

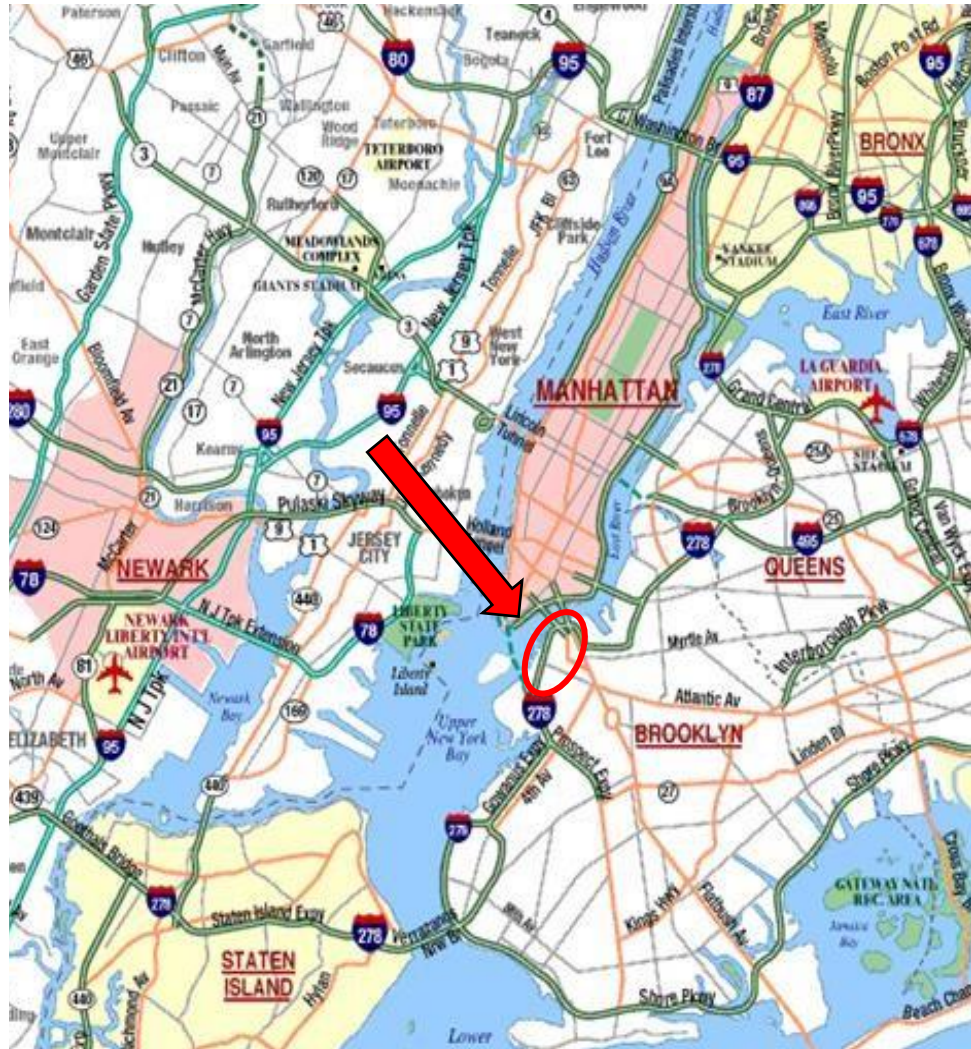
2023-2024 Interim Repairs



Agenda

- **Introductions**
- **BQE 2023-24 Interim Repair Construction Project Overview**
- **Construction Details & Mitigations**
- **Traffic Mitigations**
- **Weekend Closures/Detours**
- **Discussion/Q&A**

BQE – Project Area

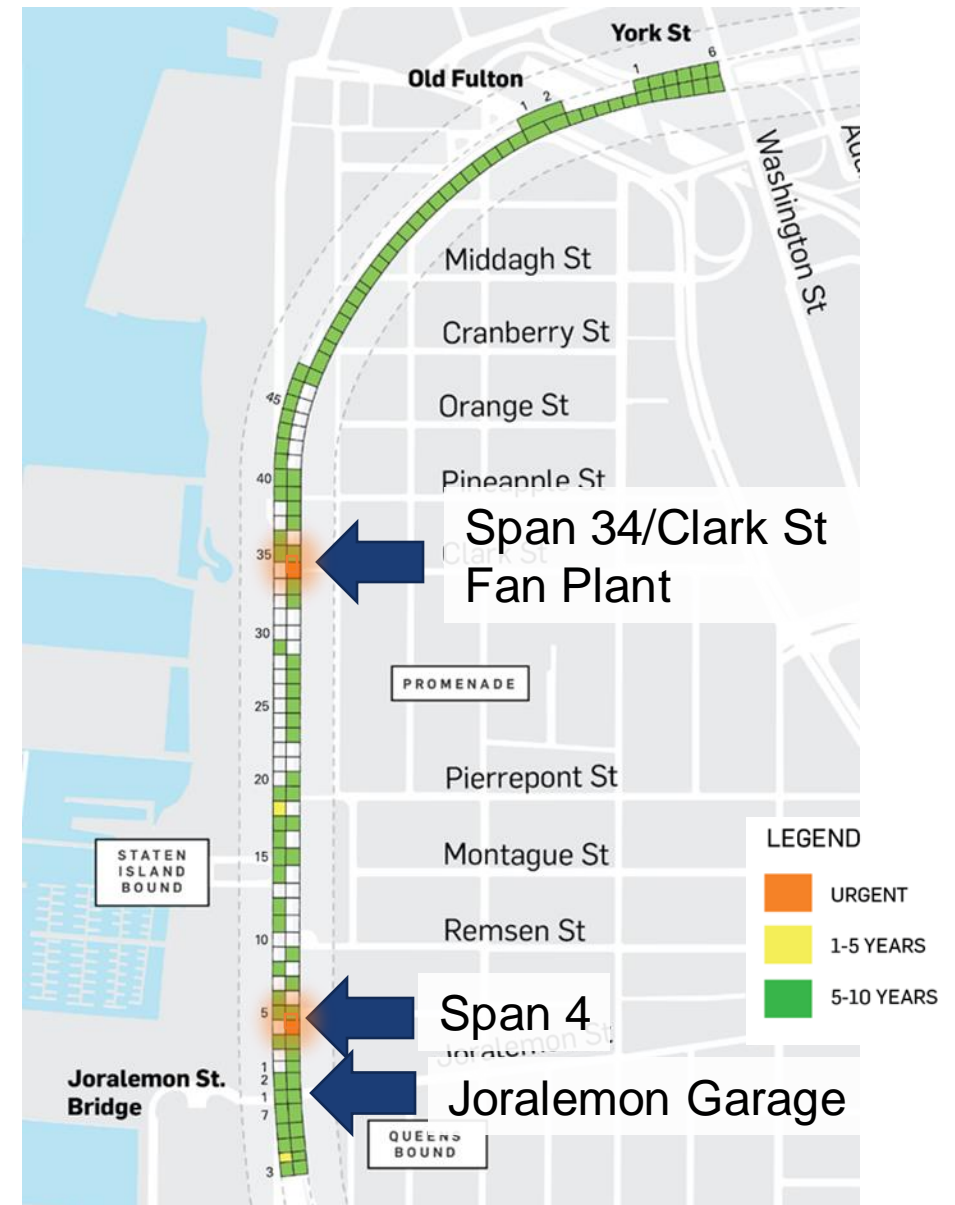


BQE Project Overview

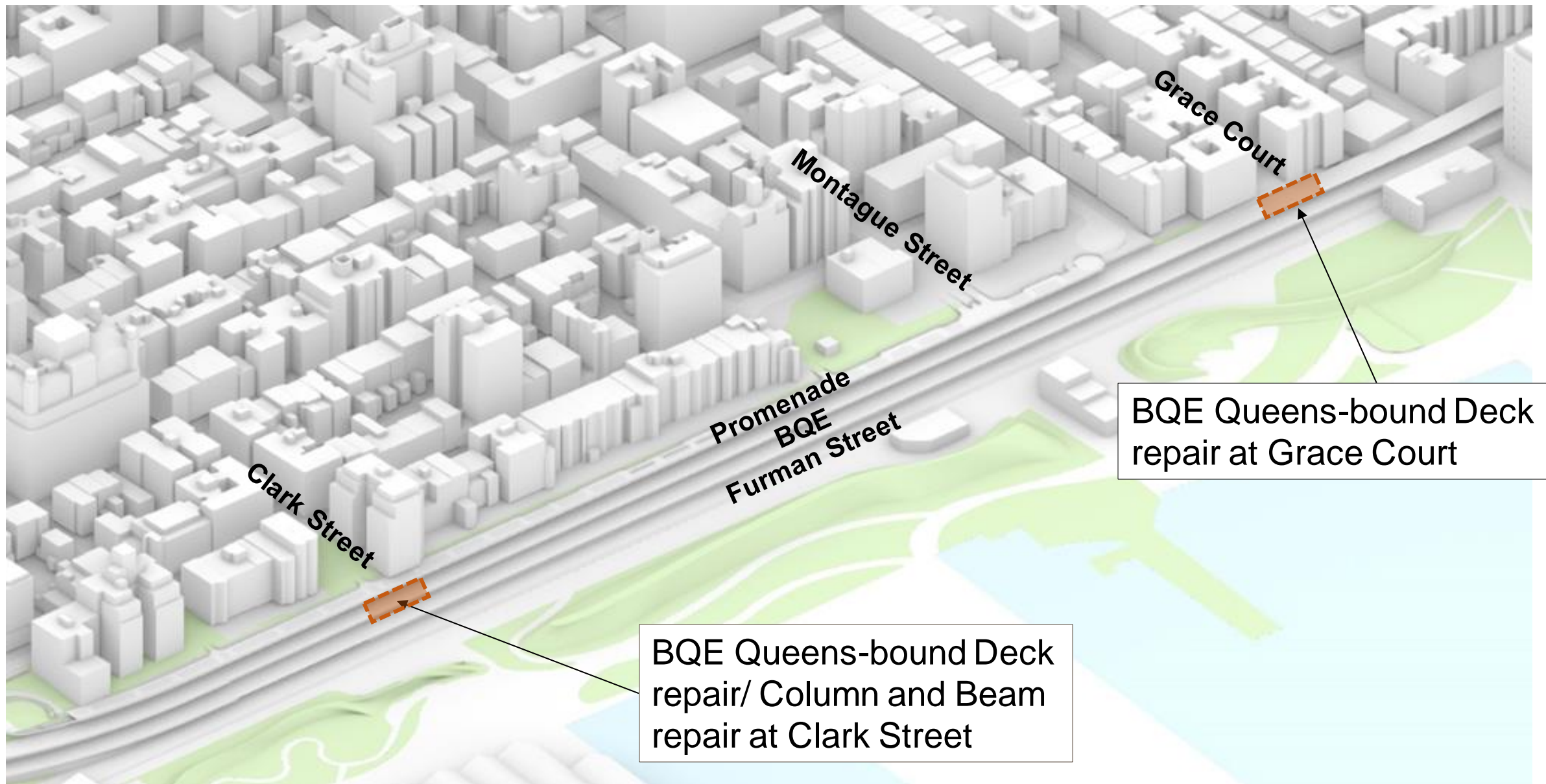
- **Safety is our number one priority.**
- NYC DOT, NYSDOT, and outside engineering partners (C2Smart) are closely tracking the city-owned structure to ensure we stay ahead of potential safety issues.
 - **In-Person Inspections by DOT Engineers.** Quarterly visual inspections detect any localized cracking, concrete spalling, steel corrosion, and other visible flags
 - **Constant Monitoring via Sensors.** Sensors and specialized instruments monitor changes in global stiffness, concrete cracking, and vibrations
 - **Truck Weight Monitoring.** Weigh-In-Motion technology provides real time measurement of truck loads. Automated enforcement starting by 2023
 - **Analysis and Modeling:** DOT and outside engineering partners (C2Smart) are using data from monitoring to assess structure's current condition and to model its future condition

BQE Project Overview

- **Components require near term repair to ensure safety & continued lifespan of the structure**
- **Key locations for repairs**
 - Span 34 (Clark Street)/Clark Street Fan Plant
 - Span 4 (Grace Court)
 - Joralemon Street Garage

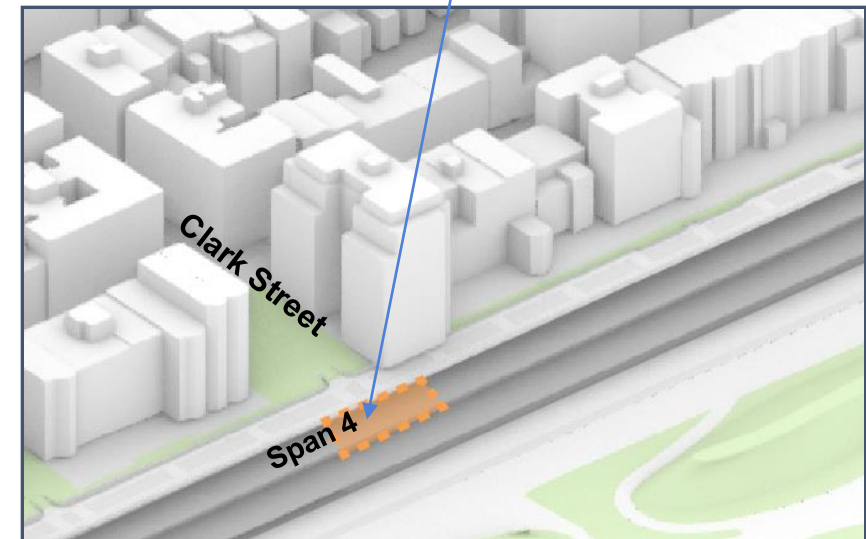
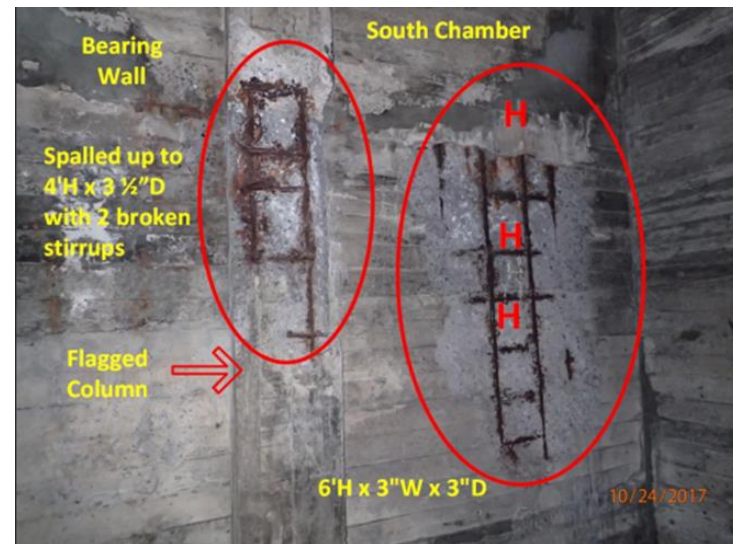


BQE – Interim Repair Area Context



Clark Street Fan Plant

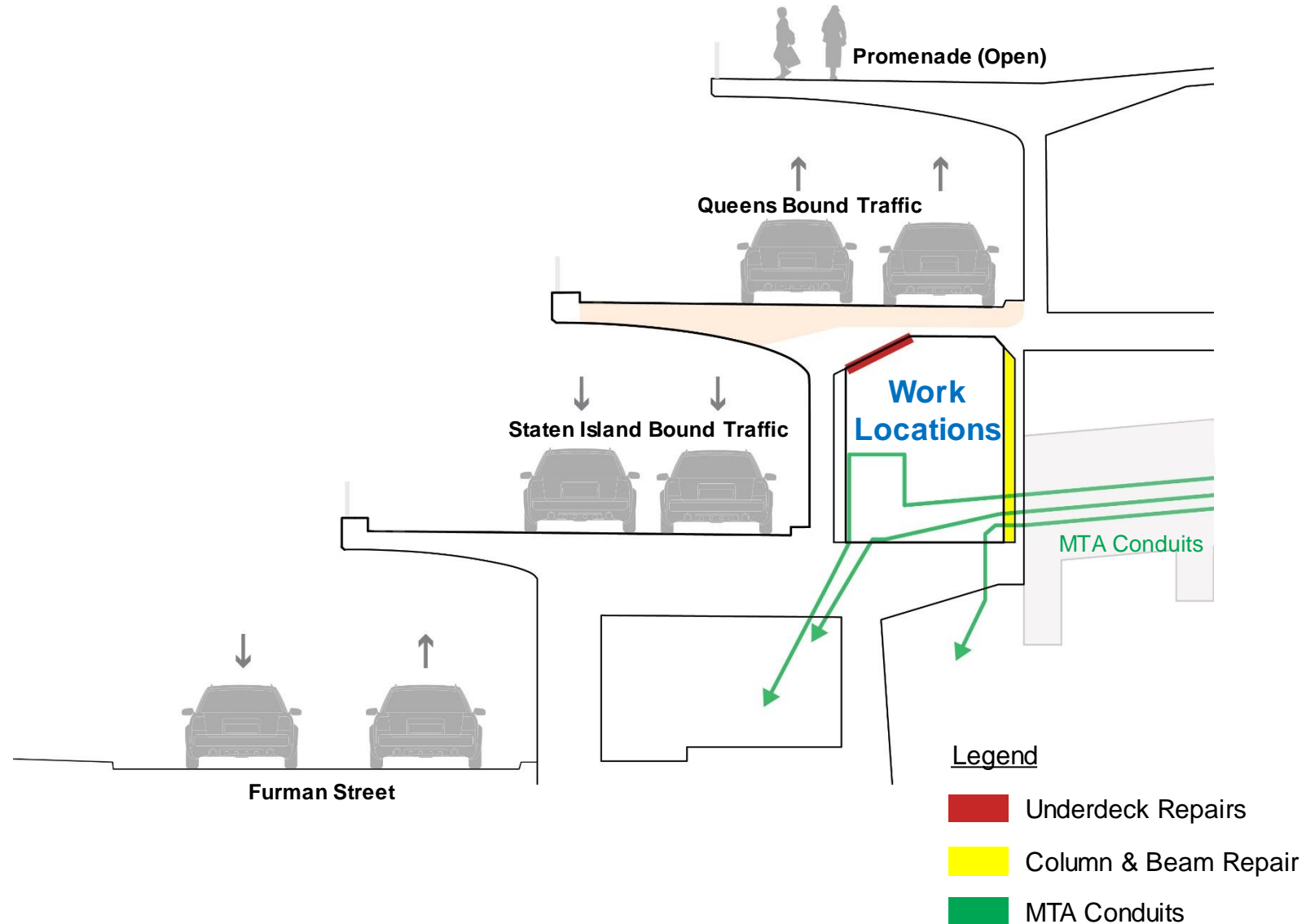
- Structural repair inside the chamber that houses the fan plant – requires MTA coordination
- Work is concurrent with BQE closures



Queens Bound Interim Repairs at Clark Street

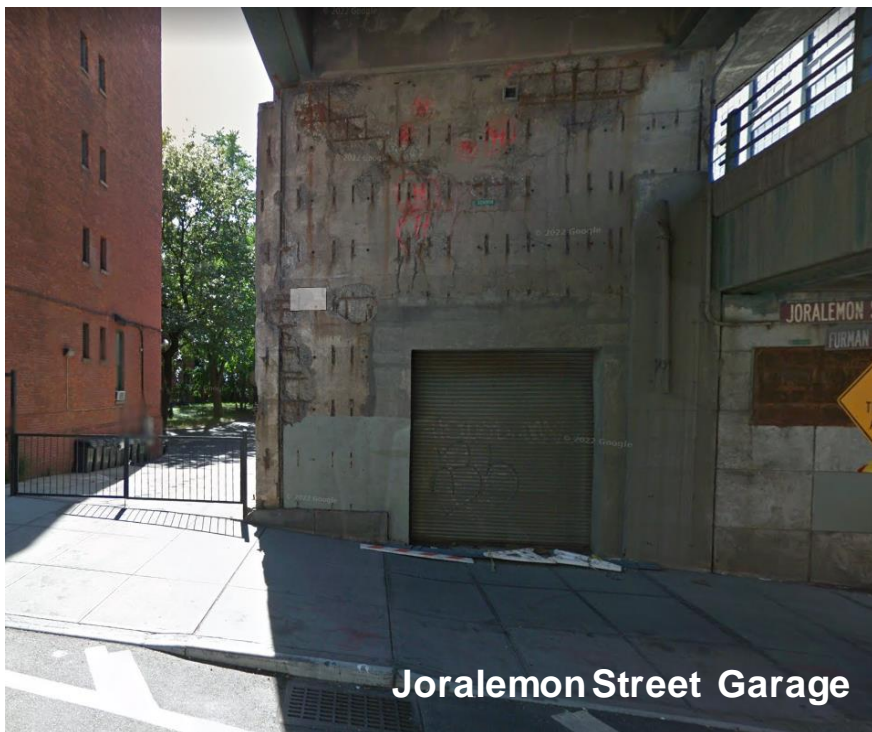


Column & beam repair



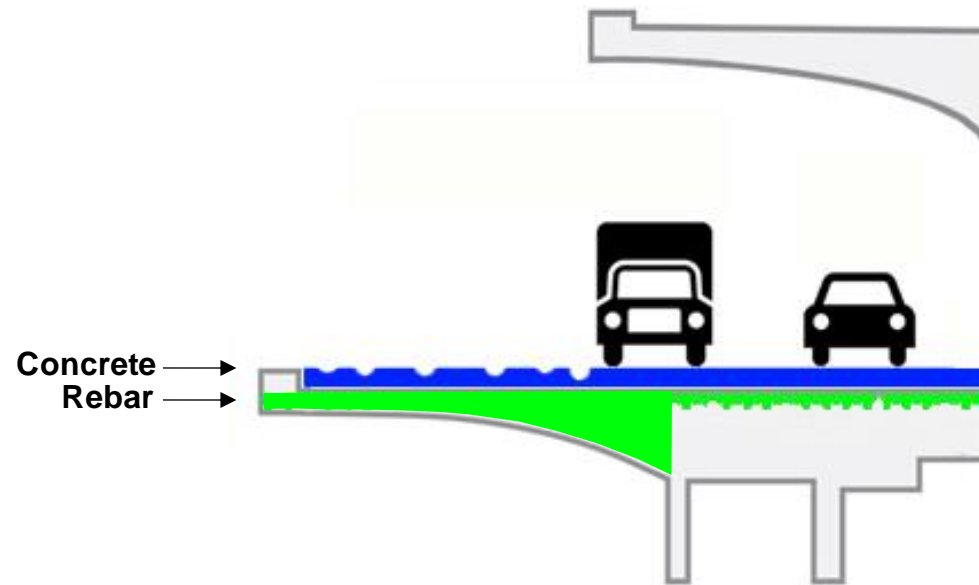
Joralemon Street Garage

- Structural repair inside the chamber that houses the garage
- Work can happen without BQE closures
- Crews can access work area via local street
- Work will primarily occur during the day, inside the garage



BQE Repair Objectives

Current Condition

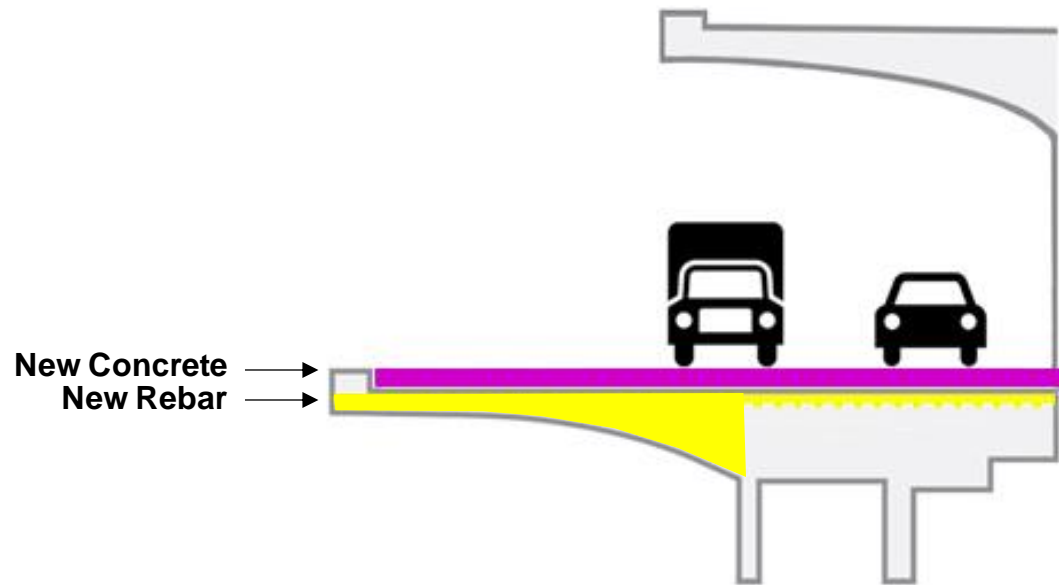


Remove deteriorated concrete and rebar

Legend

- Existing Concrete
- Existing Rebar

Required Repairs



Repair concrete and rebar

Legend

- Concrete Repair
- Rebar Repair

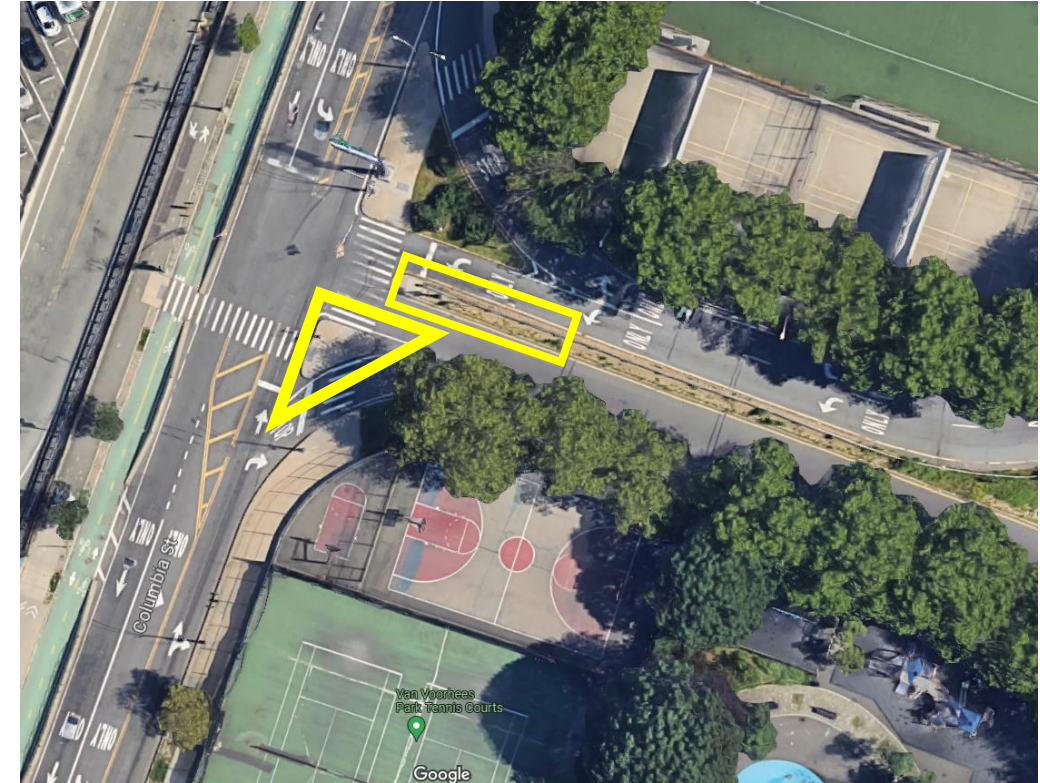
Construction Details: Preliminary Work (Late June/Early July)

Work:

- Median between ramps at Columbia St adjusted to allow for traffic changes during 1st weekend shutdown
- This requires demolition of portion of median/curbs with new curb line installation near Columbia St

Traffic management:

- Up to 10 nights of Staten Island-bound on-ramp closure, restriction of left turns from Atlantic Ave off-ramp to Columbia St
- Up to 10-day closure of 3 crosswalks and the SE sidewalk along Van Voorhees Park (from Congress St to entrance & exit ramps) - signage will be posted to alert sidewalk users
- Exit ramp remains open for Columbia St north-bound traffic
- No change to lane/ramp configurations except during first weekend shutdown



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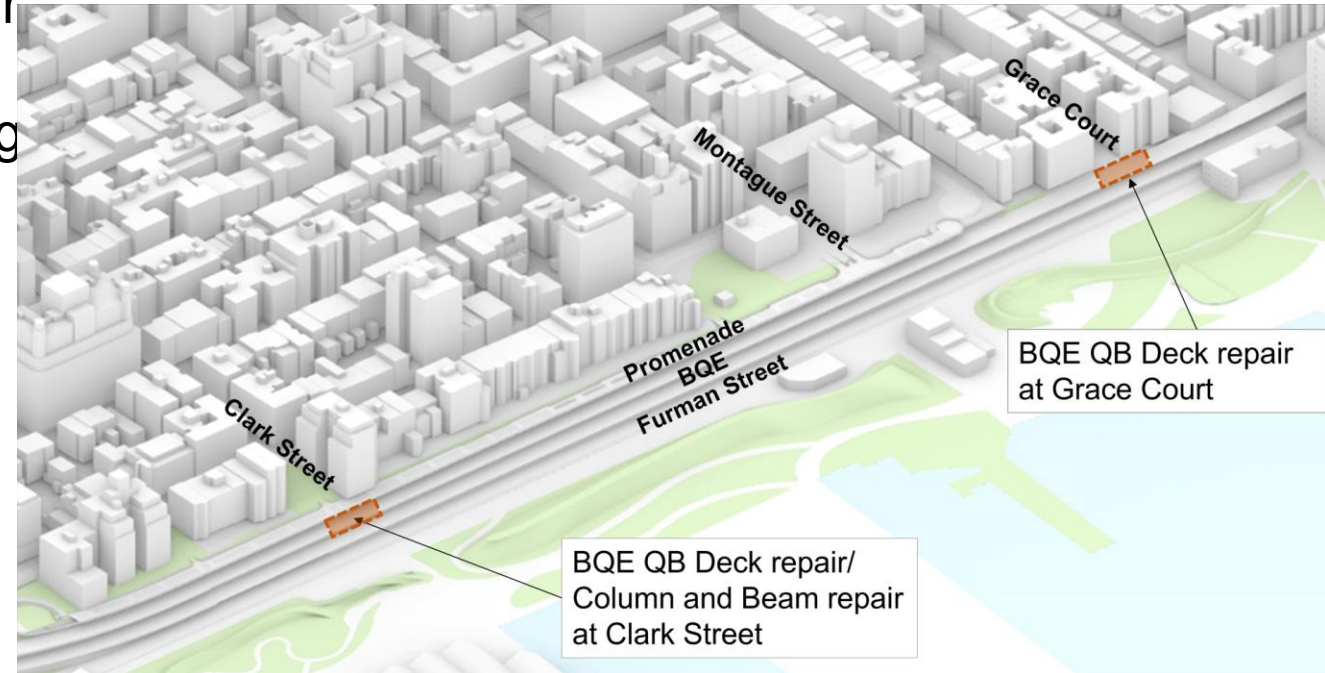
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Construction Details: Prep Work (Begins Mid-July)

- Work on Queens-bound deck of triple cantilever at both locations concurrently
- Includes removing asphalt & concrete, installing plates, and repeating to prep for the weekend closure
- Effects may include:
 - Noise and dust from saw cutting & jackhammering
 - Backup vehicle sounds
 - Additional lights
- All work occurs overnight
 - Weekday: 1:00am-5:00am
 - Weekend: 2:00am-7:00am
- Minimal staging – crews pack up at the conclusion of overnight work



In order to manage lane shifts safely during the overnight work, roadway striping will be modified to 3 lanes with only 2 lanes open to traffic.

Construction Details: Weekend Closures (Dates TBA)

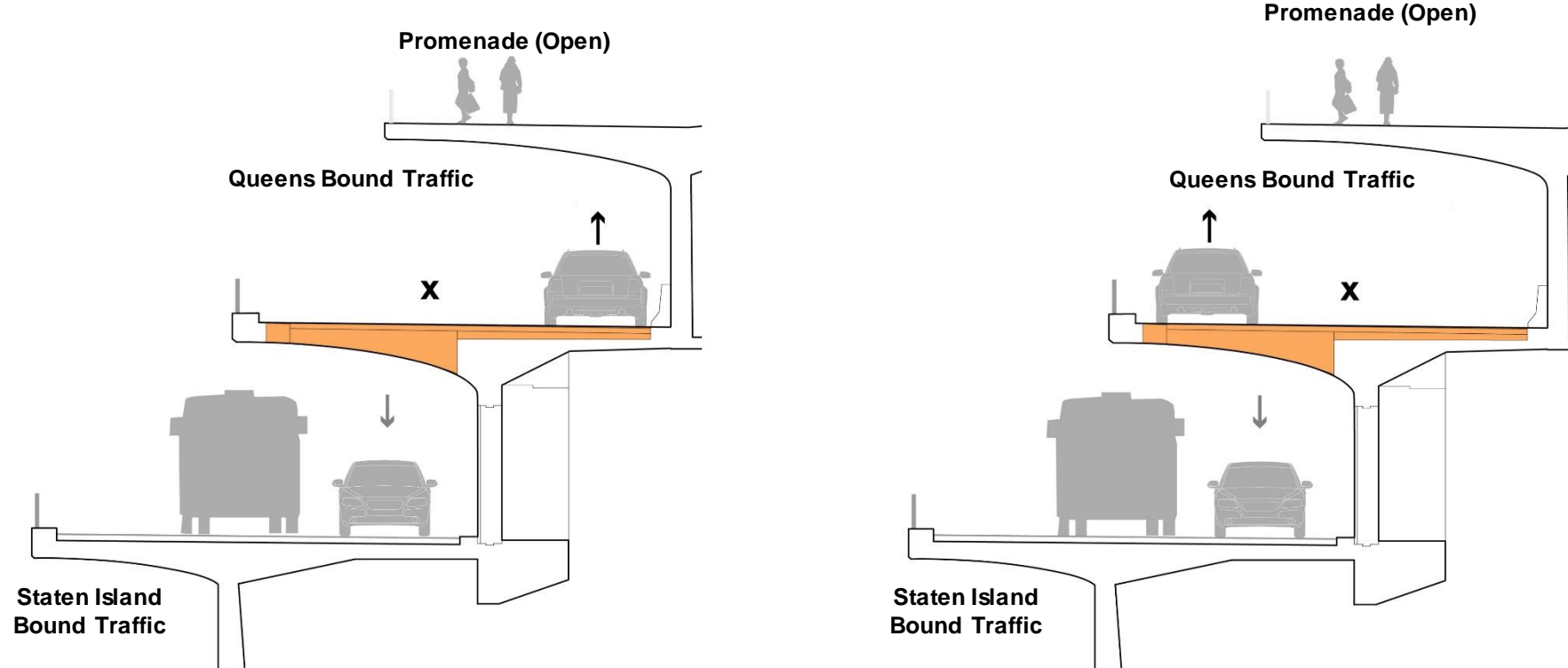
- New concrete placed with reinforcing steel bars
- Observable work is primarily limited to pouring concrete
- Major effects will include:
 - Detours in place, effects on local street network
 - 1st Weekend: Full Queens-bound closure (Friday night-Monday morning) with one lane open on Staten Island-bound
 - 2nd & 3rd Weekends: Full QB closure with both lanes open on SIB (Friday night-Monday morning)
- Preparation work will resume after the first closure

Construction Mitigation

- Air quality monitoring during demolition activity
- Noise monitoring for the duration of the project
- Sound blankets
- Wetting methods for jackhammering/power chipping
- Using smaller equipment when possible
- Dedicated liaison to address community concerns



Construction Staging



Preparation Work (Night-Time)

- Remove deteriorated concrete
- Add steel plates for support in preparation
- No daytime work

Two level highway restricts areas to shift traffic during construction

First Weekend Closure

Full closure of all Queens-Bound lanes with BQE traffic to exit at Atlantic Ave

One lane open in the Staten Island Bound direction

Closures between Saturday 2AM to Monday 4AM

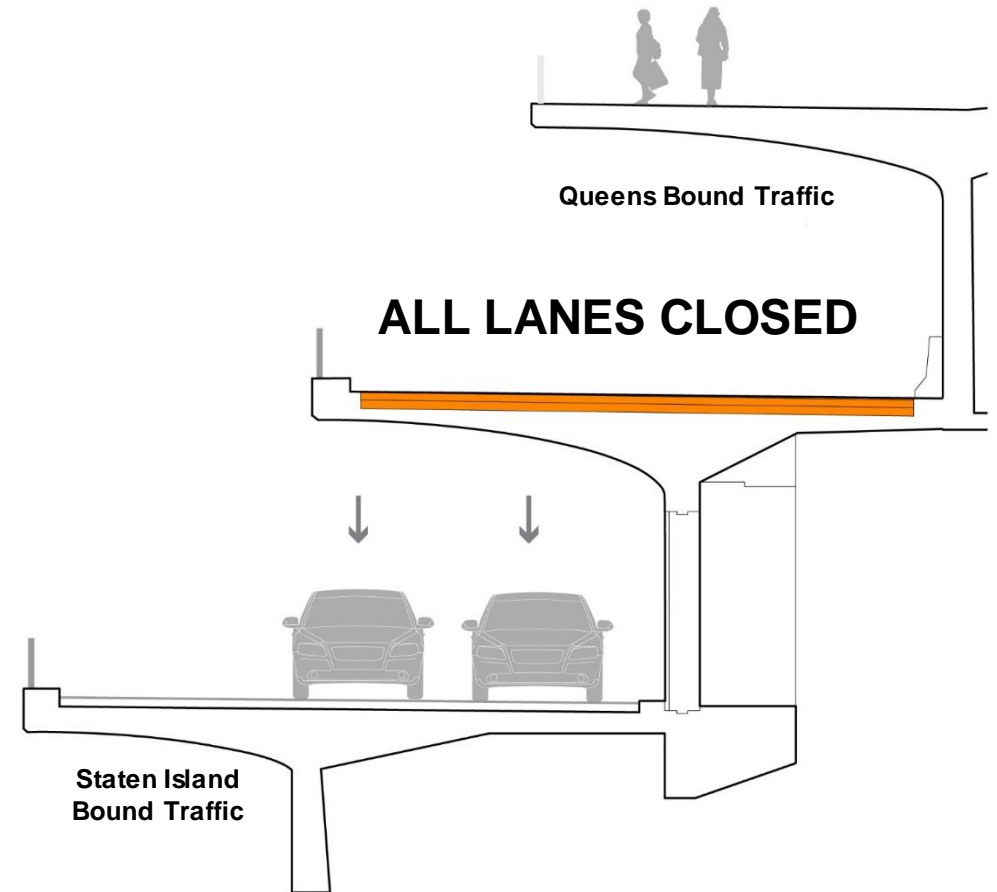


Second and Third Weekend Closures

Full closure of all Queens-Bound lanes with remaining BQE traffic to exit at Atlantic Ave

All travel lanes on the Staten Island-Bound direction will be open

Closures between Saturday 2AM to Monday 4AM



Weekend Closures (3 Total, Dates TBD)

- **Weekend 1:** Queens-bound and Staten Island-bound closures
 - QB: Full Closure
 - SIB: 1 Lane Open
- **Preparation Work Continued**
- **Weekend 2:** Queens-bound closure only
 - QB: Full Closure
 - SIB: No Closure
- **Preparation Work Continued**
- **Weekend 3:** Queens-bound closure only
 - QB: Full Closure
 - SIB: No Closure

Traffic Mitigations

- Traffic Enforcement Agents (TEAs) & pedestrian managers at key intersections
- *Temporary* adjustments to lane configurations
- Turn restrictions at select intersections
- Variable Message Sign (VMS) boards informing travelers of closures & detours; encouraging alternate modes of transit
- Emergency services stationed at Brooklyn Bridge Park
- Prospect Expressway/HOV barrier



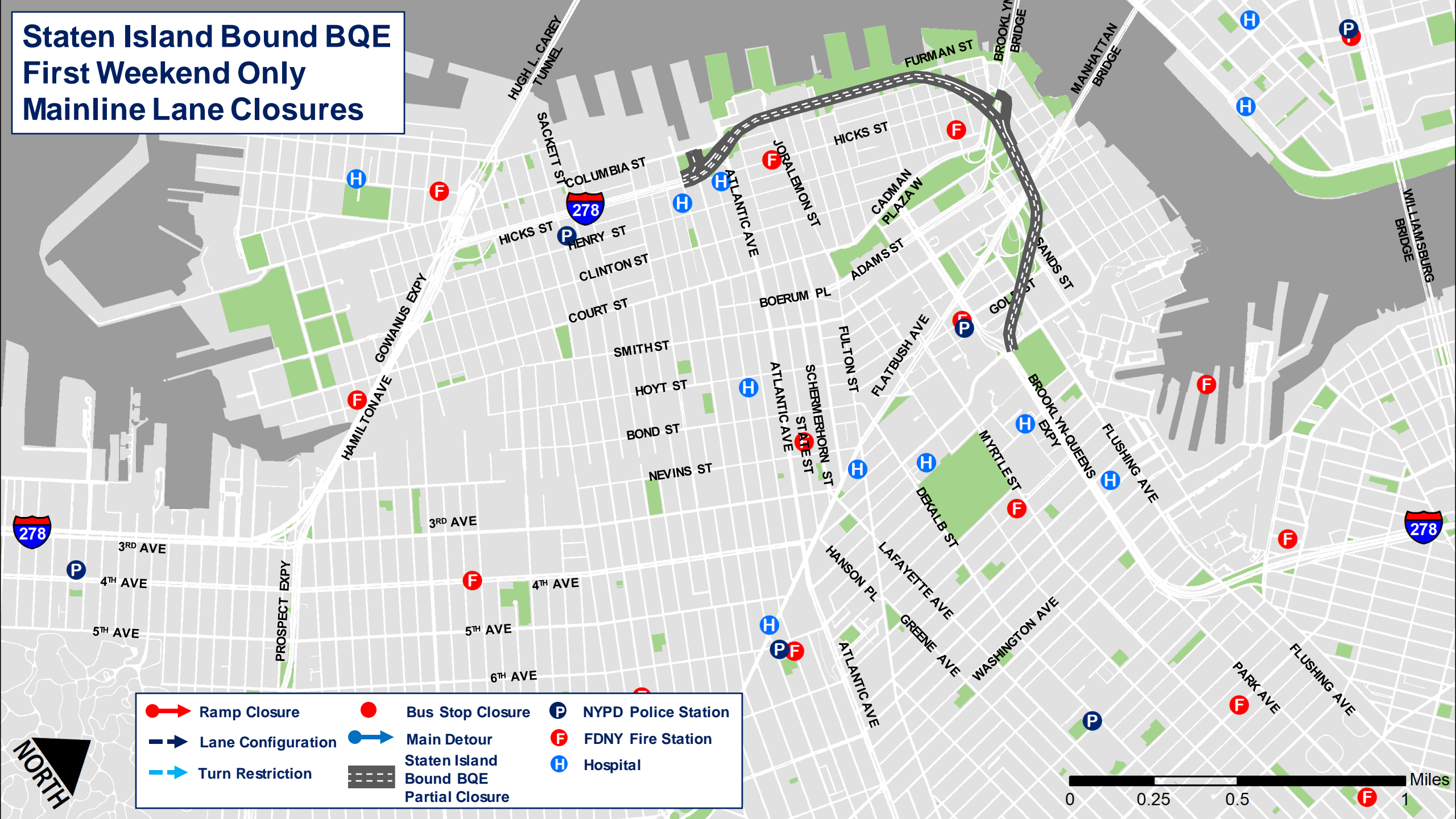
Construction Duration for Spans 4 & 34

- Overnight closures during construction
- 3 closure weekends spread out over construction period
- Joralemon Street garage repairs will occur concurrently – no BQE closures needed
- More specific schedule will be shared in future as information becomes available
- NYC DOT is working closely with the contractor to identify closure dates that minimize disruption, and condense schedules where feasible

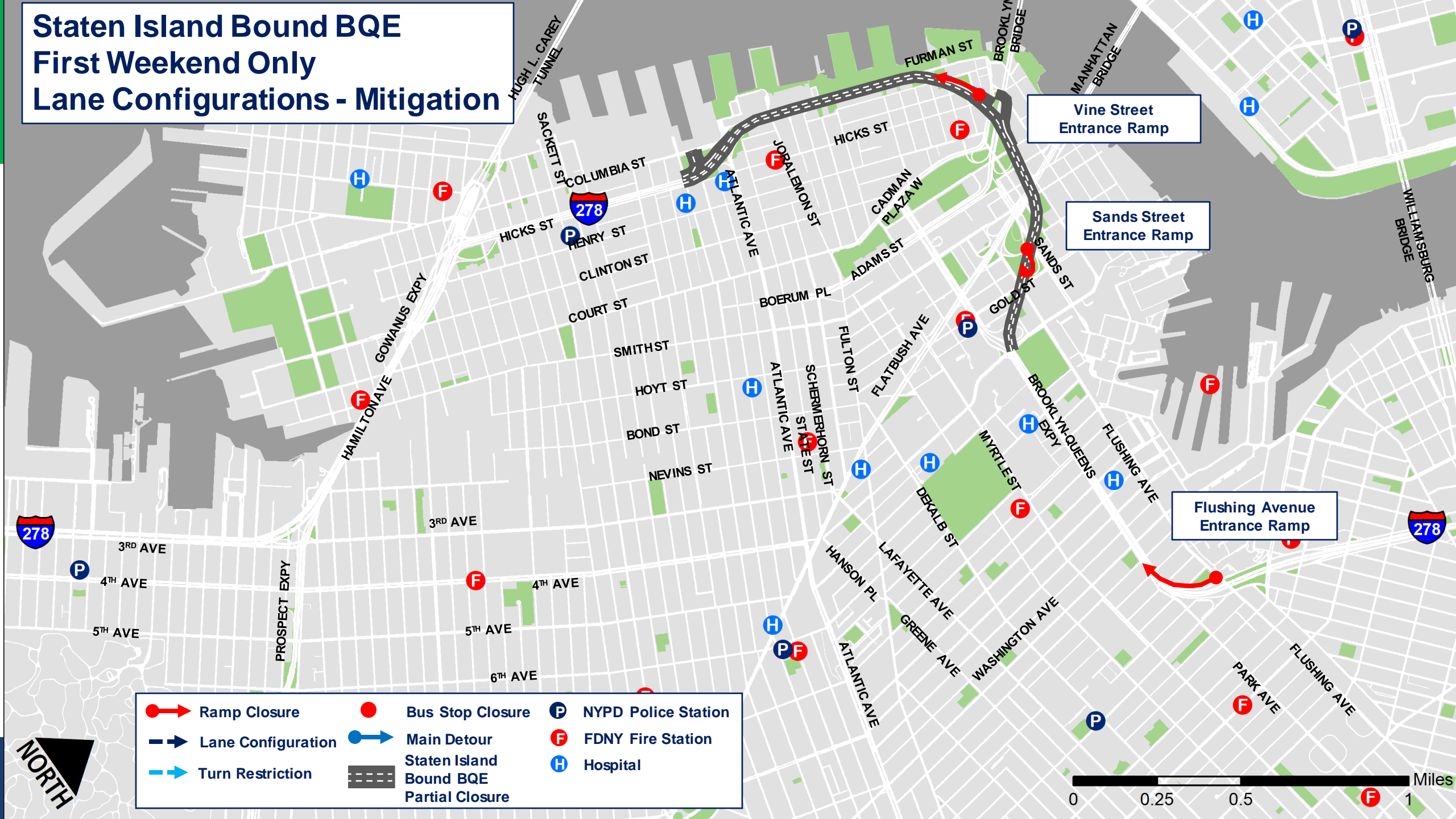
Weekend 1 Only

Staten Island-Bound Closures

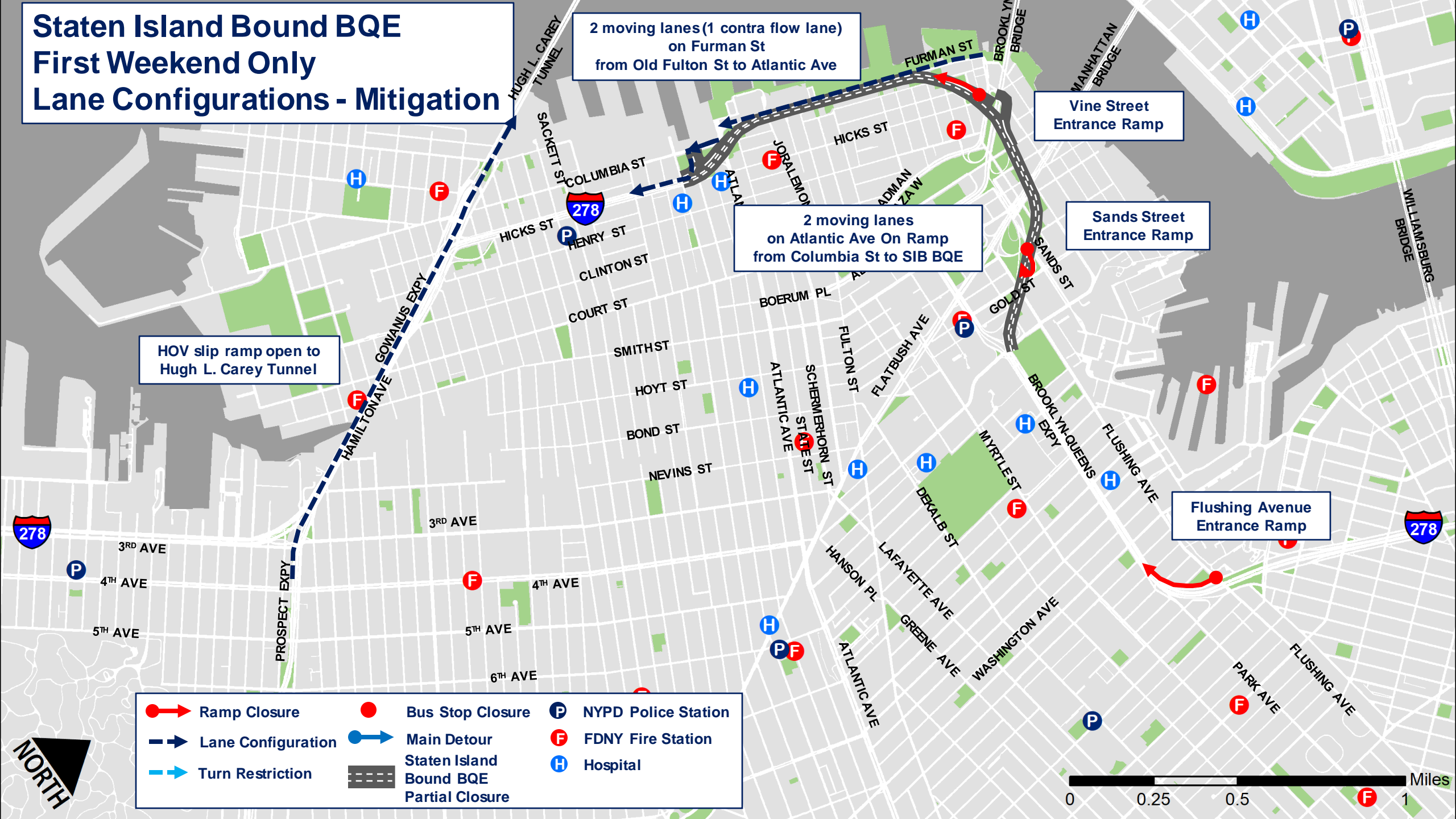
Staten Island Bound BQE First Weekend Only Mainline Lane Closures



Staten Island Bound BQE First Weekend Only Lane Configurations - Mitigation



Staten Island Bound BQE First Weekend Only Lane Configurations - Mitigation



HOV slip ramp open to
Hugh L. Carey Tunnel

2 moving lanes (1 contra flow lane)
on Furman St
from Old Fulton St to Atlantic Ave

2 moving lanes
on Atlantic Ave On Ramp
from Columbia St to SIB BQE

Vine Street
Entrance Ramp

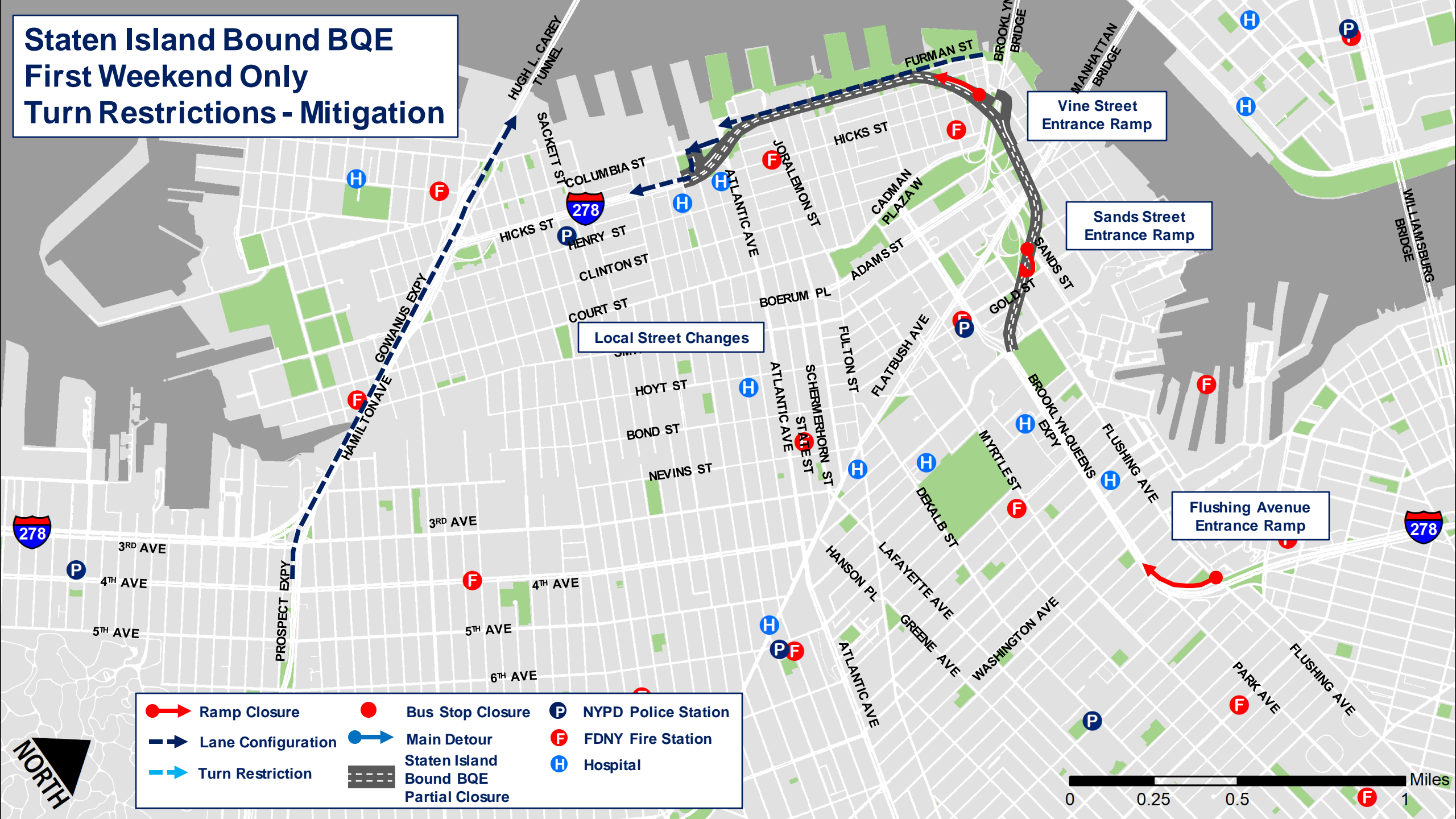
Sands Street
Entrance Ramp

Flushing Avenue
Entrance Ramp

Ramp Closure	Bus Stop Closure	NYPD Police Station
Lane Configuration	Main Detour	FDNY Fire Station
Turn Restriction	Staten Island Bound BQE Partial Closure	Hospital

0 0.25 0.5 1 Miles

Staten Island Bound BQE
First Weekend Only
Turn Restrictions - Mitigation



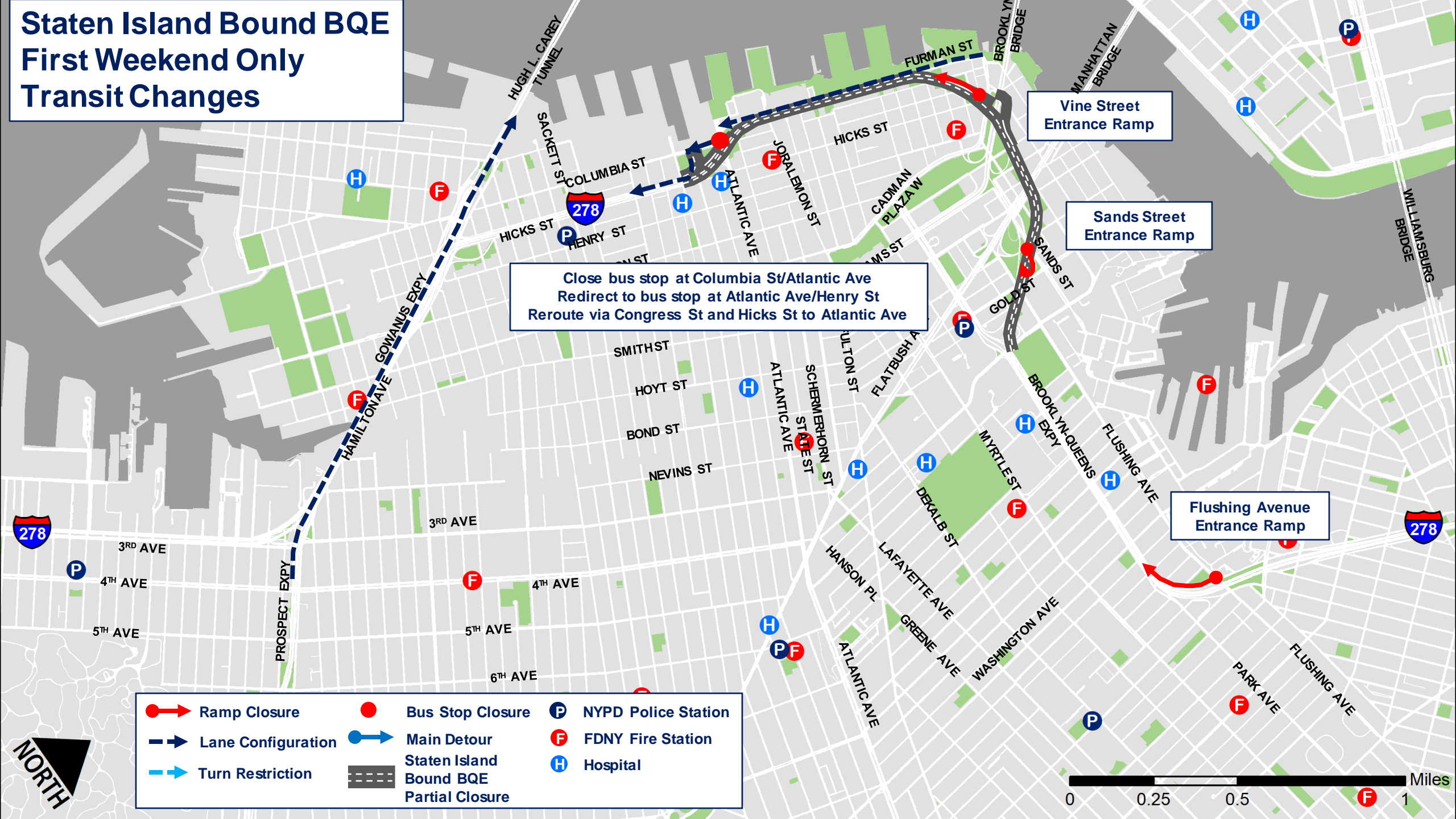
Local Street Changes

Vine Street
Entrance Ramp

Sands Street
Entrance Ramp

Flushing Avenue
Entrance Ramp

Staten Island Bound BQE First Weekend Only Transit Changes











Close bus stop at Columbia St/Atlantic Ave
Redirect to bus stop at Atlantic Ave/Henry St
Reroute via Congress St and Hicks St to Atlantic Ave

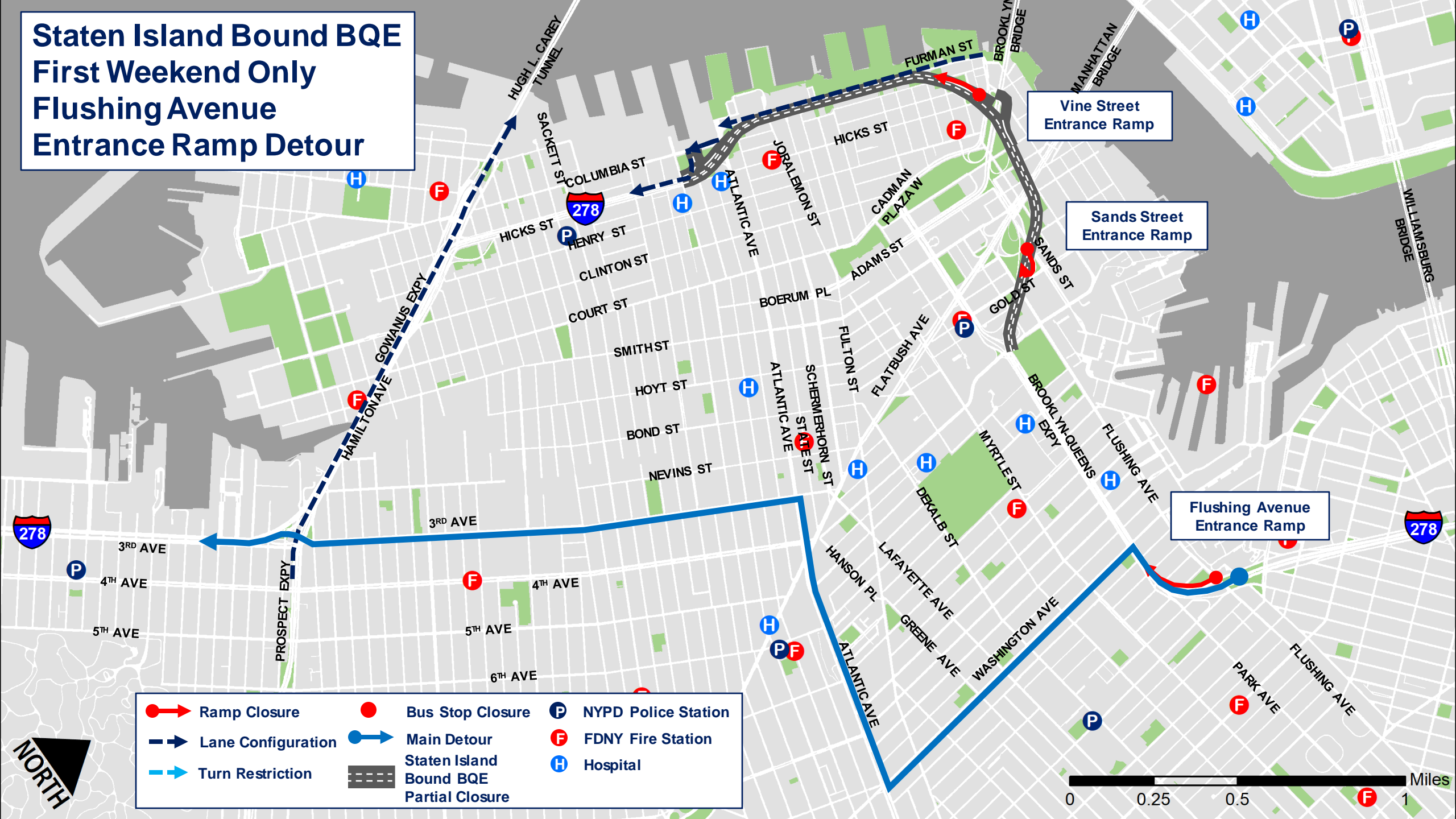
Vine Street
Entrance Ramp

Sands Street
Entrance Ramp

Flushing Avenue
Entrance Ramp

 Ramp Closure	 Bus Stop Closure	 NYPD Police Station
 Lane Configuration	 Main Detour	 FDNY Fire Station
 Turn Restriction	 Staten Island Bound BQE Partial Closure	 Hospital

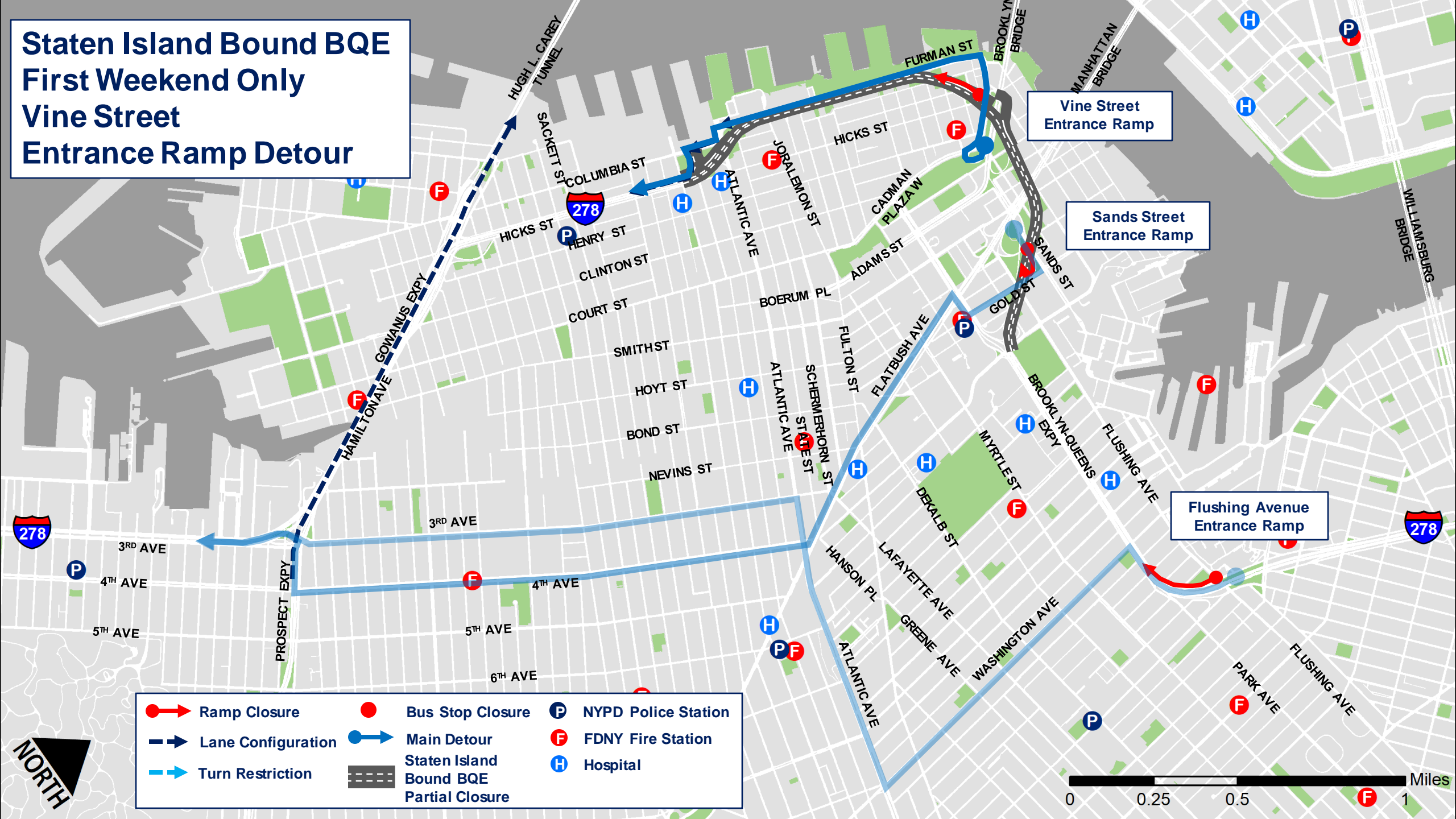
Staten Island Bound BQE First Weekend Only Flushing Avenue Entrance Ramp Detour



Staten Island Bound BQE First Weekend Only Sands Street Entrance Ramp Detour



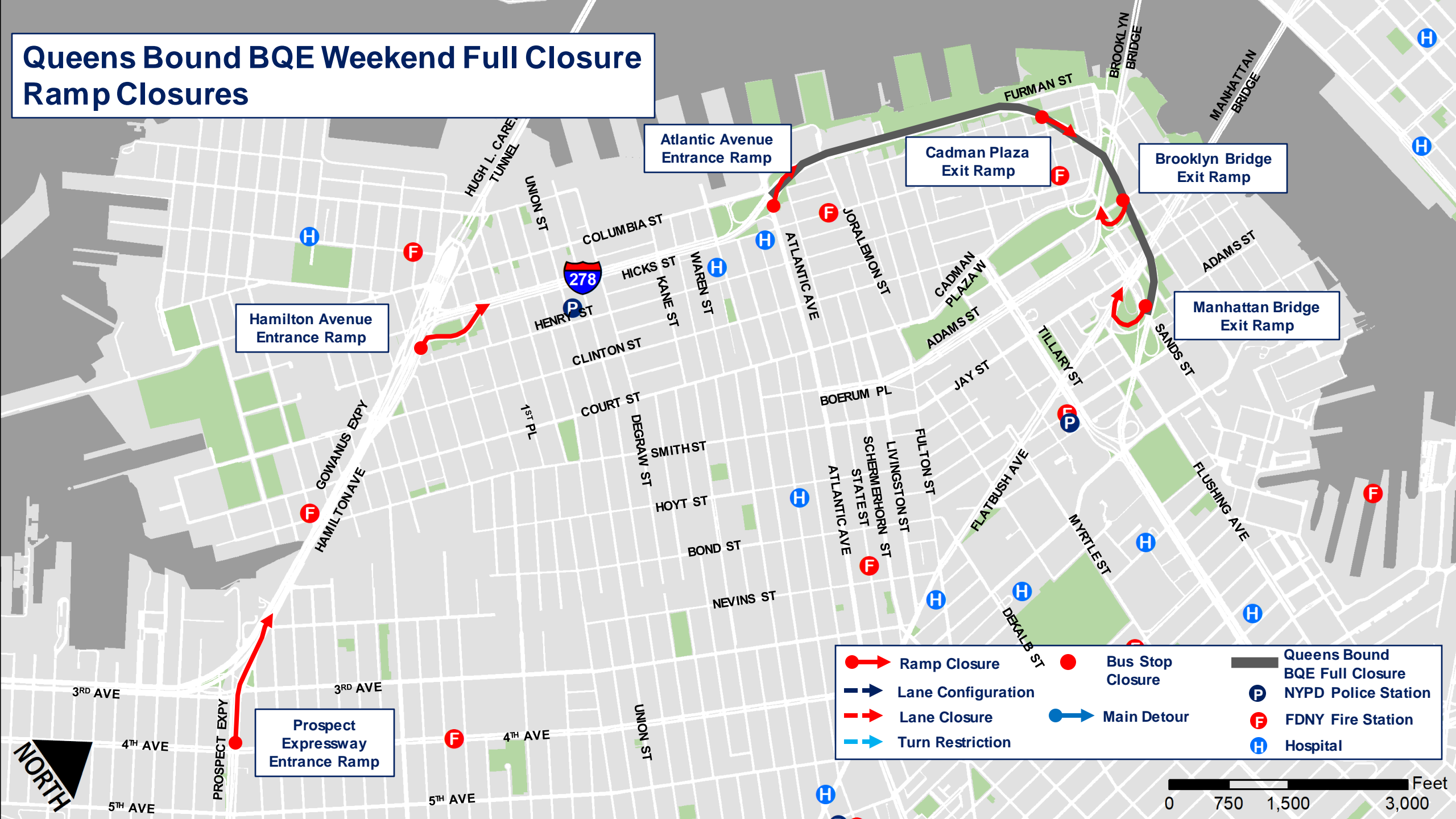
**Staten Island Bound BQE
First Weekend Only
Vine Street
Entrance Ramp Detour**



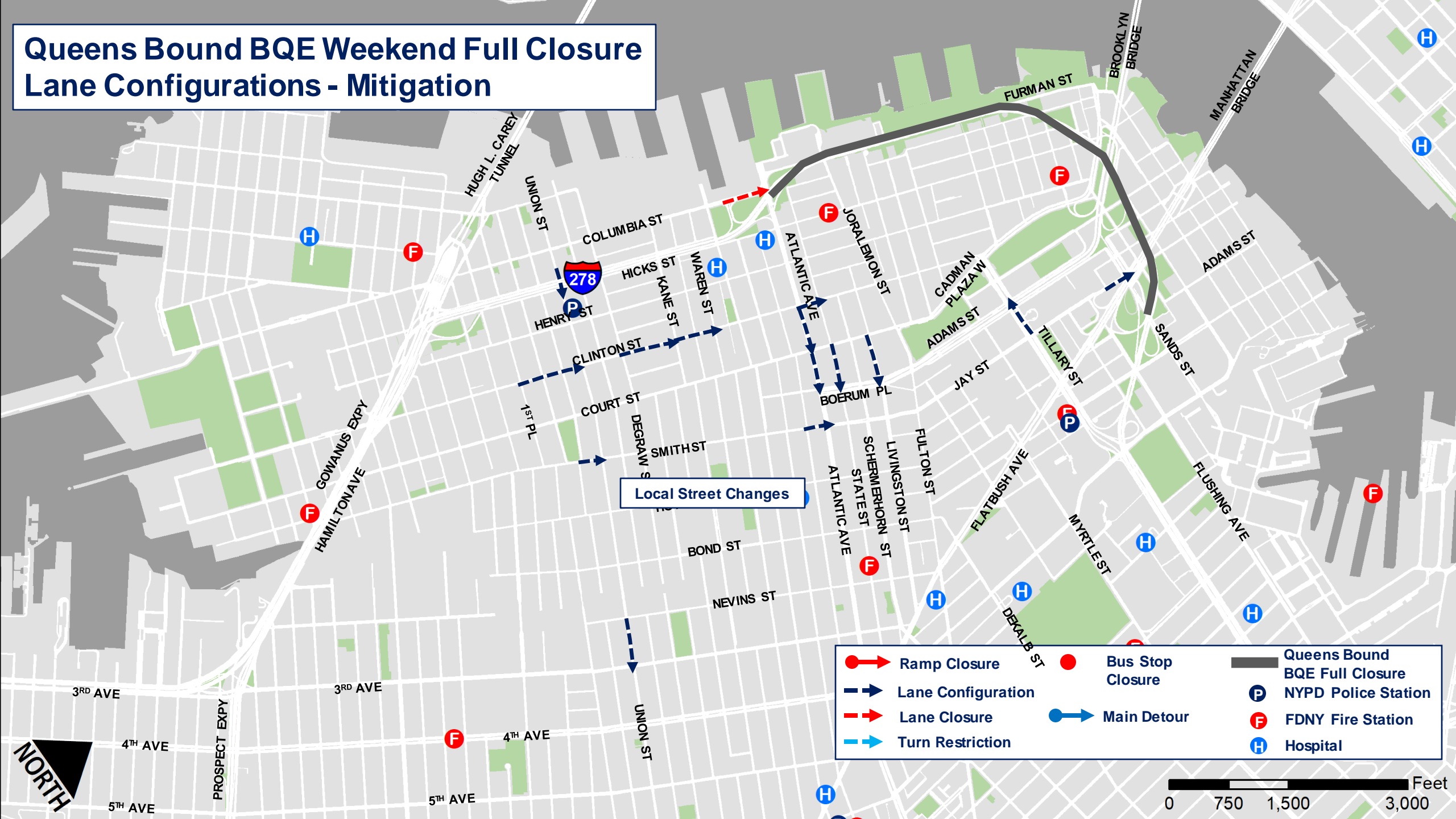
All 3 Weekend Closures

Queens-Bound Closures

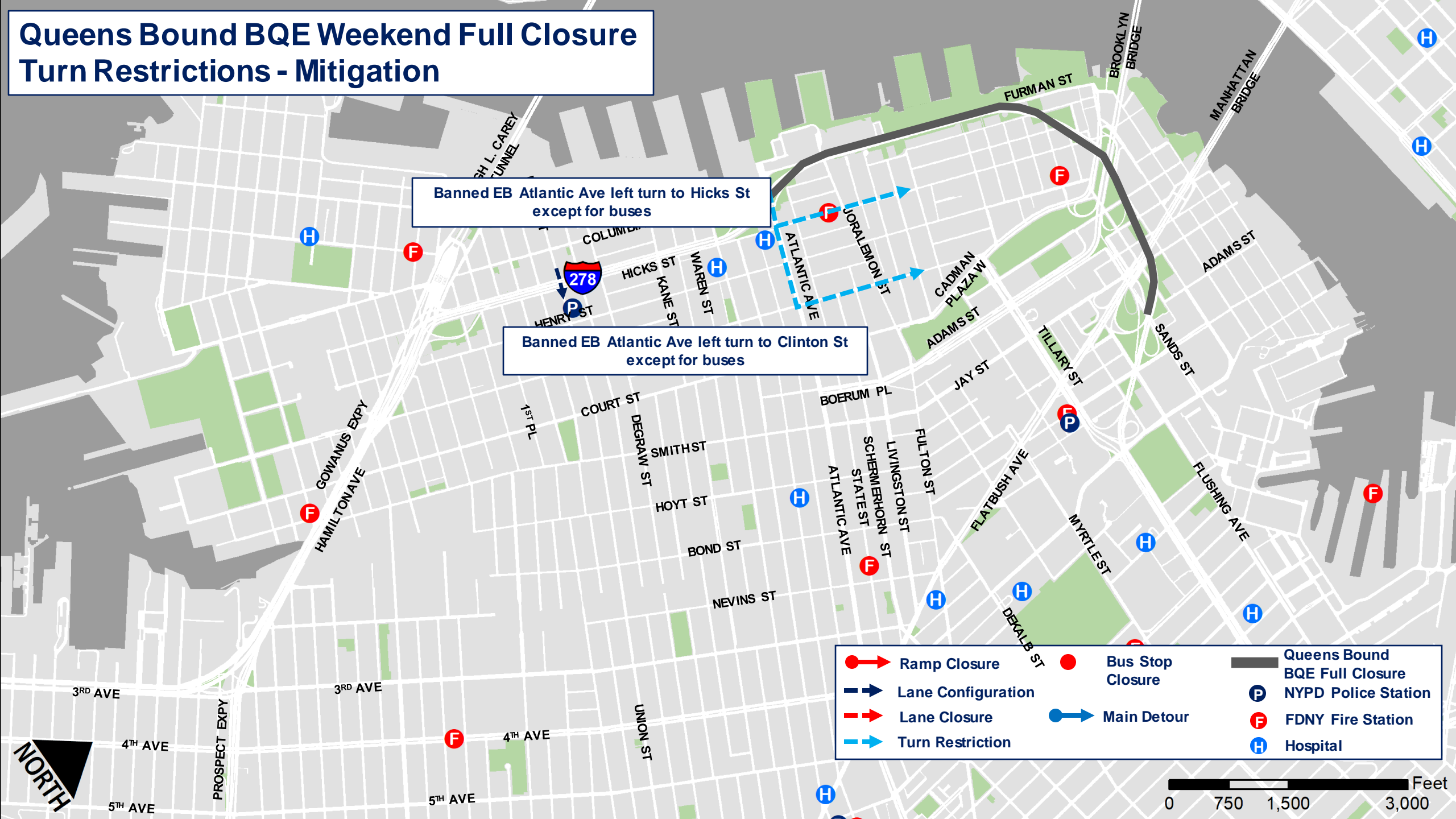
Queens Bound BQE Weekend Full Closure Ramp Closures



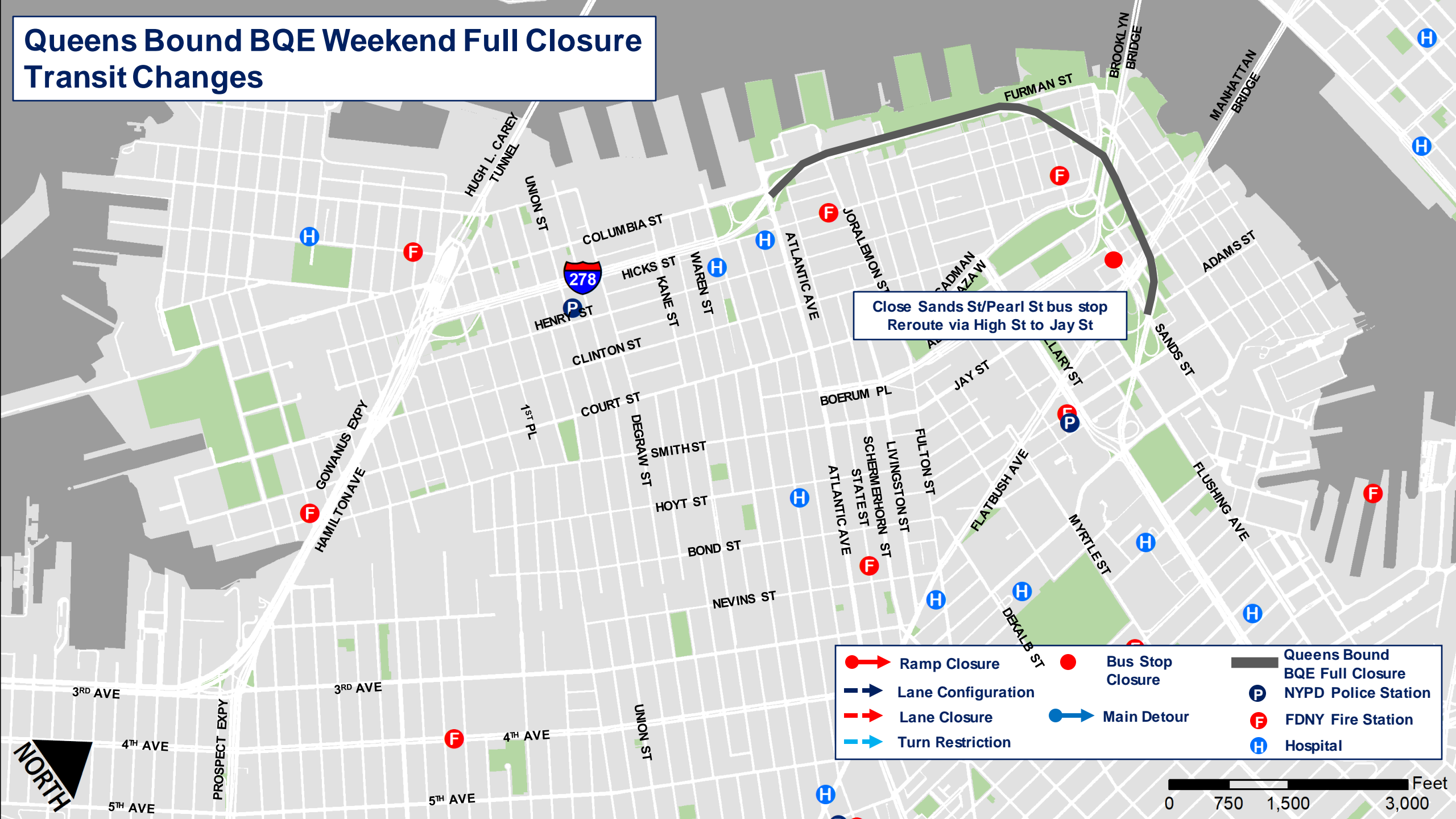
Queens Bound BQE Weekend Full Closure Lane Configurations - Mitigation



Queens Bound BQE Weekend Full Closure Turn Restrictions - Mitigation



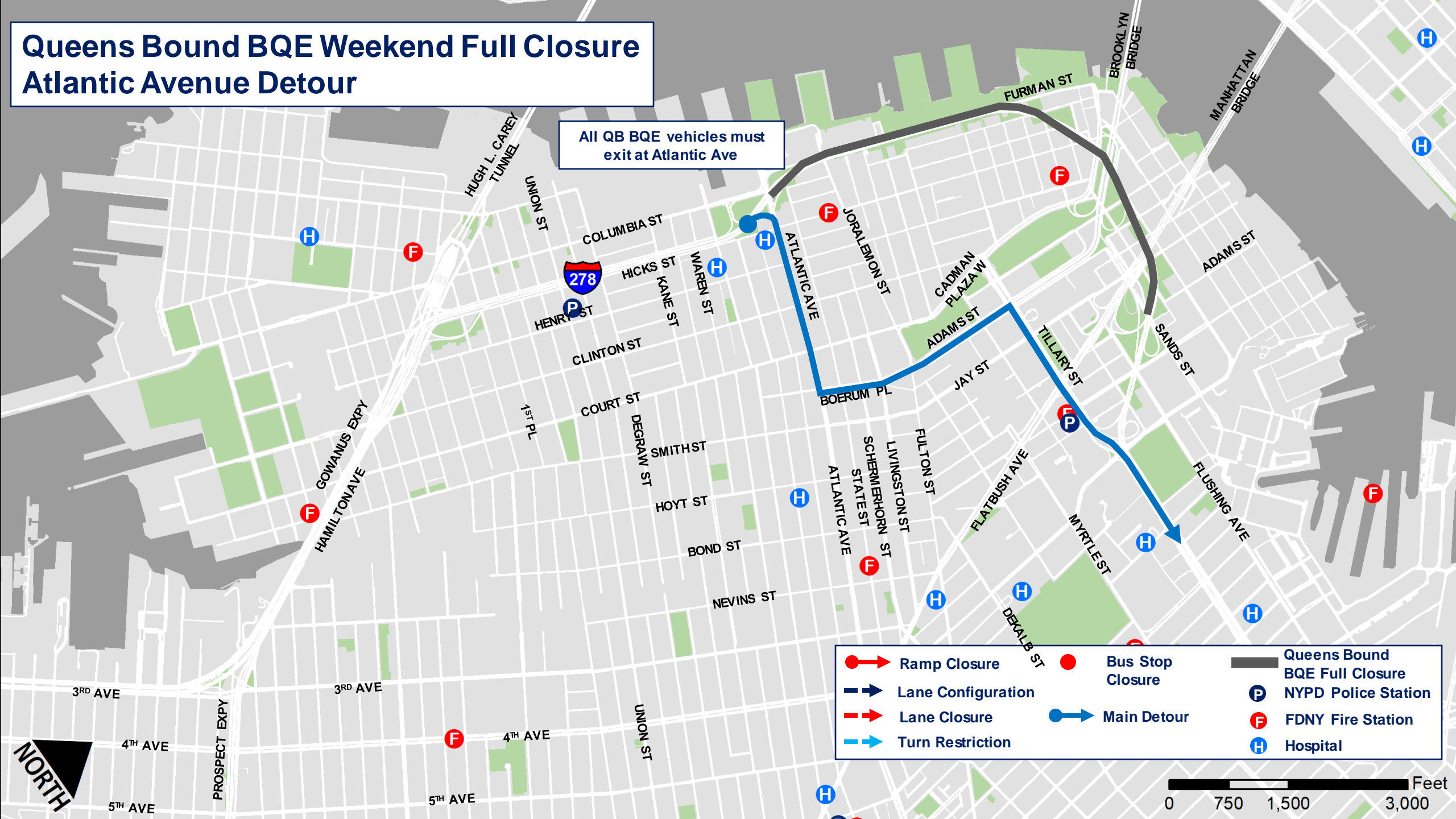
Queens Bound BQE Weekend Full Closure Transit Changes



Queens Bound BQE Weekend Full Closure

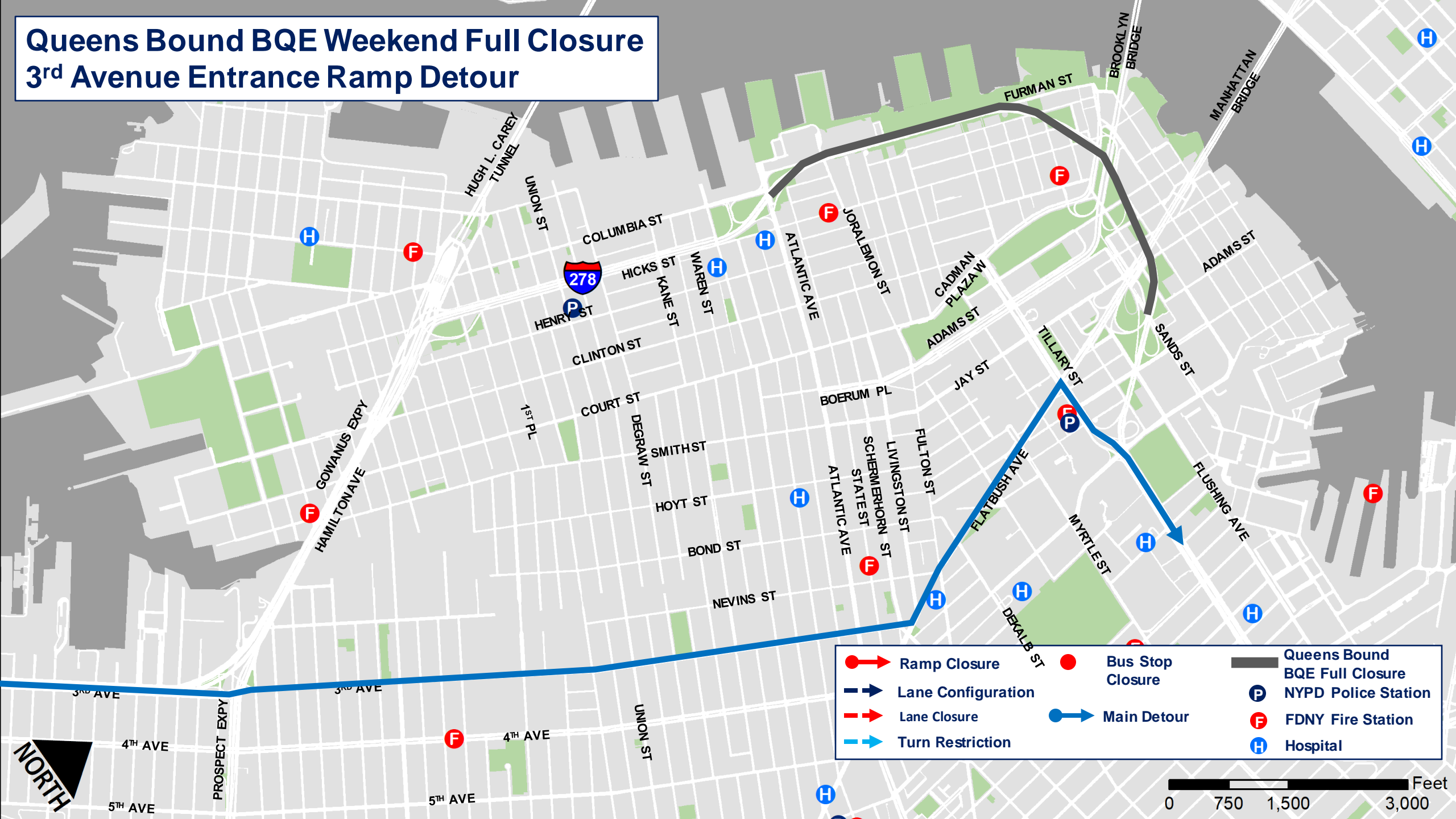
Atlantic Avenue Detour

All QB BQE vehicles must exit at Atlantic Ave



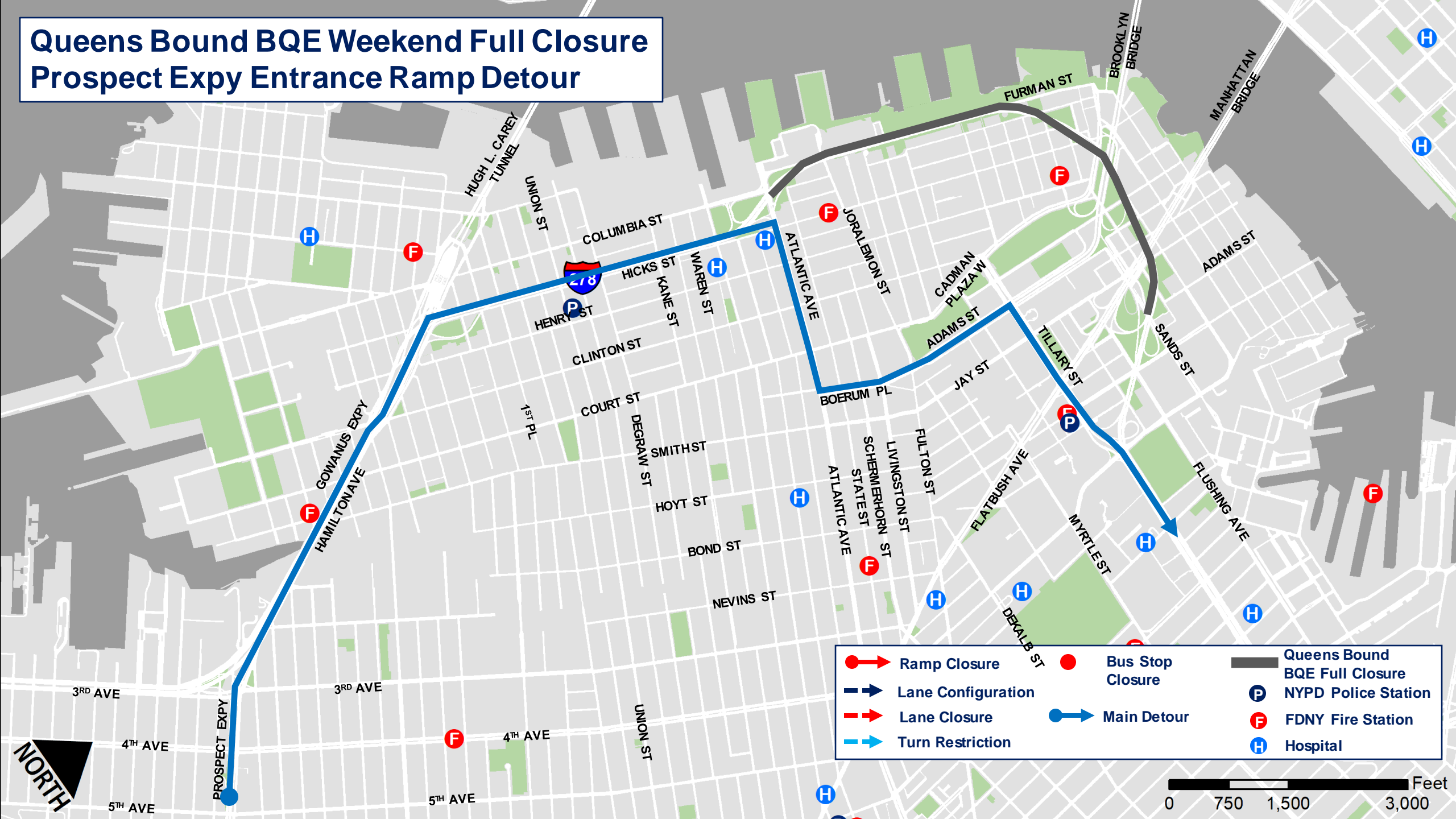
Queens Bound BQE Weekend Full Closure

3rd Avenue Entrance Ramp Detour



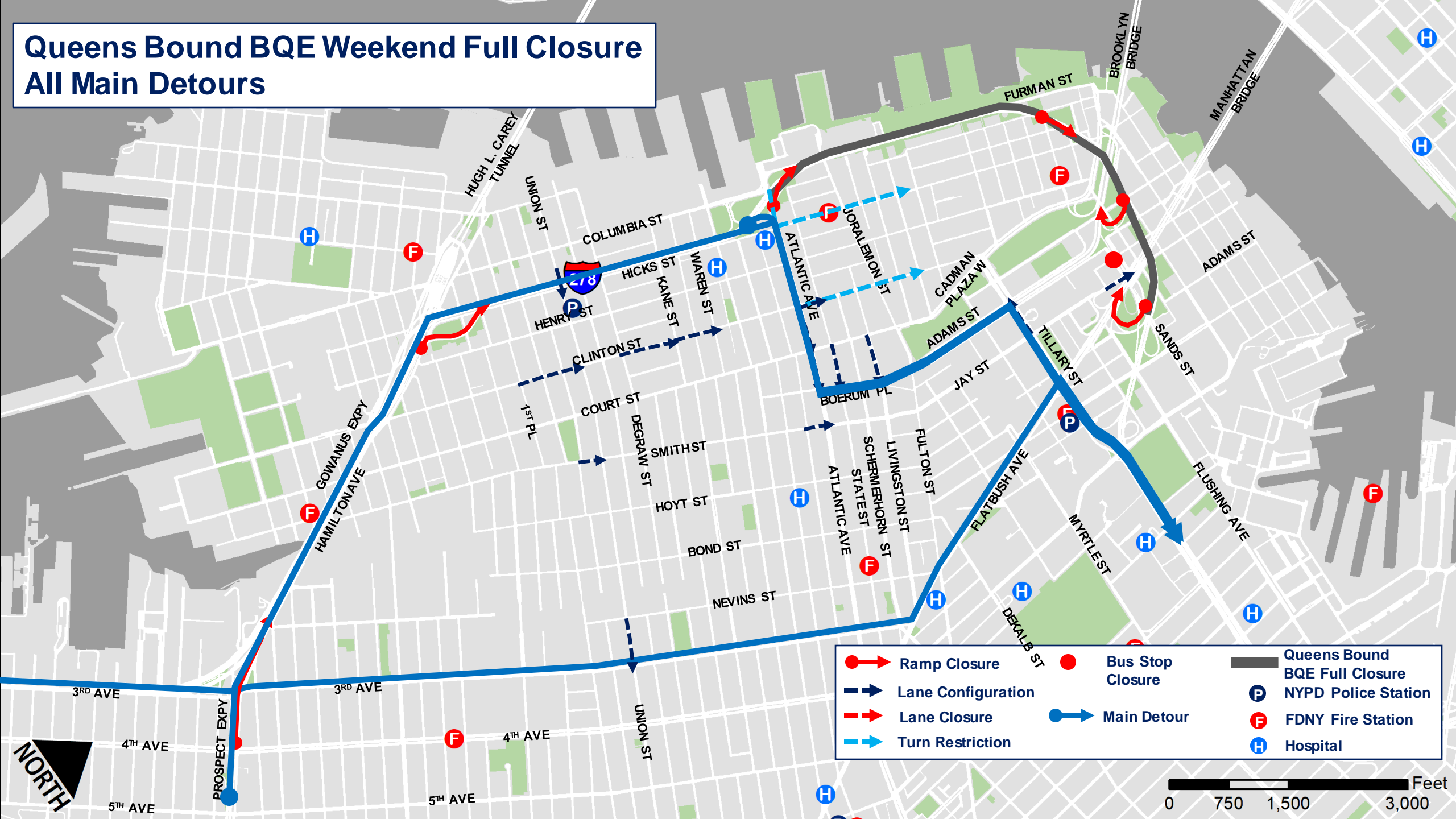
Queens Bound BQE Weekend Full Closure

Prospect Expy Entrance Ramp Detour



Queens Bound BQE Weekend Full Closure

All Main Detours









Queens Bound BQE Weekend Full Closure Linden Boulevard Detour

- Detours will be heavily signed
- Variable Message Signs (VMS) throughout Staten Island, Brooklyn, Queens and Manhattan
- Expect extended travel times

Detour exits Prospect Expy at 10th Ave, turns right on 10th Ave, and then turns left onto McDonald Ave

Detour routes to Conduit Ave, which provides connections to Nassau Expy, Van Wyck Expy, and the Long Island Expy via the Van Wyck Expy

- | | | | |
|---|---------------------|---|---------------------|
|  | Ramp Closure |  | NYPD Police Station |
|  | QB Detour |  | FDNY Fire Station |
|  | QB BQE Full Closure |  | Hospital |

0 0.5 1 2 Miles

Questions

Thank You!