

# **Newton Carriageway / Commonwealth Avenue (Route 30) Reconstruction Project**

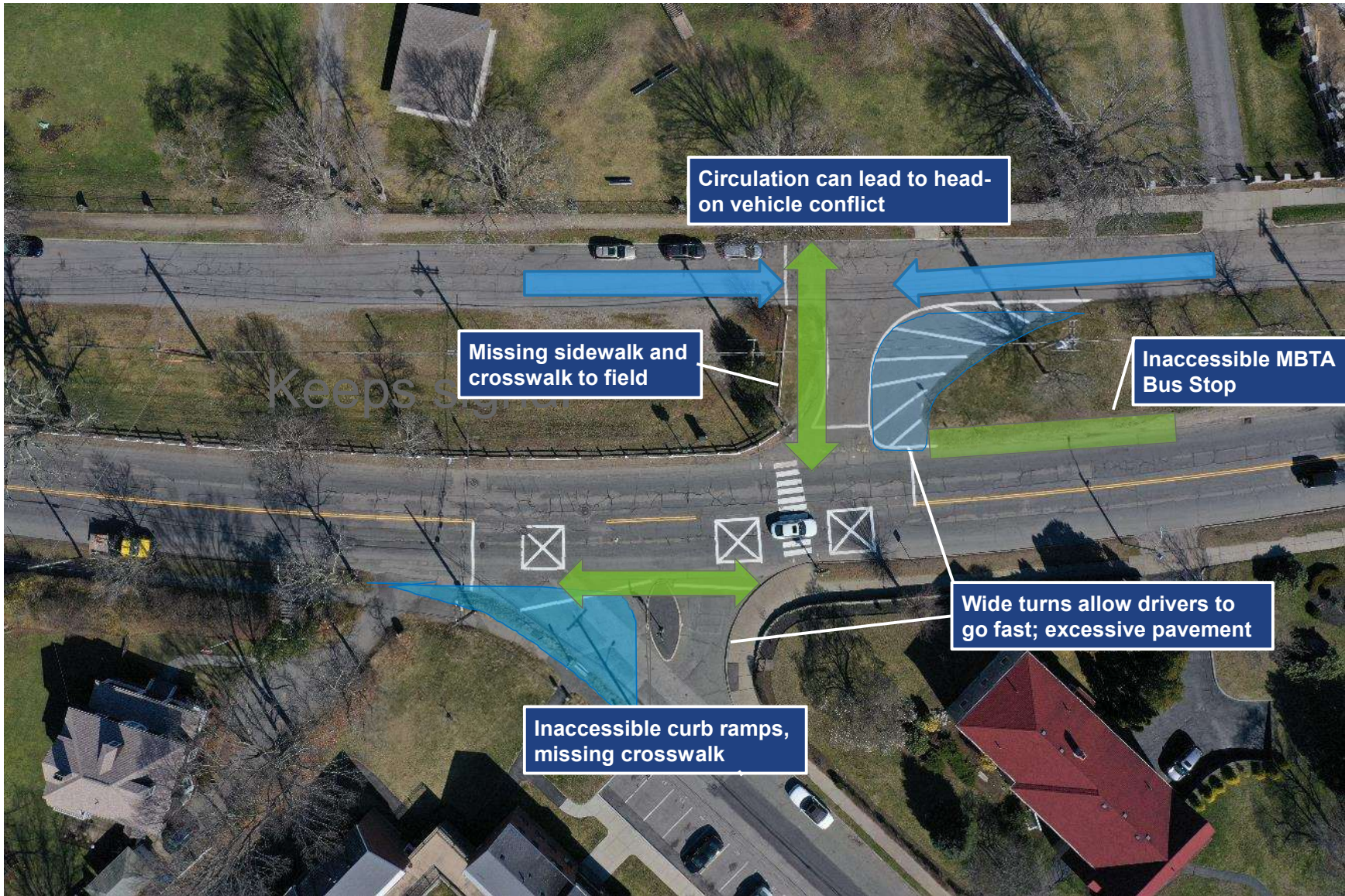
Public Information Session

**Nicole Freedman**

*Director of Transportation Planning  
City of Newton*

**April 14, 2022**

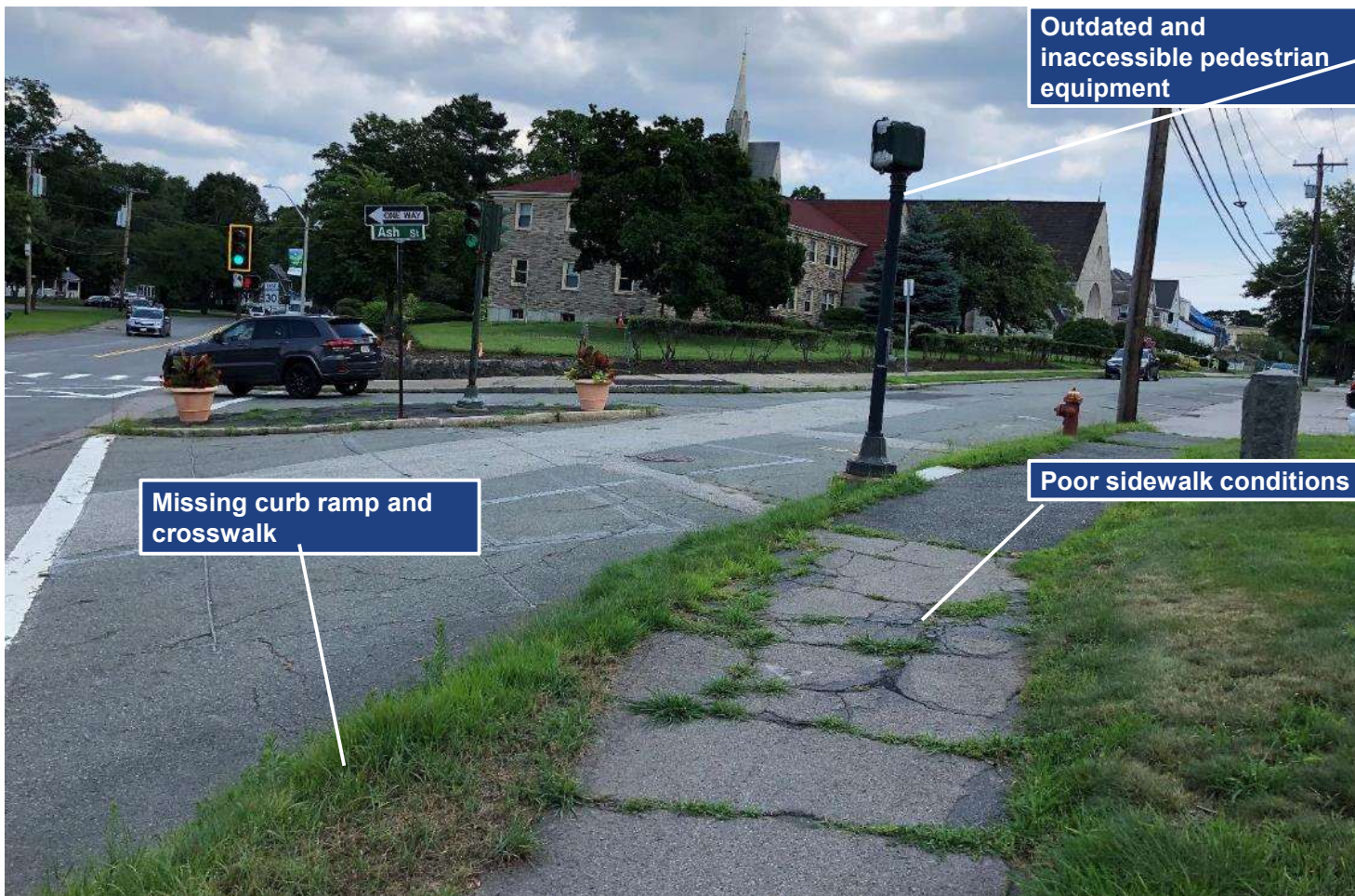
# Existing Issues: Ash Street





## Existing Issues: Ash Street

- **Complete Streets Accommodations:** Lack of bicycle facilities and lack of accessible pedestrian accommodations



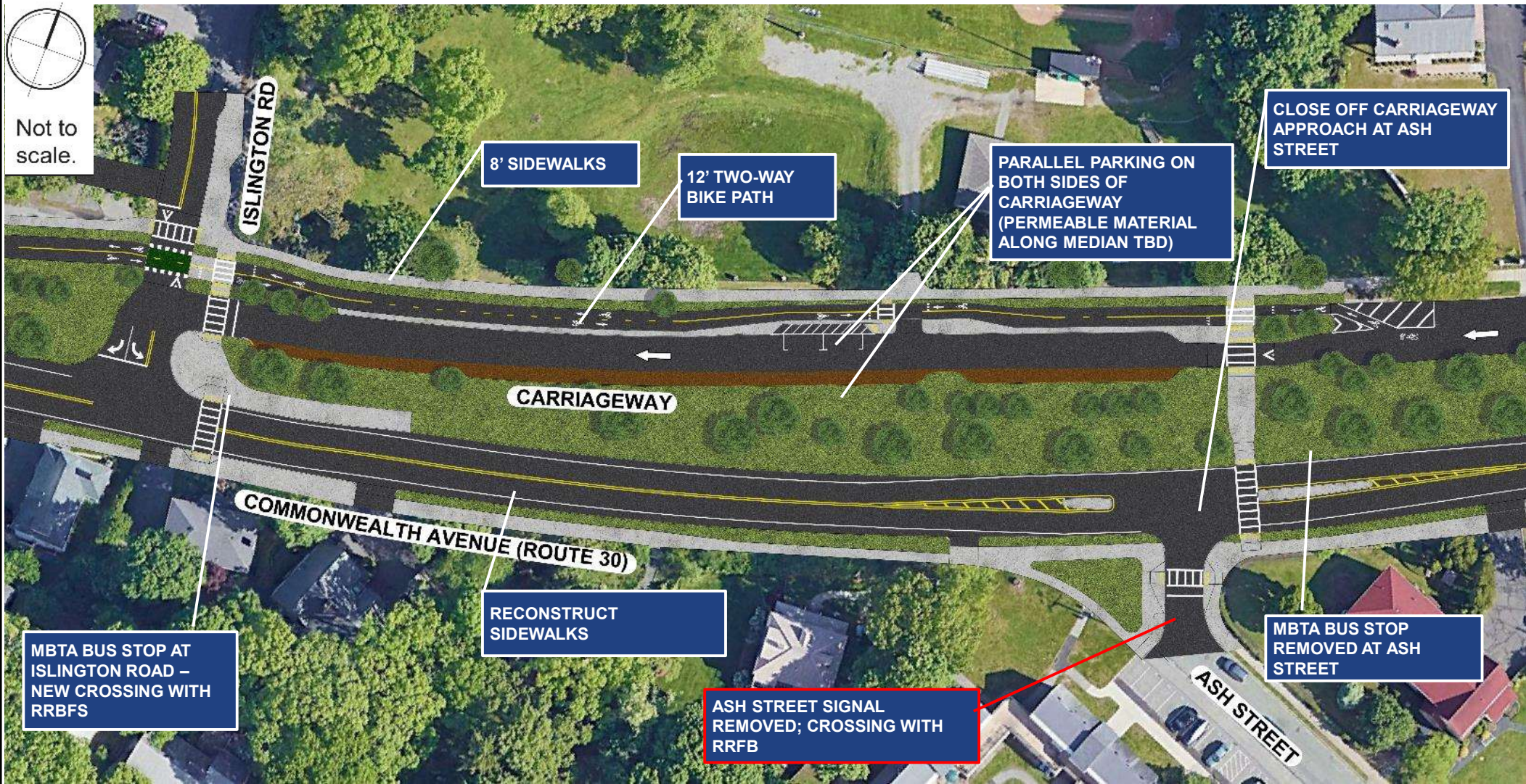
**We cannot reconstruct any part of Ash  
Street and keep the signal**



# Islington Road to Ash Street – Preferred Design (with Ash)

*Only change since 4/6/22 public hearing was to add a turn lane.*

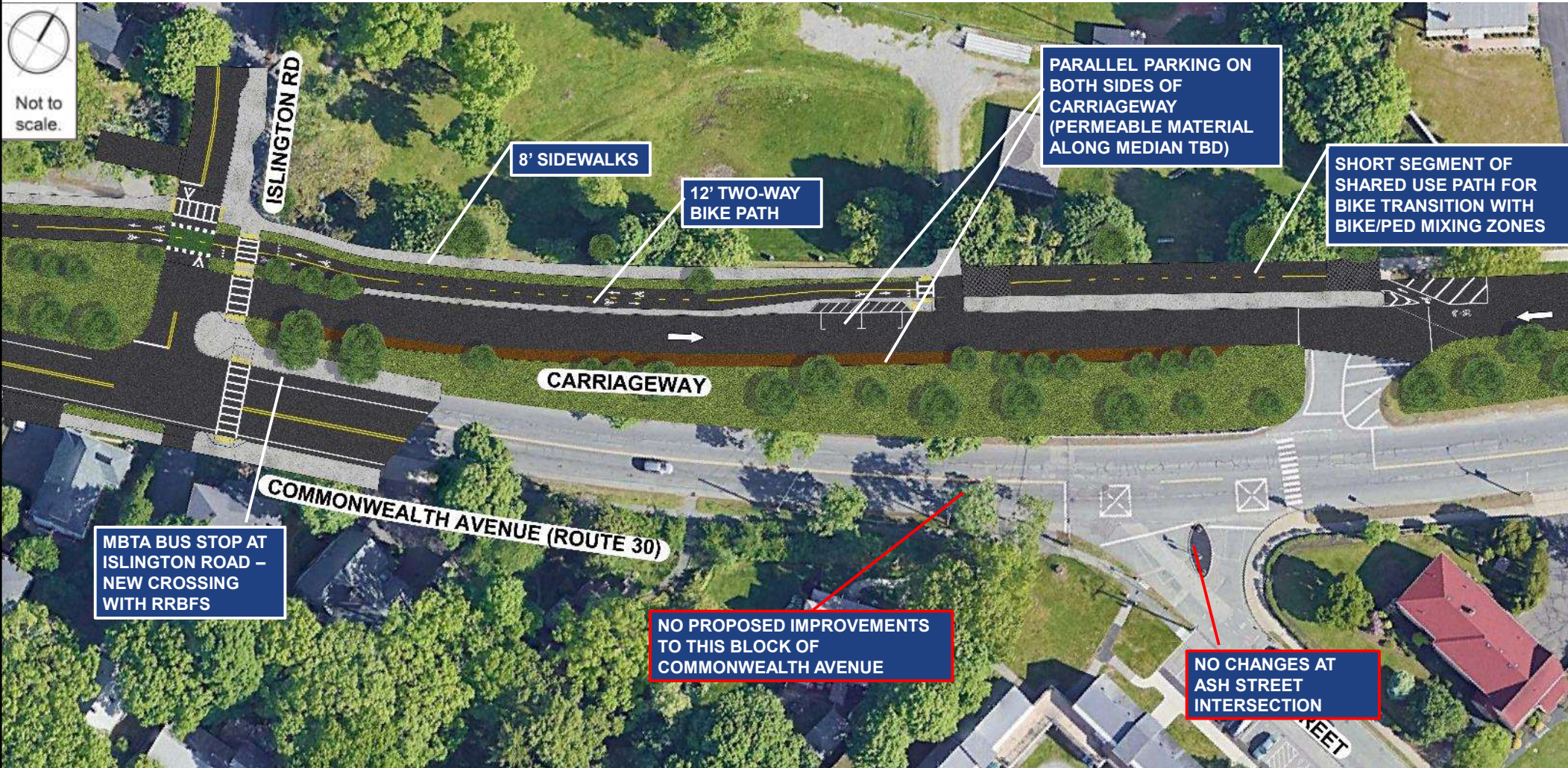
*Removes signal. Upgrades Ash.*





# Islington Road to Ash Street – Alt Design (w/out Ash).

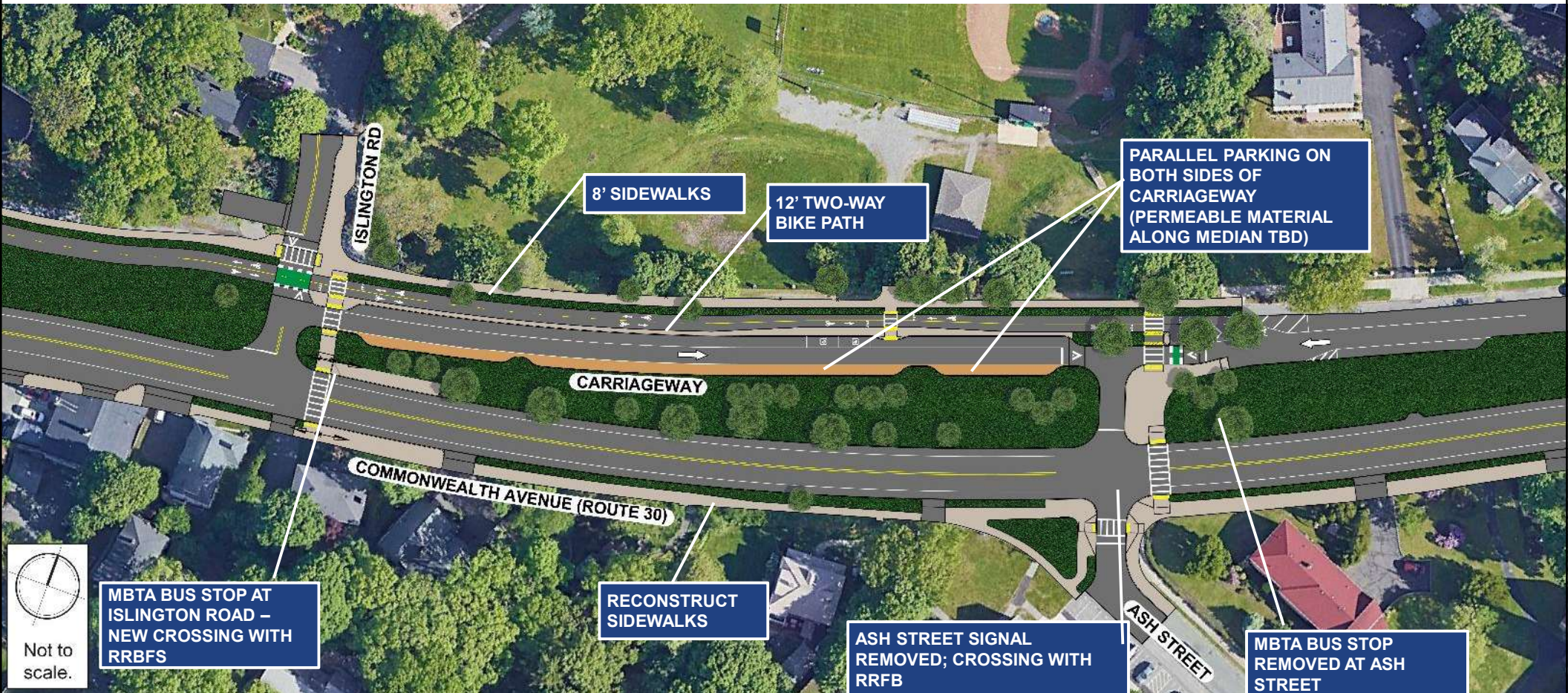
*No change since 4/6/22 public hearing. Keeps signal. No Ash upgrades.*





# Islington Road to Ash Street – “Option 3” (with Ash)

*New since 4/6. Removes signal. Upgrades Ash. “Signal-ready”*







Preferred Design (With Ash), from 4/6  
Upgrades Ash  
Removes signal  
Closes intersection



Alt Design (Without Ash), from 4/6  
No Ash upgrades  
Keeps signal



“Option 3” (With Ash), from 4/6  
Upgrades Ash  
Removes signal  
Keep intersection – “signal-ready”



## Islington Road Average Delay at AM Peak Hour

| Intersection/<br>Movement                 | No Build<br>Conditions<br>(Signal) | Preferred Design<br>(Upgrade Ash. No<br>Signal) | Alternative<br>(Keep signal. No Ash<br>Upgrades) | “Option 3” –<br>(Upgrade Ash. No<br>Signal but Signal-<br>ready) |
|---|------------------------------------|---|--|--|
|   | Average Delay (Seconds)            |   |  |  |
| Commonwealth<br>Avenue/<br>Islington Road |                                    |   |  |  |
| Islington SB left                         | 66                                 | 153   | 50   | 75   |
| Islington SB<br>right                     |                                    | 18  |  |  |
| Commonwealth<br>Avenue/<br>Ash Street     |                                    |   |  |  |
| Ash NB<br>left/right                      | 36                                 | 72  | 36   | 126  |
| Carriageway SB<br>left/right              | 34                                 | -   | 34   | 113  |



## Islington Road Average Delay at PM Peak Hour

| Intersection/<br>Movement                 | No Build<br>Conditions<br>(Signal) | Preferred Design<br>(Upgrade Ash. No<br>Signal) | Alternative<br>(Keep signal. No<br>Ash Upgrades) | “Option 3” –<br>(Upgrade Ash. No<br>Signal but Signal-<br>ready) |
|---|------------------------------------|---|--|--|
|   | Average Delay (Seconds)            |   |  |  |
| Commonwealth<br>Avenue/<br>Islington Road |                                    |   |  |  |
| Islington SB<br>left                      | 42                                 | 64  | 35   | 46   |
| Islington SB<br>right                     |                                    | 18  |  |  |
| Commonwealth<br>Avenue/<br>Ash Street     |                                    |   |  |  |
| Ash NB<br>left/right                      | 48                                 | 45  | 48   | 66   |
| Carriageway<br>SB left/right              | 45                                 | -   | 45   | 48   |



**Question: a) Why can't we upgrade Ash St and add a signal? b) Can the City install the signal later?**

**A. The project is funded by MassDOT. MassDOT law does not allow installation of a signal that does not meet traffic warrants.**

**B. If we reconstruct Ash, per MassDOT rules, we will need MassDOT approval for future installation of a signal.**

**If the City reconstructs Ash separate from this project, the City would not recommend the installation of a traffic signal at at Ash Street because it does not meet signal warrants.**



## **Question: Can the City allow eastbound travel on the Carriageway from Islington to Melrose?**

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**A. This was an intriguing suggestion. We reviewed this option however, and that the Melrose signal already operates with significant delay. Even a minimal addition of vehicles due to rerouting will increase demand over capacity. This option is not feasible.**

# **Question: Can we add more traffic calming to Commonwealth Avenue**

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**A. We are looking into this!**



## **Question: Did the pandemic influence the traffic data?**

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**Traffic data was taken twice. The first collection occurred before Covid (February 25-27), nearly 2 weeks before the State of Emergency was declared, and before school was closed in Newton.**

**A second set of data was taken in June 2021. We worked closely with Parks & Rec to ensure that traffic count data was collected during a time that Lyons Field was being heavily used.**

## Question: Can we add more parking spaces for the dog park

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- A.** We are looking at adding up to 5 parking spaces near Woodbine on Comm Ave for combined use of the existing park and any future dog park, plus the businesses/ residences on Woodbine. To make a final determination, we are doing a parking study.



# Anticipated Project Timeline



# Thank you!

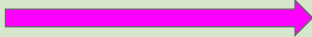


**Nicole Freedman**

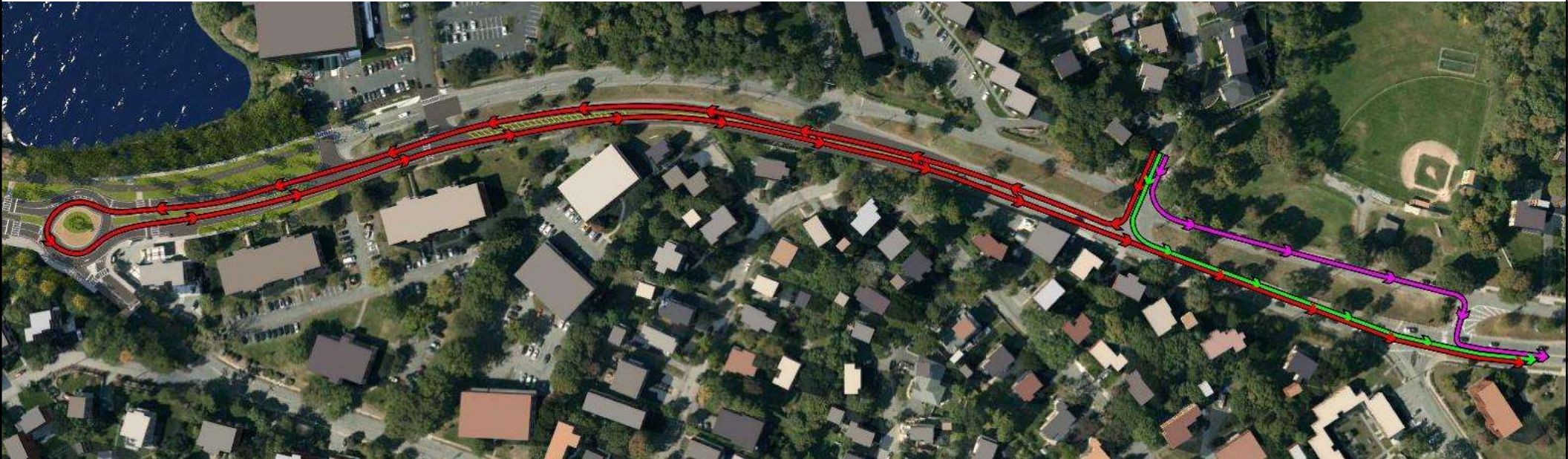
City of Newton Director of Transportation Planning  
[nfreedman@newtonma.gov](mailto:nfreedman@newtonma.gov)





# Islington Road Travel Time Comparison

| Route to go from Islington Road to Comm Ave EB |  | AM Travel Time (min) | PM Travel Time (min) |
|--|--|----------------------|----------------------|
| Existing Conditions (Signal)                   |  | 0.8                  | 1.0                  |
| Preferred Alternative (Unsignalized Left)      |  | 2.7                  | 1.2                  |
| Alternate Option (Auburn Street Roundabout)    |  | 2.2                  | 1.8                  |





## Proposed Design – Auburn Street Intersection

- Reconstructed as a Modern roundabout
- Signalized shared pedestrian and bike crossings
- Accessible pedestrian and bike facilities
- Pickup/Drop-off/Delivery area at Boathouse
- Raised pedestrian crossing on Auburn Street
- Reallocated landscape zone from median to buffer





# Ash Street Signal Warrant Analysis

| Warrant |                                    | Analysis Result |
|---------|------------------------------------|-----------------|
| 1       | Eight-Hour Vehicular Volume        | Not met*        |
| 2       | Four-Hour Vehicular Volume         | Not met*        |
| 3       | Peak Hour                          | N/A             |
| 4       | Pedestrian Volume                  | Not met*        |
| 5       | School Crossing                    | N/A             |
| 6       | Coordinated Signal System          | N/A             |
| 7       | Crash Experience                   | N/A             |
| 8       | Roadway Network                    | N/A             |
| 9       | Intersection Near a Grade Crossing | N/A             |

\*Data analyzed from traffic counts taken February-March 2020 and June-July 2021.

MUTCD Warrants #3, and #5 through #9 were not applicable to this intersection and not analyzed.

# Ash Street Signal Warrant Analysis

| Warrant |                               | Threshold for Controlling Factor   | Threshold Volume | # Hours Threshold Met | Analysis Results |
|---------|-------------------------------|--|------------------|-----------------------|------------------|
| 1       | Eight-Hour Vehicular Volume   | Volume on one minor street during eight individual hours                 | 75 veh/hour      | 0*                    | Not met          |
| 2       | Four-Hour Vehicular Volume    | Volume on one minor street during four individual hours                  | 80 veh/hour      | 0*                    | Not met          |
| 4       | Pedestrian Volume (4-Hour)    | Volume of pedestrians crossing the major street per hour over four hours | 107 ped/hour     | 0**                   | Not met          |
| 4       | Pedestrian Volume (Peak-Hour) | Volume of pedestrians crossing the major street during one peak hour     | 133 ped/hour     | 0**                   | Not met          |

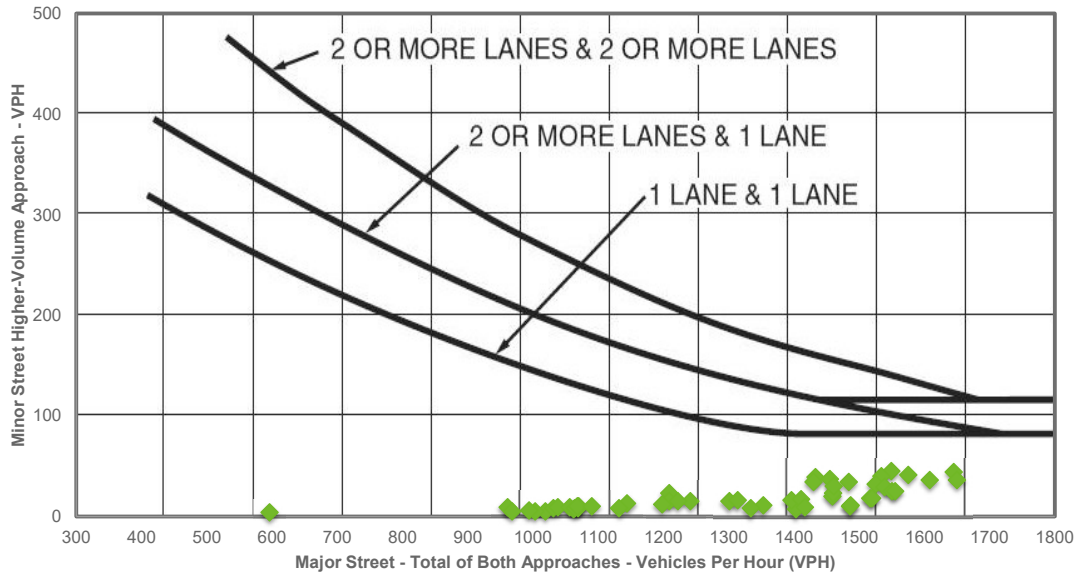
- \*The maximum vehicular volume during any hour for Winter 2020 and Summer 2021 was 45 and 29 vehicles per hour, respectively.
- \*\*The maximum pedestrian volume during any hour for Winter 2020 and Summer 2021 was 6 and 14 pedestrians per hour, respectively.



# Four-Hour Warrant

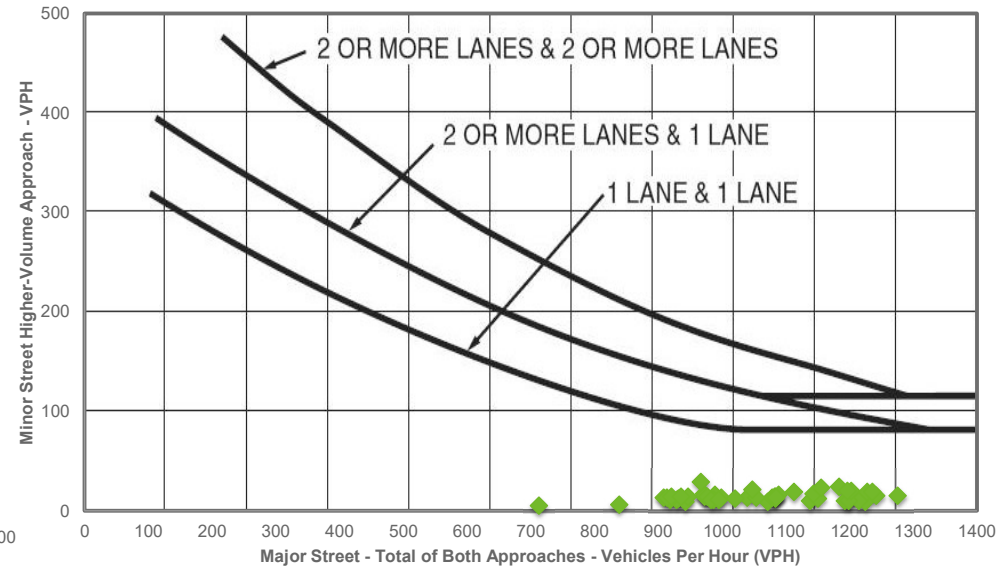
February/March 2020 Data:

MUTCD Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



June 2021 Data:

MUTCD Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume

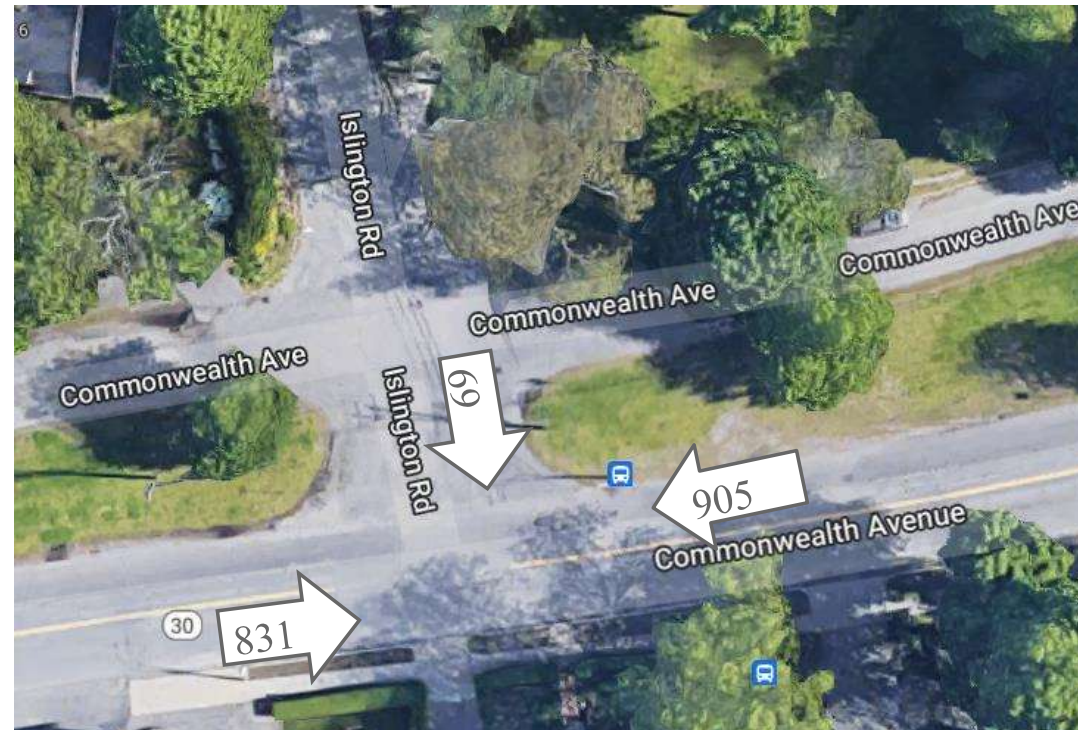


## Precedent from Unsignalized Intersections Nearby

- The adjacent Weston Route 30 Reconstruction Project evaluated 10 unsignalized intersections along a 3.7-mile corridor; a few have similar major street/minor street volumes and are being reconstructed as unsignalized



**PM Peak – Existing (2018)**  
**Rte 30 @ Ware, Weston**



**AM Peak – Build (2030)**  
**Rte 30 @ Islington, Newton**

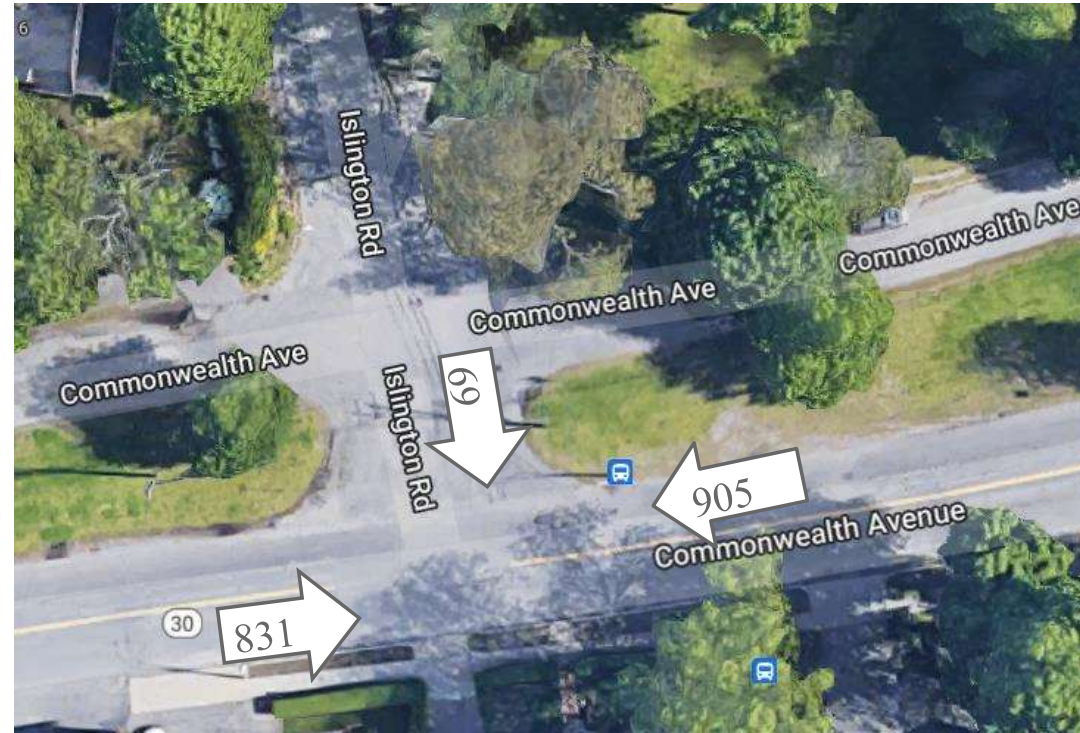


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**PM Peak – Existing (2018)**  
**Rte 30 @ Ash, Weston**



**AM Peak – Build (2030)**  
**Rte 30 @ Islington, Newton**



## Rendering: Ash Street and Project Limits





# Islington Road Rendering: After





# Ash Street Rendering (Preferred Alt): After

