

APPENDIX 6 – PILOT PROGRAM

Should funding be unavailable for launching bike share as the full Phase 1A, a smaller pilot program could be created that focuses bike share in Downtown Columbia, the Community College, and Howard County General Hospital. The eight station pilot could then be expanded at a later date to encompass the entire Phase 1A. Developing a smaller pilot is not necessarily ideal as there is a strong network effect that impacts bike share; larger systems can accommodate a more diverse range of trips due to the larger number of origins and destinations available. However, by pursuing a pilot phase first it will allow the County to test bike share's feasibility in the local market, and make any necessary strategy changes before committing to a larger scale program. The pilot will also allow the program owner to build institutional capacity to eventually manage a larger program.

SERVICE AREA AND PHASING

Based on the recommendations contained in the Business Plan, a smaller area of the County is proposed as the staging area for a bike share pilot program. The proposed phasing area and generalized station locations are presented in the map below.

This proposed Pilot Program is expected to provide a resource for transportation and recreation travel, connecting various activity centers in the core of the County including the Villages of Harpers Choice, Oakland Mills and Wilde Lake. The project would also provide service to Howard Community College, Howard General Hospital, Downtown Columbia, Blandair Park and Lake Kittamaqundi.

The pilot would provide effective service between a mix of recreational trip origins and destinations and increase transportation options between existing activity centers. However, because of the existing land use patterns and bicycle infrastructure, the predominant types of bike share trips expected for the program's outset will be recreational in their nature (ex. a resident living close to Oakland Mills Village Center wanting to go for a recreational ride around Blandair Park) even as there might be opportunities for each trip to have transportation related purposes.

The proposed pilot program as defined includes eight stations in an area of 2.1 square miles for a total station density of around 3.9 stations per square mile, double the density of stations of the overall proposed program. Based on this proposed density and phasing, the Pilot is expected to serve around eight percent of the County's total jobs and just over five percent of the County's residents based on place of residence and place of employment. The system is also expected to serve County visitors who go to Downtown Columbia for its shopping, restaurants, parks, etc. Finally, the proposed pilot program has the potential to serve 30,000 students who are enrolled at Howard Community College, with the majority of them living within five miles of campus.³²

PROPOSED STATION LOCATIONS

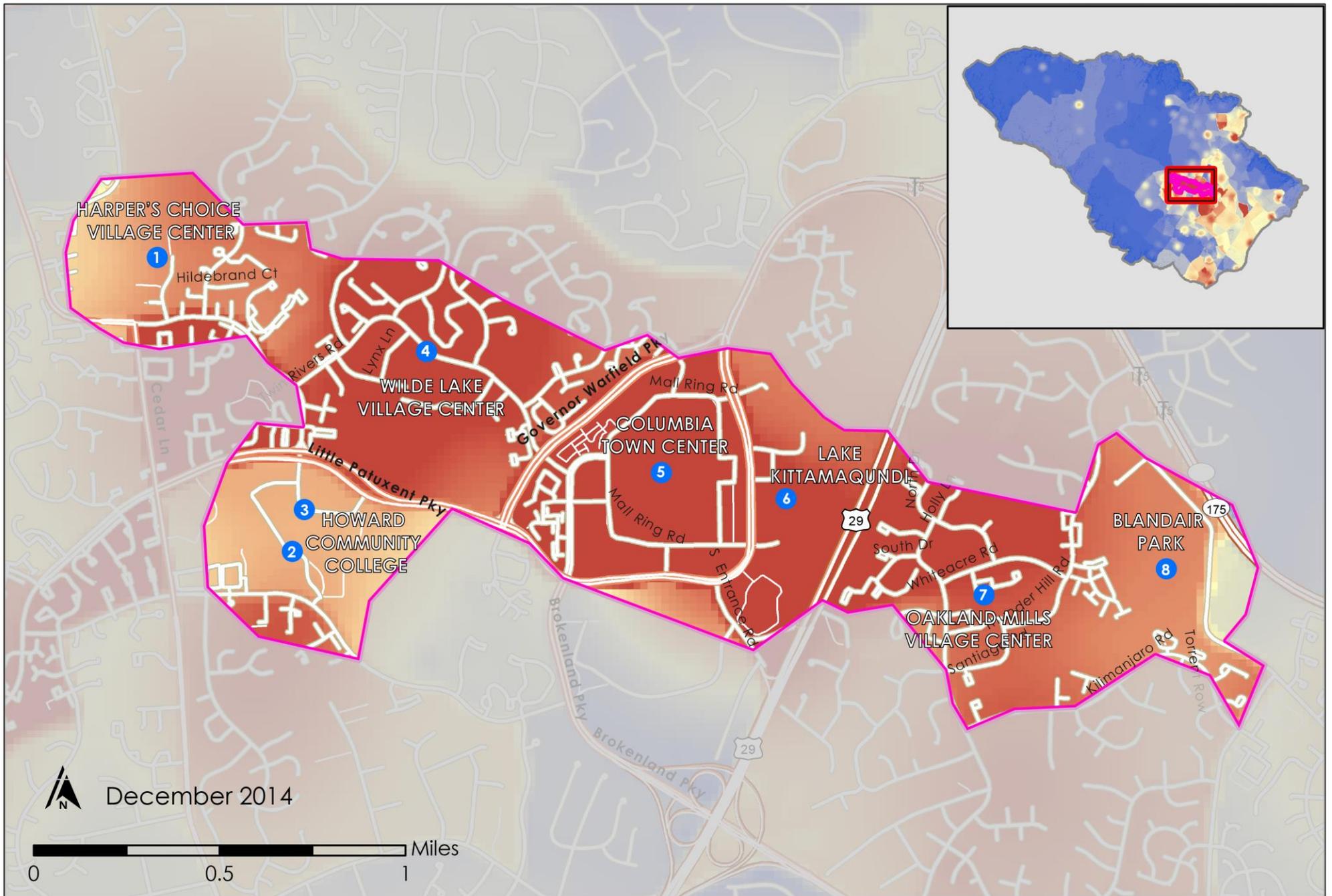
General station locations were determined based on public and stakeholder input, as well as heat map analysis performed as part of the Feasibility Analysis. The proposed locations were further refined with the feedback from County and Columbia Association representatives. The proposed station locations are included in the table and map below:

Proposed Station Locations

Station Location	Station Number
Harpers Choice Village Center	1
Howard Community College	2
Howard Community College/Howard General Hospital	3
Wilde Lake Village Center	4
Columbia Town Center	5
Lake Kittamaqundi/Whole Foods	6
Oakland Mills Village Center	7
Blandair Park	8

Please note that the final station placements will require additional public outreach and field work to determine and confirm availability of space, and right of way ownership among others. The proposed locations for bike share stations contained in this report are to be used only as a general guide.

³² Interview with Bob Marietta of Howard County Community College, May 2014



Proposed Pilot Phasing

BIKE HOWARD

Bike Share Feasibility Study



FINANCIALS

PROGRAM COSTS AND RIDERSHIP

Two cost and ridership assumptions differ for a pilot phase from those used for the entire system. A higher ridership rate is used for the pilot than assumed for the whole system at 0.5 trips/bike/day. A pilot would also require only 0.5 full-time equivalents (FTE) of administrative support, as opposed to 0.75 FTEs for Phase 1A. The program is expected to serve just over 10,000 trips in its first fiscal year, and nearly 15,800 in its second fiscal year, the first full year of operations. Cost recovery will follow the same trajectory as projected for the whole program, with the recovery ratio growing from 29 percent to 46 percent in six years. The pilot's capital costs are projected to be just under half a million dollars.

Projected Operating Costs and Ridership for Pilot (\$000s)

Fiscal Year	Pre-Launch	Yr. 1	Yr. 2	Yr. 3	Yr. 4	Yr. 5	Yr. 6
System Size							
Stations	0	8	8	8	8	8	8
Bicycles	0	80	80	80	80	80	80
Docks	0	160	160	160	160	160	160
Ridership							
Registered Users		5,100	7,900	8,600	9,000	9,500	9,900
Casual Members		5,100	7,900	8,600	9,000	9,500	9,900
Total Ridership		10,200	15,800	17,200	18,000	19,000	19,800
Revenue							
Memberships							
Registered		\$26k	\$39k	\$46k	\$49k	\$52k	\$54k
Casual		\$16k	\$25k	\$29k	\$31k	\$32k	\$34k
Usage Fees							
Registered		\$1k	\$1k	\$1k	\$1k	\$1k	\$1k
Casual		\$9k	\$15k	\$17k	\$18k	\$19k	\$20k
Advertising		\$6k	\$7k	\$7k	\$8k	\$8k	\$8k
Total Revenue		\$58k	\$87k	\$100k	\$107k	\$112k	\$117k
Operating Costs							
Daily Operations	\$0k	\$124k	\$153k	\$157k	\$162k	\$167k	\$172k
Administration	\$52k	\$53k	\$55k	\$56k	\$58k	\$60k	\$61k
Marketing	\$0k	\$21k	\$21k	\$22k	\$23k	\$23k	\$24k
Total Operating Costs	\$52k	\$197k	\$229k	\$235k	\$243k	\$250k	\$257k
Funding Gap							
Cost Recovery Ratio	N/A	29%	38%	43%	44%	45%	46%
Operating Deficit/Surplus	-\$52k	-\$139k	-\$142k	-\$135k	-\$136k	-\$138k	-\$140k

Estimated Capital Costs for Pilot Phase

	Pilot
New Stations	8
New Bicycles	80
New Stations and Bicycles	\$378,000
Site Planning and Installation Costs	\$34,000
Start Up and Parts	\$73,000
Total	\$485,000

PROGRAM IMPACTS

Estimates of Select Health, Emissions, and Congestion Indicators

Year	Trips	Trip Miles	Calories Burned	Vehicle Miles Diverted	GHD Reduction (LB of CO2)
Year 1	10,264	15,396	585,066	3,233	2,182
Year 2	15,700	23,551	894,921	4,946	3,338
Year 3	17,152	25,728	977,661	5,403	3,647
Year 4	18,010	27,014	1,026,544	5,673	3,829
Year 5	18,910	28,365	1,077,871	5,957	4,021
Year 6	19,856	29,783	1,131,764	6,254	4,222

The health, mobility, air quality, and congestion impacts of the program pilot mirror those of the full system, but on a smaller scale. Like with the full system, the largest benefit will be to public health. The program is estimated to result in over a million combined calories burned per year by its fourth year in operation. Congestion, air quality, and transit impacts are more challenging to quantify. The impact on total vehicle miles traveled and greenhouse gas emissions is expected to be negligible. The program could improve mobility in its service area, especially for trips between key destinations such as Downtown Columbia, Howard Community College, and Howard County General Hospital. Finally, while a pilot would provide improved accessibility to the transit hub in Downtown Columbia, the data from peer systems is inconclusive to quantify its impact on overall transit ridership. Bike share could also reduce trip and parking demand at the Howard Community College, especially for intra-campus car trips.