

www.aacounty.org/walkroll

#### **Final Plan Presentation**

Planning Advisory Board Meeting February 8, 2023

# Walk & Roll Anne Arundel!





# **Executive Summary**

#### Anne Arundel County, "The Best Place - For All!"

Anne Arundel County is known as the heart of Maryland. It is home to Annapolis, the state capital. Residents and visitors alike enjoy its plentiful shoreline, idyllic rural areas, and lively city and town centers. Throughout these various sceneries of Anne Arundel County, a safe, accessible, and enjoyable environment for walking and bicycling is key to a high quality of life.

Today, many parts of the County can be challenging to navigate on foot or by bicycle, as the network of sidewalks and bicycle infrastructure is incomplete and, in many places, not comfortable or appealing to people of all ages and abilities.

Walk & Roll Anne Arundel!, the County's updated pedestrian and bicycle master plan, seeks to improve these transportation conditions. Anne Arundel County leaders, residents, and stakeholders can use Walk & Roll Anne Arundel! to advance active transportation infrastructure. The recommendations in this plan will enable more people to walk and bicycle safely, comfortably, and efficiently.

#### Goals of this Plan

This plan builds on recommendations established in Move Anne Arundel!, the County's first Transportation Functional Master Plan.

Specifically, the goals and strategies in Walk & Roll Anne

- Prioritize a safe and comfortable low-stress walking and rolling network between essential destinations throughout the County.
- Ensure that vulnerable populations have access to active transportation infrastructure.
- Recommend infrastructure proven to reduce crashes. especially at intersections and along corridors with high rates of crashes resulting in death or serious
- · Identify policy recommendations to promote the construction of safe, accessible, and direct walking and rolling infrastructure.

Walk & Roll Anne Arundel! also works to address transportation challenges detailed in Plan2040, the County's General Development Plan. This plan is organized by the nine Regional Planning Areas established by Plan2040.

#### Relationship to the City of Annapolis

This plan considers the relationship and connectivity of the proposed network to the network to the City of Annapolis. However, Walk & Roll Anne Arundel! does not evaluate or make recommendations within the City. The City has its own Bicycle Master Plan.

#### Shared-use paths



Figure 2: Pedestrians and bicyclists both use a shared-use path. Source: Toole Design Group.

#### Bicycle lanes



Figure 3: A bicyclist using a standard bicycle lane. Source: Toole Design Group.



Figure 4: A separated bicycle lane located in Boston, MA.

#### What is a Low-stress Network?

Anne Arundel County residents of all ages and abilities should feel comfortable traveling in a low-stress network that meets their needs in all phases of life; from getting to school, commuting to work, and participating in recreational activities.

#### In a low-stress network:

- · Sidewalks are continuous and meet accessibility requirements. They are also characterized by wider sidewalks that are buffered from the roadway by either grass strips, street trees, parked cars, or other barriers.
- · Bicycle facilities provide separation from fast-moving motor vehicle traffic.
- · Trails are designed to accommodate the anticipated number of trail users.
- · At intersections and crossings, people have a clear, well-marked place to cross without risk of a crash.
- · Multimodal transit opportunities will seamlessly allow travelers to complete their trips using a combination of modes

To the left are some of the low-stress facilities recommended in the plan.



#### Walk & Roll Anne Arundel! Goals

- Safe and comfortable walking and rolling network for all ages and abilities
- Continuous connections to essential destinations

Increase access for vulnerable people





# Safe Bicycling Infrastructure









# Safe Walking Infrastructure









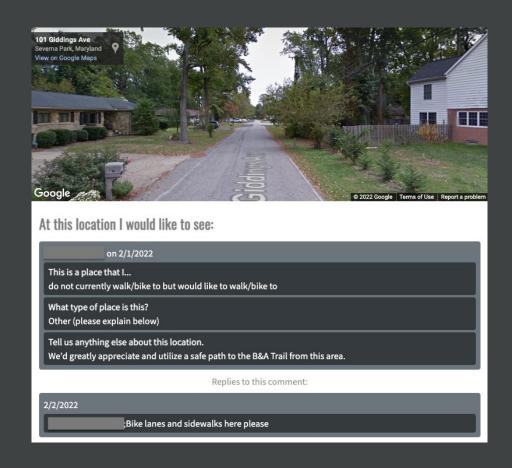




# Online survey and interactive webmap

- Over 800 comments
- Common themes:

- Connections to trails
- Need for protected or buffered bicycle lanes
- Direct neighborhood connections
- 140 comments: lack of shoulder on high-volume roads





# Online survey and interactive webmap

96.5% - use a vehicle on a regular basis

 96% - having more sidewalks, bike lanes or trails = more walking and bicycling







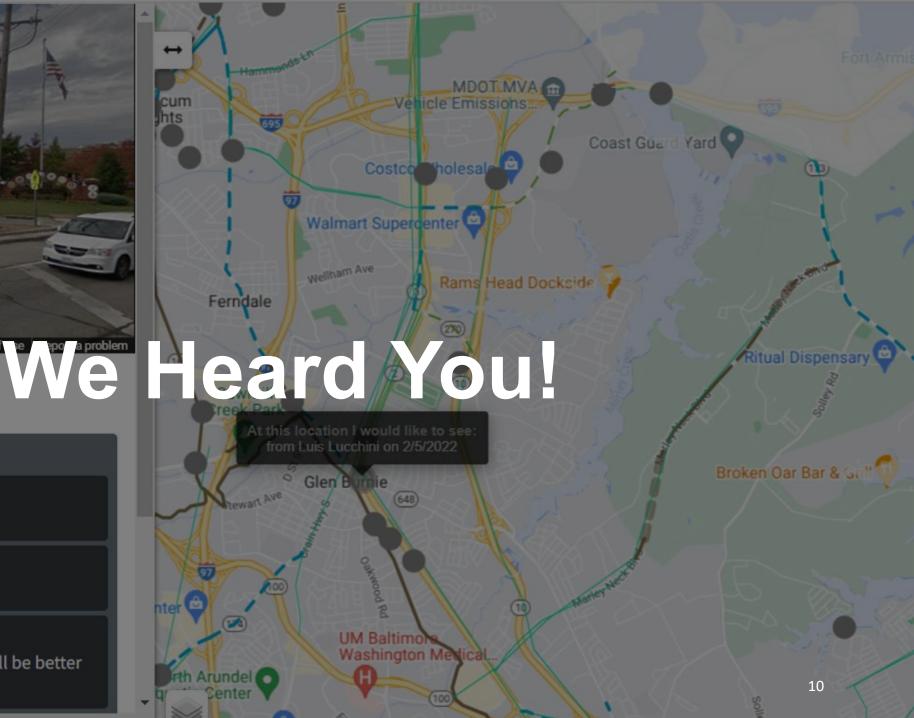


like to see:

o walking or biking

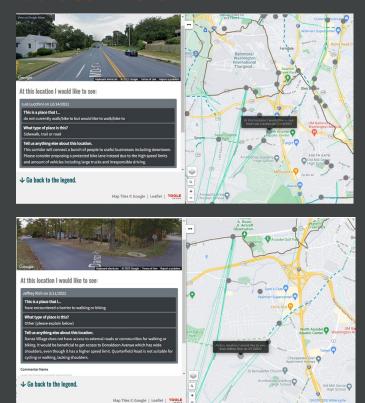
his location.

people from the neighborhoods on the east will be better

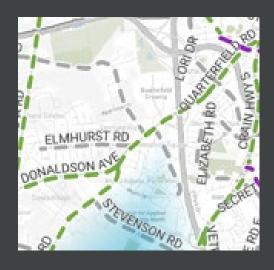


# **Quarterfield Rd**

#### Public comment



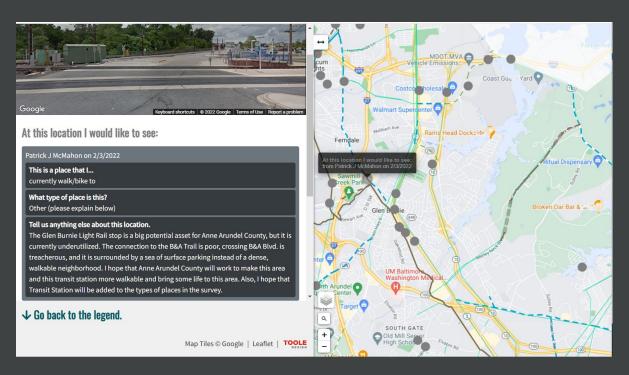
#### Plan recommendation



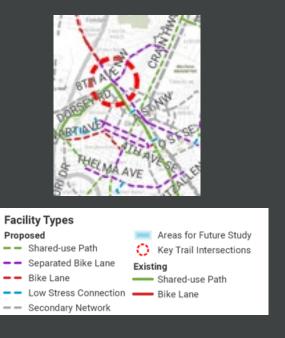


# B&A Trail – Glen Burnie Light Rail

#### Public comment

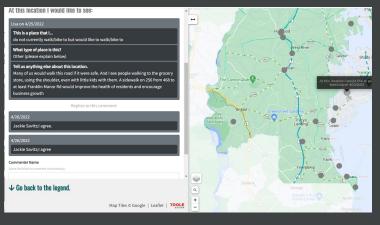


#### Plan recommendation



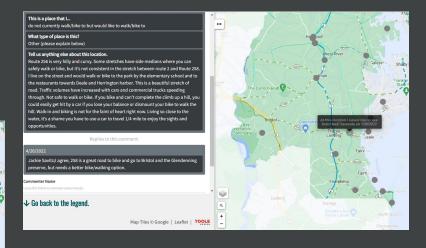


# Deale Rd/MD-256 - Deale



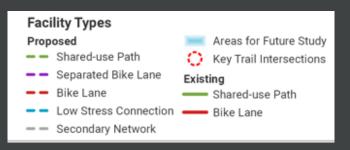
# At this location I would like to see: Mile Shay on 3/16/2022 This is a place that I od on currently wolk/bite to but would like to walk/bite to What type of place is that? One a say of this comment: Replies to this comment: Replies to this comment: Replies to this comment: ### Carnoy Shap ### Carnoy S

#### Public comments



#### Plan recommendations





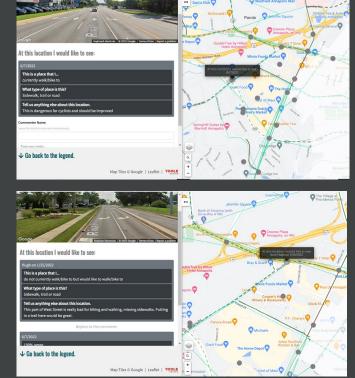


#### Riva Rd –Parole

#### Public comments







#### Plan recommendations





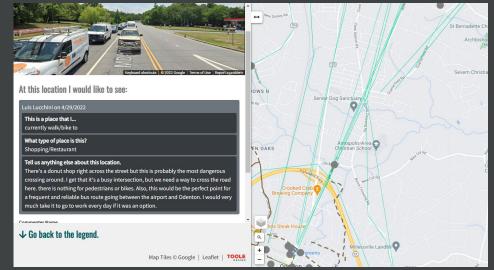




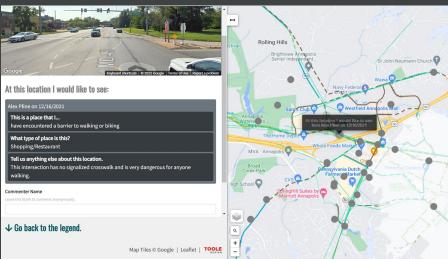
# Pedestrian and Bicyclist Crossings

 Countywide pedestrian crossing improvement recommendations:

- Pedestrian hybrid beacons
- Pedestrian refuge islands
- Leading pedestrian intervals
- Raised intersections
- Redesign or removal of slip lanes

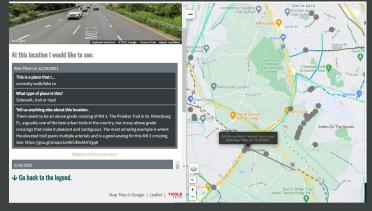






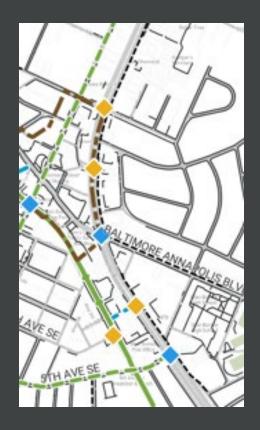
# Pedestrian and Bicyclist Crossings

#### Public comment





TOOLE たららん WALK&ROLL ANNE ARUNDEL! Plan recommendations: Rt 2 & MD 648 in Glen Burnie Town Center



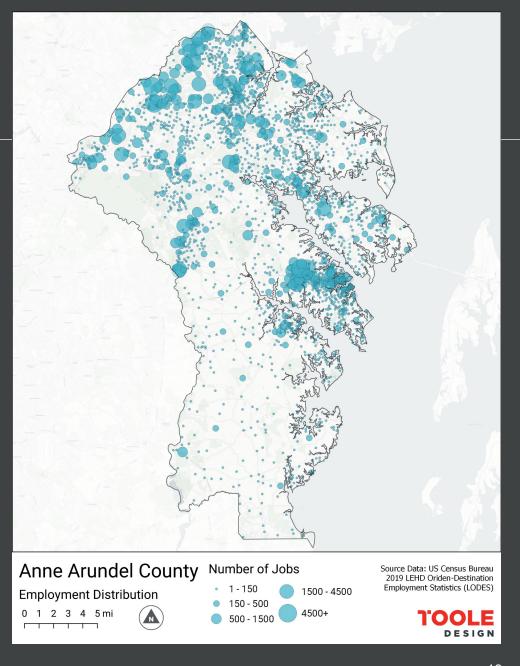


# **Building the Network**

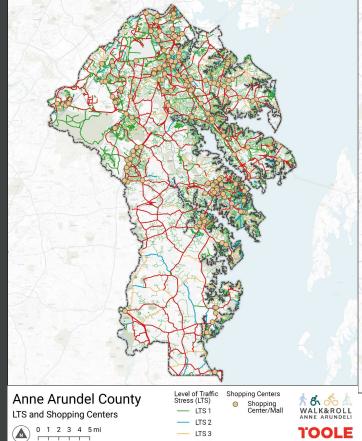
Public comments

- Crash analysis
- Access to destinations (jobs/shopping centers, schools, transit, health care, libraries, parks, residences)
- Vulnerable people (e.g., seniors, people with lower incomes, households without a car)
- Connectivity to walking & bicycling infrastructure
- Previous transportation or comprehensive plans and studies
- Cost and feasibility



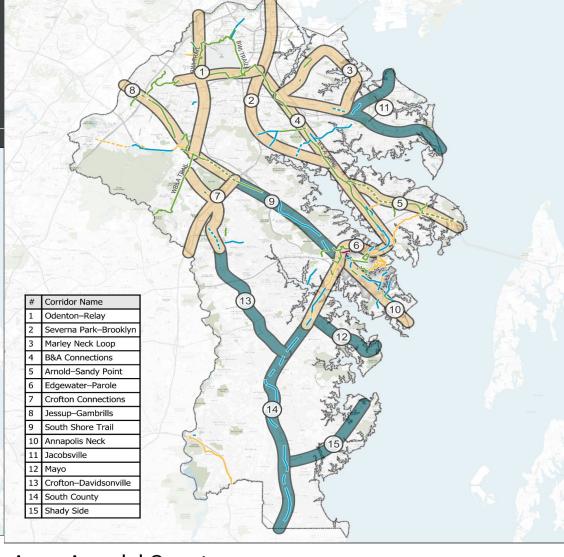


## **Priority Improvement** Areas



\_\_\_\_ LTS 3

\_\_\_ LTS 4



#### **Anne Arundel County**

#### Bike Network Vision







Existing

In Design/Construction ---- Shared Use Path

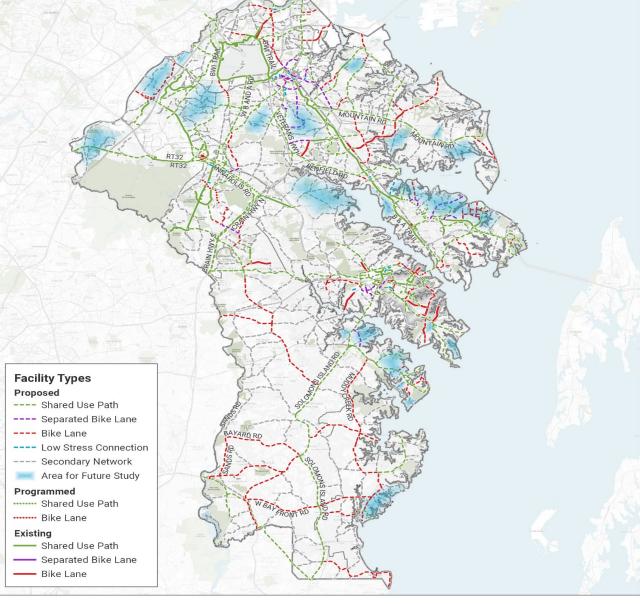
---- Separated BL

---- Bike Lane ---- Sharrow/Shoulder

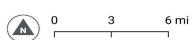
# Proposed Bicycle/ SUP Network

#### **Facility Mileage**

	Existing	Programmed	Proposed	Total
Bike Lanes	26.9	4.0	130.4	161.3
Protected Bike Lanes	0.5	-	22.4	22.9
Shared-use Paths	55.2	10.9	248.5	314.6
Low Stress Connections	-	-	3.6	3.6



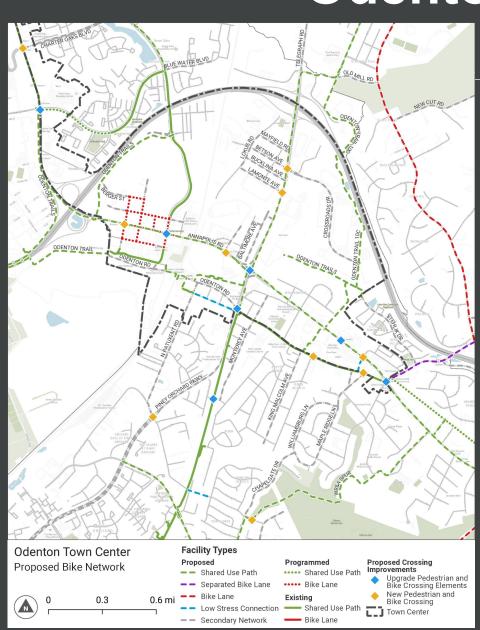
#### Anne Arundel County Proposed Bike Network

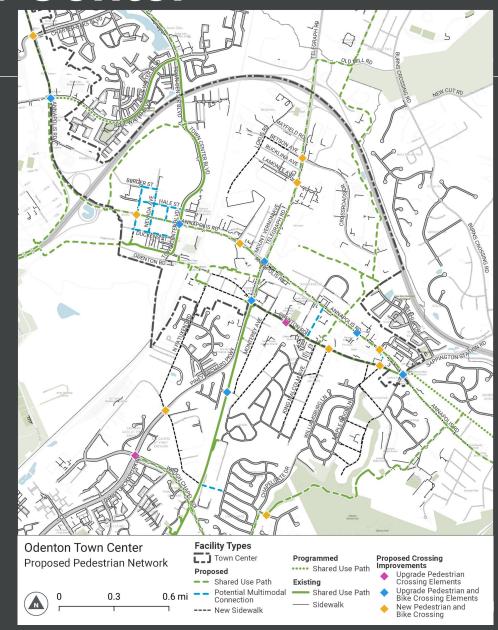




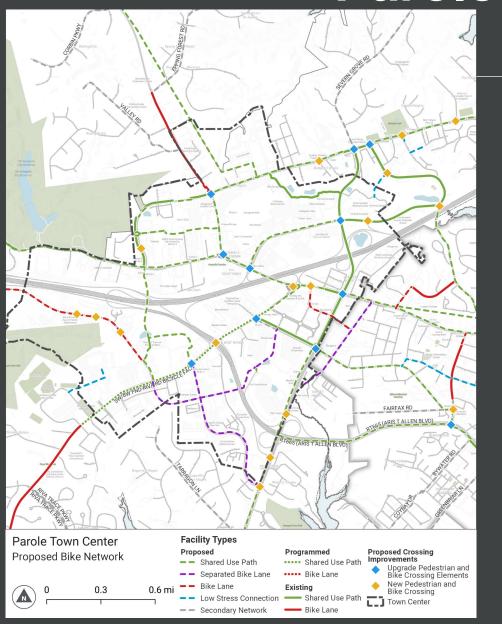


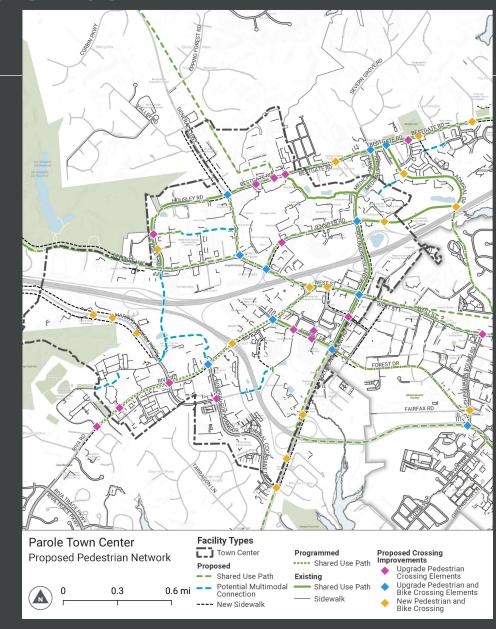
#### **Odenton Town Center**



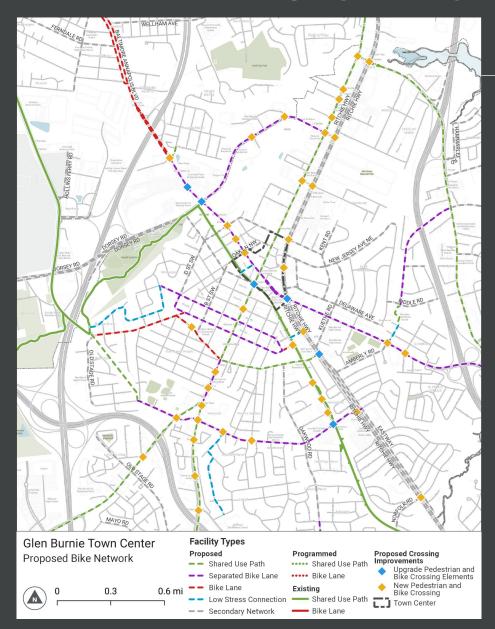


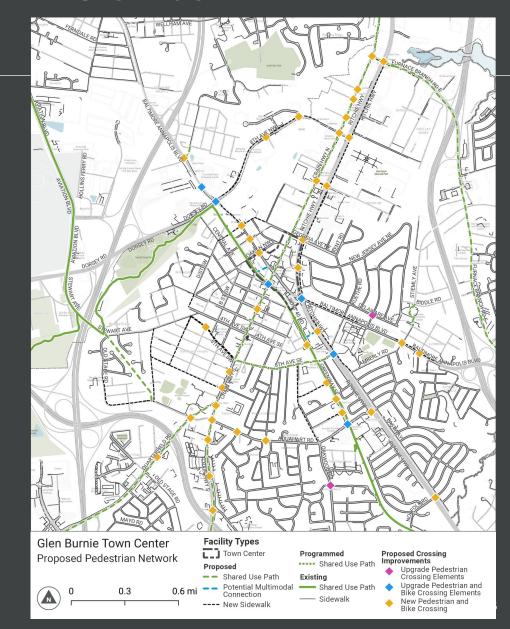
#### **Parole Town Center**





#### Glen Burnie Town Center



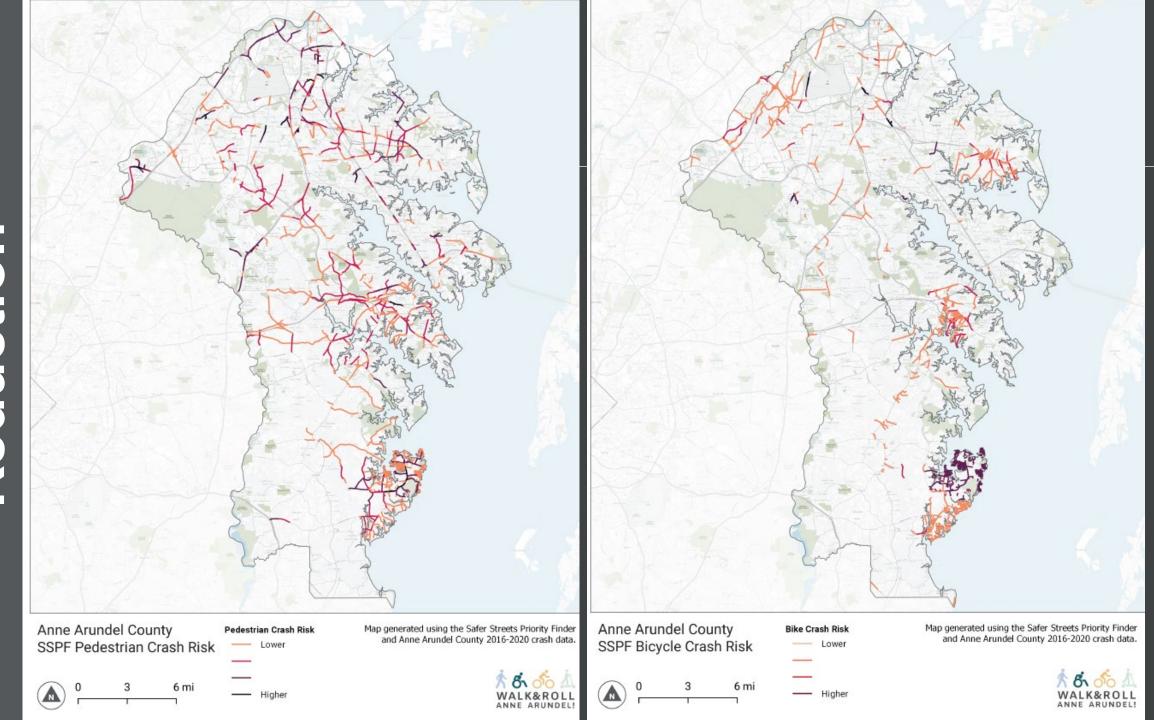




# **The 4 Criteria**

Factor	Description	Weight
Potential demand	Promotes bikeways within areas of high employment, destination, and population density	25%
Connectivity	Prioritizes projects that connect to existing bikeways or transit stops	25%
Safety	Prioritizes projects in areas with high crash risk rate	25%
Equity	Promotes bikeways within areas where people are more likely to rely on them to meet transportation needs	25%

# Safety and Crash Reduction



# Incorporating Equity

- Vulnerable Populations Index (VPI): score generated by weighing 7 determinants of transportation vulnerability equally:
  - 1. Poverty

- 2. People of Color (i.e., non-white, non-Hispanic)
- 3. Hispanic

- 4. Limited English Proficiency
- 5. Disabled
- 6. Elderly
- 7. Carless



# Regional Planning Areas (RPA)

- The network is organized by the nine Regional Planning Areas established by Plan2040.
- For each RPA:
  - Map of the proposed bike network
  - Priority projects with facility type and cost estimate

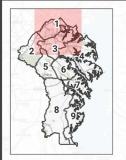


# For example: RPA 1

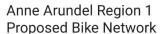
Street Name	Facility Type	Start	End	Estimated Cost
Ritchie Hwy	Shared-use Path	Northern County Line	MD 3 (Crain Hwy)	\$18,980,762
8th Ave NW	Separated Bike Lane	8th Ave NE, MD 3 (Crain Hwy N)	MD 648 (Baltimore Annapolis Blvd)	\$557,025
MD 648 (Baltimore Annapolis Blvd)	Separated Bike Lane	Nursery Rd	MD 177 (Mountain Rd)	\$3,619,476
Belle Grove Rd (Baybrook Connector)	Shared-use Path	Gibbons Ave	Potee St, S Hanover St, Jack St Intersection	\$963,226
MD 713 (Ridge Rd) and New Ridge Rd	Shared-use Path	MD 175 (Annapolis Rd) & Ridge Rd	Stoney Run Rd & Ridge Rd	\$12,400,000
WB & A Rd	Shared-use Path	BWI Trail	Old Mill Rd	\$8,423,415
Ridge Rd	Shared-use Path	New Ridge Rd	Teague Rd	\$3,400,000
Church St	Bike Lane	Ritchie Hwy	County Line	\$439,499
Rd (Baybrook Connector)  MD 713 (Ridge Rd) and New Ridge Rd  WB & A Rd  Ridge Rd  Church St	Shared-use Path  Shared-use Path  Shared-use Path  Shared-use Path  Bike Lane	MD 175 (Annapolis Rd) & Ridge Rd  BWI Trail  New Ridge Rd  Ritchie Hwy	Hanover St, Jack St Intersection  Stoney Run Rd & Ridge Rd  Old Mill Rd  Teague Rd	\$12,400,000 \$8,423,415 \$3,400,000 \$439,499

<sup>\*</sup>Projects are not in order of priority and need further study by the County











#### **Facility Types**







Shared-use Path

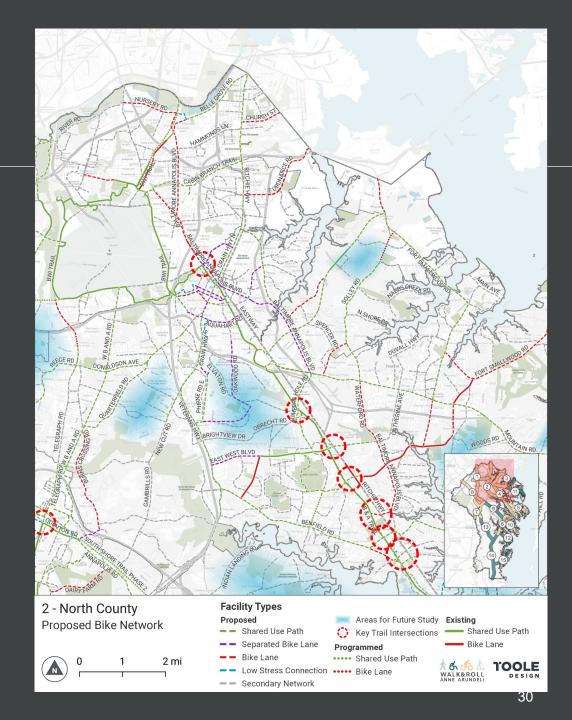




# North County – Brooklyn Park to Glen Burnie

- Shared use paths:
  - o Belle Grove Rd

- Gov. Ritchie Hwy (Route 2)
- Crain Hwy (Route 3)
- E Ordnance Rd
- New multi-use trail following Cabin Branch
- Bicycle lanes:
  - Nursery Rd
  - Baltimore Annapolis Blvd
  - Andover Rd
  - Church St
  - North Broadview Blvd



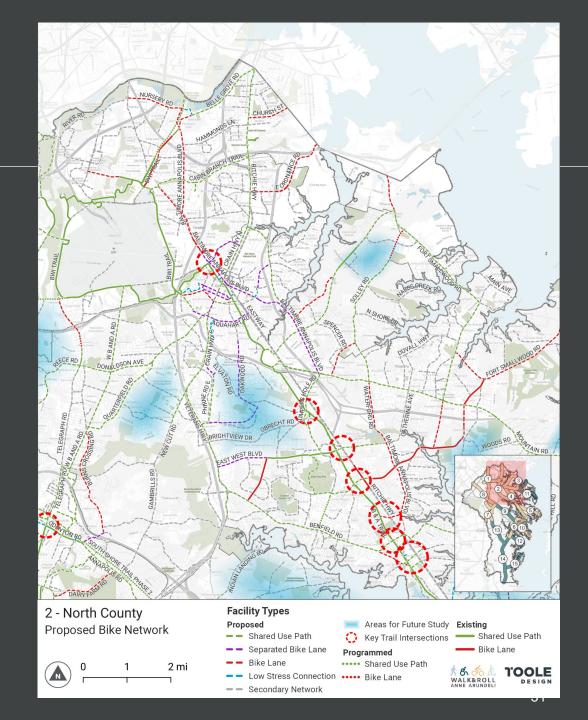
# North County – Southern Portion

#### Shared use paths:

- Route 3 (Crain Hwy/New Cut Rd)
- Quarterfield Rd
- Marley Station Rd

- Veterans Hwy
- Jumpers Hole Rd
- Earleigh Heights Connector
- Benfield Blvd
- New Old Mill Schools Trail
- Bidirectional cycle tracks on the following roadways:
  - Old Mill Rd/Blvd
  - Oakwood Rd
  - East West Blvd





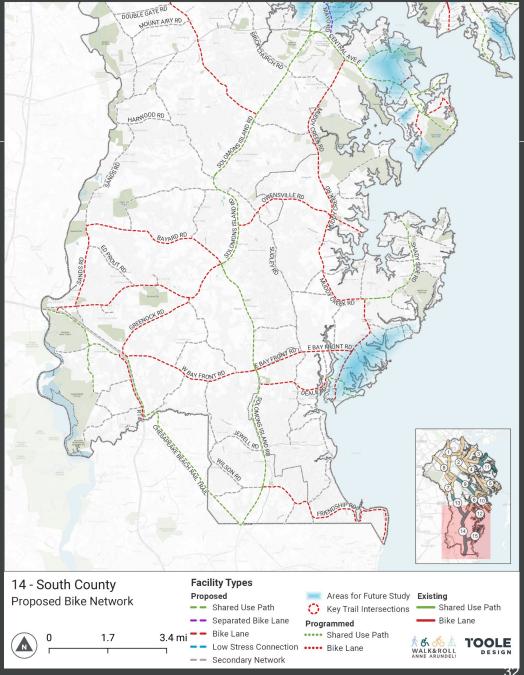
# South County

Buffered bicycle lanes on the following roads, or segments of those roads:

- Owensville Rd
- Central Ave
- Bayard Rd
- Sands Rd
- Mount Zion Marlboro Rd
- Greenock Rd
- Wrighton Rd
- Plummer Ln
- Maryland 4 Service Rd
- Pindell Rd
- Southern Maryland Blvd
- Muddy Creek Rd
- Walnut Ave
- Fairhaven Rd
- Friendship Rd

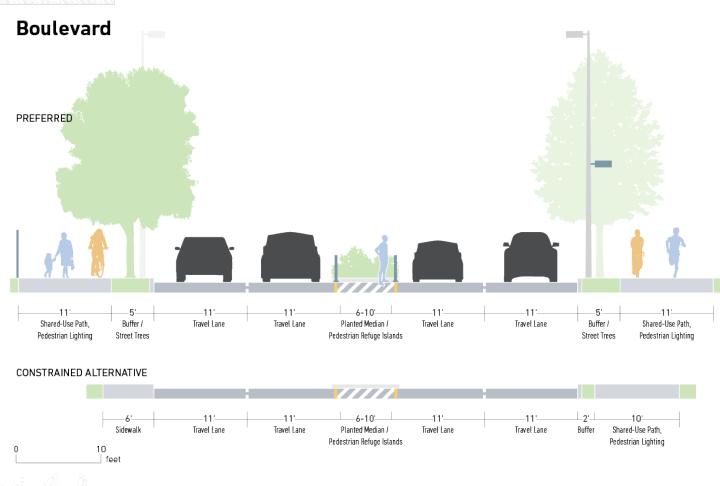
A shared use path on Solomons Island Rd







# Street Design – Boulevard







# Policy Recommendations

- Increase funding for pedestrian and bicycle infrastructure
- Coordinate with the state to compete for federal and state funding
- Update County design standards

- Sidewalks and bicycle infrastructure
- Revised Complete Streets guidelines
- Development and frontage zone requirements
- Improve access for people with disabilities
- Improve safety for students to walk and bike to school



#### Performance Measures

- To track progress on the development of the active transportation network
- 13 performance measures for:
  - Connectivity and Access

- Equity
- Safety
- Strategic Growth and Mode Shift
- Investment



Table 14: Plan Performance Measures.

Table 14: Plan Performance Measures.						
Category Performance Measure						
Connectivity	One bicycle and one pedestrian capital project per year is constructed for smaller jurisdictions (population 30,000 or less) and two of each project type is constructed for larger jurisdictions (population 30,000 or more).					
and Access	The mileage of new shared-use paths, separated bicycle facilities, standard bicycle lanes, sidewalks, trails, and sidewalks increases 5% each year.					
	By 2040, 75% of residents live within ¼ mile of protected walking and bicycling facilities.					
Familia	One bicycle capital project and one pedestrian capital project per year is constructed in Vulnerable Population Areas.					
Equity	By 2040, 75% of residents in Vulnerable Population Areas live within ¼ mile of protected walking and bicycling facilities.					
	By 2030, decrease fatal and serious injury crashes for all road users by 50%*.					
	Increase the percentage of existing walking and bicycling facilities in good condition by 2.5% per year.					
Safety	By 2040 provide sidewalks to 85% of County schools and provide separated bicycle infrastructure to 65% of County schools. Safe walking and bicycling routes should be constructed within a 1-mile radius of elementary schools and a 1.5-mile radius of middle and high schools.					
	By 2050, 50% of the County's population will be able to reach the County's Targeted Development, Redevelopment and Revitalization Areas within 30 minutes by foot, bicycle, or transit using protected pedestrian or bicycle facilities.					
Strategic Growth and Mode Shift	By 2050, 75% of County residents will be able to access at least three destinations that serve daily needs (such as schools, grocery stores, health care facilities, or transit stops) within a two mile bicycle ride or 1 mile walk.					
	By 2050, the number of trips made by walking, bicycling,					

