

21st Street Transit Priority & Safety Study

Community Advisory Board Meeting #4

November 18, 2021



Outline

- Study Recap
- Public Engagement Update
- Conceptual Corridor Proposal
- Other Improvements
- Next Steps

Study Recap

Study Recap

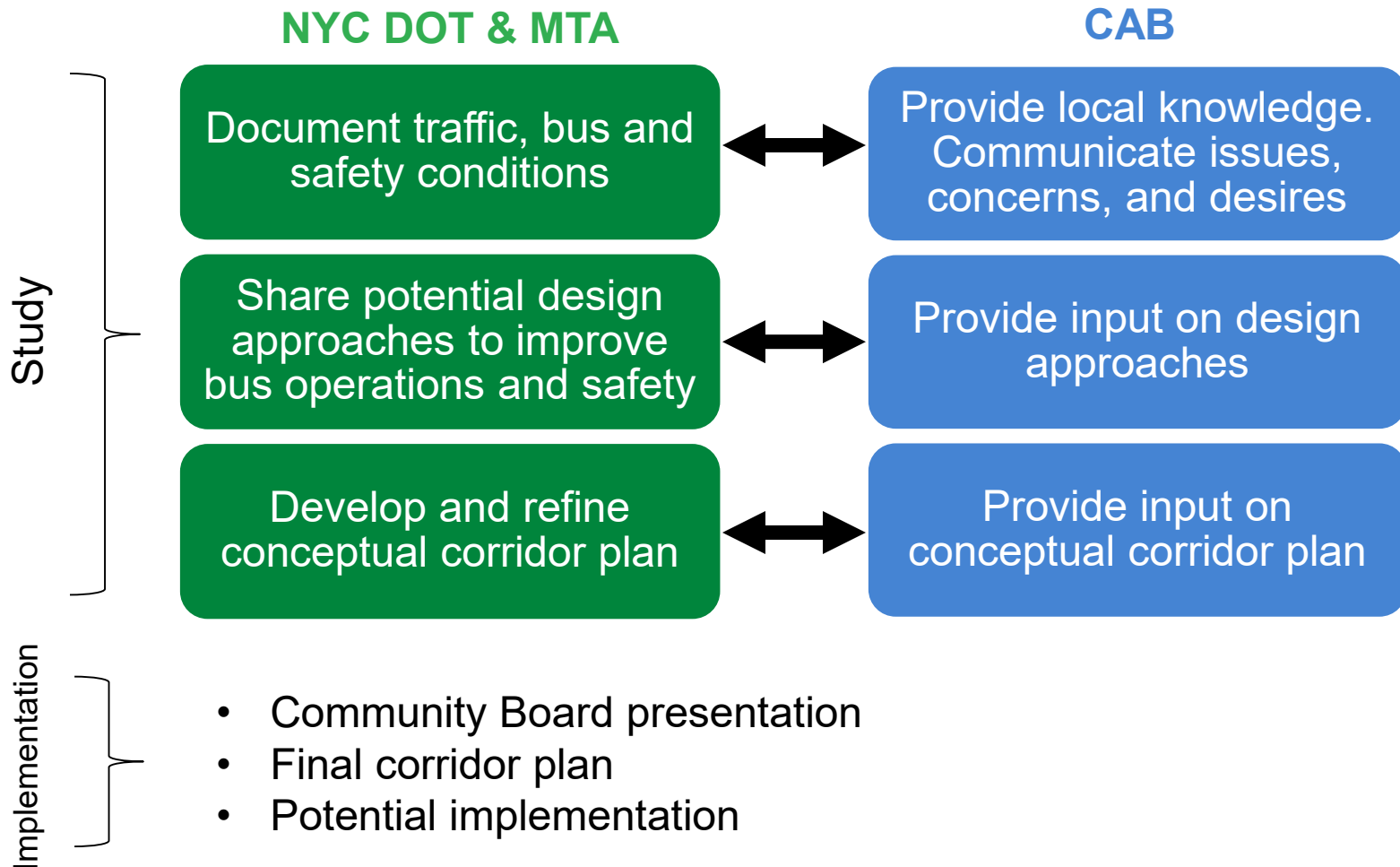
Study Corridor

- Queens Plaza North to Hoyt Ave North
- “Bridge to Bridge”
- 1.95 miles
- Consistent street width and geometry – 60’ wide
- Vision Zero Priority Corridor
- Identified as bus priority corridor in MTA’s Queens Bus Network Redesign Draft Plan



Study Recap

Study Process



Public Engagement Update

Public Engagement Feedback

Pop-Ups

Purpose:

- Understanding the safety needs and transportation issues of the community and collecting feedback on potential options for the 21st St bus priority and safety improvements

Outcomes:

- DOT increases understanding of current perceptions from community members
- Community members informed of potential design options for 21st St
- Input on preferences regarding three possible design options

Process:

- Pop-up outreach stations at sites near the project corridor @ 41st Ave and @ Broadway
- Flipbooks with project background
- DOT staff explained the 3 design options to participants and collected general and specific feedback

Dates:

- Sunday, Wednesday, and Thursday
- June 13th, 16th and 17th

Locations :

- 21st St @ 41st Ave
- 21st St @ Broadway



41st Ave and 21st St

Public Engagement Feedback

Pop-Ups – Survey Participation

- **~200+ on-street conversations** with people who live, work, and take the bus in and around the 21st Street corridor of Astoria, Queens
- **144 surveys completed** during on-street outreach, with facilitated conversations focused on bus usage and traffic safety issues and concerns in the neighborhood
- **8 in 10 (83%) participants surveyed are residents** who live in the neighborhood or close to 21st Street
- **Nearly a third (29%)** surveyed reside in nearby NYCHA properties
- **93%** of on-street participants said that their primary mode of transportation to get in/around the neighborhood is by bus



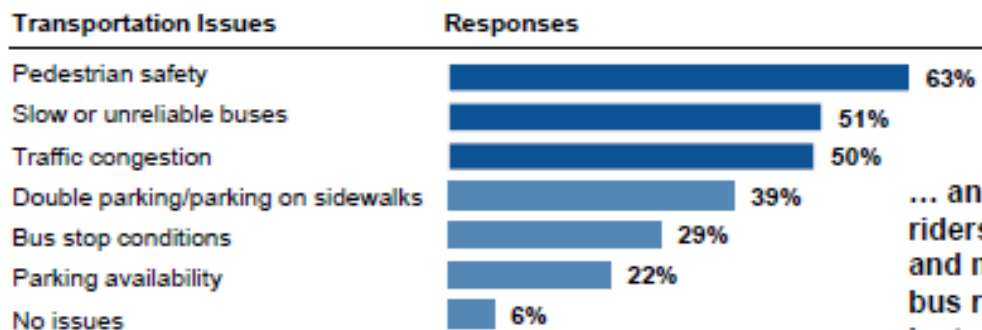
21st St and Broadway

Public Engagement Feedback

Pop-Ups – Results

Three-in-five people (63%) cited pedestrian safety as a primary concern along 21st Street. Another half (51%) experience slow or unreliable bus service and that traffic congestion (50%) is a problem in the area

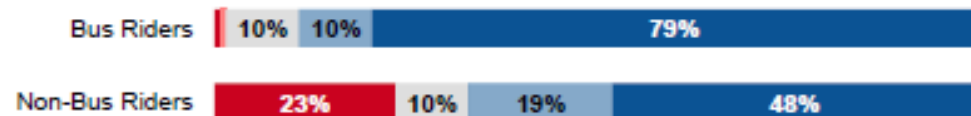
In a select-all-that-reply question among participants, % who say the following issues are transportation concerns along 21st Street...



... and more than three-quarters of respondents who identify as bus riders said they **would take the bus more often** if buses were faster and more reliable; Additionally, nearly three quarters (67%) of non-bus rider respondents said they would consider taking the bus instead of other modes if buses were faster and more reliable as well

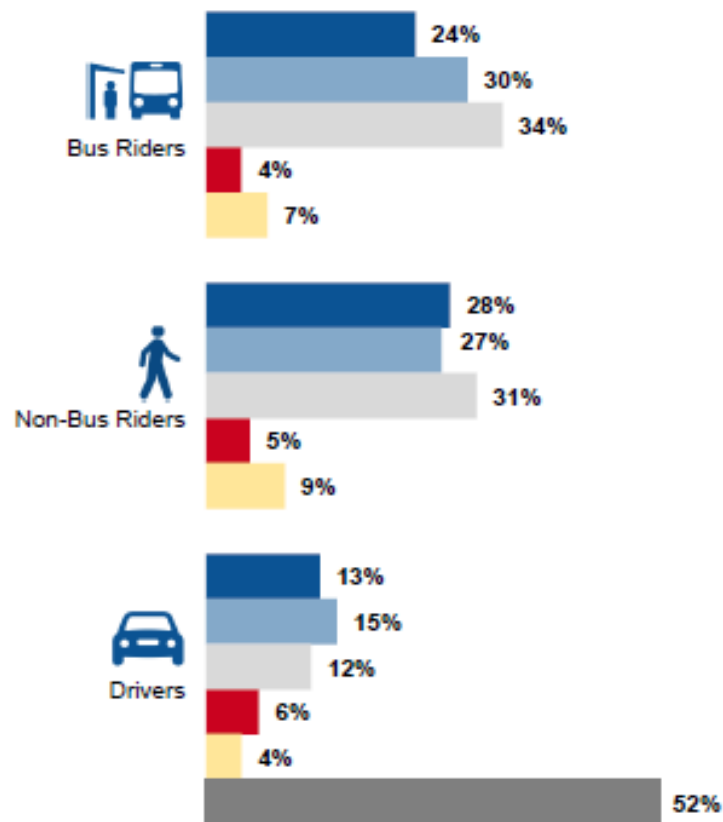
In a agree/disagree question among participants who self identify as bus riders, % who agree or disagree on whether they would take the bus more often in 21st St if buses were faster and more reliable

■ Strongly disagree ■ Somewhat disagree ■ Neutral
■ Somewhat agree ■ Strongly agree



Public Engagement Feedback

Pop-Ups – Results



1

Design option 1 – short bus lanes with bus only signals



2

Design option 2 – “offset” bus lanes with bus bulbs



3

Design option 3 – center running bus lanes with bus stop islands



None - these options will neither improve pedestrian safety nor improve bus speeds and reliability in this area

I don't know

I do not drive in this neighborhood

Feedback Map Portal

Feedback Map Portal

Category	Number of Comments	Specific Concerns
No Crosswalk	27	Astoria Blvd/Newtown Ave, 25 th Rd, 33 rd Rd, 33 rd Ave, 39 th Ave
Aggressive Drivers	19	Unsafe for bikes and peds, double parking and wide roadway encourages aggression, high speeds, Astoria Blvd complex intersection cited
Double Parking	15	Double parking cited at locations along 21 st St and side streets
Areas of Opportunity	13	Citi Bike station at F Subway Station, bike lanes, trees/planters/benches, wayfinding signs
Speeding	12	Speeding on long blocks, vehicles trying to make lights
Bus Stuck in Traffic	10	Double parking, difficult for buses to merge into traffic after stops, bus bunching, signal delays

204 Comments received as of 11/4/2021

Conceptual Corridor Design

Conceptual Corridor Design

Key Considerations

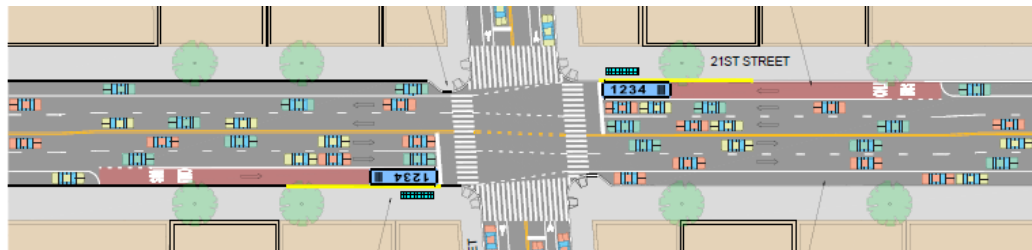
- Design should significantly enhance both pedestrian safety and bus speed and reliability
- Design needs to accommodate truck and emergency vehicles turns
- Left turns should be restricted where possible, and safely accommodated where needed

Conceptual Corridor Design

Preliminary Options

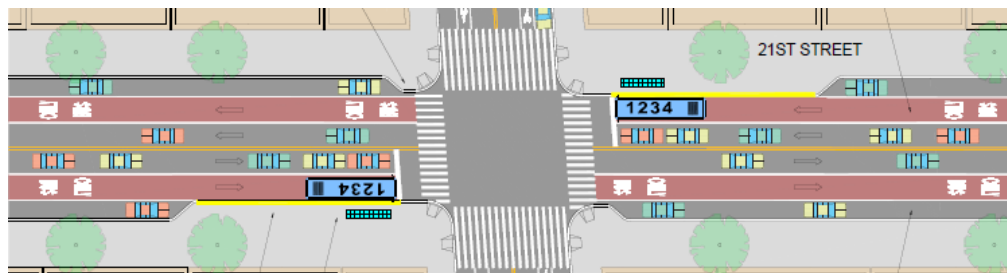
Option #1 – Queue Jump Lanes and Signals

- Very minimal pedestrian safety benefits
- Limited improvements to bus speed and reliability



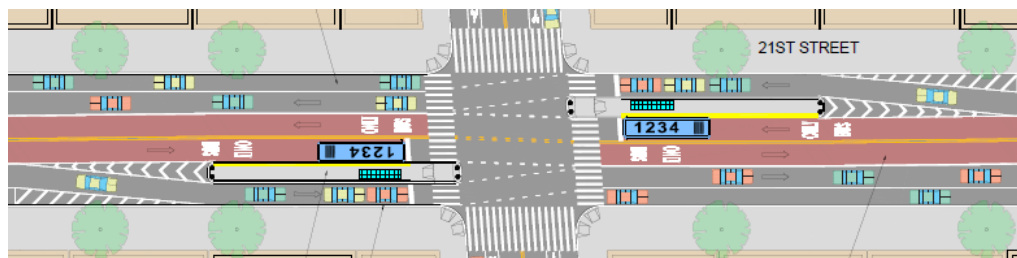
Option #2 – Offset Bus Lanes with Bus Bulbs

- Significant bus speed and reliability improvements
- Opportunities for pedestrian crossing safety gains through bus boarders and pedestrian islands
- Ability to build left turn lanes where needed



Option #3 – Center Running Bus Lane

- 21st St not wide enough to accommodate bus islands and left turn bays.
- Right turns difficult for larger vehicles
- Not possible for limited stop buses to pass local buses.



Conceptual Corridor Design

Design Elements



Woodhaven Blvd, QN

Offset Bus Lane *Proposed Locations*

- Throughout corridor



7th Ave, MN

Bus Boarder *Proposed Locations*

- 21st St @ 41st Ave (northbound)
- 21st St @ 35th Ave (northbound and southbound)
- 21st Ave @ 30th Ave (southbound)

Conceptual Corridor Design

Design Elements



Utica Ave, BK

Left Turn Lane

Proposed Locations

- 21st St @ Queens Plaza North (northbound)
- 21st St @ 41st Ave (southbound)
- 21st St @ 40th Ave (northbound)
- 21st Ave @ 30th Ave (northbound)
- 21st St @ Astoria Blvd (northbound)

All other intersections have NB/SB left turn restrictions except Hoyt Ave South SB.



Hillside Ave, QN

Pedestrian Island

Proposed Locations

- 21st St @ 41st Ave (south side)
- 21st St @ 40th Ave (north side)
- 21st Ave @ Broadway (south and north sides)
- 21st St @ 30th Ave (north side)
- 21st St @ Astoria Blvd (west and north sides)

Conceptual Corridor Design

Design Elements

Painted Curb Extension



21st St @ 31st Dr,

Painted Curb Extension

Proposed Additional Locations

- 41st Ave (NE corner)
- 40th Ave (NW corner)
- 38th Ave (All four corners)
- 14th St (NW corner)
- 35th Ave (SE, SW, and NW corners)
- 34th Ave (SE and NW corners)
- 31st Ave (SE and NW corners)
- 30th Ave (SW and NW corners)

Conceptual Corridor Design

Precedent – Utica Ave, Brooklyn



Utica Ave @ Ave L

- Major north-south arterial in Southern Brooklyn
- Offset bus lanes move to curb to accommodate left turns
- Pedestrian islands included in some locations



Utica Ave @ Winthrop St



Utica Ave @ Winthrop St

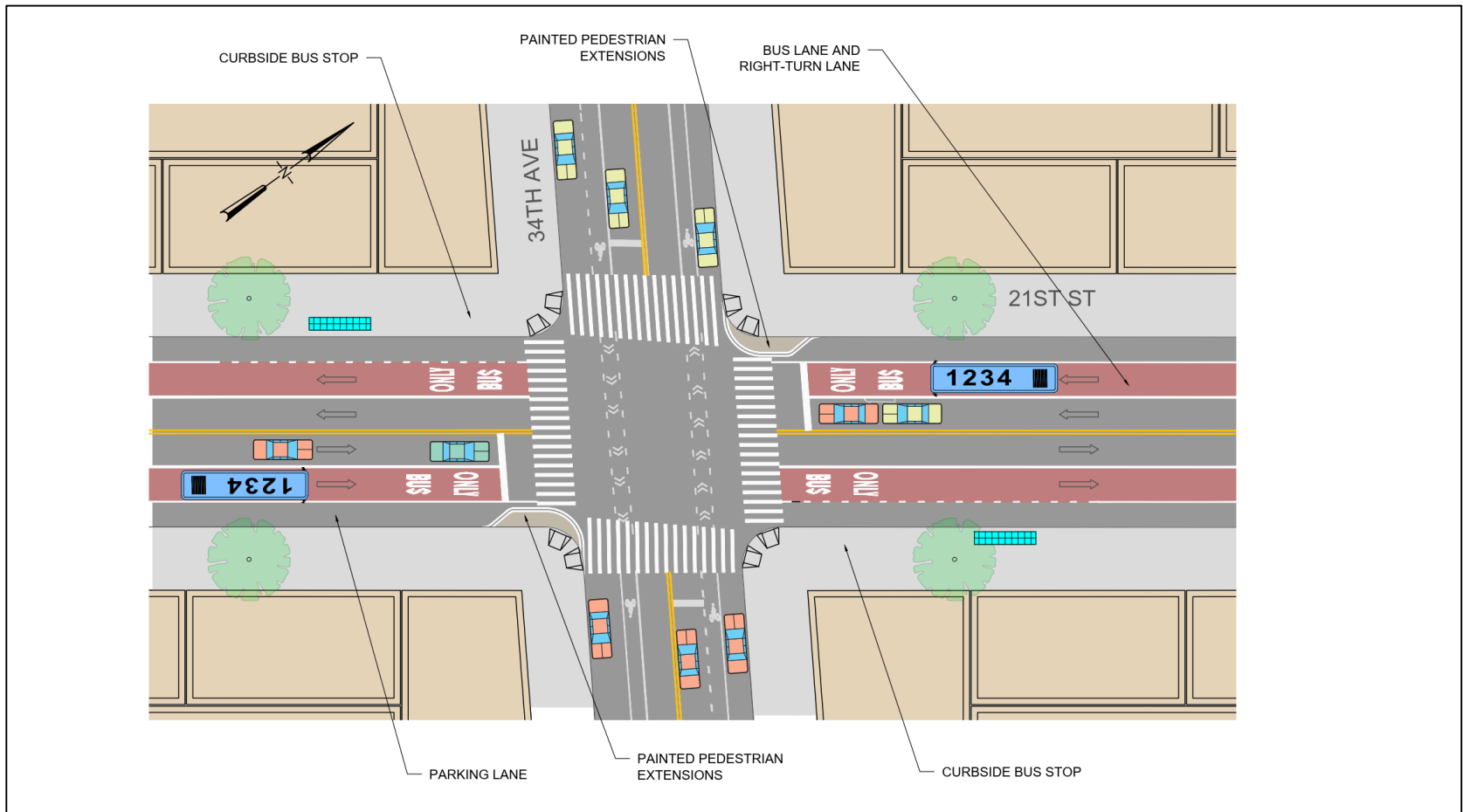
Conceptual Corridor Design

21st St @ 34th Ave - Existing



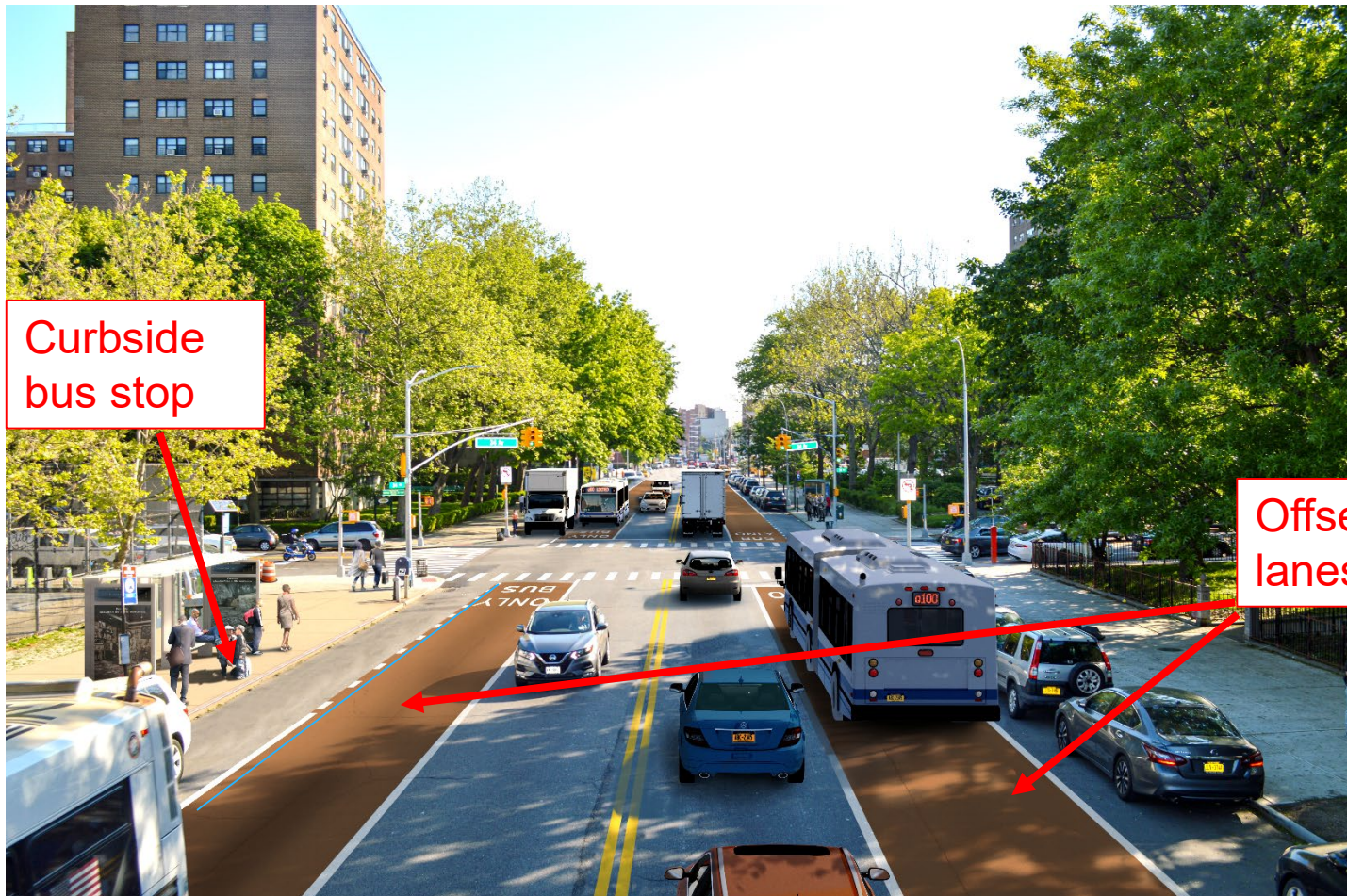
Conceptual Corridor Design

21st St @ 34th Ave - - Proposed



Conceptual Corridor Design

21st St @ 34th Ave - Proposed



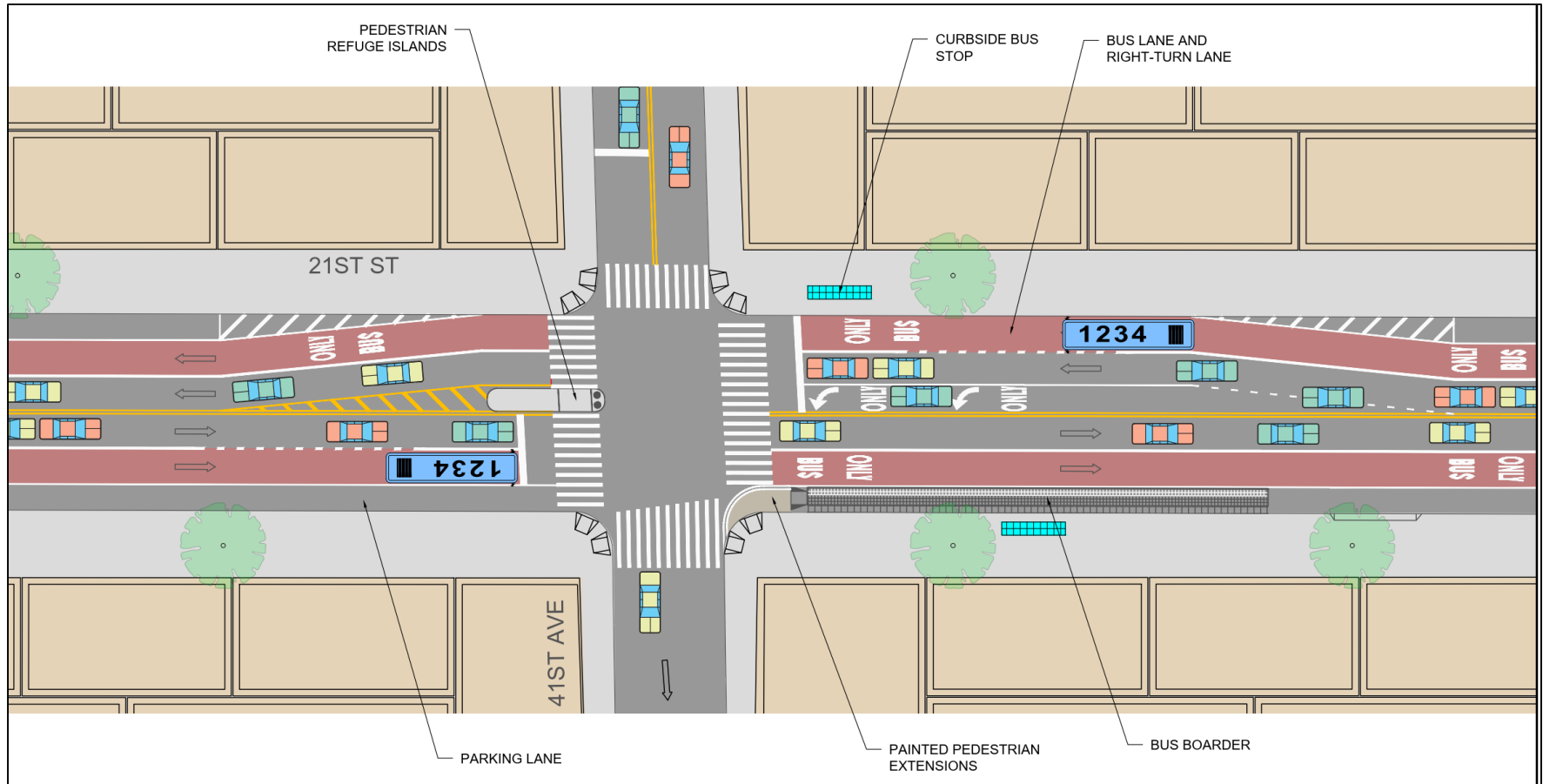
Conceptual Corridor Design

21st St @ 41st Ave - Existing



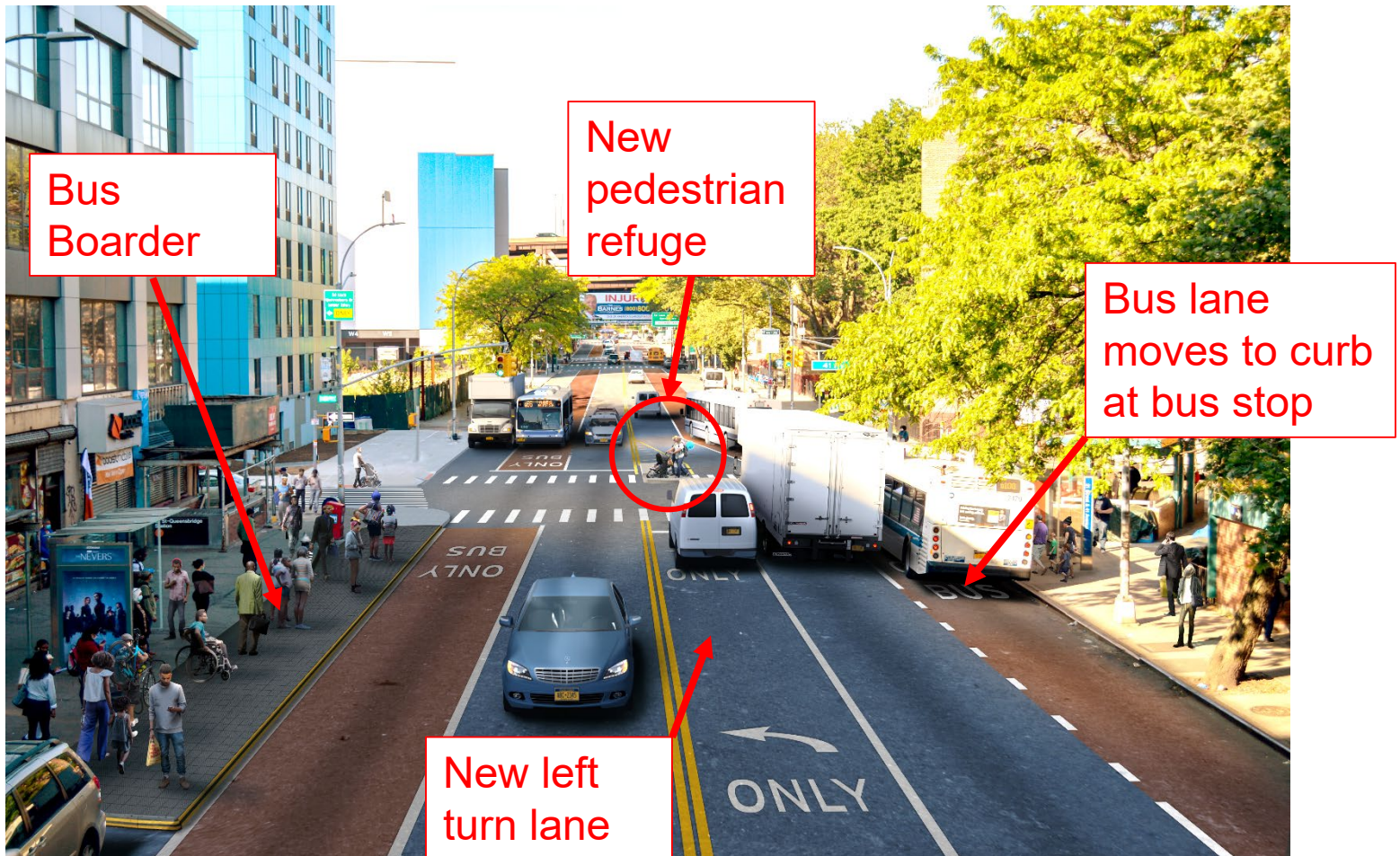
Conceptual Corridor Design

21st St @ 41st Ave - Proposed



Conceptual Corridor Design

21st St @ 41st Ave - Proposed



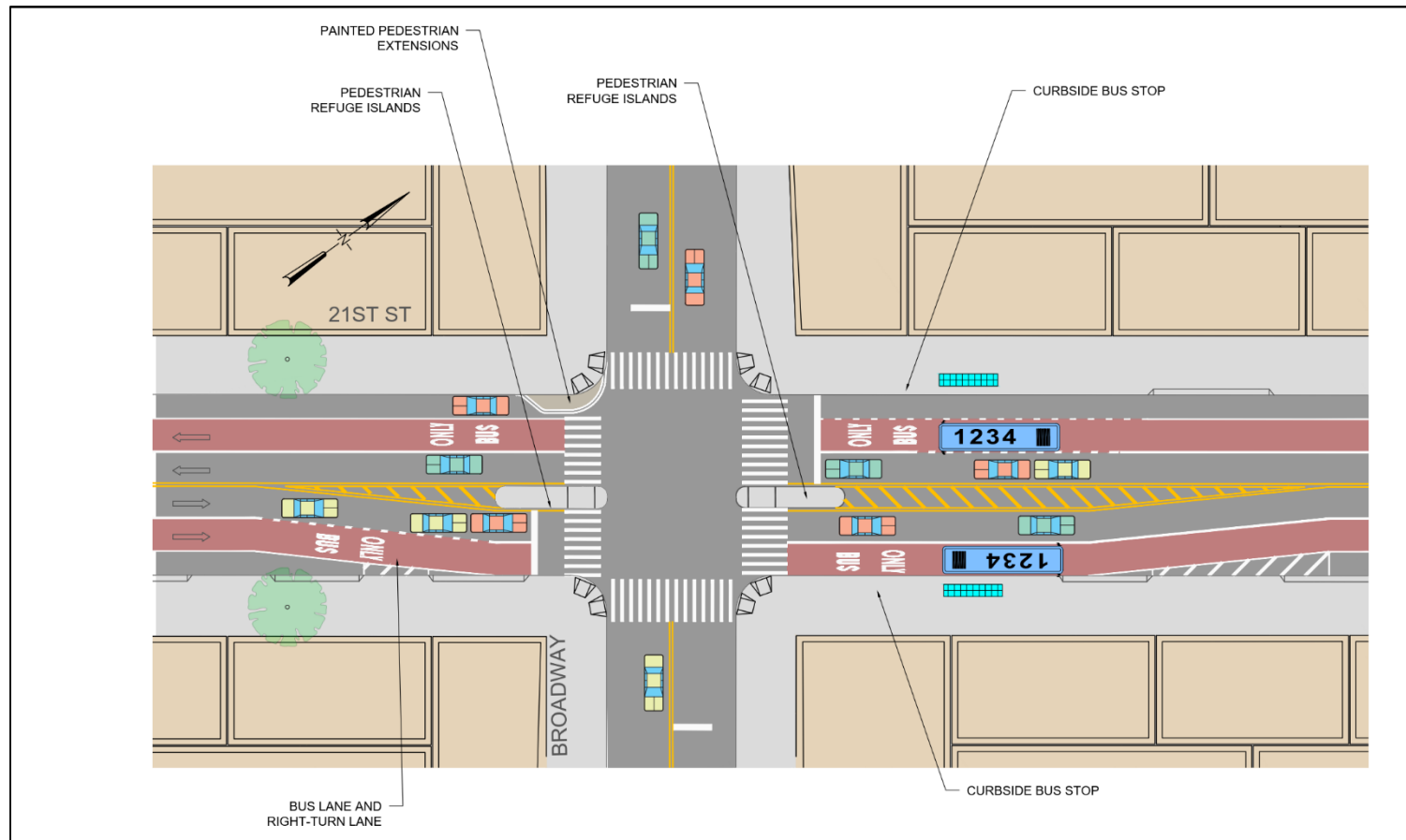
Conceptual Corridor Design

21st St @ Broadway - Existing



Conceptual Corridor Design

21st St @ Broadway - Proposed



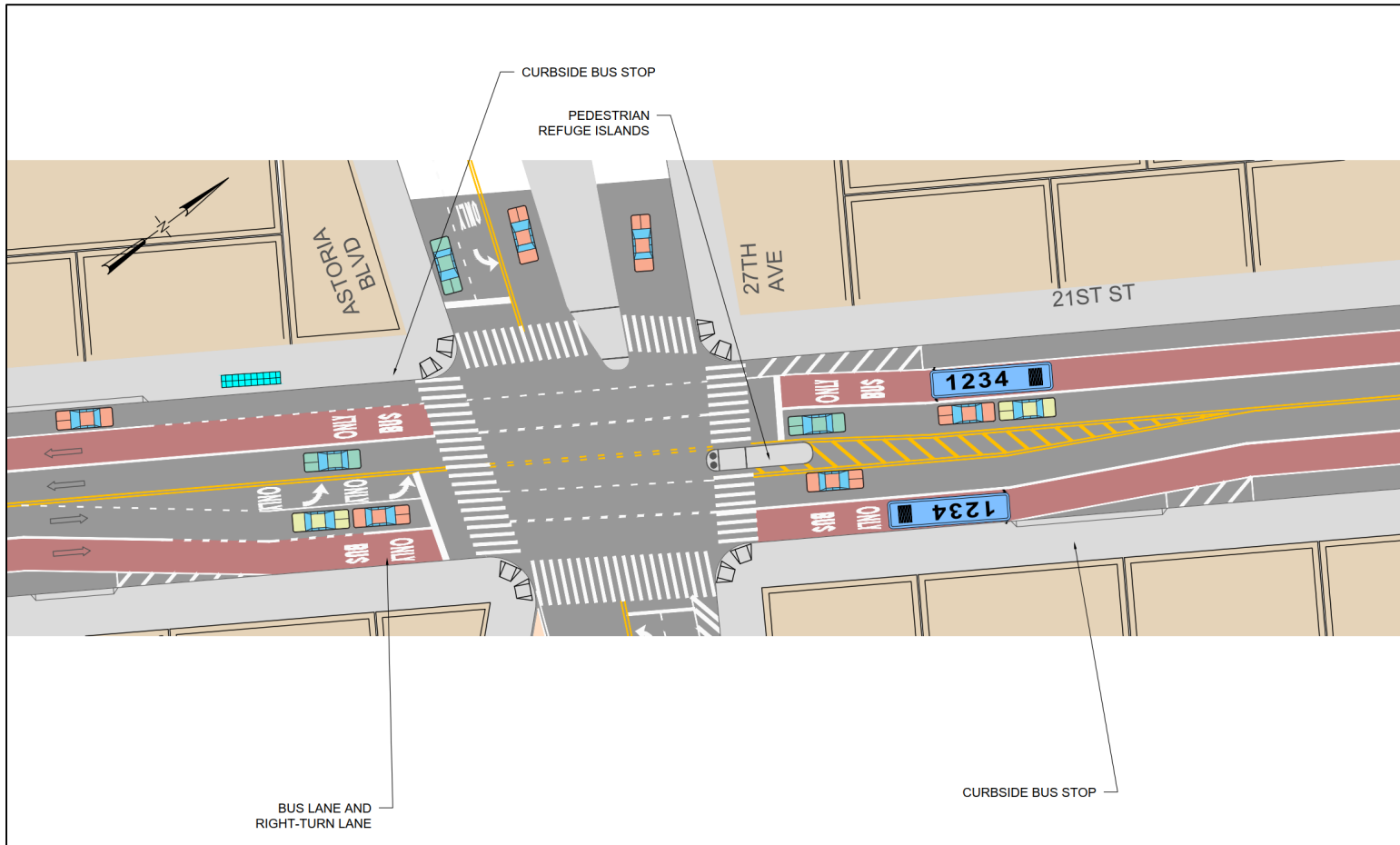
Conceptual Corridor Design

21st St @ Astoria Blvd - Existing



Conceptual Corridor Design

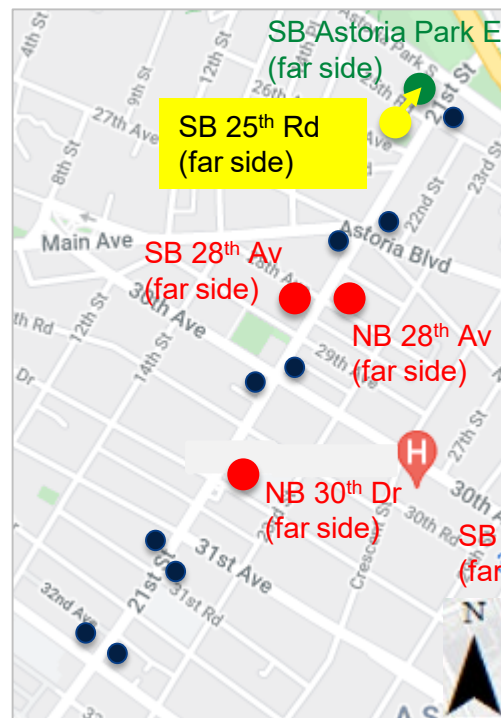
21st St @ Astoria Blvd - Proposed



Conceptual Corridor Design

Bus Stop Balancing

- Bus stops on 21st Street often closer than MTA Guidelines (750')
- Very closely spaced stops reduce bus speed and reliability
- MTA and DOT proposing removal or move of nine stops
 - NB 30th Dr, SB 36th Ave, and SB 33rd Ave all had less than 100 daily passenger ons and offs
 - 28th Ave, 36th Ave, and 38th Ave stops less than 500' from adjacent stops
 - SB 25th Rd moved to locations with better bus stop conditions
- No changes to stops south of 38th Avenue



KEY:



Existing bus stop



Red stop removed



Bus stop moved

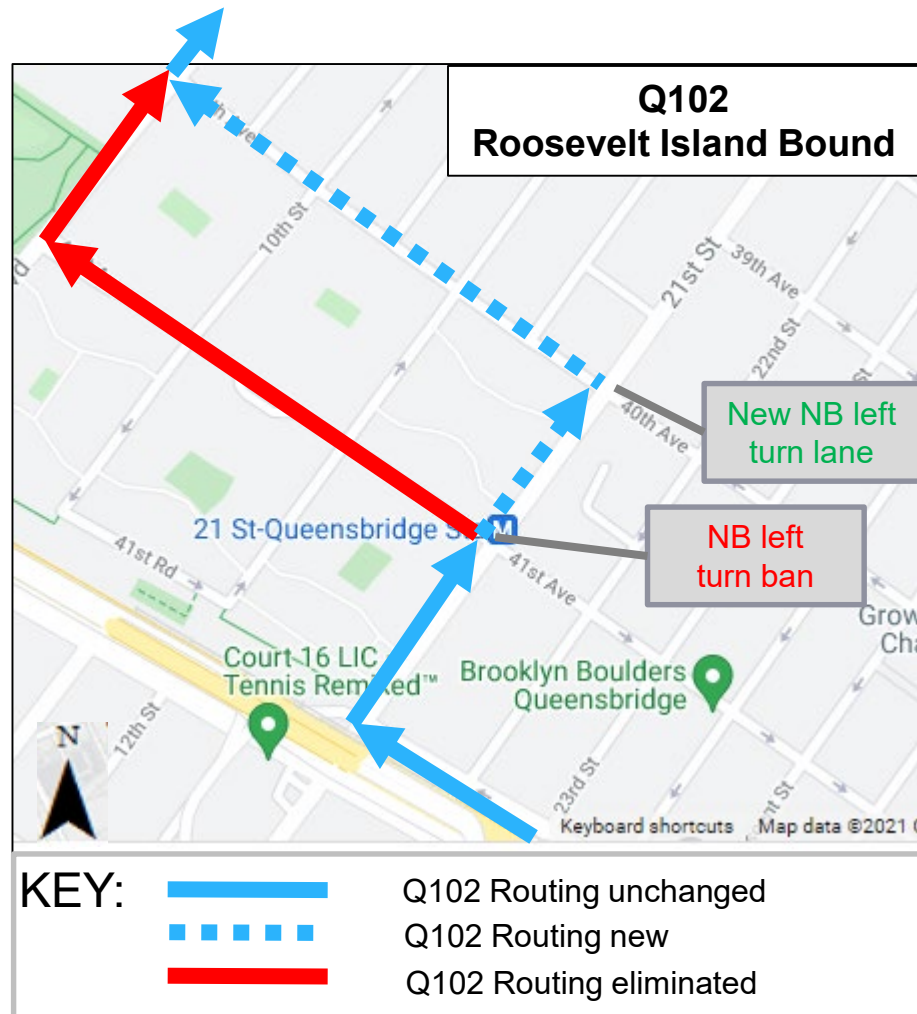


New bus stop

Conceptual Corridor Design

Bus Route Change

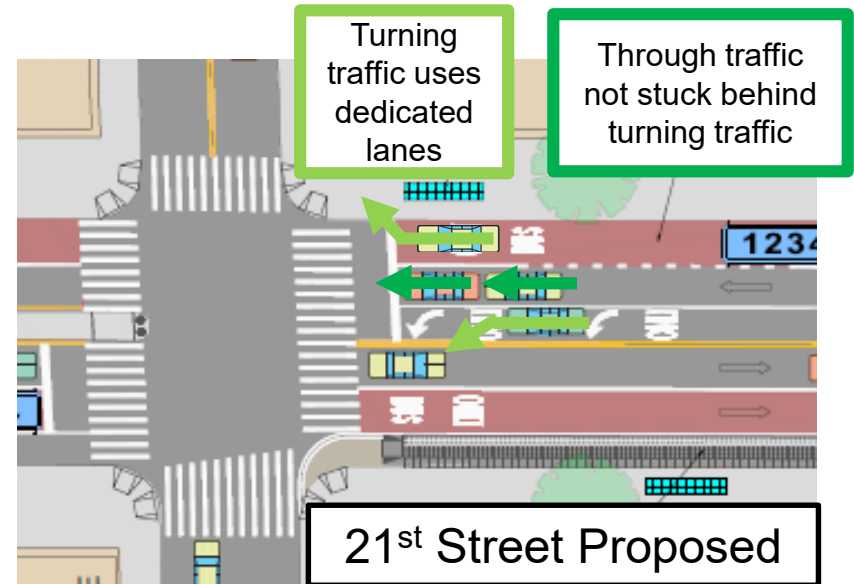
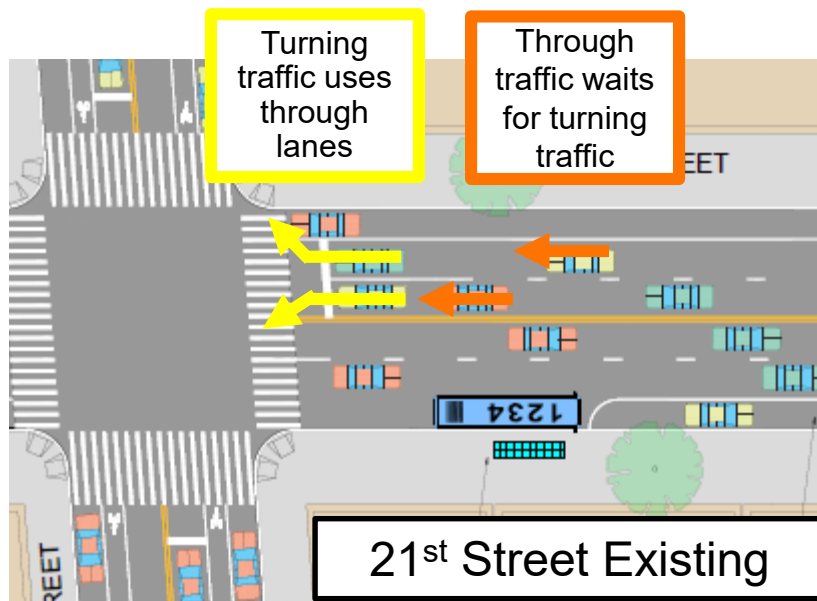
- Roosevelt Island-bound Q102 bus currently turns left at 41st Avenue
- Proposed design provides dedicated northbound left turn lane at 40th Ave
- New routing uses 40th Ave instead of 41st Ave
- No changes proposed to Q102 in Astoria-bound direction
- No other bus route changes proposed



Conceptual Corridor Design

Traffic Considerations

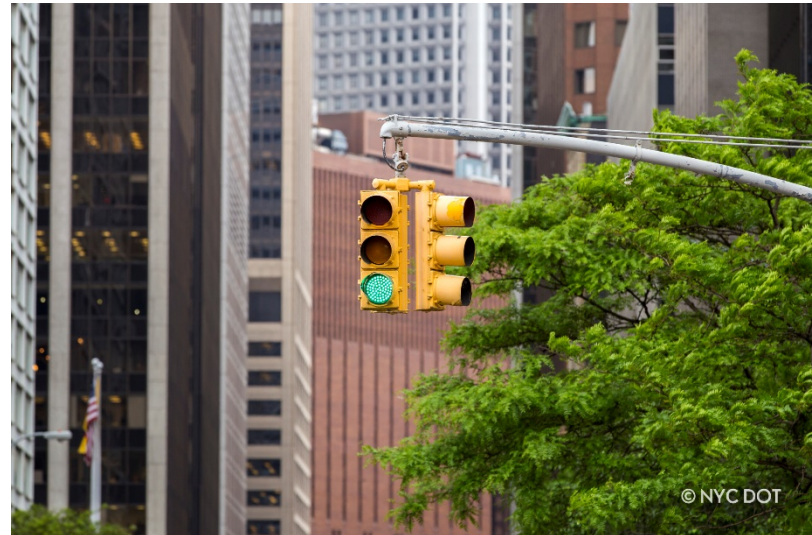
- To improve bus travel and pedestrian safety project reduces through travel lanes from two to one in each direction
- However, left turn bans, left turn lanes, and right turns made from bus lanes take turning traffic out of the through lane



Conceptual Corridor Design

Signal Timing

- DOT will adjust signal timing to optimize for new design
- In some cases, green time will be re-allocated to 21st Street from side streets



Conceptual Corridor Design

Traffic – What to Expect

- Initial congestion likely as drivers get used to new design of 21st Street
- Conditions will improve over time due to **Triple Divergence**

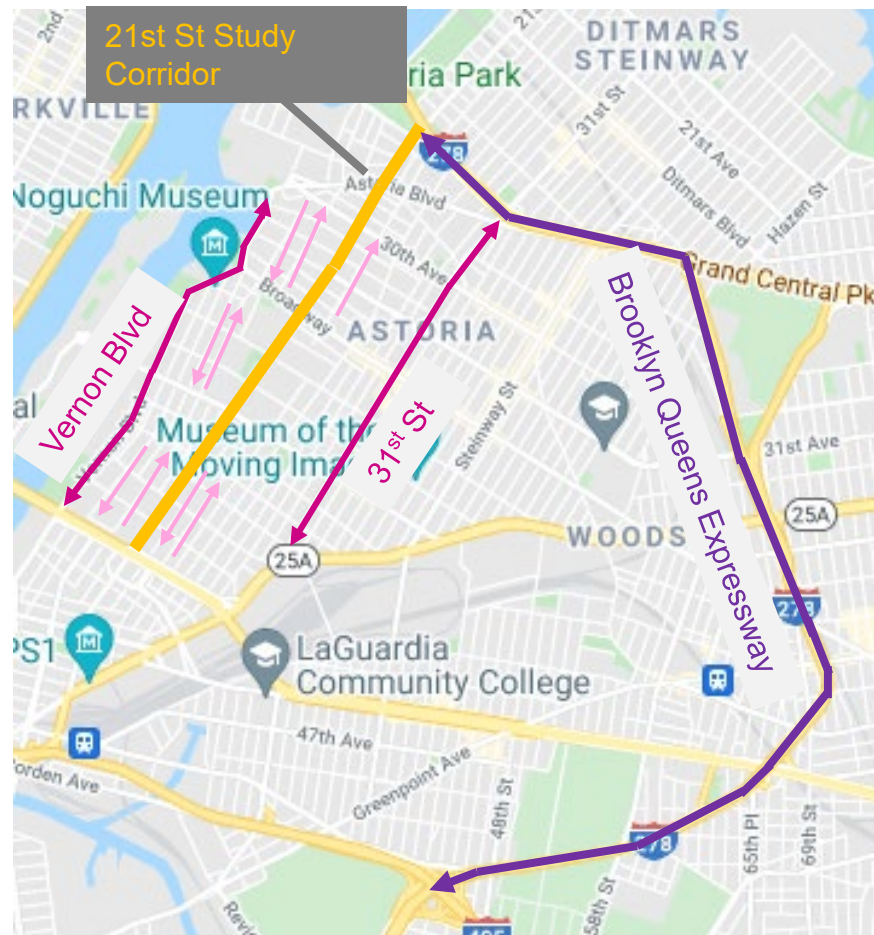
Triple Divergence – When overall capacity decreases, drivers will seek out other modes, travel during other times of day or use alternative routes.

Triple Divergence		
1.	Mode	Some drivers will shift to other means of travel. Increases in bus speed and reliability will make that mode more attractive
2.	Time	Some drivers will choose to travel at off-peak times.
3.	Route	Some drivers will use parallel streets to reach their destination.

Conceptual Corridor Design

Traffic Diversions

- The majority of current traffic volumes can be accommodated on 21st St
- Regional through traffic may use BQE
- Some traffic may divert to Vernon Blvd or 31st St
- Many local north-south alternatives for local trips



KEY:

- ↔ Regional route
- ↔ Through route
- ↔ Local connections

Conceptual Corridor Design



Questions and Comments?



Other Improvements

Ongoing Investigations

1) Vehicle Loading Zones

- Goal = reduce double parking
- Time lapse camera observations planned
- Curbside management plan to be developed

2) Sidewalk Tree Plantings

- DOT has requested survey by Department of Parks and Recreation
- Expected to be complete by end of year

3) Bus Lane Enforcement

- Will investigate for 2022 installation of road side cameras
- MTA piloting cameras on buses – will eventually be citywide

4) Transit Signal Priority

- Have requested study
- If feasible would be implemented in 2022

Next Steps

- Virtual Public Meeting - December
- Community Board Presentation – Early 2022
- Please provide any additional thoughts and comments to DOT
 - John O'Neill - joneill@dot.nyc.gov



Thank You!



NYC DOT



NYC DOT



nyc_dot



NYC DOT