DEMOGRAPHIC CHARACTERISTICS OF THE SAMPLE

The demographic profiles of the sample are exhibited in Figures 1–6. The age profile of the sample is illustrated in Figure 1. A large percentage of the respondents (61.8%) fell between the ages of 25 to 54 with the largest portion in the 45–54 (24.4%) followed by the 35–44 (21.4%) and 25–34 (16.0%) age categories. Figure 2 shows the number of years the respondents had lived in Cary. There was a larger percentage living in Cary for 2–5 years (27.0%), over 20 years (26.0%), and 6–10 years (23.2%). In terms of education, a high percentage (66.2%) of the respondents graduated with a college degree including 37.6% with a bachelor's degree, 23.7% with a master's degree, and 4.9% with a PhD, JD, or MD degree (Figure 3). The racial breakdown shown in Figure 4 illustrates 68.6% of the respondents were Caucasian, 11.1% were Asian (includes Native Hawaiian and Pacific Islander), 9.5% were African-American, and 6.5% were Hispanic. Figure 5 shows there were 23.7% of respondents earning between $100,001–$150,000, 20.7% earning over $200,000, and another 20.7% earning between $75,001–$100,000. Figure 6 shows 52.1% of the sample were male, 47.4% were female, and 0.5% were non-binary. Most of the respondents (71.2%) resided in single-family homes, 12.7% in a townhouse/condominium, 14.0% in an apartment, and 2.0% in other housing. As to homeownership, 73.6% of the respondents own or have a mortgage, 22.5% pay rent/someone else owns, and 3.1% pay no rent/someone else owns. This year, there were 93.1% (87.2% in 2020) of the respondents who indicated they were registered voters. When asked if they wanted to be contacted by a staff person, 12.5% (12.0% in 2020) responded yes.

Figure 1. Sample: Age Distribution

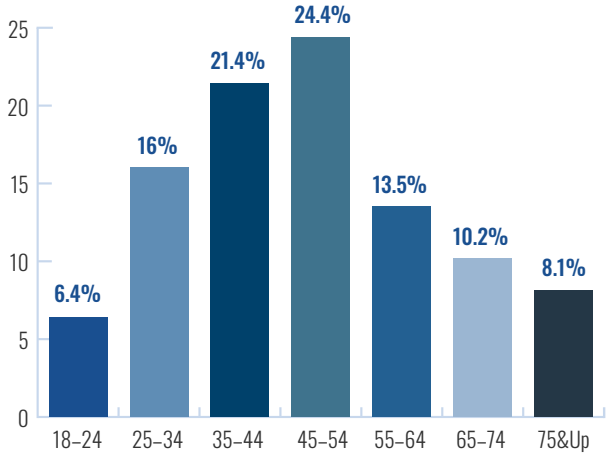


Figure 2. Sample: Years Lived in Cary

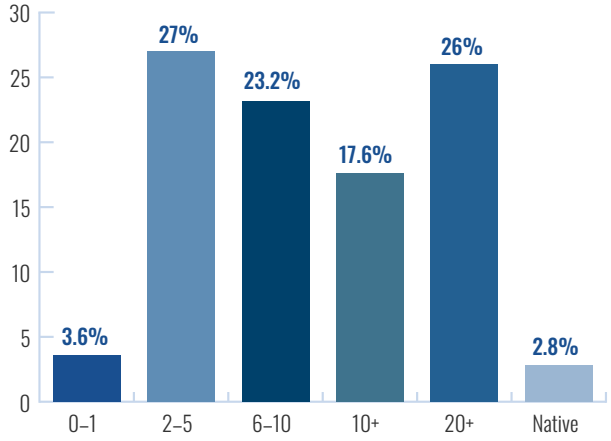


Figure 3. Sample: Educational Level

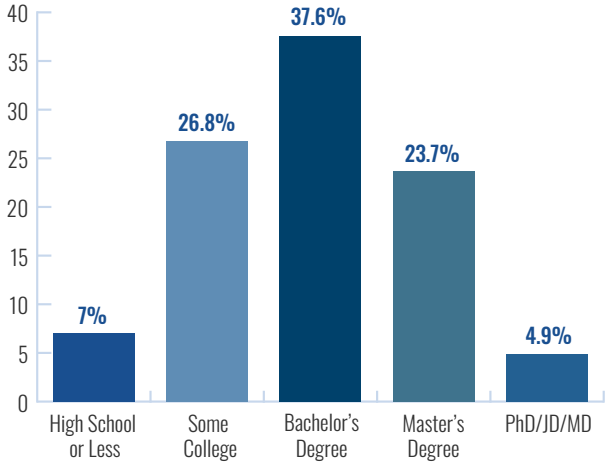


Figure 4. Sample: Race

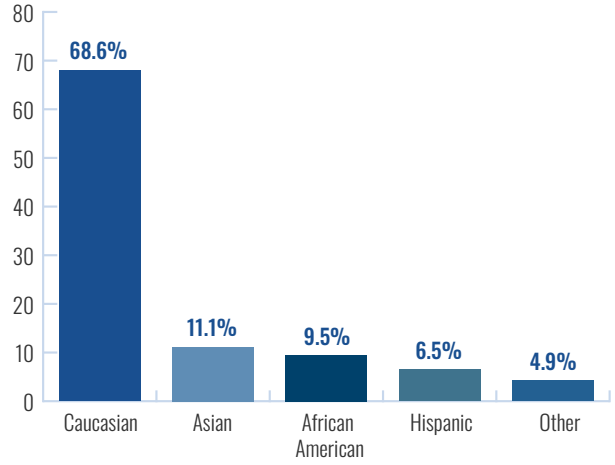


Figure 5. Sample: Income

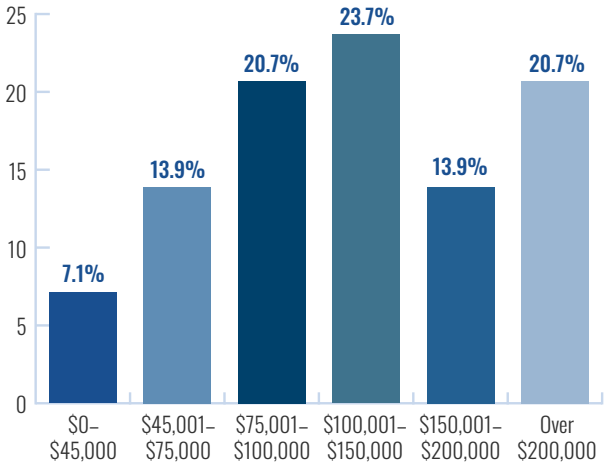
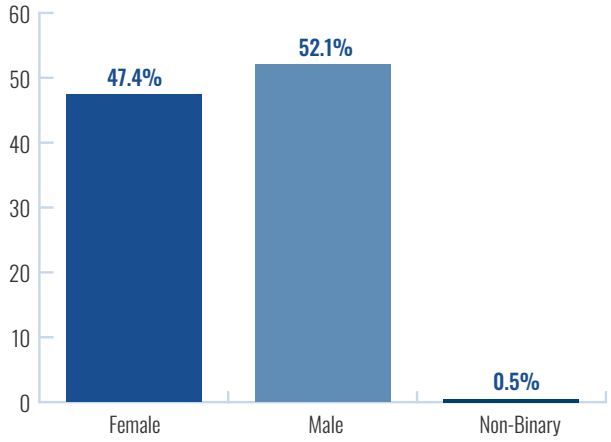


Figure 6. Sample: Gender



Selected demographic cross tabulations on age (B562–B569), education (B570–B576), home ownership (B577–B584), home type (B585–B592), income (B593–B599), race (B600–B607), voter status (B608–B615), and years in Cary (B616–B623) are included at the end of Appendix B.

Several of the means for the service dimensions in the survey were converted into grades. The mean score was changed into a percentage (using 9 as the denominator) and compared to the grading scale shown in Table 1. The respondents were also asked if they would agree to participate in a focus group session to gain even more insight into their opinions with 38.5% of the respondents agreeing to participate in a session.

Table 1. Grading Scale

RATING (%)	GRADE
97–100	A+
94–96	A
90–93	A-
87–89	B+
84–86	B
80–83	B-
77–79	C+
74–76	C
70–73	C-
67–69	D+
64–66	D
60–63	D-
Below 60	F

The report will include selected cross tabulations expressly chosen by the Town for specific questions in the survey (Appendix B). It is important to exercise a degree of caution in the interpretation of cross tabulations. They will act to segment or partition the sample size and in turn, increase the margin of error for a question. For that reason, it is difficult to generalize from cross tabulations with small sample sizes for a specific demographic subgrouping.

The percentages in the tables are rounded off to one decimal place. Due to rounding, this may result in row totals that do not always add up to exactly 100.0%. The demographic recodes for the cross tabulations were age (18–24, 25–54, 55–64, 65 and over), education (high school degree/some college, college degree, PhD/JD/MD), home type (single family, apartment, townhouse/ condo, other), income (0–$45,000, $45,001–$100,000, $100,001–$150,000, $150,001–$200,000, over $200,000), race (Caucasian, Asian, African-American, Hispanic, other), and years in Cary (0–1, 2–5, 6–10, over 10, native).

They will act to segment or partition the sample size and in turn, increase the margin of error for a question.

For clarification, other housing includes mobile homes, duplexes, and any other living arrangement such as assisted living. Other races include all respondents selecting other as to their race and Native Americans due to their limited number. All the tables are displayed in percentages unless otherwise stated.

The results between the survey periods may show an upward or downward trend between the survey periods. It is important to examine

these changes for statistical significance. For that reason, significance tests were conducted on the mean differences for the 2020 and 2022 surveys. Any question with a mean score which was measured in both years was compared with statistical analysis. No assumption of homogeneity of variance was assumed since the sample sizes for the service dimensions generally differed for the two measurement periods. For that reason, a Welch's t-test was utilized with a two-tailed test at the .05 significance level to determine significance. This statistical method will test the null hypothesis that the two population means are equal while correcting for unequal variances. A two-tailed test was employed due to the fact the mean difference could be higher or lower. A significant result would indicate the differences in the two means would be more (or less) than would be expected by chance. An asterisk will be placed after any means in the tables that are statistically significant such as 8.50*. Appendix Q lists the significance tests for all the Town's service dimensions comparing changes from 2020 to 2022. This year, there were 22 statistically significant mean changes with 4 improving and 18 declining.

This year, the refusal rate increased from 17.5% to 43.4% resulting in significantly more calls to complete the survey. This is a very unusual refusal rate for Cary which normally has some of the lowest we encounter.

There are some additional notes to the 2022 Biennial Survey. The collection period was longer for this survey increasing from five to eight weeks compared to 2020. Several factors contributed

to this increase. Spam calls have influenced how often people answer calls and survey research firms have responded by increasing the number of callbacks and the interval between them. This is what we have done in this survey with the number of callbacks doubling. Along with spammers, Covid has also impacted survey response rates effectively lowering them. Research studies by Rothbaum & Bee (2021) and Villa Ross, Shin, & Marley (2021) have highlighted this impact. In addition, Covid had a direct impact on the survey team as several experienced members contracted the disease in January slowing down our progress. This year, the refusal rate increased from 17.5% to 43.4% resulting in significantly more calls to complete the survey. This is a very unusual refusal rate for Cary which normally has some of the lowest refusal rate. The higher percentage of cell phone numbers serves to limit calling times to nights and weekends and precludes daytime calls except on landlines (only 6% of the sample). Finally, the survey length increased from 13–17 minutes in 2020 to 15–20 this year slowing down the overall completion rate.

We ran a breakdown of the sample for January and February to see if there were any statistically significant differences between the two months and there were minimal differences. One of these was the cleanliness and appearance of streets which was statistically significant with higher scores in February. This may have been impacted by weather (snow) in January. In addition, the rating for the availability for multi-generational housing and five actions to increase bike ridership were lower in February than January. This was possibly related to our calling protocol in February. We switched to a stratified sampling method to reach underrepresented age groups as we neared the end of the survey. In this case, we called more in the 55–64 age group during February (16.4% versus 10.1%) and this group gave lower ratings for both multi-generational housings and bike actions. The only other statistically significant difference was for the neighborhood characteristic of strength (adapt to change, visually interesting) and it would not seem this question would be impacted by calling month.

Besides response rate, Covid can have an impact on the ratings given by the respondents. As municipal departments temporarily close or have short-staffed situations due to outbreaks, this can directly influence respondent perceptions of the local government. This appears to be what has happened in Cary during this survey period. Other municipalities have delayed citizen surveys for these concerns while Cary kept on their same schedule.

It can be more difficult to match age distribution parameters with lower response rates due to the excessive number of calls required to locate respondents in the needed age groups. However, the age distribution (the primary screening method) of the sample distribution generally coincides with the 2020 US Census American Community Survey estimates in terms of the age distribution. Keep in mind, you must remove the under 18 population from the total population and then recalculate the population parameters. The Biennial results compared favorably to Census ACS including 18–24 (6.4% versus 8.1%), 25–34 (16.0% versus 15.5%), 35–44 (21.4% versus 21.5%), 45–54 (24.4% versus 21.3%), 55–64 (13.5% versus 16.7%), 65–74 (10.2% versus 10.6%), and 75 & Over (8.1% versus 6.2%). A check of the fit with a Goodness of Fit calculation by comparing the observed counts to what would be the expected ACS population counts resulted in a Chi-Square statistic ($\chi 2 = 8.36$, $p=.2127$) indicating a good fit at the .05 significance level.