

Amendment 2 to Council Resolution No. 48-2018

**BY: Chairperson at the request
of the County Executive and
cosponsored by Jennifer Terrasa**

**Legislative Day No. 5
Date: May 7, 2018**

Amendment No. 2

(This amendment adds a section to the Plan that addresses Bus Stops and Accessibility.)

- 1 In the Central Maryland Transit Development Plan, attached to the Resolution as filed, after page
- 2 6-140, insert pages 6-141, 6-142 and 6-143 as attached to this Amendment.

Bus Stops and Accessibility

Bus stops are an essential part of the transit infrastructure. This plan calls for improvements in bus stops across the region as an additional investment priority over the next five years. A critical element in the success of transit in the region is the bus stop, which is the location where the customer first encounters the transit network. However, the concern is not just the stop itself, but the need to provide for a safe, accessible pathway to reach the stop. Recent research has documented that stop improvements including sidewalks, ADA improvements, shelters, seating and signage increases fixed-route ridership from the area served by the stop and reduces the demand for paratransit services. A recently completed study in Utah found that improved bus stops saw ridership increases that were higher than increases in control group stops, while also experiencing ADA paratransit demand increases that were lower than at control group stop areas¹. Improved stops make the existence of the transit system more visible and increase the likelihood that more trips will be made on the fixed-route system.

With limited public resources, one of the major challenges in implementing a bus stop improvement program is deciding what and where to focus those limited resources. Therefore, being able to leverage existing data sources to prioritize bus stop locations where safety and accessibility improvements will have the greatest impacts is important. Transit systems vary in the factors used in prioritizing bus stop placement and improvements, but in general the following factors (however measured) are used:

- **Safety:** Stop location is a key factor, whether it is located at the near side (of the intersection), far side, or mid-block; its proximity to safe pedestrian crossings, visibility to motorists (whether located in a blind spot, due to a curve, rise, or obscured by a structure or landscaping); and design aspects such as presence of a curb, the amount of setback, lighting, etc. are all safety factors to be considered both in prioritization and in the design of each bus stop. Accident and enforcement statistics should also be used to identify and prioritize changes to improve safety.
- **Usage:** stops with higher usage would likely have higher priority, after safety factors have been addressed.
- **Transfer points:** locations used by more than one route or carrier are likely to need a larger stop with amenities such as benches and shelters because of the likelihood of passengers with longer wait times between buses.
- **Key public facilities or population concentrations:** stops with a higher level of amenities and accessibility would be a priority at public facilities such as schools, senior centers, libraries, public buildings, colleges, hospitals or medical facilities. Some systems also prioritize stops at large apartment or higher-density residential developments, senior residential communities, or mobile home parks.

¹ Ja Young Kim, Keith Bartholomew, and Reid Ewing, Impacts of Bus Stop Improvements, University of Utah, Department of City and Metropolitan Planning, for the Utah Department of Transportation, Research Division, Report UT-18.04, March 2018.

- **Americans with Disability Act design requirements:** Bus stop locations must have adequate sidewalk connections and roadway crossing amenities, such as marked crosswalks, median islands, curb ramps, and/or pedestrian signals. The design of the bus stop itself needs to meet requirements calling for an unobstructed concrete landing pad that is 5 feet wide (parallel to the roadway) by 8 feet deep (perpendicular to the roadway), connected to sidewalks and streets by an accessible path, with the slope of the pad parallel to the roadway the same as the roadway, and a cross-slope not exceeding 1:50 (2%)². A related consideration is that the location of bus stops (whether relocation of an existing stop or placement of new stops) should be cognizant of the impact on the ADA complementary paratransit eligibility area, which is the area 0.75 miles mile on either side of a fixed-route. Moving a stop may inadvertently cut off ADA eligibility from persons who are currently ADA certified, or from a key destination such as a clinic or elderly housing facility.

Other factors to be considered in prioritizing bus stop placement and improvement investments include public input, user characteristics (for example benches where the riding population is more likely to be elderly). Many transit systems with ongoing bus stop improvement programs develop these factors into a score and categorize stops based on the scoring system.

Howard County

There are approximately 490 RTA bus stops in Howard County of which approximately 50 have shelters. Many of the bus stops were installed twenty plus years ago and are simply “poles in the ground”. Many lack basic amenities such as a concrete pad where passengers can stand, a bench, trash can, or adequate lighting. Many are not connected to the sidewalk network, and even some that are connected are not fully accessible to persons with disabilities.

The Howard County Office of Transportation is responsible for bus stops. The Office maintains a GIS database and inventory of bus stop locations and the amenities at each.

Improvements to bus stops in Howard County are made under capital projects; for the past several years Howard County has had two capital projects (Co286 and Co332). Since 2011 the County has improved approximately 140 stops, an average of approximately 18 per year. Progress slowed in FY 2016 and FY 2017 due to the change of a construction and installation contract but has picked up under a new contract and the County is on track to complete approximately 80 improvement projects in FY 2018.

Some bus stop projects can be complex and need time to resolve, such as if they need sidewalk extensions where right of way needs to be acquired or where a road crossing is unsafe. This can occur where a good bus stop can be provided on one side of a road near a

² Full guidance on the ADA requirements can be found in Accessibility Guidelines for Buildings and Facilities by the U.S. Architectural and Transportation Barriers Compliance Board (Access Board).

destination, such as a library or community center, but there is no safe access to the destination from a bus stop on the other side of the road.

Bus stops and changes to bus routes need to be coordinated with bicycle and pedestrian access. BikeHoward, the County's bicycle master plan (2016), makes recommendations for integrating bicycling with transit services (see page 46, for example). All RTA buses have bicycle racks facilitating mode transfer from bicycles to buses.

WalkHoward is Howard County's Pedestrian Master Plan (draft 2017). As part of the WalkHoward update, County staff assessed 494 bus stops and access to them via sidewalks and roadway crossings. The highest needs at bus stops were for landing pads (78 percent) and for pedestrian lighting (51 percent). Other often-recommended improvements were for a new bus stop sign (33 percent), a map and schedule (27 percent), and a curb ramp to the stop (22 percent). Bus stop needs are factored into WalkHoward's 44 recommended priority improvement projects (the WalkHoward Plan uses the term "structured projects"). For example, the structured project scoring system incorporated bus stops that were missing landing pads.

As part of TDP implementation, improvements to bus stops need to continue and be accelerated where possible. Funding for bus stop capital projects needs to be maintained. In FY 2018 and FY 2019, spending is anticipated to be between \$400,000 and \$500,000 per year. The Office of Transportation should continue to use the recommendations from BikeHoward and WalkHoward, in addition to the criteria above, to inform the prioritization process for bus stop improvements. Implementation of the TDP routes reconfiguration is an opportunity to review bus stop locations, potentially relocating some to better, safer locations. Other opportunities for bus stop improvements occur when capital and private development projects, particularly new construction projects, affect roads and rights-of-way. The County should continue its efforts to leverage these opportunities to improve bus stops. This TDP recommends the County develop a Bus Stop Plan to bring together in one place coordinated recommendations from this TDP, WalkHoward, and BikeHoward.