

Goldsboro Road Pedestrian and Bicycle Improvements Study – Facility Planning Phase I

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Description

Staff will brief the Planning Board on the Project Prospectus for the Goldsboro Road Pedestrian and Bicycle Improvements project and solicit your comments, which will be considered in MCDOT's preparation of the final document to be submitted to the County Council.

Summary

MCDOT's Preferred Alternative (Attachment 1) includes bike lanes along Goldsboro Road between MacArthur Boulevard and River Road; a continuous sidewalk on the north side of the road with a landscaped buffer where space is available; a sidewalk along portions of the south side of the road to facilitate access to bus stops; and additional crossing improvements such as pedestrian medians and crosswalks.

The majority of public comments received are in favor of this project.

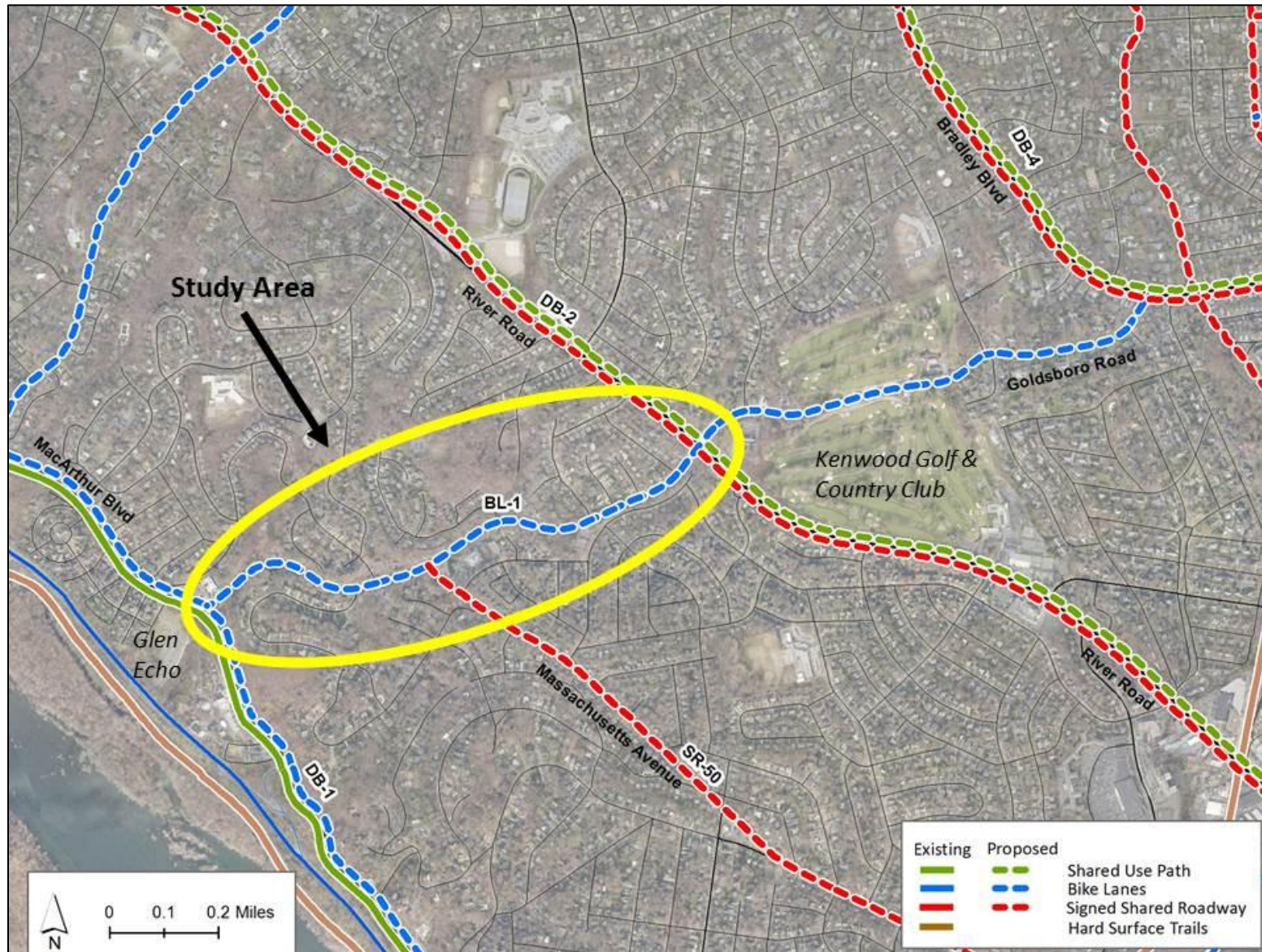
We believe that MCDOT has adequately addressed the issues raised by staff and we support the Preferred Alternative with the comments recommended below.

Recommendations

1. The Goldsboro Road Bicycle and Pedestrian Improvements Study should proceed to Phase II of the facility planning process to develop a detailed design for the completion of the Preferred Alternative (#2).
2. MCDOT should conduct a future facility planning study to further evaluate ways to reconfigure the intersection of MacArthur Boulevard and Goldsboro Road to simplify pedestrian and bicycle crossing movements and improve the operation and safety for all intersection users.

Previous Planning Board Actions: None

Figure 1: Study Area



Background

The project study area (Figure 1) includes approximately one mile of Goldsboro Road, between MacArthur Boulevard and River Road. Goldsboro Road is a two-lane road with a posted speed limit of 35 mph. It is classified as an arterial road Between MacArthur Boulevard and Massachusetts Avenue, with an average daily traffic (ADT) of approximately 11,500 vehicles, and as a major highway between Massachusetts Avenue and River Road, with an average daily traffic (ADT) of approximately 16,500 vehicles.

The study area is approximately one and a half miles west of Downtown Bethesda. Glen Echo Park is on the west end of the study area and is a major destination park that hosts many arts and cultural organizations, artist studios, a restored carousel, and numerous classes in visual and performing arts. The study area is primarily residential, with mainly single-family homes, but also some townhomes and commercial buildings.

Minnehaha Branch, a tributary to the Potomac River, runs adjacent to Goldsboro Road. It crosses Goldsboro Road in two locations.

RideOn Route 29 provides bus service along Goldsboro Road. There are 9 bus stops in the study area with around 70 boardings and 110 alightings per day. The majority of boardings and alightings occur at MacArthur Boulevard.

There are two signalized intersections on Goldsboro Road in the study area: Massachusetts Avenue and River Road. A complex traffic circle is located at the intersection with MacArthur Boulevard.

Project Description

The purpose of this project is to improve pedestrian and bicycle safety and connectivity on Goldsboro Road and to nearby public facilities, and to improve access to transit stops. Currently, Goldsboro Road has bikeable shoulders of varying width and condition that are used by some bicyclists, but there are no designated bicycle facilities. Over the entire one-mile length of the project, sidewalks exist for only about a quarter mile on the south side of Goldsboro Road at the intersection with Massachusetts Avenue.

The Phase I study conducted by MCDOT evaluated four alternatives, including a no-build alternative. Each build alternative is composed of two 11-foot-wide vehicular travel lanes, on-road bike lanes, continuous 5-foot-wide sidewalks on the north side of the road, pedestrian scale lighting, 3 to 6-foot-tall retaining walls in some locations, and culvert extensions.

- The No Build Alternative proposes no construction, leaving inadequate facilities for pedestrians and most bicyclists.
- Alternative 1 includes bike lanes on both sides of the road and 5-foot-wide sidewalks on the north side of the road directly behind the curb. Sidewalks are provided on the south side of the road in limited locations.

- Alternative 2 is the **Preferred Alternative** and is similar to Alternative 1 except that it adds a 6.5-foot-wide landscaped panel between the bike lane and the sidewalk along the north side of the road where space is available.
- Alternative 3 is similar to Alternative 2 except that it adds a consistent 6.5-foot-wide landscaped panel and a 5-foot-wide sidewalk on the south side of the road.

Stormwater management facilities will be provided to treat additional impervious area associated with the proposed sidewalk, roadway widening, and bike lane construction. Stormwater management design will incorporate the latest Maryland Stormwater Design Manual including the requirements of the Stormwater Management Act of 2007. Design strategies will focus on the use of Environmental Site Design techniques such as bio-swales, infiltration, and submerged gravel wetlands.

All build alternatives include curb and gutter on the north side of the roadway. Alternative 3 also has curb and gutter on the south side of the roadway, while Alternatives 1 and 2 leave an open section for drainage along the south side of the roadway.

Typical sections for the three alternatives are shown below.

Figure 2: Typical Section for Alternative #1

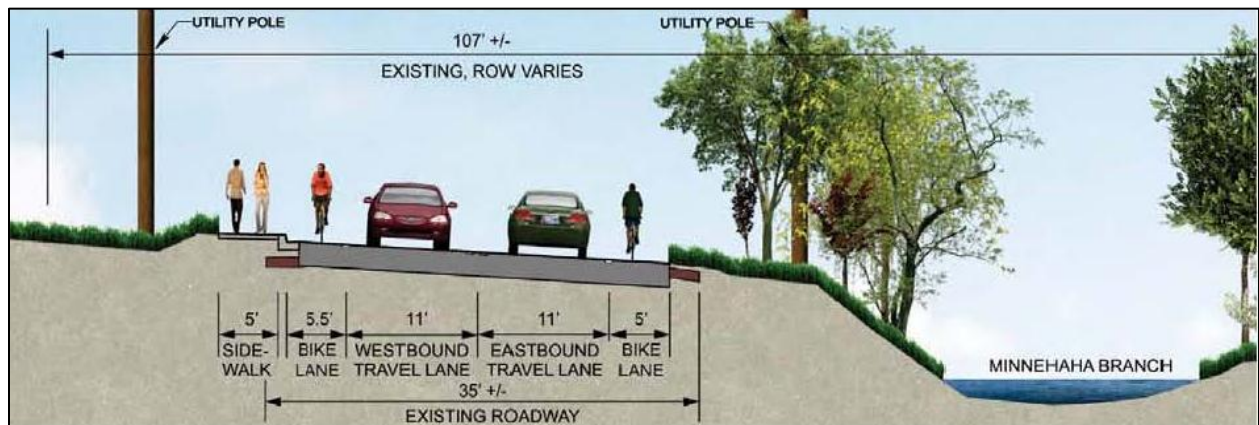
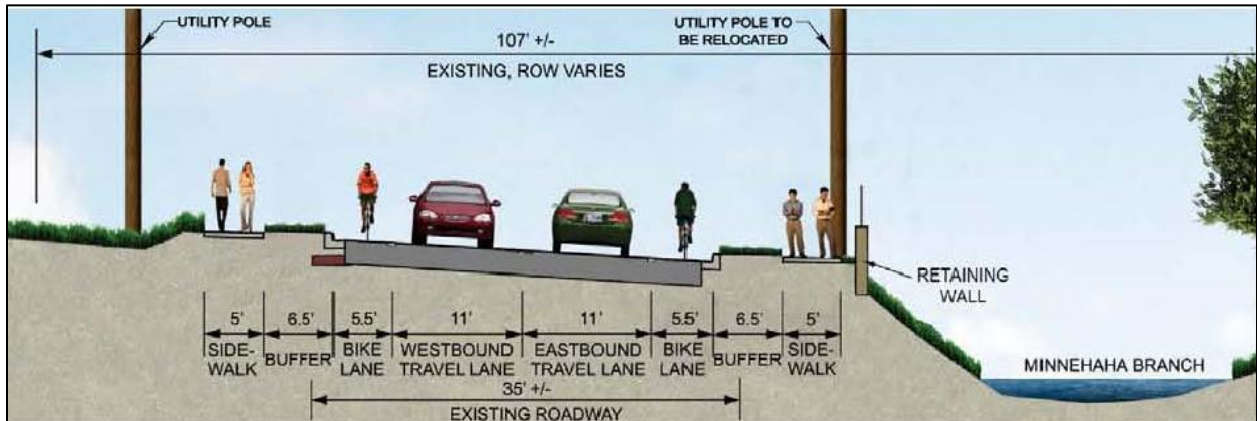


Figure 3: Typical Section for Alternative 2 (Preferred Alternative)



Figure 4: Typical Section for Alternative #3



Master Plan Consistency

The following recommendations in the 1990 Bethesda Chevy Chase Master Plan and the 2005 Countywide Bikeways Functional Master Plan should be considered in the evaluation of the Goldsboro Road Pedestrian and Bicycle Improvements Project. They are listed below and shown in Figure 1:

- The Countywide Bikeways Functional Master Plan (page 44) recommends bike lanes (BL-1) on Goldsboro Road from MacArthur Boulevard to Bradley Boulevard.
- An overarching goal of the Bethesda Chevy Chase Master Plan (page 97) is the “Expansion of the system of pedestrian paths and bikeways to link residential areas with public facilities, commercial areas, and transit services.”
- The Bethesda Chevy Chase Master Plan (page 102) also “endorses the expansion of pedestrian paths and bikeways to form a network linking residential neighborhoods with public facilities.” Further, the plan recommends (page 103) “that pedestrian safety improvements be supported and expanded along major highways and arterials.”

The No Build Alternative is not consistent with these Master Plan recommendations. The build alternatives are all consistent with the master plan. MCDOT selected Alternative 2 as the Preferred Alternative because it accomplishes the project objectives while minimizing impacts. While Alternative 1 has the least impacts, those impacts are only slightly less than the impacts of Alternative 2 and were deemed to be not significant. Alternative 3 provides the best pedestrian accommodation but has the greatest environmental impacts.

Staff Analysis

We concur with MCDOT’s evaluation of the Goldsboro Road study area, which found that there is a need for better pedestrian and bicycle safety and connectivity, and with their selection of Alternative 2 as the Preferred Alternative.

Bicycle Planning Guidance

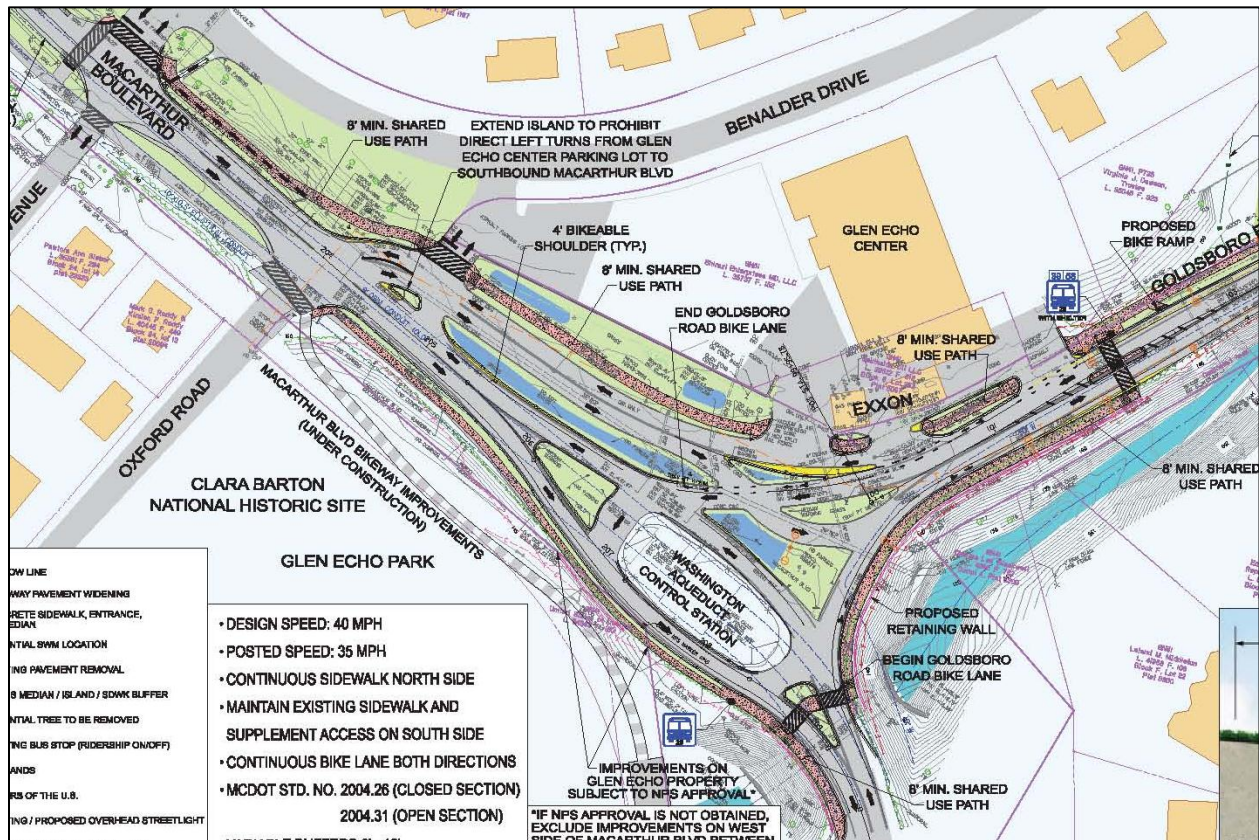
The Bicycle Planning Guidance that the Planning Board reviewed on September 4, 2014 includes two graphs to identify the types of bicycle facilities that are most appropriate under different traffic speed and traffic volume conditions: one graph for “Confident Cyclists” and another for the “Interested but Concerned” population (Attachment 2)¹. Since the posted speed limit on Goldsboro Road is 35 mph; the average daily traffic (ADT) is approximately 11,500 between MacArthur Boulevard and Massachusetts Avenue and is 16,500 between Massachusetts Avenue and River Road, bike lanes are sufficient to address the needs of the “Confident Cyclist” population, but are likely insufficient to meet the needs of the “Interested but Concerned” population, who would prefer a physically separated bicycle facility, such as a cycle track or a shared use path, to ride comfortably on Goldsboro Road. However, either facility type would require additional paved areas and will increase the environmental impacts adjacent to a tributary.

MacArthur Boulevard / Goldsboro Road Intersection

The intersection of MacArthur Boulevard and Goldsboro Road has an unconventional design that functions somewhat like a traffic circle due to the presence of the Washington Aqueduct Control Station, located in the middle of the intersection. The project team evaluated several options for reconfiguring the intersection to simplify pedestrian and bicycle crossing movements, while improving the operation and safety of all intersection users. All of the options were deemed infeasible because each would have routed traffic on top of the existing aqueduct in areas that could be damaged by heavy truck traffic. To accommodate pedestrian and bicycle transitions between Goldsboro Road and MacArthur Boulevard, shared use paths are provided on both sides of Goldsboro Road and connect to crosswalks at MacArthur Boulevard (see Figure 5). This is not ideal, but the constraints at the intersection are beyond the scope of this study to address.

¹ “Confident Cyclists” represent about 10% of the population. They are comfortable bicycling on some roadways, but prefer bicycle facilities separated from traffic, especially on higher speed roads. “Interested but Concerned” bicyclists represent over 50% of the population. They like to ride bicycles, but do not ride regularly due to safety concerns. They will not ride on higher volume and higher speed roads such as arterials, without separated bicycle facilities.

Figure 5: MacArthur Boulevard / Goldsboro Road Intersection



Benefits of Preferred Alternative

The Preferred Alternative addresses the need for continuous bicycle facilities on both sides of Goldsboro Road as well as continuous sidewalks on the north side of the road. While there are not continuous sidewalks along the south side of the road, the Preferred Alternative does provide sidewalks for much of the alignment. Furthermore, there are eight crossing opportunities – and all but one have a pedestrian refuge – to facilitate access to transit stops and to residences on the south side of the road. These facilities would increase pedestrian and bicyclist comfort and accommodation, serve bus stops and local destinations and community facilities, and enhance connections to the Bethesda CBD, Glen Echo Park, and the MacArthur Boulevard shared use path.

Existing and proposed bikeways in the vicinity of the study include:

- MacArthur Boulevard is recommended to have a Dual Bikeway (DB-1), including an existing shared use path and a proposed bike lanes.
- River Road is recommended to have a Dual Bikeway (DB-2), including a proposed shared use path and a proposed signed shared roadway.
- Massachusetts Avenue is recommended to have a signed shared roadway (SR-50).
- Bradley Boulevard is recommended to have a Dual Bikeway (DB-4), including a shared use path and a signed shared roadway, but is proceeding through Facility Planning Phase II as an 8-foot-

wide shared use path and bike lanes with the concurrence of the Council and the Planning Board.

When fully implemented, these bikeways will comprise a robust network that enables cyclists of various abilities to access local and regional destinations.

The Preferred Alternative includes potential stormwater management in various locations along the corridor, which could include bio-swales, infiltration, and submerged gravel watersheds.

Impacts of Preferred Alternative

The Project Prospectus identifies environmental impacts of the Preferred Alternative. These preliminary assessments will be refined in Phase II when a Natural Resources Inventory/Forest Stand Delineation (NRI/FSD) is performed and more facility design details are developed. The environmental impacts identified in the Prospectus include 32 specimen trees (>24" dbh) and 0.02 acres of wetlands, and 0.8 acres of forest.

The Project Prospectus states the Preferred Alternative will impact approximately 5 properties and will require approximately 0.02 acres of right-of-way acquisition. Temporary construction and grading easements will be required from an additional 4 properties for a total of approximately 0.20 acres. There are no displacements.

According to the United States Fish and Wildlife Service, "Except for occasional transit individuals, no federally proposed or listed endangered or threatened species are known to exist within the project impact areas."

Recommendations

MCDOT adequately addressed most of the comments that Planning staff made during the course of the Facility Planning Phase I study. Therefore, we do not have any additional recommendations for improving the study. However, we do believe that a future facility planning study is needed to further evaluate the unconventional intersection of MacArthur Boulevard and Goldsboro Road.

Community Outreach

A public meeting was held for this project on December 4, 2013. The purpose of this meeting was to discuss the project alternatives and to receive community input and answer questions. As of April 30, 2014, 66 comments have been received. Of those, 62 support the project and 4 oppose / disagree with the project. Several of the comments expressed a preference for an alternative: 4 for Alternative 1, 8 for Alternative 2, and 6 for Alternative 3. In addition, newsletters were distributed to 616 addresses in November 2013 and to 661 addresses in August 2014.

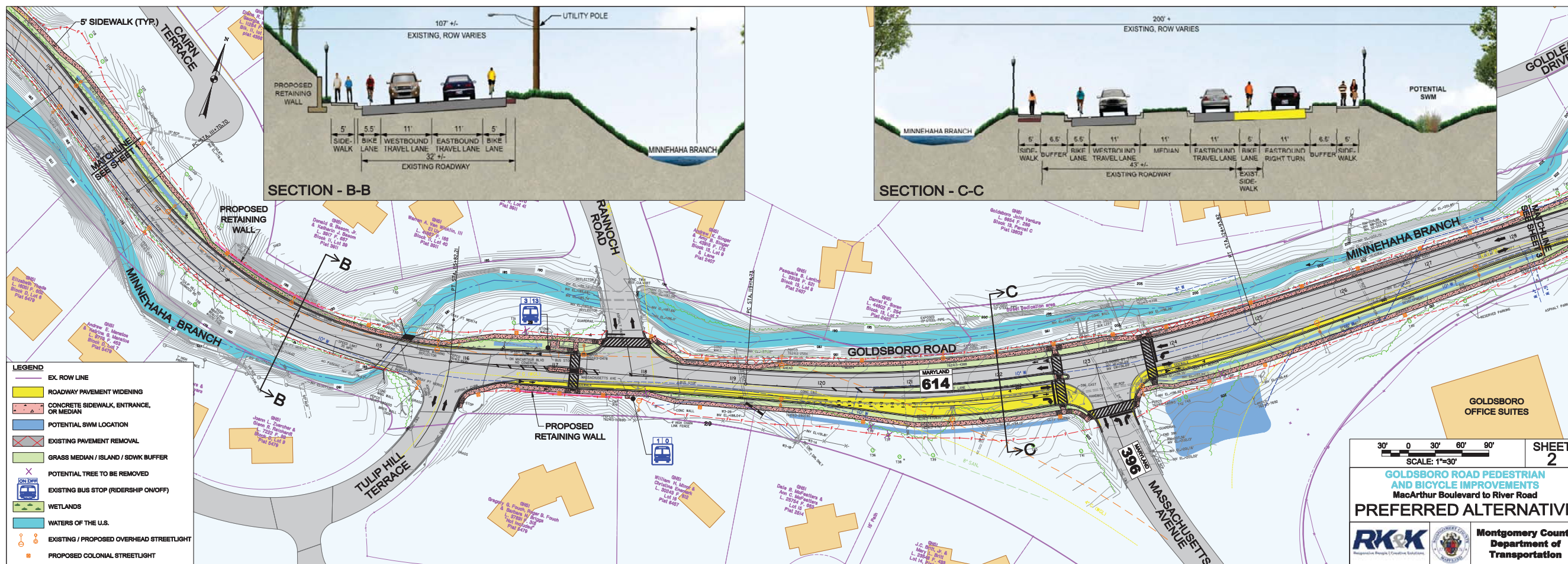
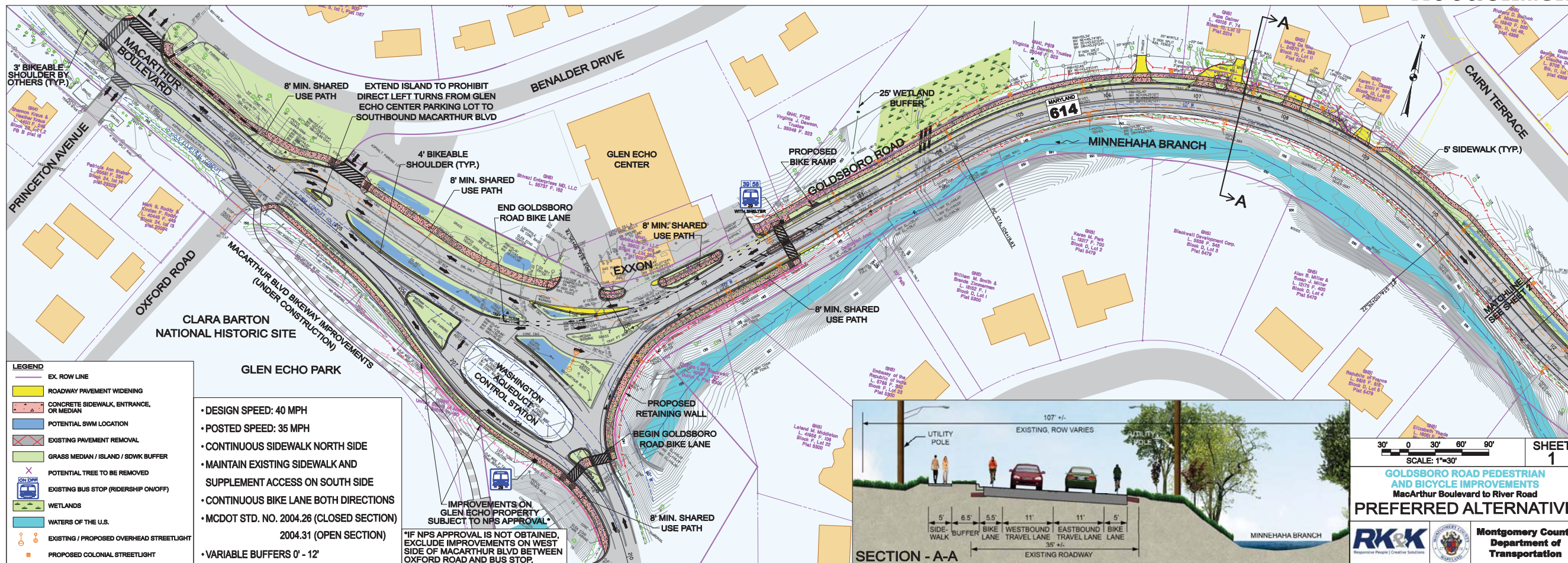


FIGURE 3
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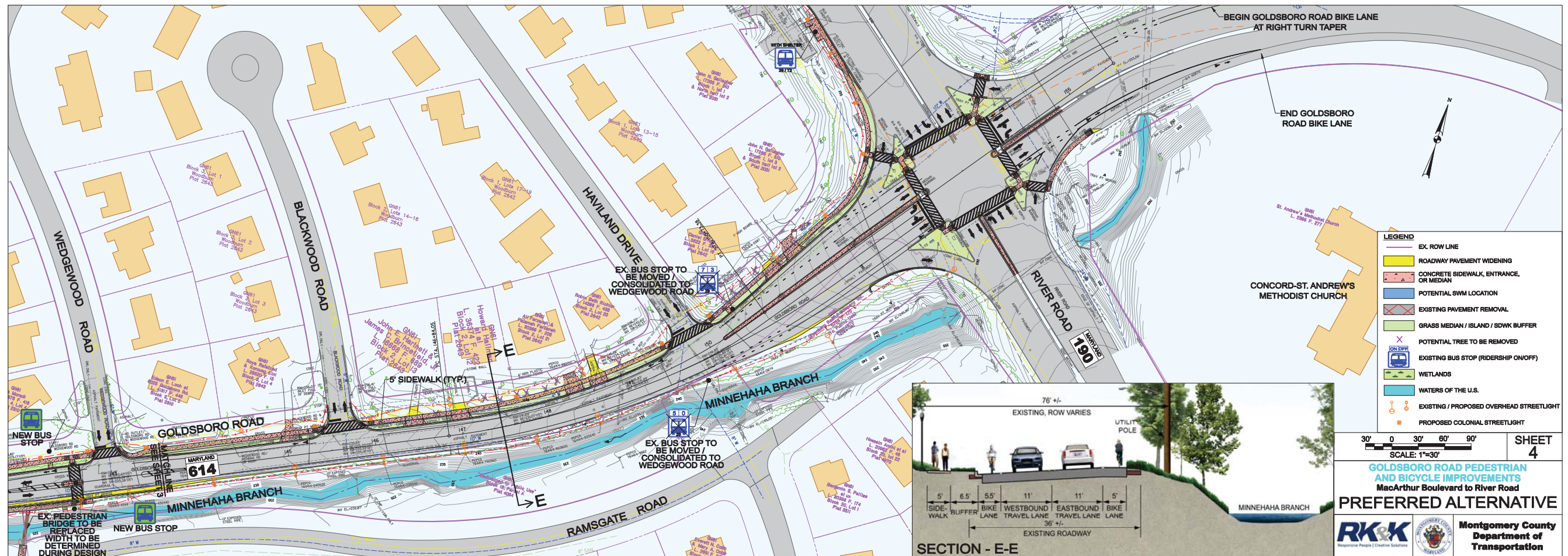
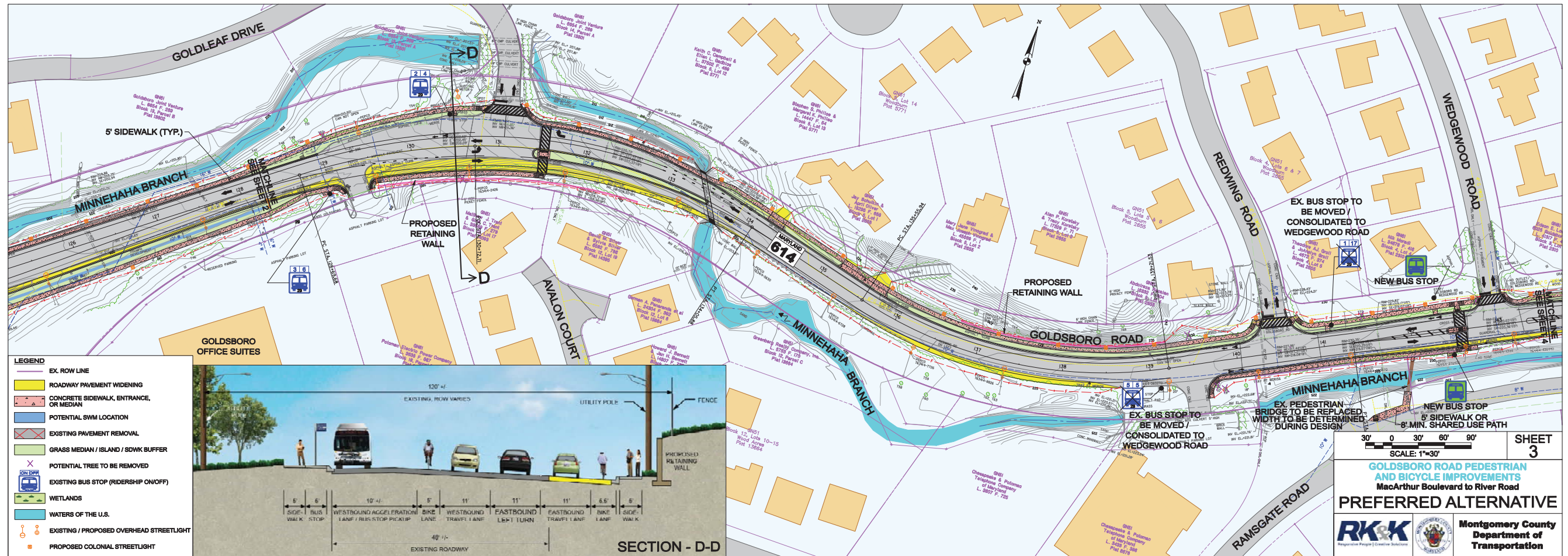


FIGURE 3
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DESIGNING FOR THE INTERESTED BUT CONCERNED

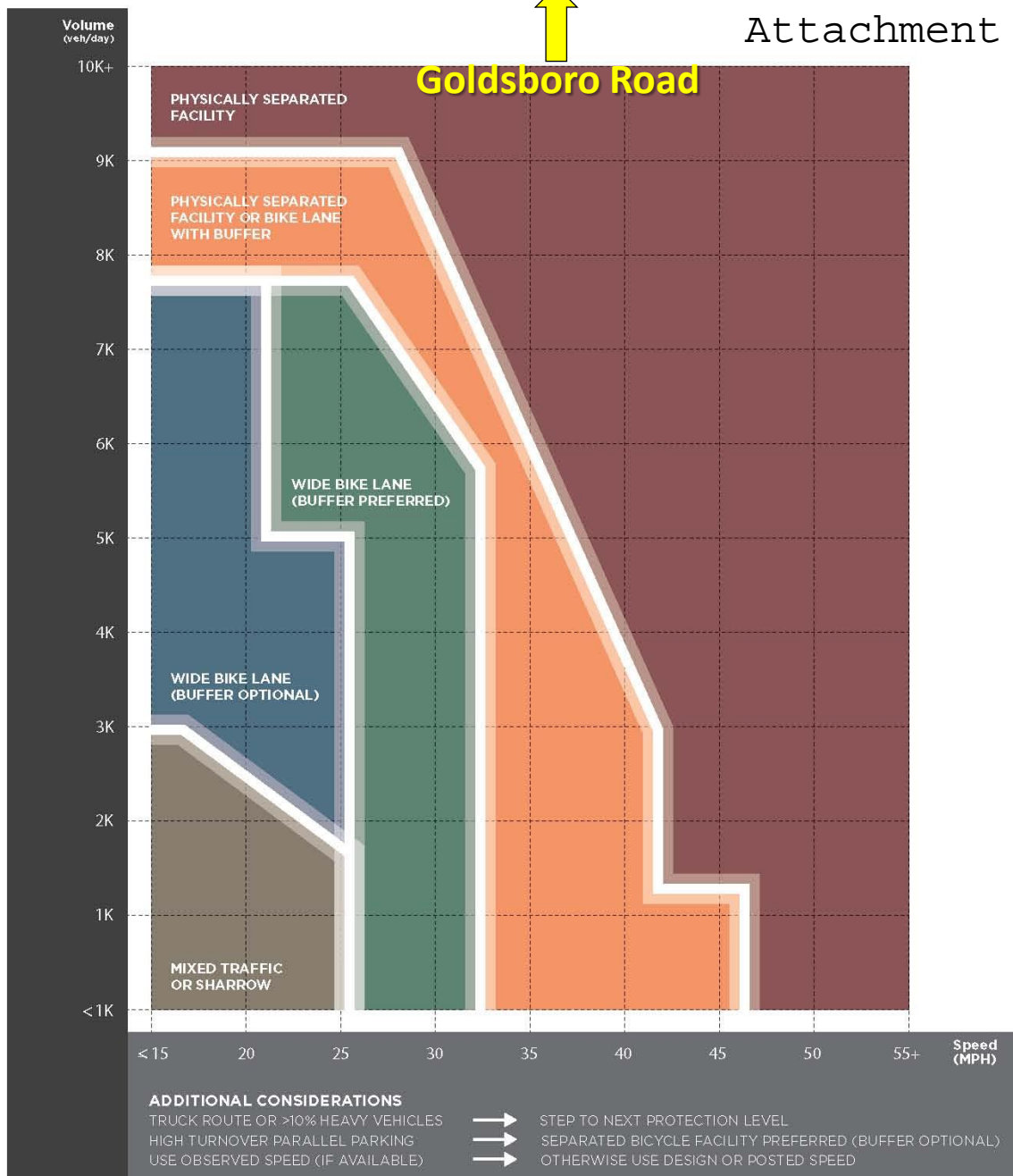
The "interested but concerned" population requires additional levels of separation at lower traffic volumes and speeds than have traditionally been provided. The chart at the right helps the planner identify what types of facilities are appropriate in different speeds and traffic volumes.

Traffic volumes (on the y-axis) are daily volumes, and traffic speed (on the x-axis) is actual (e.g. 85th percentile). In the absence of observed speed data, design or posted speeds may be used.



Goldsboro Road

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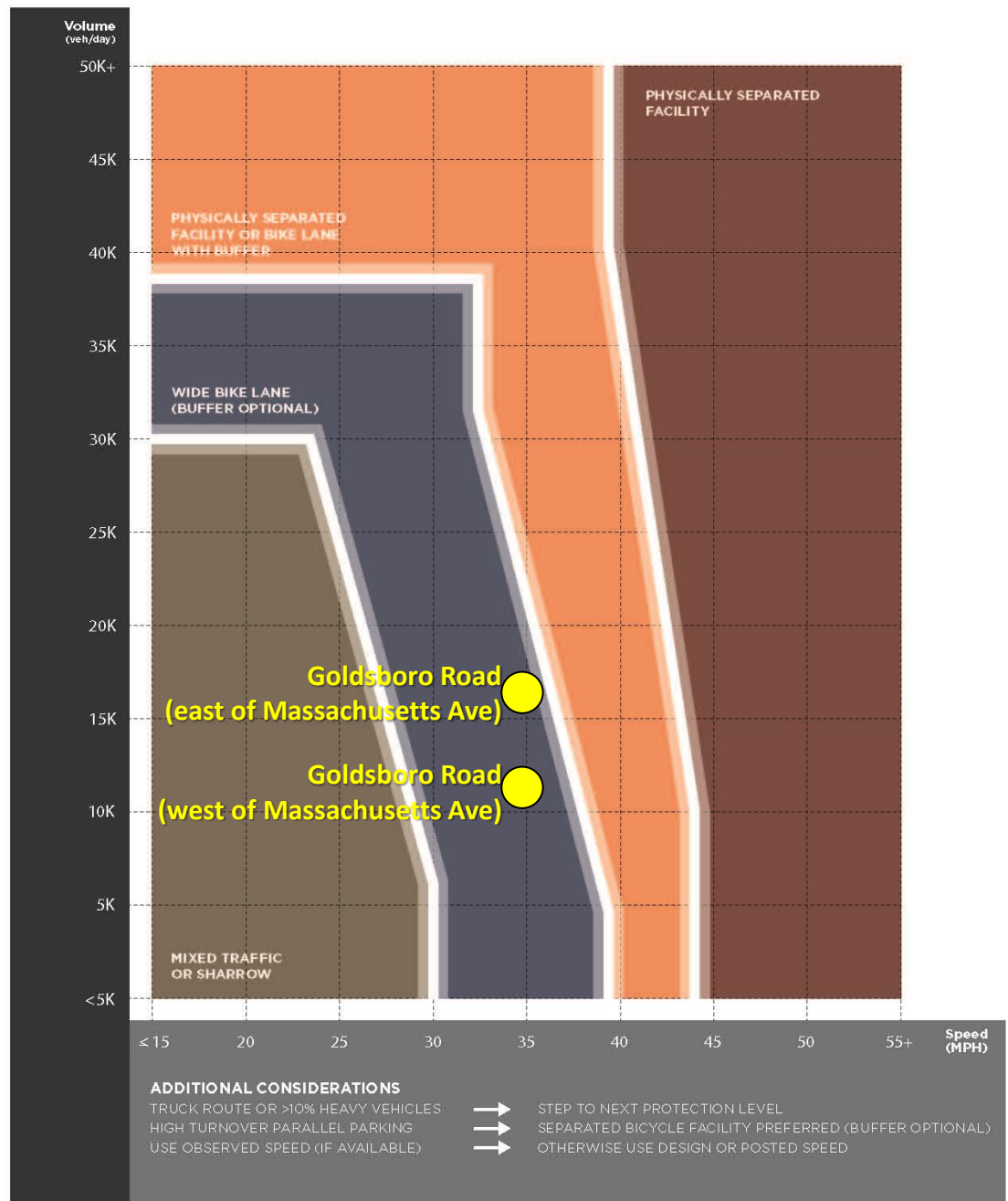
Note: a physically separated facility is a cycle track or a shared use path

FIGURE 5 | PRE-SELECTION FOR INTERESTED BUT CONCERNED

DESIGNING FOR CONFIDENT CYCLISTS

Confident cyclists generally require less physical separation from traffic than the general population. They are comfortable riding in roads where the traffic operates at higher volumes and speeds, so planning for confident cyclists usually requires less dedicated space within the roadway.

As with the "Interested but Concerned" chart, the Confident Cyclists facility selection tool (at right) is based on daily vehicle volume (y-axis) and observed vehicle speed (x-axis).



Note: a physically separated facility is a cycle track or a shared use path

FIGURE 6 | PRE-SELECTION FOR CONFIDENT CYCLISTS