

VISION ZERO

ARLINGTON COUNTY

Update to the Transportation Commission

Department of Environmental Services
Transportation Engineering & Operations

April 2023

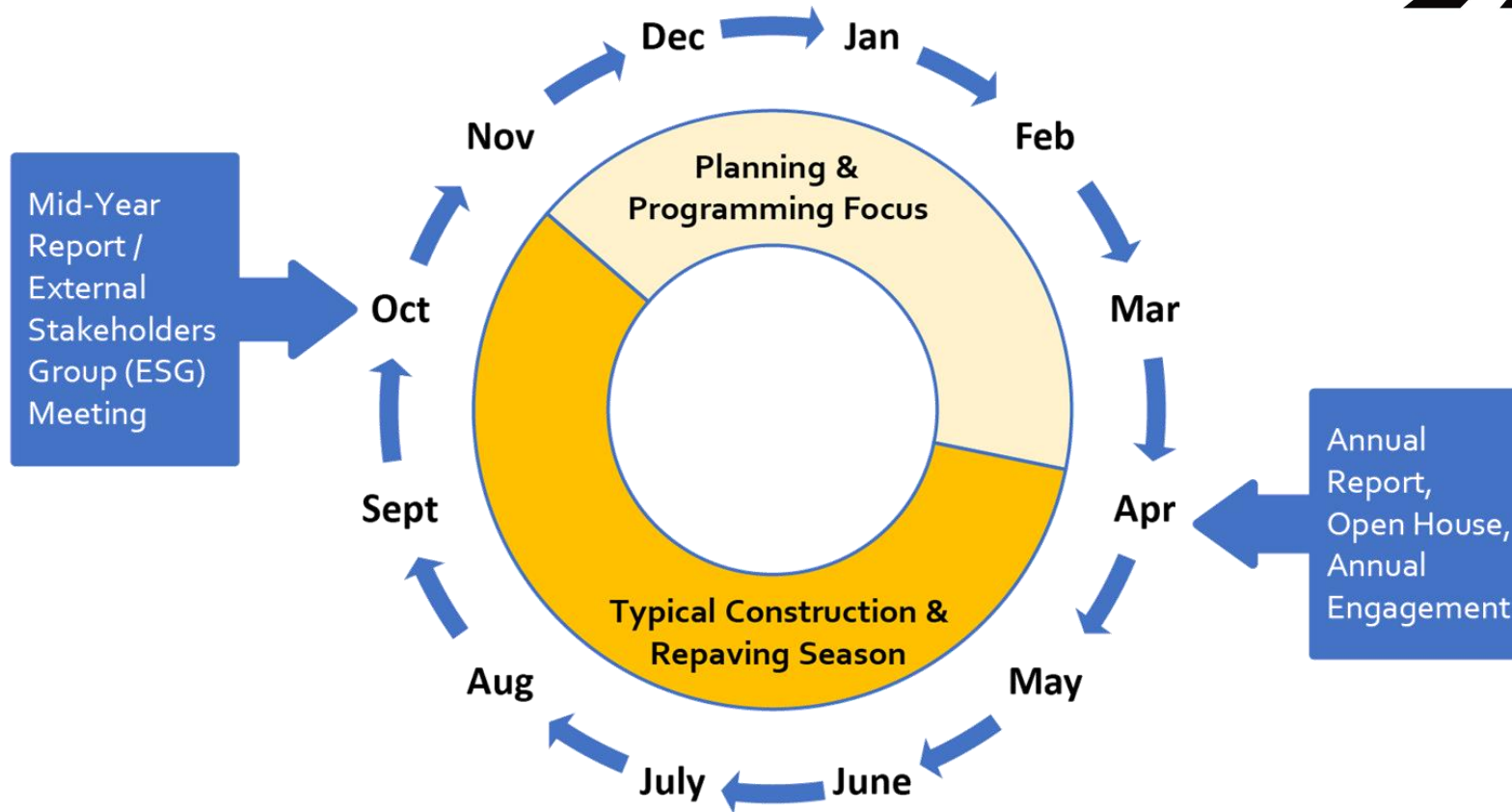


Agenda

- 2022 Annual Report & Updates
- Transportation Safety Equity Analysis
- Wrap Up + Q&A



Annual Program Cycle



Year-Round Activities:

- ✓ Crash, HIN, and Hot Spot Analysis
- ✓ Community Reports Responses
- ✓ Collaboration and Communication

Multi-Year Activities:

- ✓ HIN Update (every three years)
- ✓ Hot Spot Analysis (every 2 years)
- ✓ Action Plan Update (2025)



Made **community request tracking** publicly available

Expanded the County **streets inventory**

Reviewed **23 hot spot** locations

Updated the **HIN**

Conducted **3 HIN safety audits**

Conducted updated **systemic analysis**

Completed Transportation Safety **Equity Analysis**

Reviewed **50+ critical crash** locations

Completed **before/after** analysis for **8 hot spots**

Piloted safety analysis within **2 private site plan** projects

Planned **14 additional school slow zones / school zone** retrofits

Programmed **4 new safety-driven capital projects**

Published the **Multimodal Safety Engineering Toolbox**

Evaluated impacts of **5 pilot projects**

Added a place to **report construction-related concerns** online and responded to **237 requests**

Collaborated with VDOT on **11 safety** initiatives

Coordinated with APS on **2 pilot projects** and **14 school slow zones**

Coordinated with micromobility companies to encourage safe parking practices



Hosted **Annual Safety Engagement** that reached over **1,000** people



Responded to over **3,520 public requests** from the request for service tool

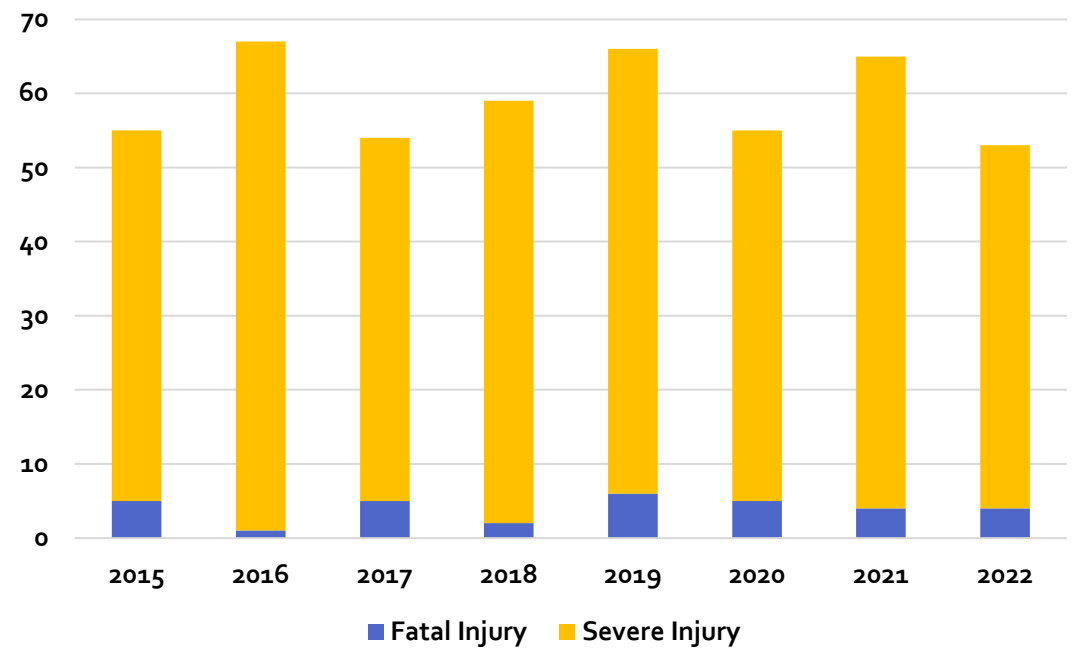
Hosted **80+ safety-related classes/events** with almost **2,000** attendees



Launched a **critical crash mitigation campaign** that reached **150,000+** people per month

2022 Program Tracking

Total Severe and Fatal Crash History



Resulting Infrastructure Improvements

- ✓ Progressed improvements for **17 hot spot** locations
- ✓ Installed **13 school slow zone** demonstration projects
- ✓ Added **40+ Leading Pedestrian Intervals** on High-Injury Network corridors
- ✓ Implemented **7** and initiated **5** improvements at critical crash locations
- ✓ Reduced speed limits on **6** corridors so that no County-owned streets have posted speed limits over 30 mph
- ✓ Installed **3.86** miles of new or enhanced bike facilities
- ✓ Completed **11** quick-build projects and **7** safety-driven projects
- ✓ Installed **70** micro-mobility corrals

High-Injury Network Update



- Includes 2018-2022 crash data
- Applies sliding scale-based methodology
- Weights by severity (fatal, severe, visible injuries)
- Normalizes by functional classification
- Excludes interstates
- Captures 52% of injury crashes on only 6.8% of the County's roadways
- Will be released with the Annual Report in April
- Safety audits to start in summer with expedited reporting/action

Our Approach to Safety: Responsive v. Proactive

Responsive

Critical Crash Follow Up

Collaborate with an interdepartmental team to identify immediate action to address severe & fatal crash locations (and identify next steps to address similar locations to prevent crashes).

Hot Spot Program

Identify crash hot spots using crash & near miss data and implement safety improvements through quick-build projects.

High-Injury Network Audits

Conduct walking assessments of HIN corridors to identify quick fix/build improvements and ensure future planning efforts consider large scale corridor needs.

Community Report-A-Problem

Respond to safety concerns reported by community members – typically involves an investigation, data collection, and implementation of recommendations.

Proactive

Systemic Improvements

Identify a safety issue in one location, then identify and improve other similar locations to prevent crashes.

Equity Analysis

Perform an analysis of transportation safety issues countywide to identify and address areas or people disproportionately affected by crashes.

Community Education

Promote Vision Zero and transportation safety messaging through targeted advertisements and education materials throughout the community.

Vision Zero Equity Analysis

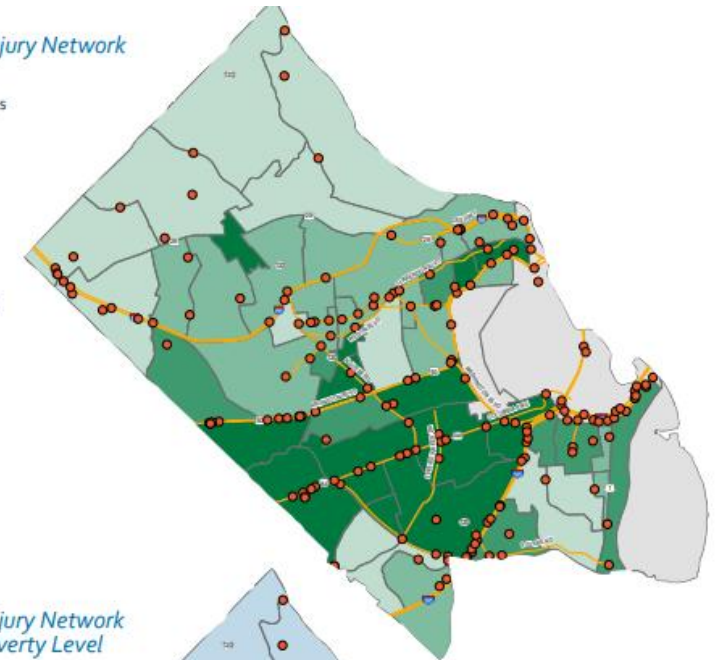
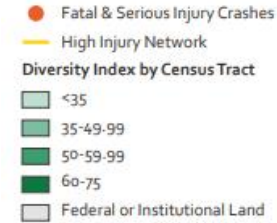
Key Findings & Recommendations

April 2023

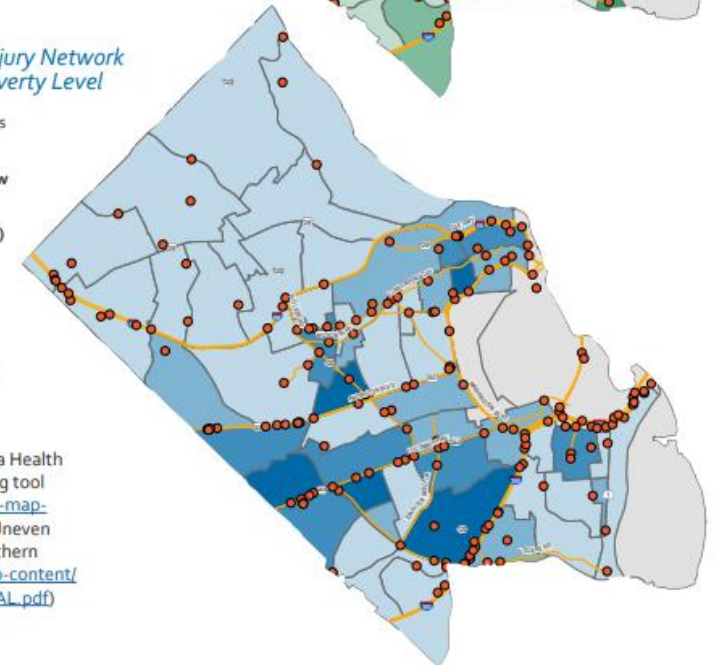
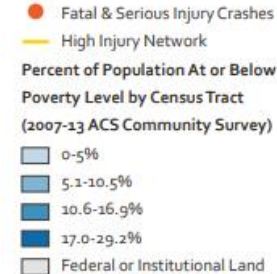
PURPOSE

- One of the six goals of Arlington's [Vision Zero](#) program: **To prioritize transportation safety investments equitably in the most vulnerable communities.**
- While developing the Vision Zero Action Plan, we compared equity indicators to crash data to determine if/how imbalances in social opportunity relate to transportation safety. Findings showed a rough relationship between crashes and each racial diversity and lower income block groups.
- To learn more, the [Action Plan](#) prescribed the Item A4: **Equity Analysis: to identify the inequitable impacts of transportation on safety in Arlington County communities and integrate this work with countywide efforts in furtherance of the [County's Equity Resolution](#).**

Arlington County High-Injury Network & Diversity Index



Arlington County High-Injury Network & Percent at or Below Poverty Level



Data Sources: Northern Virginia Health Foundation interactive mapping tool (novahealthfdn.org/interactive-map-opportunity/) and report, The Uneven Opportunity Landscape in Northern Virginia (novahealthfdn.org/wp-content/uploads/NVHF-Issue-Brief-FINAL.pdf)

ARLINGTON COUNTY STEERING TEAM

Christine Baker (Vision Zero Program Manager)

Samia Byrd (County Manager's Office / Chief Race and Equity Officer)

Ben Aiken (County Manager's Office Race & Equity Team / Vision Zero Interdepartmental Rep)

Paul Mounier (ART Transit Planner / Vision Zero Interdepartmental Rep)

Robert Sharpe (Public Health Asst Division Chief / Vision Zero Interdepartmental Rep)

Michael-dharma Irwin (DHS Quality Assurance Manager)

Elizabeth Hardy (CPHD Principal Planner / Demographer)

Tim McIntosh (Former CPHD Arlington Neighborhood Programs Lead)

Hui Wang (Director of the Transportation Division)

Dan Nabors (TE&O Acting Bureau Chief / Vision Zero Lead)

Erin Potter (DES Engagement & Communications)

Nate Graham (DES Engagement & Communications)

Caitlyn Mitchell (Vision Zero Team)

Ana Mazidi (Vision Zero Team)

Bridget Obikoya (Transportation Planning Team)

Allison Bullock (Transportation Planning Team)

Matthew Holden (TE&O Data Manager)

CONSULTANT SUPPORT

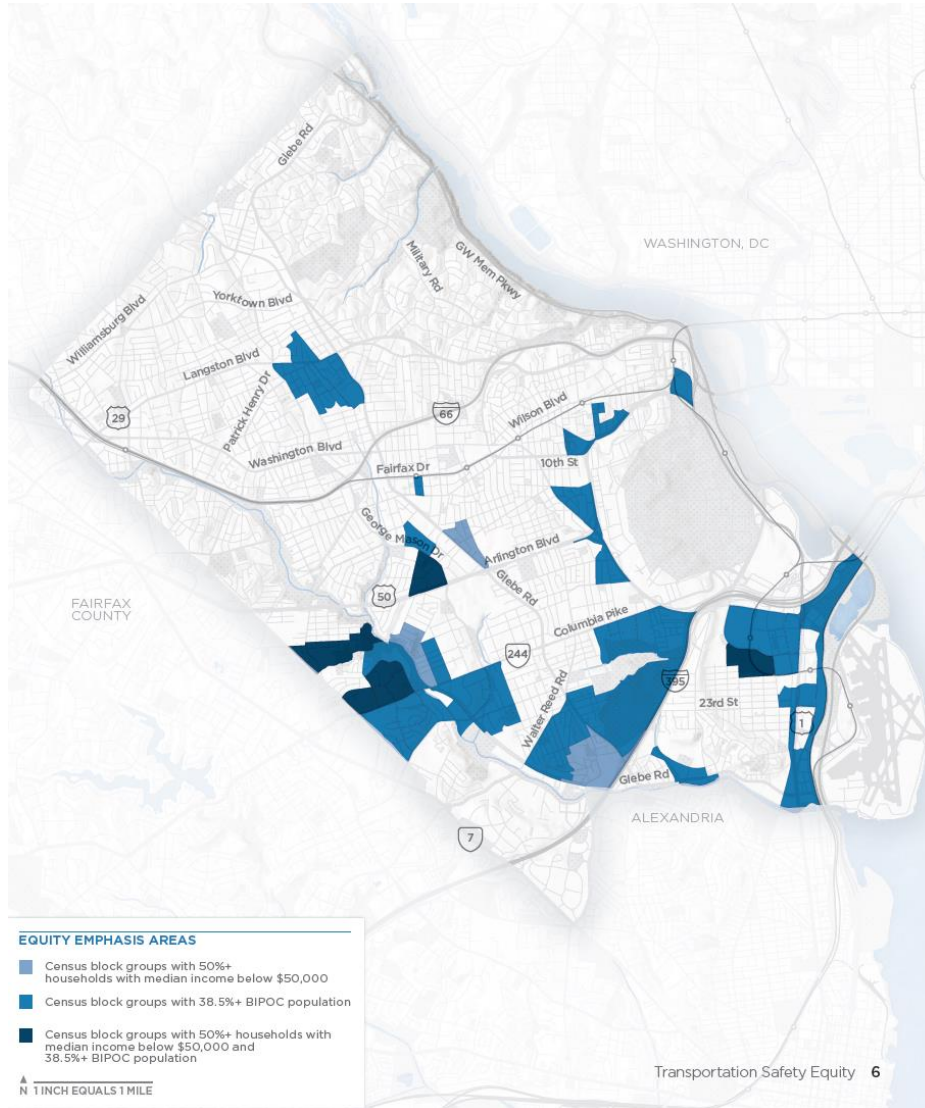
Toole Design

Fehr & Peers

ANALYSIS

Analysis:

- Equity Emphasis Areas
- Crash Data
- Driver Origins
- Systemic Risks
- Community Requests
- Hospital Data



Identified through Arlington Transit's Title VI Requirements for FTA.

Included Census Block Groups:

- With a Black, Indigenous, or people of color (BIPOC) population of 38.5%+
- Where 50%*+ households have a median income of \$50,000 or less

**We refined the income threshold from 17.5% to 50% of households with a median income of \$50,000 or less to effectively prioritize neighborhoods with lower incomes.*

ANALYSIS

Analysis:

- Equity Emphasis Areas
- **Crash Data**
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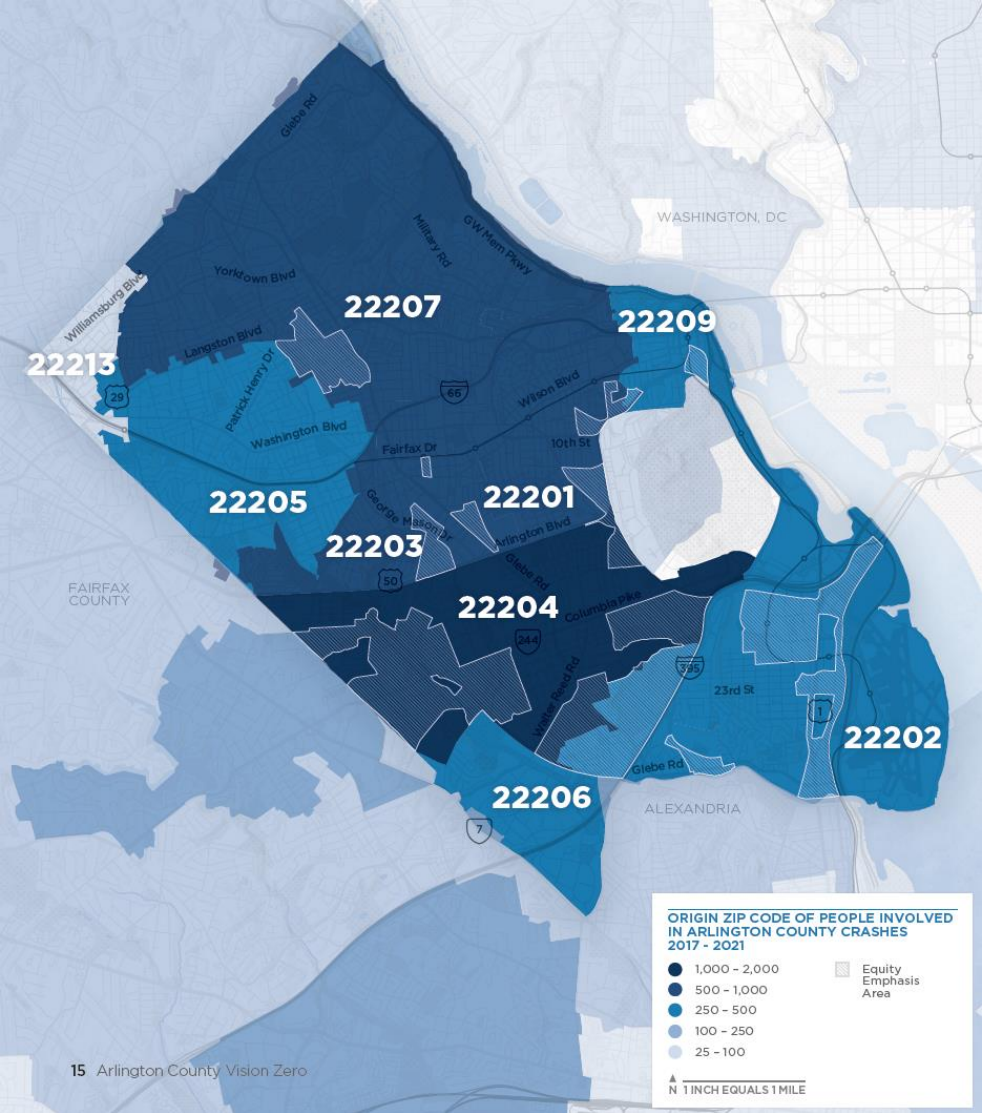
From 2017-2022, Census Block Groups identified as either lower-income or higher-Black, Indigenous, and people of color (BIPOC) population experienced almost twice as many crashes per square mile than the County as a whole.

CRASH LOCATION	CRASHES	SQUARE MILES	CRASHES PER SQUARE MILE
ENTIRE COUNTY	13,733	26.1	526
LOWER INCOME AREA	762	0.75	1,014
HIGHER BIPOC AREA	2,747	3.0	916

ANALYSIS

Analysis:

- Equity Emphasis Areas
- Crash Data
- **Driver Origins**
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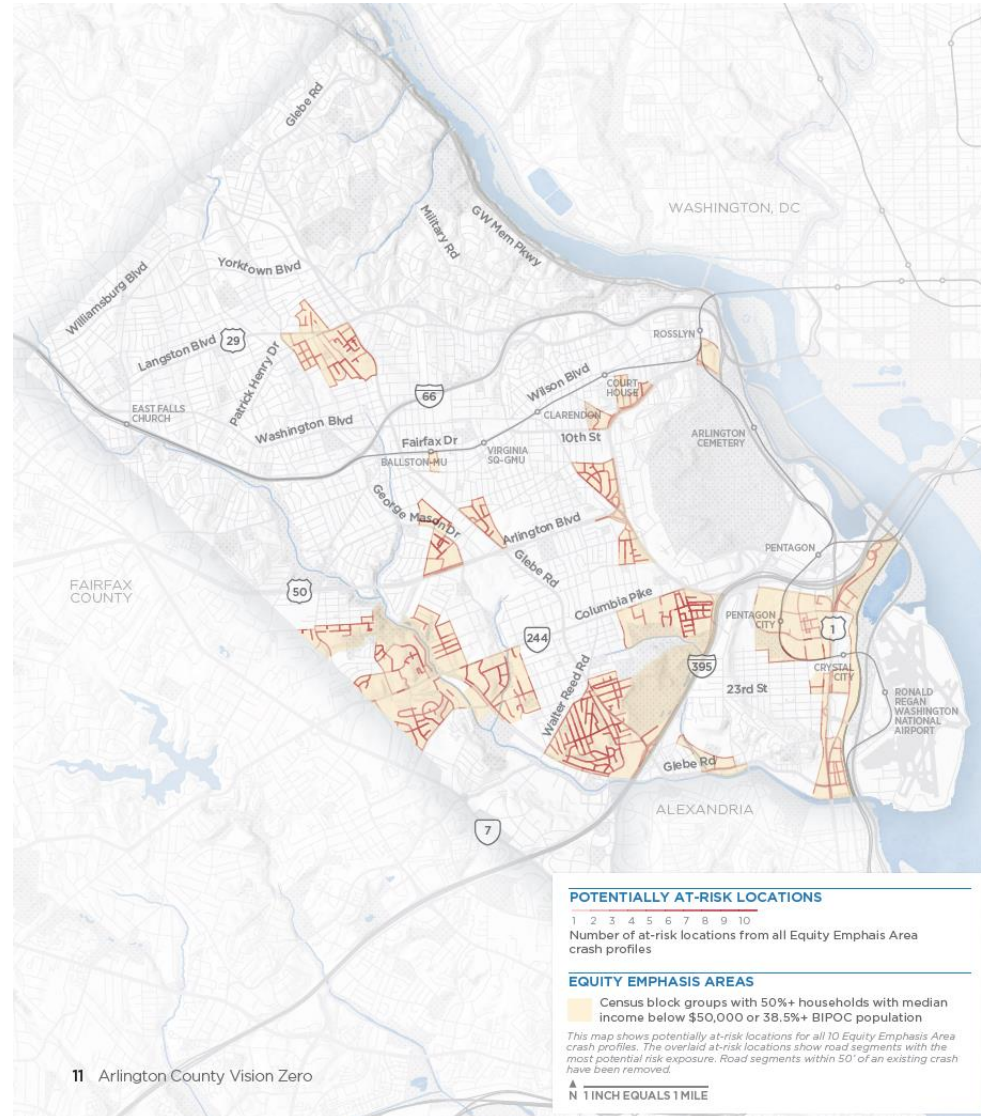
About 40% of people involved in Arlington County crashes are from Arlington County. Nearly 60% are from surrounding communities.

ZIP Code 22204 stands out with nearly a quarter of the County's crashes and almost half of the County's Equity Emphasis Areas. It tops the chart with other metrics, except jobs.

ANALYSIS

Analysis:

- Equity Emphasis Areas
- Crash Data
- Driver Origins
- **Systemic Risks**
- Community Requests
- Hospital Data



Systemic Safety uses historical crash factors to identify locations at risk for crashes. We first looked countywide and narrowed to focus on Equity Emphasis Areas.

The top ten crash trends in Equity Emphasis Areas more often involve pedestrians, left turn conflicts, and land uses like schools.

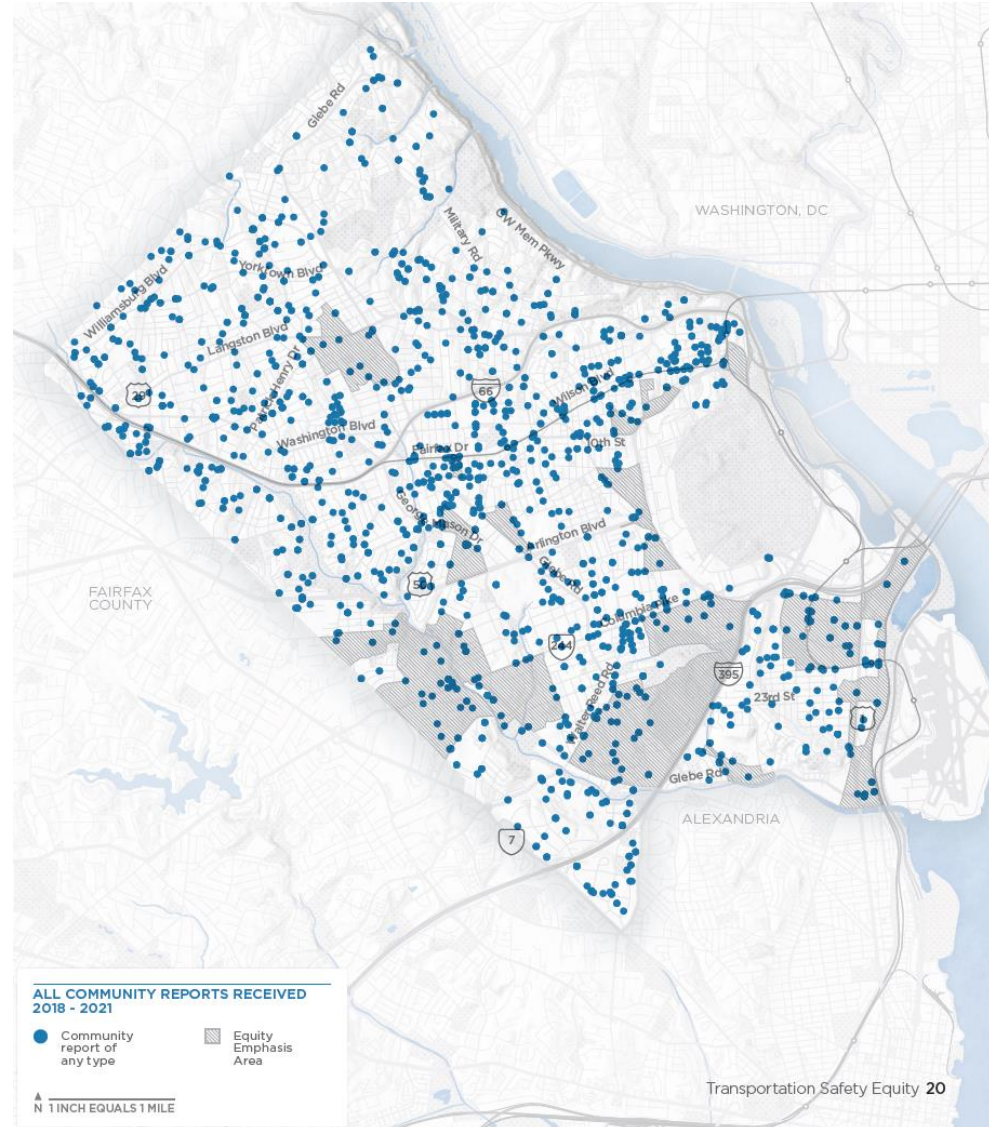
ANALYSIS

Analysis:

- Equity Emphasis Areas
- Crash Data
- Driver Origins
- Systemic Risks
- **Community Requests**
- Hospital Data

Reporting channels analyzed:

- Request for Service Portal,
- Inquiries to the County Board,
- ART and WMATA Service portals (filtered for safety-related),
- Arlington Neighborhood Program applications (filtered for transportation-related),
- Neighborhood Complete Streets Program applications



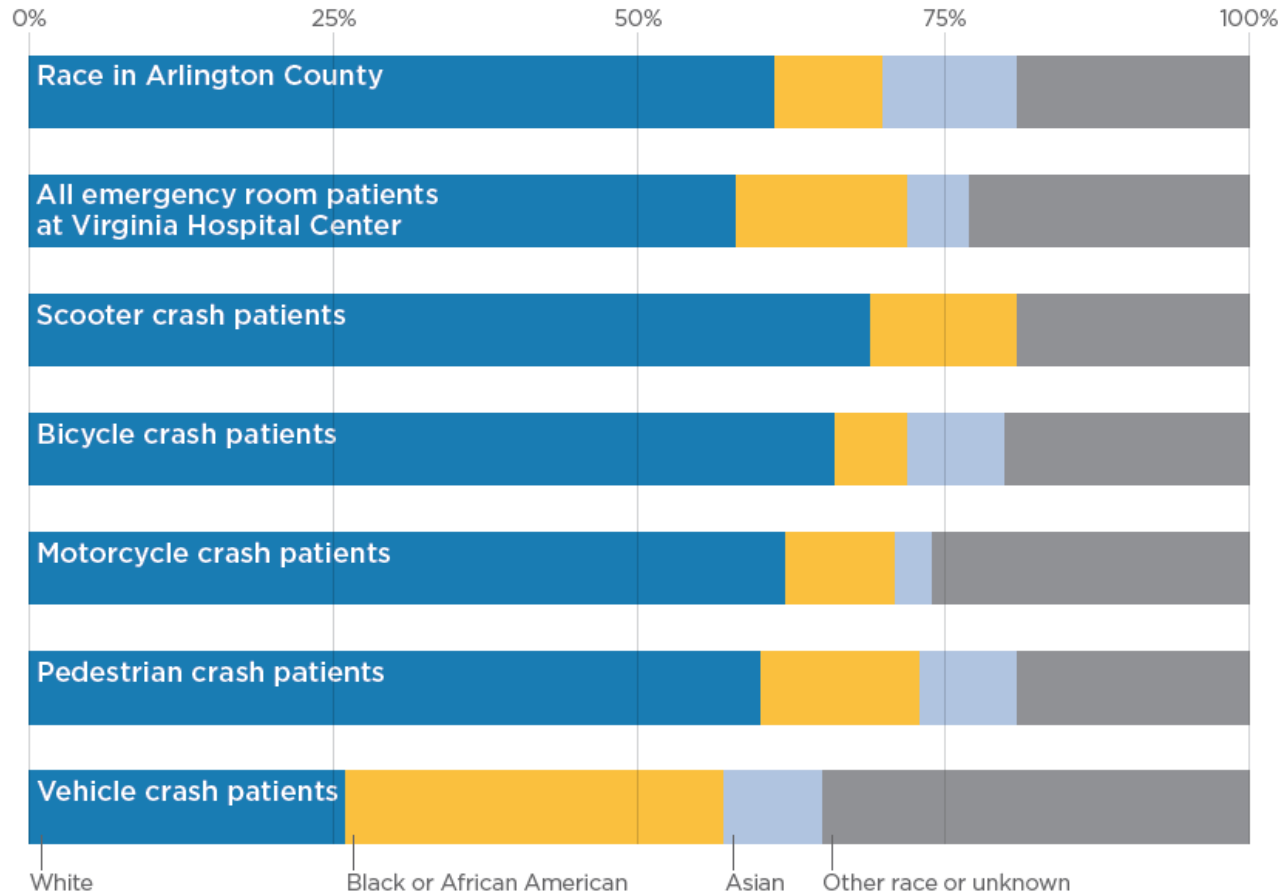
Most community requests came from densely populated areas, which corresponds with community requests per capita, but Equity Emphasis Areas are underrepresented.

Neighborhood Complete Street requests are particularly less common in Equity Emphasis Areas.

ANALYSIS

Analysis:

- Equity Emphasis Areas
- Crash Data
- Driver Origins
- Systemic Risks
- Community Requests
- **Hospital Data**



At the Virginia Hospital Center, people who identified as Black or African American were overrepresented in serious vehicle crashes from 2020 to 2021.

VHC was the only local hospital to share data with the County.

RECAP

Analysis:

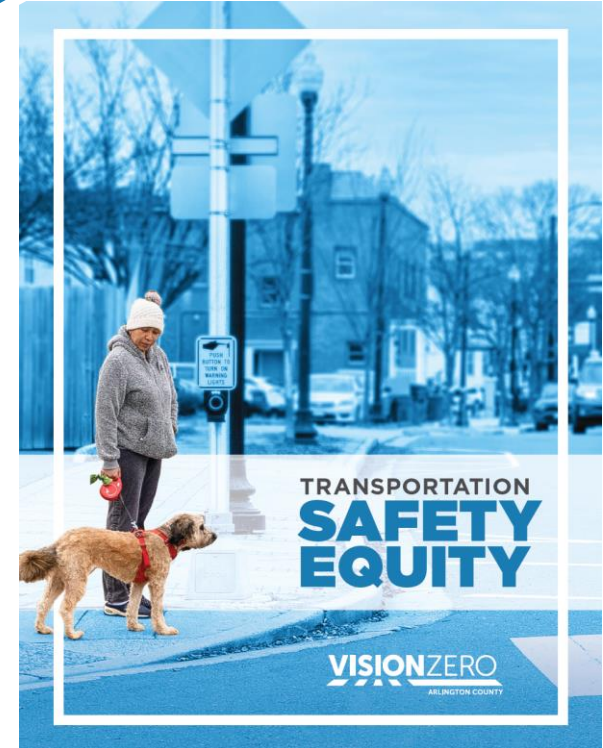
- Equity Emphasis Areas
- Crash Data
- Driver Origins
- Systemic Risks
- Community Requests
- Hospital Data
- Reviewed with an internal interdisciplinary steering team and a third-party consultant for quality assurance.

Findings:

- Crashes occur twice as often in Equity Emphasis Areas.
- People from 22204 were disproportionately involved in crashes.
- The top ten crash trends in Equity Emphasis Areas more often involve pedestrians, left turn conflicts, and land uses like schools.
- Community requests are underrepresented in Equity Emphasis Areas.
- Black or African American individuals were overrepresented in crash-related hospitalizations.

Next Steps:

- A set of 10 action items that elevate Equity Emphasis Areas for:
 - safety analysis,
 - project prioritization,
 - public engagement,
 - education, and
 - proactive safety improvements.
- A plan for assessing our progress on reducing inequities over time.



ACTION ITEMS

Overall: Reassess proportionalities of crashes in Equity Emphasis Areas (EEAs)

1. Update and quality check EEAs as new data becomes available
2. Prioritize safety analysis and safety improvement projects in EEAs
3. Improve safety at intersections within EEAs
4. Deploy engineering tools to reduce driver speeds in EEAs
5. Enhance pedestrian infrastructure within EEAs
6. Host public safety campaign encouraging behavior change for all road users
7. Monitor and evaluate capital safety improvements on corridors along EEAs
8. Promote consistent safety messaging, infrastructure, and policies with regional partners
9. Focus traffic safety and Vision Zero outreach in EEAs
10. Apply an Equitable Engagement Checklist to Vision Zero and other transportation outreach

TRACKING PROGRESS

The County defined tracking metrics for each action item to continuously assess our progress toward reducing disproportionalities in safety.

We will report our progress toward these actions and use outcomes to inform the Arlington County Vision Action Plan update in 2025.

TRACKING METRICS

- Percentage of projects completed in EEAs
- Percentage of community requests for projects in EEAs
- Percentage of outreach events held in EEAs
- Reduction in serious or fatal crashes in EEAs
- Reduction in speeds as determined through before/after study
- Estimated reach of campaigns in EEAs
- Regular check-ins with regional Vision Zero partners
- Increase in engagement by historically underrepresented groups

THE BOTTOM LINE

This analysis confirmed that there are neighborhoods in Arlington that have historically been overrepresented in crash data and underrepresented in responses to transportation-related safety requests.

The recommendations create a path forward for Arlington to:

1. Be proactive in addressing infrastructure needs with an equity lens
2. Create a platform to prioritize safety projects in underserved neighborhoods
3. Ensure that reporting channels are clear and accessible to all community members

By tracking progress, we commit to reduce and rectify these disproportionalities over time.

The Vision Zero program will continue to prioritize safety projects that reduce fatal and severe crashes. This analysis integrates equity into that prioritization process to ensure there is no undue burden (less access to safe infrastructure) on any of Arlington's community members.