APPENDIX G: BICYCLE NETWORK VISION RESPONSE

INTENT OF THE NETWORK VISION – ALL AGES, ABILITIES, AND IDENTITIES

The Bicycle Network Vision is a blueprint to create an interconnected system of high-comfort bike facilities suitable for all ages, abilities, and identities that links origins and destinations. The types of routes that make up this high-comfort Network Vision include:

1. **Off-Street Paths**
2. **Greater Separation** – Major streets that can be made comfortable for biking by adding separated bike facilities (or where separated bike facilities already exist)
3. **Bicycle Priority Street** (also referred to as "Lower volume and/or speed) – Streets that can be made comfortable for biking by adding interventions that manage vehicle volume and speed (or already are comfortable for biking because volumes and speeds are already lower).

Streets identified as needing greater separation in the Network Vision are generally significant commercial streets or arterials that serve a travel function for all users (people walking, cycling, driving, riding in a bus, etc.). These often have higher volumes of motor vehicles, and more specifically of heavy vehicles (buses, trucks), and have greater conflicts with bus stops and parked cars.

Streets identified as bicycle priority streets either currently meet the criteria for high-comfort, or can meet the criteria with further countermeasures, such as traffic speed management or traffic volume management treatments. For further guidance on the City's criteria for high-comfort facilities on a variety of streets, see Chapter 5 in the Bike Plan.

This palette of facility types provides three general bikeway options for creating a network that provides a consistently high level of comfort across a variety of contexts.

HOW YOUR INPUT SHAPED THE NETWORK VISION UPDATE

Community input was a large part of updating the Network Vision from the original 2015 version. This was done through in-person public engagement (including intercept survey opportunities, tabling at neighborhoods throughout the city, and an open house); meetings with the Cambridge Bicycle Committee; questionnaires and surveys available in person (hard copy) and on-line; an online WikiMap and a Cambridge-specific online commenting system. This public feedback was used to create the updated Network Vision. Notable additions to the category for separated bicycle lanes in the 2020 Network Vision include Broadway, Aberdeen Avenue, Brattle Street between Mount Auburn Street and Fresh Pond Parkway, and Garden Street between Concord Avenue and Huron Avenue. All input was carefully considered, taking into account physical limitations of corridors, transit needs, curbside access needs, and current and likely future vehicle volumes and speeds.

BICYCLE NETWORK VISION DETERMINATIONS

The Network Vision is not intended to represent all bike facilities in Cambridge. Every Cambridge-owned street and path counts as a route for people biking; there are also many paths on state property (e.g., the Dr. Paul Dudley White Bike Path along the Charles River) and some on private property that provide public easements. The Network Vision was developed by looking at key origins and destinations and creating connections among these; those streets are then prioritized for treatment. This process is described in greater detail in Chapter 5. Many other streets currently have bike lanes or other treatments, and streets that are not in the Network Vision are still candidates for a treatment that supports people bicycling. In fact, the City of Cambridge's goal is to make biking on every City-owned street possible and comfortable, even if the street is not prioritized in the Network Vision. The streets and paths identified in the Network Vision establish a priority network for high-comfort bicycle facilities and will undergo additional scrutiny during the planning and design process to ensure this.

During the input process, community members suggested additions to the high-comfort Network Vision, all of which were considered in the review process. Ultimately, some suggestions were not included in the final Network Vision due to physical constraints and conflicts with other priorities. Notably, there were requests for greater separation on some of the major streets, which we recognize may be desirable for people riding bikes because they provide the most direct path of travel to some destinations. Some of these streets are simply too narrow to add separated bike lanes, which would be necessary for the street to qualify as high comfort. For others, adding separated bike lanes would create excessive impacts on other priorities, such as transit. Additionally, the City has to consider how the street network functions for all uses and users, including people walking, transit, trucks delivering goods to residences and local businesses, and drivers/passengers. Changes to certain trucking and heavily used motor vehicle routes may have the unintended consequence of pushing this traffic onto residential streets. Still, these streets—as with all streets in the city—may be candidates for some other type of treatment that would improve conditions for bicycling.

NOTABLE CORRIDORS RECEIVING MANY COMMENTS ON THE DRAFT NETWORK VISION

The City received hundreds of comments on the Network Vision. While most comments affirmed the Vision, several streets received multiple comments proposing additions to the Network Vision or asking for different designations of specific streets. These streets warrant a more formal response as to why their designations were not changed as part of the 2020 update to the Network Vision. Explanations are provided below, along with identification of existing or planned parallel alternative routes to reach the same destinations—and, where relevant, how the City will work to improve these alternative routes to create a high-comfort connection.

PROSPECT STREET

Prospect Street is the most direct route between Central Square, Inman Square, and Union Square in Somerville, making it a popular street for all roadway users. Prospect also serves several important bus lines. The narrow street width and the need to accommodate bus service and goods deliveries to businesses and residences means that there is not enough room to provide high-comfort, separated bike facilities on Prospect Street. The left-turn lanes on the lower half of the corridor are necessary both for safety, as some intersections experienced high crash volumes before the left turn pockets were installed, and to avoid significant delays to bus service. While most of the corridor does not have on-street parking, even the complete removal of the one side of parking on the upper portion of the corridor would still not provide the appropriate width for adequate separated bike lanes in both directions.

However, it is clear that a safe, convenient, high-comfort bike route between Central, Inman, and Union squares is needed. The map below details an alternative route, both for northbound and southbound directions of travel, to Prospect Street. While these routes have been established (see Wayfinding maps on the City website) and certain improvements have already been made, such as the contraflow lane on Norfolk Street, the City is working towards implementing a more comprehensive bike priority streets (Lower Volume/Lower Speed) program. This program will include cohesive wayfinding, strategic traffic speed management, and traffic volume management strategies, as needed.

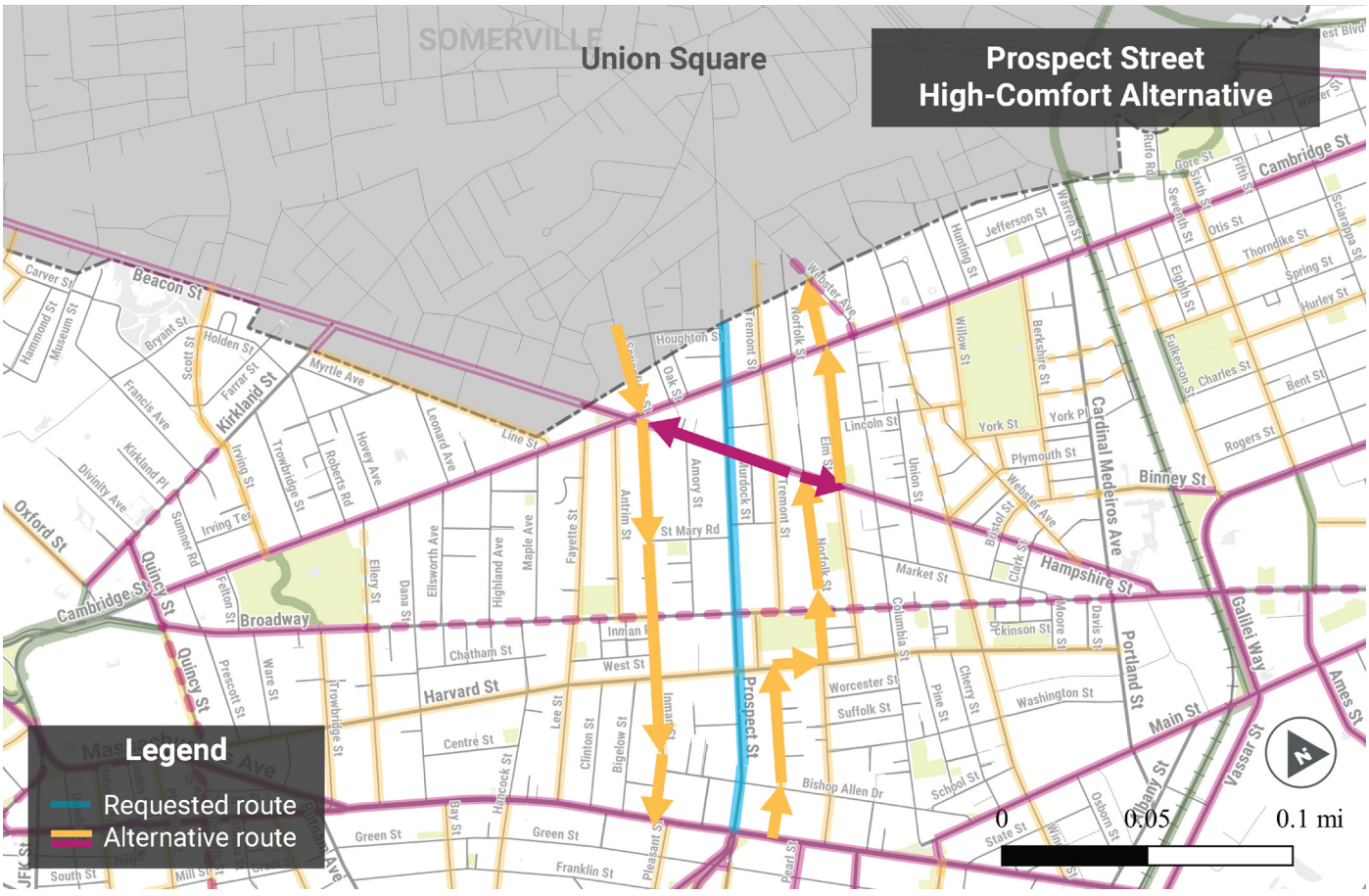

Figure G.1: Prospect Street High-Comfort Alternative Route

KIRKLAND STREET (PORTION)

Kirkland Street is the most direct route between Harvard Square and Union Square for all roadway users, including transit riders on the MBTA Route 86 bus, which is Cambridge's 6th-busiest bus route in terms of ridership. Bus riders currently experience high delays on Kirkland Street, particularly approaching the intersection of Washington Street, the continuation of Kirkland Street, with Beacon Street in Somerville. Given this, Kirkland Street has been identified as a priority transit street for future transit improvements. These improvements are likely to include queue jump lanes or bus lanes, which would eliminate any available space to add separated bike lanes, even if all parking is removed. Somerville recently reconfigured much of Washington Street (between Dane Street and Webster Avenue), the continuation of Kirkland Street, with shared bus/bike queue jump lanes and separated bike lanes. The current plan for the Washington Street and Beacon Street intersection in Somerville includes a mix of bus/bike lanes and separated bike lanes, slated for implementation at a later date.

The separated bike facilities included in the Network Vision on Kirkland Street between Oxford Street and Irving Street/Scott Street may ultimately extend closer to Beacon Street. However, the Irving Street/Scott Street intersection is currently the most logical spot to continue the high-comfort network with a bike priority (Lower Volume/Lower Speed) street. Improvements at this intersection to facilitate safer, more comfortable left turns between Kirkland Street and Scott Street or Irving Street will be evaluated. The map below details alternative high-comfort routes between Harvard Square and Union Square.

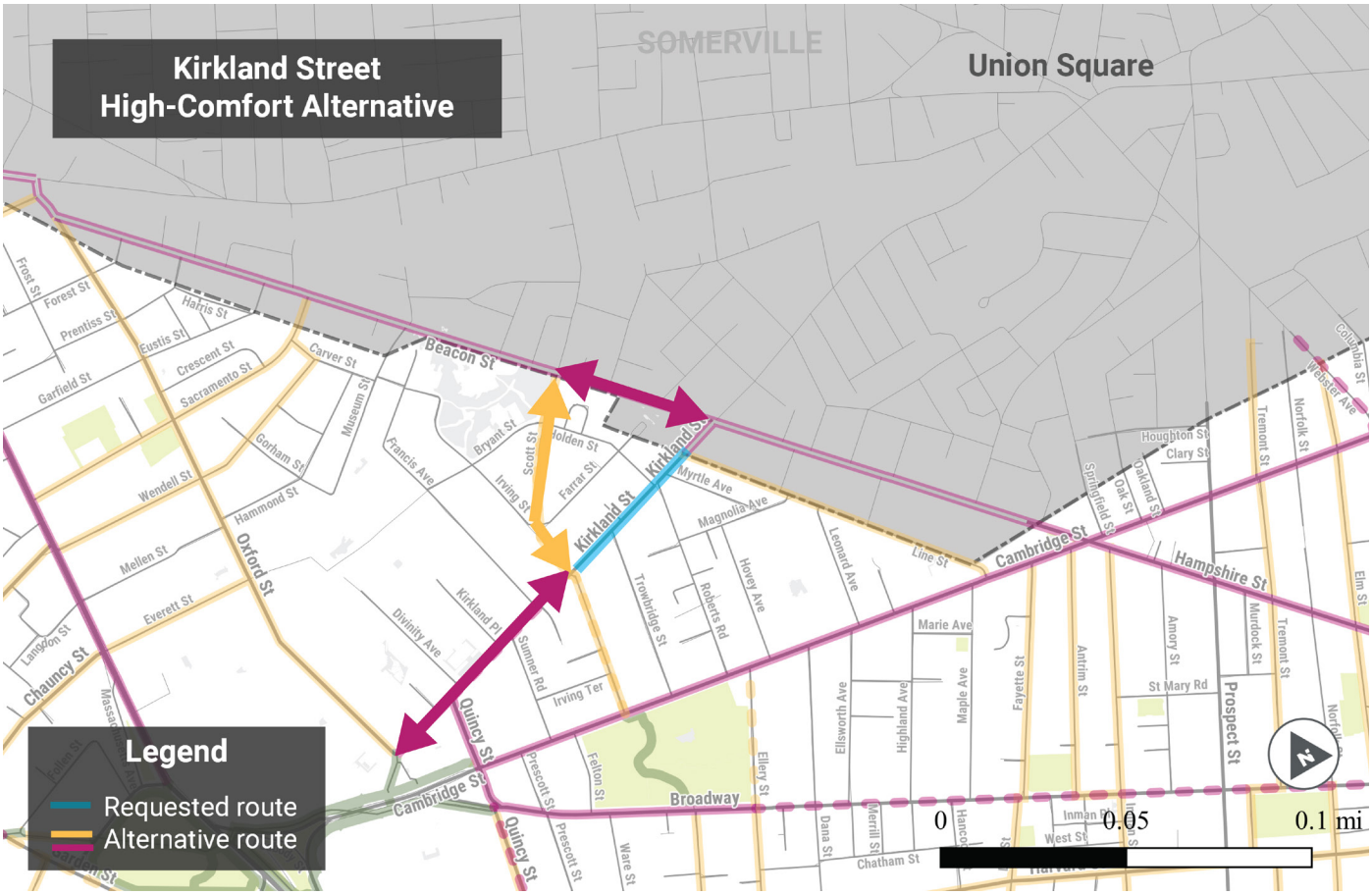

Figure G.2: Kirkland Street High-Comfort Alternative Route

HURON AVENUE (CONCORD AVENUE – GARDEN STREET)

The segment of Huron Avenue between Concord Avenue and Garden Street is not wide enough to accommodate separated bike facilities in both directions while maintaining some level of street parking and loading, something that has been identified as a high priority to the local businesses. Public process for this segment of Huron Avenue has concluded, and the final design includes partial bike lanes and traffic calming treatments. Information can be found on the project website.

GARDEN STREET (HURON AVENUE – NEW STREET)

Garden Street from Huron Avenue to New Street is not physically wide enough for separated bike facilities in both directions, even with parking removed. While the City implemented traffic speed management measures as part of the areawide sewer separation project, we recognize that this segment of Garden Street has not achieved the goals for a high-comfort bike priority (Lower Volume/Lower Speed) street and that more intervention is needed. Additional strategies may include more traffic speed management, such as pinch points, or traffic volume management tools, such as diverters. For more information on the City's bicycle priority street tools, see Chapter 4 within the Bike Plan.

BELMONT STREET

Belmont Street is unique in that the City of Cambridge only has jurisdiction between Mount Auburn Street and Ericsson Street. In addition, the southern sidewalk along this section of the street is part of the City of Watertown. As such, any redesign required agreement from Watertown and Cambridge to foster a continuous street design. The street is being reconstructed starting in 2021, following a two-year design process. Belmont Street is a transit priority street with a high demand for on-street parking and loading serving adjacent businesses. While separated bike facilities are not currently planned for the entire length of Belmont Street, they are proposed in segments where the street width allows, along with traditional bike lane segments. In addition, at the intersection of Belmont Street with Holworthy and Mount Auburn Streets, separated cycling facilities and protected intersection design elements are included, with dedicated connections to the Cambridge Watertown Greenway. Information on the design and project updates can be found on the project website.

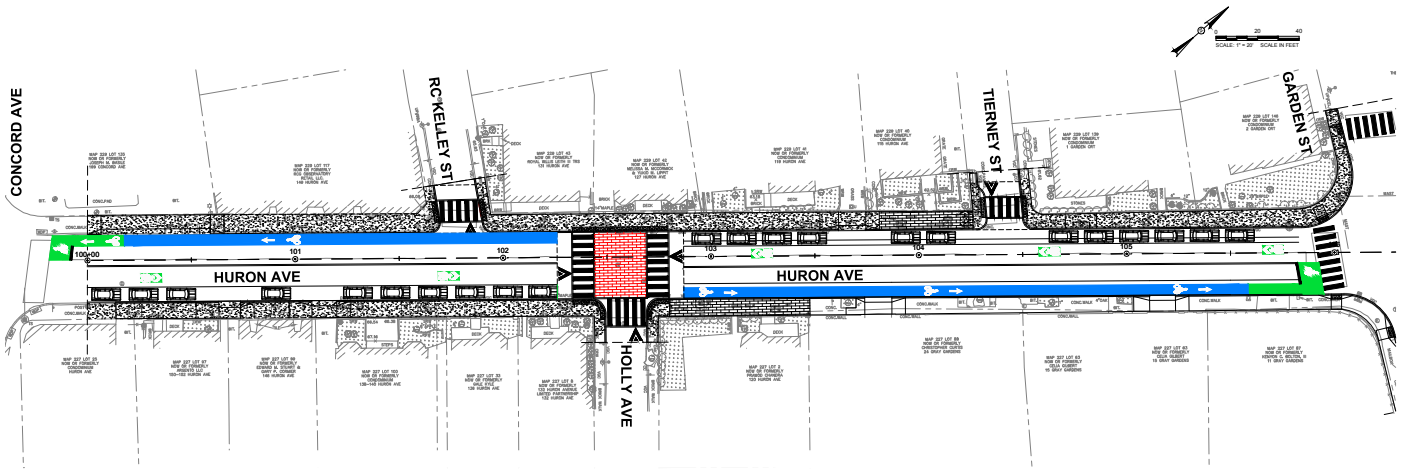

Figure G.3: Huron Avenue between Concord Avenue and Garden Street Design

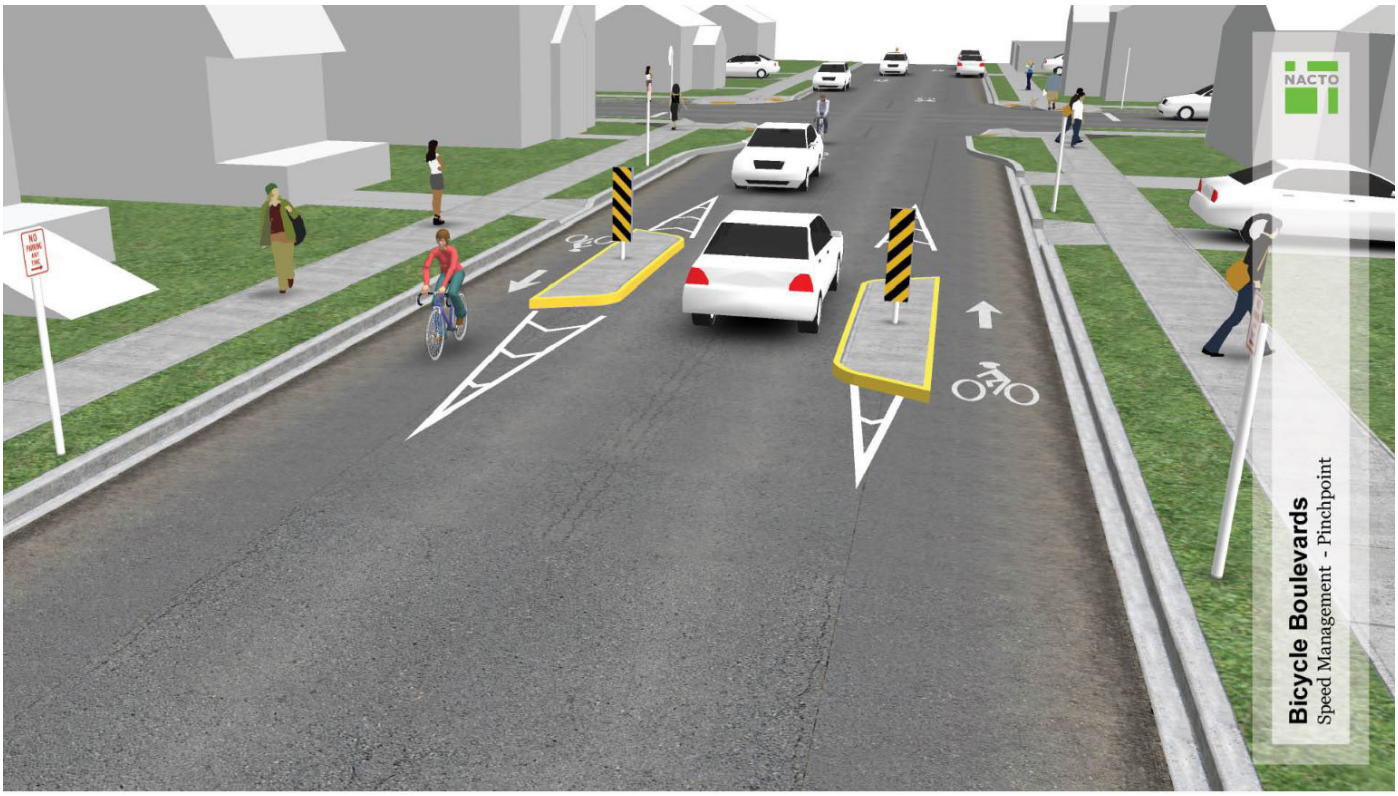

Figure G.4: Diagram of a Pinch Point with Bike Cut-throughs

Figure G.5: Photo of a Pinch Point with Bike Cut-throughs

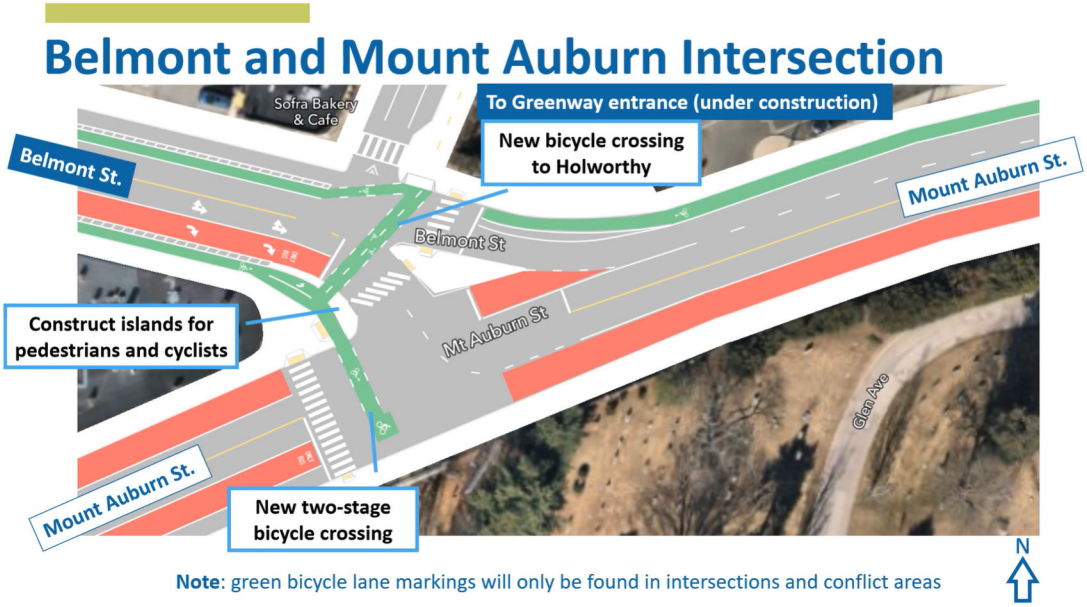

Figure G.6: Diagram of the bicycle facility additions at the Belmont St and Mount Auburn St intersection.

RESPONSES TO OTHER REQUESTS

Several requests were made to redesignate certain streets from Bicycle Priority Street (Lower Volume/ Lower Speed Street) to Greater Separation. The rationale associated with these requests is that the streets are currently not comfortable for bicycling in mixed traffic. The intent of the Bicycle Priority Street designation is that traffic speed and traffic volume management treatments will be used as appropriate to create comfortable conditions for all ages, abilities, and identities (see Chapter 5 of the Cambridge Bicycle Plan), recognizing that these streets may not currently feel comfortable. Therefore, several requests to reclassify were not incorporated; rather, treatments to create comfortable conditions will be considered during implementation of Bicycle Priority Streets.

The First and Second Street corridors are in the design process now. We received comments to designate First Street as having greater separation in the Network Vision, however it is also a transit priority street. As part of this design process, the possibility of creating both separated bicycle facilities and transit lanes will be evaluated, as will the option of designing Second Street to be a high-comfort alternative to First Street with additional bike priority street treatments. For more information, visit the project website.

The City received many comments regarding the addition of contraflow lanes on a variety of streets. While not all one-way streets are good candidates for contraflow lanes due to width of the roadway or the presence of an adequate parallel route, contraflow lanes will be considered when streets are being resurfaced or when other implementation activities occur.

Requests were made to include Putnam Avenue on the Network Vision. However, Putnam Ave. is too narrow to implement any kind of separated bicycle facility. Parallel routes on various streets are identified instead, including Chestnut Street and Blackstone Street. In addition, recent improvements to Banks Street including a contraflow lane, offer a low-speed, low-volume alternative route between Mt. Auburn Street and Western Avenue.