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# **APPENDIX 1. SURVEY RESPONSES**





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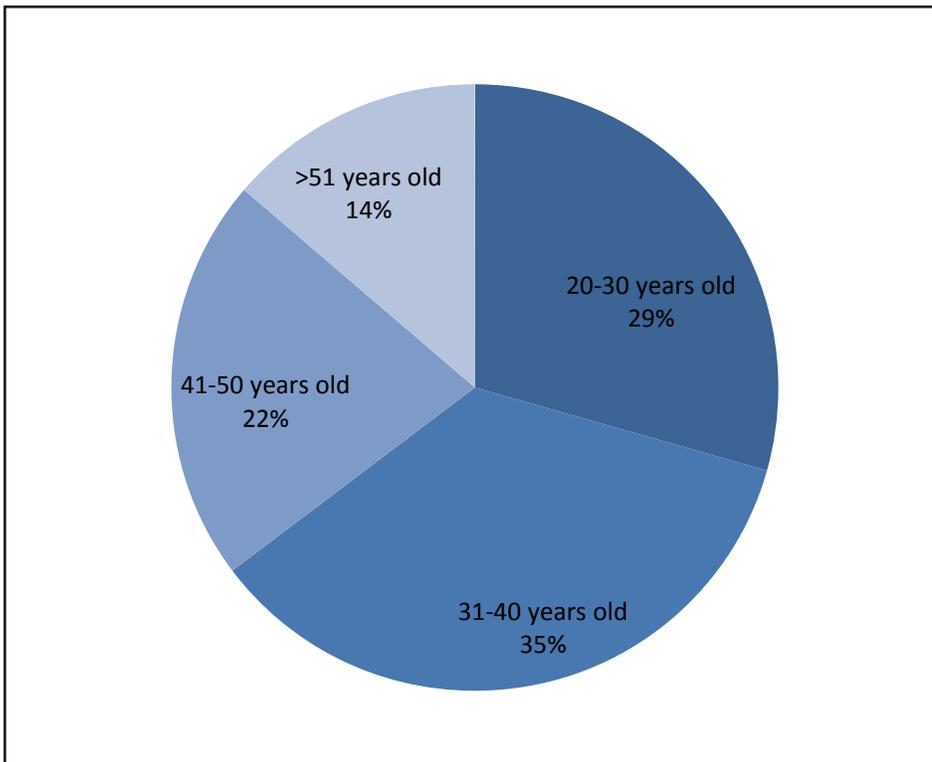
This appendix provides a summary of the 65 responses received from the online survey. It should be noted that there are some limitations to this survey. It is a small sample size, and many of the respondents are self-selecting individuals who either strongly support or oppose bike share and may be more inclined to complete the survey – rather than a randomly chosen sample. The results of the survey should not be considered a statistically valid sample.



## DEMOGRAPHIC AND EMPLOYMENT INFORMATION

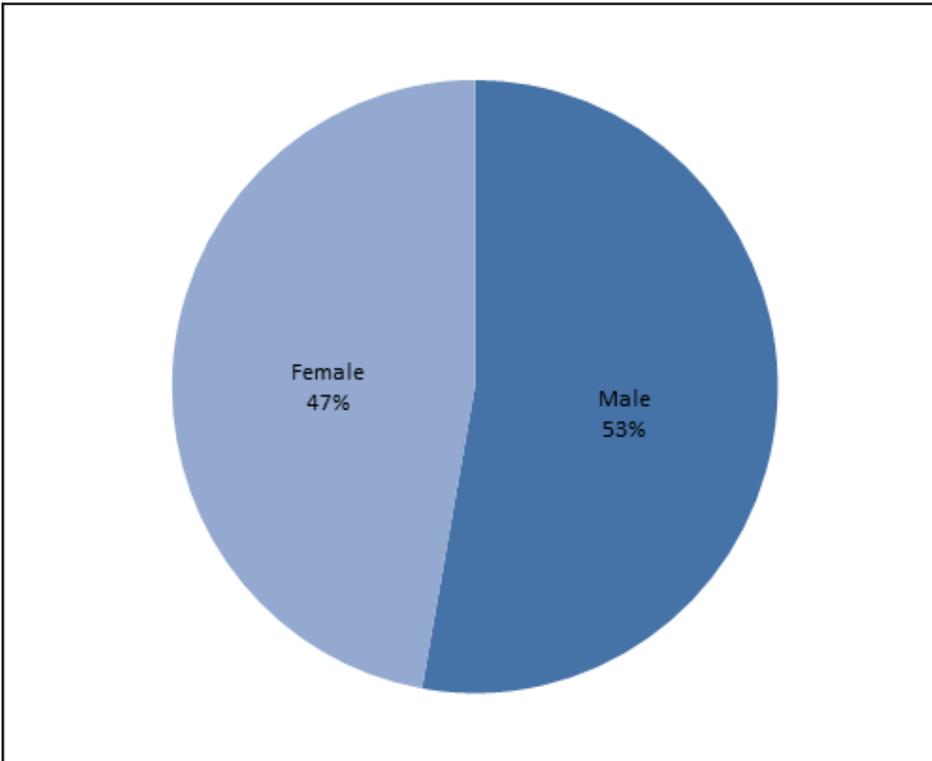
Survey participants were asked to provide demographic and employment information as a part of the survey. Respondents were of an average age of 39 years, mostly white, employed, resided in a household that earned an income over \$60,000 annually, and represented both males and females. Specific demographic information is shown below (see Figures A1.1 through A1.6).

**Figure A1.1. Age of Survey Participants**

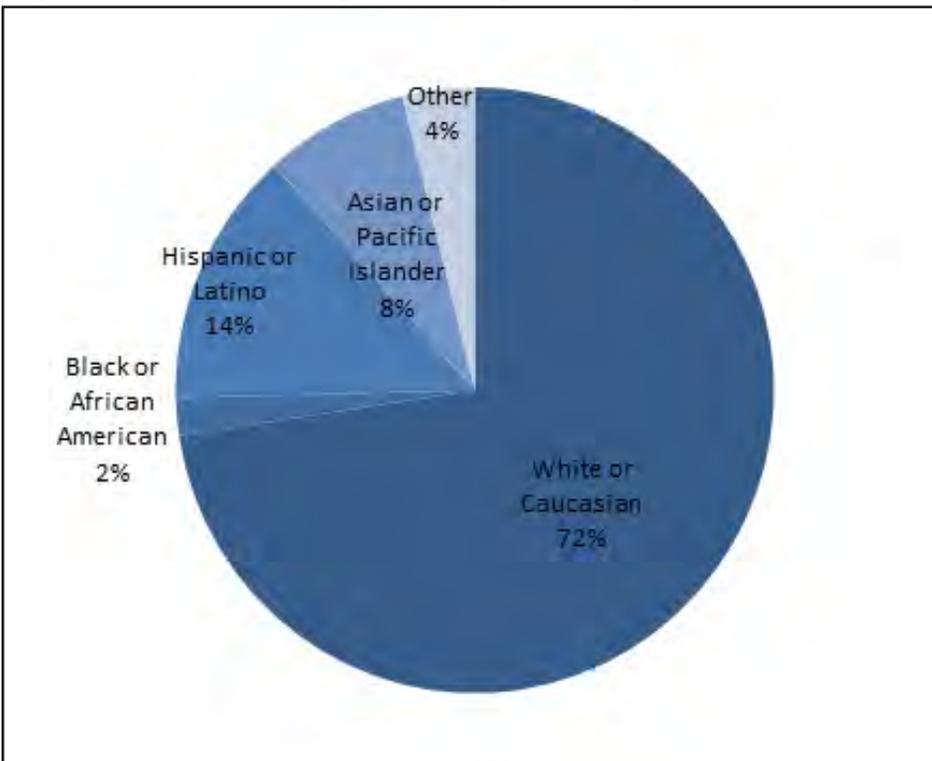




**Figure A1.2. Gender of Survey Participants**

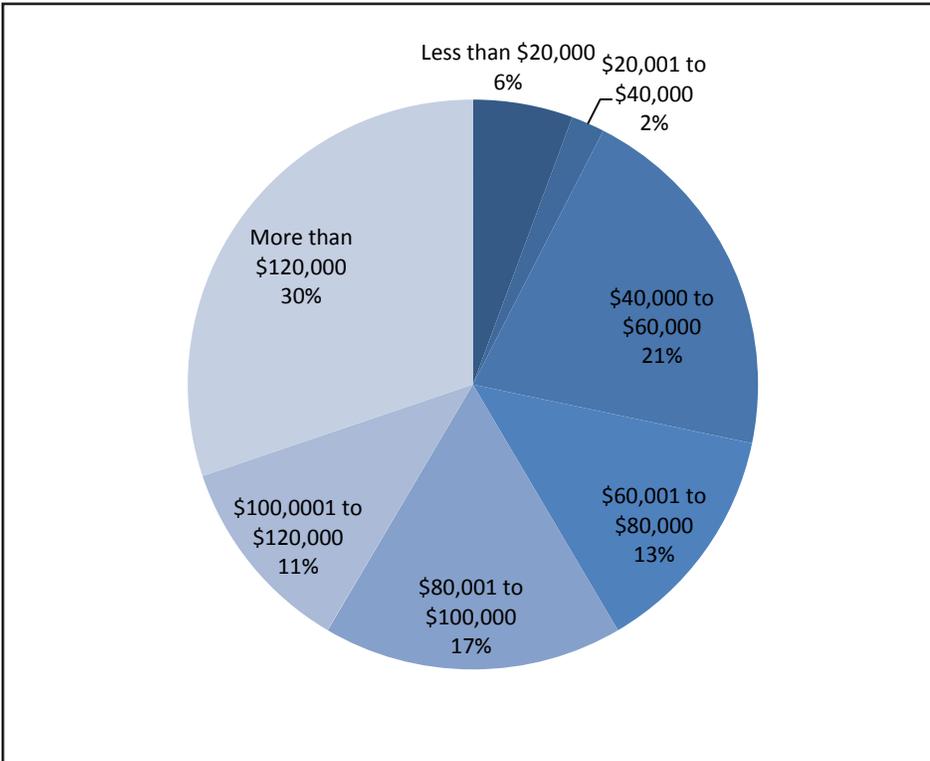


**Figure A1.3. Ethnicity of Survey Participants**

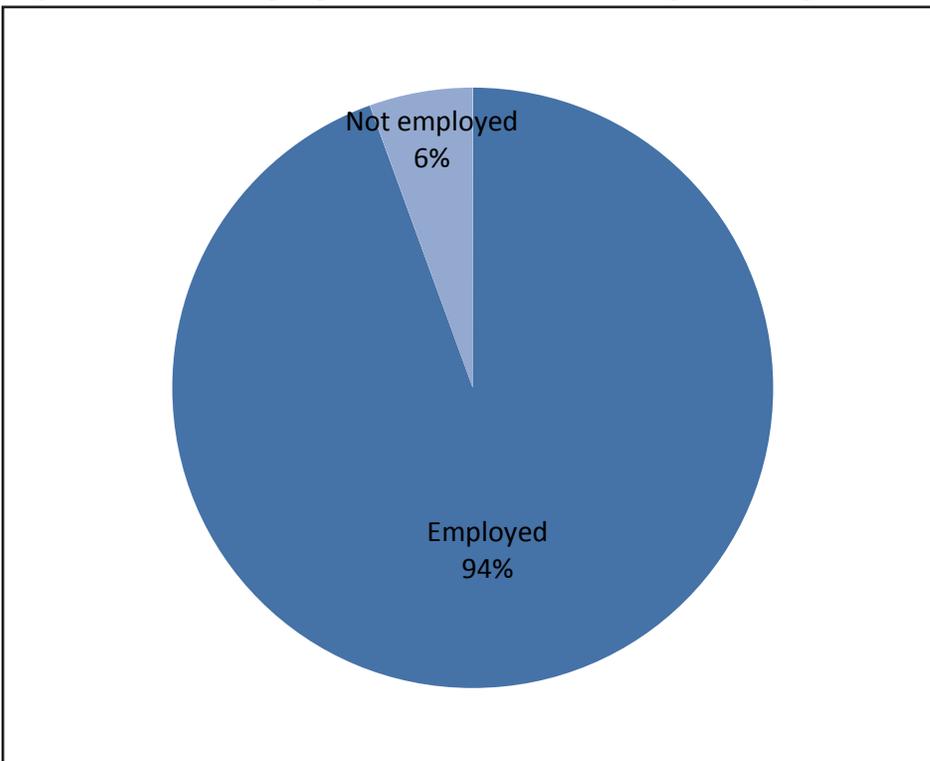




**Figure A1.4. Annual Household Income of Survey Participants**

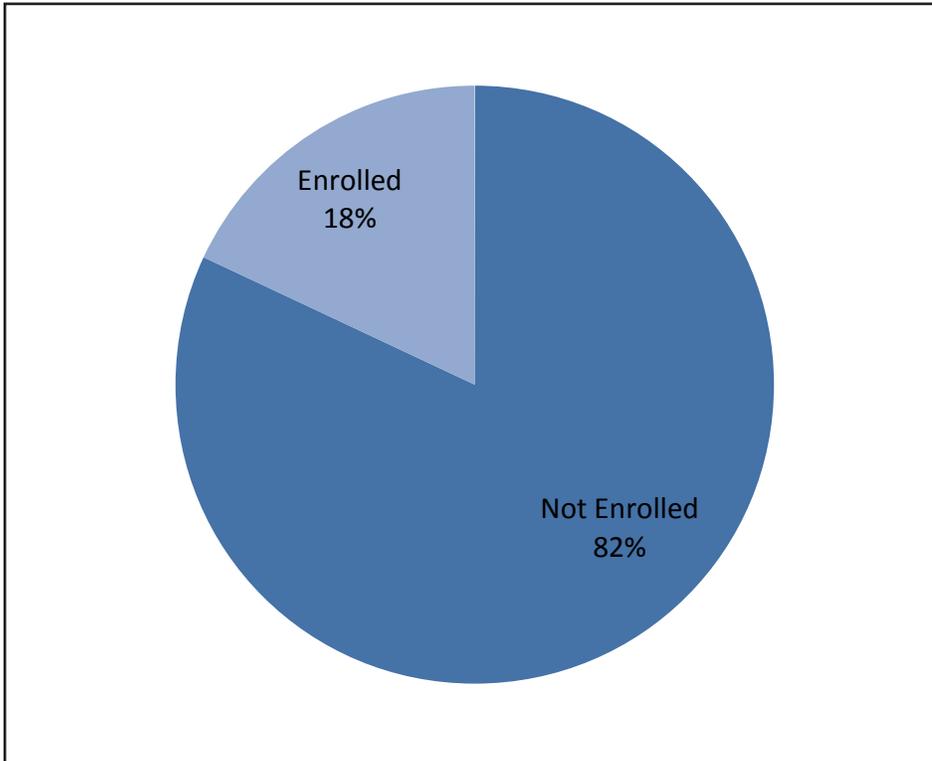


**Figure A1.5. Employment Status of Survey Participants**





**Figure A1.6. College Enrollment Status of Survey Participants**



The survey also asked respondents to provide the ZIP code of their current residence, place of employment, and school (if currently enrolled). The majority of respondents (65%) live in Jersey City, with 15% in Hoboken and the remainder either in other Hudson County towns or outside the county.



Based on the results of the survey, Table A1.1 compares the demographics of respondents with Hudson County's population. This shows that survey respondents tended to over-represent white and higher income populations.

**Table A1.1. Comparison of Survey Respondent and County Demographics**

Demographic	Survey Respondents	County Population <sup>13</sup>	Representation
Age (median)	39	43	Survey approximately represented county age
Gender (% female)	47%	50%	Survey approximately represented female population
Ethnicity (% white)	88%	66%	Survey over-represented white populations
Annual Household Income (median)	\$80,000	\$32,500	Survey over-represented higher income households
College Enrollment (% enrolled)	19%	8%	Survey over-represented county college enrollment

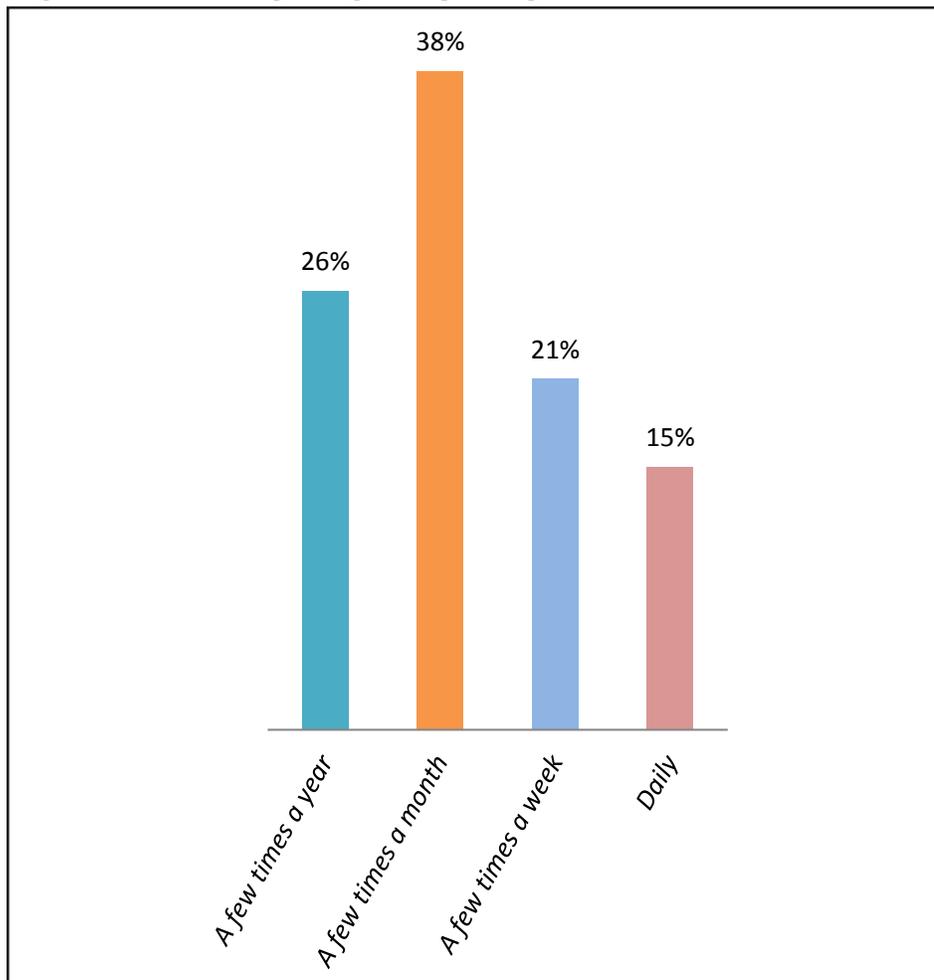
<sup>13</sup> U.S. Census Bureau, "State & County QuickFacts," U.S. Department of Commerce, 2012. <http://quickfacts.census.gov/qfd/states/#>, April 2014.



## CURRENT BICYCLE USAGE

Generally, survey respondents represented active cyclists. The majority (65%) of respondents reported having access to a working bicycle, with 36% indicating that they bicycle daily or multiple times per week (see Figure A1.7). Approximately 31% of respondents are year-round bicyclists who are willing to ride regardless of weather conditions.

**Figure A1.7. Bicycling Frequency**

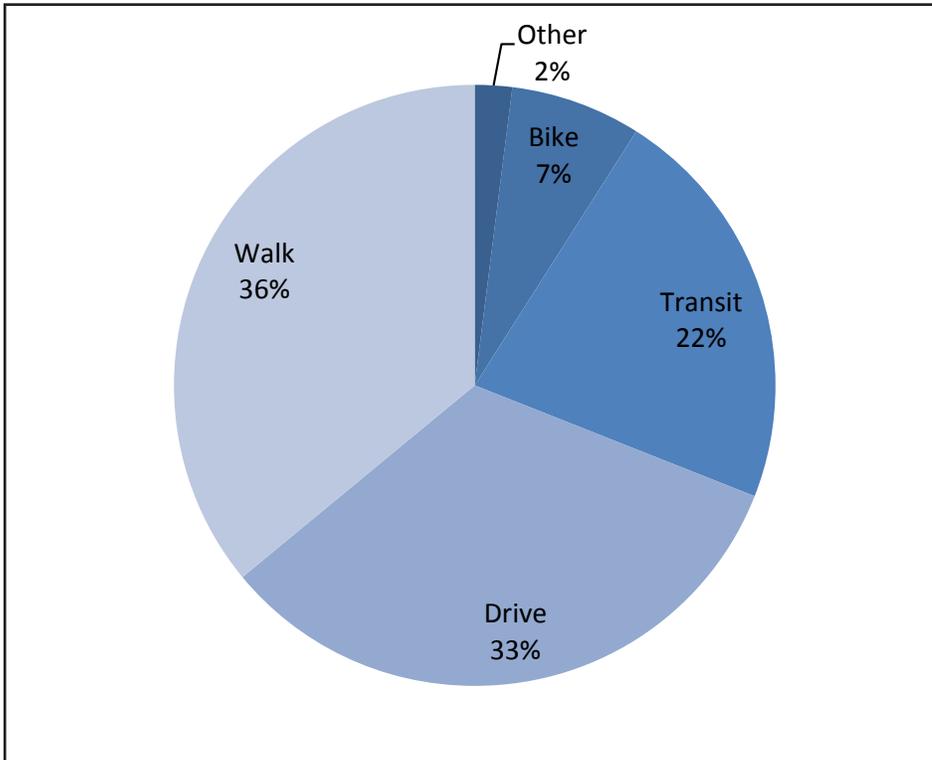


Just under two-thirds of respondents (64%) indicated that they had previously used a bike share system.



The survey also asked respondents their primary mode of transportation for destinations in Hudson County (see Figure A1.8); 36% indicated that they primarily walk, followed by 33% indicating that they primarily drive.

**Figure A1.8. Primary Transportation Mode**





## *OPINIONS ON BIKE SHARING AND ITS FEASIBILITY IN HUDSON COUNTY*

A significant majority of survey respondents (93%) were of the opinion that a bike share system is a good idea for Hudson County, and approximately 7% did not think a bike share system was a good idea.

When asked why bike share was a good idea, some of the responses included the following:

- Reduce traffic congestion and carbon footprint
- Provide low-cost transportation alternatives to lower income population
- Greater connectivity to Hudson County's centers and destinations
- Provide opportunities for physical activity
- Supplement transit and increase connectivity to transit
- Opportunity to enhance Hudson River Walkway and connect to Citi Bike bike share

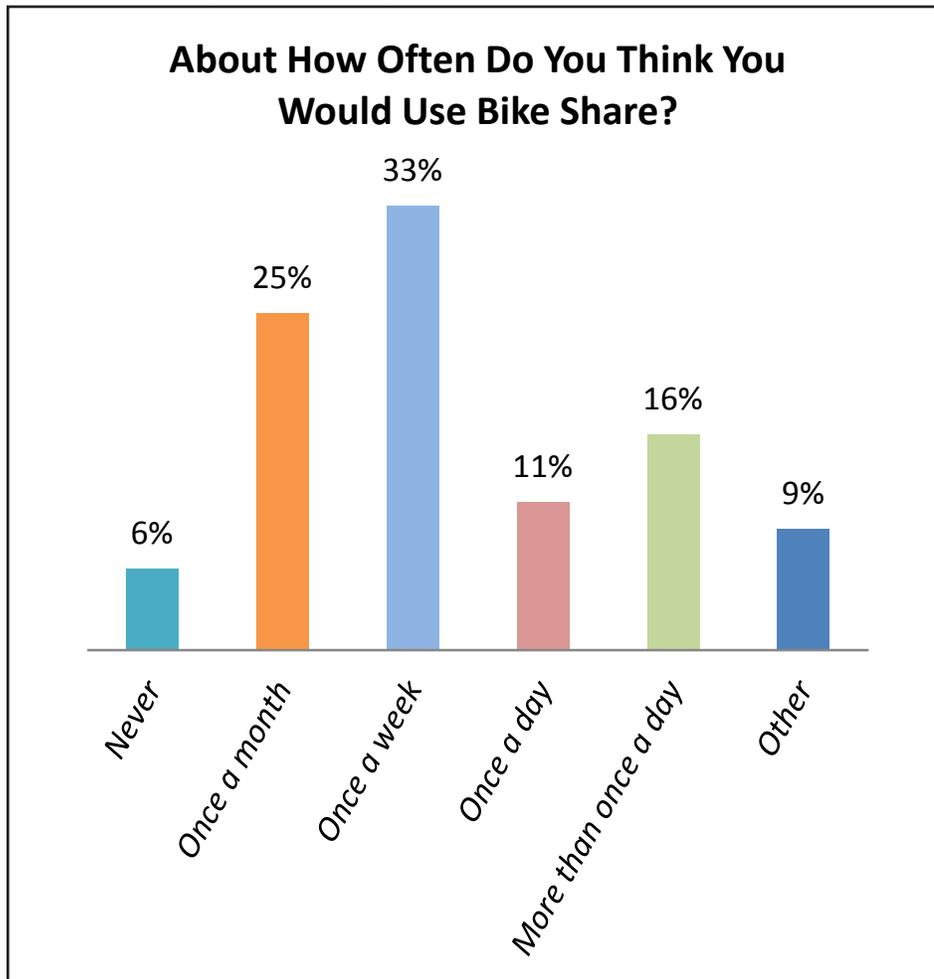
Respondents who indicated that they did not think bike share was a good idea for Hudson County included the following reasons:

- Safety concerns due to lack of infrastructure and education for drivers and cyclists
- Bike share would impede vehicle traffic into/and out of Hoboken
- There is not enough demand to move between locations

Approximately 20 respondents stated that they would use a bike share program at least once a week (33%), while only 6% stated that they would never use the program (see Figure A1.9).



**Figure A1.9. Potential Frequency of Bike Share System Usage**



Over half of respondents stated that the most likely trips for which they would use a bike share system included running errands, riding to the PATH, light rail, commuter rail or bus, shopping or eating out, and meeting family or friends.

When asked about what prices they would likely pay for annual, weekly, and daily memberships, the average of responses showed that respondents would be willing to pay \$87, \$21, and \$11 respectively.

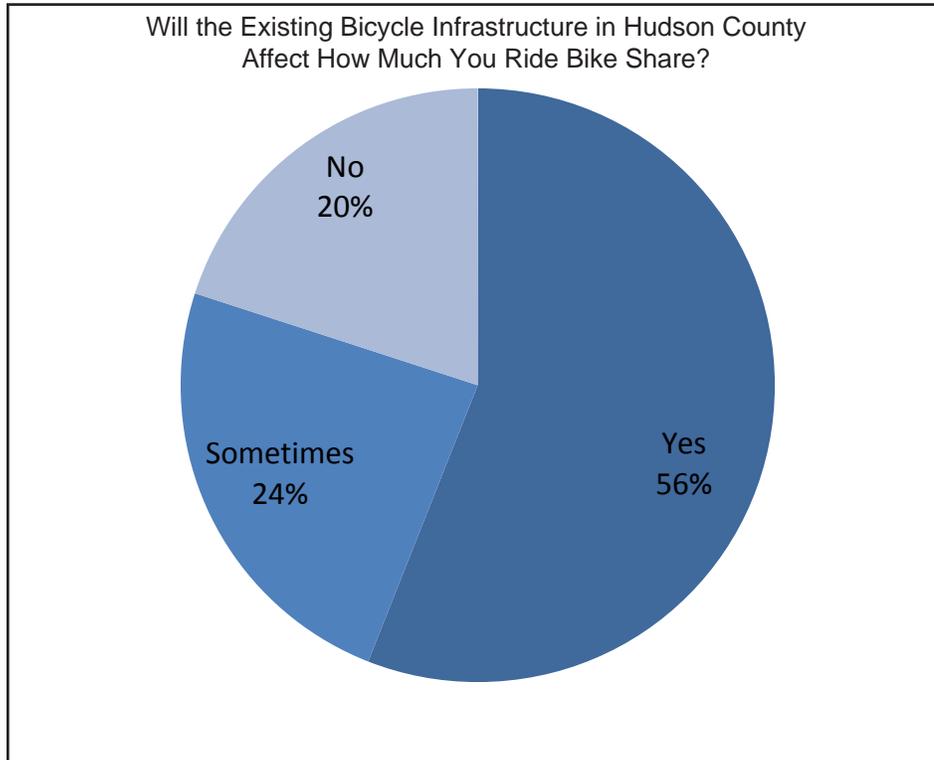
About 52% of respondents stated it would be very important to integrate the bike share system of Hudson County with the Citi Bike bike share system, and 30% stated it would be slightly important. Only about 7% said it would not be important to integrate with the Citi Bike system.



## *INFLUENCE OF EXISTING INFRASTRUCTURE ON BIKE SHARE USAGE*

About 80% of respondents stated existing bicycle infrastructure would or would sometimes influence how much they rode bike share in Hudson County (see Figure A1.10).

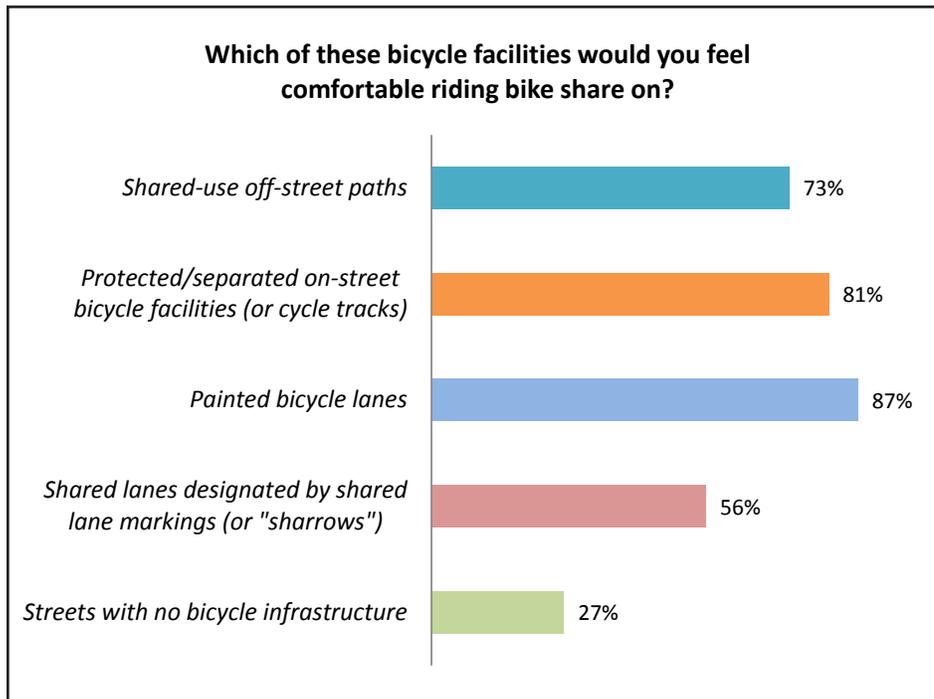
**Figure A1.10. Influence of Bicycling Infrastructure on Bike Share Usage**





In addition, survey participants were asked to select the types of facilities they would feel comfortable riding bike share on. About 14 respondents (27%) said they would be comfortable riding on streets with no bicycle infrastructure, while 45 respondents (87%) stated they would feel comfortable riding on streets with painted bicycle lanes (see Figure A1.11).

**Figure A1.11. Bicycle Facility Comfort<sup>14</sup>**



<sup>14</sup> Because survey respondents were able to select more than one option, the total percentage is greater than 100%.



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# **APPENDIX 2. FINANCIAL ANALYSIS OF BNR PROPOSAL**





During the course of the study, the municipalities of Jersey City, Hoboken and Weehawken issued a request for proposals (RFP) and awarded a contract for bike share implementation and operation in those three urban municipalities with the condition of using no public funding. The contract was awarded to a collaboration of the companies E3Think, Bike N Roll, nextbike and P3 Global Management. The project team for this feasibility study was asked to undertake a financial analysis of the proposal that was put forth in response to the RFP. At the time of writing this report, and subsequent to the initial proposal, the number of stations that will be provided by BNR has increased to 102, from the proposed 45<sup>15</sup>; this memorandum does not include a comparison to updated membership and ridership projections based on the revised station numbers as such projections were not provided by BNR.

<sup>15</sup> "Jersey City to join Hoboken, Weehawken in bike-share program", April 23, 2014, [http://www.nj.com/jjournal-news/index.ssf/2014/04/jersey\\_city\\_to\\_join\\_hoboken\\_an.html](http://www.nj.com/jjournal-news/index.ssf/2014/04/jersey_city_to_join_hoboken_an.html)



## *MEMBERSHIP AND RIDERSHIP PROJECTIONS*

Table 4.1 showed the comparison cities to the BNR proposal. The table shows that the proposed system has reasonable, if not conservative, assumptions compared with similar bike share systems around the country. Some numbers that could be adjusted are:

- Annual member-to-bike ratio in the proposal is 6.3 whereas the average of comparable systems is 9.5, and Boston, Washington, D.C., and New York average 11.8 annual members per bike. This ratio, and therefore the total number of annual members could be increased.
- Casual member-to-station ratio in the proposal is 288 whereas the average of comparable systems is 841, and Boston, Washington, D.C., and New York average 998 casual members per station. Although the number of annual visitors in Hudson County is likely to be less than these cities, this ratio, and therefore the total number of casual members could be increased.



## *REVENUE AND COST PROJECTIONS*

Although the membership and ridership assumptions are conservative, the financial projections may be aggressive. Minimal financial information is provided in the proposal, as it was not required, and the system will be privately owned and operated. However, the following information from the proposal was used to extrapolate membership and usage fee revenue projections using the model developed from the performance of comparable cities:

- Annual and casual membership projections of 5,000 and 23,000, respectively.
- Annual and daily membership fees of \$95 per year and \$9.95 per day, respectively.
- Usage fees 1.5 times those of Boston, Washington, D.C., and Minneapolis.

Using these assumptions and a 3% annual growth rate on the number of annual and casual members, the membership and usage fees shown in Table A2.1 were derived from the membership projections put forth in the proposal.



**Table A2.1. Projected Revenue Based on Membership Levels included in the BNR Proposal**

	Year 1	Year 2	Year 3	Year 4	Year 5
Annual Growth	3%				
Annual Membership Fees	\$475,000	\$489,250	\$503,928	\$519,045	\$534,617
Casual Membership Fees	\$228,850	\$235,716	\$242,787	\$250,071	\$257,573
Usage Fees <sup>1</sup>	\$111,263	\$114,600	\$118,038	\$121,580	\$125,227
Total	\$815,113	\$839,566	\$864,753	\$890,695	\$917,416

<sup>1</sup> Assumes 35% of casual rides incur a \$7.50 fee.

A range of operating costs was derived based on the lowest known operating costs on a low ridership system (Minneapolis) and an urban high-ridership system (Washington D.C.) for an 800-bicycle system:

- Potential Annual Operating Costs – Minimum: \$1,040,000 (based on Nice Ride Minnesota).
- Potential Annual Operating Costs – Maximum: \$2,000,000 (based on Capital Bikeshare in Washington, D.C.)

Depending on the operating costs that can be achieved by BNR, these numbers show a system that may break even on membership and usage fees if operating costs (and therefore service levels) are kept to a bare minimum. If operating costs are similar to Washington D.C., then the system will be in deficit of approximately \$1,100,000 during the first year using the proposal's membership estimates. Any deficit may be closed by either surpassing the membership estimates or bringing in sponsorship and advertising.

However, as mentioned above, the annual and casual membership projections are conservative when compared to the performance of the comparison cities. If the average of these cities' annual member-to-bike and casual member-to-station ratios are used, the revenues increase significantly, as shown in Table A2.2.



**Table A2.2. Projected Revenue Based on Membership Levels of Comparable Cities**

	Year 1	Year 2	Year 3	Year 4	Year 5
Annual Growth	3%				
Annual Membership Fees	\$725,396	\$747,158	\$769,572	\$792,660	\$816,439
Casual Membership Fees	\$669,672	\$689,763	\$710,456	\$731,769	\$753,722
Usage Fees <sup>1</sup>	\$325,582	\$335,349	\$345,410	\$355,772	\$366,445
Total	\$1,720,650	\$1,772,270	\$1,825,438	\$1,880,201	\$1,936,607

<sup>1</sup> Assumes 35% of casual rides incur a \$7.50 fee.

It is noted that the higher membership and ridership estimates would likely imply higher operating costs at the higher end of the range because of increased member servicing, more usage, system balancing and bike maintenance. These projections show a system that could potentially break even based on membership and usage fees alone.



## *PROFIT SHARE*

The BNR proposal projects a \$400,000 - \$800,000 profit share to the cities based on a 10% profit sharing rate. Using the midpoint of this range, this implies that the profit to BNR is projected at \$6 million over the 5-year life of the contract, or an average of \$1.2 million per year. Based on the revenue and operating cost estimates above, it does not seem feasible that such profit can be generated from membership and usage fees alone. Therefore, the profit share must also include sponsorship and advertising revenues.

