

Executive Summary

Overall response and respondent demographics

A total of 891 individual households completed the Butterfield Road Safety Survey over the three week collection period. Roughly two-thirds of responding households have children under the age of 18 living in them, and one-third of households had at least one older adult (age 65+).

Use of Butterfield

A majority of respondents live on Butterfield Road or a street accessed by it, a third attend a school accessed by Butterfield Road, and just over a quarter are members of the Sleepy Hollow Homes Association.

Butterfield Road has other uses, with a large share (35%) using it as a bicycle-through route to Terra Linda, or to access the Community Center (15% are on the Swim Team and 11% are pool members from outside the neighborhood).

Comfort of facilities

Though the majority of respondents travel by bike or by foot on Butterfield Road daily or weekly, few people “always” feel comfortable riding or walking along the street (less than 20%). Majorities of respondents indicated that they were “sometimes” comfortable walking or biking, but more people said they were either “seldom” or “never” comfortable than responded “always.”

Unreported crashes

Despite only 9 reported injury collisions on the corridor in the last 10 years, respondents described 72 bicycle crashes and 6 pedestrians being hit by cars, the vast majority in the past 5 years. While most of these resulted in minor injuries or property damage, 15 resulted in moderate (bleeding) or severe (hospitalization) injuries. Even though the survey did not reach all users of the Butterfield Road Corridor, these responses alone eclipse the official figure. This is explained by the fact that only a small minority of crashes (even those resulting in injuries) were reported to law enforcement, precluding their entry into the statewide crash database.

Support for changes

Support for reallocating street space on the unincorporated County side of Butterfield Road from a shoulder and de facto automobile parking to a bicycle/walking lane is very high, with greater than 85% of respondents indicating that they would “definitely” or “potentially” support such a

plan. This support held when subsetting respondents to those who live along the Butterfield Road Corridor or are members of the Sleepy Hollow Homes Association.

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Introduction

Butterfield Road Safety Committee

The committee was convened by the Office of Supervisor Katie Rice and the Sleepy Hollow Homes Association. Other members of the committee include representatives from the Marin County and Town of San Anselmo Departments of Public Works, as well as the Marin County Bicycle Coalition, and various residents of the Butterfield Road Corridor.

Genesis of study and goals

The Butterfield Road Corridor Safety Survey was generated from an initiative to improve safety on Butterfield Road, particularly among vulnerable road users (people walking, rolling, or bicycling). The road is traveled by a wide variety of users every day, including work commuters, students accessing the three schools, and bicycle users traveling to Terra Linda via Fawn Drive/Mission Pass Path. It was determined by the committee that a survey should be distributed to the community to achieve the following goals:

Goal 1: Assess comfort of Butterfield Road among non-motorized users

Reports from residents of the Butterfield Corridor indicate that speeding is prevalent and crossing the street is challenging, particularly in busy locations such as the Sleepy Hollow Community Center. The survey asked respondents to qualitatively rate their comfort level of traveling on Butterfield Road by a variety of means.

Goal 2: Gather information about previously unreported collisions

While official counts show relatively few traffic collisions resulting in injuries, anecdotal reports indicated that quite a number of bicycle riders had had crashes or close calls on Butterfield Road. This should not be surprising, as research indicates that bicycle- and pedestrian-involved collisions are regularly under-reported to police, particularly when those collisions do not result in a fatality or major injury. However, even minor crashes (or close calls) can discourage people from choosing active travel modes. To this end, the survey gathered information about collisions on Butterfield Road, some of which may have previously gone unreported.

Goal 3: Assess support for roadway reconfiguration to facilitate bicycle/pedestrian travel

Despite the high rate of bicycle and pedestrian traffic on Butterfield Road, dedicated facilities only exist on the San Anselmo (i.e. southern) portion of the corridor. Past the Town/County line, the portion of the road striped as a bike lane is actually considered a shoulder and is used as de facto on-street parking for the fronting residences. This results in bicycle users and pedestrians having to enter the lane of traffic to maneuver around parked cars. The survey asked whether

respondents had observed this behavior, and whether they would support reconfiguration at the expense of on-street parking.

Survey development

The survey was developed by a member of the Sleepy Hollow Homes Association and staff from the Marin County Bicycle Coalition, and reviewed by the rest of the committee over the course of two meetings. The survey was created in SurveyMonkey and distributed online, as described below.

Survey distribution & incentives

The survey was distributed by the various members of the Butterfield Corridor Safety Committee. A link to the survey was posted in the following venues:

- Sleepy Hollow Homes Association email list, website, and bulletin
- Sup. Rice SHHA article in bulletin
- Schools on the corridor (San Domenico, Hidden Valley, Brookside, Little Mountain, Archie Williams)
- Marin County Bicycle Coalition email newsletter and social media
- Sleepy Hollow Presbyterian Church
- Nextdoor (SA, Sleepy Hollow)
- San Anselmo Town Manager's mailing list
- Sleepy Hollow swim team
- Social media post through Eyes Up campaign
- Physical signage on Butterfield Road

The survey went live on January 13, 2022 and closed February 7th. As an incentive for completing the survey, Marin County Bicycle Coalition offered to raffle a waterproof bicycle bag to one of the respondents at random.

Findings

This section contains a summary of the survey findings, grouped by topic. The survey instrument itself, which included 32 questions, and summaries of all responses, can be provided at request by emailing warren@marinbike.org.

Respondents

Number

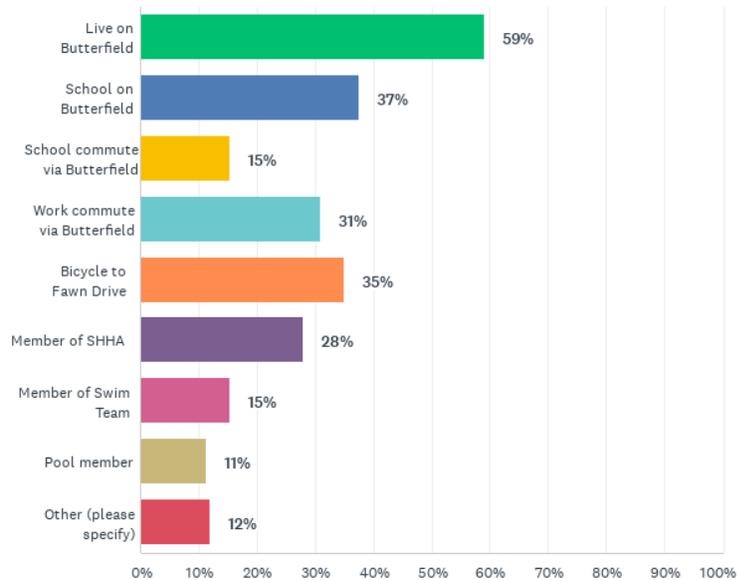
During the course of response collection, the survey received 891 complete responses. The survey requested that respondents complete only one survey *per household*, meaning that the results represent a larger share of the population than they might otherwise suggest.

Types of users

Question 1 of the survey asked respondents to indicate their relationship with Butterfield Road. This question allowed respondents to indicate multiple responses, understanding that people use the corridor in several different ways, meaning that the totals sum to more than 100%.

A majority of survey respondents live on Butterfield Road or on a road accessed by Butterfield Road. A large share of respondents have children attending one of the three schools accessed from Butterfield (Brookside, Hidden Valley, or San Domenico) with a smaller group having children who attend school off the corridor but commute via Butterfield Road. Over a third of respondents use Butterfield Road to access the bicycle route to Terra Linda via Fawn drive. Sleepy Hollow Home Association (SHHA) members made up more than a quarter of the responding households.

Q1 Please identify your relationship to Butterfield Road (select all that apply)



Most common “other”

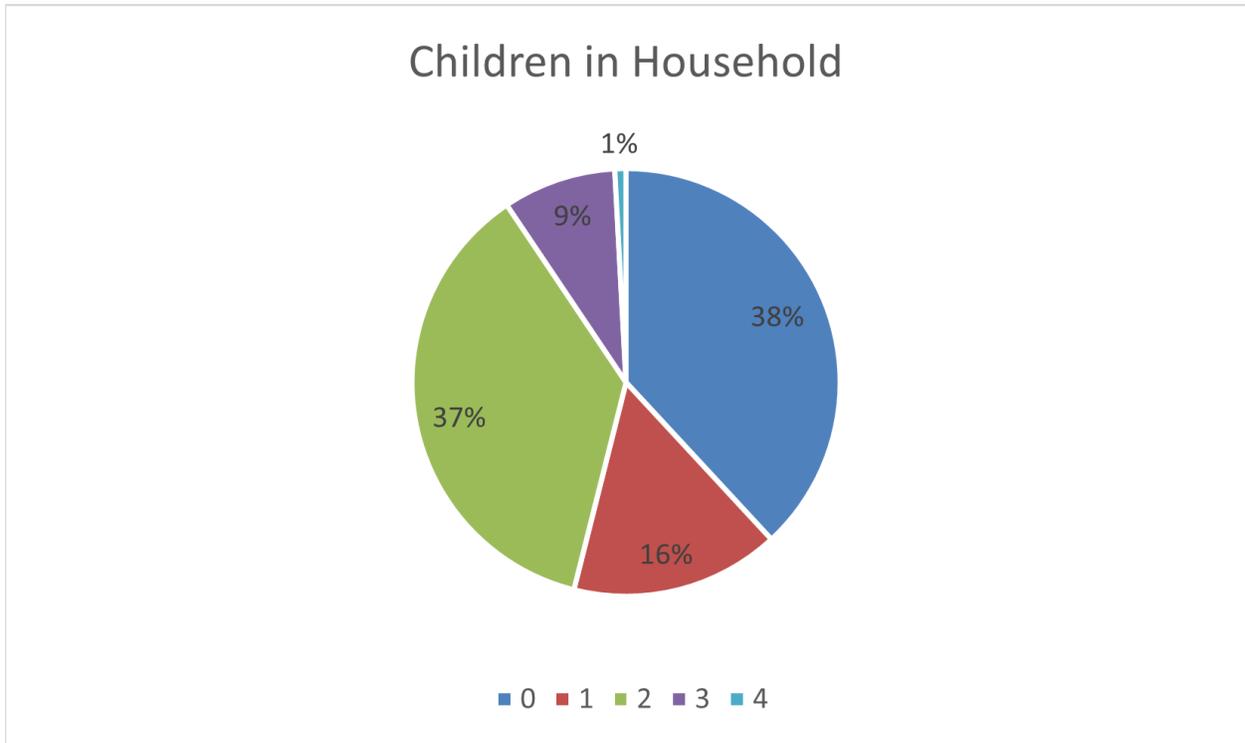
An open response was provided for people to indicate other ways in which they use Butterfield Road. The most common responses were:

- Travel to errands and shopping
- Recreational activities *on* Butterfield Road (such as jogging or dog walking)
- Recreational activities accessed *via* Butterfield Road (such as off-street trails)

Parents

The survey asked respondents how many children under the age of 18 live in their household. For privacy purposes, the exact household composition was not determined, but due to the initial safety effort being spurred by parents who felt their children were not safe traveling along Butterfield Road, it was decided that it would be helpful to report comfort and use separated by children in the household.

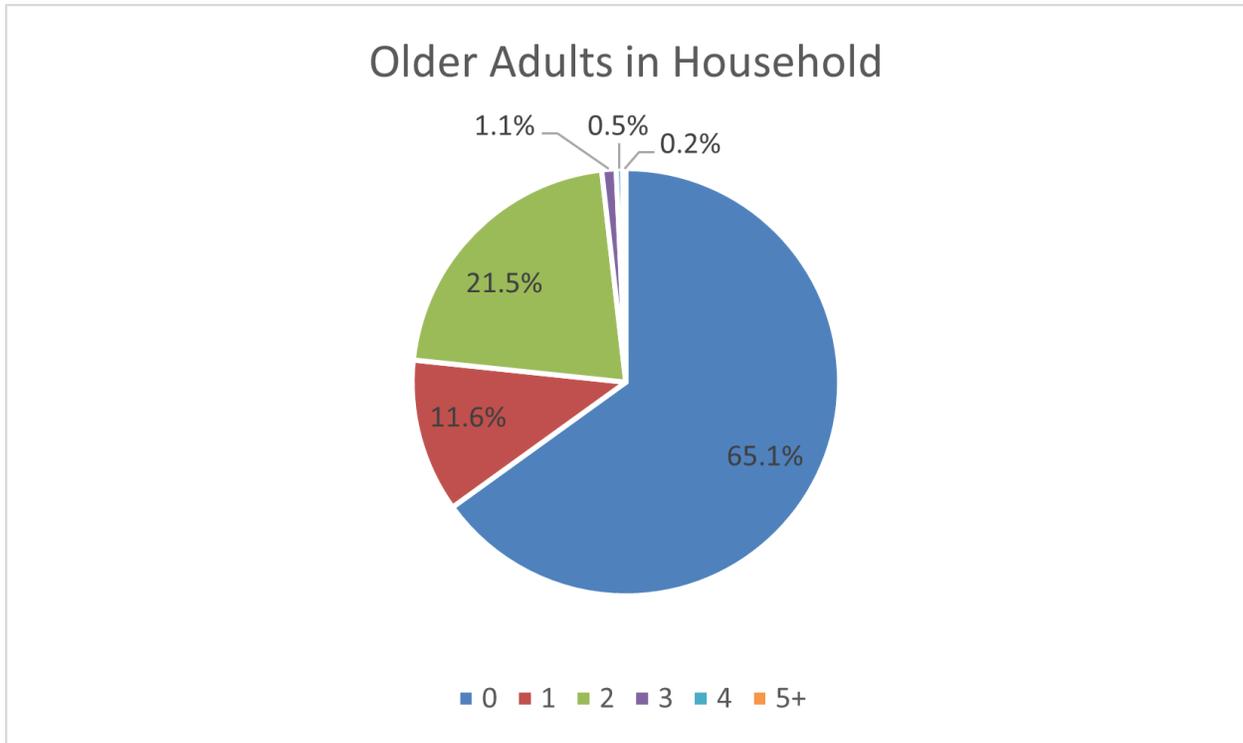
Most respondents (93%) answered the question about how many children under 18 were in their household. Of those a majority (62%) had at least one child. In total, respondents to the survey are parents to 980 school-age children.



Older adults

Respondents were asked how many older adults (65 and above) live in the household. Research has shown that older people are disproportionately likely to be victims of pedestrian-involved crashes, and more likely than younger people to be severely injured in such a crash. Given the importance of remaining active and preserving independence for older people, this was considered an important variable.

A similar share (93%) of respondents indicated the number of older adults in their household. Just over one-third of respondents had older adults in the household. Most of those households had one (11.6%) or two (21.5%) older adults. In total, the survey captured households with 509 older adults.



Home zip

While the largest share of respondents completing the survey live on the Butterfield Road Corridor, a number of frequent users live outside of it. The table below shows the nearest zip codes on a map and the number of respondents from each.

City/Town	Zip Code	%
San Anselmo	94960	79.8%
Fairfax	94930	7.6%
Terra Linda	94903	3.5%
Central San Rafael	94901	2.1%
Novato	94949/94947/94945	1.6%
Mill Valley	94941	0.9%
Greenbrae/Kentfield	94904	0.6%
Larkspur	94939	0.5%
Tiburon	94920	0.5%

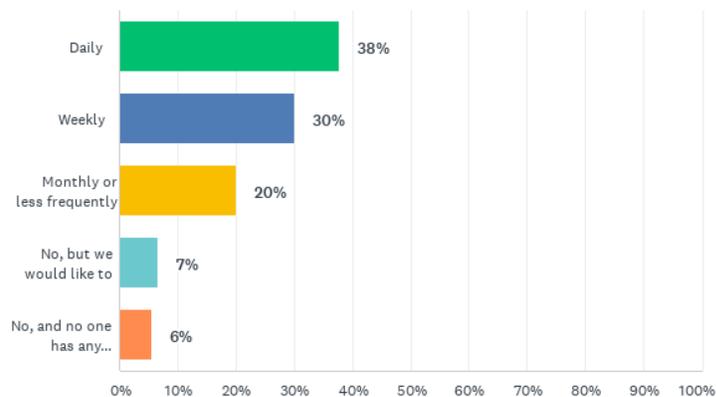
Corte Madera	94925	0.5%
All Others	-	2.3%

Because addresses were not requested, it's not possible to exactly determine the share of people on the Butterfield Road Corridor who completed the survey. However, 681 respondents from the 94960 zip code represent 10.8% of the 6,283 households living in the zip code (which covers a larger area than the Butterfield Corridor)

Use and comfort

One of the goals of the survey was to assess the comfort level of frequent and infrequent active transportation users of Butterfield Road. Respondents were asked how frequently they travel by foot, by bicycle, or by other active modes on Butterfield Road. A majority of respondents travel by active mode either daily (38%) or weekly (30%). Unsurprisingly, among people who live on Butterfield or a street accessed by it, the share of people using it daily is even higher (51%).

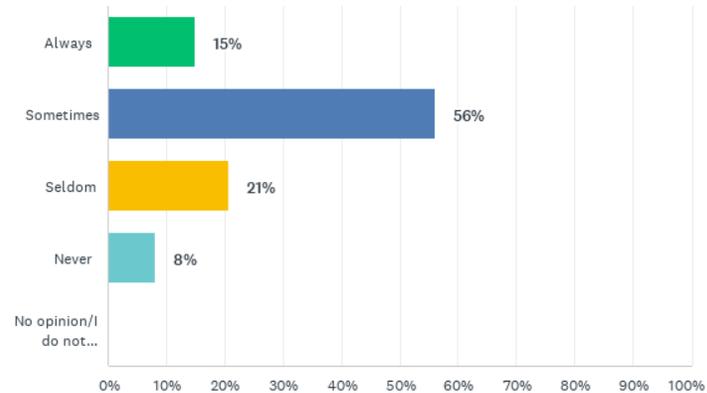
Q2 Do you or anyone in your household walk, roll, scoot, skate, or ride a bicycle on Butterfield Road?



A small share of respondents said that they do not travel on Butterfield Road but would like to (7%), and a roughly equivalent number say that they do not and have no interest in doing so (6%).

Respondents were asked whether they or members of their household feel safe walking along, crossing, or riding along Butterfield Road, and were given a four-option scale of “Always,” “Sometimes,” “Seldom,” or “Never.”

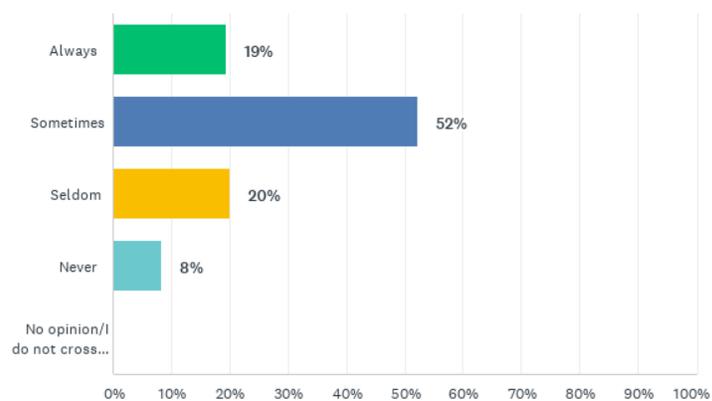
Q3 Do you (and members of your household) feel comfortable walking/rolling/scooting/skating on Butterfield Road?



The results indicate that few people always feel comfortable walking/rolling/scooting on Butterfield Road (15%), with a majority indicating that they feel comfortable sometimes (56%) and smaller shares responding “seldom” (21%) or never (8%).

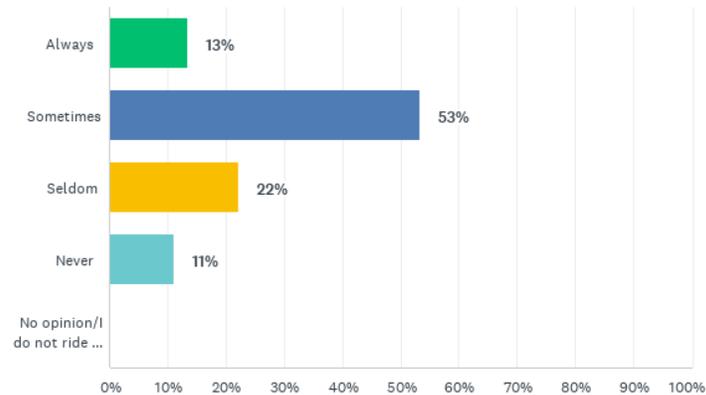
Responses were largely similar when asked about crossing the road, with a slightly higher share of people saying they were “always” comfortable (19%), and roughly equivalent shares in reporting that they are “sometimes” (52%) or “seldom” (20%) comfortable.

Q4 Do you (and members of your household) feel comfortable crossing Butterfield Road on foot?



Responses indicate that riding a bicycle along the road is the least comfortable experience, with nearly as many indicating that they are “never” comfortable (11%) as “always” comfortable (13%), and a large majority indicating they are either “sometimes” (53%) or “seldom” comfortable (22%)

Q6 Do you (and members of your household) feel comfortable and safe riding a bicycle on Butterfield Road?



Frequent users vs infrequent

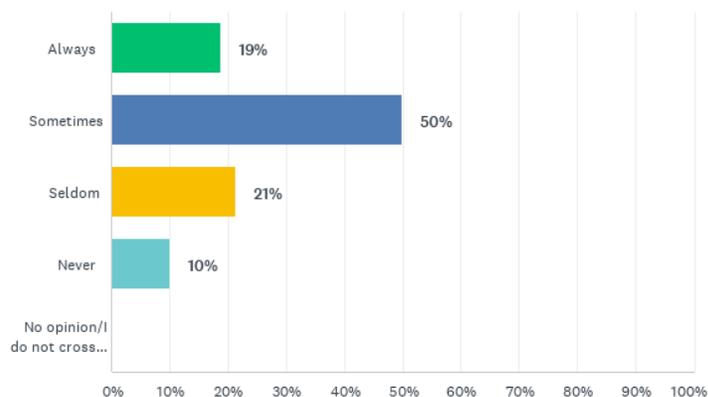
Analysis was conducted to determine whether daily users of Butterfield Road perceived any difference in comfort level, as an understanding of the road may increase or decrease perceived comfort.

Reliably across respondents who walk along, walk across, or ride along Butterfield Road, daily users reported lower levels of comfort than weekly or monthly users, a fact which may run counter to expectations.

Community center crossing

The Safety Committee requested that the survey specifically question respondents about the crossing at the Sleepy Hollow Community Center (Irving Drive). Unsurprisingly, the question was answered by only a subset of respondents (525). The results were similar to perceptions of safety crossing at other locations on Butterfield Road, with half of respondents indicating “sometimes” (50%) and roughly equivalent amounts saying “always” (19%) and “seldom” (21%).

Q5 Specifically, do you feel safe crossing Butterfield Road on foot at the Sleepy Hollow Community Center?



Collisions

A primary goal of the survey was to identify collisions that had previously gone unreported. While data from the Statewide Integrated Traffic Records System (SWITRS, a database that catalogs all of California's injury traffic crashes) serves as a helpful starting point, it has shortcomings when evaluating heavily trafficked active transportation corridors.

First, SWITRS excludes property damage only (PDO) collisions, meaning that any crash that *does not* result in a personal injury is not recorded (though it might result in a damaged automobile or bicycle). Second, research has shown that solo crashes (e.g. someone crashing a bicycle on a pothole) have a very low report rate. This should be unsurprising - if someone wrecks their bike, the first thought is not to call the police. Third, research also indicates that crashes involving vulnerable road users go underreported, particularly those resulting in less than serious crashes.

The SWITRS data indicates that there were nine bike- or pedestrian-involved crashes on Butterfield Road between 2011 and 2020. One of these crashes was fatal (a pedestrian killed in a crosswalk at Caleta Ave. in 2019) and one resulted in a serious injury (a bicyclist that appears to have struck a parked car at Butterfield Ln. in 2019).

That said, it was considered possible that there were more collisions that did not find their way into the database. And though these unreported crashes may be, on average, less serious than the reported crashes, they are nonetheless important. Injuries exact both a physical and mental toll, and even non-injury crashes can result in trauma that causes travelers to think twice about attempting to walk or ride on a street again.

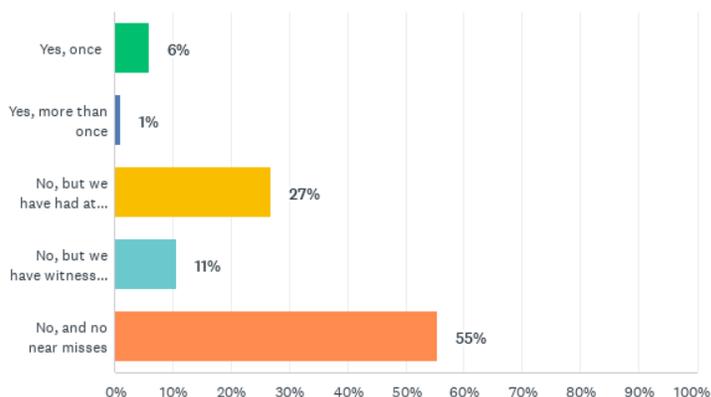
Bike Collisions

Number, type, and date

In total, survey respondents reported 72 bicycle crashes on the corridor. Of these, 50 were known to be between 2015 and the present date (several crashes occurred either earlier than that, or the respondent did not provide an estimated date). The year 2021 alone saw 17 collisions among responding households.

In addition to the 7% of respondents who had been involved in one or more crash, an additional 11% of respondents (95 people) have witnessed a bicycle crash, and over a quarter (27%) had had at least one near miss.

Q7 Have you or anyone in your household had a bicycle crash on, or crossing, Butterfield Road?

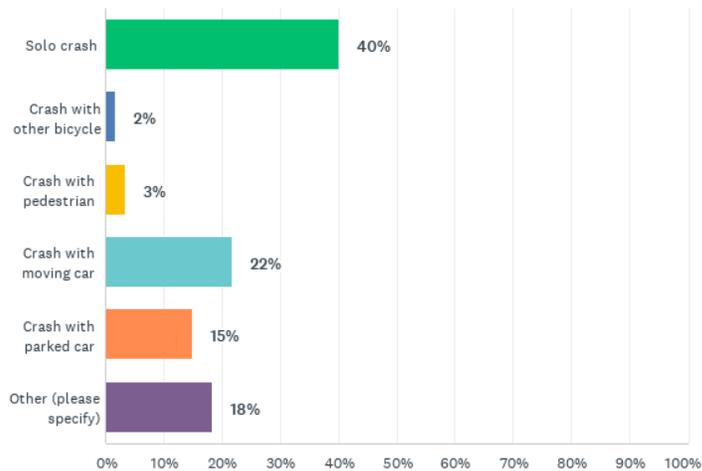


Of these 72 crashes, 54 of them (75%) occurred to people who indicated that they live on Butterfield Road or a street accessed by it.

Respondents were asked to indicate the type of crash. Because of limitations in the survey software, only the most recent crash was described (a total of 60 crashes). The most common type of crash was a solo crash (40%, or 24 crashes). Over one-third of people collided with cars, either moving (22%, 13 crashes) or parked (15%, 9 crashes). One person crashed with another bicycle and two people crashed with pedestrians.

Two of the “other” crashes involved a trash/recycling bin placed in the bike lane or shoulder.

Q9 Please select the nature the crash (or if multiple, the most recent)



Location

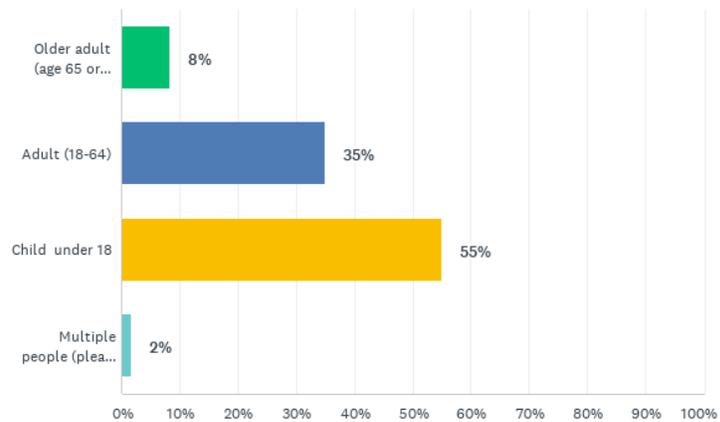
Respondents were asked to indicate the intersection closest to the location of their household member's crash. Crashes were distributed across the corridor with several distinct hotspots. Of the 54 crashes for which a location was provided, 7 occurred at Fawn Drive (the bicycle-through route between San Anselmo and Terra Linda), and 6 at Green Valley Court (the entrance to Hidden Valley Elementary School). Suffield Avenue (an unusual intersection configuration) and Legend Road both saw 5 bicycle crashes.

Aside from Legend Road, all of these hotspots were notable in that a much larger share of the crashes involved motor vehicles. Three of the 6 crashes at Green Valley Court involved a moving car, and 2 more involved a crash with a parked car. Three of the crashes at Fawn Drive were with parked cars and 1 was with a moving car. Four of the crashes at Suffield Avenue involved a moving car, and the remaining one was a crash where the rider swerved to avoid hitting a car door opened in front of them.

Victim type

Though Butterfield Road sees a wide variety of bicycle users, the majority of riders involved in crashes were children under the age of 18. Roughly one-third of crash victims were adults between 18-64 with 8% being older adults.

Q10 Who in your household was involved in the crash?

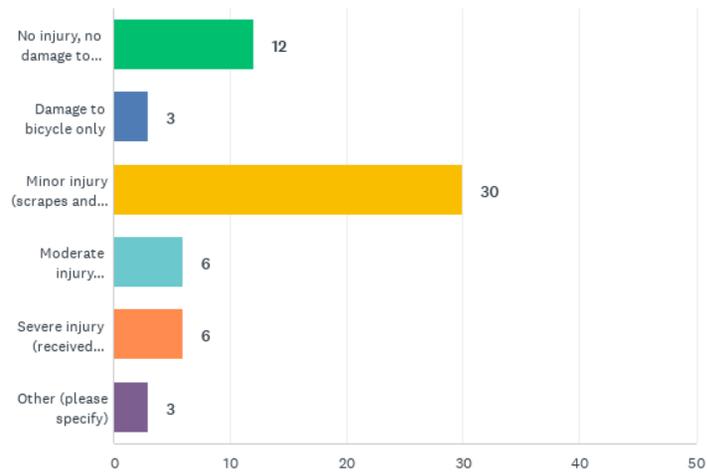


Severity

As discussed earlier, the vast majority of traffic crashes result in either property damage only or minor injuries. However, even those can leave a mark, whether financial, physical, or emotional. This is reflected in the data received from the survey. The lion's share of crashes results in either no injury or damage (12 crashes), damage to the bicycle only (3 crashes), or minor injury (30 crashes).

However, 14 crashes (a figure that includes two "other" responses) resulted in moderate or severe injuries to the riders.

Q14 What was the result of the crash?



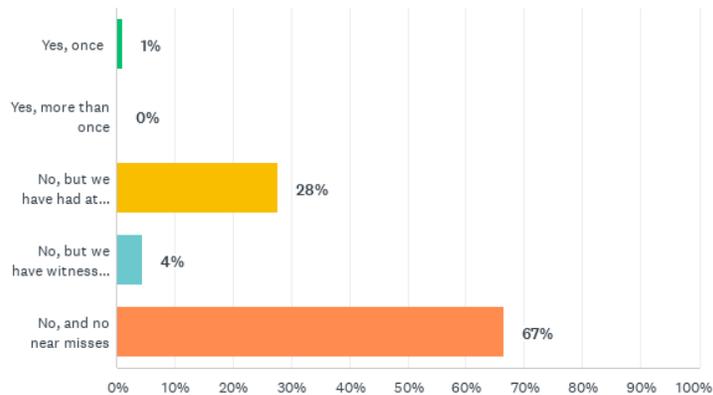
Pedestrian Collisions

Number, type, and date

In total, survey respondents reported 11 pedestrian crashes on the corridor. However, analysis of the responses found that only 6 of those crashes were properly entered (4 involved dogs and 1 involved a car-only crash). As such, the figures involved in this section are not particularly useful.

In addition to these crashes, 4% of respondents (39 people) have witnessed a pedestrian-involved crash, and over a quarter (28% or 243 people) had had at least one near miss while walking.

Q8 Have you or anyone in your household been hit by a vehicle while walking on, or while crossing on foot, Butterfield Road? (this includes using a wheelchair, scooter, or skateboard)



Location

Because fewer pedestrian-involved crashes were reported, it was not as clear there were hotspots. Two crashes did occur at Green Valley Court (near Hidden Valley Elementary School), with one crash occurring each at Fawn Drive, Rutherford Avenue/Meadowcroft Court, and Caleta Avenue. One crash report did not provide a location.

Victim type

Three of the victims were adults and 2 victims were children. One crash report did not include the age of the victim. As mentioned earlier, 3 people reported crashes involving their dog.

Severity

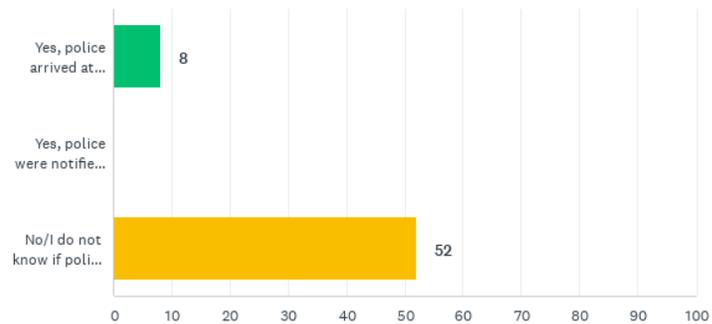
Of the five crashes where a severity was reported, 1 was severe (requiring hospitalization), 2 were minor (scrapes and bruises), and 2 did not result in an injury.

Police reporting

One purpose of the survey was to determine the degree to which the number of reported crashes on the corridor represented a subset of the full number of collisions. As noted above, the only crashes that make it into the statewide database are injury crashes where a police report was filed.

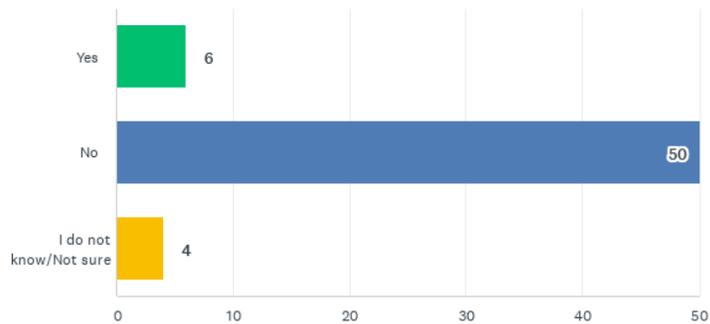
As such, the survey asked those who had been involved in crashes to determine the degree to which police had been involved.

Q11 Were police made aware of the crash?



Of the 60 people who responded to the question, only 8 indicated that police arrived on the scene of the crash.

Q12 Was there a police report filed for the crash?



Only a small minority of the total crashes reported in the survey resulted in a formal report being filed with law enforcement. Among the crashes described in the survey, 5 out of every 6 crashes *did not* result in a report, suggesting that the 10 crashes in the past 10 years found in the SWITRS database represent a significant undercount of the full set of crashes.

Support for changes

Goal 3 of the survey was to assess support in the community for reallocating the roadway space in the County portion of Butterfield Road.

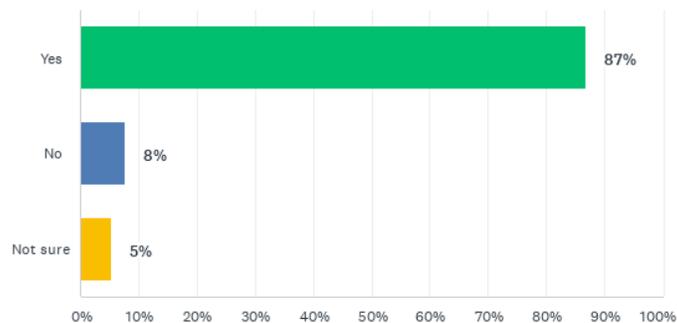
Parked cars as barriers

As previously described, Butterfield Road has Class 2 (i.e. paint-only) bike lanes from Sir Francis Drake Blvd to Oak Knoll Dr (the northern limit of the Town of San Anselmo). At that point the right-of-way widens significantly, but the shoulder has no parking limitations and is used as de facto on-street parking (despite being striped and stenciled as a bike lane).

Due to cars parking on the shoulder and the lack of dedicated sidewalks or bike lanes, the survey included a question asking whether respondents had seen bicycle users or pedestrians forced to enter the roadway to navigate around parked cars.

This phenomenon was widely recognized, with 87% of respondents indicating that they had observed the behavior. This has significant safety implications, given that the road is signed for a 30 mph speed limit in this section.

Q25 While traveling on Butterfield Road, have you seen pedestrians or bicyclists enter the traffic lane to get around a parked car?



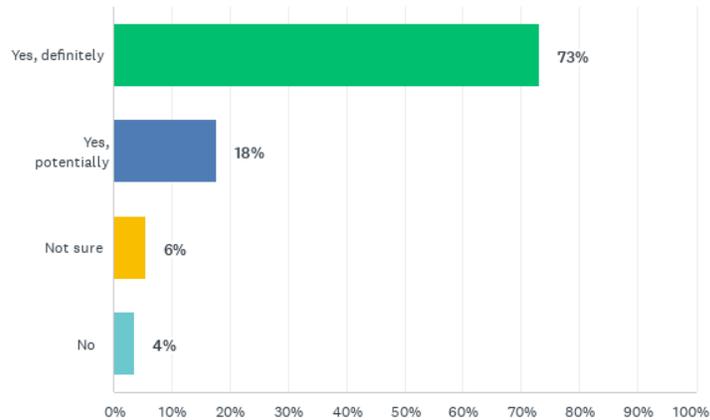
Bike lane for parking

Respondents were asked whether they would support a reallocation of public street space to provide a bike/walk lane, even if it meant removing some on-street parking. Despite parking being an often-controversial subject, there was strong support for removing the parking and replacing it with a space for walking or biking.

Among all respondents, over 90% indicated that they definitely or potentially supported removing parking and replacing it with a bike/walk lane. Only 4% opposed such a plan with 6%

being unsure.

Q26 Would you support a designated walk/bike lane on Butterfield Road to keep pedestrians and children riding to school out of the path of cars, even if it entailed removing some on-street parking?



These figures held even when responses were limited to residents of the Butterfield Road Corridor (Yes definitely: 66%, Yes potentially 21%) and when limiting to the Sleepy Hollow Homes Association (Yes definitely: 66%, Yes potentially 20%).

Next steps

Open Response

The survey also provided a question where respondents could give qualitative feedback or other recommendations for improving safety on Butterfield Road. Conducting qualitative analysis on this will be time-consuming and has not yet been initiated.

Mailing list

Respondents were able to leave an email address if they wished to be notified about further safety updates on Butterfield Road (and be entered into a raffle for an Ortlieb bag, offered by Marin County Bicycle Coalition). A total of 511 emails were obtained this way. Steps should be taken to maintain this mailing list for future correspondence.