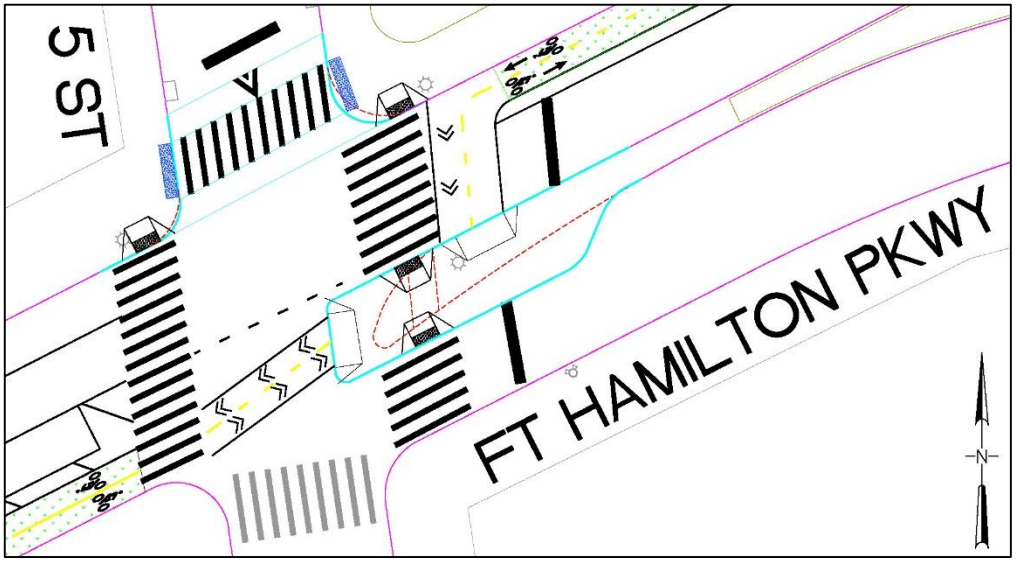
Location

- Typically locate raised crosswalks in areas with high numbers of children, seniors and/or people with disabilities
- DOT received community request for safety improvements along E 5 St
- Adjacent to:
  - PS 130 The Parkside School
  - Greenwood Playground
  - Immaculate Heart of Mary Church
  - Brooklyn Public Library – Windsor Terrace
- Connection to Ft Hamilton Pkwy F and G Subway Station

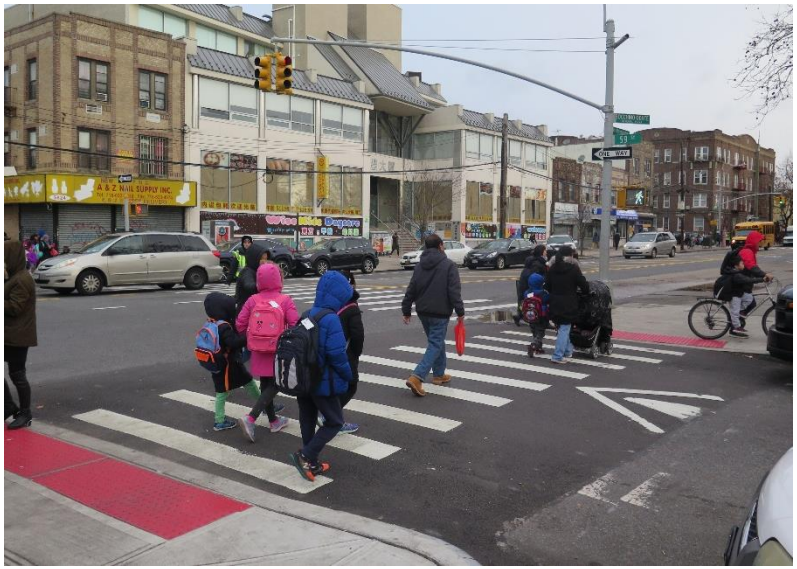
Proposed Raised Crosswalk Location at Ft Hamilton Pkwy & E 5 St

Benefits

- Reduce speeds – self enforcing speed control, like speed humps
- Improve pedestrian visibility, elevating the pedestrian to the height of the curb
- Encourage motorist to yield to pedestrians
- Increase accessibility – provide a level crossing for those with ambulatory disabilities and seniors



Proposed Raised Crosswalk Design



Raised Crosswalk Design at Ft Hamilton Pkwy & 59 St

Existing Crosswalk at Ft Hamilton Pkwy & E 5 St

Summary Project Benefits

- Increases pedestrian safety by shortening crossing distances, slowing turns, and adding protected crossing times at McDonald Ave
- Discourages speeding by narrowing roadway
- Creates a safer, more direct and comfortable experience for cyclists
- Discourages double parking through redesign and new regulations
- Simplifies the connection to Sunset Park
- Maintains traffic capacity