Hillside Avenue Safety Enhancements

Presentation to Queens Community Board 13 Transportation Committee

September 2023
Hillside Avenue, 241st St to Langdale St

Presentation Overview

- Background
- Existing Conditions
- Project Proposal
- Next Steps

Pedestrians cross Hillside Avenue
Background
Background

Planning Framework

• Freight Mobility Unit is committed to strategies outlined in Delivering New York: A Smart Truck Management Plan for NYC
  • Safety: improve the safety of truck travel at intersections and along corridors
  • Sustainability: foster the sustainable and environmentally responsible movement of goods
  • Freight Efficiency: Improve the efficiency of freight movement to, from, and within NYC
  • Partnerships & Knowledge: Grow public and private partnerships to increase knowledge about freight

• The Freight unit aims to address 1) truck safety priority corridors - streets where there is a concentration of truck involved crashes with vulnerable road users (pedestrians and cyclists) and 2) improve safety on existing truck routes for all road users

• In response to several local laws, DOT is actively working to continue to increase the number of loading zones citywide and undertake efforts to consolidate deliveries
Freight Mobility Unit Overview

Freight Toolkit

What We Do: Reduce the impacts of trucks on communities and infrastructure while improving the efficiency of truck deliveries

Manage Demand
- Off-Hour Deliveries
- Truck Safety Education, Outreach, & Partnerships

Enhance safety, network connectivity & curb access
- Expand Loading Zones
- Truck Route Enhancements
- Microdistribution Hubs

Promote sustainable last-mile delivery ecosystem
- Street Improvement Projects
- Commercial Cargo Bike Program
- Truck Electrification & Decarbonization
- Blue Highways

Outreach, & Partnerships
Truck Safety and Compliance Enforcement Coordination
Hillside Avenue Corridor

Floral Park and Bellerose Sections

- Hillside Avenue features a variety of land uses between Langdale Street and 241st Street including residential, commercial, and public institutions.

- Hillside Avenue is a major through truck route that connects New York City to Long Island.

- The Q1, Q36, and Q43 bus routes connect Hillside Avenue to other bus routes and MTA/LIRR trains.

- During peak hours, more than 3000+ vehicles may travel via Hillside Avenue (many seek to access the Cross Island Parkway); approximately 10% of vehicles on Hillside Avenue are trucks during the AM peak (7:45-8:45AM) and 6% during the PM peak (4:30-5:30 PM).
Project Motivation

Corridor Limits

- Vision Zero corridor with 17 individuals killed or severely injured between 2016 and 2020
- Corridor features many deficiencies regarding pedestrian safety
- The corridor is marked by speeding, a lack of truck loading zones, long crossing distances, faded markings, lack of vehicles yielding to pedestrians, and complex geometries at some intersections
- DOT recently completed improvements further west on Hillside Avenue (Hollis Court Boulevard to 212th Street)
- Recently, rehabilitation work (capital work) for the Cross Island Parkway overpass commenced
Crash History Overview

Hillside Avenue, 241st Street to Langdale Street

From 2016-2020, there were 272 injuries along the corridor resulting from crashes.
Crash History

2016-2020 (5 Year Summary)

- 17 road users (4 pedestrians) have been killed or severely injured (2016-2020)

- 35% of pedestrian related injuries are associated with pedestrians crossing with the signal in their favor

- 23% of crashes involve right-angle crashes

- Severe injury crashes are concentrated around the Cross Island Parkway, Little Neck Parkway, and close to the City limits (268th Street and Langdale Street)

### Injury Summary, 2016-2020 (5 Years)

<table>
<thead>
<tr>
<th>Mode</th>
<th>Total Injuries</th>
<th>Severe Injuries</th>
<th>Fatalities</th>
<th>KSI</th>
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<tbody>
<tr>
<td>Pedestrian</td>
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<td>4</td>
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<td>4</td>
</tr>
<tr>
<td>Bicyclist</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Motor Vehicle Occupant</td>
<td>232</td>
<td>11</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>Other Motorized</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Total</td>
<td>272</td>
<td>15</td>
<td>2</td>
<td>17</td>
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</table>

2016-2020 crash data for Hillside Avenue, 241st Street to Langdale Street

Pedestrians at 251st Street and Hillside Avenue
Engaging Local Businesses

Merchant Survey Results

- Surveys completed in February and March of 2022
- **Incoming Deliveries**: Businesses typically receive deliveries between 9am-3pm (Peak: Monday – Wednesday)
  - **Outgoing Deliveries**: Nearly 40% of outgoing deliveries are made by 3rd parties (i.e. Uber Eats, DoorDash, etc.) via personal vehicles (commonly double park)
  - **Parking/Loading**:
    - Most delivery vehicles park in metered parking spaces, in front of hydrants or in bus stops
    - Larger businesses (i.e. supermarkets) that receive multiple deliveries from larger trucks often use metered parking spaces

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**Hillside Avenue Average Daily (weekday) Deliveries**

<table>
<thead>
<tr>
<th>Time</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
<th>Sat</th>
<th>Sun</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 AM - 7 AM</td>
<td>5%</td>
<td>2%</td>
<td>5%</td>
<td>3%</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>7 AM - 9 AM</td>
<td>5%</td>
<td>2%</td>
<td>5%</td>
<td>3%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 AM - 11 AM</td>
<td>17%</td>
<td>10%</td>
<td>16%</td>
<td>17%</td>
<td>12%</td>
<td>5%</td>
<td>2%</td>
</tr>
<tr>
<td>11 AM - 1 PM</td>
<td>19%</td>
<td>16%</td>
<td>21%</td>
<td>21%</td>
<td>21%</td>
<td>5%</td>
<td>2%</td>
</tr>
<tr>
<td>1 PM - 3 PM</td>
<td>10%</td>
<td>12%</td>
<td>17%</td>
<td>16%</td>
<td>9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 PM - 5 PM</td>
<td>10%</td>
<td>9%</td>
<td>10%</td>
<td>10%</td>
<td>12%</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>5 PM - 7 PM</td>
<td>2%</td>
<td>2%</td>
<td>3%</td>
<td>2%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 PM - 11 PM</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>11 PM - 5 AM</td>
<td></td>
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</tr>
</tbody>
</table>

**% of businesses reporting deliveries**

- < 10%
- 10%-20%
- > 20%

Data based on 58/108 businesses surveyed who answered ‘yes’ to receiving deliveries; blank cells contain no data

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Community Outreach

Merchant Survey Results

- Multiple businesses stated delivery vehicles either double park, park at a fire hydrant, or park in bus stops to make their deliveries while customers often double park for quick pickups.

- Many participants without adjacent parking available stated they have no control over where delivery vehicles park.

- Merchants have more control over delivery times when they bring in their own products due to the availability of parking and/or off-street unloading space behind many buildings.

- Speeding, double parking, and lack of commercial parking were all commonly heard issues.

NYC DOT’s street ambassador team conducted merchant surveys at multiple businesses on Hillside Avenue.
Existing Conditions
Existing Conditions

Hillside Avenue Corridor

Double parking

Geometry that encourages speeding

Long crossings for pedestrians

High volume of deliveries
Existing Conditions

Hillside Avenue Corridor

- Illegal turns
- Blocked bus stops
- Missing crosswalks
- Geometric constraints
Hillside Avenue Avenue – Existing Conditions

241st Street to Cross Island Parkway Off-Ramp

- Illegal turns out of gas station
- Illegal southbound left turns
- Long ped crossing and slip lane geometry encourages speeding
- Faded lane markings
- Missing crosswalk

← 241st Street →
← Hillside Avenue →
← Cross Island Pkwy Off-Ramp →
→ 84th Road →
Hillside Avenue – Existing Conditions

251st Street to Little Neck Parkway

- High volume of deliveries
- High volume of pedestrians crossing
- Frequently blocked bus stop
- Faded lane markings
- Substandard pedestrian refuge spaces
- Frequent double parking
- Long pedestrian crossings
Hillside Avenue – Existing Conditions

256th Street to 259th Street

- Frequent mid-block illegal U-turns
- High volume of pedestrians crossing
- Frequently blocked bus stop
- Frequent double parking
- New construction in progress
- High pedestrian volume crossing
- Frequent deliveries
Hillside Avenue – Existing Conditions

260th Street to 263rd Street

- High volume pedestrian crossing
- Frequently deliveries
- Faded lane markings
- Long pedestrian crossing
- Gas station curb cuts
- Frequent double parking

Image: Aerial view of Hillside Avenue with annotations pointing out existing conditions such as high volume pedestrian crossings, frequent deliveries, faded lane markings, long pedestrian crossings, gas station curb cuts, and frequent double parking.
Hillside Avenue – Existing Conditions

267th Street to Langdale Street

- Constrained bus turnaround movements
- Complex intersection geometry
- Illegal right turns on red
- Complex intersection geometry; long pedestrian crossings
- East Williston Avenue
- Hillside Avenue
- 267th Street
- Langdale Street
- 268th Street
Project Proposal
Proposed Safety Improvements

Hillside Avenue 241st Street to 242nd Street

- New crosswalk
- Prevention of illegal left turns out of existing gas station
- Potential removal of overnight parking restrictions
- Explore westbound left turn signal
Proposed Safety Improvements

Hillside Avenue, 243rd Street to Cross Island Parkway

- Shorter pedestrian crossing
- Prevention of illegal left turn from 243rd Street
- Normalize turns
- Add missing crosswalk

*Off-ramp markings refurbishment; additional options exist*
*Additional options may require additional funding/coordination*
Proposed Safety Improvements

Hillside Avenue and 251st Street

- Bus stop relocation (move in front of Bellerose Public Library)
- Provide pedestrian refuge island
- Left turn restriction
- Add trucking loading zone
Proposed Safety Improvements

Hillside Avenue and Little Neck Parkway

- Improve accessibility
- Provide pedestrian refuge space
- Slow/calm turning movements
Proposed Safety Improvements

Hillside Avenue and 256th, 261st, and 264th Streets – Pedestrian Islands at Westbound Approaches

Provide pedestrian refuge island

Explore adding trucking loading zones (where appropriate)

Left turn restriction

Existing condition at Hillside Avenue and 256th Street
Proposed Safety Improvements

Hillside Avenue and 259th and 266th Streets – Pedestrian Islands at Eastbound Approaches

- Left turn restriction
- Provide pedestrian refuge island
Proposed Safety Improvements

Hillside Avenue and 263rd Street

- Shorten pedestrian crossing
- Slow left turns
Proposed Safety Improvements

Hillside Avenue, 267th Street to 268th Street and East Williston Avenue, 267th Street to 268th Street

- Bus stop relocation
- One-way eastbound conversion
- One-way southbound conversion
- Normalize a complex intersection and provide additional pedestrian space
Proposed Safety Improvements

Hillside Avenue and Langdale Street

Existing condition leaves little room between opposing left turns from Langdale Street/Cherry Lane to Hillside Avenue
Project Benefits Summary

Improving Corridor Safety

- Shorten crossing distances for pedestrians
- Provide pedestrian refuge space
- Calm/slow turns
- Improve curb management
- Introduce conflict reducing designs
Next Steps
Proposed Implementation Strategy

Proposed Project Phasing

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**Phase 1: 251st St to 259th St**: pedestrian refuge islands (x3), concrete median tip extensions, bus stop relocation, truck loading zones, markings refurbishment

**Phase 2: 260th St to Langdale St**: pedestrian refuge islands (x3), painted curb extensions, truck loading zones, bus stop relocation, one-way conversions, slip lane closure, intersection alignment improvements, markings refurbishment

**Phase 3: 241st St to 250th St**: crosswalk additions, turn restrictions, painted curb extensions, turn calming, signal timing changes*, markings refurbishment

*corridor wide improvement
Next Steps

Timeline

**Spring 2024:** Planned implementation to start with Phase 1

**Summer 2024-Fall 2025:** Continuation of implementation through a phased approach

### Safety
- Promote safety for all road users via street design through a phased approach

### Communication
- Follow-up and address issues and/or concerns identified by local stakeholders

### Continued Monitoring
- Continue to monitor conditions on Hillside Avenue as implementation takes place

Hillside Avenue and Little Neck Parkway
Thank You!

Questions?
Appendix
**Existing Conditions – Sample Intersection Counts**

**Hillside Avenue and Commonwealth Boulevard**

- Volumes are highest within the project area during the PM peak (4:30 PM-5:30 PM) with over 3000 vehicles passing through a given intersection (during a one-hour period).
- Around 7% of all vehicles passing through the intersection during peak periods are trucks.
- A significant proportion of automobiles passing through the intersection are accessing the Cross Island Parkway (30%) after this intersection.
Left Turns Bans – Counts and Alternative Routes

Hillside Avenue Pedestrian Refuge Islands

At intersections where concrete pedestrian refuge islands are to be installed, constructability checks have been completed for all intersections (all proposed locations are feasible); alternative intersections may be used for left turns

Hillside Av and 251st St
Proposed ped island in WBL turn bay feasible – restrict WBL
- AM Peak: 7 (+3 WBL at 252nd St, +4 WBL at 250th St)
- PM Peak: 20 (+10 WBL at 252nd St, +10 WBL at 250th St)

Hillside Av and 256th St
Proposed ped island in WBL turn bay feasible – restrict WBL
- AM Peak 7 (+7 WBL at 257th St)
- PM Peak: 14 (+14 WBL at 257th St)

Hillside Av and 259th St
Proposed ped island in EBL turn bay is feasible – restrict EBL
- AM Peak 5 (+2 EBL at 258th St, +3 EBL at 260th St)
- PM Peak: 9 (+4 EBL at 258th St, +5 EBL at 260th St)
Left Turns Bans – Counts and Alternative Routes

Hillside Avenue Pedestrian Refuge Islands

At intersections where concrete pedestrian refuge islands are to be installed, constructability checks have been completed for all intersections (all proposed locations are feasible); alternative intersections may be used for left turns.

Hillside Av and 261st St
Proposed ped island in WBL turn bay is feasible – restrict WBL
- AM Peak: 4 (+2 WBL at 262nd St, +2 WBL at 260th St)
- PM Peak: 7 (+3 WBL at 262nd St, +4 WBL at 260th St)

Hillside Av and 264th St
Proposed ped island in WBL turn bay is feasible – restrict WBL
- AM Peak: 0
- PM Peak: 19 (+10 WBL at 263rd St, +9 WBL at 265th St)

Hillside Av and 266th St
Proposed ped island for EBL turn bay is feasible – restrict EBL
- AM Peak: 7 (+3 EBL at 265th St, +4 EBL at 267th St)
- PM Peak: 6 (+3 EBL at 265th St, +3, EBL at 267th St)