May 2021

ACKNOWLEDGEMENTS

The Town of Arlington wishes to thank the following resident volunteers, Town staff, and consultant staff that made this plan possible. Their thoughtful, dedicated work for more than a year—during a pandemic no less—is a testament to their dedication to making Arlington a better place for travel by all modes, now and in the future.

Sustainable Transportation Plan Advisory Committee

Daniel Amstutz, Senior Transportation Planner
Heather Barber, Arlington Business Community
Linda Butt, Parking Advisory Committee (2019-2020)
Adam Chapdelaine, Town Manager
Darcy Devney, Disability Commission
Lenard Diggins, Transportation Advisory Committee
Phil Goff, East Arlington Livable Streets Coalition
Doug Mayo-Wells, Arlington Bicycle Committee
Mike Rademacher, Department of Public Works
Officer Corey Rateau, Arlington Police Department
Kristine Shah, Health & Human Services Department
Rachael Stark, Walking in Arlington
Ezekiel Wheeler, Arlington Business Community

Consultant Team

Matt Smith, Nelson\Nygaard
Alyson Fletcher, Nelson\Nygaard
Bill Schwartz, Nelson\Nygaard
Michael Carraher, Nelson\Nygaard
Kien Ho, BETA Group, Inc.
Jaklyn Centracchio, BETA Group, Inc.
Charles Creagh, BETA Group, Inc.

Additional Town of Arlington Staff

Town Manager's Office

Julie Wayman

Department of Planning & Community Development

Jennifer Raitt, Director
Erin Zwirko, Assistant Planning Director
Ali Carter, Economic Development Coordinator
Kelly Lynema, Senior Planner
Ken Pruitt, Energy Manager
Mallory Sullivan, Community Development Block Grant (CDBG) Administrator
Emily Sullivan, Environmental Planner/Conservation Agent
Mary Muszynski, Administrative Assistant

Arlington Select Board

Steve DeCourcey
Lenard Diggins
Eric Helmuth
John Hurd
Diane Mahon

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PART 1: EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The ability for a community's transportation system to move people and goods effectively, efficiently, and equitably is fundamental to quality of life, economic opportunity, and sustainability. **The Connect Arlington Sustainable Transportation Plan** is a 20-year strategy to ensure that residents, workers, business owners and visitors are provided a safe, reliable, multimodal transportation network that meets the needs of all people of all ages and abilities.

A highly connected sustainable transportation network is critical to Arlington's future.

Transportation is not just a means to an end. Yes, transportation systems link people to their jobs, goods and services, and educational opportunities essential to their daily lives; but transportation also links people to their friends and family, recreation, and to the larger community—both within and outside of Arlington's borders. Transportation is critical to the movement of goods—locally, regionally, and nationally—that all people rely on, and increasingly for delivery of household goods directly to people's doorsteps.

Transportation also has a major impact on climate and the natural environment, whether from greenhouse gas emissions from cars, trucks, and buses; from stormwater impacts from large swaths of impervious surfaces including paved roadways, sidewalks, and parking lots; and from heat island impacts from these same surfaces. A truly sustainable transportation plan and implementation strategy must address all of the above in a coordinated fashion to provide both the means for people to move about as they need and to address these environmental impacts on the planet.

CONNECT ARLINGTON VISION AND GOALS

In 20 years, Arlington is a community that offers a transportation network that provides:

- **Safe facilities for all users**, no matter how they travel.
- **Mobility options that meet the needs for diverse populations** and people of all ages and abilities.
- **A pedestrian first, walk-friendly environment.**
- **A low-stress bicycle network** connecting people in all areas of Arlington on dedicated, comfortable facilities.
- **A transit rich environment** with more local and regional options, improved connections, reduced travel times, and enhanced user comfort for all who live, work, and visit Arlington.
- **A system that reduces the climate impacts from travel in Arlington through** sustainable roadway design and incentivizing reduction in drive-alone trips.
- **Infrastructure and policies to support the local economy** including efficient movement of goods and services.
- **Responsive and transparent transportation decision-making** to address critical safety concerns, keep people informed, and allocated resources effectively.

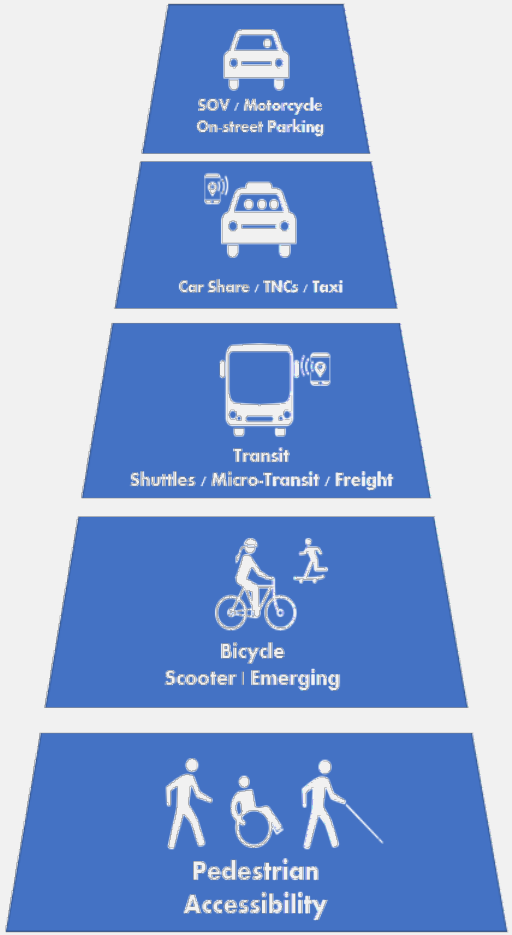
WHAT IS A SUSTAINABLE TRANSPORTATION PLAN?

A sustainable transportation plan provides a comprehensive planning and implementation framework to ensure a community's transportation network provides multiple ways to move around in a manner that is accessible, safe, convenient, and affordable for all users regardless of their age, race, gender, ability, disability, ethnicity or income, throughout different stages of their lives. Essentially, sustainable transportation provides a system of choice that connects people to where they want and need to be in a manner that is equitable, maintainable, fiscally viable and environmentally responsible.

As a sustainable transportation plan, the strategy must address three key elements:

1) Providing all people with a safe, well maintained, accessible transportation network of choice—multiple ways to accomplish a trip;
2) Managing auto congestion through providing reliable alternatives to the car to ensure people and goods are able to move about with minimal trip delays (and enhance productivity); and
3) Minimizing negative transportation impacts on the environment, primarily through the reduction of greenhouse gas emissions (GHGs).

To do so requires a new way of thinking about how people and goods move about town and the region. The more people rely on non-polluting transportation options like walking and bicycling, lower polluting (per capita) options like transit, and incorporate "green" practices like electrification and sustainable infrastructure design, the more the Town will be able to meet the goals set forth in this document. Think of this plan as inverting the pyramid of transportation priorities. Whereas in the past, the car was the priority, followed by transit and then bicycling and walking, this plan aims to put more efficient and low-polluting modes first, as well as high-occupancy, shared and commercial vehicles, and put single-occupancy vehicles (SOVs) lowest on the priority list because they are inefficient, polluting and create greater congestion.



CONNECT ARLINGTON PROCESS

The Connect Arlington transportation plan process began in January 2020. Initial tasks included analyzing and synthesizing existing conditions data about Arlington's population and workforce, and for all modes of transportation. Based on these findings, the project team identified transportation needs and gaps in Arlington, and developed strategies to address them over a 20-year timeframe.

Public Engagement

Connect Arlington was informed by the concerns, comments and suggestions of Arlington residents, business owners and workers throughout the process. Despite engagement challenges stemming from the COVID-19 pandemic, more than 1,300 Arlingtonians provided feedback on the plan through online surveys, mapping exercises, virtual public forums, and focus group meetings. To ensure diverse voices were heard, outreach strategies included press releases, social media and targeted strategies to different populations including the use of door hangers to encourage participation. Feedback received ensured that the plan and its strategies are not only informed by, but reflect the values, vision, and goals of the community.

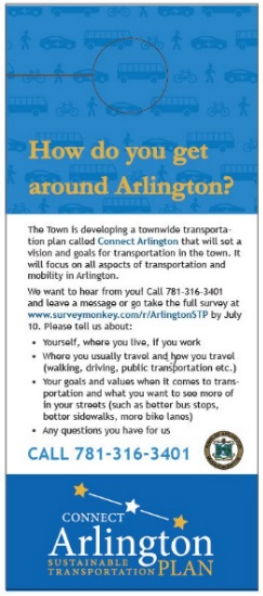
Connect Arlington Sustainable Transportation Plan

Building on the findings from the existing conditions work, and input from the public, the final Connect Arlington Sustainable Transportation Plan was developed to reflect the community's vision and goals. The final plan is presented in the sections below:

1) **Connect Arlington Executive Summary**
2) **Connect Arlington Strategies & Implementation**
3) **Connect Arlington Fact Book**
4) **Public Engagement Summary**

The four sections provide an understanding of Arlington's existing transportation system—its strengths, weaknesses, and deficiencies, how the current system operates, and a roadmap for a more equitable and sustainable multimodal future.

The following pages highlight some key findings from the existing conditions work and an overview of goal strategies. For more information, see the Connect Arlington Strategies section following the **Executive Summary** and the final two sections: **Connect Arlington Fact Book,** and **Public Engagement Summary.**



CONNECT Arlington

KEY TRANSPORTATION STATS

Street Infrastructure

137 Miles

of total streets

74%	15%	5%	6%
(101 miles)	*(21 miles)*	*(7 miles)*	*(8 miles)*
Public streets Owned and maintained by the Town	**Private streets** Partially maintained by the Town *(e.g. plowing)* and/or by property owners fronting the roadways *(e.g. paving and upkeep)*	**Other facilities** Partially owned and maintained by the Town (e.g. cemeteries, pathways in parks)	**State streets** Owned and maintained by the State or maintained in part by the Town *(e.g., plowing)*

Active Transportation Infrastructure

132 Miles

(Estimated) of sidewalks owned and maintained by the town

25 Miles

of bicycle and/or multiuse facilities

42 miles	8 miles	5 miles	12 miles
Streets Without Sidewalks *(On either side of street, primarily in hilly areas of town)*	**Multiuse Paths** *(Mostly comprised of the Minuteman Bikeway)*	**Bicycle Lanes**	**Lane Sharing Network** *(Informal, but designated routes)*

Key Transportation Stats *(continued)*

Transit

11 Bus Routes

6 routes	2 routes	3 routes
Provide Connections to Alewife Station *(Red Line and Bus Connections)*	**Service to Harvard Square** *(Red Line and Bus Connections)*	**Connections to Davis Square & Lechmere/East Cambridge** *(Red and Green Line Connections)* **Connection to Medford** *(Orange Line Connection)*

Rail Access

Within short walking or biking distance

Red Line	Commuter Rail
Alewife Station near border with Cambridge	Within ½-mile of Arlington at West Medford (Lowell Line) and Belmont (Fitchburg Line)

SUMMARY - CONNECT ARLINGTON STRATEGIES

GOAL: Safe Facilities for All Users No Matter How They Travel

There are on average over 550 crashes per year in Arlington involving vehicles, pedestrians, and bicyclists. The Town is committed to doing more to eliminate all severe injuries and fatalities on its streets. Ensuring that people not only feel, but are safe, while walking around in paramount.

Strategies:

- **Adopt a Vision Zero policy** to ensure streets are designed in a manner that prioritizes safety for all users, with a goal of eliminating traffic deaths and injuries through a holistic approach to reducing roadway conflicts.
- **Ensure all roadway design projects adhere to the Town's adopted Complete Streets Policy** to ensure that all roadway projects are designed for all users—not just cars.
- **Prioritize investments that improve safety at intersections and along road segments with the greatest pedestrian and bicyclist conflicts** including intersections with oblique angles, poor site distances and confusing operations.
- **Develop and implement a Neighborhood Traffic Calming Program** to address safety issues and concerns.
- **Develop educational programs that promote safe travel behaviors by ALL users.**
- **Ensure streetscape plantings do not limit visibility.**
- **Develop policies and guidelines that promote the safe use of emerging mobility devices** including e-bikes and other micro-mobility options.
- **Continue to implement initiatives that enhance safety to and from schools and community facilities** including Safe Routes to Schools (SRTS) projects and programs and Arlington's ADA Transition Plan infrastructure Improvements.
- **Advance plans to enhance safety and reduce user conflicts** along Mass Ave in Arlington Center.

GOAL: Mobility Options for All Ages, Capabilities, and Incomes

An integrated transportation network with multiple mobility options must be prioritized to ensure that Arlington's residents, workers and visitors of all ages, capabilities and incomes are able to equitably move to, from, within and through Arlington. To provide mobility options for all will require a comprehensive, coordinated strategy.

Strategies:

- **Continue to implement accessibility improvements throughout Arlington** including sidewalk and access improvements (ramps, ADA parking, van parking) at schools, public buildings, recreation facilities and more.
- **Continue to develop and implement Safe Routes to School (SRTS) projects**—programs and infrastructure improvements—that aim to provide safe transportation networks for children to walk and bike from their homes to their schools.
- **Complete the Minuteman Bikeway Study and implement strategies that increase access to and capacity and safety on the pathway** to ensure that it remains a comfortable active transportation facility for all active transportation users—recreational or commuter—including bicyclists, runners, and walkers.
- **Increase car share availability and membership in Arlington** by working with car share companies to add more cars and by promoting membership.
- **Increase access to bike share throughout Arlington** by promoting the system, providing subsidized memberships (to those who qualify) and adding more stations over time.
- **Expand transit options to Arlington residents and workers through local shared transportation programs and services** to provide enhanced, efficient connectivity to and from neighborhoods not proximate to MBTA services, including through locally funded transit services and partnerships with mobility providers (e.g., micro-transit) and neighboring communities.

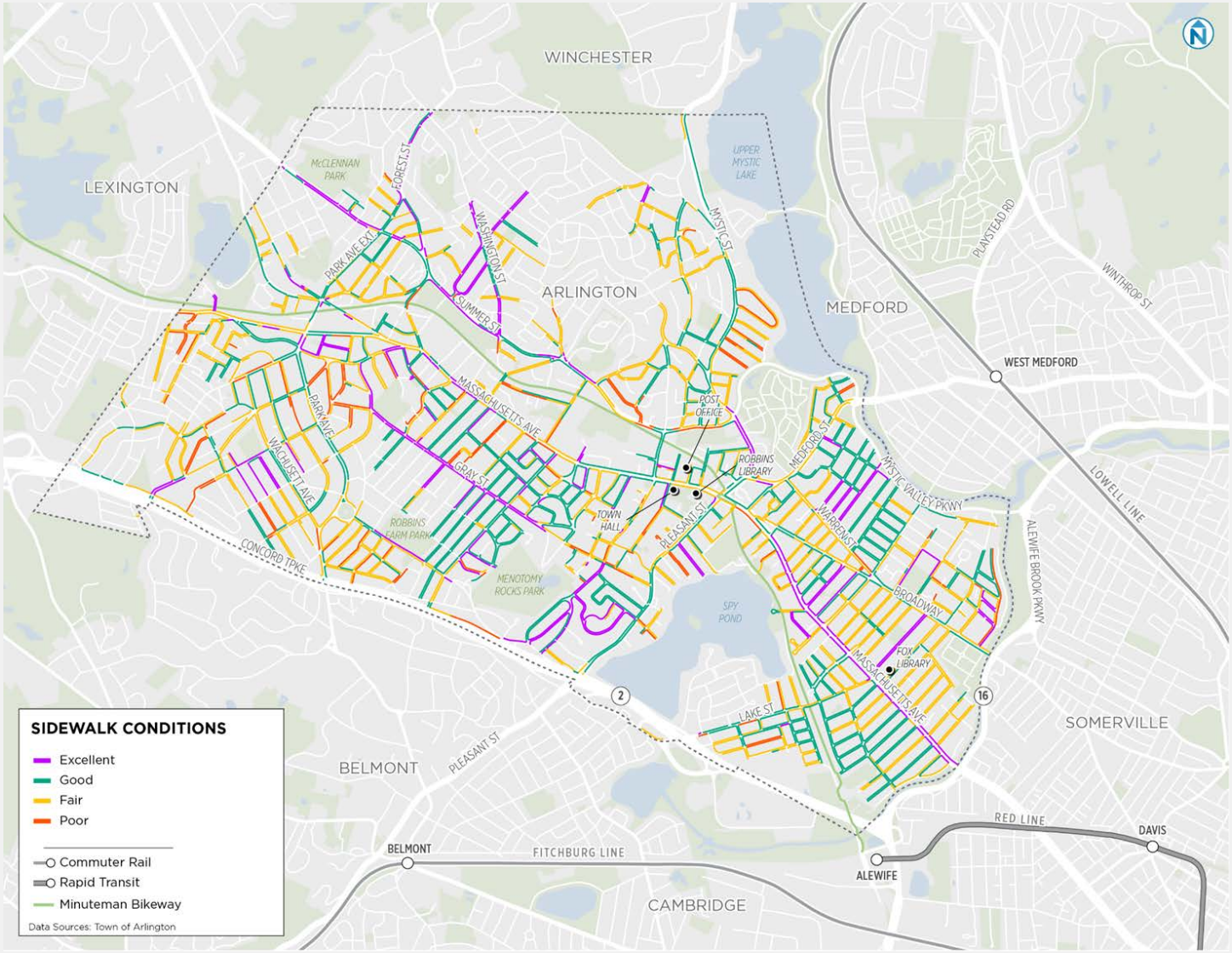
GOAL: A Pedestrian First, Walk-friendly Environment

The most important element of any transportation network is the pedestrian realm. It is the only mode of travel that is a part of every trip, whether the trip is entirely on foot or a component of a car, transit, bicycle or trip by other mode. It is also the most equitable trip type in that the pedestrian realm can be used by all at no charge. As such, ensuring that all of Arlington is connected by well-maintained pedestrian infrastructure is paramount.

Strategies:

- **Continue to maintain and upgrade sidewalks for accessibility and communicate planned projects** to ensure all sidewalks throughout Arlington are in good condition, free of tripping hazards, and fully ADA compliant.
- **Create a program and process for prioritizing, funding, and implementing new sidewalk construction** where no sidewalks currently exist in the network.
- **Continue to ensure all pedestrian facilities are fully accessible, ADA-compliant and maintained** to provide equitable access for all, no matter their capabilities.
- **Enhance pedestrian safety through design improvements on intersections** by reducing pedestrian crossing distances, enhancing lighting and other strategies.
- **Expand and maintain the existing street tree canopy to improve pedestrian safety and comfort** by providing cooling shade for pedestrians, and through safety strategies to address sidewalk damage caused by tree roots.

SIDEWALK IMPROVEMENT PROGRAM



Proactive planning provides a roadmap to achieve goals in a predictable manner.

Connect Arlington recommends building on the Town's completed sidewalk conditions analysis to develop a comprehensive sidewalk improvement program to implement and allocate funding to ensure the pedestrian network is safe and proactively maintained.

GOAL: A Low-Stress Bicycling Environment

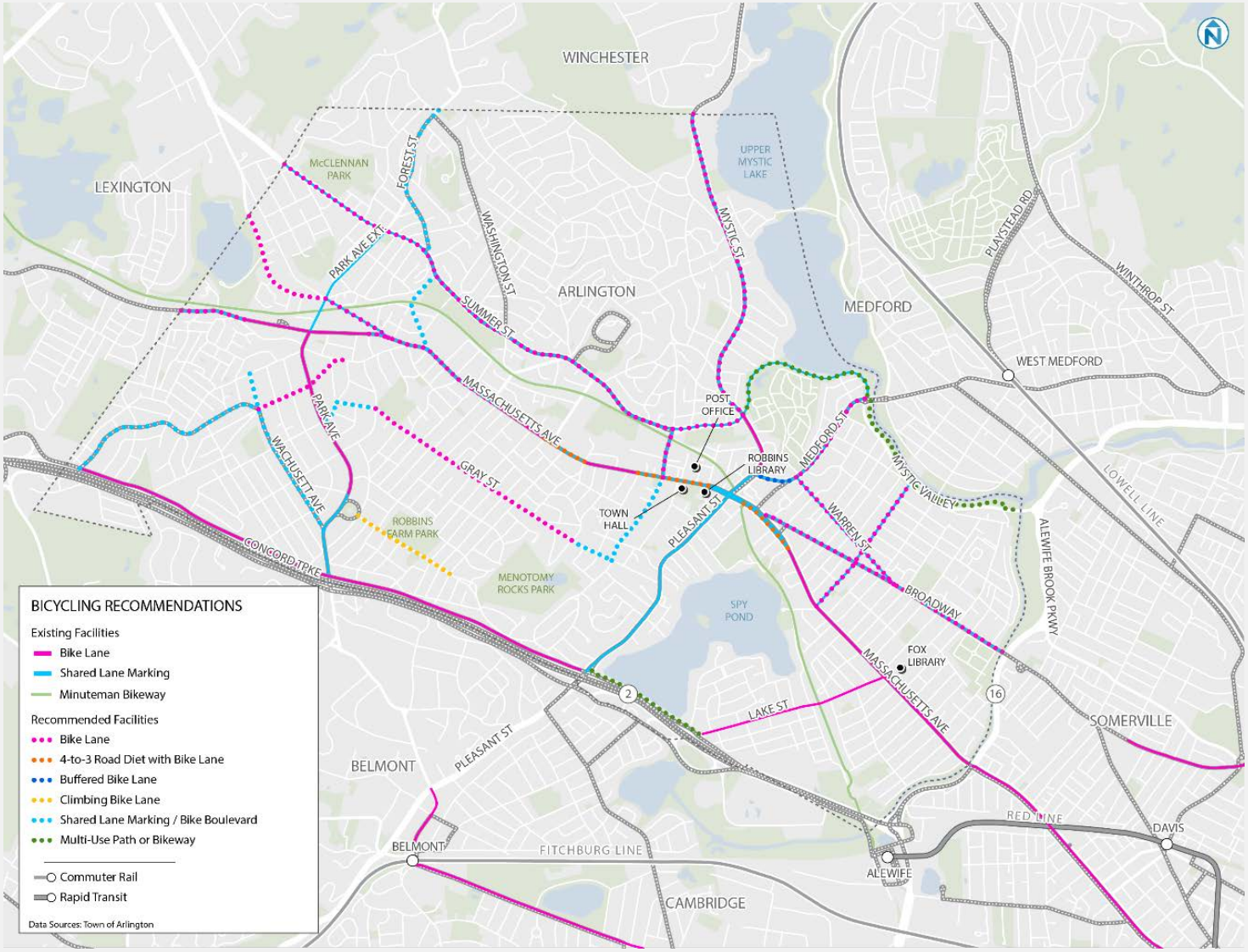
Developing a robust, interconnected network of dedicated bicycle facilities and amenities will make bicycling a safe, comfortable, and practical option—a preferred choice—for more of Arlington's residents, workers and visitors, no matter their comfort level—from beginner to experienced. More bicycling will also help to reduce greenhouse gas emissions and provide health benefits to users.

While a comprehensive Bike Master Plan should be considered to develop a truly comprehensive strategy, this plan recommends the below initiatives to achieving a low-stress bicycling network.

Strategies:

- **Prioritize new bicycle facilities along corridors currently designated as Arlington's "lane-sharing network"** including completing the bicycle lane network on all of Mass Ave, prioritizing projects that connect to existing facilities, and to and from schools and public facilities.
- **Construct a multiuse path along Mystic Valley Parkway.**
- **Establish dedicated or preferred bike routes ("bike boulevards")** on low-volume streets that provide safer bicycle travel parallel to high traffic roadways - on roadways that connect to neighborhoods and schools.
- **Add or upgrade existing bicycle parking along commercial corridors and at public facilities** to encourage more to choose a bicycle over a car trip because they know their bicycles can be parked easily and locked up safely.
- **Study potential to redesign major intersections and rotaries/roundabouts** to encourage more bicycling by providing improved rider safety and comfort.

RECOMMENDED BICYCLE NETWORK



Developing a highly connected network of dedicated, preferably separated, bicycle lanes and facilities is a priority recommendation of Connect Arlington.

Building out a town-wide network would provide safer, more comfortable, and convenient facilities to encourage bicyclists of varying levels of experience and comfort to move around, reducing the need or preference to drive.

GOAL: A Transit-Rich Environment

Arlington residents were clear about their desire for improved transit service throughout the planning process, even during the COVID-19 pandemic where physical distancing requirements resulted in decreases in transit use throughout the region. They recognized that transit could move more people, more effectively and efficiently over long distances than, or in combination with, other modes.

To provide more reliable, faster, and comfortable transit, and encourage ridership, Connect Arlington priorities include:

Strategies:

- **Increase bus frequency on highest ridership bus routes**—e.g., Route 77—to reduce crowding and provide greater comfort.
- **Study potential for and implement bus priority initiatives to reduce transit trip times and achieve (near) Bus Rapid Transit service in Arlington** including through providing more bus priority lanes, queue jumps, transit signal priority (TSP) and intelligent transportation systems (ITS), level boarding platforms and other strategies that expedite bus travel, particularly in locations where congestion significantly increases transit travel time.
- **Enhance the bus stop experience to provide greater rider comfort and increase convenience** by providing more seating at MBTA stops, more bicycle parking, co-locating bike share stations, investing in technology infrastructure and implementing micro-mobility hubs at bus stops along Mass Ave.
- **Expand local transit options for Arlington residents and workers** to enhance connectivity within Arlington and to and from neighboring towns and cities. Options include funding a local fixed-route service, contracting with a third-party micro-transit service, and/or partnering with neighboring communities to fund fixed-route services that enhance local connectivity.

GOAL: Reduced Climate Impacts from Travel in Arlington

Transportation services and facilities are among the largest contributors to climate change. Reducing car trips, especially drive-alone trips, and implementing sustainable policies and investing in sustainable infrastructure is essential to help reduce climate impacts. To accomplish this goal, Connect Arlington recommends the following:

Strategies:

- **Manage travel demand to reduce single-occupancy vehicle trips and emissions** by promoting mode shift from single-occupancy vehicle trips to alternatives like walking, biking, carpooling and transit use, and through coordinated land use and transportation planning (e.g., mixed-use development near transit and jobs).
- **Implement mobility recommendations included in the Town's Net Zero Action Plan** to reduce greenhouse gas emissions stemming from the transportation network and its users.
    - **Create and implement a plan to expand public electric vehicle charging** at libraries, business districts, public parking and other facilities, both on- and off-street.
    - **Adopt a zero-emission municipal fleet and charging infrastructure plan and policy** that commits to complete transition to zero emission vehicle purchases by no later than 2030.
    - **Advocate for improved utility rate designs** to facilitate smart electric vehicle charging and accelerate EV adoption.
- **When designing and constructing any transportation facilities, include low impact, "green" design interventions and construction techniques to reduce climate impacts** including those that reduce impermeable surfaces to the greatest extent, reduce heat island impacts, increase water retention on-site, etc.

GOAL: Infrastructure and Policies to Support the Local Economy and Resident Quality of Life

Local businesses rely on all modes of transportation to connect customers to their businesses, workers to their jobs, and to deliver goods and services sold at or sent from their location. Connect Arlington recommends curbside, access and parking strategies that support local businesses and improve quality of life.

Strategies:

- **Ensure Arlington's roadways and off-street parking are maintained** to support local business activity and resident safety.
- **Consider changes to parking regulations and policies that more effectively manage public on- and off-street parking** including allocating funding to study parking along all of Mass Ave with an emphasis on East Arlington and Arlington Heights.
- **Rethink the curb and design it to support competing users and needs more effectively,** including designating zones for pick-up and drop-off activity, zones for increased service and delivery needs, and repurposing on-street parking areas for other modes including bus and bicycle travel, or recreation (e.g., parklets).

GOAL: Responsive and Transparent Transportation Decision-Making

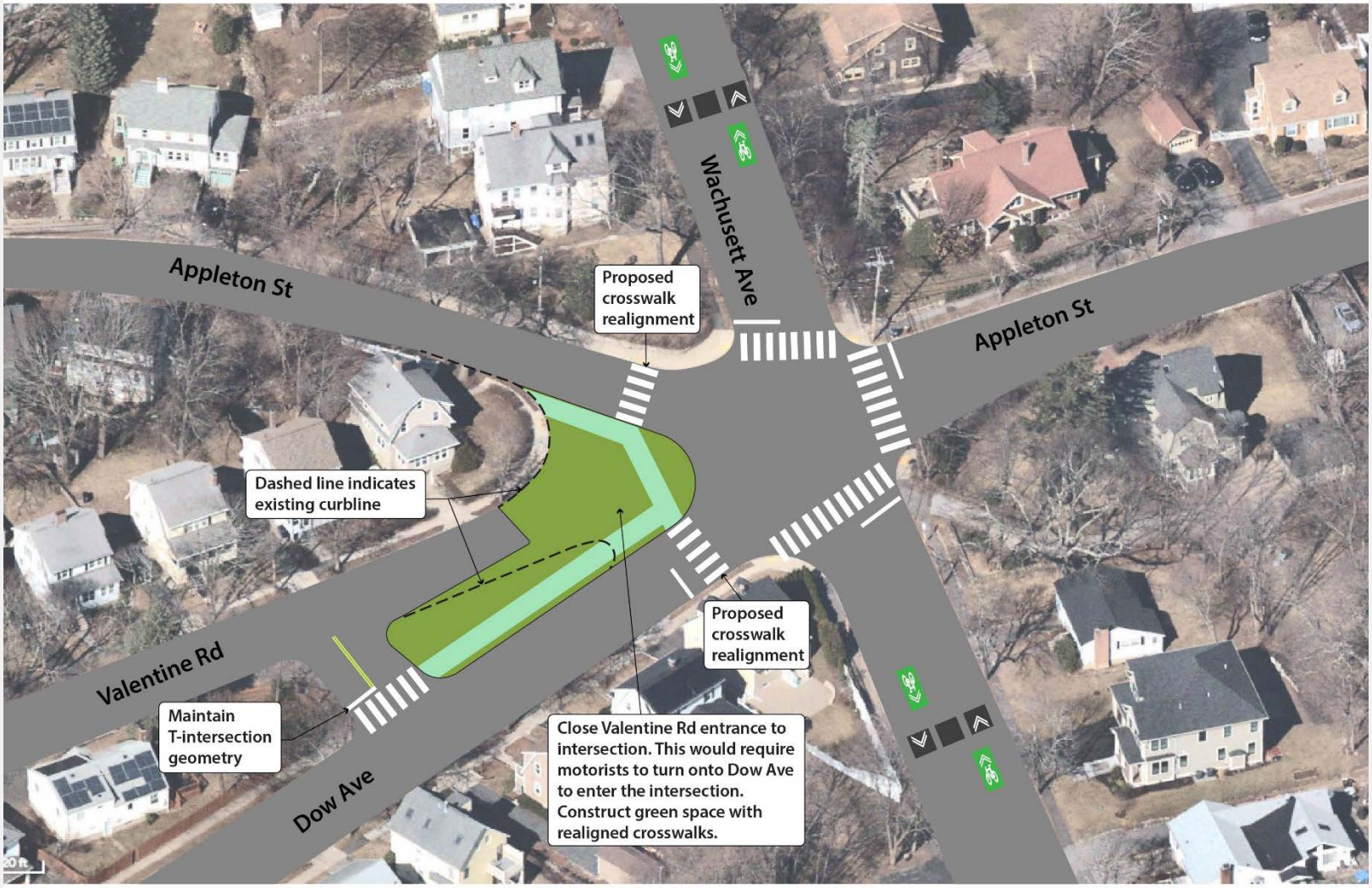
To provide a transportation network for all users and abilities, it is imperative that decision-making at all levels is clearly communicated and transparent. When and why specific programs and projects are prioritized and funded in any given year is essential given the competing needs for dollars available.

Strategies:

- **Create a process for communicating transportation project updates, construction impacts and other service issues proactively**—in advance to residents, workers and visitors makes for a better, less stressful, and safer experience.
- **Develop and regularly update a Local Transportation Improvement Program (LTIP),** to provide all Town departments and the public with a clear understanding of which transportation initiatives are in the pipeline, where in the process each initiative is, when it is planned for completion, and which funding is available (or potentially available, e.g., grants).
- **Test before you invest by implementing "tactical" infrastructure projects using low-cost, temporary materials** to rapidly address a traffic or safety issue, or to test out alternative street layouts to provide facilities for other modes not currently provided.
- **Analyze and track key data over time** to inform transportation decision making and prioritization.

TEST BEFORE YOU INVEST: TRAFFIC CALMING PROJECTS

Wachusett Avenue - Bike Boulevard - Dow Avenue Inset



NOT TO SCALE

PART 2: THE PLAN

1. CONNECT ARLINGTON: THE PLAN

INTRODUCTION

The Town of Arlington has made considerable progress over the last 20 years to develop a more multi-modal and pedestrian and bicycle friendly community. This work has been accomplished through the work of hundreds of Town staff, volunteers, and numerous stakeholders all with a shared commitment to ensuring people can get around Arlington in multiple ways safely, efficiently, and equitably. However, although progress has been made, the Town and its residents know that more work needs to be done. **Connect Arlington** is a 20-year sustainable transportation plan to ensure that all Arlingtonians, workers, business owners and visitors are provided a safe, reliable, multimodal transportation network that meets the needs of all people of all ages and abilities.

Arlington's unique location within the Boston region puts it close enough to the Commonwealth's major employment centers to make the commute sustainable, but distant enough for the town to have retained a close-knit, community feel. Compared to its neighbors to the south, Arlington's streets are calmer and mainly residential, with obvious exceptions along its commercial corridors, especially Massachusetts Avenue (locally known as Mass Ave). However, travel conditions and disparities are found throughout town.

- Some areas are very walkable and accessible, whereas other areas lack sidewalks or sidewalks require maintenance.
- Some areas of Arlington have good bicycle connectivity—e.g., neighborhoods abutting the Minuteman Commuter Bikeway and Mass Ave—while others have few or no bicycle accommodations.
- Travel time reliability of transit is poor given MBTA buses operate in congested traffic en route to rapid transit and employment centers.
- Areas west of Pleasant Street are hilly and can be challenging for those who may opt to walk, bike, or connect to and from bus transit, whereas areas east of Pleasant are flat and more maneuverable for all modes.
- The Minuteman Bikeway is high quality commuting infrastructure for non-motorized users throughout town, but conflicts between bicyclists and pedestrians are frequent, especially due to different traveling speeds.

Transportation Terms

What is Multi-modal Transportation?

A system that incorporates multiple modes of transportation, including pedestrians, bicycle, transit, vehicular and emerging mobility options and technologies.

CONNECT ARLINGTON VISION AND GOALS

No plan can be achieved without a set of goals to inform decision making and set priorities. To be useful, they must be grounded in the real world, but also represent aspirations for better outcomes. Think of the goals as the roadmap for what the plan must accomplish over the next 20 years to be considered a success.

VISION Statement

In 20 years, Arlington is a community that offers a transportation network that provides:

A. **Safe facilities for all users**, no matter how they travel.

B. **Mobility options that meet the needs for diverse populations** and people of all genders, ages, and abilities**.**

C. **A pedestrian first, walk-friendly environment.**

D. **A low-stress bicycle network** connecting people throughout Arlington on dedicated, comfortable facilities.

E. **A transit rich environment** with more local and regional options, improved connections, reduced travel times and enhanced user comfort for all who live, work, and visit Arlington.

F. **A system that reduces the climate impacts from travel in Arlington** through sustainable roadway design and incentivizing reduction in drive-alone trips.

G. **Infrastructure and policies to support the local economy** including efficient movement of goods and services.

H. **Responsive and transparent transportation decision-making** to address critical safety concerns, keep people informed, and allocated resources effectively.

By ensuring the plan addresses and meets these goals, the sustainability of Arlington's transportation network will be achieved through providing residents and workers with transportation choice and less reliance on vehicular travel.

Transportation Terms

What is an SOV?

Single-occupancy vehicles (SOVs) generally refer to privately-owned vehicles whose only occupant is the driver, even though they are capable of and designed to carry multiple people.

CONNECT ARLINGTON STRATEGIES

The Connect Arlington Sustainable Transportation Plan aims to achieve multiple goals through policies, programs, and infrastructure strategies. While some are presented as mode-specific (e.g., pedestrian, bicycle or transit), when considered as pieces of the entire network, the intent is for them to work in tandem with one another to ensure the overall system is connected between modes. One of the aspirations of the plan is to create a transportation system of choice, with multiple options of travel to meet the needs of all users.

A. Safe Facilities for All Users No Matter How They Travel

Ensuring that people not only feel safe but are safe while getting around Arlington is paramount. As noted in the **Fact Book** (Section 3) on average there are over 550 crashes per year in Arlington involving vehicles, pedestrians, and bicyclists. And while the Town has worked hard to prevent crashes through roadway infrastructure safety initiatives, such as by lowering the town wide speed limit to 25mph, it must maintain its commitment to doing more to eliminate all severe injuries and fatalities on its streets.

The following strategies provide the framework for Arlington to ensure its transportation network is safe for all.

A.1 Adopt a Vision Zero policy.

The Town of Arlington should adopt a Vision Zero policy to ensure streets are designed in a manner that prioritizes safety for all users, with a goal of eliminating traffic deaths and injuries through a holistic approach to reducing roadway conflicts. In doing so, Arlington would join a growing list of communities in the region with Vision Zero policies—Cambridge, Somerville, Boston—and would benefit from aligning its policy with these communities, as well as learn and coordinate with others through the **Vision Zero Network**[1], a national nonprofit project committed to eliminating all traffic fatalities and severe injuries.

Key to Vision Zero is prioritizing the safety of those most vulnerable to serious injury or fatality—pedestrians and bicyclists. Vision Zero policies must first provide policy and design initiatives that ensure those walking or riding are able to move about with minimal conflict between themselves and larger, more dangerous cars, buses, and trucks. Reducing crossing distances for pedestrians,

[1] The Vision Zero Network is a nonprofit project, committed to defining, building momentum and advancing Vision Zero in communities across the U.S. This collaborative campaign helps communities reach their goals of Vision Zero—eliminating all traffic fatalities and severe injuries—while increasing safe, healthy equitable mobility for all. The Network convenes leaders in the realms of public health, transportation planning and engineering, policy, community advocacy, and private sector to develop and share promising strategies and to support strong distributed leadership that make Vision Zero a reality.

providing protected or buffered bicycle lanes, removing slip lanes, and providing pedestrian lead times at signals all help to reduce conflicts between users and must be prioritized.

Vision Zero practices also make roadways safer for drivers. It is essential for roadways to be designed and used in a manner that drivers are provided safe networks. Design strategies to reduce speeds, provide clear, intuitive use (e.g., clear road markings, signage and more), will help drivers to avoid conflicts and crashes with each other, not just pedestrians and bicyclists. Many of the strategies included in this plan address these concerns.

Transportation Terms

Vision Zero

Vision Zero is a policy and strategy introduced by the Swedish Parliament in the late 1990s that sought to eliminate traffic fatalities and serious injuries by the year 2020. Since then, cities throughout the United States have adopted Vision Zero policies, including Boston, Cambridge, and many others. Core principles of Vision Zero include that traffic deaths and injuries are preventable, safety is the primary consideration in transportation decision-making, and traffic safety solutions must be addressed holistically.

A.2 Ensure all roadway design projects adhere to the Town's adopted Complete Streets policy and guidelines.

Complete Streets policies are intended to ensure that all roadway projects are designed for all users and modes—vehicles, transit, bicycle, and pedestrian. However, when right-of-way (ROW) is limited, design often prioritizes the car over other modal improvements. The result is projects that minimize, reduce, or eliminate many of the pedestrian, bicycle and transit improvements that make a street a complete facility for all users.

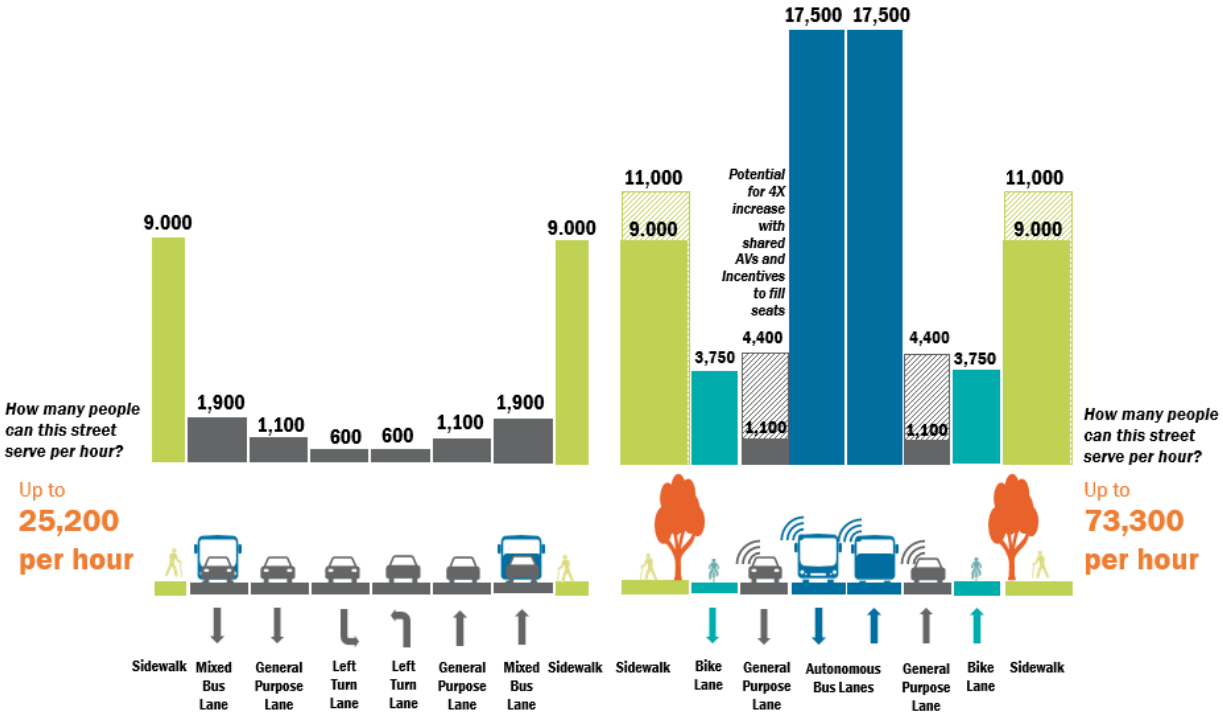
The Town of Arlington has adopted a Complete Streets policy. And although the Town has demonstrated strong adherence to its policy, the work to ensure that all modes are given equal weight and standing throughout the design process over time and changes in leadership must continue to reduce conflicts for the many users of its streets. Transparency is critical to the success of these projects. While it is ultimately the responsibility of Town departments—Public Works, Police, Fire, Planning & Community Development—to ensure projects meet the Complete Streets design standards, the design process should also include review by Town Boards and Commissions, advocacy groups and include a public process from the start to identify key mode priorities for different projects, particularly larger projects where there is insufficient right-of-way (ROW) to equally serve all users.

A.2.1 Update the Town of Arlington's Complete Streets Prioritization Plan and align it with Connect Arlington Priorities.

The Town's State-approved Complete Streets Prioritization Plan includes a list of priority projects eligible to receive grant implementation (i.e., construction) funding from the State. The Town successfully received funding for its first project in 2017 which added sidewalks to Gray Street near Ottoson Middle School.

The current plan is eligible for an update in May 2021 and should include many of the priorities identified in this plan as part of the update. The Prioritization Plan should be updated regularly—at least every five years—given that changes to transportation patterns, preferences, behaviors, and options may cause the priority projects to shift over time. Ensuring the Prioritization Plan is updated regularly will better position the Town to apply for funding on projects most important or likely to receive funding given State funding priorities.

Figure 1 Complete Streets move more people, more efficiently and safely.



A.2.2 Implement the Town's Complete Streets Prioritization Plan.

Once the updated Prioritization Plan has been approved by the Massachusetts Department of Transportation (MassDOT), the Town should prioritize implementation of these projects, both through applying for funding through the Complete Streets Program and leveraging Town resources. Funding through the State program is allocated annually, but only available to communities without an active project already funded and/or under construction. Once a project that received funding is complete, the municipality may apply for their next project. Arlington should be prepared to apply for funding whenever eligible. Eligible projects must be in the final design phase and provide estimated construction costs. As such, allocating funding for design services should be included in Town budgets to line up potential projects. Although Complete Streets grants are not guaranteed through the program, having project designs and costs can be used for other grant opportunities or to request Town funding.

A.3 Prioritize investments that improve safety at intersections and along road segments with the greatest pedestrian and bicyclist conflicts.

The cause of many roadway crashes is human error—poor judgement, distraction—or weather conditions. However, locations where multiple crashes occur, especially those with similar crash characteristics, often point to roadway design concerns or conditions that may contribute to crashes, and where initiatives to enhance safety should be a priority. Figure 2 summarizes areas in Arlington where safety enhancements should be prioritized or tracked. The map is based on crash assessment findings—high crash locations and clusters where pedestrians and bicyclists were involved—as described in the project **Fact Book** (Section 3), as well as intersections where visibility and/or confusing geometries create additional safety concerns for pedestrians and bicyclists.

Initial priorities should focus on locations where improvements have not been made in recent years, or where crashes have resulted in fatalities or injuries. For locations where large projects are underway or are under study (e.g., Appleton Street and Mass Ave, the proposed study of connecting the Minuteman

Transportation Terms

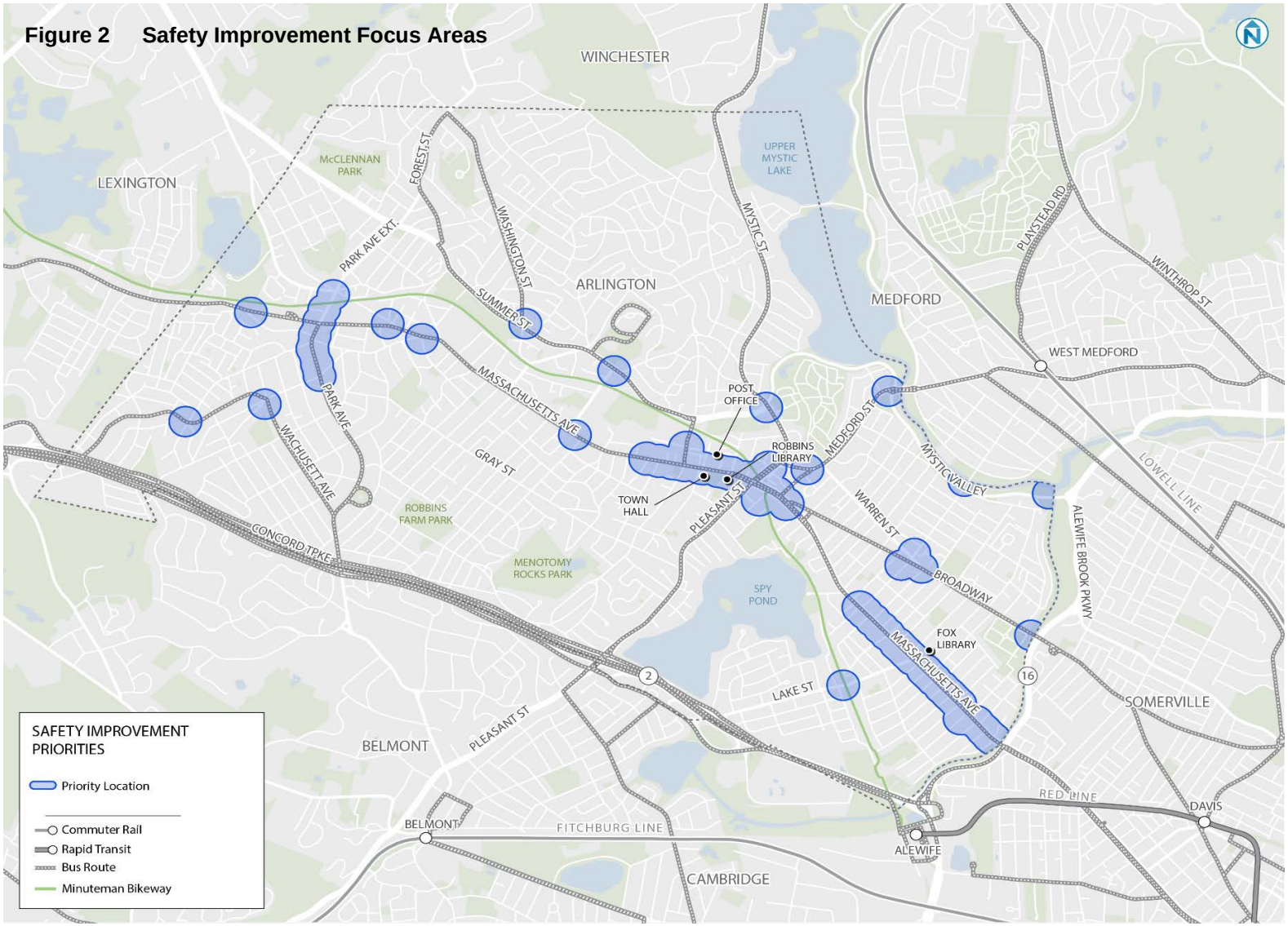
Complete Streets

As defined by *Smart Growth America*, "Complete Streets are streets for everyone. They are designed to prioritize safety, comfort, and access to destinations for all people who use the street, especially people who have experienced systemic underinvestment or whose needs have not been met through traditional transportation approaches, including older adults, people living with disabilities, people who cannot afford or do not have access to a car, and Black, Native and Hispanic or Latino/a/x communities. Complete streets make it easy to cross the street, walk to shops, jobs and schools, bicycle to work, and move actively with assistive devices. They allow buses to run on time and make it safe for people to walk or move actively to and from train stations. This means that every transportation project will make the street network better and safer for people walking, biking, driving, riding transit, and moving actively with assistive devices—making your town a better place to live."

https://smartgrowthamerica.org/program/national-complete-streets-coalition/publications/what-are-complete-streets/

Bikeway to the Mystic River Path submitted by the Town for MassTrails funding), projects should be reviewed to ensure they prioritize safety and never just to increase vehicular throughput. And for those that have been completed in the last few years (e.g., Mass Ave in East Arlington and Arlington Center) crashes and public concerns should be tracked to determine if additional safety initiatives may be needed.

Figure 2 Safety Improvement Focus Areas

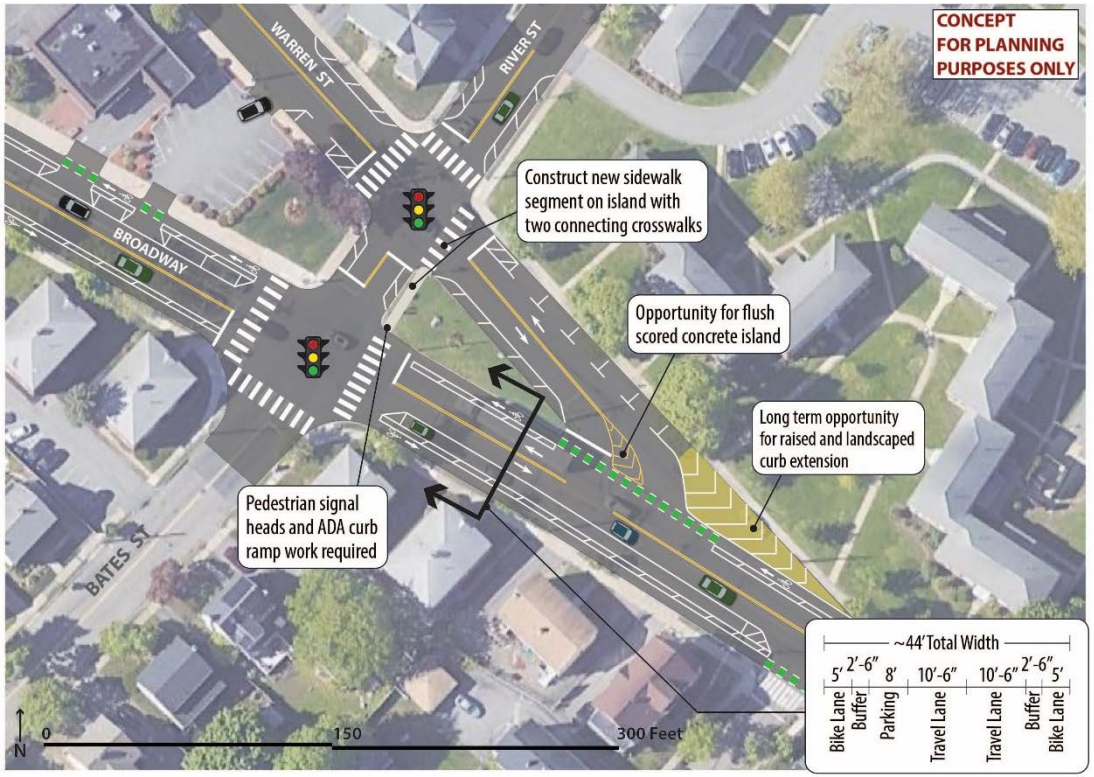


A.3.1 Address safety at roadway intersections with oblique angles, poor site distances, and confusing operations.

There are many intersections in Arlington where multiple roadways intersect, visibility is limited, and car throughput and speeds are prioritized to create confusing and dangerous conditions for all users. The Town should prioritize projects that enhance safety through slowing cars, squaring off intersections, reducing pedestrian crossing distances, improving visibility and more. Example intersections include:

- Mass Ave at Appleton Street
- Mass Ave at Lowell Street
- Appleton Street at Wachusett Ave, Valentine Road and Dow Ave
- Park Ave at Wollaston Ave and Paul Revere Road
- Park Ave at Lowell Street, Westminster Ave, and Bow Street
- Mystic Street at Mystic Valley Parkway and Summer Street
- Broadway and Warren Street (see Figure 3)

Figure 3 Broadway and Warren Street Safety Improvement
(Concept for Planning Purposes Only)



A.3.2 Eliminate slip lanes from relevant intersections to slow down cars and better protect more vulnerable users (e.g., pedestrians and bicyclists).

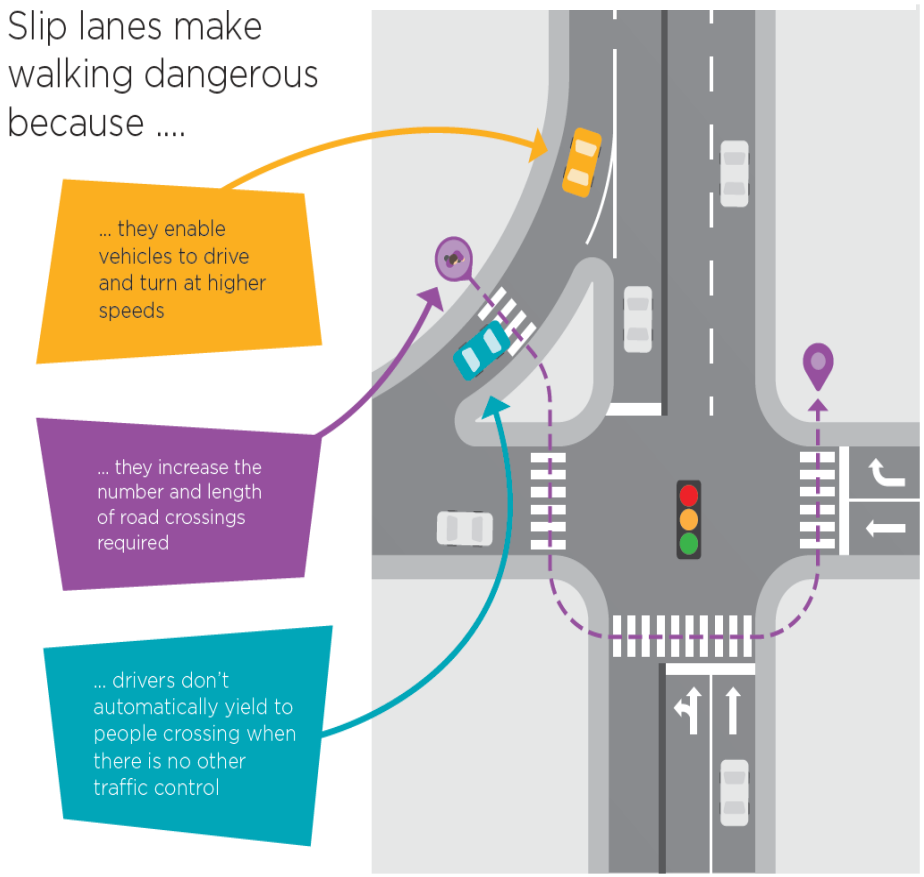
Slip lanes are designed to expedite vehicular travel to the detriment of pedestrian safety. They encourage cars to travel at higher speeds and require multiple crossing for pedestrians. (See Figure 4). Removing slip lanes slows cars by requiring a sharp right turn and reduces the number of crossing for pedestrians. Locations to study include:

- Mystic Street and Chestnut Street
- Medford Street and Chestnut Street

A.3.3 Design, fund and implement projects that enhance pedestrian and bicycle safety.

Pedestrian and bicyclist safety is a key priority of this plan. Please see **Goal Areas C and D** for more information accessibility and safety improvements.

Figure 4 Slip Lane Conflicts



A.4 Develop and implement a Neighborhood Traffic Calming Program to address safety concerns.

Residents and other stakeholders often know where safety is a major concern but may not be discernable from crash or other traffic related data. This includes neighborhood streets where speeding is excessive, extra wide intersection crossings that present crash concerns, and more. The Town should develop a program where resident and other stakeholder groups may request a project to calm traffic within their neighborhood, work with the Town to analyze the issue and identify a strategy, and allocate funding to address these neighborhood traffic and safety concerns using tactical materials to "test" before making a more costly permanent investment.

It is important that the program clearly define what a neighborhood traffic calming initiative is and what it isn't, and to provide examples of project types that are possible. For example, neighborhood traffic calming typically includes:

- Small-scale, inexpensive projects (e.g., costing less than $20,000) to slow down traffic on local, residential streets.
- Projects that use temporary or semi-permanent materials to test ideas that can become permanent if successful.
- Projects that narrow streets though signage, bump outs, neck downs; or that improve sidewalks, pedestrian crossings (e.g., speed cushions/bumps); add bicycle lanes and separation where possible.
- Signage, raised medians and other elements that divert traffic.

Any program developed should include data collection before and after implementation to determine if an intervention achieves the speed reduction intended.

Figure 5 Neighborhood Traffic Calming Techniques

Temporary Speed Humps and Flex Posts

Bump outs to reduce speeds

Rubber Traffic Tables

A.5 Develop educational programs that promote safe travel behavior by ALL users.

Safe travel is every user's responsibility—drivers, bicyclists, pedestrians, and personal mobility users (e.g., electric scooters, skateboards, etc.). Developing educational materials including signage, online materials, presentations, pamphlets, and more can encourage safe behavior by providing greater knowledge about user protocols and rules that make getting around safer for all. Potential initiatives could include:

- **Bicycle Safety Programs,** for example through MassBike in partnership with MassDOT, the RMV and Safe Routes to School (SRTS) program, that teach children how to safely ride bicycles including traffic rules (e.g., stop at red lights), how to use a one-direction bike lane, and more. Similar programs targeted at adults should be promoted as well.
- **Provide Bike Safety Equipment** like helmets to students through grant opportunities and/or partnerships with local businesses and organizations, for example, through White & Gluck's Project KidSafe[2] program and others, like the Arlington Bicycle Advisory Committee, who in the past has provided helmets to Arlington residents.
- **Safe Routes to School (SRTS)** program route maps should include safe bicycle connections/routes, not just walking routes. Additionally, educational materials for parents and school staff should be provided to address safety concerns between walkers and vehicles during arrival and dismissal.
- **Share the Path** – The Minuteman Bikeway is a heavily used multiuse path. Developing a comprehensive safety program through enhanced signage, pavement markings (see Figure 6), separated uses, and other user information would help to inform those not versed in how to properly share the path. The Town has provided Community Preservation Act (CPA) funding to study potential safety improvements along the Minuteman Bikeway.

Figure 6 Shared Path Pavement Markings

[2] In 2018, 50 helmets were donated to Pierce Elementary School through Boston-based law firm, White & Gluck's KidSafe Program, which as of 2018 had donated over 20,0000 bicycle helmets to children across the Commonwealth. https://arlington.wickedlocal.com/news/20180417/peirce-students-get-new-bike-helmets, https://www.bwglaw.com/project-kidsafe.html

- **Driver Education Programs,** including new- and long-term driver education, about user behavior (e.g., heavy/car yields to light/pedestrian, sharing roadways with other users), and promoting non-driving for short trips that can be accomplished by other modes.

A.6 Ensure streetscape plantings do not limit visibility.

Dense and overgrown plantings like shrubs and decorative grasses limit visibility along roadways (more than trees), particularly at street corners, driveways, and roadway medians and at bump outs, where they limit visibility of all users. Policies to ensure plantings do not impact safety could include:

A.6.1 Develop educational materials and distribute to property owners about responsible plantings on private property that improve visibility and safety.

The use of groundcover instead of shrubs, planting or moving shrubs further into the property and trimming hedges below two feet are good examples of plantings that would not obstruct visibility.

A.6.2 On public property–bump outs, medians, sidewalk (corners)—only allow plantings 2.5 feet high or lower.

Within 20 feet of a corner, median intersection, pedestrian, or bike crossing, avoid tall shrubs and grasses that block views, tall planters, street trees, etc. Planting locations and types should be considered in all roadway infrastructure projects, particularly those addressing high pedestrian areas. Additionally, individuals or groups responsible for streetscape plantings—e.g., garden clubs, merchant groups, and others—often require education about roadway safety and plantings.

A.7 Develop policies and guidelines (design and user guidelines) that promote the safe use of emerging mobility devices and services including e-bikes and other micro-mobility options.

Micro-mobility includes existing mobility options like bike share, as well as an expanding list of options from e-bikes and e-scooters (shared and private), electric skateboards, and future personal mobility technologies. In addition to pending legislation at the State level for e-bike and e-scooters, it is recommended that Arlington should develop its own guidelines and/or regulations for where and how different devices should travel so that all roadway users are aware of what is and isn't allowed to travel on a facility. For example, should e-scooters be allowed on a multi-use path, in a bike lane, or in a vehicle travel lane? What about higher speed e-bikes? (See **Strategy F.2,** for transportation initiatives related to the Arlington *Net Zero Action Plan*.)

Design guidelines should also be established to inform future roadway and trail design projects. For example, multi-use paths should be wider if they are intended to allow e-bikes and other e-assist device which travel at higher speeds. Regardless, restrictions on speeds should be posted and enforced. Pedestrians should be separated from these users wherever possible to avoid conflicts and potential crashes, and not discourage their use.

A.7.1 Require shared mobility providers to implement "low speed" zones for electric or e-assist devices.

Shared mobility providers can limit maximum speeds of electric or e-assist bicycles, scooters, and other devices within defined areas through geofencing technology. When an electric device enters the geofenced area, speed is automatically lowered to a predetermined limit (such as 5 mph or 10mph) while in the georeferenced zone. When the device leaves the zone, speed can increase. For example, Bluebikes is developing a hybrid dock and dockless model for e-bikes that is not yet available. To allow for shared e-bikes to use the Minuteman Bikeway in the future the Town could require Bluebikes to geofence the corridor for their e-bikes with a maximum speed to be determined.

A.8 Continue to implement initiatives that enhance safety to and from schools and community facilities including Safe Routes to Schools projects and programs and Arlington's ADA Transition Plan infrastructure improvements.

(Please see strategies included in **Section B: Mobility Options for All**)

A.9 Advance plans to enhance safety and reduce user conflicts along Mass Ave in Arlington Center.

Mass Ave is heavily traveled by all modes through Arlington Center, the Town's primary Civic Center and home to Town offices, retail, restaurants, and cultural amenities. It is also where the Minuteman Bikeway crosses Mass Ave, where several transit routes provide service, and where three state routes converge—Route 60, Route 2A, and U.S. Route 3. As highlighted in the **Fact Book** (Section 3), Mass Ave through Arlington Center is a State-designated pedestrian and bicycle crash cluster. Recent initiatives undertaken and completed to improve safety include the $1.7 million Safe Travel Project to better connect the Bikeway through the Center, and the Arlington Center Sidewalk Improvement Project to repair and replace sidewalks on Mass Ave between Mystic/Pleasant Street and Franklin Street, and along Broadway and Medford Street. The Town worked with a consultant to create conceptual plans to lead to for a more extensive reconstruction of this area with the Mass Ave Phase II project. The Town went through a public process to identify a preferred concept for reconstructing Mass Ave through Arlington Center that would enhance bicycle and pedestrian facilities and repair aging infrastructure. The project aimed to continue the Mass Ave reconstruction that occurred from Route 16 at the Cambridge

line to Pond Lane. The Town was unable to get support for this segment of the project from MassDOT District 4 and has since worked on project segments, including sidewalk reconstruction and improvements to Whittemore Park in the Center. Additional roadway work remains and should be prioritized.

Given Connect Arlington's emphasis on enhancing pedestrian, bicycle, and transit connectivity, it is recommended that the project be revisited to determine if the selected design for the project would meet the goals and vision of this plan. For example, the Phase II plans prioritize vehicle throughput over other modes and does not enhance the transit experience. The opportunity to proactively reimagine how Arlington Center functions from the perspective of all modes, and to design it move more people—not just cars—could address multiple strategies in this plan.

One potential design refinement to enhance pedestrian safety, provide safer bicycle facilities and slow vehicle speeds would be exploring a 4-to-3 lane road diet, with one travel lane in each direction and a center turning lane, a similar configuration as found west of Bartlett Avenue. The Town could also explore a three-lane section similar to the one implemented in East Arlington with the Mass Ave Redesign Phase I. The road diet would reduce crossing distances for pedestrians, provide room for separated, bicycle lanes (parking protected where possible), and potentially bus priority lanes (during peak travel times), and slow vehicle speeds.

Figure 7 Mass Ave Phase II Conceptual Master Plan (2016, Design Plan by VHB)

B. Mobility Options for All Ages, Capabilities, and Incomes

B.1 Continue to implement accessibility improvements throughout Arlington.

B.1.1 Continue to allocate funding to implement transportation improvement projects identified in the Town's recently updated Americans with Disabilities Act (ADA) Transition Plan.

Ensuring transportation facilities are accessible to all ages and abilities (including those who are vision or hearing impaired) must be prioritized for Arlington to be a connected community for all. Numerous initiatives are identified in the ADA Transition Plan including sidewalk and access improvements (ramps, ADA parking, van parking) at schools, public buildings, recreation facilities and more. The Town currently allocates funding for these improvements; however, it is unclear how much money is dedicated to these projects, or which projects have been prioritized. Including all ADA improvement projects in the recommended Local Transportation Improvement Project (LTIP, see **Strategy H.2** for more information) would provide transparency into the process and decision-making and provide a mechanism for input into priorities from users and advocacy groups.

Figure 8 Accessible Sidewalk

The recently completed Arlington Center Sidewalk Project replaced brick sidewalks with concrete with a stamped brick border.

B.1.2 Require all sidewalks to be constructed with materials that are accessible to all.

While many like the aesthetic appeal of brick sidewalks, they are not an optimal option for those with mobility impairments. Brick sidewalks typically provide rougher surfaces which inhibit travel for those with mobility limitations. To ensure sidewalks are accessible, all sidewalks in commercial areas, town facilities and along major pedestrian connections should be constructed using concrete. Decorative brick or stamped concrete could be included for edge treatments, but only where space allows (see Figure 8). When brick is used, wire-cut bricks that provide a smoother surface should be required. Areas adjacent to handicap parking spaces should be concrete.

B.2. Continue to develop and implement Safe Routes to School (SRTS) projects.

Several thousand children attend Arlington's schools. Encouraging them to walk or bike to school is not only good for their health, but it also reduces traffic congestion and greenhouse gas emissions. Safe Routes to School (SRTS) programs and infrastructure projects aim to provide safe transportation networks for children to walk and bike from their homes to their schools. Arlington was one of the first communities in the country to set up a SRTS program.

Funding for the program can come from both the State through MassDOT and the town. Although State funding has been limited in recent years, Arlington should prioritize local investments that enhance connectivity to and from schools throughout town. It should also consider school connectivity in all major projects whether its directly connected with the project or not. For example, any roadway project that potentially impacts a child's walk or bike to school must address their safety.

In 2019, Arlington received funding from MassDOT to implement a SRTS infrastructure project near Stratton Elementary School. The allocation will be made available in Federal Fiscal Year 2024 (FFY2024). Arlington continues to work with the Massachusetts SRTS program and its regional coordinator on other projects to address safety concern around other schools, including Dallin Elementary School and Thompson Elementary School.

B.3. Complete the Minuteman Bikeway Project and implement recommendations that increase access to and capacity and safety on the pathway.

The Minuteman Bikeway is the central active transportation spine through Arlington, providing a picturesque, separated multi-use path for bicyclists and pedestrians connecting to Lexington and Bedford to the north and Cambridge to the south. The facility serves as both a recreational amenity for bicyclists, runners and walkers, and a convenient commuting route for residents and workers, connecting to the Red Line at Alewife Station in Cambridge and to the Somerville Community Path and Davis Square. Its popularity and heavy use has also resulted in conflicts among different users—especially bicyclists and pedestrians—and vehicles at roadway crossings.

The Town has allocated Community Preservation Act funding to engage a consultant to study options to expand capacity and improve safety long the Minuteman Bikeway. The study should be comprehensive in its analysis and recommendations; however, at a minimum, priorities to study and implement recommended changes should include:

B.3.1 Prioritize opportunities to separate bicyclists from pedestrians to expand capacity and enhance comfort and safety.

During the Connect Arlington planning process, numerous comments were received about the conflicts between bicyclists and pedestrians along the Minuteman Bikeway. Based on findings from the Bikeway study to be completed by the Town soon after the completion of this plan, opportunities to increase capacity through separate facilities designed for different speeds would add comfort and improve safety for both pedestrians and bicyclists along the pathway. Given that many segments of the pathway do not provide enough right-of-way (ROW) to provide fully separated uses, opportunities to widen the path and provide preferred use areas for each mode should be explored.

Figure 9 User Separation

There are many design strategies to provide user separation. The Missouri Greenway includes areas for faster bicycle travel in the center, with areas for pedestrians on each side.

B.3.2 Develop and implement comprehensive wayfinding and user safety program for the bikeway.

Signage to educate new and returning users how the pathway should be used, or which pathway to use (if separate facilities are constructed) would help to reduce user conflicts. Wayfinding signage could also be used to encourage users to stop in Arlington's commercial centers and support local businesses.

B.3.3 Install lighting to increase visibility and safety along the pathway at night.

Based on input received during focus groups and other plan engagement activities, many would like to see lighting added to the pathway from the Red Line to the Lexington line to increase safety of all users, and encourage more to use the facility at night, particularly during winter months when commuting hours are dark.

Developing a lighting plan to illuminate the bikeway would attract more use, particularly in darker months when many commuters return home after sunset. Lighting would not only reduce crash risks between users and pathway obstructions (e.g., vegetation on the path, uneven surfaces) but would also improve personal safety by providing increased visibility. Systems that direct light onto the path are recommended to minimize light impacts on residential abutters.

Lighting could be installed along the entire pathway as one large project, or could be implemented in phases, beginning with segments from the Cambridge line to Arlington Center.

B.3.4 Improve and add additional neighborhood connections.

Ensure that all neighborhood connections, where they exist or can be added with minimal effort, are designed to accommodate all users safely. Connector paths should be no less than 8 feet wide to provide space for both bicyclists and pedestrians, which travel at different speeds. Adding connections to reduce distances between entry and exit points (combined with lighting) will also increase personal safety of users by providing more opportunities to exit the pathway when uncomfortable or potentially dangerous situations occur.

B.4 Increase car share availability and membership in Arlington.

Reducing car ownership helps to eliminate car trips that could be easily and conveniently made using other modes. Further, not every individual or household wants to or can afford to own a car, or more than one car. Currently, the car share provider Zipcar offers a few options in town for car share. However, providing shared vehicles throughout Arlington would help more residents to live a car-free or "car light" lifestyle by providing convenient options to use a vehicle when needed, and encouraging the use of other modes when not. There are many options for the Town to increase car share availability, including:

B.4.1 Work with car share companies (e.g., Zipcar, Getaround, etc.) to explore additional locations, including on- and off-street locations.

B.4.2 Develop a Community Car Share program of Town-owned vehicles managed by a third-party entity.

More and more communities are opting to own (and contract with a third party to operate) their own fleets of car share to increase access for their residents and businesses. Getaround, for example, is used to manage municipally-owned car share programs.

B.4.3 Include car share as part of parking requirements in new multi-family, or larger commercial developments.

Requiring car share at larger developments can reduce the need to own a car, or more than one car. This not only reduces monthly household expenses but can lower the overall development costs when less parking is needed.

B.4.4 Incentivize car share memberships.

Provide free or subsidized memberships and rides to incentivize and increase use of car share. This could include car share memberships to all Town employees to decrease drive-alone trips to work by providing a car option only when needed.

B.5 Increase access to bike share throughout Arlington.

B.5.1 Promote and provide free or subsidized bicycle share memberships.

Bike share (Bluebikes) provides an alternative transportation choice to many who cannot afford or do not wish to own a personal bike. Bluebikes offers an income-eligible program to those with an EBT Card, reducing the monthly membership to $5 or annually to $50. This may still be out of reach for some. Providing additional local subsidies—e.g., free memberships to qualifying people—would make bike share available to all. Additionally, providing free or reduced memberships to Town staff would encourage non-auto commutes and other trips taken during the workday. Establishing a Bluebikes enrollment center at Town Hall or at other location(s) would also better promote bicycle share membership and use.

B.5.2 Identify funding for more bike share stations to improve neighborhood bicycle connectivity.

The Town should explore funding opportunities—Town funding, grant funding, sponsorships, TDM requirements—to provide additional bike share hubs and make connections proximate to residents in neighborhoods away from the Mass Ave spine. Stations could be located adjacent to parks and the Minuteman Bikeway.

B.6 Expand transportation options to Arlington residents and workers through local shared transportation programs and services.

Currently, 11 MBTA bus routes run through Arlington[3]; however, all are designed to funnel passengers to rail connections, most notably the Red Line at Alewife Station, and are not always convenient for accessing shopping, entertainment, or social trips. For many, bus routes do not provide efficient connectivity to and from neighborhoods, or are too far for many to walk to, particularly those with mobility challenges exacerbated by challenging topography. Arlington could provide supplementary local services to bridge the gap.

B.6.1 Partner with TNCs to provide door-to-door connectivity, including subsidized rides to qualifying residents, to those who do not or choose not to drive.

TNCs (Transportation Network Companies) like Uber and Lyft provide door-to-door services through mobile applications at a premium cost not affordable or accessible to all users, including those without a smartphone or knowledge of how to use the applications. The Town could partner with TNCs so that rides could be arranged in advance and by phone through Council on Aging transportation services or another entity. Partnerships with TNCs are active in communities like Needham for medical appointments, and through several community service organizations in Attleboro as part of the CAR: Community Access to Rides program.[4]

B.6.2 Explore opportunity to launch local transit service through contracting with a third-party micro-transit service.

See **Strategy E.4**. for details.

B.6.3 Explore opportunities to partner with abutting communities to fund fixed route services that enhance local connectivity.

See **Strategy E.4**. for details.

[3] This includes Route 79 which is suspended at the time of this writing due to the MBTA Forging Ahead changes.

[4] http://www.svdpattleboro.org/district/CAR%20Brochure-SVDP%20version.pdf

C. A Pedestrian First, Walk-Friendly Environment

The most important element of any transportation network is the pedestrian realm. Walking not only has health benefits in that it is an active form of transportation and emits no greenhouse gases; it is the only mode of travel that is a part of every trip, whether a whole trip, or at the beginning or end of a trip via car, transit, bicycle or other mode. Walking is also the most equitable trip type in that the pedestrian realm can be used by all at no charge. As such, ensuring that all of Arlington is connected by well-maintained pedestrian infrastructure is paramount. (The pedestrian environment refers to sidewalks and street crossings for users of all abilities, including those with limited mobility, or those that require an assistive device such as a cane or wheelchair.)

C.1. Continue to maintain and upgrade sidewalks for accessibility and communicate planned projects.

As shown in the **Fact Book** (Section 3), existing sidewalks vary in quality and condition. Arlington used to allocate $500,000 annually to sidewalk improvements to enhance the pedestrian environment, but this number has fluctuated and been reduced in recent years. The Town uses the ADA Transition Plan and ranks areas based on certain criteria to address existing sidewalks in poor condition or not ADA-accessible. However, it is not always clear how sidewalk maintenance improvements are being planned or prioritized.

The Town should develop a transparent sidewalk maintenance program to provide all residents with a better understanding of what is planned, why it is planned, which projects are currently funded, and when future projects are anticipated. Because sidewalks have varying levels of foot traffic depending on their location and purpose, the plan should balance improvements (and funding) to address needs in high traffic pedestrian areas (e.g., commercial areas), pedestrian routes to schools (e.g., Safe Routes to Schools), recreation and transit routes, and with lower pedestrian traffic on neighborhood side streets. A program would also provide opportunities for public input into the process. (See **Strategy H.2** for more information.)

Figure 10 Sidewalk Improvement Program Priority

Providing a sidewalk on the western side of River Street approaching the Mystic Valley Parkway should be a Sidewalk Improvement Program priority.

C.2. Create a program and process for prioritizing, funding, and implementing new sidewalk construction where no sidewalks currently exist in the network.

The Town of Arlington has a robust sidewalk network, and most work related to sidewalks is to preserve and maintain this infrastructure. However, in many neighborhoods and along some major streets, there are gaps in sidewalk or no sidewalks at all. This includes parts of Arlington Heights which developed with lower densities and more focused around the automobile, some private roads, and even in dense parts of East Arlington. Installing sidewalks where none exist can make walking safer and become a feasible option for residents who wish to walk to parks, schools, commercial areas, or for exercise. Although the Town installs small stretches of sidewalks in some limited cases, there is no defined sidewalk construction program to prioritize and build out new sidewalk networks where they would be beneficial. This program should include additional funding beyond existing funds for sidewalk maintenance that can be used to design and construct new sidewalks, as well as be used to provide matching funds for state or federal grants.

C.3. Continue to ensure all pedestrian facilities are fully accessible, ADA-compliant and maintained.

All sidewalks should be designed, constructed, and maintained to ensure that they are accessible to all and meet criteria to ensure ADA-compliance. This includes crosswalks, which indicate to pedestrians and drivers alike where roadway crossings should occur—a critical component of roadway safety. Ensuring crosswalks are visible and well defined and accessible encourages more to walk. Throughout Arlington, there are many crosswalks that are faded, that have non-compliant ramps or in some cases no ramps at all and are located at intersections that lack accessible pedestrian signals.

C.3.1 As part of the sidewalk improvement plan, develop a plan to install, upgrade and maintain accessibility ramps, tactile warning strips and other infrastructure to become (or remain) fully ADA-compliant.

All crosswalks are required to be fully-ADA compliant; however, upgrading those that are not will take time. Crosswalks in high pedestrian traffic areas should be prioritized. In addition to CDBG funds, which the Town allocates for these improvements annually, additional grant and Town funds should be allocated when available to expedite accessibility improvements.

C.3.2 Require accessible pedestrian signals for all new traffic signal installations, and proactively upgrade existing signals to increase safety for those with visual and hearing impairments.

Accessible pedestrian signals include devices that communicate information about "Walk" and "Don't Walk" times at signalized intersections and crosswalks in visual and audible ways. Additionally, consider automated pedestrian signals which remove the need to press a button.

C.4. Enhance pedestrian safety through design improvements at intersections and crossings.

C.4.1 Minimize pedestrian crossing distances and increase visibility at intersections where crashes involving pedestrians are highest.

The less time a pedestrian is in a roadway, the less likely they are to be struck by a vehicle. To improve pedestrian safety, the Town should prioritize projects that improve visibility and reduce time in the roadways—especially those with more than two lanes. This could include enhanced lighting, reduced crossing distances across roadways through road diets, continued investment in bump outs, adding pedestrian refuges where possible, removing adjacent on-street parking that block crosswalks, regular vegetation maintenance, and signalization (including traditional signals where warranted and warning beacons such as Rectangular Rapid Flashing Beacons [RRFBs]). Additional measures, such as adjusting pedestrian signal times to provide more time for walkers with mobility impairments should also be assessed to provide sufficient time to cross the roadway. Given that resources are limited, improvements to pedestrian crossings should be prioritized based on different factors, including roadway geometry, volume of vehicles and pedestrians, vehicle speeds, and proximity to trip attractors like schools or commercial areas. Less expensive visibility improvements such as expanding the crossing flag program started by the Transportation Advisory Committee and painting curbs to highlight no parking areas near crosswalks should also be explored. The Town should develop guidance for improving existing crossings and installing new crossings based on these factors.

C.4.1.1 Review unsignalized pedestrian crossings along major roadways and implement measures to enhance pedestrian safety.

Unsignalized crosswalks along high-traffic, high-speed roadways are especially challenging for pedestrians to use. Finding a gap in traffic is more difficult due to high traffic volumes, multiple lanes, and higher speeds; speeding makes crossings less comfortable for pedestrians and drivers need greater distance to stop. On-street parking near crosswalks, which may be heavier and more in demand on major roads in commercial areas, contributes to poor sight distance by blocking the ability of drivers to see pedestrians and vice versa. All unsignalized crossings of Mass Ave,

Summer Street, Mystic Street, Pleasant Street, Park Ave, and Broadway should be reviewed to ensure visibility is good and whether additional enhancements are needed to create safe and predictable crossings.

C.4.2 Enhance lighting at intersections and other crossings to improve pedestrian visibility.

The Town should prioritize lighting enhancements through a combination of brighter overhead lights at crosswalks, flashing light systems (e.g., RRFBs) at mid-block crossing locations, pedestrian actuated light path systems including in-road flashing lighting, focused pedestrian crossing lighting, and more. The Town should develop clear guidelines for when and where to install enhanced lighting systems for currently unsignalized crosswalks. RRFBs in particular have been shown to significantly increase driver yielding to pedestrians in uncontrolled crosswalks and are being used at many locations in neighboring communities. However, they require additional funding to install and maintain and so should be located thoughtfully.

C.4.3 Pilot intersection lighting improvements that focus on the pedestrian, and pedestrian crossings, to improve visibility and safety.

Lighting at intersections in Arlington is provided by overhead streetlights that generally illuminate the entire roadway, not specific locations where pedestrians are most vulnerable: crosswalks. Designing and installing new lighting technologies that focus lighting on the pedestrian crossing and the pedestrians themselves, can provide greater pedestrian visibility to oncoming vehicles in darker hours. Initial locations could include intersections along Mass Ave where multiple pedestrian crashes have occurred, and Minuteman Bikeway crossings. (See Figure 11 for examples.)

C.4.4 Ensure signalization policies and infrastructure are developed and/or installed to enhance pedestrian safety.

In addition to ensuring intersections are ADA compliant (including accessible signals), additional policies for signalization should be in place to ensure crossings are safe and intuitive for pedestrians, bicyclists, and drivers alike. The Town should ensure the following are in place:

1) Update all signal timing to meet new Manual on Uniform Traffic Control Devices (MUTCD) guidelines to provide adequate time for people to cross the intersection.
2) Establish policy for when exclusive or concurrent pedestrian phases should be implemented. When concurrent signals are used, ensure LPI—Leading Pedestrian Interval—is included to give pedestrians the opportunity to enter an intersection three to seven seconds before vehicles to provide pedestrian priority and greater visibility before vehicles are given the green light.

3) Explore using pedestrian-specific signals (e.g., RRFBs) at locations where pedestrian crossing activity is high but does not warrant full signalization.

Figure 11 Pedestrian-oriented Lighting

Lighting advances that focus light at crosswalks and that "spotlight" the pedestrian increase visibility and reduce crashes. (Sources: Left Image: https://www.aspentimes.com/news/aspen-mulls-pedestrian-lighting-system; *Right Image:* https://www.howardindustries.com/products/ped-crossing-signs*)*

C.5 Expand and maintain the existing street tree canopy to improve pedestrian safety and comfort.

Street trees are not only an aesthetic complement to our roadways. Street trees have been shown to decrease vehicle speeds by more clearly defining right of way (ROW) reserved for vehicles by reducing the perceived roadway width. Slower vehicle travel creates a safer, more comfortable pedestrian network. Street trees also provide cooling shade for pedestrians on sidewalks, reduce heat island impacts during warmer months, and absorb CO2. As such, transportation projects should strive to avoid removal of mature trees and develop creative solutions to maintain existing street trees.

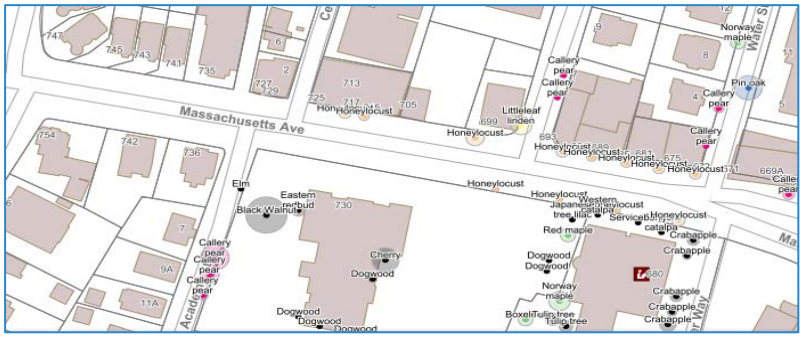
C.5.1 Implement Arlington's 2018 Tree Management Program and refine as needed to enhance pedestrian comfort and safety.

The Town adopted a tree management program in 2018 based on the street tree inventory conducted in August 2017. Ensuring that resources are allocated to the multiyear strategy improve comfort and safety for users of Arlington's streets.

C.5.2 Define policies and strategies to address sidewalk damage caused by tree roots to ensure sidewalks are accessible to all users, and free of tripping hazards.

Street tree roots cause many sidewalks to crack, buckle, and spall, resulting in tripping hazards and in some cases impeding access (particularly those with mobility impairments). Given the importance of street trees for many reasons—aesthetics, sustainability, pedestrian comfort—multiple interventions should be used to more effectively repair or prevent sidewalk damage from tree roots.

Figure 12 Arlington Street Tree Inventory



The street tree canopy varies greatly along different segments of Mass Ave. For example, the block between Water Street and Court Street has five street trees, whereas there are none two blocks to the west.

Potential solutions include using more flexible sidewalk materials around trees that are able to withstand roots more effectively, "shaving" protruding sidewalk edges to smooth transitions by reducing tripping hazards, selecting street tree species with deeper root systems, constructing sidewalk extensions into the "parking lane" to provide an accessible path, requiring larger ADA-compliant tree grates, and potential root removal/excavating techniques as deemed appropriate by the Tree Warden.

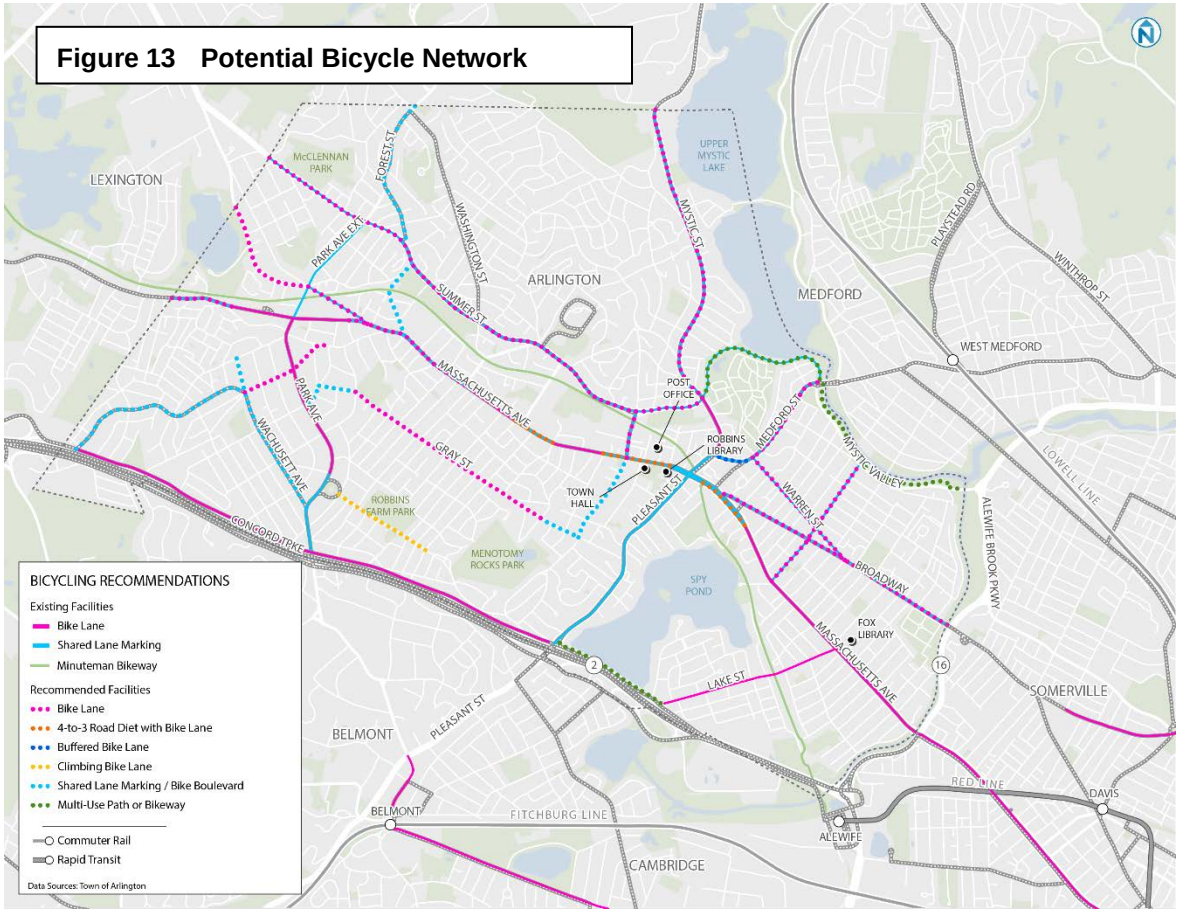
D. A Low-Stress Bicycling Environment

A key strategy in reducing the need to drive, particularly for short- and medium-range trips, is to provide an interconnected network of dedicated bicycle facilities and amenities that make bicycling a safe, comfortable, and practical option—a preferred choice—for more residents and workers. More bike trips also support other sustainability goals—they emit no greenhouse gasses and provide health benefits to users.

Arlington is fortunate to have a major off-road bicycling east-west spine—the Minuteman Bikeway—and a growing secondary on-road route along much of Mass Ave, especially in East Arlington. What the town currently lacks are safe, comfortable facilities feeding neighborhoods, schools, and recreational spaces to and from these key routes. As such, a key goal of this plan is to connect more people to these facilities by expanding the network, prioritizing projects that connect to the spine, radiating out over time to create a connected network without gaps.

While a comprehensive Bike Master Plan should be considered to develop a truly comprehensive strategy, this plan recommends the below initiatives to achieving a low-stress bicycling network.

Figure 13 Potential Bicycle Network



D.1 Prioritize new bicycle facilities along corridors currently designated as Arlington's "lane-sharing network".

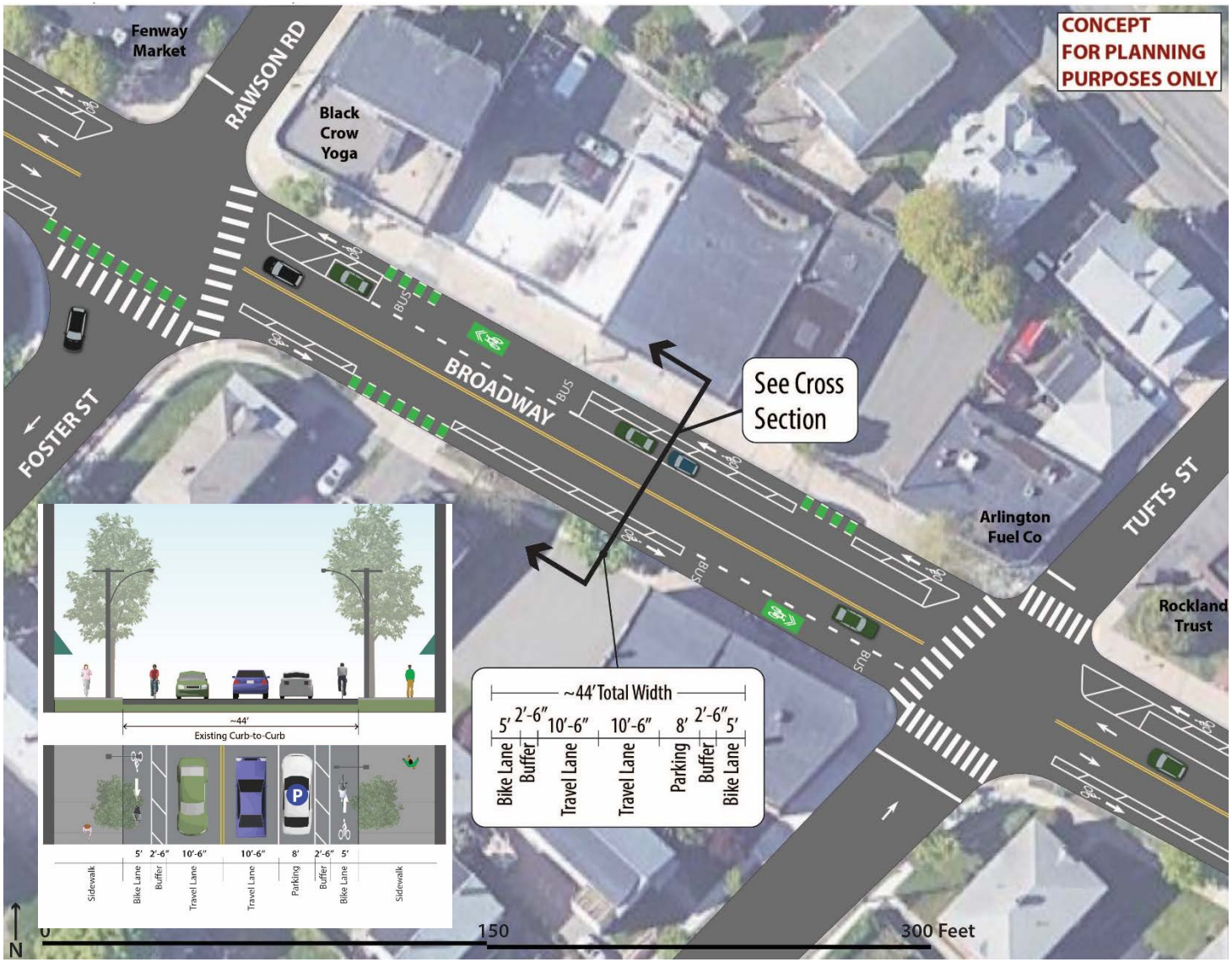
As described in the **Fact Book** (Section 3), the below roadways are designated as the Town's "lane-sharing network," corridors that connect neighborhoods to commercial centers, schools, and regional transportation networks. However, although designated as key bicycling corridors, these roadways do not currently have bike lanes. And while some segments do have shared lane markings (also known as sharrows), these markings do not contribute to a comfortable network because they require mixing and merging with faster-moving, heavier cars. They include:

- **Mass Ave** including all areas not currently served by a bicycle lane;
- **Foster Street/Rawson Road** between Mass Ave and Mystic Valley Parkway;
- **Medford Street** between Mystic Street and Mystic Valley Parkway;
- **Mill Street** between Summer Street and Mass Ave;
- **Mystic Street** between Mystic Valley Parkway and the Winchester town line;
- **Summer Street** between Mystic Street and the Lexington town line;
- **Pleasant Street** between Mass Ave and Route 2;
- **Park Avenue Extension** between Mass Ave and Summer Street;
- **Park Avenue** between Park Circle and Concord Turnpike;
- **Broadway** from Arlington Center to Alewife Brook Parkway; and
- **Warren Street** between Medford Street and Broadway.

Best Practices at Work: Lake Street Bike Lanes

Arlington is already taking steps to create a connected bicycling network. The Town recently added dedicated bike lanes on Lake Street between the Minuteman Bikeway crossing to Route 2. The project shows the importance of connecting new facilities to the existing network. These dedicated lanes not only provide increased safety and comfort for those using them, but they were also designed to feed bicyclists from low stress neighborhood streets to Lake Street to connect to the Minuteman Bikeway.

Figure 14 Broadway Bicycle Lane Concept



D.1.1 Complete the bicycle lane network along all of Mass Ave.

Approximately half of Mass Ave has dedicated bike lanes, the largest contiguous portion of which was completed through the roadway's redesign in East Arlington. Northwest of Arlington Center features a combination of bike lanes connected by shared lane markings. Areas with sharrows should be converted to bike lanes. Given the roadway dimensions, this could require removal of parking on at least one side of the road. The Town should design a project that meets the needs of both bicyclists and abutting property owners.

D.1.2 Prioritize new bicycle lane projects that connect to existing bicycle facilities to create a safe, contiguous bicycle lane network.

An important consideration when planning for and achieving a town-wide bicycling network is developing facilities that feed into and provide direct connectivity to existing facilities to form contiguous, continuous dedicated facilities that will appeal to riders of all comfort levels. Initial bike lane priorities should focus on segments of the lane sharing network that connect to or are a short distance from the Minuteman Bikeway, Mass Ave, and other existing facilities.

For example, one potential project could include adding bicycle lanes to short segments like Mill Street between Mass Ave and Summer Street; combined with the segment of Summer Street between Mill Street and Mystic Street. This would provide a contiguous bicycle network between the Minuteman Bikeway to Mass Ave. bike facilities (See **Strategy D.1.1.**) and connect to existing on-road bike lanes on Mystic street.

D.1.3 Prioritize corridors that provide safe facilities to schools and other community facilities.

In addition to completing bike facilities along Mass Ave, which better connects all of Arlington to the high school, prioritizing bicycle lanes on corridors that enhance connectivity to Arlington schools would make bicycle trips safer. Providing safer routes could encourage more parents not to drive their children to school, reducing peak hour congestion and decreasing their carbon footprint. Priority corridors to add lanes could include: Foster Street/Rawson Road, Bates Road/River Street, and others. (See **Strategy D.2** for additional strategies to better connect schools by bicycle travel.)

D.1.4 Stripe bike lanes on corridors that connect Arlington residents and workers more efficiently to regional transit.

Getting more residents and workers to commute by means other than the car is a key strategy to reducing overall congestion and impacts on the environment from cars. Adding dedicated bicycle lanes along corridors that more efficiently and safely connect residents and workers to transit stations should be a priority. This includes:

- **Medford Street** between Mass Ave and the Medford line;
- **Bates Road/River Street** to better connect to the West Medford commuter rail station (½-mile from the Arlington line);
- **Broadway** which will connect to the future Green Line station in Ball Square (Somerville), and helps connect to Davis Square; and
- **Other connections** (e.g., Mill Street) to the Minuteman Bikeway that connect to Alewife Station in Cambridge.

D.1.5 Work with neighboring cities and towns to build bike facilities that connect to those in Arlington to enhance regional bicycle connectivity.

Bicycle travel will be safer and more efficient if they connect across municipal borders. The Town of Arlington should work with neighboring cities and towns to develop and build bike lanes on roadways that meet with bicycle lanes in Arlington to create a greater regional network. Corridors that lead to transit connections, commercial centers and other important destinations should be prioritized. Potential examples include working with the following communities:

- **Medford** to provide bicycle facilities on High Street between Arlington and West Medford (commuter rail);
- **Belmont** along Lake Street and/or Pleasant Street to connect to Belmont Center;
- **Somerville** along Broadway; and
- **Cambridge** to coordinate improved bicycle access at Mass Ave and Route 16, and the Minuteman Bikeway.

D.1.6 Stripe bike lanes along the remaining "lane sharing network".

Each of the corridors presents design challenges due to limited ROW as they are too narrow to accommodate all the competing uses: driving lanes, parking lanes, bicycle lanes, sidewalks, etc. The Town should study each of the corridors and develop a short- to medium-term implementation plan to provide safe, dedicated bicycle facilities on each—with buffered or separated lanes, wherever possible. *MassDOT's Separated Bike Lane Planning & Design Guide*[5] and/or NACTOS's *Urban*

[5] https://www.mass.gov/lists/separated-bike-lane-planning-design-guide

Bikeway Design Guide[6] provide many design options that may be applicable to different segments of the lane sharing network. Based on the Project Team's assessment, the primary trade-off to providing bike lanes on these routes will be the removal of on-street parking along some segments. (The Town should engage with abutters from the outset to understand the impacts that may result from removal of on-street parking.)

To ensure progress is being made, the Town could prioritize implementation along corridors that require minimal removal of on-street parking, while ongoing outreach and design strategies are developed for corridors that require more trade-offs. Initial corridors could include:

- Mystic Street from Mystic Valley Parkway to the Winchester line; and
- Summer Street from Mill Street to Mystic Street, which look to be possible with minimal removal of on-street parking (if off-street parking could be provided for users of Buzzell Field Park).

D.2 Construct a multiuse path along Mystic Valley Parkway.

D.2.1. Work with DCR to design the multi-use path.

The existing pathway along the Mystic Valley Parkway should be designed to be a high-capacity multiuse facility for bicyclists, walkers, and runners. Given much of the corridor provides considerable area, Arlington should work with DCR and advocate for separated facilities—one for higher speed bicycles and another for pedestrians—to make for a comfortable and safe facility for all active users. During this process, the Town of Arlington applied for a MassTrails grant to study this opportunity but had not been notified at the time of this plan's completion. Particular attention should be paid to the Medford Street crossing where the presence of a rotary on each side of the river makes for an extremely difficult crossing for both bicyclists and pedestrians. (See **Strategy D.5.2** for more.)

D.2.2 Partner with DCR to construct the multi-use path.

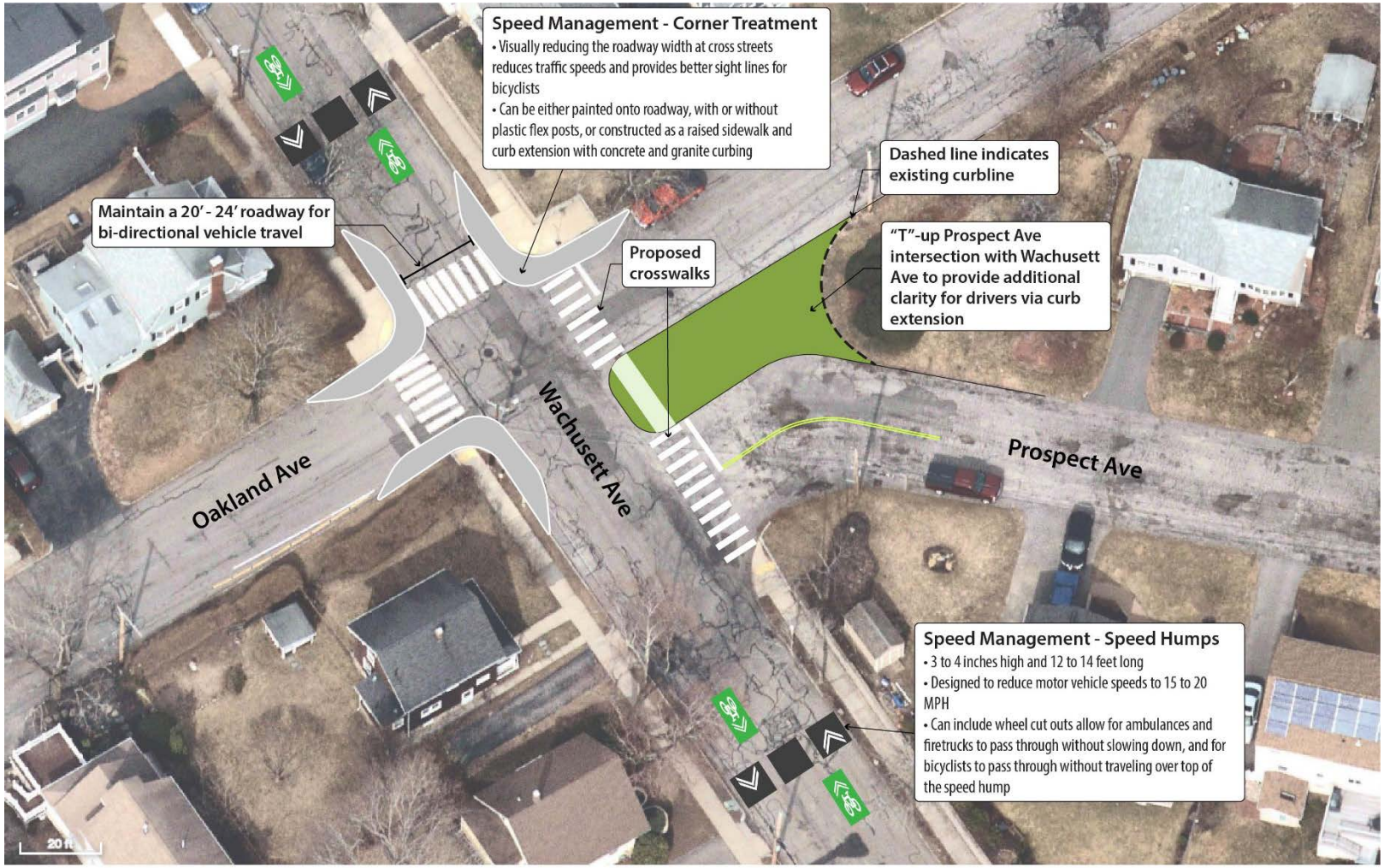
Identify funding—e.g., DCR funding, Complete Streets, Town funding, other grant programs—to construct the project.

[6] https://nacto.org/publication/urban-bikeway-design-guide/

D.3 Establish dedicated or preferred bike routes, or "bike boulevards", on low-volume roadways that connect to neighborhoods and schools.

Roadways not currently included in the Town's lane sharing network should be considered for additional bicycle lanes, or as established preferred shared bicycle routes. Routes that enhance connectivity town wide for bicyclists, as well as those that improve access to schools and other public amenities should be prioritized. This could include bike lanes on Gray Street, portions of Wollaston Ave (east of West Street and Tanager Street), as well as shared roads—"bike boulevards"—on low-volume streets that provide safer bicycle travel parallel to high traffic roadways, and/or that lead to schools. To ensure that designated bike boulevards are comfortable and safe for bicyclists, vehicle through traffic should be discouraged or diverted, routes should be clearly marked with signage, and where necessary, traffic calming measures should be implemented. (See Figure 15 and **Strategy A.4** for more strategies to calm traffic on neighborhood streets.)

Figure 15 Wachusett Avenue Bike Boulevard Design Concept



NOT TO SCALE

D.4 Add or upgrade bicycle parking along commercial corridors and at public facilities.

Providing more and better-quality bicycle parking (in conjunction with more bicycle lanes) will encourage many to take a bicycle somewhere when they know their bicycles can be locked up safely. Beginning with the $25,000 allocated for new bike parking in FY21, upgraded bicycle parking should be installed at the following locations:

- Major Commercial Areas (Arlington Center, East Arlington, Arlington Heights);
- Small Commercial Clusters (Broadway at Rawson, Tufts and Oxford streets; Summer Street at Mystic Street and Mill Street);
- High ridership MBTA bus stops; and
- Public facilities including parks, public buildings and more.

Figure 16 Long Term Bicycle Parking

Arlington recently created bicycle parking guidelines (https://www.arlingtonma.gov/home/showdocument?id=48389) that should be referred to when adding new bicycle parking. In areas where longer term bike parking is likely (e.g., schools, major bus stops), covered bike parking kiosks, bike cages or individual bike lockers should also be considered where room is available.

D.5 Study potential to redesign major intersections and rotaries/roundabouts to provide dedicated bicycle lanes that improve rider safety and comfort.

Major intersections, particularly those with awkward geometries (e.g., no right angles), as well as rotaries and roundabouts are challenging and dangerous to travel through for all but the most experienced bicyclists.

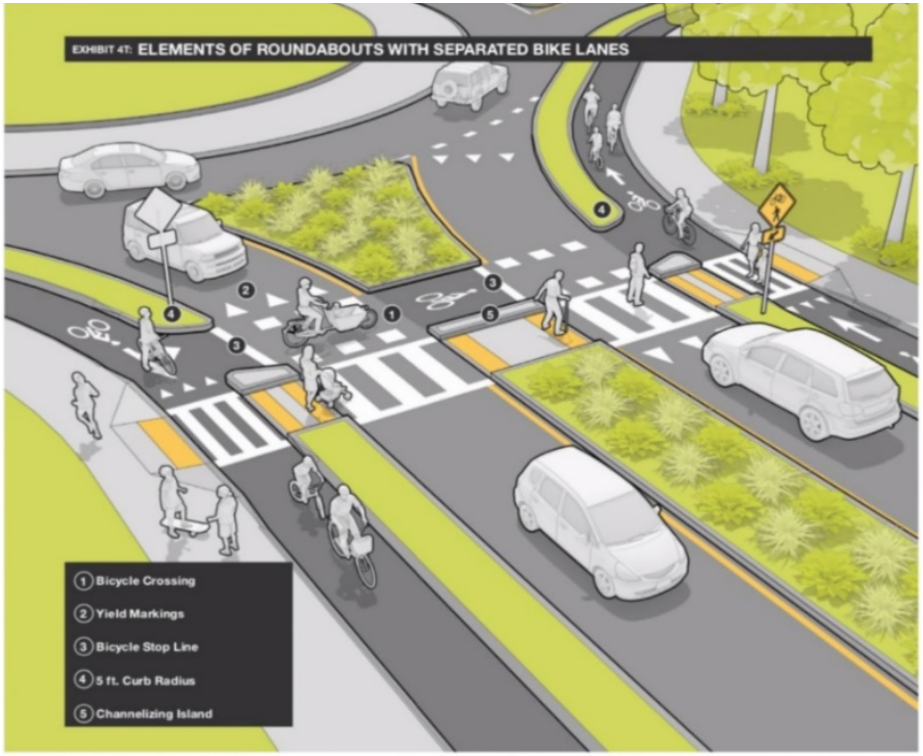
Redesigning and reconstructing these facilities to provide bike lanes that carry through intersections—instead of bike lanes that stop before intersections and require bicyclists to mix with traffic—would encourage more bicycling by providing comfort to more riders. (See also **Strategy A.3.1**, for additional intersection safety improvement strategies.)

D.5.1 Identify and redesign high conflict intersections to improve bike safety.

As the Town's bicycle network expands, ensuring bicyclists can travel safely through challenging intersections is essential. When projects are identified, the Town should refer to the *MassDOT Shared Bike Lane Planning & Design Guide* and *NACTO Urban Bikeway Design Guide* for initial guidance. Both resources provide best practice intersection design examples to enhance bicyclist safety. Potential intersections to redesign for bicycles could include:

- Mystic Street and Chestnut Street;
- Mystic Street and Mystic Valley Parkway;
- Mass Ave and Park Ave; and
- Broadway and Warren Street (see Figure 4).

Figure 17 Roundabout Design with Separated Bike Lanes (MassDOT)



D.5.2 Explore options for redesigning the Medford Street/Mystic Valley Parkway rotary to incorporate dedicated facilities that allow for safer bicycle (and pedestrian) movement and slow vehicle travel.

Rotaries are often difficult to maneuver and unsafe for bicyclists. There are many resources available, including the *MassDOT Guidelines for the Planning and Design of Roundabouts,*[7] offering best practice design strategies to provide separated bicycle lanes through rotaries/roundabouts.

Funding sources for implementing these projects could include Complete Streets funding (if the project is included in the approved Complete Streets Prioritization Plan), MassWorks grants (if tied to economic development), non-profits and foundations, and local Town funding.

[7] https://www.mass.gov/lists/guidelines-for-the-planning-and-design-of-roundabouts

E. A Transit-Rich Environment

Arlington residents were clear about their desire for improved transit service throughout the planning process, even during the COVID-19 pandemic where physical distancing requirements resulted in decreases in transit use throughout the region. They recognized that transit could move more people, more effectively and efficiently over long distances than, or in combination with, other modes.[8]

E.1 Increase bus frequency on highest ridership bus routes to reduce crowding and provide greater comfort.

The Town should advocate for and proactively work with the MBTA to increase bus frequency, particularly along high ridership routes like the 77 and routes with high connectivity, to both provide greater convenience to riders through shorter headways (i.e., wait times between buses), and to reduce overcrowding to provide greater comfort. Additionally, providing more commuters with the ability to sit can increase productivity during longer commutes by allowing them to work while they commute.

E.2 Study potential for and implement more bus priority initiatives to reduce transit trip times and achieve (near) Bus Rapid Transit service in Arlington.

Travel times and predictability are negatively impacted when buses travel in mixed traffic, particularly on heavily congested roadways. Strategies to prioritize the movement of buses over single occupancy vehicles can reduce travel times considerably and make for more predictable bus scheduling and convenience.

In partnership with the MBTA, the bus priority project pilot in East Arlington successfully decreased bus trip times by expediting bus travel through repurposing the parking lane along a heavily congested segment of Mass Ave in East Arlington. Exploring opportunities for more bus priority lanes combined with initiatives like transit signal priority (TSP), queue jumps, level boarding platforms and other strategies to expedite bus travel along high ridership routes would help Arlington achieve (near) Bus Rapid Transit (BRT) service. Routes for further study include:

- **Mass Ave/East Arlington:** Extend the bus priority lane to Lake Street in East Arlington and beyond that towards Arlington Center, with TSP, level boarding platforms and other strategies to further reduce morning peak bus travel times.

[8] In response to reduced commuting during the COVID-19 pandemic, two bus routes were suspended and service on others was significantly reduced; however, they are anticipated to return once impacts from the pandemic lessen.

- **Mass Ave/Arlington Center and Arlington Heights:** Study potential for additional bus priority investments along all of Mass Ave and identify segments and initiatives with greatest potential to expedite bus travel. Priority areas would include Arlington Center and Arlington Heights.
- **Broadway:** Study potential for bus priority initiatives to expedite trips between Arlington and Somerville to the Red Line Station at Davis Square and the Green Line Extension at Ball Square.

(Note: It will be important to consider accommodating bicycle users along many of these routes with a combination bus-bike lane when right-of-way is constrained, or a fully separated bike lane.)

E.3 Enhance the bus stop experience to provide greater rider comfort and increase convenience.

A transit experience that is comfortable, convenient, and predictable contributes to repeat and regular use. This extends beyond the bus ride and to the bus stop. While Arlington does not have the authority to change MBTA routes or schedules, it can invest in and improve station areas to provide a more comfortable and convenient transit experience.

E.3.1 Ensure sidewalks are well maintained and ADA-compliant (including ramps) at all bus stops.

Ensuring sidewalks are well maintained and accessible makes it easier for people of all abilities to use transit. Ensuring sidewalks are smooth, free of tripping hazards and other impediments must be prioritized. This includes rapid snow removal in winter months.

Many bus stops in Arlington received a “low” accessibility score as part of the MBTA’s Plan for Accessible Transit Infrastructure (PATI) project, meaning there are significant access issues. Additionally, only some MBTA bus stops offer shelters and few (if any) provide adequate seating. Arlington should continue to work with the MBTA to ensure deficiencies at bus stops are addressed, including defects in sidewalks, ramps, and other paths of travel. The Town should also advocate for the MBTA to provide more shelters with seating or allocate Town funding to do so at or near all bus stops (where feasible). Combined, these initiatives would make sidewalks and bus stops more accessible, and provide protection from weather and more seating, particularly for those unable to stand for long periods of time between buses. Shelter and seating design consistent with or complimentary to existing bus shelters would visually connect Town provided amenities to the bus stop.

E.3.2 Provide bike parking at or near all bus stops. Locations with highest boardings and alightings should be prioritized.

Providing bike racks at bus stops encourages more people to bike to transit knowing that there is a place to park and lock their bike securely. At a minimum, an inverted-U bike rack should be included at all bus stops. At high ridership stops, multiple racks should be provided. Where sidewalk space is not adequate, using roadway space for bike corrals (bike parking in car parking spaces), ideally separating the bus stop from parking, should be used.

E.3.3 Where supported, co-locate bike share stations at major bus stops.

As the Bluebikes bike-share program grows over time, co-locating hubs at major bus stops (such as the Arlington Heights Busway, Mass Ave and Broadway in Arlington Center, and along Mass Ave in East Arlington), particularly stops with convenient access to the Minuteman Bikeway, will provide more of a seamless transition from transit to active transportation connections.

E.3.4 Partner and coordinate with the MBTA and other partners to enhance transit technology at bus stations to improve convenience, communication, and comfort.

As part of the MBTA Automated Fair Collection 2 (AFC 2.0) program, fare machines will be added at some bus stops to expedite boardings. While this technology will improve travel times, additional investments would enhance communication, convenience, and comfort. Over time, the Town should partner with the MBTA and third parties (e.g., digital advertising vendors) to install technology able to communicate bus route, schedule and real-time arrival information, travel alerts and weather impacts, local announcements and more. Systems that provide free Wi-Fi, device charging (for phones, tablets and other devices) and other amenities would further enhance the transit experience.

E.3.5 Design and implement micro-mobility hubs at key locations/bus stops along Mass Ave.

To increase transit use and convenience, bus stops along Mass Ave in Arlington Heights, Arlington Center and East Arlington should be adapted to become neighborhood-serving mobility hubs. Mobility hubs collocate multi-modal services and amenities, often at transit stops, to provide convenience, flexibility, and mode choice. This could include bicycle parking, bike share hubs, on-street reserved car-share parking, TNC pick-up and drop-off zones, information kiosks, and seating. Hubs must be designed to be accessible to all ages and abilities including those with vision and hearing impairments.

E.4. Expand local transit options for Arlington residents and workers.

As noted above, the Town of Arlington has limited ability to change MBTA bus service. However, it can provide additional local transit options to enhance connectivity within Arlington and to and from neighboring towns and cities.

E.4.1 Explore opportunity to launch local transit service through contracting with a third-party micro-transit service.

Micro-transit services are launching in communities across the country. These third-party contract transit services typically offer on-demand rides and often door-to-door service in smaller ADA-accessible vehicles (e.g., vans) within a defined geography. Rides can be requested either through a mobile app or by phone through a dispatcher. Micro-transit services can be limited to specific populations (e.g., seniors or low-income residents) or used by all. Communities like Newton, MA have switched to micro-transit for their Council on Aging (COA) services, whereas other communities like Salem, MA are exploring options to serve all residents, particularly those not within an easy walk of existing MBTA bus transit.

The Town should conduct a study to define the best micro-transit options to meet its needs and issue an RFI to better understand the level of service and costs to operate such a system.

E.4.2 Explore opportunities to partner with abutting communities to fund fixed route services that enhance local connectivity.

Operating a fixed route transit service can incur significant costs, and in many cases, the ridership does not justify the investment of Town funding. However, opportunities to partner with neighboring communities to provide additional transit service should be explored whenever possible to provide enhanced local connectivity to goods and services within and across town lines. For example, Lexington's locally-operated service—Lexpress—provides service to and from Alewife Station. Additional funding from Arlington could be leveraged to add stops in Town, increasing options for Arlington residents.

Figure 18 Micro-transit Systems in the Region

The cities of Salem and Newton have both launched micro-transit services to better meet the needs of their communities by providing an affordable transit option that provides convenience and flexibility, particularly for those who need to travel to or from locations with limited or no existing transit services.

F. Reduced Climate Impacts from Travel in Arlington

F.1. Manage travel demand to reduce single-occupancy vehicle trips and emissions.

Transportation Demand Management (TDM) includes policies and strategies that enhance livability and convenience, primarily by promoting mode shift from single-occupancy vehicle trips to alternatives like walking, biking, carpooling and transit use. TDM comes in many forms including commuter programs, tax incentives, parking management, land use planning and more.

F.1.1 Continue to refine and promote Transportation Demand Management (TDM) requirements and strategies that reduce car trips.

In addition to TDM strategies included in zoning (e.g., charging for parking on-site), through its TDM Ordinance the Town requires new developments to provide incentives that reduce car trips, but only when the developer is seeking a reduction in required parking. TDM programs include "free ride home" options, discounted transit passes, bikeshare memberships, carpool incentives, remote work allowances, and for larger development projects, incentives, or requirements to reduce parking, incorporate bike and pedestrian infrastructure and amenities, and more. The Town could lead by example by developing its own program to encourage Town employees to leave their car at home. The Town should also explore requiring all new developments or changes of use to include TDM measures that reduce car trips. The City of Cambridge's TDM programs provide a best practice model.

F.1.2. Continue to encourage and incentivize mixed-use, higher density development near transit and jobs.

People who live or work in or adjacent to mixed-use environments, and especially those served by transit, often drive less because it is more convenient to walk or bike to eat, shop, or hop on a public transit option. In so doing, they reduce their carbon footprint by reducing or eliminating single-occupancy vehicle trips. Arlington allows for mixed-use higher density zoning in its commercial districts and should continue to explore more programs and incentives that integrate land use considerations with transportation needs.

F.1.2.1 As recommended in the Net Zero plan, establish a Chapter 40R Smart Growth Zoning Overlay District to allow for dense residential and mixed-use development.

Smart Growth Overlay Districts (40R) encourage municipalities to establish higher-density residential and mixed-use zoning districts near transit stations and services and other existing development concentrations like existing town centers and villages and include a higher percentage of affordable housing. Districts must be approved by the State,

and once approved, communities are eligible for Chapter 40R payments for each unit created and may qualify for Chapter 40S reimbursements for costs associated with school children residing in 40R developments.

Establishing a 40R Smart Growth Zone along portions of Mass Ave and other select areas would benefit Arlington beyond providing more affordable housing. It would concentrate higher densities along major transit routes to encourage car-light lifestyles, provide units to qualifying low-income households in locations near transit and goods and services, and provide more customers to local businesses without the need to add additional public parking.

F.1.2.2 Consider zoning amendments and incentives to reduce the need to drive, with parking maximums (not minimums), increased bike parking requirements, and other mechanisms.

Parking maximums limit the total parking allowed within a development to reduce driving and encourage residents and workers to use other modes of travel. Parking maximums typically work best in mixed-use areas proximate to essential goods and services—such as grocery stores—and frequent transit service or alternative transportation options. In Arlington, this would include all of Mass Ave and Broadway. Additional zoning strategies, like increased bicycle parking requirements to at least one per unit and car-sharing space provisions should also be considered. Car-share would offer residents a car option when needed.

In addition to encouraging non-auto trips, zoning requirements that reduce parking lower the total development or redevelopment costs, which can lead to more affordable housing options, and reduce household expenses associated with owning a car (e.g., monthly loan or lease payments, parking costs, gasoline, and insurance). The Metropolitan Area Planning Council's (MAPC) *Perfect Fit Parking Study*[9] found that a large percentage of parking required by zoning and built as part of new residential development goes unused—they have much more parking than necessary. Developments within Arlington were included in the study. The Town should work with MAPC to better understand local parking demand and amend parking requirements to reflect real demand, and to encourage other modes of travel.

F.1.3 Create a Transportation Information page on the Town website.

Create a dedicated page—a "One Stop Shop"—to provide information about and links to transportation resources and services for those who live a car-free or car-light lifestyle. The page should include information about car-share options and locations, bike share locations, transit routes, schedules, and real-time transit information, and more.

[9] https://perfectfitparking.mapc.org/

F.2. Implement mobility recommendations included in Arlington's Net Zero plan to reduce greenhouse gas emissions stemming from the transportation network and its users.

The Town of Arlington's Net Zero plan includes numerous strategies to reduce emissions stemming from the transportation network and its users. The framework includes many of the recommendations considered during the Connect Arlington planning process—including the need to increase electric automobile charging stations, transitioning to an all-electric municipal fleet of vehicles and more. Several of the Net Zero mobility recommendations are already included as part of other strategies—e.g., promoting car share and zoning changes. In addition, the Town should work to implement the following recommendations included in the Net Zero plan:

F.2.1 Create and implement a plan to expand public electric vehicle charging at libraries, business districts, public parking, and other facilities, both on- and off-street.

F.2.2 Adopt a zero-emission municipal fleet and charging infrastructure plan and policy that commits to complete transition to zero emission vehicle purchases by no later than 2030.

F.2.3 Advocate for improved utility rate designs to facilitate smart electric vehicle charging and accelerate electric vehicle (EV) adoption.

F.3 When designing and constructing any transportation facilities, include "green" design interventions and construction techniques to reduce climate impacts.

This includes design and construction methods that reduce impermeable surfaces to the greatest extent, reduce heat island impacts, increase water retention on-site, etc.

G. Infrastructure and Policies to Support the Local Economy and Resident Quality of Life

Local businesses rely on all modes of transportation to connect and attract customers to their businesses, workers to their jobs, and to deliver goods and services sold at or sent from their location. In addition to strategies discussed in previous sections of this plan, it is essential for local business activity (including movement of freight) and resident quality of life to ensure Arlington's roads are in good condition. Additionally, a critical component of Arlington's transportation infrastructure that supports local business activity and resident quality of life is the curb. The curb, considered by many as a place to park, is increasingly competitive real estate as more uses and users seek to repurpose it to support local business and recreational activity.

G.1 Ensure Arlington's roadways and off-street parking are maintained to support local business activity and resident quality of life.

The condition of roadways impacts how people, goods and services can move around safely and efficiently. Roadways that are in poor condition create more than inconveniences—they create safety hazards for all users and can result in damage to personal property. They can also reduce productivity by creating delays and damage to vehicles. Ensuring that Arlington's roadways are maintained allows all users—drivers, bicyclists, pedestrians, transit riders—to move about more safely and efficiently.

G.1.1 Regularly update and implement the Town's pavement management program.

Roadways that are resurfaced proactively and regularly provides for safer movement by all users through the repair of cracking, potholes and other issues that result when maintenance is deferred. Ongoing, proactive maintenance also reduces costs over time.

Repaving is an opportune time to add bicycle facilities and make pedestrian improvements such as crosswalks and bump outs. The Department of Public Works, Department of Planning and Community Development, Arlington Bicycle Advisory Committee, and the Transportation Advisory Committee should proactively work together to ensure opportunities are not missed to improve access for all modes.

G.1.2 Allocate adequate funding for the maintenance and upkeep of Arlington's roadways.

The Town receives an annual allocation of funding for roadway improvements and maintenance through the State's Chapter 90 program; however, these funds are rarely adequate to address Town infrastructure maintenance. The Town should

identify total funds needed to keep its roadway infrastructure in a state of good repair and allocate additional funds annually to meet the needs. Deferring roadway maintenance results in higher repair costs in the future.

Funding for maintenance must also include snow and ice removal from roadways, bike lanes, shared-paths, and sidewalks in the winter; leaf and debris removal; and general sweeping.

G.1.3 Ensure off-street parking lots are maintained and feel safe.

Parking to support local business activity must be convenient, accessible and feel safe. Ensuring that off-street parking is easy to find through wayfinding must be a priority, as should sidewalk conditions connecting the parking facilities to the commercial uses. Just as important is the perception of safety. The Town should improve lighting in, to and from all off-street parking to ensure people are visible at night, when many people feel less safe. For example, the Russell Common parking lot needs upgrades—sidewalk and lighting—which the Town is working to address.

G.2 Consider changes to parking regulations and policies that more effectively manage public on- and off-street parking throughout Arlington.

Public on- and off-street parking does not simply provide locations for residents, customers, and employees to park; it influences travel patterns and mode choice, and when managed and designed inefficiently, can lead to increased congestion from circling cars searching for parking, double parking, and other illegal parking. The Town should continue to study public parking and identify strategies to more effectively manage and operate existing facilities and revise regulations and policies to maximize their use. Parking management is a more cost-effective way to maximize the use of limited parking resources than constructing new facilities, which are costly to build and to maintain over time. (See also **Strategy F.1.2.2** for zoning strategies to reduce parking demand.)

G.2.1 Allocate funding to study parking along all of Mass Ave with an emphasis on Capitol Square/East Arlington and Arlington Heights.

Conducting a comprehensive parking study for all of Mass Ave.—including updating inventory and utilization gathered as part of previous initiatives like the 2009 East Arlington Parking Study, 2017 Arlington Center Parking Study, and more recent Arlington Heights Occupancy Study—would provide a complete picture of parking along Arlington's central roadway spine. Data collected for the study would provide information necessary to adjust and better manage parking along the whole corridor in ways that encourage turnover, and to identify locations where parking could potentially be removed to support other modes including bus priority and/or bike lanes.

G.2.2 Study parking in neighborhoods adjacent to commercial concentrations and/or transit and consider additional regulations where warranted.

Parking spillover from commercial areas or adjacent to transit connections can add to parking pressures in neighborhoods. For example, as identified in this study and in Arlington's Master Plan, Red Line users that park in East Arlington, or Mass Ave users that park on adjacent neighborhood streets, likely add to resident parking pressures. The Town should study neighborhood parking impacts and consider neighborhood parking regulations where appropriate. Should additional regulations be required—for example, time limits, resident parking only, or other—the Town should allocate resources to ensure enforcement occurs. Absent enforcement, regulations will be ignored, and parking concerns will persist.

G.3 Rethink the curb and design it to support competing users and needs more effectively.

The curb, often considered the "parking lane", has traditionally been reserved for on-street car parking, the result of decades of transportation planning focused on accessing business districts by car, including in Arlington. Changing travel preferences combined with new and growing transportation options (e.g., Uber, Lyft, bike share, car share, e-scooters) and increased delivery services (e.g., the "Amazon Effect", food delivery), require more nuanced approaches for use of valuable curbside real estate. (For more information, see the Boston MPO's report, *Future of the Curb*[10]*.)*

G.3.1 Identify locations for dedicated curbside zones for pick-up and drop-off activity.

More and more people (of all ages) access commercial centers, particularly those with concentrations of eating and drinking establishments and cultural attractions, by ride hailing services like Uber and Lyft. When there is no location for ride hailing vehicles to pull over to pick-up and drop-off passengers, vehicles stop in the roadway, putting riders at risk, and/or creating unnecessary congestion.

TNC use is expected to increase in coming years, particularly as autonomous vehicles become a reality. Establishing pick-up and drop-off zones proximate to multiple attractions expedites the process by concentrating activity, removes TNC vehicles from travel lanes to improve safety and reduce congestion, and reduces the need for adding parking capacity where spaces are limited. Ride hailing also enhances roadway safety by removing potential driving under the influence situations.

10 https://www.ctps.org/data/pdf/studies/other/Future-of-the-Curb.pdf

G.3.2 Designate additional locations to accommodate increased service and delivery needs.

Providing additional locations for delivery vehicles convenient to multiple businesses and residences reduces the need for delivery vehicles including those large and small to double park, which causes congestion. Given the collection of businesses in Arlington, hybrid service/pick-up and drop off zones may be an option given most commercial deliveries occur during the day, whereas ride-hailing increases for social purposes during evening hours.

G.3.3 Repurpose on-street parking where possible to prioritize other modes including bus and bicycle travel, or to provide additional open space in commercial areas.

In areas with sufficient off-street parking to meet residential and/or business demand, repurposing the "parking lane" for transit priority, bicycle lanes, and/or bicycle parking (including Bluebikes stations as the system grows in Arlington) would help to move more people, more efficiently along bus and bicycle routes by decreasing transit times and encourage more to bike. On-street parking can also be repurposed for parklets—small "parks" within the parking lane—for people to dine or relax outdoors in areas where sidewalk space is limited. Repurposing parking for other uses can enhance the transit and bicycle experience and reduce the need to drive (and park), while supporting local business and the customer experience. Allowing for customer parking on side streets within a specified distance of a commercial street to replace customer parking is also recommended.

Figure 19 Arlington Parklet Program

In 2020, the Town of Arlington (through MassDOT Shared Streets and Spaces grant funding), repurposed on-street parking spaces for use as public parklets to enhance outdoor dining, ensure pedestrian safety, and provide additional bike parking.

H. Responsive and Transparent Transportation Decision-Making

To provide a transportation network for all users and abilities, it is imperative that decision-making at all levels is clearly communicated and transparent. When and why specific programs and projects are prioritized and funded in any given year is essential given the competing needs for dollars available.

H.1 Create a process for communicating transportation project updates, construction impacts and other service issues proactively.

People rely on the transportation network to get them to and from where they need to go within a particular amount of time based on experience. While not all elements can be controlled—e.g., delays from vehicle crashes—delays caused by construction, equipment failure, and special events, can be planned around. Providing as much information about planned or known impacts in advance to residents, workers and visitors makes for a better, less stressful, and safer experience.

Formal channels of and plans for communicating transportation impacts should be established and followed. This could include advance signage, text announcements, social media postings, email listings, robocalls, and more, including the transportation page on the Town's website—a "one-stop shop" for all initiatives related to transportation. (See also **Strategy H.2.3** for more information to be included on the website.)

H.2 Develop and regularly update a Local Transportation Improvement Program (LTIP).

There are dozens of transportation initiatives underway, in planning, or under consideration at any given time in Arlington. Multiple departments are tasked with these initiatives, through funding allocated as part of the Town Budget and Town Meeting process, through grants received (by different departments), and through the State for larger projects. Given the numerous entities responsible for the planning, design, construction, and implementation, it can be difficult to fully understand all that is approved or planned to be implemented, or how they are being prioritized across departments, in any given year or time period. Having one tracking mechanism, a Local Transportation Improvement Program (LTIP), will provide the Town Manager and departments, Town Meeting members, the Finance Committee, and the public with a clear understanding of what initiatives are in the pipeline, where in the process each initiative is, when it is planned for completion, and which are funded, or in need of funding through the budget process (or could potentially get funding through available grants). An LTIP will also provide transparency to the community by clearly communicating the many initiatives planned or considered, give stakeholders an opportunity to provide input into priorities, and create a more inclusive decision and prioritization process.

An LTIP should be formalized as follows:

H.2.1 Establish an internal LTIP working group to develop the initial LTIP.

The LTIP Committee would be comprised of representatives from Public Works, Police, Fire, Planning & Community Development, Council on Aging, and other departments as needed, as well as the TAC and ABAC. To begin, each representative would provide a list of all transportation-related projects and provide to a designated staff person to consolidate the initial program. Information should include the project name, status, estimated completion date, and funding allocated (or needed).

The Town Manager should designate the staff person responsible for initiating and maintaining the list.

H.2.2 Update the LTIP quarterly.

Given the many projects, potential project changes or funding availability, it is recommended that the LTIP be updated biannually and aligned with the Town budget process to ensure it is up-to-date and effective. It is recommended that the internal committee representatives to meet quarterly to review the list and provide updates on projects.

H.2.3 Provide the LTIP on the Town of Arlington website.

Given the many departments in charge of transportation projects, it is recommended that all transportation projects be listed at one location on the Town's website. This will provide the public a convenient location to learn about various initiatives, and how, where and when they are able to provide input. All initiatives should include a staff point of contact.

H.3 Test before you invest.

Transportation infrastructure projects are costly to plan, design, and construct, and often take years to complete from start to finish. In many cases, the project intent—to enhance safety, provide facilities for other modes, etc.—is successful; however, in some cases it does not improve conditions adequately, and in others the result does not justify the cost. For projects addressing critical safety issues, traditional practices also take far too much time to address the issue.

Communities are increasingly turning to "tactical" projects to address safety and other transportation concerns. Tactical roadway initiatives include projects that are implemented using low-cost, temporary materials, to address a traffic or safety issue, or to test out an alternative street layout to provide facilities for other modes not currently provided (e.g., bike lanes).

H.3.1 Implement tactical projects rapidly to address safety issues and concerns.

In locations where safety is a concern, particularly at locations where a crash involving a pedestrian or bicyclist has occurred, changes to enhance safety should be implemented as rapidly as possible. Temporary and tactical projects such as increased signage, speed bumps, road diets using flex-posts, dedicated lanes for bicyclists and more can be implemented quickly to slow traffic, increase visibility and more to reduce conflicts. Arlington has already worked on Shared Streets tactical pilots, which used signage, sawhorses, traffic cones, and other temporary materials to reallocate street space for pedestrians and bicyclists. See Figure 20 for more information.

It is important that the Town work with neighborhood groups, school PTOs, business owners and groups, and relevant Town committees such as the TAC and ABAC to ensure these projects address the issues effectively, and to gain support in areas impacted.

H.3.2 Develop and implement a Neighborhood Traffic Calming Program to address safety concerns.

Many neighborhood traffic calming initiatives do not require significant investments to address safety problems. Low-cost tactical and short-term projects that slow traffic and provide dedicated space for pedestrians and bicyclists often address the issues in a cost-effective manner and should be used both to test strategies, or as semi-permanent solutions. (See **Strategy A.4** for more information.)

Figure 20 Shared Streets Pilot Project

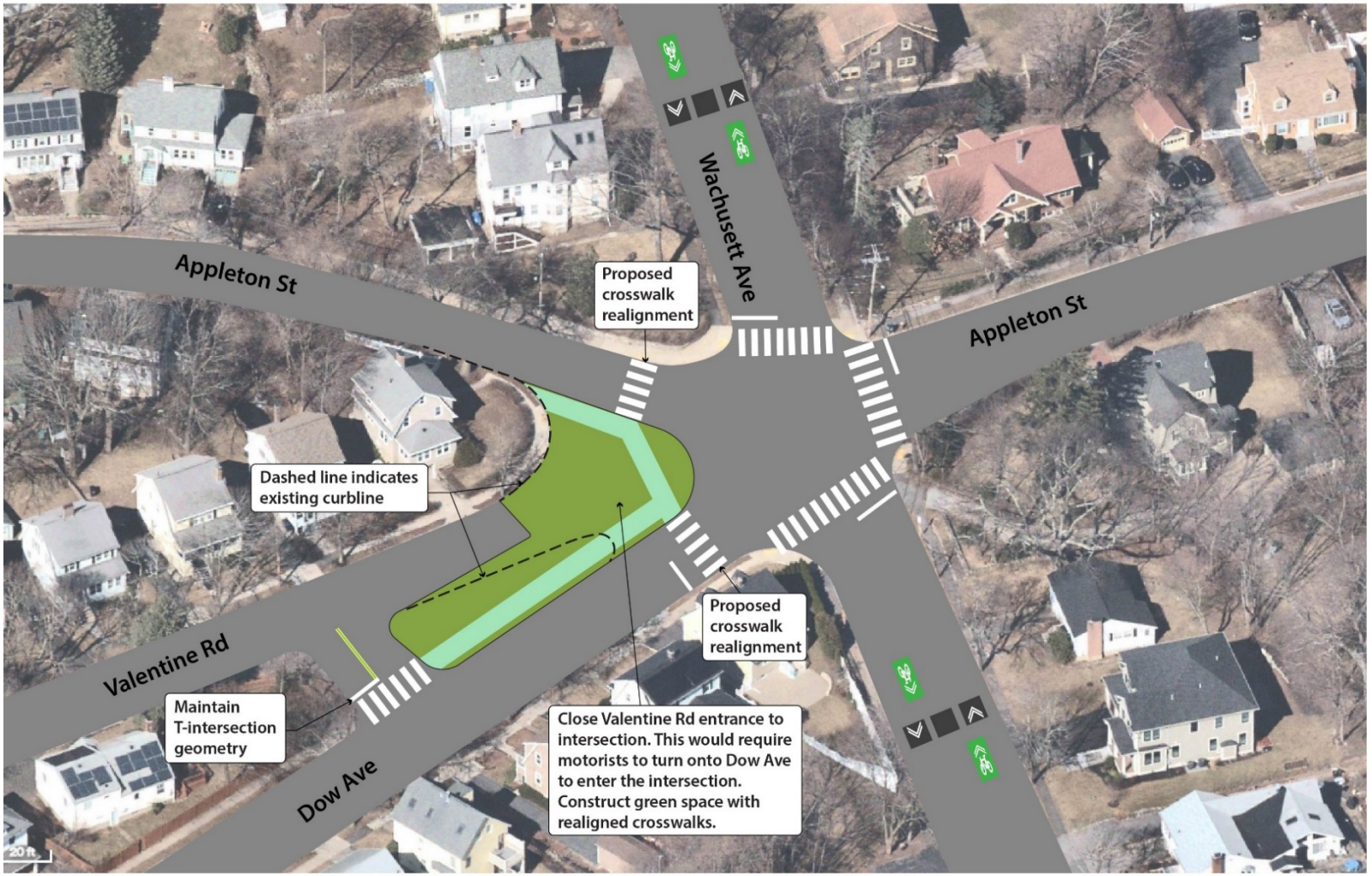
In response to COVID-19 physical distancing needs, Arlington implemented two shared streets pilot projects, one on Brooks Avenue and one on Mary Street.

For the pilot projects, street space was reallocated for walking and active travel, and closed off to non-local vehicle traffic. Reallocating the space provided the opportunity for people to move about with greater distance between each other than a sidewalk would allow.

Similar pilots could be used to test potential for bike lanes, pick-up/drop-off zones and more.

Figure 21 Neighborhood Traffic Calming Concept

Wachusett Avenue - Bike Boulevard - Dow Avenue Inset



NOT TO SCALE

H.4 Analyze and track key data sets over time to inform transportation decision making and prioritization.

Key to the success of any plan is to identify mechanisms to track plan implementation and progress. To that end, Connect Arlington includes a set of easily monitored metrics that Town staff can track over time to determine the effectiveness of initiatives recommended in the plan.

Tracking progress not only provides the Town the ability to identify and celebrate successes, but also the ability to pivot when initiatives underperform, or additional or alternative strategies are needed. These metrics will help to ensure that Town leadership and staff remain committed to achieving the plan goals, and the public the ability to see progress resulting from Town investments.

The metrics highlighted below were identified because they are simple to collect data and track on a yearly and multi-year basis. They are intended as potential measurements for the Town to track; however, additional or different measures could be identified over time should they be deemed to more effectively track progress.

	CRASHES	MODE SHARE		TRAVEL TIME	BIKE LANE MILES	SIDEWALK INVESTMENTS
METRICS	Annual number of crashes in Arlington to track progress of enhancing safety. - Total - Crash Type - Severity - Location/Patterns	Based on American Community Survey (ACS) Census data and the Annual Town Survey, how Arlington residents get around for work and other trips. Total: - Drive - Transit - Bike - Walk - Combination	**Supplemental** Conduct and track counts year to year at specific locations. This could include: - Multimodal traffic counts at key intersections - Minuteman Bikeway counts - Pedestrian Counts	Based on ACS data, review travel commute data to track the value of infrastructure and technological improvements to shorten trip times. Also, MBTA and/or transit data to determine public transit travel time improvements.	Track total linear mileage of bicycle lanes and bicycle boulevards to see how much progress has occurred to develop town-wide network. Also track investments in bike parking.	Track total investment in sidewalks over time to measure progress.
BASELINE	2019 Crashes (MassDOT Crash Data)	2019 Mode Share (ACS)	2019 Counts	2019 Avg Trip Time (ACS)	2019 Total Mileage	2019 linear feet of sidewalk constructed/repaired; curb ramps improved
DATA TRACKED	Annual # crashes	Annual Mode Share	Annual	Average Travel Time (measured annually), trip time reduction for specific projects (like bus lanes)	Annual/when completed or installed	Annual/when completed or installed
TARGET BY 2040	Zero fatalities and major injuries	Reduce percentage of commuters driving alone, increase share of commuters bicycling and taking public transit (target percentages TBD)		Reduce average commute time by 10% percentage for all modes	100% completion of recommended bike lane network	TBD

2. IMPLEMENTATION

The table below provides an overview of Connect Arlington goals and strategies. For each strategy, entities responsible for implementation are included as are general costs and timeframes. Strategies in blue bold text represent priority and/or early win initiatives.

Goal Area	Strategy		Action		Responsible Parties	Cost	Timeframe
			Priority Strategies are highlighted in yellow		Top Entity: Lead Lower Entities: Supporting	$: < $10K $$: $10K - $25K $$$: $26K-$100K $$$$: > $100K	Short-term: 1-3 years Medium Term: 4-10 years Long-term: 11-20 years
Safe facilities for all users no matter how they travel.	A.1	Adopt a Vision Zero Policy	A.1	Adopt a Vision Zero policy.	Planning & Community Development Public Works Police	$	Short-term
	A.2	Ensure all roadway design projects adhere to the Town's adopted Complete Streets policy and guidelines.	A.2.1	Update the Town of Arlington's Complete Streets Prioritization Plan and align it with Connect Arlington priorities.	Planning & Community Development Public Works Police	$	Short-term
			A.2.2	Implement the Town's Complete Streets Prioritization Plan.	Public Works Planning & Community Development	$$$$	Short-term Ongoing
	A.3	Prioritize investments that improve safety at intersections and along road segments with the greatest pedestrian and bicyclist conflicts.	A.3.1	Address safety at roadway intersections with oblique angles, poor site distances and confusing operations.	Public Works Planning & Community Development	$$ - $$$$	Short-term (tactical) Medium-term (permanent)
			A.3.2	Eliminate slip lanes from relevant intersections to slow down cars and better protect more vulnerable users.	Public Works	$$-$$$	Medium-term
			A.3.3	Design, fund and implement projects that enhance pedestrian and bicycle safety.	Public Works Planning & Community Development Transportation Advisory Committee Bicycle Advisory Committee Police	$ - $$$$	Short-term Ongoing
	A.4	Develop and implement a Neighborhood Traffic Calming Program to address safety concerns.	A.4	Develop and implement the program.	Planning & Community Development Public Works Transportation Advisory Committee	$ - $$$	Short-term Ongoing

Goal Area	Strategy		Action		Responsible Parties	Cost	Timeframe
			Priority Strategies are highlighted in yellow		Top Entity: Lead Lower Entities: Supporting	$: < $10K $$: $10K - $25K $$$: $26K-$100K $$$$: > $100K	Short-term: 1-3 years Medium Term: 4-10 years Long-term: 11-20 years
Safe facilities for all users no matter how they travel.					Police		
	A.5	Develop educational programs that promote safe travel behavior by all users.	A.5	Develop and implement programs.	Planning & Community Development Transportation Advisory Committee Bicycle Advisory Committee Arlington Public Schools Disability Commission Police	$	Short-term Ongoing
	A.6	Ensure streetscape plantings do not limit visibility.	A.6.1	Develop educational materials and distribute to property owners about responsible plantings on private property that improve visibility and safety.	Planning & Community Development Tree Warden	$	Short-term
			A.6.2	On public property - bump outs, medians, sidewalk corners - only allow plantings 2.5 feet high or lower.	Tree Warden	$	Short-term Ongoing
	A.7	Develop policies and guidelines that promote the safe use of emerging mobility devices and services including e-bikes and other micro-mobility options.	A.7	Develop policies and guidelines.	Planning & Community Development Transportation Advisory Committee Bicycle Advisory Committee Police	$	Short-term
			A.7.1	Require shared mobility providers to implement "low speed" zones for electric or e-assist devices.	Planning & Community Development Town Manager's Office	$	Medium-term
	A.8	Continue to implement initiatives that enhance safety to and from schools and community facilities including Safe Routes to Schools projects and programs and Arlington's ADA Transition Plan infrastructure improvements.	A.8	See Strategy B for more	Arlington Public Schools Disability Commission Planning & Community Development Police	$ - $$	Ongoing

Goal Area	Strategy		Action		Responsible Parties	Cost	Timeframe
			Priority Strategies are highlighted in yellow		Top Entity: Lead Lower Entities: Supporting	$: < $10K $$: $10K - $25K $$$: $26K-$100K $$$$: > $100K	Short-term: 1-3 years Medium Term: 4-10 years Long-term: 11-20 years
	A.9	Reconfigure Mass Ave. in Arlington Center to enhance safety by reducing user conflicts.	A.9	Design and implement.	Planning & Community Development Public Works Transportation Advisory Committee Bicycle Advisory Committee Police	$$$$	Medium- to Long-term
Mobility options for all ages, capabilities, and incomes.	B.1	Continue to implement accessibility improvements throughout Arlington.	B.1.1	Continue to allocate funding to implement transportation improvement projects identified in the Town's recently updated ADA Transition Plan.	Public Works Disability Commission	$$-$$$$	Ongoing
			B.1.2	Require all sidewalks to be constructed with materials that are accessible to all.	Public Works	$	Short-term
	B.2	Continue to develop and implement Safe Routes to School (SRTS) projects.	B.2	Develop and implement programs and projects.	Arlington Public Schools Planning & Community Development Public Works Police	$-$$$$	Ongoing
	B.3	Complete the Minuteman Bikeway Planning Project and implement recommendations that increase access to and capacity and safety on the pathway.	B.3	Complete and implement Project	Planning & Community Development Bicycle Advisory Committee	$$$	Short-term
			B.3.1	Prioritize opportunities to separate bicyclists from pedestrians to expand capacity and enhance comfort and safety.	Planning & Community Development Bicycling Advisory Committee Public Works	$$$	Medium-term
			B.3.2	Develop and implement comprehensive wayfinding and user safety program for the bikeway.	Planning & Community Development Bicycle Advisory Committee	$$	Short- to Medium-term
			B.3.3	Install lighting to increase visibility and safety along the pathway at night.	Public Works Planning & Community Development Bicycle Advisory Committee Disability Commission	$$$	Medium-term
			B.3.4	Improve and add additional neighborhood connections.	Public Works Bicycle Advisory Committee	$$	Short-term

Goal Area	Strategy		Action		Responsible Parties	Cost	Timeframe
			Priority Strategies are highlighted in yellow		Top Entity: Lead Lower Entities: Supporting	$: < $10K $$: $10K - $25K $$$: $26K-$100K $$$$: > $100K	Short-term: 1-3 years Medium Term: 4-10 years Long-term: 11-20 years
Mobility options for all ages, capabilities, and incomes.	B.4	Increase car share availability and membership in Arlington.	B.4.1	Work with car share companies to explore additional locations, including on- and off-street locations.	Planning & Community Development	$	Short- to Medium-term
			B.4.2	Develop a Community Car Share Program of Town-owned vehicles managed by a third-party entity.	Planning & Community Development Transportation Advisory Committee Town Manager's Office	$$$	Medium- to Long-term
			B.4.3	Include car share as part of parking requirements in new multi-family or larger commercial developments.	Planning & Community Development	$	Short-term
			B.4.4	Incentivize car share memberships.	Planning & Community Development Transportation Advisory Committee	$	Short-term
	B.5	Increase access to bike share throughout Arlington.	B.5.1	Promote and provide free or subsidized bicycle share memberships	Planning & Community Development Bicycle Advisory Committee	$	Ongoing
			B.5.2	Identify funding for more bike share stations to improve neighborhood bicycle connectivity.	Planning & Community Development Bicycle Advisory Committee	$$$	Medium-term
	B.6	Expand transportation options to Arlington residents and workers through local shared transportation programs and services.	B.6.1	Partner with TNCs to provide door-to-door connectivity, including subsidized rides to qualifying residents, to those who do not or choose not to drive.	Planning & Community Development	$$	Short-term
			B.6.2	Explore opportunity to launch local transit service through contracting with a third-party micro-transit service.	See Strategy E.4.	$$$$	Medium-term
			B.6.3	Explore opportunity to partner with abutting communities to fund fixed route services that enhance local connectivity.	See Strategy E.4.	$$$$	Medium-term

Goal Area	Strategy		Action		Responsible Parties	Cost	Timeframe
			Priority Strategies are highlighted in yellow		Top Entity: Lead Lower Entities: Supporting	$: < $10K $$: $10K - $25K $$$: $26K-$100K $$$$: > $100K	Short-term: 1-3 years Medium Term: 4-10 years Long-term: 11-20 years
A pedestrian first, walk-friendly environment.	C.1	Create and implement a sidewalk improvement program.	C.1	Develop and implement.	Public Works Transportation Advisory Committee	$-$$$$	Short-term
	C.2	Create a program and process for prioritizing, funding, and implementing new sidewalk construction where no sidewalks currently exist in the network.	C.2	Create program	Public Works Planning & Community Development	$$-$$$	Short-term
	C.3	Continue to ensure all pedestrian facilities are fully accessible, ADA-compliant and maintained.	C.3.1	As part C.1, develop a plan to install, upgrade and maintain accessibility ramps, tactile warning strips and other infrastructure to become (or remain) fully ADA-compliant.	Public Works Disability Commission	$$-$$$$	Ongoing
			C.3.2	Require accessible pedestrian signals for all new traffic signal installations, and proactively upgrade existing signals to increase safety for those with visual and hearing impairments.	Public Works Disability Commission	$$$	Short-term
	C.4	Enhance pedestrian safety through design improvements at intersections	C.4.1	Minimize pedestrian crossing distances and increase visibility at intersections where crashes involving pedestrians are highest.	Public Works	$-$$$$	Short-term
			C.4.1.1	Review unsignalized pedestrian crossings along major roadways and implement measures to enhance pedestrian safety.	Planning & Community Development Public Works Transportation Advisory Committee Police	$-$$$	
			C.4.2	Enhance lighting at intersections and other crossings to improve pedestrian visibility.	Public Works	$$-$$$	Short-term

Goal Area	Strategy		Action		Responsible Parties	Cost	Timeframe
			Priority Strategies are highlighted in yellow		Top Entity: Lead Lower Entities: Supporting	$: < $10K $$: $10K - $25K $$$: $26K-$100K $$$$: > $100K	Short-term: 1-3 years Medium Term: 4-10 years Long-term: 11-20 years
			C.4.3	Pilot intersection lighting improvements that focus on the pedestrian, and pedestrian crossings, to improve visibility and safety.	Public Works Planning & Community Development	$$-$$$	Medium-term
			C.4.4	Ensure policies and infrastructure are developed and/or installed to enhance pedestrian safety.	Public Works	$ - $$	Short-term Ongoing
	C.5	Expand and maintain the existing street tree canopy to improve pedestrian safety and comfort	C.5.1	Implement Arlington's 2018 Tree Management Program, and refine as needed to enhance pedestrian comfort and safety	Public Works Tree Warden	$$-$$$	Ongoing
			C.5.2	Define policies and strategies to address sidewalk damage caused by tree roots to ensure sidewalks are accessible to all users, and free of tripping hazards.	Public Works Tree Warden	$ - $$$	Short-term Ongoing
A low-stress bicycling environment.	D.1	Prioritize new bicycle facilities along corridors currently designated as Arlington's "lane sharing network".	D.1.1	Complete the bicycle lane network along all of Mass Ave.	Public Works Planning & Community Development Bicycle Advisory Committee	$$$-$$$$	Short- to Medium-term
			D.1.2	Prioritize new bicycle lane projects that connect to existing bicycle facilities in high conflict areas to create a safe, contiguous bicycle lane network.	Public Works Planning & Community Development Bicycle Advisory Committee	$$ - $$$$	Short- to Medium-term
			D.1.3	Prioritize corridors that provide safe facilities to schools and other community facilities.	Public Works Planning & Community Development Bicycle Advisory Committee	$$ - $$$	Short- to Medium-Term
			D.1.4	Stripe bike lanes on corridors that connect Arlington residents and workers more efficiently to regional transit.	Public Works Planning & Community Development Bicycle Advisory Committee	$$ - $$$	Medium-term

Goal Area	Strategy		Action		Responsible Parties	Cost	Timeframe
			Priority Strategies are highlighted in yellow		Top Entity: Lead Lower Entities: Supporting	$: < $10K $$: $10K - $25K $$$: $26K-$100K $$$$: > $100K	Short-term: 1-3 years Medium Term: 4-10 years Long-term: 11-20 years
			D.1.5	Work with neighboring cities and towns to build bike facilities that connect to those in Arlington to enhance regional bicycle connectivity.	Planning & Community Development Public Works Bicycling Advisory Committee	$ - $$$	Short-term Ongoing
			D.1.6	Stripe bike lanes along the remaining "lane sharing network."	Public Works Planning & Community Development Bicycle Advisory Committee	$$ - $$$	Long-term
	D.2	Construct a multiuse path along Mystic Valley Parkway.	D.2.1	Design the path.	Planning & Community Development Bicycling Advisory Committee DCR	$$$	Short-term
			D.2.2	Construct the path.	Public Works DCR	$$$ - $$$$	Medium-term
	D.3	Establish dedicated or preferred bike routes - "bike boulevards" - on low-volume roadways that connect to neighborhoods and schools.	D.3	Design and build.	Planning & Community Development Public Works Bicycle Advisory Committee	$$-$$$	Short- to Medium-term
	D.4	Add or upgrade bicycle parking along commercial corridors and at public facilities.	D.4	Implement bike parking.	Planning & Community Development Public Works Bicycle Advisory Committee	$$	Short-term
	D.5	Study potential to redesign major intersections and rotaries/roundabouts to provide dedicated bicycle lanes that improve rider safety and comfort	D.5.1	Identify and redesign high conflict intersections to improve bike safety.	Planning & Community Development Public Works	$$ - $$$	Short-term (tactical) Long-term (permanent)
			D.5.2	Explore options for redesigning Medford Street/Mystic Valley Parkway rotary to incorporate dedicated facilities that allow for safer bicycle and pedestrian movement and slow vehicle travel.	Planning & Community Development Public Works Bicycle Advisory Committee Police	$$$$	Medium- to Long-term

Goal Area	Strategy		Action		Responsible Parties	Cost	Timeframe
			Priority Strategies are highlighted in yellow		Top Entity: Lead Lower Entities: Supporting	$: < $10K $$: $10K - $25K $$$: $26K-$100K $$$$: > $100K	Short-term: 1-3 years Medium Term: 4-10 years Long-term: 11-20 years
A transit-rich environment.	E.1	Increase bus frequency on highest ridership bus routes to reduce crowding and provide greater comfort.	E.1	Advocate for increased frequency.	Planning & Community Development Transportation Advisory Committee Town Manager's Office	$	Short-term Ongoing
	E.2	Study potential to implement more bus priority initiatives to reduce transit trip times and achieve (near) Bus Rapid Transit service in Arlington.	E.2	Study and Implement	Planning & Community Development Public Works Transportation Advisory Committee MBTA	$$$-$$$$	Short- to Medium - term
	E.3	Enhance the bus stop experience to provide greater comfort and increase safety.	E.3.1	Ensure sidewalks are well maintained and ADA-compliant (including ramps) at all bus stops.	Public Works Disability Commission MBTA	$$-$$$	Short-term Ongoing
			E.3.2	Provide bike parking at or proximate to all bus stops.	Public Works Bicycle Advisory Committee Planning & Community Development	$$-$$$	Short-term Ongoing
			E.3.3	Where supported, co-locate bike share stations at major bus stops.	Planning & Community Development Public Works Bicycle Advisory Committee	$$$-$$$$	Medium-term
			E.3.4	Partner and coordinate with MBTA and other partners to enhance transit technology at bus stations to improve convenience, communication, and comfort.	Planning & Community Development Transportation Advisory Committee MBTA	$$-$$$$	Medium-term
			E.3.5	Design and implement micro-mobility hubs at key locations/bus stops along Mass Ave.	Planning & Community Development Public Works Transportation Advisory Committee	$$$-$$$$	Long-term
	E.4	Expand local transit options for Arlington residents and workers.	E.4.1	Explore opportunity to launch local transit service through contracting with a third-party micro-transit service.	Planning & Community Development Town Manager's Office Transportation Advisory Committee	$$$$	Medium- to Long-term
			E.4.2	Explore opportunities to partner with abutting communities to fund fixed	Planning & Community Development Town Manager's Office Transportation Advisory Committee	$$$$	Medium- to Long-term

Goal Area	Strategy		Action		Responsible Parties	Cost	Timeframe
			Priority Strategies are highlighted in yellow		Top Entity: Lead Lower Entities: Supporting	$: < $10K $$: $10K - $25K $$$: $26K-$100K $$$$: > $100K	Short-term: 1-3 years Medium Term: 4-10 years Long-term: 11-20 years
				route services that enhance local connectivity.			
Reduced climate impacts from travel in Arlington.	F.1	Manage travel demand to reduce single-occupancy vehicle trips and emissions.	F.1.1	Continue to refine and promote TDM requirements and strategies that reduce car trips.	Planning & Community Development	$	Short-term
			F.1.2	Continue to incentivize mixed-use, higher-density development near transit and jobs.	Planning & Community Development	$	Short-term Ongoing
			F.1.2.1	Establish Chapter 40R Smart Growth Overlay District.	Planning & Community Development	$	Short- to Medium-term
			F.1.2.2	Consider zoning amendments and incentives to reduce the need to drive.	Planning & Community Development	$	Medium-term
			F.1.3	Create a transportation information page on the Town website.	Planning & Community Development Public Works Town Manager's Office	$	Short-term Ongoing
	F.2	Implement mobility recommendations included in Arlington's Net Zero plan to reduce greenhouse gas emissions stemming from the transportation network and its users.	F.2.1	Create and implement a plan to expand public electric vehicle charging at libraries, business districts, public parking, and other facilities.	Planning & Community Development	$$$	Short- to Medium-term
			F.2.2	Adopt a zero-emission municipal fleet and charging infrastructure plan and policies that commits to complete transition to zero emission vehicle purchases by not later than 2030.	Planning & Community Development Public Works Town Manager's Office	$$$$	Medium-term (full implementation)
			F.2.3	Advocate for improved electricity rate designs to facilitate smart electric vehicle charging and accelerate EV adoption.	Town Manager's Office	$	Short-term Ongoing

Goal Area	Strategy		Action		Responsible Parties	Cost	Timeframe
			Priority Strategies are highlighted in yellow		Top Entity: Lead Lower Entities: Supporting	$: < $10K $$: $10K - $25K $$$: $26K-$100K $$$$: > $100K	Short-term: 1-3 years Medium Term: 4-10 years Long-term: 11-20 years
	F.3	When designing and constructing any transportation facilities, including "green" design interventions and construction techniques to reduce climate impacts.	F.3	Adopt standards.	Public Works	$	Short-term
Infrastructure and policies to support the local economy and resident quality of life.	G.1	Ensure Arlington's roadways and off-street parking are maintained to support local business activity and resident quality of life.	G.1.1	Regularly update and implement the Town's pavement management program.	Public Works	$$$$	Ongoing
			G.1.2	Allocate adequate funding for the maintenance and upkeep of Arlington's roadways.	Public Works Town Manager's Office	$$$$	Ongoing
			G.1.3	Ensure off-street parking lots are maintained and feel safe.	Public Works Parking Advisory Committee	$$$	Ongoing
	G.2	Consider changes to parking regulations and policies that more effectively manage public on- and off-street parking.	G.2.1	Allocate funding to study parking along all of Mass Ave. with an emphasis on Capitol Square/East Arlington and Arlington Heights.	Planning & Community Development Parking Advisory Committee Police	$$$	Short-term
			G.2.2	Study parking in neighborhoods adjacent to commercial concentrations and/or transit and consider additional regulations where warranted.	Planning & Community Development Parking Advisory Committee Police	$$	Medium-term
	G.3	Rethink the curb and design it to support competing users and needs more effectively.	G.3.1	Identify locations for dedicated curbside zones for pick-up and drop-off activity.	Planning & Community Development Parking Advisory Committee Public Works Police	$$	Short-term
			G.3.2	Designate additional locations to accommodate increased service and delivery needs.	Planning & Community Development Parking Advisory Committee Public Works Police	$$	Short-term

Goal Area	Strategy		Action		Responsible Parties	Cost	Timeframe
			Priority Strategies are highlighted in yellow		Top Entity: Lead Lower Entities: Supporting	$: < $10K $$: $10K - $25K $$$: $26K-$100K $$$$: > $100K	Short-term: 1-3 years Medium Term: 4-10 years Long-term: 11-20 years
			G.3.3	Repurpose on-street parking where possible to prioritize other modes including bus and bicycle travel, or to provide additional open space in commercial areas.	Planning & Community Development Parking Advisory Committee Public Works Disability Commission Police	$$	Short-term
Responsive and transparent transportation decision-making.	H.1	Create a process for communicating transportation project updates, construction impacts and other service issues proactively.	H.1	Create and implement.	Planning & Community Development Public Works	$	Short-term
	H.2	Develop and regularly update a Local Transportation Improvement Program (LTIP)	H.2.1	Establish an internal LTIP working group to develop the LTIP	Planning & Community Development Town Manager's Office Public Works LTIP Working Group	$	Short-term
			H.2.1	Update the LTIP quarterly.	LTIP Working Group	$	Ongoing
			H.2.3	Provide LTIP on the Town of Arlington website.	Planning & Community Development	$	Ongoing
	H.3	Test before you invest.	H.3.1	Implement tactical projects rapidly to address safety issues and concerns.	Planning & Community Development Public Works Police	$ - $$ (per project)	Short-term Ongoing
			H.3.2	Develop and implement a Neighborhood Traffic Calming Program to address safety concerns.	Planning & Community Development Public Works Transportation Advisory Committee Police	$ - $$ (per project)	Short-term Ongoing
	H.4	Analyze and track key data sets over time to inform transportation decision making and prioritization.	H.4	Track metrics	Planning & Community Development	$	Ongoing (Annually)