



N Henderson Rd Safety Audit

Department of Environmental Services
Transportation Engineering & Operations
N Glebe Rd to Arlington Blvd

Audit: January 2024



Safety Audit Background



- Safety audits are conducted on High-Injury Network corridors.
 - Arlington's [High-Injury Network](#) identifies streets that have a relatively high number of serious injury and fatal crashes.
 - The Vision Zero approach is focused on reducing our most severe crashes first and foremost, and the HIN allows us to focus analysis and resources on these corridors.
- The purpose of the safety audits is to review crash/operational data and visit each High Injury Network corridor to identify:
 - Quick action projects that we can implement in the short term to improve safety (signs, markings, bollards, small-scale construction, other maintenance, etc.),
 - Existing/upcoming projects occurring on the corridor and how they will help address safety, and
 - Other longer-term opportunities or needs to enhance safety for consideration for future capital projects or plans.
- [View the High-Injury Network Corridor Safety Audits page](#) for more information about the audit process and follow up.

HIN safety audits are not intended to fix *all* safety needs *immediately*.

The purpose is to identify (1) safety needs that we can address quickly and (2) safety needs that we can begin to plan for on a larger-scale.

Safety Audit Contents

- Study Area
- Traffic Volumes & Speed Limits
- Land Use/Facilities
- Vehicle Travel Lanes & Curb Space
- Transit Stops
- Bike Routes
- Crossing Infrastructure
- Crash History
- Community Input
- Recent & Upcoming Developments
- Field Findings & Next Steps



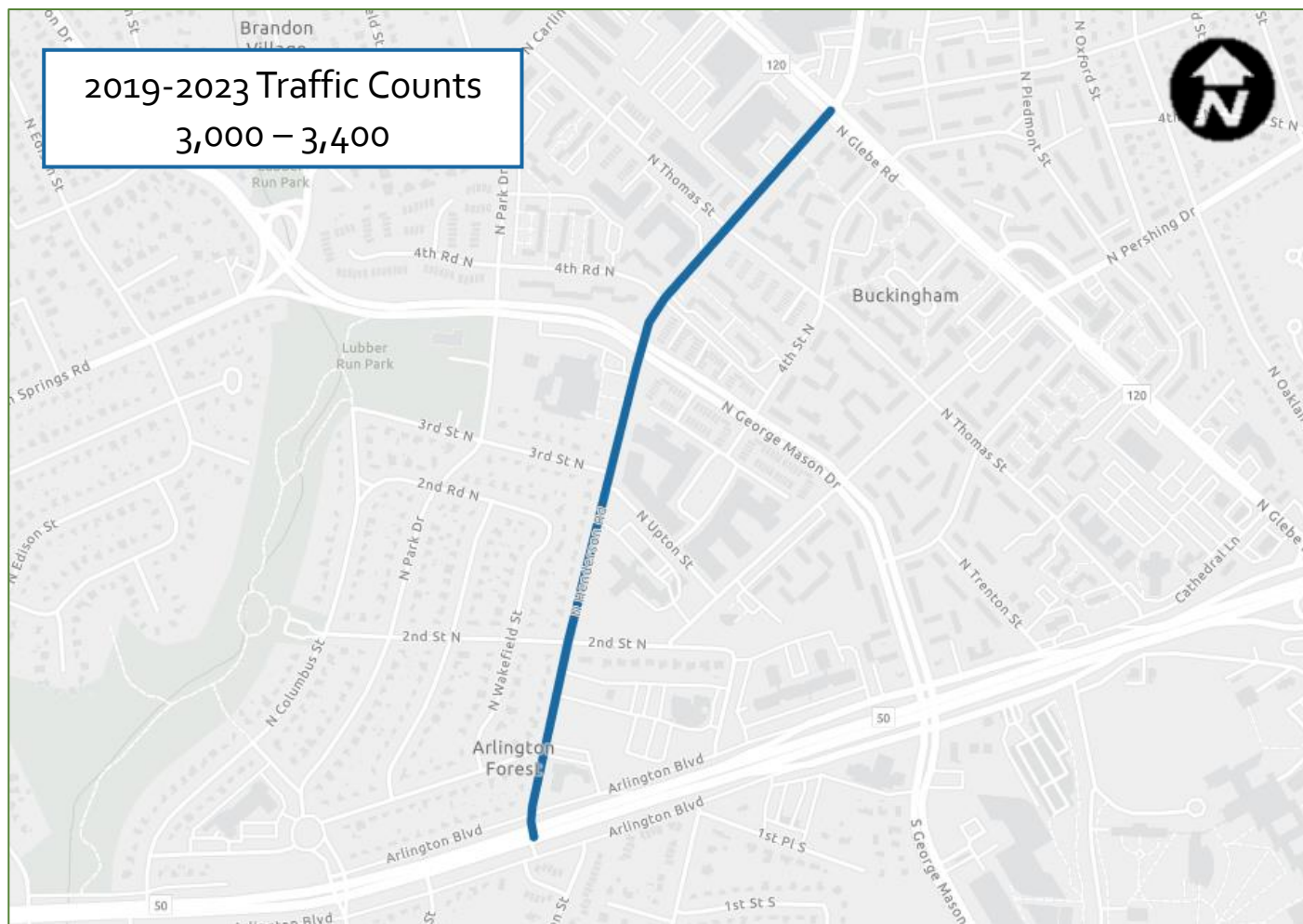
Safety Audit Study Area

**Study Limits: N Henderson Rd;
from N Glebe Rd to Arlington Blvd**



Traffic Volumes & Speed Limits













Speed Limit:
25 mph

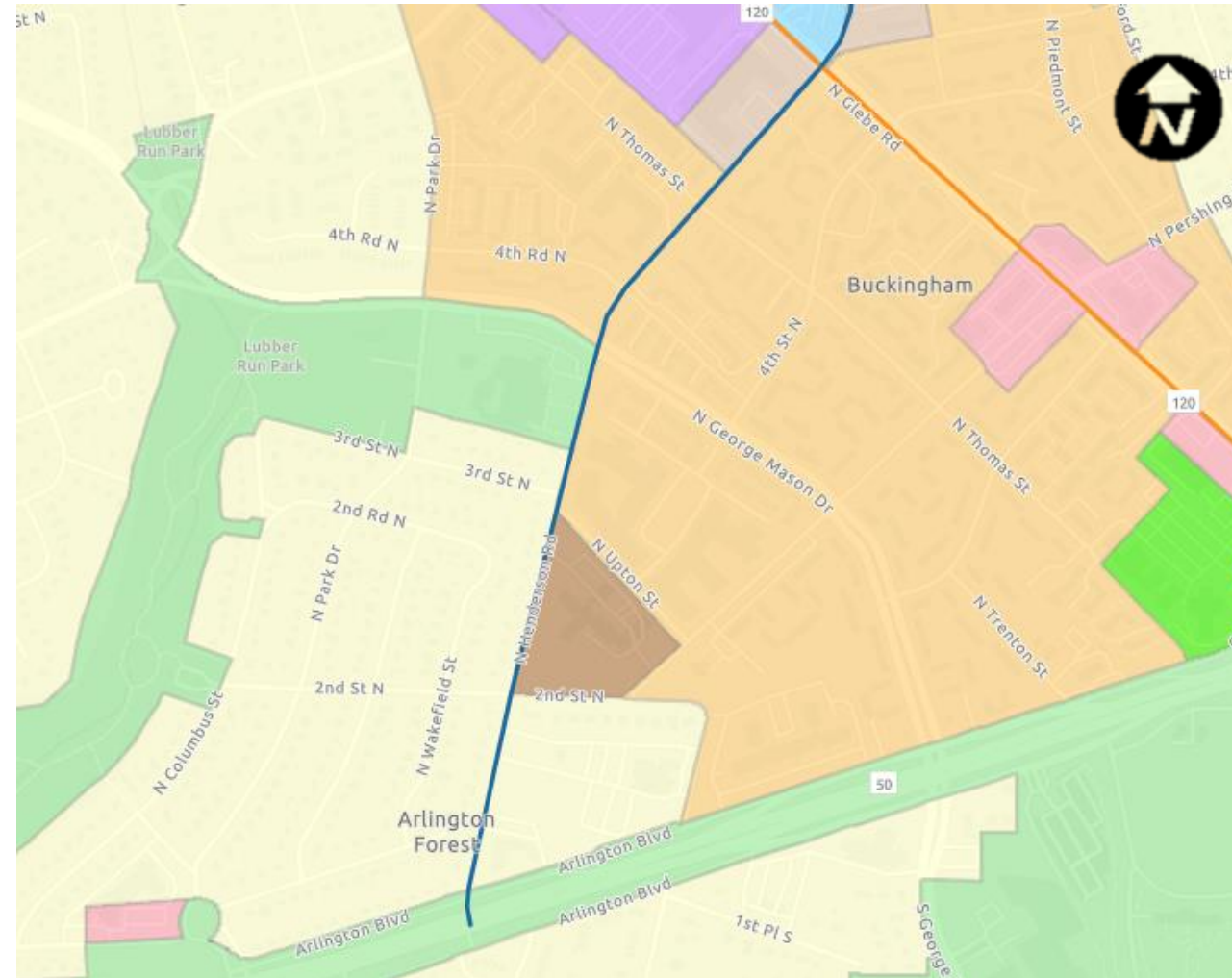


Land Use & Facilities

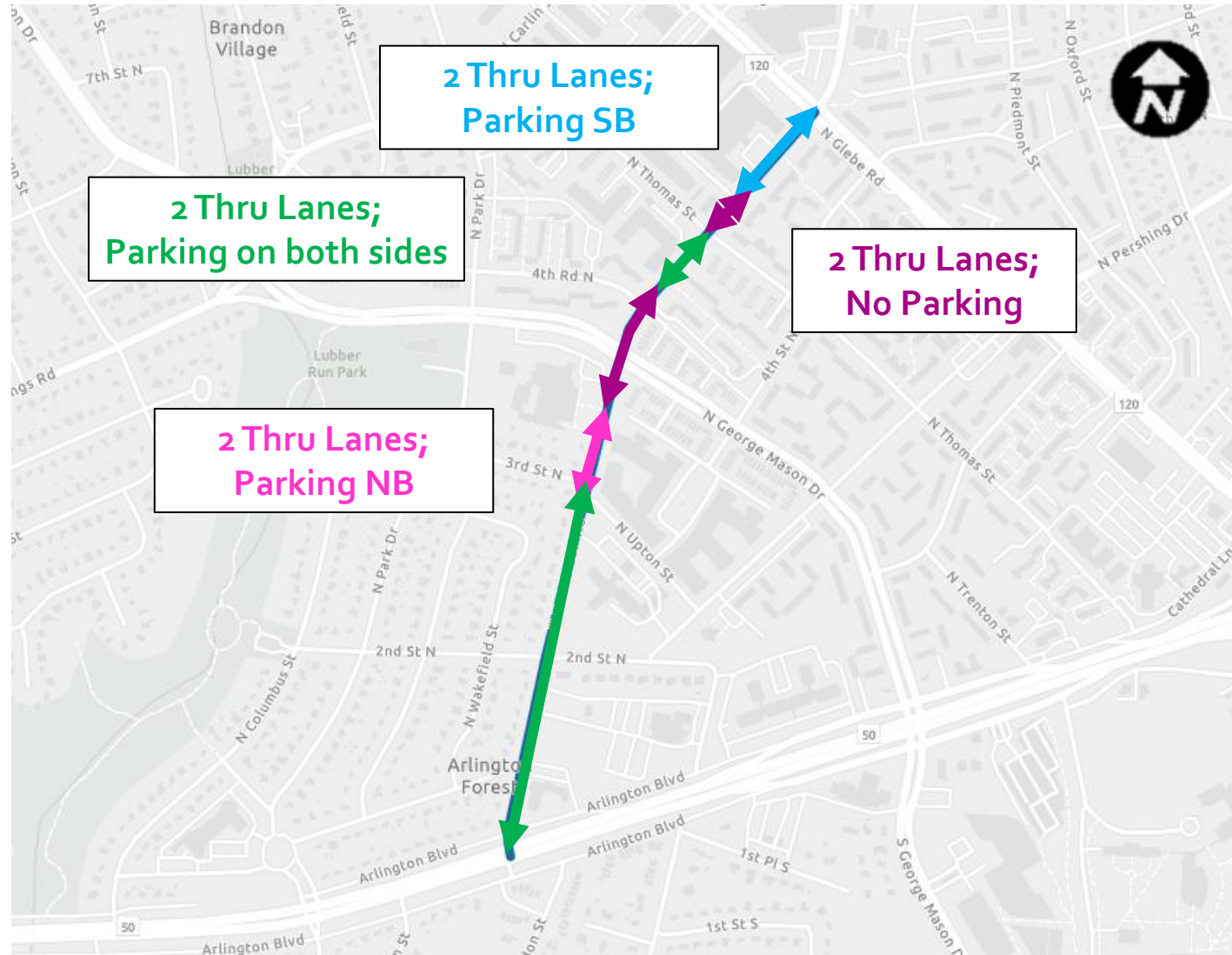
- Low to Medium Residential land use along the corridor.
- Public land use includes Barrett Elementary School and Lubber Run Park.
- Community Facilities land use from N Upton St to 2nd St N is the Culpepper Garden Apartments (affordable senior living).

General Land Use Plan Designation

 Low Residential (1-10 units/acre)	 Public
 Low Residential (11-15 units/acre)	 Semi-Public
 Low-Medium Residential	 Government and Community Facilities
 Medium Residential	 Service Commercial
 High-Medium Residential	 Medium Office-Apartment-Hotel
 High Residential	 High Office-Apartment-Hotel



Vehicle Travel Lanes & Curb Space



Transit

Metro Station



Metro Orange/Silver/Blue Line Station

ART Stop



Bus stops include: 41, 72

WMATA Bus Stop

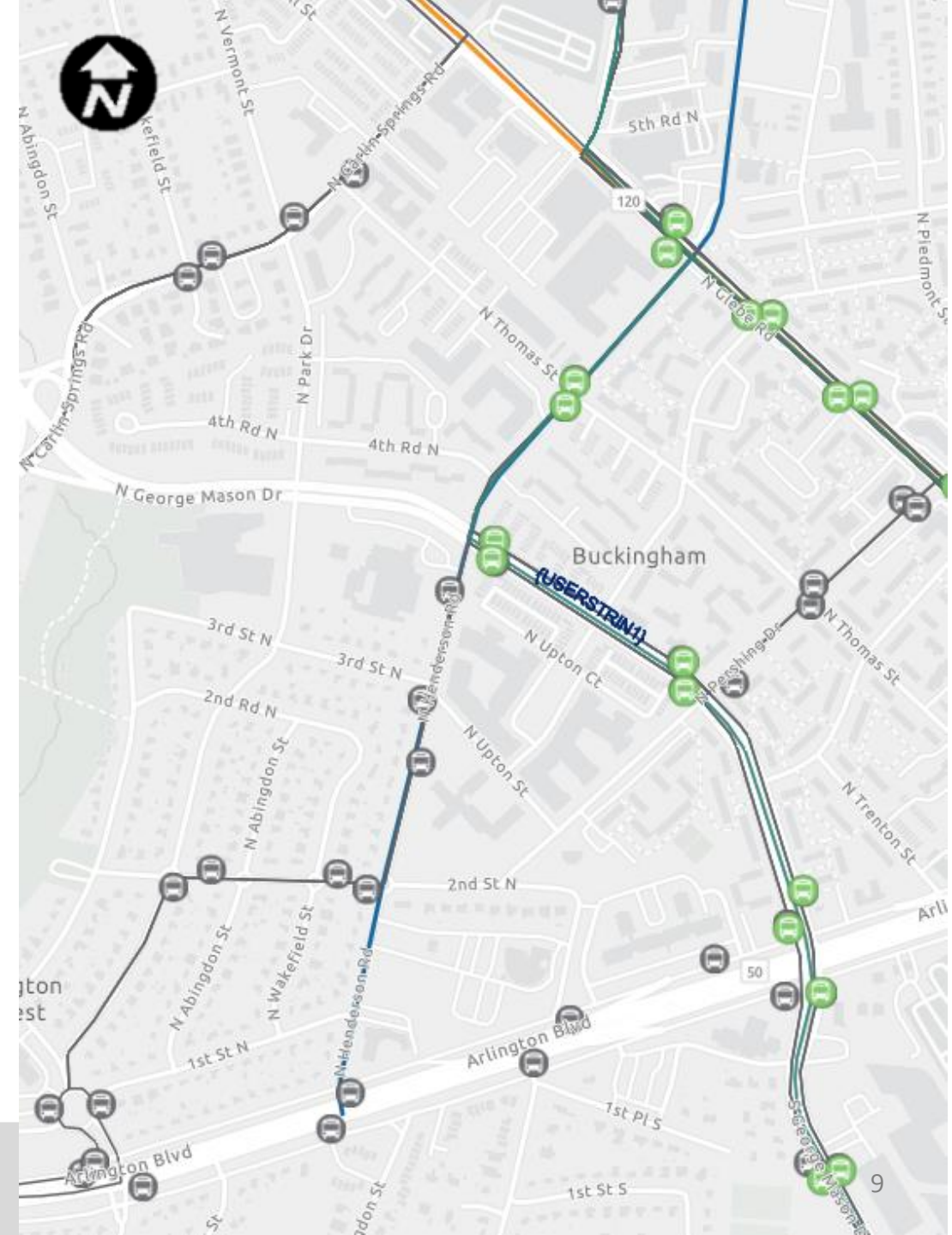


Bus stops include: 4B, 10B, 22A, 23A, 23T

ART Bus Route



WMATA BUS ROUTE



Existing Bike Routes & Infrastructure

Capital Bikeshare Station



Bike Racks / Corrals



Bike Facility

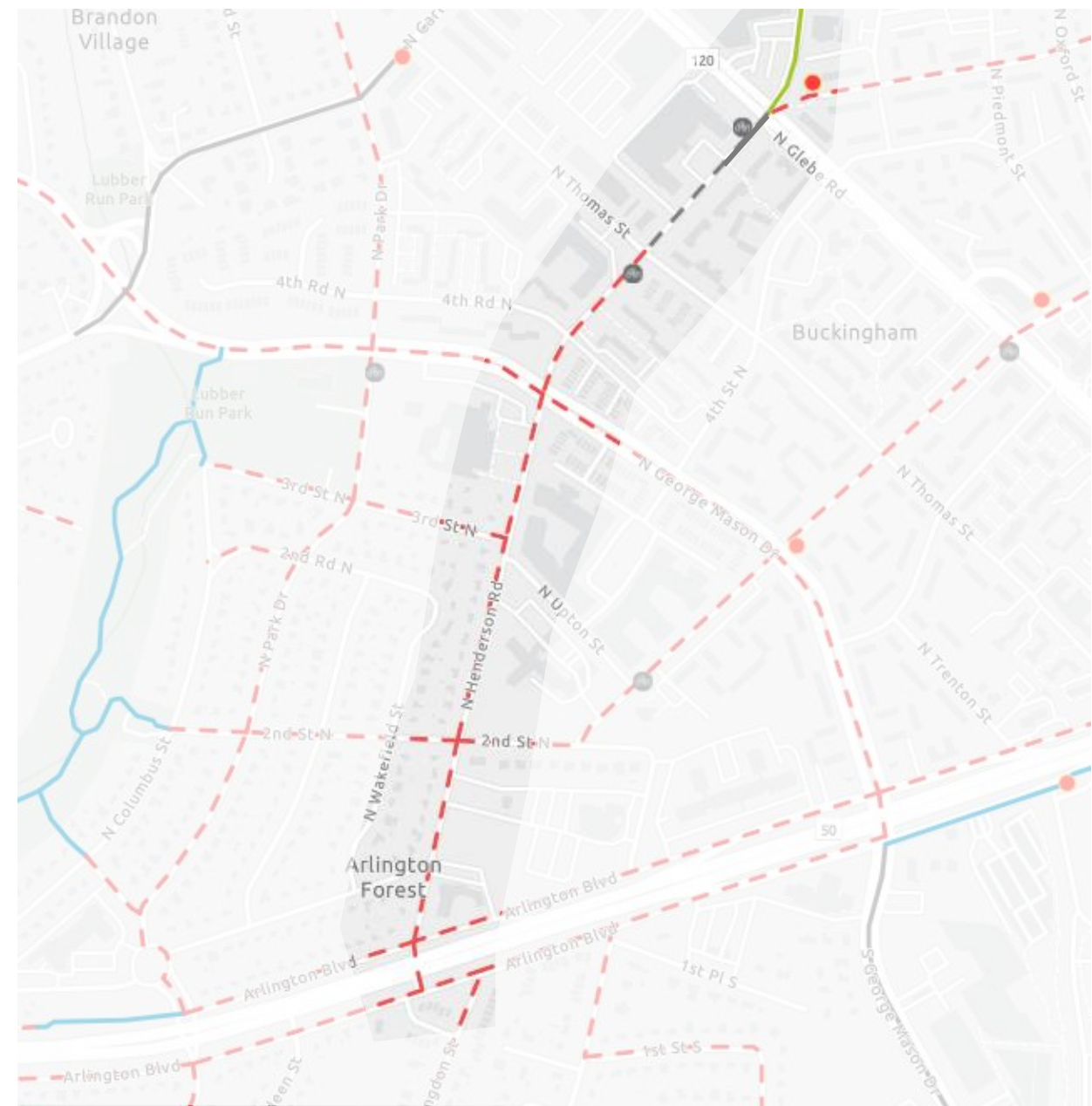
Facility Type

- Water Fountain
- Bike Repair
- Restroom/Water Fountain
- Restroom

Bike Route

Route Type

- Recommended Route
- Off Street Trail
- Bicycle Lane
- Sharrow
- Buffered Bike Lane
- Protected Bike Lane



Pedestrian/Bike Crossing Infrastructure

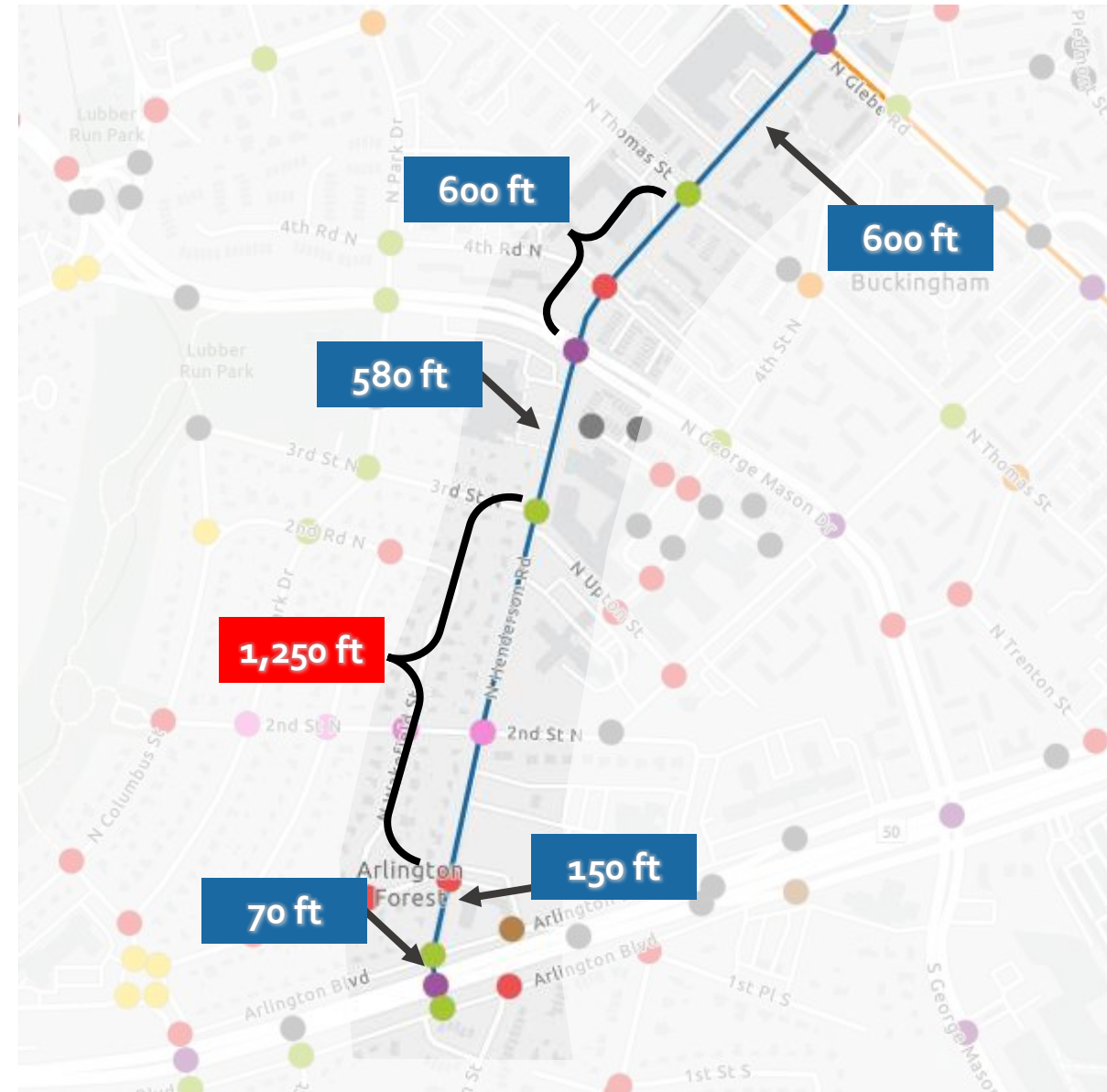
Findings:

One segment is longer than 1,000 ft.

Intersection Traffic Control

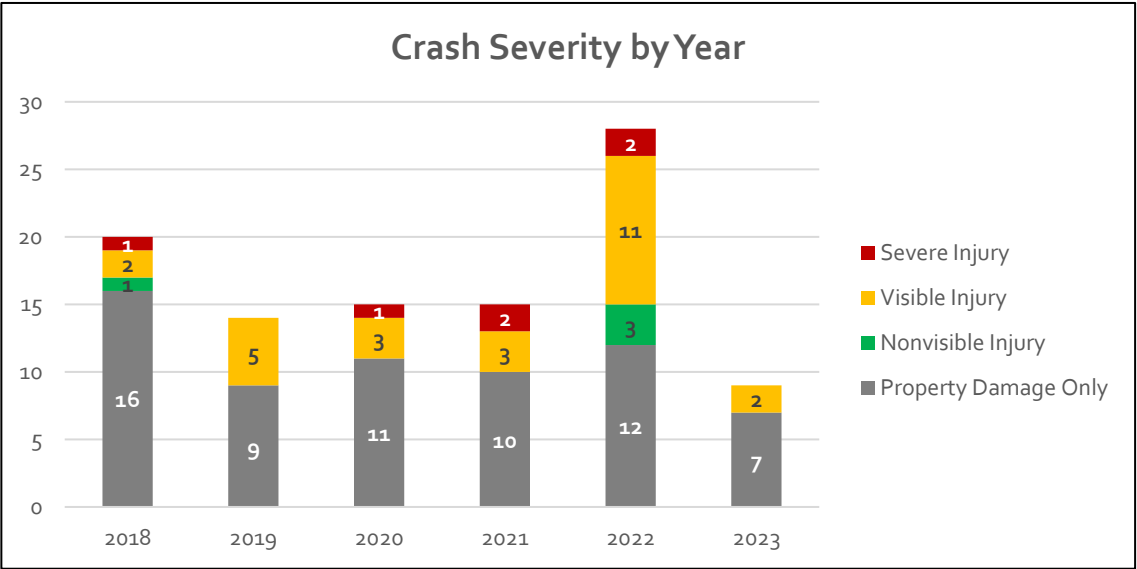
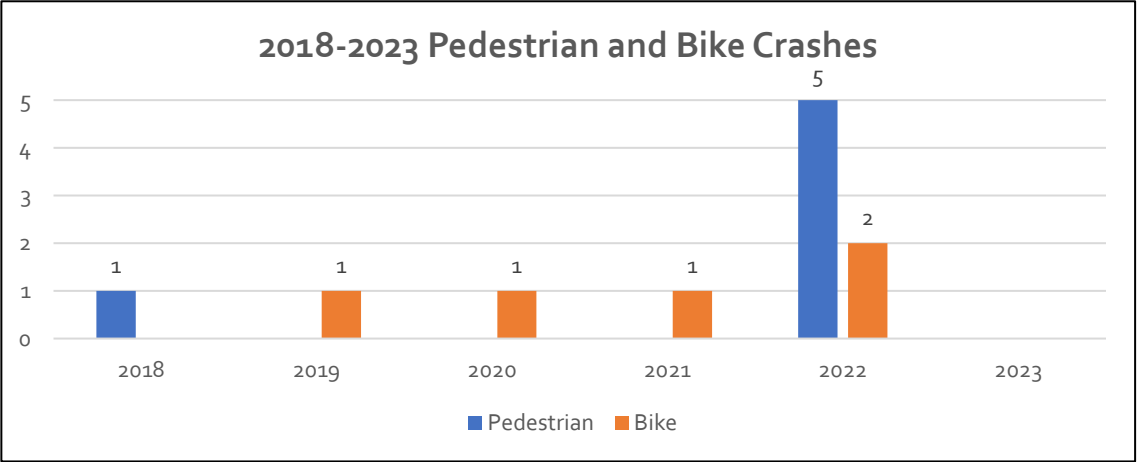
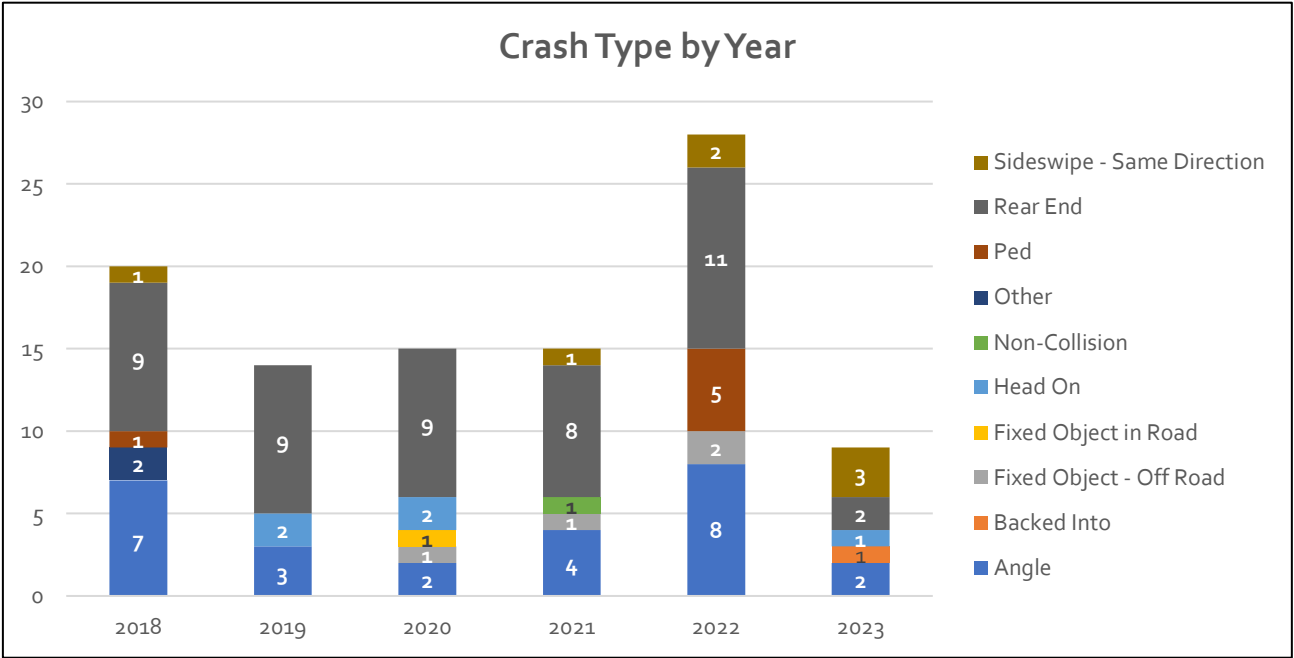
Traffic Control Type

- T - with Stop
- None
- Two-way
- Signalized
- All-Way (4)
- Yield
- Traffic Circle
- Other Stop
- All-Way (3)



Crash History 2018-2023 – Trends

- Crashes remained at or below 20 crashes per year from 2018-2021.
- In 2022, there was an increase in the number of crashes along the corridor. However, by September 2023 the number of crashes remained at low levels.
- The highest number of pedestrian and bike crashes occurred in 2022.
- The most common type of crashes throughout the years were rear-end crashes.



Note: This study used crash data from January 2018 – September 2023.

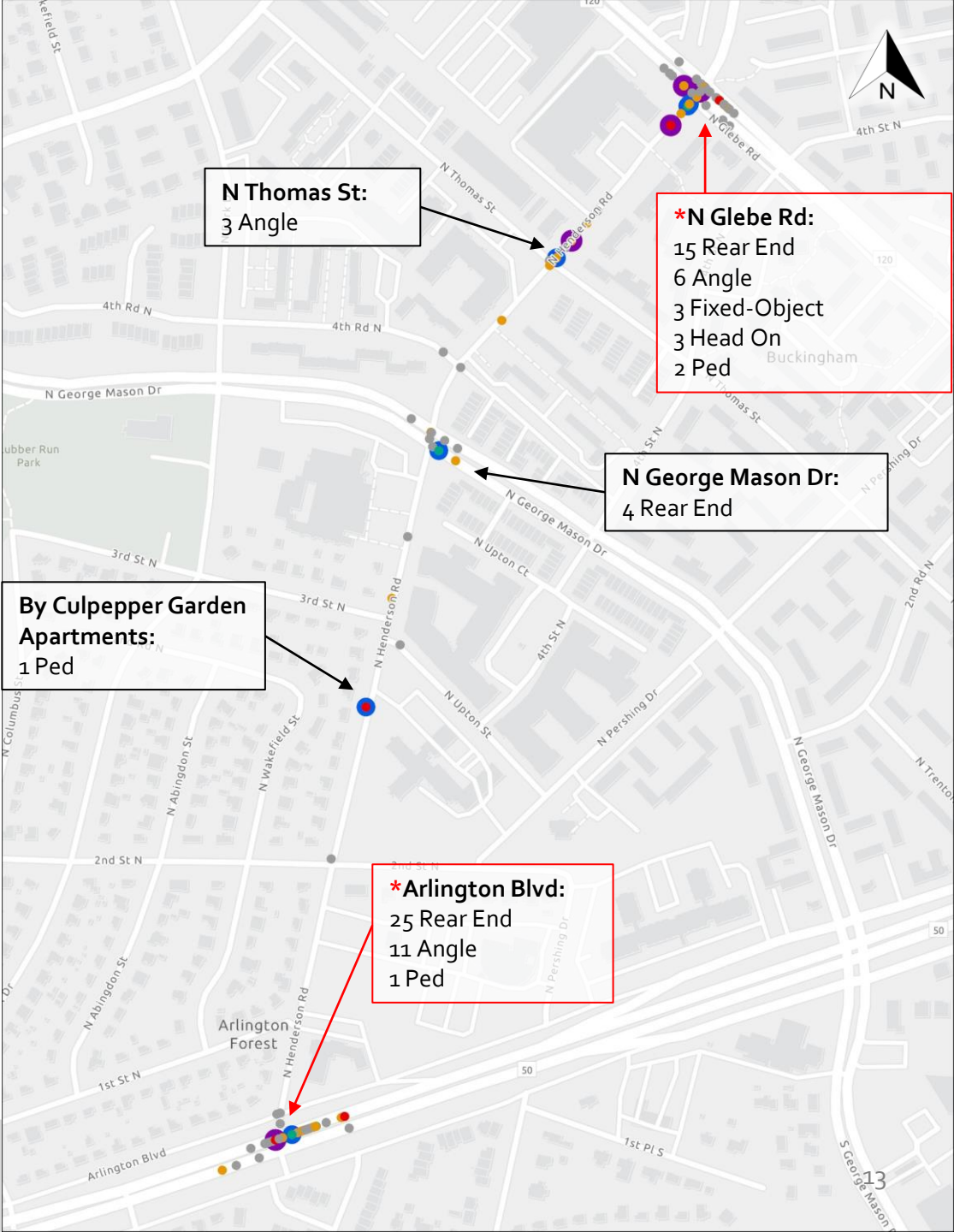
Crash History 2018-2023 – Locations

- Severe Injury
- Visible Injury
- Non-Visible Injury
- Property Damage Only

- Bike (halo)
- Pedestrian (halo)

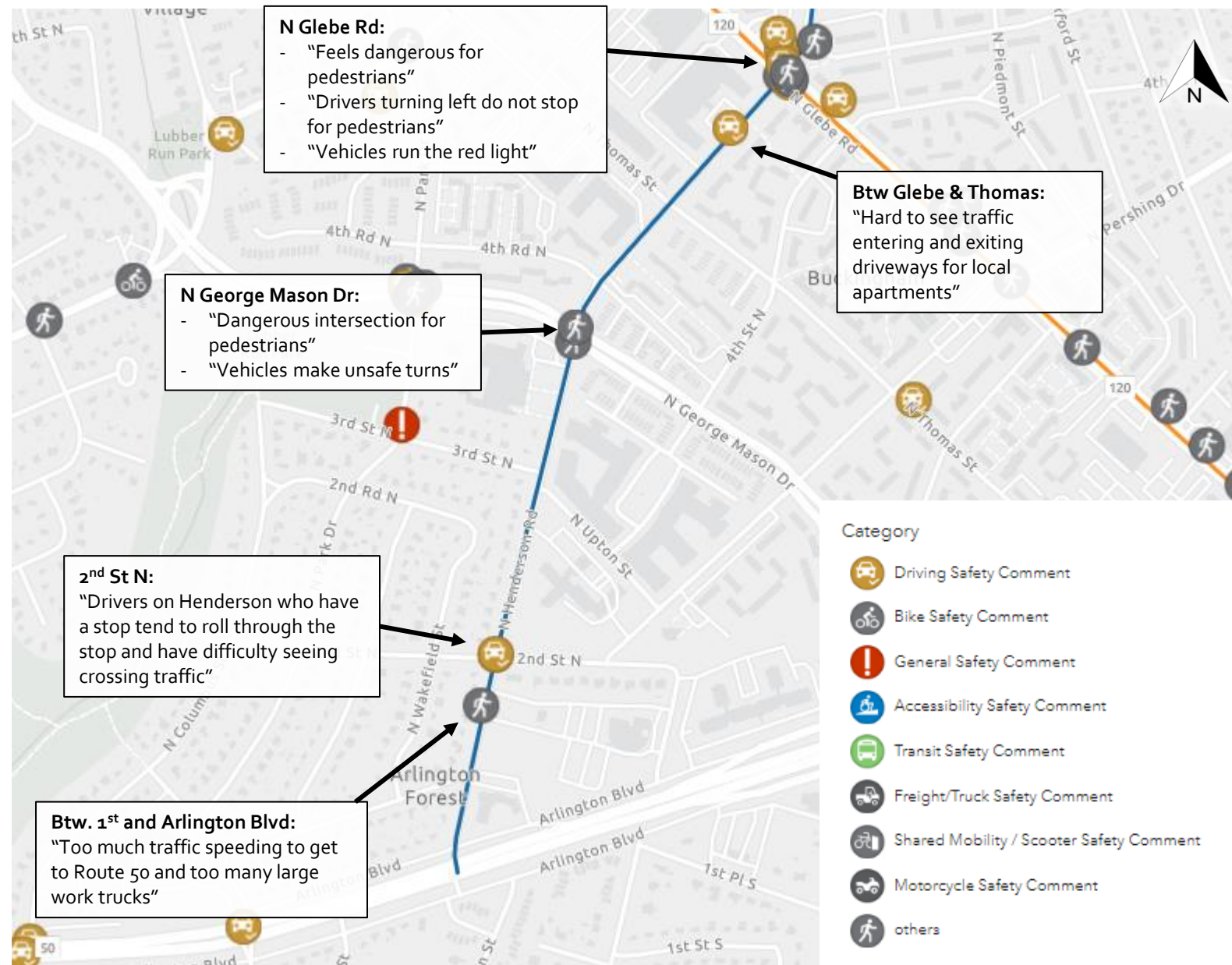
Specific crash type patterns are called out in the text boxes where present
*Previously Identified Vision Zero [Crash Hot Spot](#)

Note: January 2018 – September 2023 crash data is included in the study.



Community Input on Corridor

- Location-specific community feedback was collected in spring 2023 using an online clickable map
- The call outs to the right are pulled directly from community commentary on the interactive map
- The common recurring comments on the corridor pertained to:
 - Drivers do not stop/yield for pedestrians.
 - Sight-line issues.



Recent and Upcoming Projects & Developments

In Progress/ Upcoming Projects

N Park Dr and N George Mason Dr Intersection Improvements

This project will deliver pedestrian and vehicle safety improvements including the installation of new 4-way traffic signal, curb extensions on all corners of the intersection, increased street lighting where necessary and marked crosswalks for all crossings at the intersection.

Bike Boulevard Route Master Transportation Plan (pg. 65)

The Master Transportation Plan designates a bicycle boulevard route from N Glebe Rd to Columbia Pike via Henderson Rd, S Abingdon St, 3rd St S, and S Wakefield St.

George Mason Dr Speed Limit Changes

The County Board approved a speed limit reduction along N George Mason Dr between N Carlin Springs Rd and Arlington Blvd.

Glebe Road STARS Study in Arlington County:

Arlington County is collaborating with VDOT in a STARS (Strategically Targeted Affordable Roadway Solutions) Program which will develop comprehensive transportation solutions to address safety issues from I-66 to Columbia Pike. The

Glebe Rd corridor improvement study began in the summer of 2023. Suggested improvements include adding/improving bike lanes, improving signage, upgrading signals, replacing non-compliant ADA ramps, sidewalk improvements, upgrading medians, lane reconfigurations, and other changes will be considered.

Field Findings

The following slides include maps starting from the north end of the corridor working south. The maps identify key findings and next steps from the safety audit.



Each pinpoint lists the key safety need that was identified during the safety audit and the next step for action with a general timeline.

Each “next step” takes into consideration the background information shown in previous slides (crash history, corridor characteristics, and community input). Next steps are summarized at the end of this document.

Field Observations: Key Findings & Next Steps

Finding: The southbound bike lane markings transition to a sharrow at the first driveway. Diagonal parking and no bike lane in the northbound direction.

Next Step: Assess feasibility to improve the southbound bike lane transition to shared lane and explore opportunities to improve bike and vehicle operations in the northbound to be integrated into the next repaving effort. (mid/long term)

Finding: History of three angle crashes.

Next Step: Review potential improvements to the intersection such as all-way stop control, sight-line adjustments, or other marking/tactical measures (short term). Add high visibility markings on all sides (short term). Update crossing signage to current standards (short term).

Finding: History of four rear-end crashes and one pedestrian crash. Missing "Keep Right" sign at the median nose. There is temporary rerouting to this intersection due to the turn restrictions at George Mason and N Park Dr. The County installed a leading pedestrian interval and no right turn on red signs between 2020-2022. Various community comments cited pedestrian and turning vehicle concerns.

Next Step: Monitor impacts from the George Mason and Park project a block away (short term). Install a "Keep Right" sign at the median nose (short term).



Finding: 2024 Hot Spot. History of rear end, angle, and pedestrian crashes. Wide intersection with long crosswalks. Lane transition challenges for eastbound buses. Various community comments cited pedestrian and vehicle concerns.

Next Step: Implement improvements suggested via the VDOT STARS study:

- Install a leading pedestrian interval and no turn on red signs for westbound Quincy St to improve crossings (short term)
- Add a dedicated southbound Glebe Road left turn lane and dedicated northbound right turn lane at North Quincy Street, a bike lane on the southbound Glebe Road approach at North Quincy Street/North Henderson Street, and special transit signal heads for the southbound bus lane (long term)

 **Potential Safety Issue**

Field Observations: Key Findings & Next Steps



Potential Safety Issue

Finding: Potential sight-line issues. Crosswalks cannot be marked due to overlap with the travel lanes around the traffic circle.

Next Step: Review potential improvements to the intersection such as all-way stop control, sight-line adjustments, or other marking/tactical measures (short term).

Finding: Lack of high visibility crosswalk markings.

Next Step: Add high visibility crosswalk markings (short term).

Finding: No stop bar for eastbound Arlington Blvd Service Road. Wide intersection for service road.

Next Step: Add a stop bar (short term). Explore tactical options to mitigate wide turns (short term).

Finding: Lack of markings over the bus drop-off area. Lack of speed hump signage.

Next Step: Install crosswalk markings over the bus drop-off area (short term). Update speed hump signage to current standards (short term).

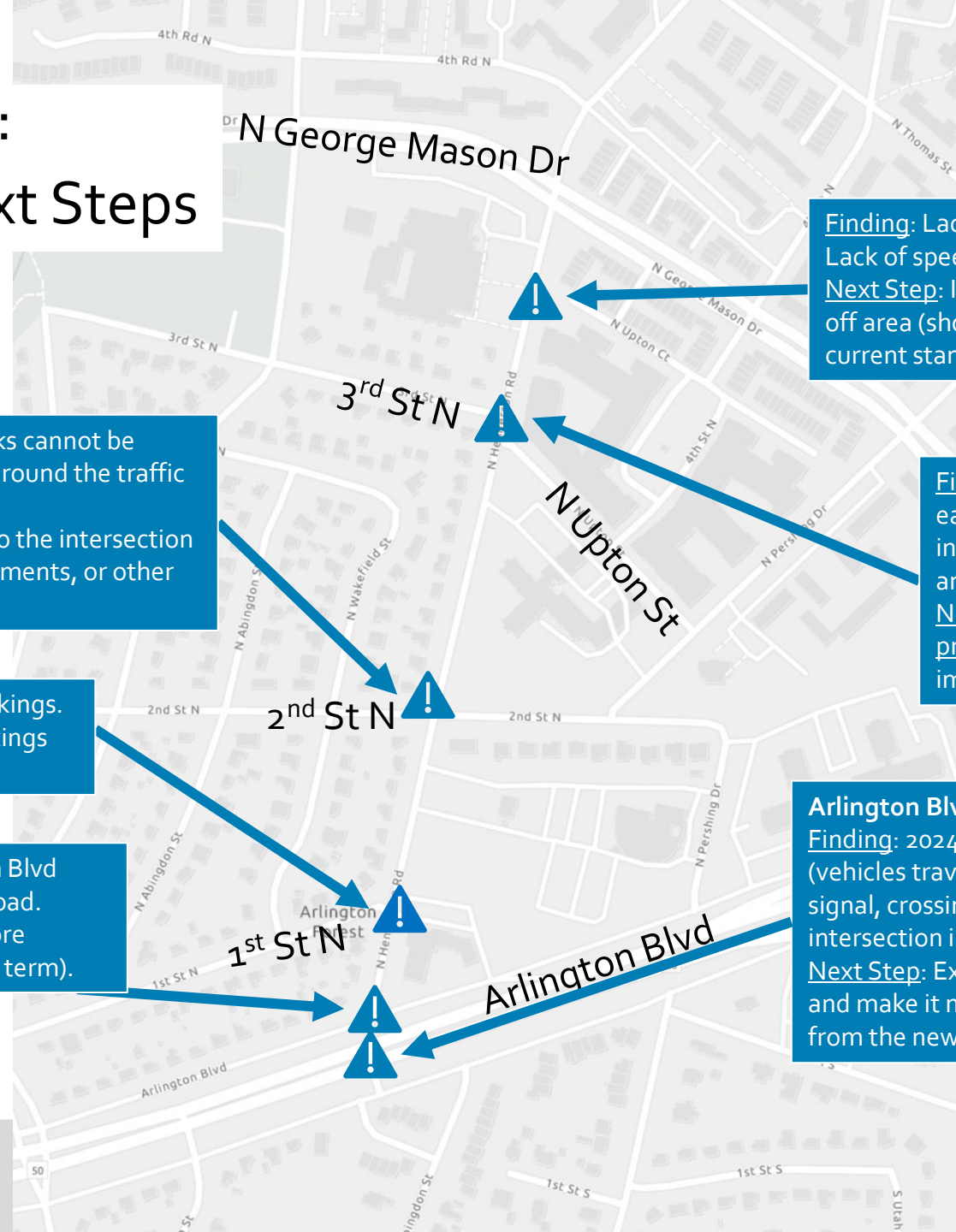
Finding: Potential sight-line issues for eastbound vehicles. Parking restrictions installed in 2023; however, cars were still parked and blocking sightlines.

Next Step: Assess feasibility of a Quick-Build project at this location to prevent parking and improve the bus stop (short term).

Arlington Blvd Main Road

Finding: 2024 Hot Spot. History of rear-end crashes (vehicles traveling westbound) and angle crashes. The signal, crossings, and ramps were upgraded at this intersection in 2022.

Next Step: Explore options to relocate the Right Turn sign and make it more visible (short term). Monitor conditions from the new signal improvements. (short term)



Summary of Next Steps

Short Term (within 1 year)

- N Glebe Rd – Install a [leading pedestrian interval](#) and [no right turn on red](#) signs for westbound Quincy St to improve crossings.
- N Thomas St – Review potential improvements to the intersection such as all-way stop control, sight-line adjustments, or other marking/tactical measures. Add high visibility markings on all sides. Update crossing signage to current standards.
- N George Mason Dr – Monitor impacts from the George Mason and Park project a block away. Install a “Keep Right” sign at the median nose.
- Near Barret Elementary School – Install crosswalk markings over the bus drop-off area. Update speed hump signage to standards.
- 3rd St N/ N Upton St – Assess feasibility of a [Quick-Build project](#) at this location to prevent parking and improve the bus stop.
- 2nd St N – Review potential improvements to the intersection such as all-way stop control, sight-line adjustments, or other marking/tactical measures.
- 1st St N – Add high visibility crosswalk markings.
- Arlington Blvd Service Rd – Add a stop bar. Explore tactical options to mitigate wide turns.
- Arlington Blvd Main Rd – Explore options to relocate the Right Turn sign and make it more visible. Monitor conditions from the new signal improvements.

Long Term (3+ years)

- N Glebe Rd – VDOT is assessing improvements through the ongoing STARS study program which include:
 - Adding a dedicated southbound Glebe Road left turn lane and dedicated northbound right turn lane at North Quincy Street, a bike lane on the southbound Glebe Road approach at North Quincy Street/North Henderson Street, and special transit signal heads for the southbound bus lane.
- From N Glebe Rd to N Thomas St - Assess feasibility to improve the southbound bike lane transition to shared lane and explore opportunities to improve bike and vehicle operations in the northbound to be integrated into the next repaving effort.