



Columbia Association Bicycle and Pedestrian Count Program 6 Year Program Summary

July 2020

Columbia, Maryland is a planned community, well-known for the more than 114 miles of pathways and sidewalks designed to connect its neighborhoods, commercial centers, and parks. The pathway system supports opportunities for safe off-road recreational and commuter travel by pedestrians, bicyclists and other users of non-motorized transportation. Over the course of the past six years, between the inaugural count of May 2014 through May 2019, the Columbia Association Bicycle and Pedestrian Pathway Count Program was established to document the volume and types of active transportation traffic occurring along Columbia's pathway system.

In its first year, the count program was designed primarily to capture established traffic patterns and serve as a baseline for subsequent pathway counts. As few major on-road and pathway bicycle improvements had yet to be made in Columbia, these early count years provided data to verify how user demand may be affected by planned pathway development and/or future improvements to the existing network. Coupled with the Active Transportation Action Agenda's (November 2011-September 2012) pathway user survey on how, when, and why people use the trail system, the count program was essential to understanding trail user demographics including gender, age, and helmet use. New count locations were added throughout the program years to help further understand user demographics and numbers in a specific location or in anticipation of future pathway improvements planned over the next decade or more.

Over the course of the count program, significant pathway investments were made by Columbia Association in addition to those made by the County to its non-vehicular transportation network. Between 2014 and 2015 this included a trail extension completing the loop around Lake Kittamaqundi (fall 2014) and the installation of navigation signage along CA pathways. County improvements included the construction of the Cross-Columbia Trail which directly connects Howard County General Hospital to Blandair Park. In addition to capturing the effect these investments have on Columbia's trail users, the annual count program also considered how temporary disturbances impacted users such as the closure of the U.S. 29 pedestrian bridge during its refurbishment in 2018.

Demand and Usage

Of the nineteen unique locations included in the count program, the majority showed relative consistency in volume and user demographics across their count years. Weather conditions were the

single greatest determinant of changes in user demand on the pathway system day-to-day and in year-to-year averages. In other words, outlier years showing drops in user demand are correlated with and can be attributed to increased rainy and stormy weather, such as that recorded in 2017.

Lake Kittamaqundi is one of the few locations where significant changes were observed over the course of the past six years. The weekday pedestrian average increased 662% and the bicyclist weekday average increased 933% between 2014 and 2019. Slightly less dramatic, the weekend averages also increased at 214% for pedestrians and 89% for bicyclists over the course of the count program. These increases can be directly linked to the investment CA made in constructing the northern trail section of the Lake Kittamaqundi Trail that completed the loop around the lake extending to Kennedy Gardens.

Overall, Columbia's two largest lakefront loop trails, Lake Elkhorn and Lake Kittamaqundi, see the greatest use with averages recorded at almost 3 or 4 times the amount of other count locations. Both these locations have a high degree of local and regional draw and provide parking to accommodate visits from greater afield than the neighborhood level. The loop trails around Jackson Pond and Wilde Lake, while not seeing the same demand as their larger counterparts, are the next most consistently used sections of the CA pathway network.

The Downtown Columbia trail is unique in its recorded volatility across all count years with as few as 10 users counted some days and over 1,100 on other days. This flux is solely tied to events scheduled at the Merriweather Post Pavilion. Merriweather events also had an effect on day-to-day numbers at the Cross Columbia Trail at Governor Warfield Parkway, although overall numbers remained low at this location. Currently maintained as wooded parkland, CA owns the majority of open space land around the Pavilion and is developing plans for several pathways and amenities in this area. As the count program has demonstrated, any investments should be consciously designed to accommodate various scales of user demand.

Demographics

Pedestrians are by far the greatest user group of the CA pathway system, making up 85% of weekday and 75% of weekend traffic between 2014 and 2019. The two Patuxent Branch Trail locations and the Blandair Regional Park are the three locations where weekend bicyclists' numbers come close to rivaling pedestrian usage. Other users, such as skateboarders, scooters, and rollerblades are below 3% of all users.

Confirming the survey results from the Active Transportation Agenda, CA's pathways appear to be primarily used for recreational purposes. Throughout the six-year study, less than 10% of bicyclists had commuter bags, which typically serve as a proxy for identify a commuter trip. Helmet use also remained steady with averages between 70 and 80% overall and for most individual count locations. The gender split for Columbia's pathway network is stable with typical splits of approximately 50-50 or 60-40 (male-female) at most count locations. Individual count locations show a wider range of youth and older adult splits, but these user groups typically make up less than a quarter of total users, indicating that the pathway system is attractive to and used by all age groups.

Summary and Lessons Learned

Overall, the count program showed consistent user demand across all count locations commensurate with the type of pathway facility, surrounding land uses, and impact of weather conditions on count numbers. Columbia's largest and most visible loop trails, Lake Elkhorn and Lake Kittamaqundi, show the highest use rates. Smaller neighborhood-scaled pathway systems, while also internally consistent in user demand, have one-fourth to one-third of the average count numbers as these larger facilities. The completion of the Lake Kittamaqundi loop trail resulted in exponential growth of trail users the first year after completion and a secondary exponential increase in 2018 which may have resulted from increased residential development occurring in nearby Downtown Columbia and the reopening of the U.S. 29 Pedestrian Bridge. In contrast, the other major infrastructure improvement, the Cross-Columbia Trail had relatively low count numbers despite its prominent location serving as a major missing east-west commuter link. Unlike all other count locations, the Downtown Columbia (Symphony Woods) location showed the greatest variation in day-to-day and year-to-year count numbers as a direct result of events occurring at Merriweather Post Pavilion.

Key Takeaway

Investments in the Columbia trail system show mixed results in increased activity.

Exponential growth in use was demonstrated year after year following CA's investment in the northern trail section that completed the Lake Kittamaqundi Loop. Significantly lower count numbers at other major trail projects, particularly along the Cross-Columbia Trail, demonstrates the primacy of recreational activity on Columbia's path system over transportation and commuting activity.

For the past six years, the Pedestrian and Bicycle Count Program collected data that enabled insightful comparisons across sites and across time. With six years of data on hand, a baseline has been established and trends are now predictable to such an extent that the labor and effort needed to undertake an annual count is no longer necessary. Instead, Columbia Association's Office of Planning and Community Affairs is developing a staff-led rotating year-round count approach that will provide an aggregate view of pathway use over time. This new 2.0 count initiative will be useful in continuing to target improvement funds and discover community needs.

Considerations for the Future

A new program design that records count data more frequently at individual sites throughout the year will be able to provide different insights from those gleaned under the current annual count program design. Over time, sufficient data consistently recorded would continue to inform on how the pathway network is utilized and by whom. Within the next decade spanning 2020 through 2030, it is anticipated that in addition to CA's continued investment in the Columbia pathway network, several complementary county-led major pedestrian and bicycle projects will be designed and constructed. These include side paths and in-road bicycle facilities along Twin Rivers Road, Snowden River Parkway, Oakland Mills Road, Dobbin Road, Robert Fulton Drive and the extension of the Cross-Columbia Trail along Little Patuxent Parkway.