Fordham Road – Inwood Bus Priority

Community Board 6 Transportation Committee – June 22, 2023

BETTERBUSES

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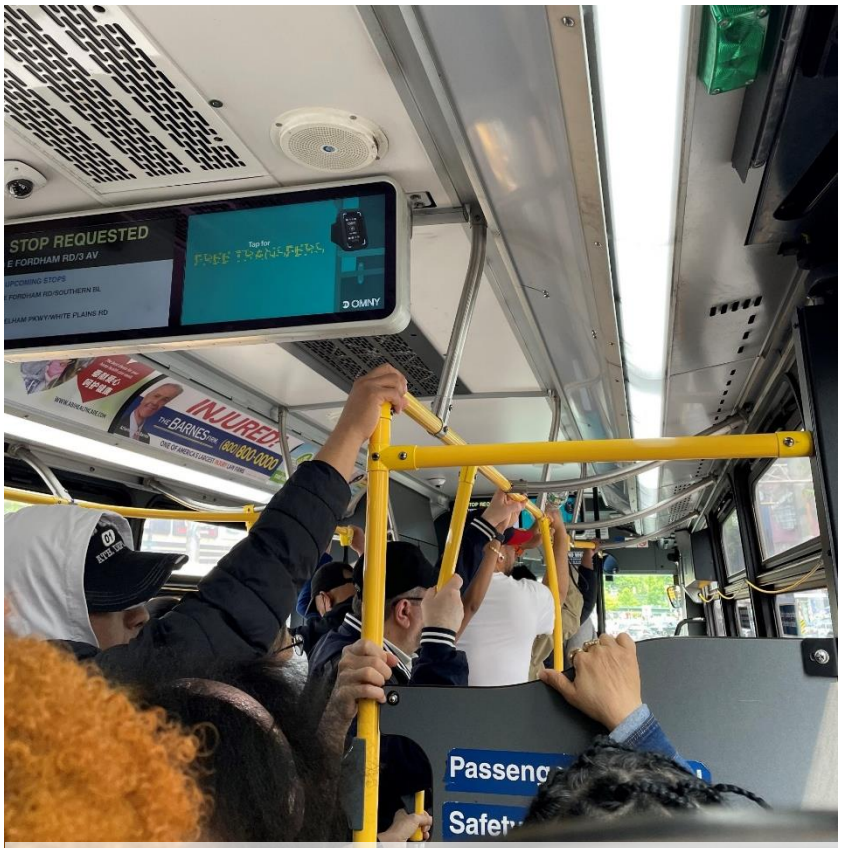


Bx12 SBS, Fordham Rd at 2pm on May 15, 2023

Project Background

Why Fordham Road?

- In 2008, MTA and DOT launched the **first Select Bus Service (SBS)** route on the Bx12
- Bx12 is the **busiest bus route** in the Bronx, and second busiest in NYC after the M15
- Critical **crosstown transportation corridor** and serves as a major **Bronx-Manhattan connection**
- **85,000 average daily bus riders** on 5 routes (Bx12-SBS + Local, Bx9, Bx17, Bx22)
- This area of the city is located within a **Tier 1 Priority Investment Area** in the NYC Streets Plan
- **Bus riders and pedestrians form the majority** of roadway users on Fordham Road
- **62%** of households on Bx12 corridor have no access to a private vehicle. **71%** commute to work via public transit, walking, or biking

Bx12 SBS, Fordham Rd at University Ave

- Fordham Rd is a **Vision Zero Priority Corridor with 4 VZ priority intersections** at Sedgwick, University, Grand and Jerome Aves
- **83 persons killed or significantly injured** between 2014-2018 between Deegan and Boston Road

Existing Bus Priority

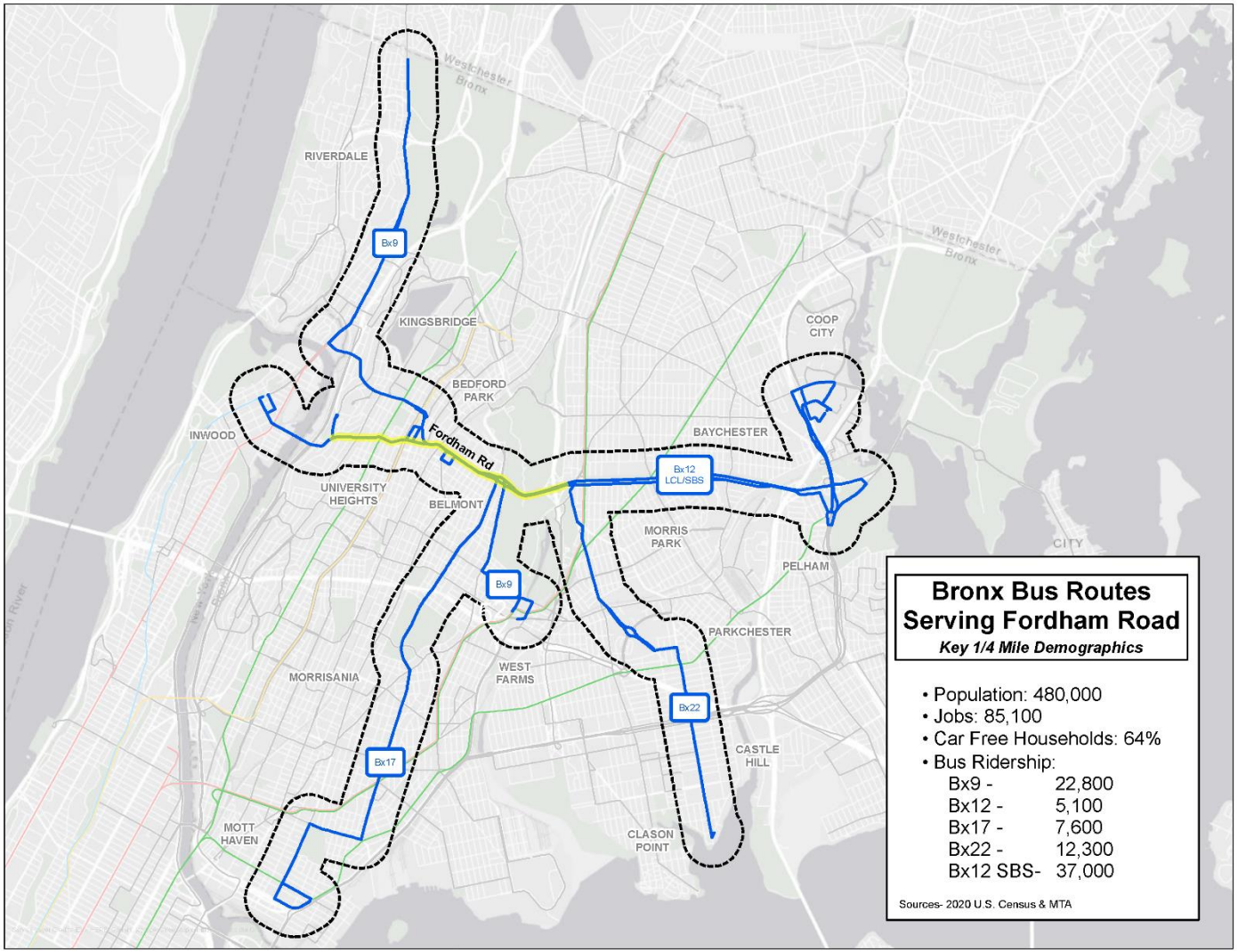
- Currently only curbside bus lanes exist on Fordham Rd
- Along most of the corridor, bus lanes are only in effect in peak periods, Monday-Friday, 7AM to 7 PM, with a two-hour midday window for deliveries
  - Westbound 7 AM to Noon, and 2 PM to 7 PM
  - Eastbound 7-10 AM, and Noon to 7 PM
- There is a segment of curbside bus lanes in western section of Fordham, from Sedgwick Ave to University Ave, that are in effect 7am-7pm Monday-Friday, without the two-hour midday break

Curb Demand Challenges

- Curbside bus lanes are a less efficient means of balancing bus priority and curb access
- Deliveries are only permitted during a 2-hour window in the midday when the bus lanes are not in effect
- Expeditious pick-ups and drop-offs by passenger cars are allowed at any time, regardless of bus lane hours, which causes further delays for buses needing to weave in and out of traffic
- Observations and data show that existing curbside bus lanes are frequently blocked throughout the day

Fordham Rd and Valentine Av

MTA Bus Routes on Fordham Rd



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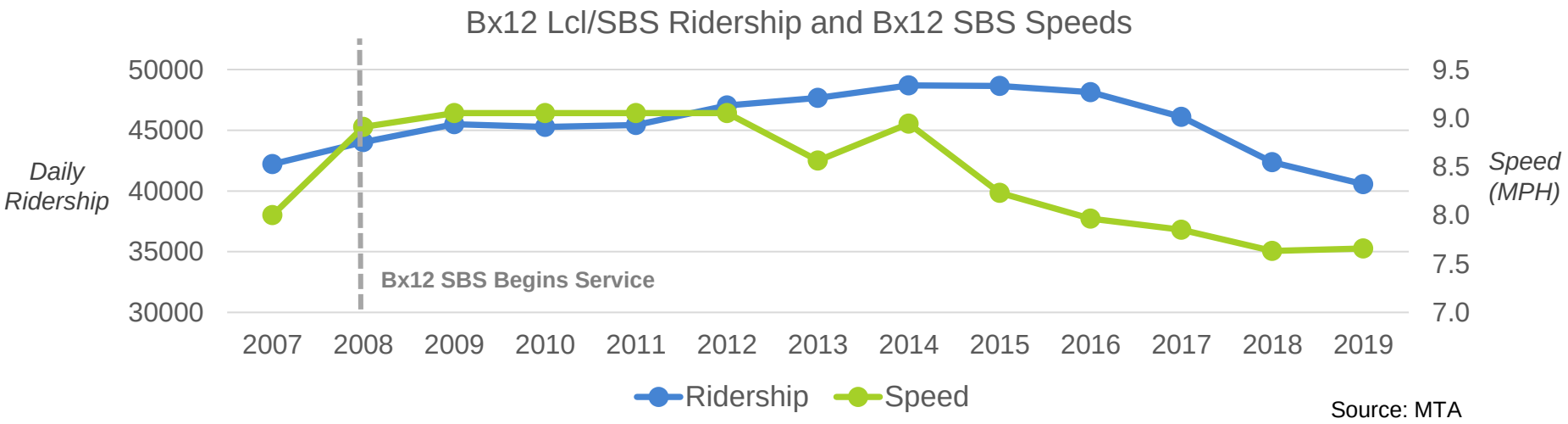
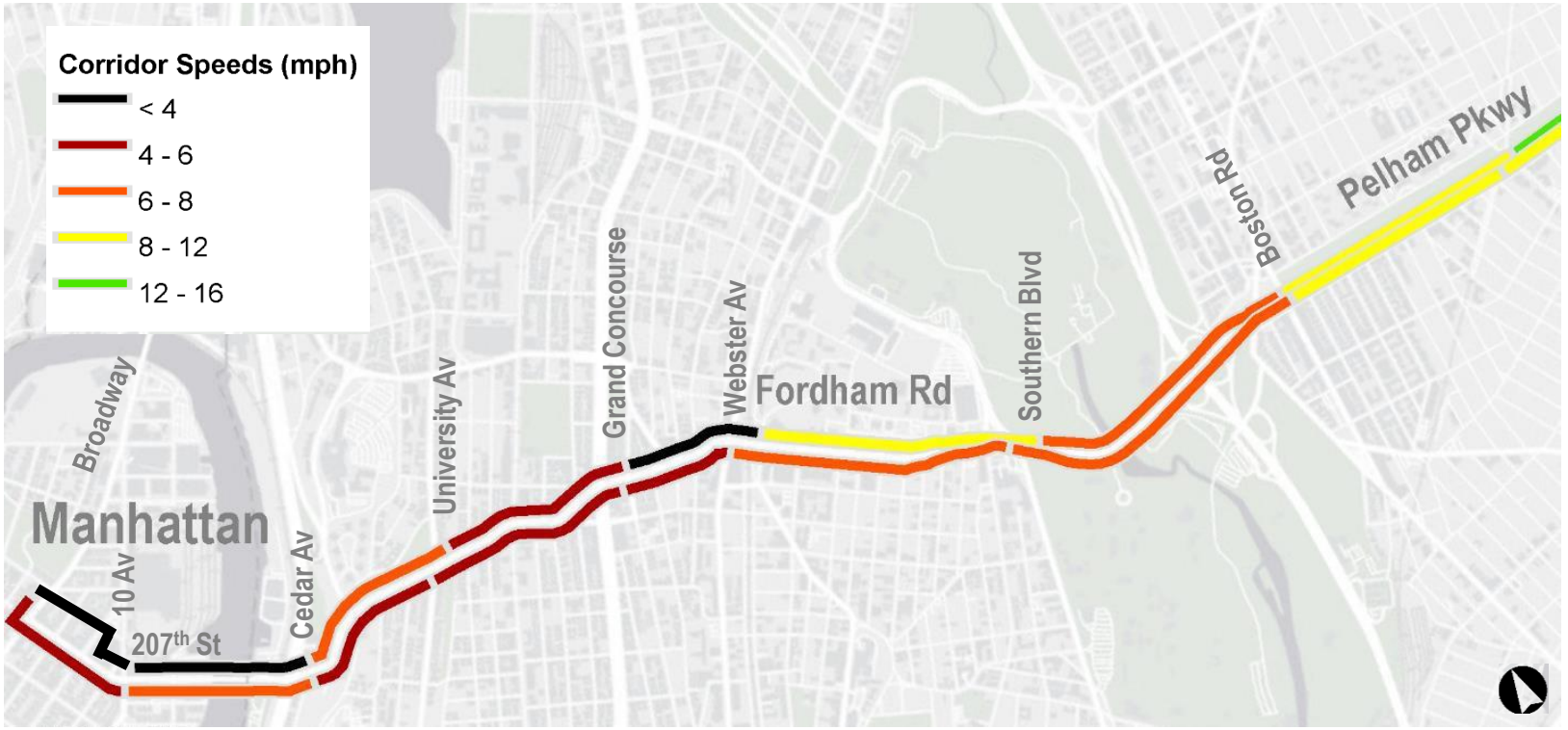
Bus Speeds and Ridership

- Service and street design changes resulted in improvements for bus service, particularly after implementation of Select Bus Service in 2008
- In recent years, bus speeds and ridership have declined



Source: MTA

Bx12 SBS Bus Speeds



Source: MTA

- Bx12-SBS bus speeds are slowest from Boston Rd to Broadway/Isham St in the westbound direction, and from 207th St/Broadway to Boston Rd in the eastbound direction
- Major segments of congestion include the University Heights Bridge and between Webster Ave and Grand Concourse

Fordham Road Deserves Better

- DOT's transit toolkit has evolved since the Bx12 SBS launch in 2008
- Commercial vehicles illegally park in the bus lane if they do not conduct deliveries within the 2-hour midday window
- Buses are forced to drive in general travel lanes, creating even greater congestion for drivers and 85,000 bus passengers
- The existing condition on Fordham Rd does not work for **any** road user
- DOT now has a stronger street improvement toolkit to address these issues

Fordham Rd and Webster Av

Proposed Alternatives Summary

Three alternatives, initially proposed at CAB #3 in March 2022 have been under discussion/study:

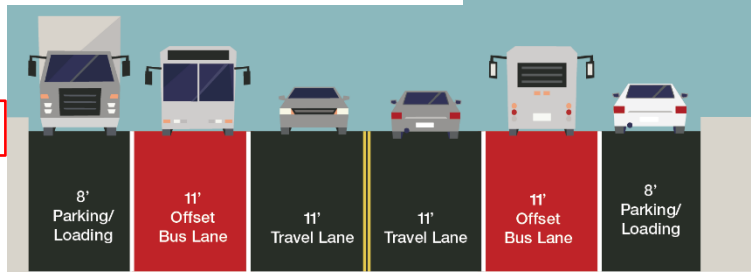
Will continue to study

Alternative A: Offset Bus Lanes in Both Directions:
Convert existing curbside bus lanes to offset lanes and extend offset lanes. In effect at all times (24/7).

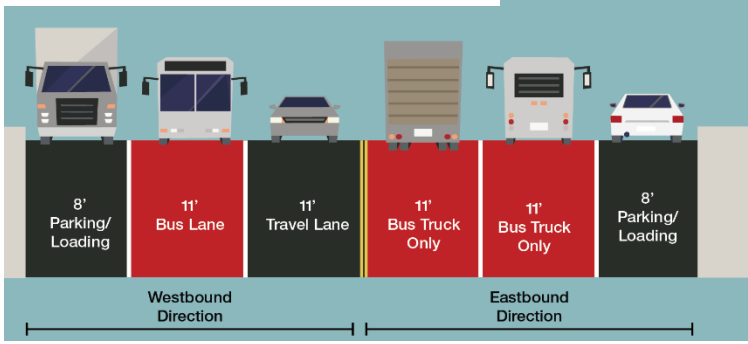
Alternative B: Eastbound Busway from Morris Av to Webster Av:
Eastbound through traffic restrictions on Fordham Rd, except for buses and trucks, with local access on all blocks. Offset lane in westbound direction and offset bus lanes as proposed in Alternative A outside the Busway section. In effect at all times (24/7).

Alternative C: Two-Way Busway between Jerome & Webster Aves:
Both eastbound and westbound through traffic restrictions on Fordham Rd, except for buses and trucks, with local access on all blocks; also includes offset bus lanes proposed in Alternative A outside the Busway section. In effect at all times (24/7).

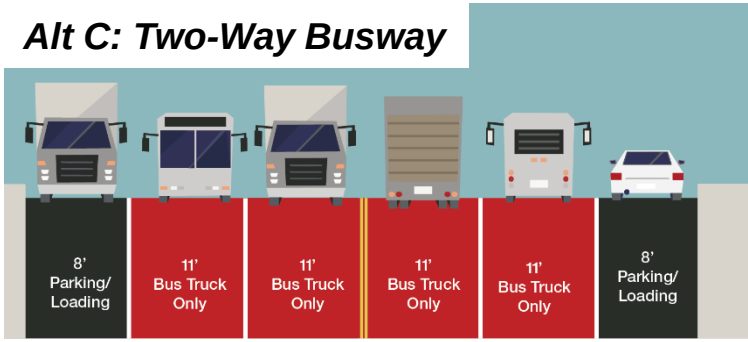
Alt A: Offset Bus Lanes



Alt B: Eastbound Busway



Alt C: Two-Way Busway



Timeline of Outreach

1. Meetings, Project Briefings, Walkthroughs

Over 30 Individual Community Outreach Events to Date

1. MTA Bronx Bus Network Redesign Workshop at Davidson Community Center – June 25, 2019
2. Merchant Survey – June 2019
3. Shopper Survey at Fordham Plaza – July 2019
4. MTA Bronx Bus Network Redesign Presentations to BX Community Boards 5, 7, 12 & MN CB 12 – November – December 2019
5. Association for Better NY Public Polling on transportation needs – November 2020
6. **Community Advisory Board Meeting #1 – January 14, 2021**
7. **Community Advisory Board Meeting #2 – February 17, 2021**
8. Presentation to Belmont BID – March 26, 2021
9. Presentation to Fordham BID – April 5, 2021
10. Public Workshop – June 2, 2021
11. **Community Advisory Board Meeting #3 – March 15, 2022**

Outreach since CAB 3 meeting

12. Briefing with Councilmember Feliz, Fordham BID, Belmont BID, and community stakeholders – August 26, 2022
13. Street Intercept Survey along Fordham Road – October 2022
14. Walkthrough with DOT Commissioner, NYCT President, Bronx BP, CM Feliz, CM Sanchez – November 16, 2022
15. Project briefing with Bronx BP staff – December 21, 2022
16. Briefing with Belmont BID and City Hall – January 18, 2023
17. Briefing with Small Business Services – February 9, 2023
18. Briefing with Rider's Alliance and Transportation Alternatives – March 14, 2023
19. Briefing with New York Botanical Garden and Bronx Zoo – March 27, 2023
20. Meeting with Councilmember Sanchez – March 28, 2023
21. Briefing with Fordham University – March 30, 2023
22. Arthur Ave Shopper Survey – April-May 2023
23. Meeting with Councilmember Feliz – May 4, 2023
24. Meeting with Belmont & Fordham BID, DOT Commissioner, NYCT – May 15, 2023
25. **Community Advisory Board Meeting #4 – May 31, 2023**
26. CB 7 Transportation Committee – June 1, 2023
27. CB 11 Transportation Committee – June 5, 2023
28. Briefing with Rep. Ritchie Torres – June 12, 2023
29. Briefing with Senator Rivera – June 13, 2023
30. CB 5 Municipal Services Committee – June 13, 2023
31. Briefing with Bronx Zoo, Botanical Garden, Fordham University – June
32. Briefing with Assemblymember Tapia – June 14, 2023
33. Briefing with Bronx Borough President – June 15, 2023
34. Briefing with Senator Jackson – June 21, 2023

Recent Outreach Events and Studies

March 2022 to Present

1. March 15, 2022 – Community Advisory Board Meeting 3
2. Received letters from CM Feliz, Fordham BID, Belmont BID, Bronx Borough President, and CB 6, listened to concerns through multiple meetings and project briefings
3. DOT Commissioner walkthrough with NYCT President, Bronx Borough President, Councilmember Feliz, Councilmember Sanchez in November 2022
    - **Outcome:**
        1. Put project on hold and established a 6-month ABLE camera evaluation
        2. Conducted surveys along Arthur Ave
        3. Continued speaking to major community institutions to understand their transportation needs and concerns

DOT-Elected Officials Walkthrough – November 2022

Timeline of Outreach

2. Direct Engagement with the Fordham Community

Fordham Rd Merchant Survey

- In June 2019, NYC DOT Street Ambassadors visited 230 businesses on Fordham Rd and 207 St
- Availability of **parking/loading** was a key concern
    - Only 20% of businesses on Fordham Rd indicated that they are able to determine when their deliveries arrive
    - Complaints of customers receiving tickets during quick pickup/drop-off activity

Fordham Rd Shopper Survey

- Surveyed 175 people in July 2019
- **86% of visitors to businesses on Fordham Road reported arriving by walking, bus, or train**
- 65% were from neighborhoods along or near the Fordham Road corridor

Bryan Park (Kingsbridge Rd)

Fordham Plaza (Night Market)


Grand Concourse

Public Polling

- Association for a Better NY (ABNY) and Change Research surveyed 302 respondents between November 16–19, 2020, including 275 from CBs 5, 6, and 7
- 79% support changes to city streets that can make **buses faster and more reliable**
- Respondents support additional bus priority measures on Fordham Rd
    - 89% support **improving existing bus lanes**
    - 66% support **additional bus lanes**
    - 70% support a **busway**
- 72% of non-bus riders support **improving the existing bus lanes on Fordham Rd**
- If buses along Fordham Rd were faster and more reliable, 67% of riders who ride once a week or less and 28% of non-riders stated that they would be **more likely to ride the bus.**

Virtual Public Workshop – June 2021

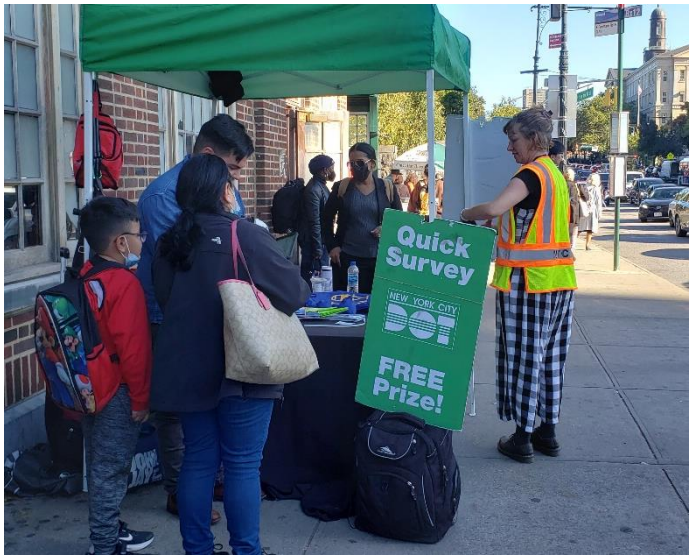
Main Takeaways:

- Serious **traffic congestion** along Fordham Rd
- Issues with **parking** and **curb access**
- Support for **physical barriers** for bus lanes
- Support for **offset bus lanes** to allow for parking along curb
- Support for **busway** option for congested areas
- **Bike and pedestrian safety** concerns near Major Deegan, Sedgwick Ave, and Grand Concourse

Example workshop slide, from Jerome Ave to Webster Ave

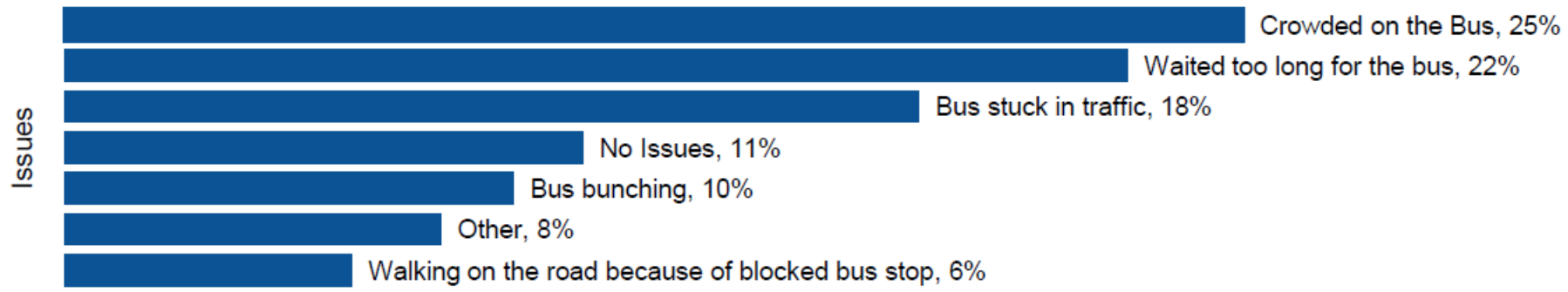
Fordham Rd Street Intercept Survey

- Surveyed 295 people and 400+ on-street conversations in October 2022
- **86% of pedestrians rode the bus** as their primary mode of transportation
- 34% of these respondents were on the corridor for shopping



What are the biggest issues with your bus rides along Fordham Rd? (n=409)

% of respondents reporting sentiments on buses when traveling on Fordham Rd as a bus rider.



Arthur Ave Shopper Survey

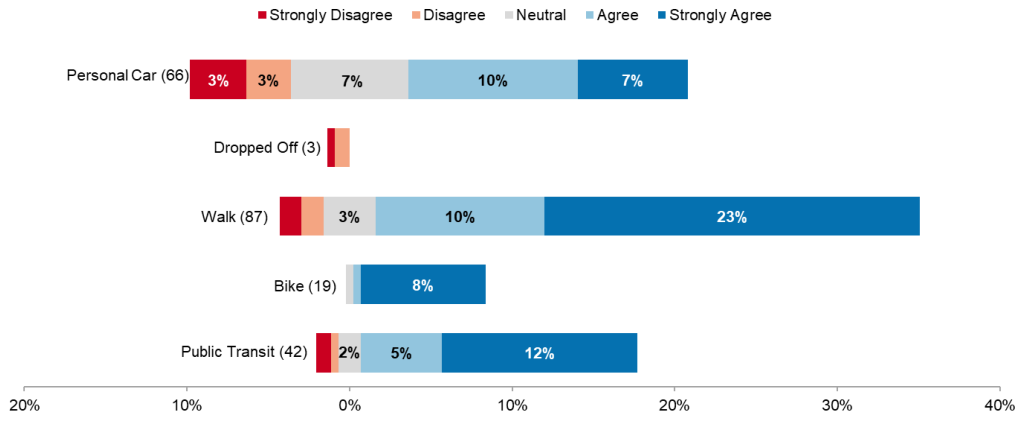
- Surveyed 221 people March - April 2023
- 70% of respondents came to Arthur Ave specifically to visit businesses
- 55% came for shopping and dining
- Most respondents supported a busway

Parking experience around Arthur Ave (n=66)	*Had trouble finding parking*	**55%**
	Paid for on street metered parking	**65%**
	Parked no more than two blocks away from destination	**67%**
	Found parking under 10 mins	**69%**
	Planned to park for at least an hour near Arthur Ave	**81%**

How do respondents feel about adding a busway along Fordham Rd?

Would you support a busway along Fordham Rd prioritizing buses and trucks by limiting thru traffic? (*Local access and parking for private vehicles would still be allowed*)

Sentiments expressed by respondents are based on their preferred mode of transportation for reaching the Arthur Ave area (n=221)



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Six-Month Camera Enforcement Evaluation

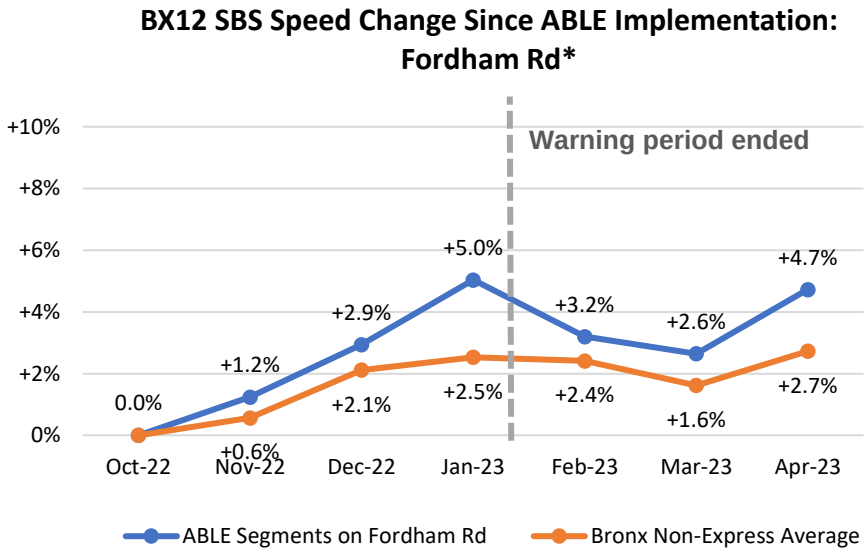
Fixed-Location Camera Violations

- There are currently **10 fixed-location** bus lane enforcement cameras along Fordham Road
    - 2 installed in 2011
    - 8 installed in 2013
- **5 cameras in Council District 15**
    - Issued 1,818 violations between November 2022 and April 2023
- **5 cameras in Council District 14**
    - Issued 2,708 violations between November 2022 and April 2023

Fixed-Location Bus Lane Enforcement Camera on Fordham Road

On-Bus Camera Bus Lane Enforcement (ABLE)

- ABLE implemented Bx12 SBS on **November 18, 2022** with a 60-day warning period
- Nearly **16,000 tickets were issued** on Fordham Road between Sedgwick Av & Southern Blvd between 11/18/22 and 4/21/23
- In April 2023, buses traveled **4.7% faster**
- Still slower than 2008 post-SBS bus speeds of 6.7 mph
- ABLE cameras do change driver behavior:
  - **86% commit only one violation**
  - 9% commit only two violations
  - 5% commit three or more



	Oct 2022 mph	Apr 2023 mph	Speed Change	Violations
Fordham Rd Average*	6.0	6.3	+4.7%	15,799
Bronx Average (non-express)	7.0	7.2	+2.7%	

*Note: bus speeds computed for the most common operating hours in each direction between Sedgwick Av & Southern Blvd: Eastbound 7a-10a & 12p-7p; Westbound 7a-12p & 2p-7p. Bus lane hours may vary.

ABLE Evaluation Conclusions

- ABLE bus lane enforcement is having a **positive effect** on bus speeds on Fordham Road
- Enforcement alone has not raised bus speeds to prior levels as **blockages remain frequent**
- Most violations are issued in the central and western parts of Fordham Road
- This improved bus lane enforcement, paired with improved bus lane designs, can further improve bus speeds for the 85,000 riders per day using Fordham Road

Fordham Road Traffic Analysis

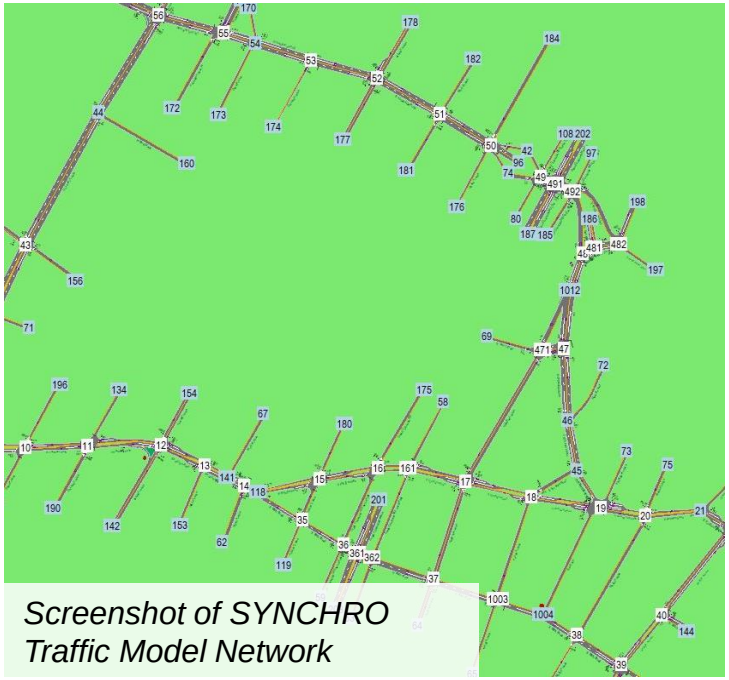
Traffic Analysis Methodology

1. **Count traffic & pedestrians** at over 60 intersections from Pelham Parkway to University Heights Bridge, and on 207th Street, Kingsbridge Road and 188th St.

2. **Analyze origin-destination** with anonymized GPS data from drivers on Fordham Rd used to understand diversion routes likely under a busway alternatives

3. **Model each intersection and analyze:**
   - Signal timing
   - Number of lanes and turning movements (left, straight, right)
   - Time and number of pedestrians crossing streets
   - For multiple alternatives, scenarios & improvements

4. **Validate model** with observations in-person of traffic flow, parking movements, loading, etc.

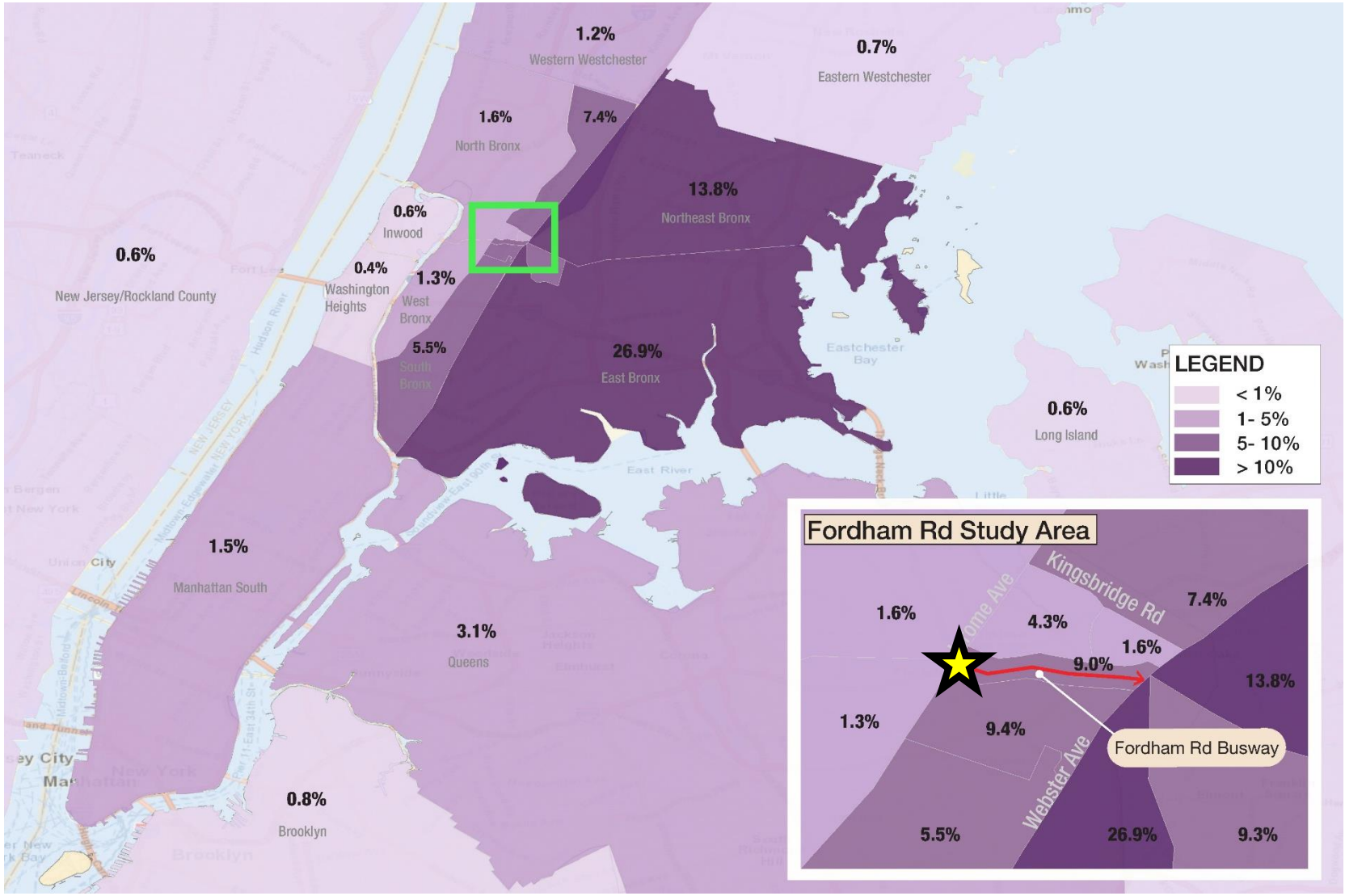


Screenshot of SYNCHRO Traffic Model Network

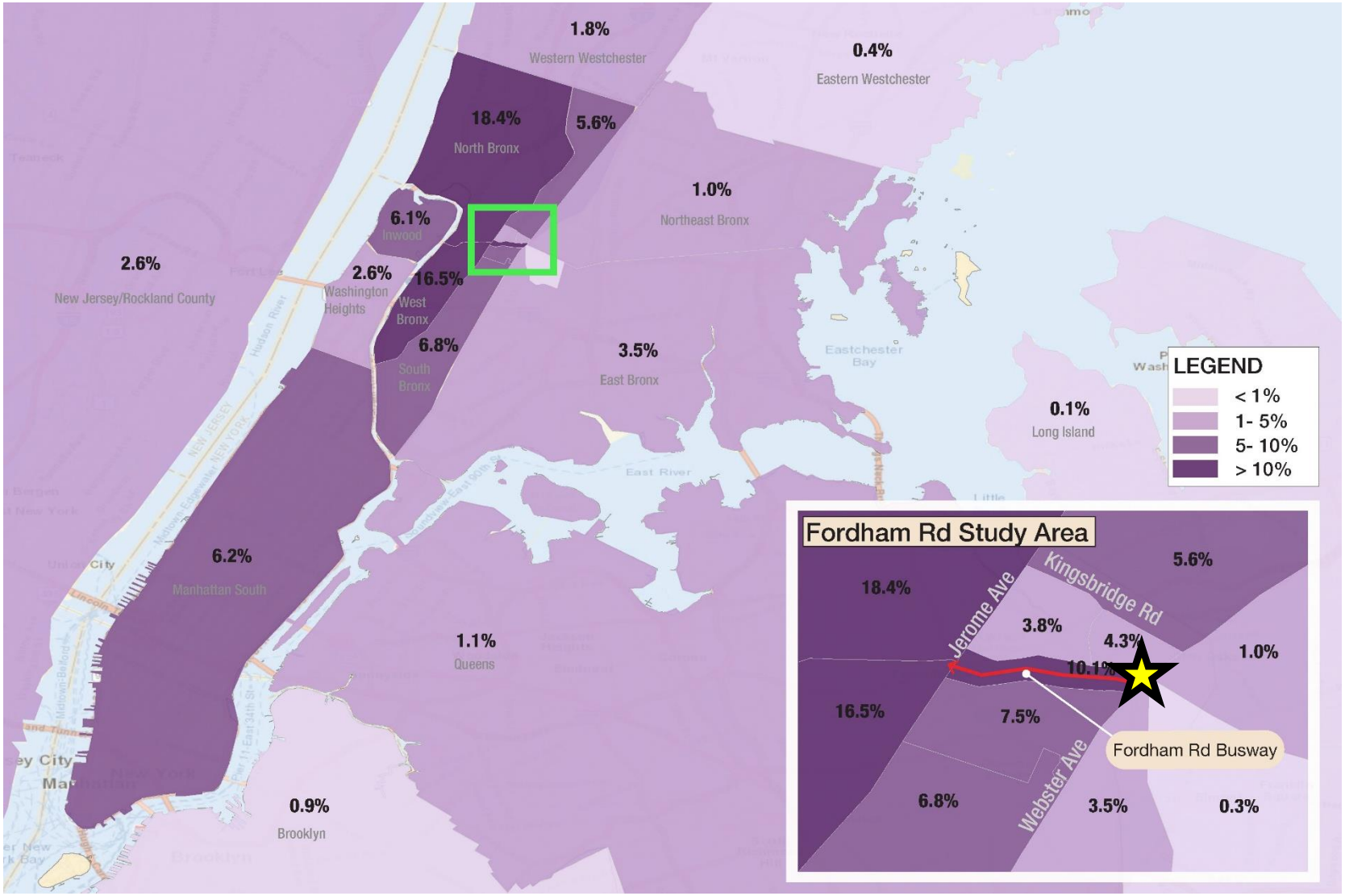
5. **Worst case scenario is analyzed:**
   - Traffic analysis software analyzes worst hours of day, longest queues, diversion patterns.
   - Realistically, some drivers divert to other routes or choose to travel at different times of day
   - Traffic analyses were prepared for a range of scenarios from no volume reduction up to a 40% reduction.

Result is a prediction of the future according to engineering standards

Fordham Rd Vehicle Origin-Destinations
Eastbound from Fordham Rd & Jerome Av



Fordham Rd Vehicle Origin-Destinations
Westbound from Fordham Rd & Webster Av



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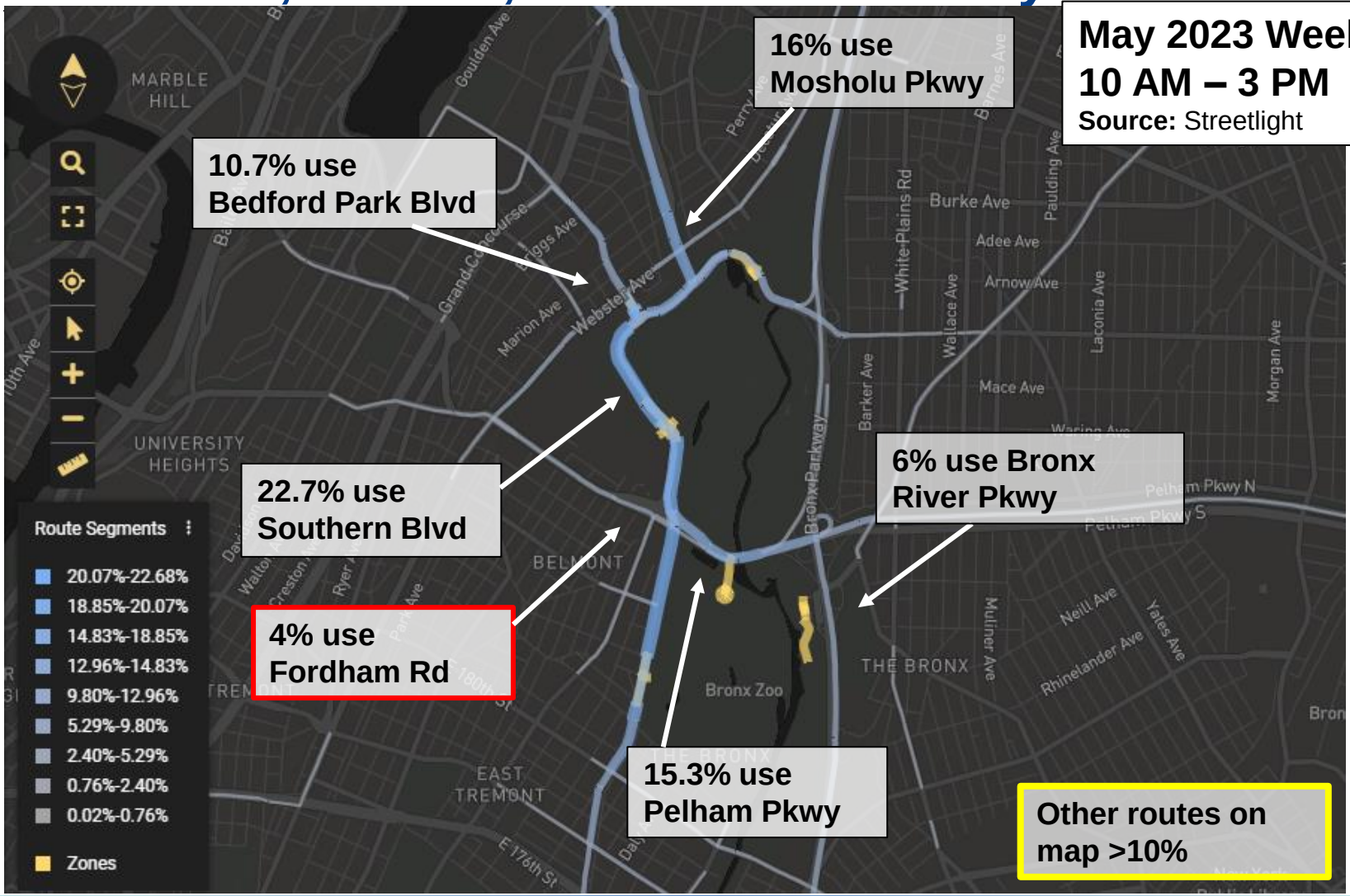
Origin-Destination Analysis for Car Drivers: Bronx Zoo, Garden, Fordham University

- Created zones to entrances of parking lots for Fordham University, Bronx Zoo, Botanical Garden
- Traffic analysis software uses anonymized cell phone data to model top routes that people in cars took to get ***to*** and ***from*** the parking lots
- Sample time period is May 2023 weekends 10am – 3pm
- Results are combined for all three institutions, but can isolate out in future analyses

Top Routes for Drivers: Driving *to* Parking Lots
Bronx Zoo, Garden, Fordham University



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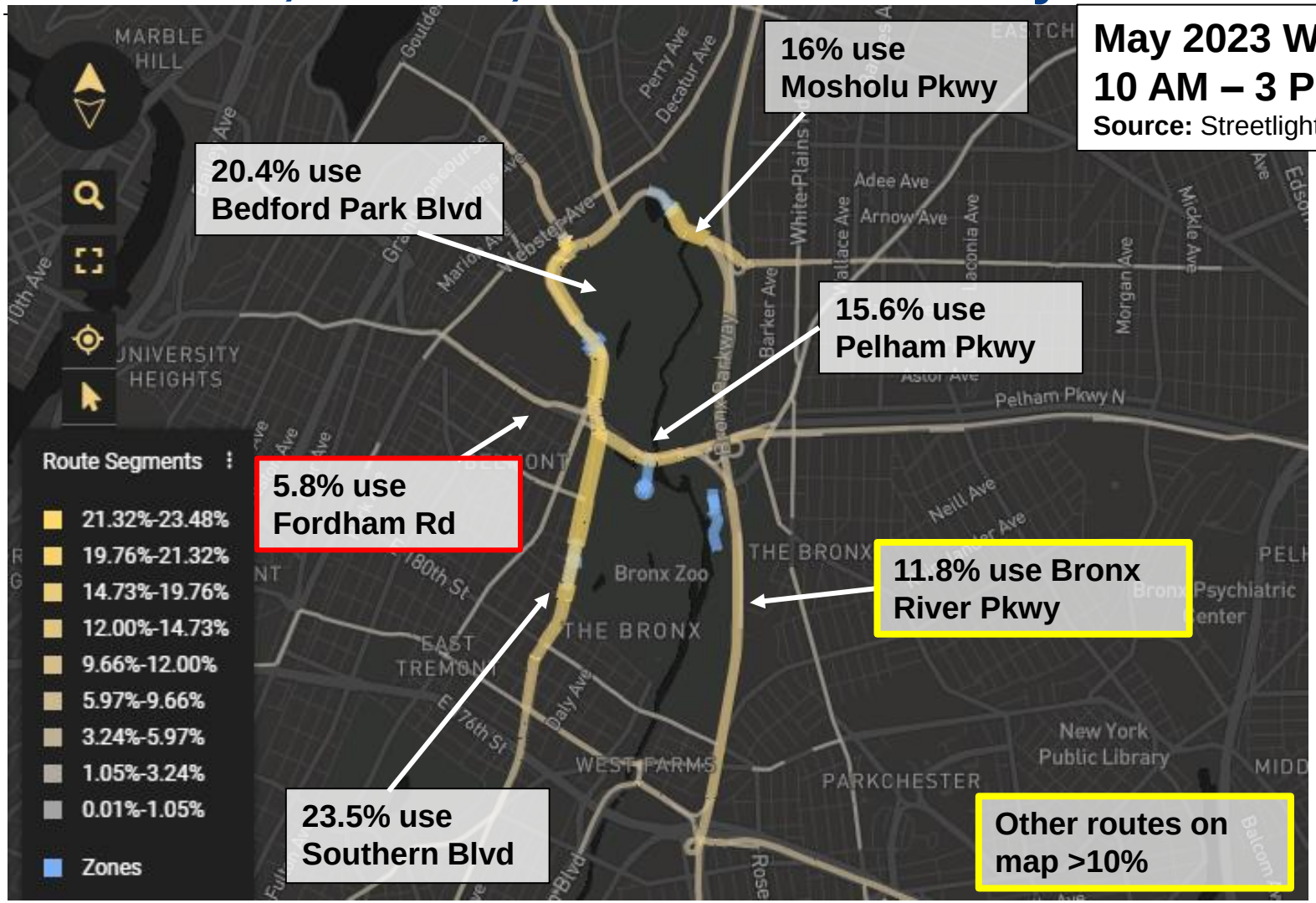
Top Routes for Drivers: Driving *from* Parking Lots Bronx Zoo, Garden, Fordham University



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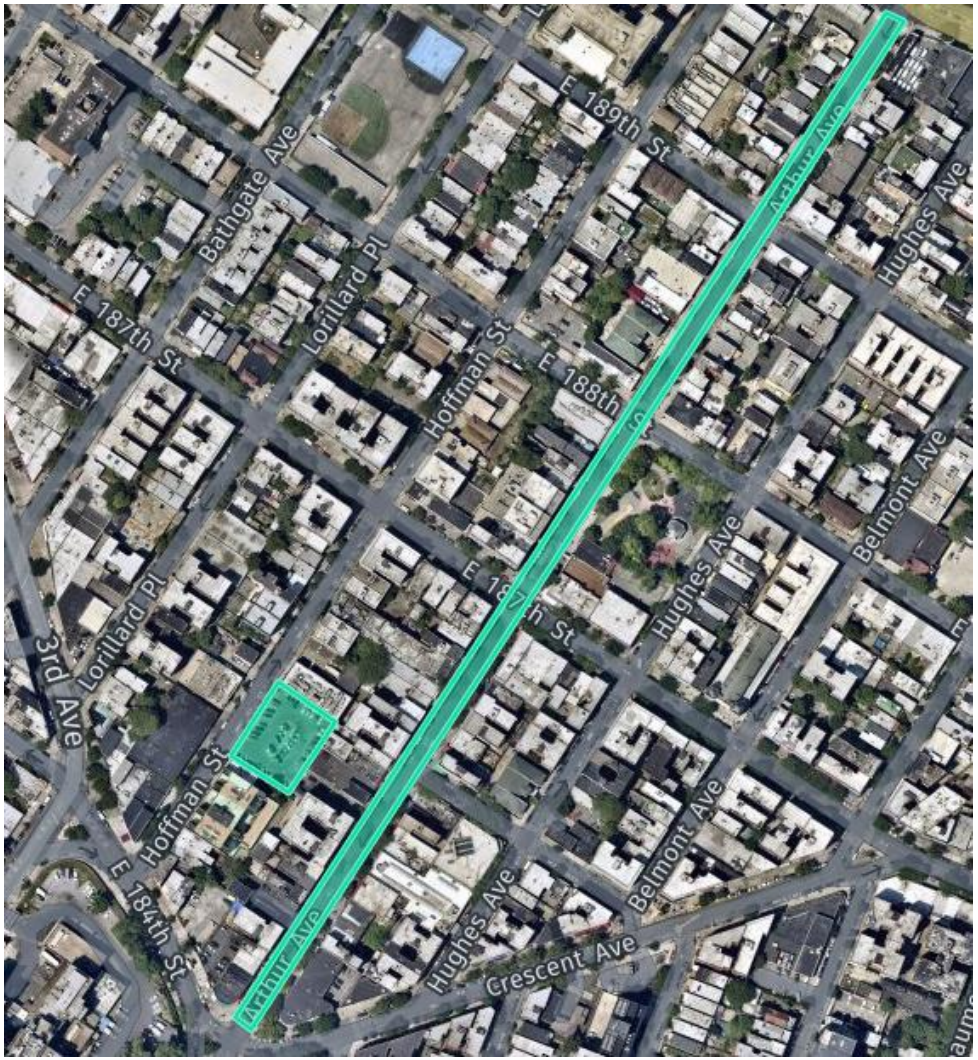
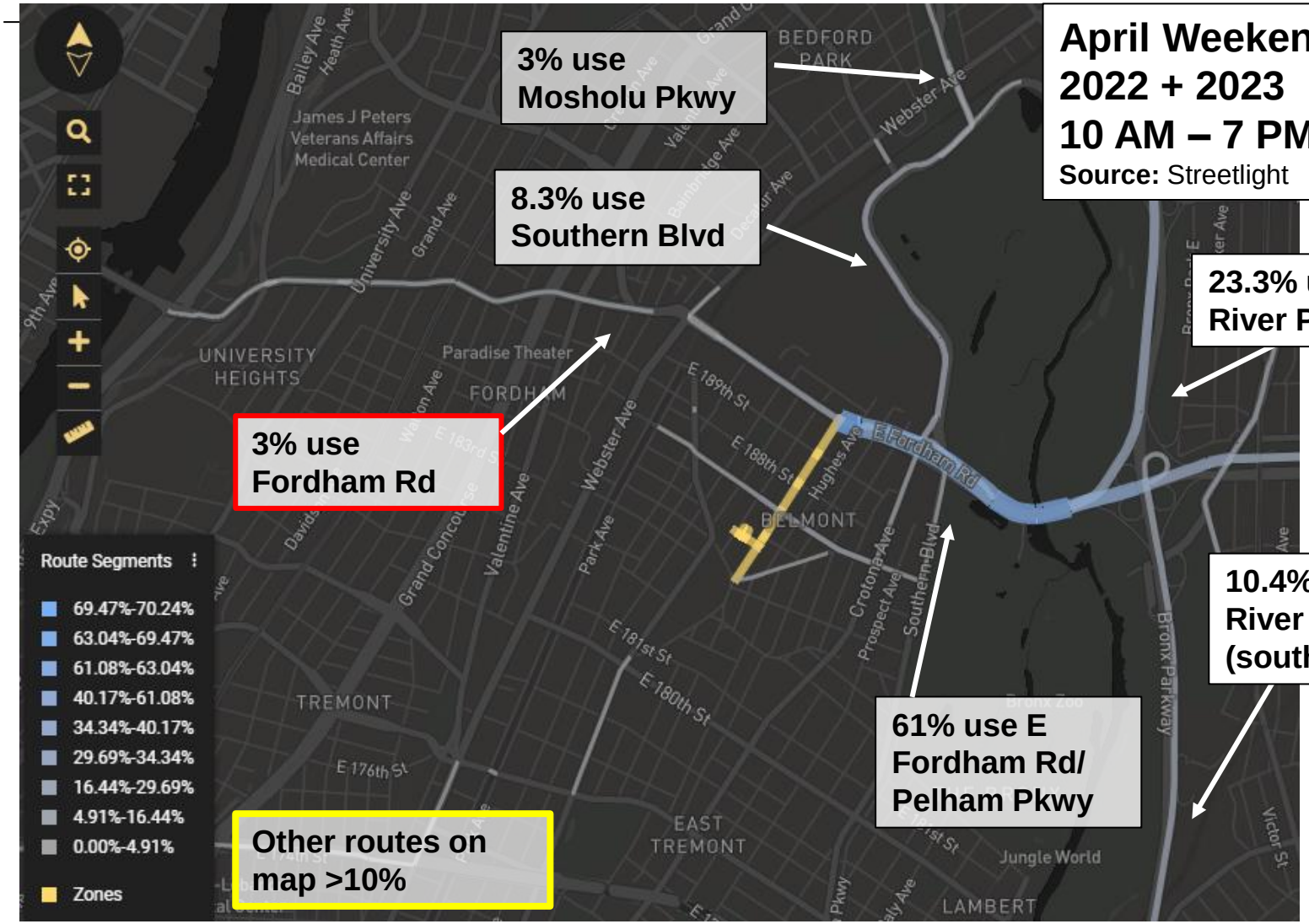
Origin-Destination Analysis for Car Drivers: Arthur Ave

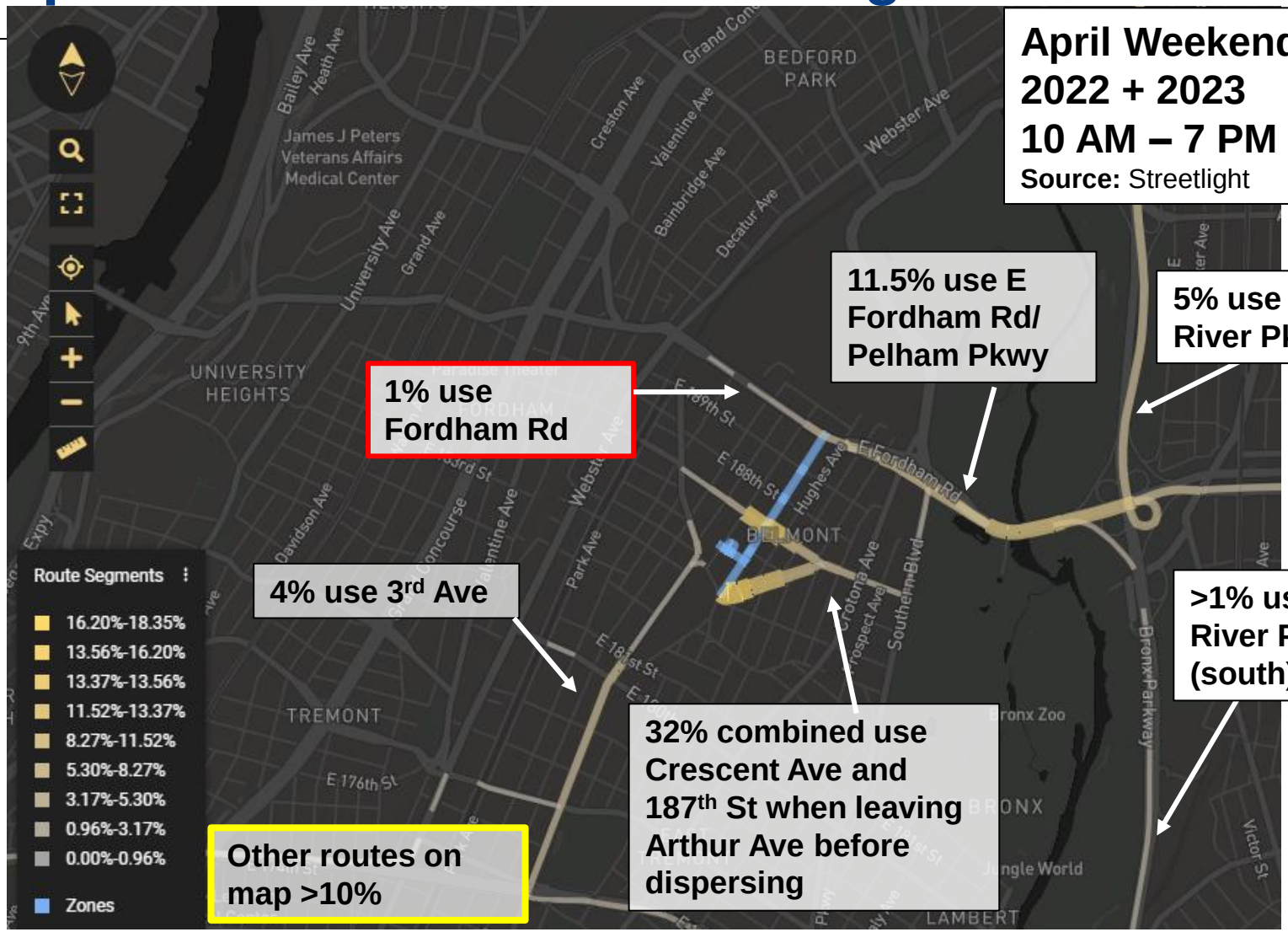
- Created zones for Arthur Ave corridor and Hoffman St parking lot
- Traffic analysis software uses anonymized smart car data **(Connected Vehicle Data – CVD**) to model top routes that people in cars took to get ***to*** and ***from*** the highlighted zones
- **Note:** because an entire corridor was included instead of just parking lots, CVD was used instead of cell phone data to isolate car drivers from the visitors who arrived by walking, transit, or biking
- Sample time period is April 2022 + 2023, weekends, 10am – 7pm.



Top Routes for Drivers: Driving *to* Arthur Ave



Top Routes for Drivers: Driving *from* Arthur Ave



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Traffic Analysis Model Results

3 Alternatives Being Studied

- DOT conducted a traffic analysis on three distinct design alternatives for bus priority treatments along the Bx12 corridor

    1. Alternative A: Offset Bus Lanes

    2. Alternative B: Eastbound Busway; Offset outside busway section

    3. Alternative C: Two-way Busway; Offset outside busway section

- Reported results reflect that about 20% of vehicles are expected to travel during other times than the peak hour, travel by a different mode, or take a roadway not in this network.

Alternative A: Offset Bus Lanes in Both Directions

Traffic Regulations:

- Bus-only lane located one-lane away from the curb in effect **at all times, 24/7**
- Single travel lane in both directions
- Buses still pull up to the curb to pick up passengers before continuing into offset lane

Offset Bus Lane Benefits:

- Curbside lane available for pick-up/drop-off & deliveries according to posted regulations – deliveries in bus lane are prohibited
- Buses have priority with fewer conflicts than curbside lanes
- Automated enforcement for double parking
- Reduced weaving by vehicles in single travel lane

Offset Bus Lanes on Webster Ave, Bronx
Launched in 2013

Alternative A: Offset Bus Lanes in Both Directions

- Existing curbside bus lanes along Fordham Rd would be converted to offset lanes, allowing for more curbside parking and loading zones, in effect 24/7
- Offset or curbside bus lanes explored on 207th St, from 10th Ave and through the University Heights Bridge

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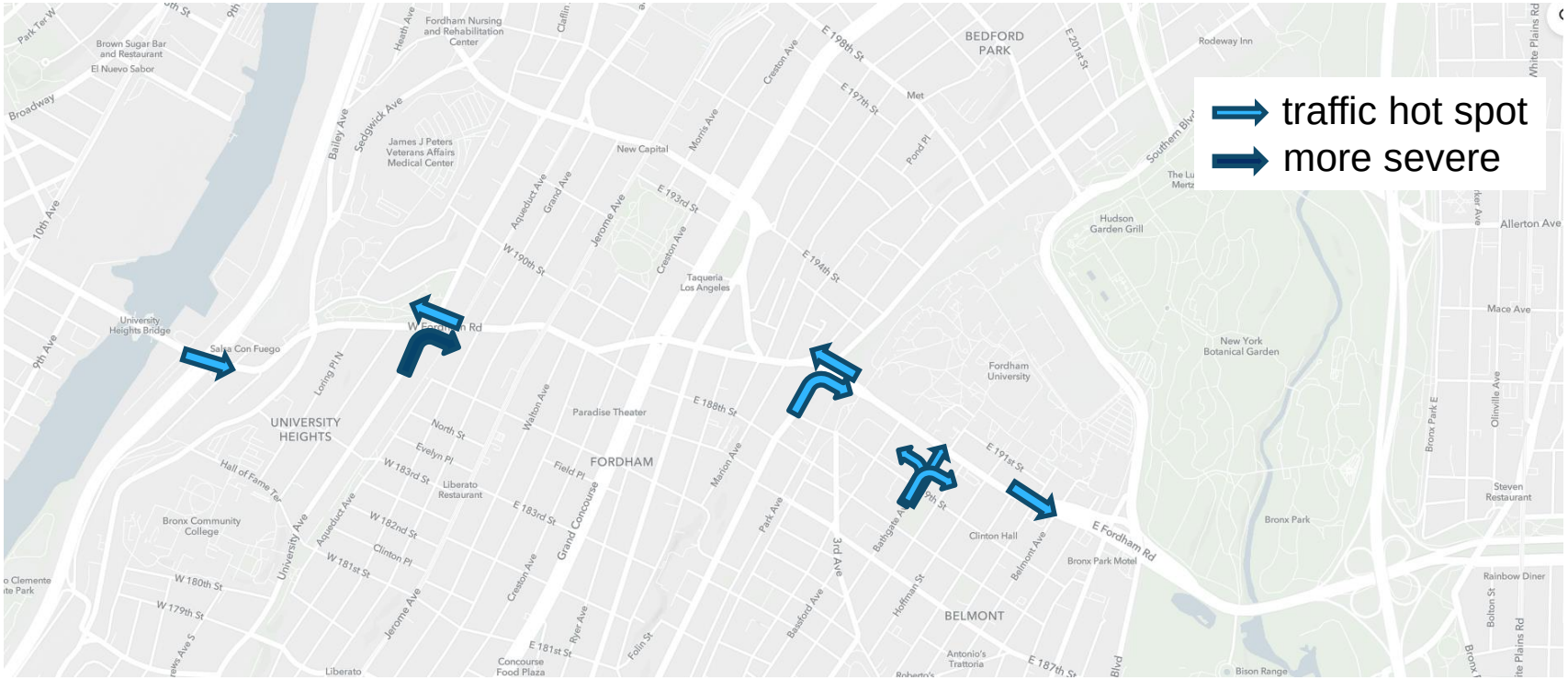
Traffic Analysis Results
Alternative A: Offset Bus Lanes in Both Directions



- All intersections surrounding Fordham Road operate well
- Some traffic movements on Fordham Road will need further adjustment as indicated
- All vehicles assumed to still use Fordham Road. In reality, some may divert to 188th Street or Kingsbridge Road, or outside of the network entirely
- Assumes no traffic diversions from Fordham Road and a 20% volume reduction

Alternatives B and C:
Busway (Transit & Truck Priority) Overview

Traffic Regulations within Busway:

- ***All vehicles can access every block; in effect all times***
- Only buses, trucks, and emergency vehicles can drive through along the entire corridor

  Trucks defined as any vehicle that has more than two axles OR six or more wheels

- General vehicles allowed Local Access Only

  Local Access: vehicles are allowed to drive on busway for local trips, pick-up/drop-off, and garage access but must make the next available right turn off Busway

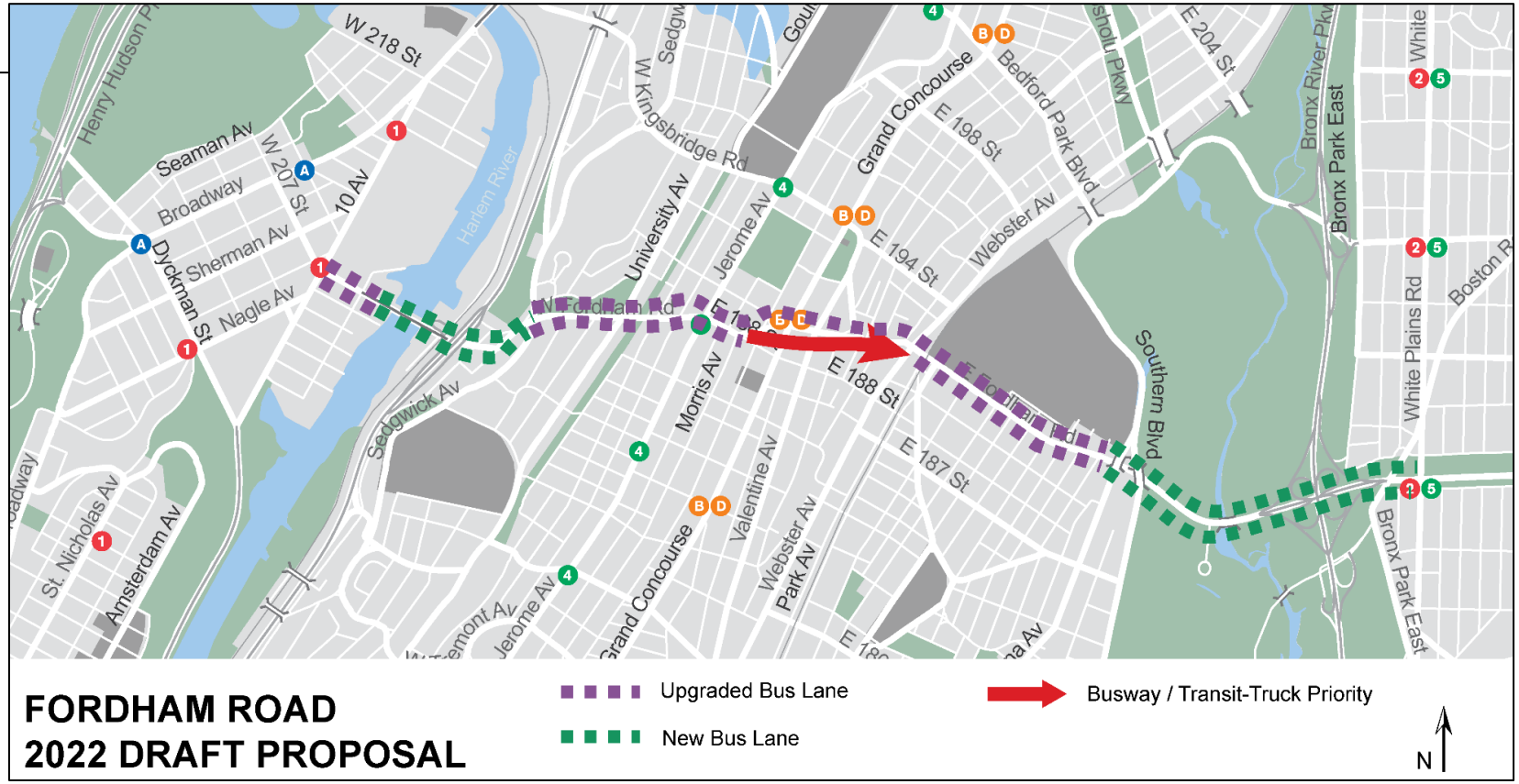
14th St, MN

Busway Benefits:

- Busway regulations reduce the level of congestion along the Busway corridor
- All drivers who need to be on Fordham Road can get to the corridor; drivers who do not can take other paths
- Reduced congestion helps improve bus speeds and reliability
- Trucks do not divert through neighborhoods and deliveries are easier

Jamaica Ave/Archer Ave, QN

Alternative B: Eastbound Busway from Morris Ave to Webster Ave



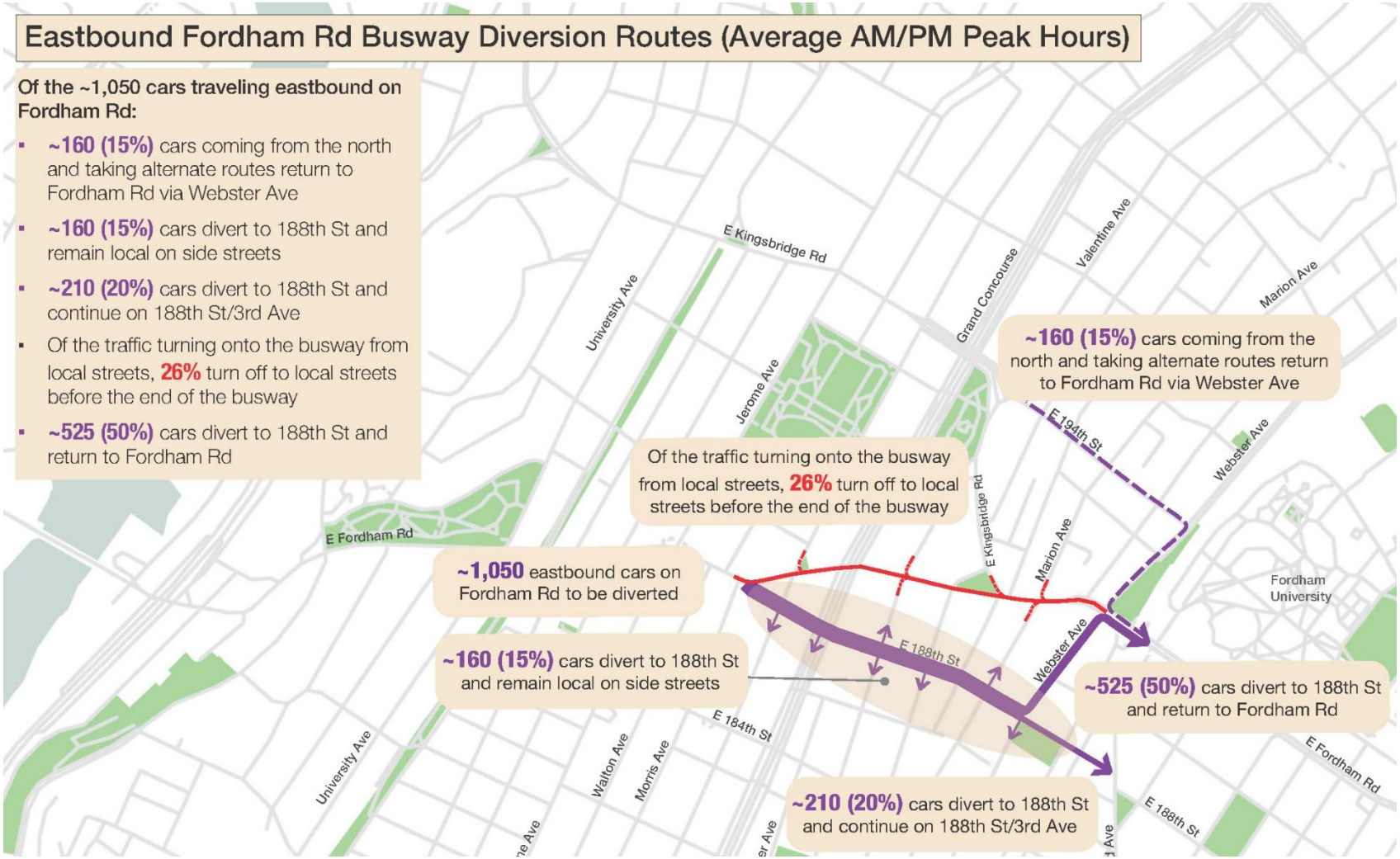
- Eastbound through traffic on Fordham Rd would be restricted to Local Access Only, except for buses and trucks; in effect at all times (24/7)
- Curb access would be allowed for loading/unloading
- Offset lane in westbound direction
- Bus lanes proposed in Alternative A would remain outside of the Busway section

Local Traffic Patterns for Fordham Road Drivers: Eastbound

Eastbound Fordham Rd Busway Diversion Routes (Average AM/PM Peak Hours)

Of the ~1,050 cars traveling eastbound on Fordham Rd:

- **~160 (15%)** cars coming from the north and taking alternate routes return to Fordham Rd via Webster Ave
- **~160 (15%)** cars divert to 188th St and remain local on side streets
- **~210 (20%)** cars divert to 188th St and continue on 188th St/3rd Ave
- Of the traffic turning onto the busway from local streets, **26%** turn off to local streets before the end of the busway
- **~525 (50%)** cars divert to 188th St and return to Fordham Rd



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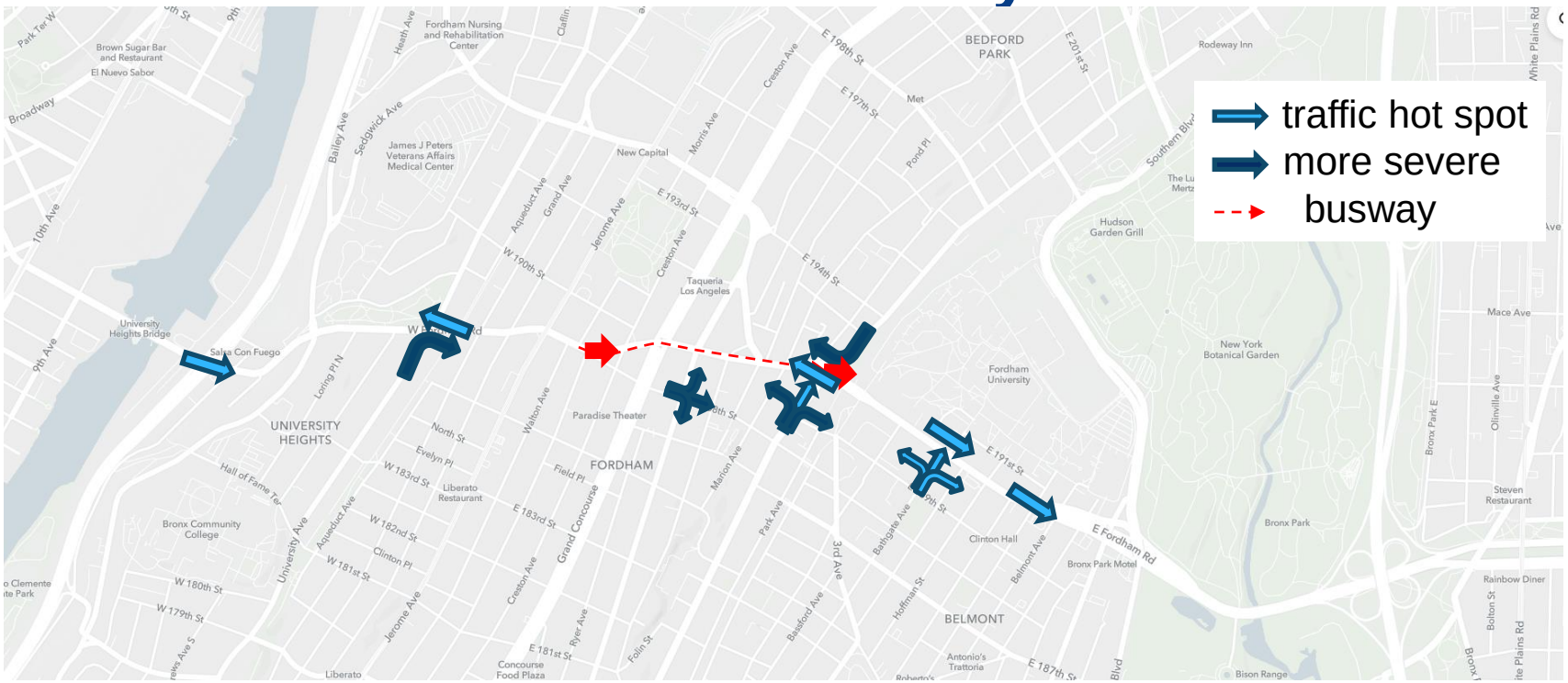
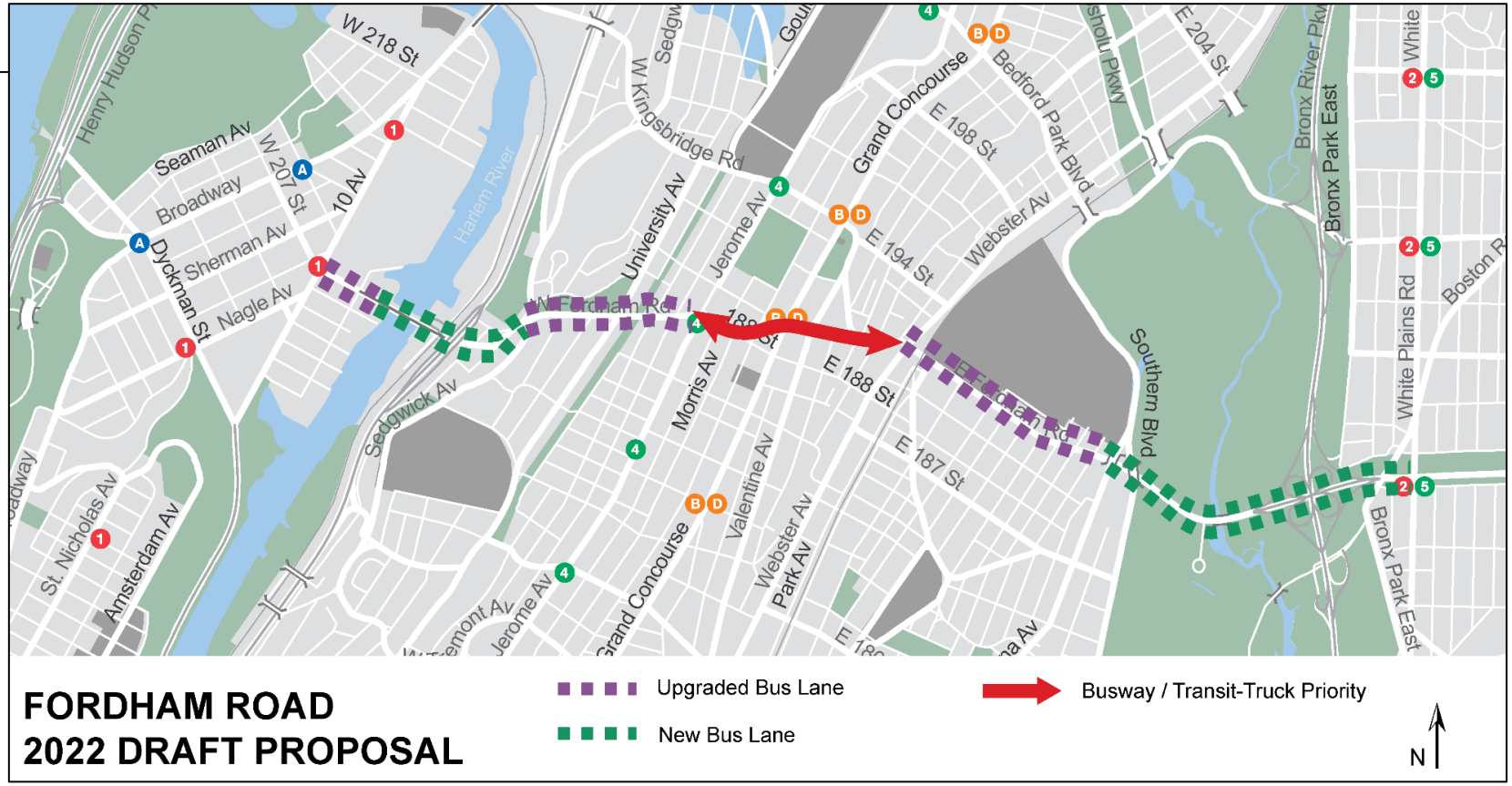
Traffic Analysis Results
Alternative B: Eastbound Busway



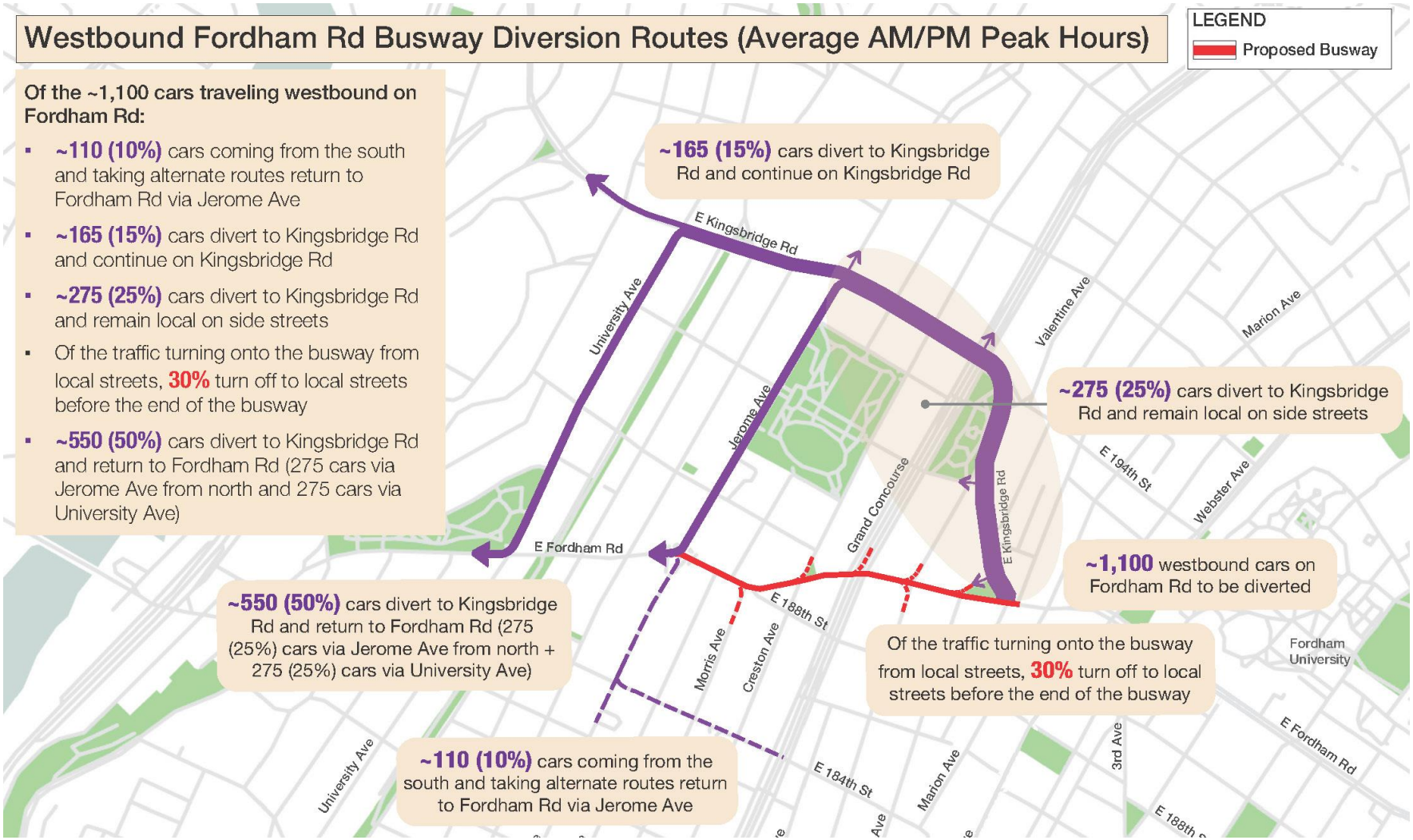
- Eastbound bus/truck/local access only from Morris Av to Webster Av
- More travel movements have greater delays than Alt A, as cars turn on to Fordham Rd
- All intersections in Busway segment generally operate better than today, with most traffic diverted to Kingsbridge and 188th Street
- Turn delays on University Ave and Webster Ave also have implications for buses on those roadways
- Assumes traffic diversions from Fordham Road and a 20% volume reduction

Alternative C: Two-Way Busway between Jerome Av & Webster Av



- Both eastbound and westbound through traffic on Fordham Rd would be restricted to Local Access Only, except for buses and trucks; in effect at all times (24/7)
- Curb access would be allowed for loading/unloading
- Bus lanes proposed in Alternative A would remain outside of the Busway section

Local Traffic Patterns for Fordham Road Drivers: Westbound



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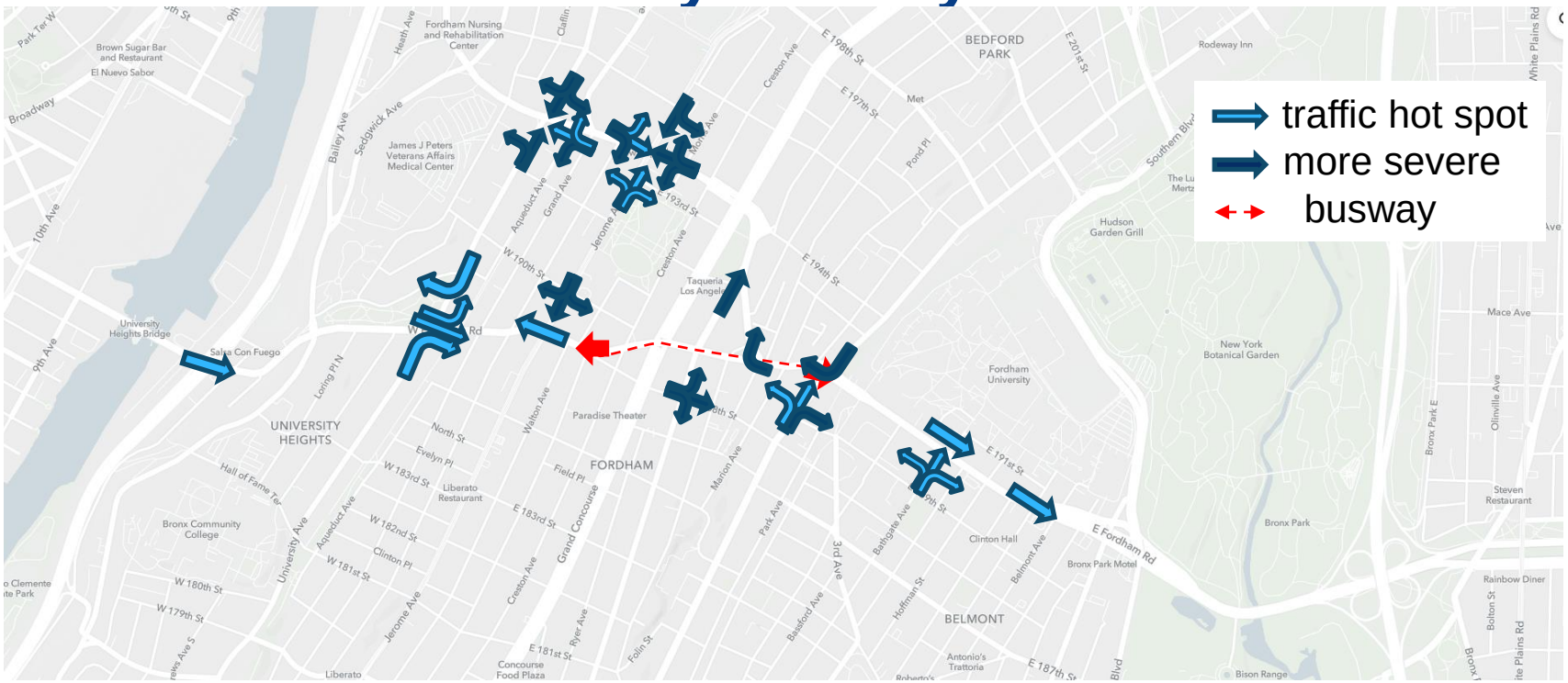
Traffic Analysis Results
Alternative C: Two-Way Busway



- Two-way bus/truck/local access only between Jerome & Webster Aves
- Includes many of hot spots from Alt B, plus additional associated with two-way busway
- Largest effects are on diversion streets, especially along Kingsbridge Rd at Jerome Av and University Av
- Turn delays on University Ave and Webster Ave also have implications for buses on those roadways
- Assumes traffic diversions from Fordham Road and a 20% volume reduction

Summary & Next Steps

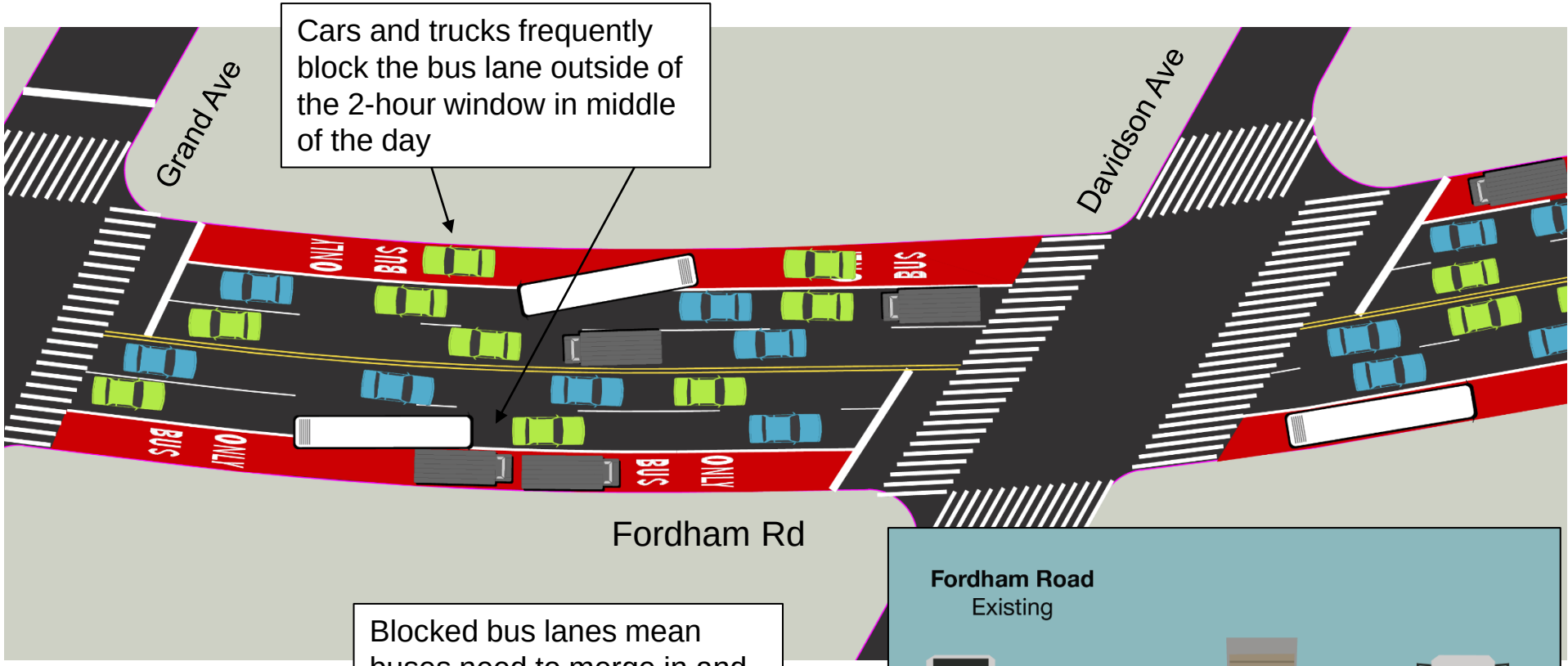
Summary of Alternatives

	Bus Service	Traffic Analysis Results	Bus Rider Feedback	Business Owner Feedback
Alternative A: Offset Bus Lanes	✓	✗	✓	✗
Alternative B: Eastbound Busway	✓ ✓	✗ ✗	✓ ✓	✗ ✗ ✗
Alternative C: Two-Way Busway	✓ ✓	✗ ✗ ✗	✓ ✓ ✓	✗ ✗ ✗

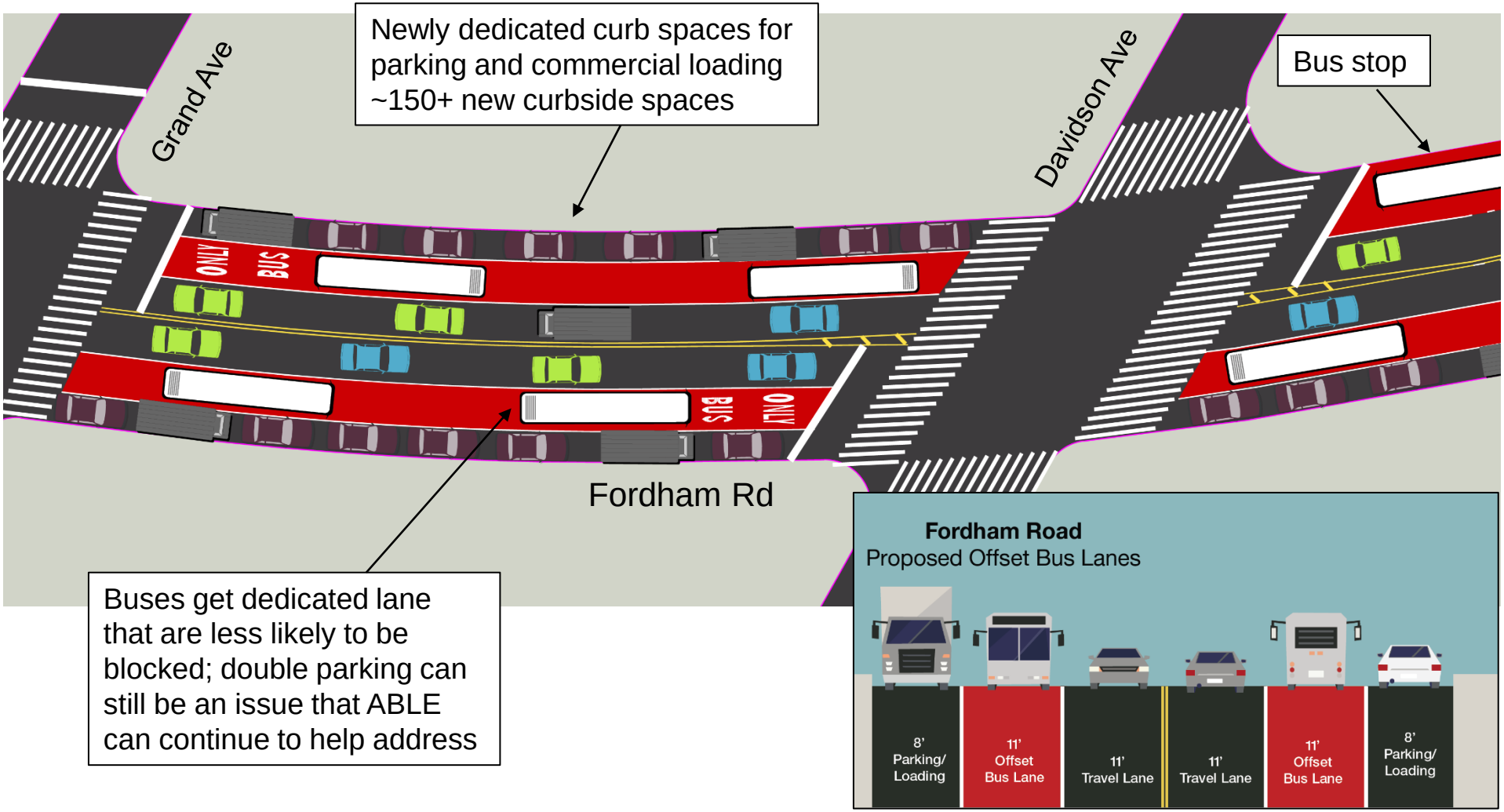
Advancing Design for Alternative A: Offset Bus Lanes in Both Directions

- Based on factors identified in the traffic analyses and listening to the community concerns, **Alternative A – offset bus lanes along Fordham Rd – is the best treatment to improve overall bus speeds, reliability, and curb demand** while minimizing the effects on buses on north/south corridors
  - Bus lanes are less likely to be blocked from illegal parking
  - New design addresses intense curb demand: approximately combined **150+ parking/loading spaces** added to corridor instead of confined to two-hour window **(approximately 50 spaces within CB 6)**
  - Offset bus lanes are not foolproof – double parking can still block the bus lane, but they are an upgrade from curbside bus lanes
- DOT and MTA will continue to monitor bus speeds, reliability, and curb demand and engage with all members of the Fordham community to ensure that the roadway works best for all users.

Typical Existing Conditions



Alternative A: Offset Bus Lanes
Draft Concept Design for Typical Block



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Next Steps

June 2023: Present to Community Boards

- Briefings with stakeholders – June 2023
- CB 7 Transportation Committee – June 1, 2023
- CB 11 Transportation Committee – June 5, 2023
- CB 5 Municipal Services Committee – June 13, 2023
- CB 6 Transportation Committee – June 22, 2023

Summer 2023: Continue to refine design and take in feedback from community

Fall 2023: Planned implementation

Thank you!

NYC DOT NYC DOT nyc_dot NYC DOT

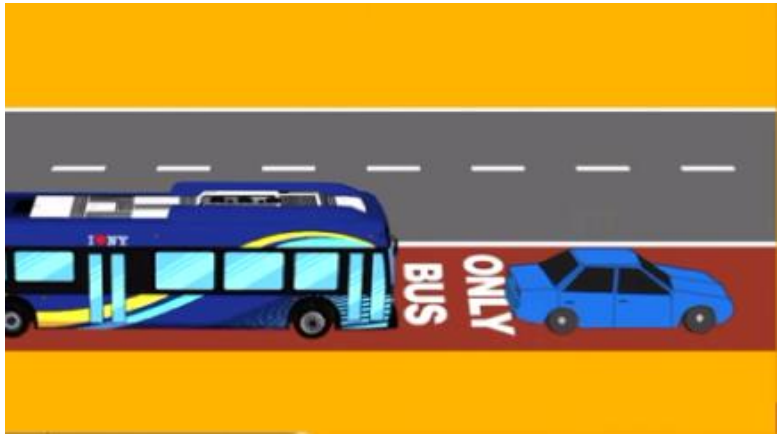
Appendix

Traffic Analysis for University Heights Bridge and 207th Street Manhattan

- DOT analyzed a combination of bus priority treatments in this section of the study area, given the current constraints which include:
  - Current construction affecting the public right-of-way at 207th St
  - Future DOT capital project as part of the Inwood Rezoning
- DOT will make minor adjustments to signal timing to facilitate traffic flow and continue to monitor bus speeds, reliability, and curb demand as construction progresses.

How Does ABLE Work?

- ABLE was implemented on all Bx12-SBS buses on November 18, 2022, with a 60-day warning period, with summonses issued starting January 17, 2023
- Enforces against vehicles parking or standing in a bus lane during the bus lane hours
- Two buses must capture the same vehicle 5 minutes apart to issue a violation
- ABLE cameras capture license plate information photos and videos, with location information
- Human review by DOT process ensures violations are captured and issued according to program rules
- When ABLE cameras are installed on new routes, DOT will issue warnings to motorists for the first 60 days
- ABLE can enforce anywhere along bus lane, not just in fixed locations



Transit Toolkit

Woodhaven Blvd, QN

161st St, BX

14th St, MN

Hylan Blvd, SI

Broadway, QN

Bus Stops Toolkit

Nostrand Ave, BK

86th St, MN

Hylan Blvd, SI

Utica Av, BK

Pedestrian Safety Toolkit

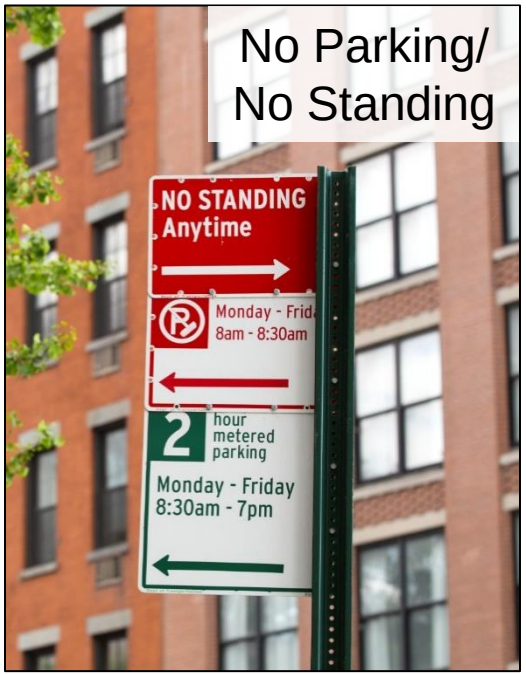
Fordham Rd, BX

Kings Hwy, BK

149th St, BX

Southern Blvd, BX

Parking Toolkit



Other Tools

- Traffic signal timing
- Transit Signal Priority (TSP)
- Bus lane camera enforcement
  - DOT stationary cameras
  - MTA on-bus cameras (ABLE)
- Left & right turn bays

Gun Hill Rd & Webster Av