

# *Rider Demographics & Travel Patterns*



2022

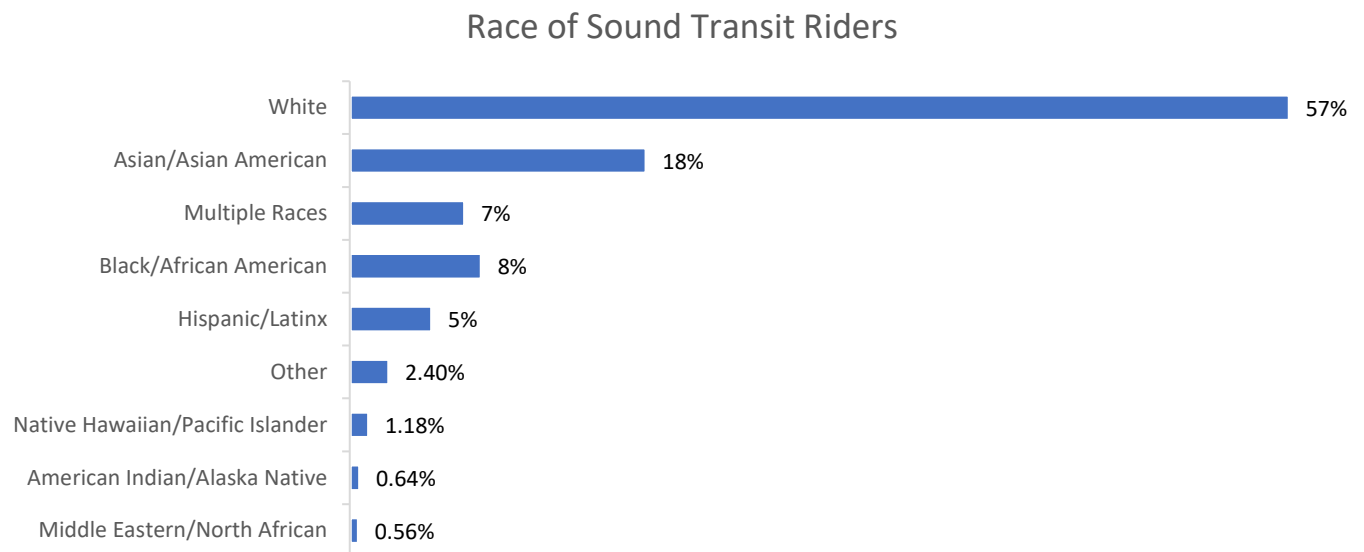
## DATA & METHODOLOGY

Sound Transit's last comprehensive survey of rider demographics was conducted on board trains and buses from 2018-2019. The survey chose a random sample of weekday trips between 6 am and 9 pm on which to survey every rider, resulting in a sample of 28,000 responses that is mostly representative of the ridership. As discussed more in the conclusion, this methodology does have limitations that result in certain groups being underrepresented. However, Sound Transit attempted to correct some of this bias by weighting survey results based on known ridership patterns such as the share of boardings by mode, time of day, and segment where the respondent boarded or alighted. Weighting means that if the share of actual responses received with a certain characteristic does not match the share of known riders with that characteristic, we can multiply the responses from underrepresented groups to ensure that equal representation is achieved.

Survey respondents were asked about key demographic characteristics and travel behaviors. Data is summarized below for both minority and non-minority riders.

### Race

Sound Transit riders were 57% non-minority (white) and 43% minority (all other races).



Sound Transit does not collect information on the national origin of its riders.

### Languages Spoken

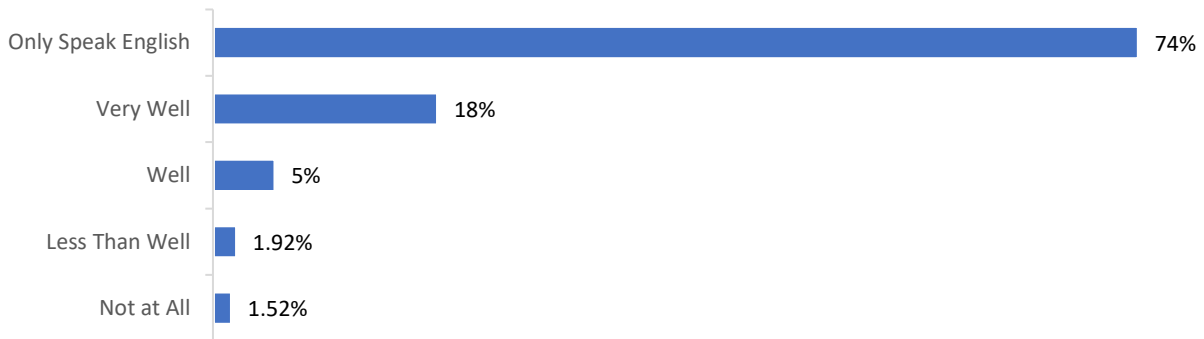
Sound Transit does not collect information on language spoken on our ridership survey. We rely on Census data about languages spoken in a region. The top languages spoken by Limited English Proficiency residents in the Sound Transit district are:

Language	Share of LEP residents
Spanish	27%
Chinese (Mandarin, Cantonese)	16%
Other Asian and Pacific Islander Languages	11%
Vietnamese	10%
Russian, Polish, and other Slavic Languages	8%
Other Indo-European Languages	7%
Korean	7%
Tagalog	5%

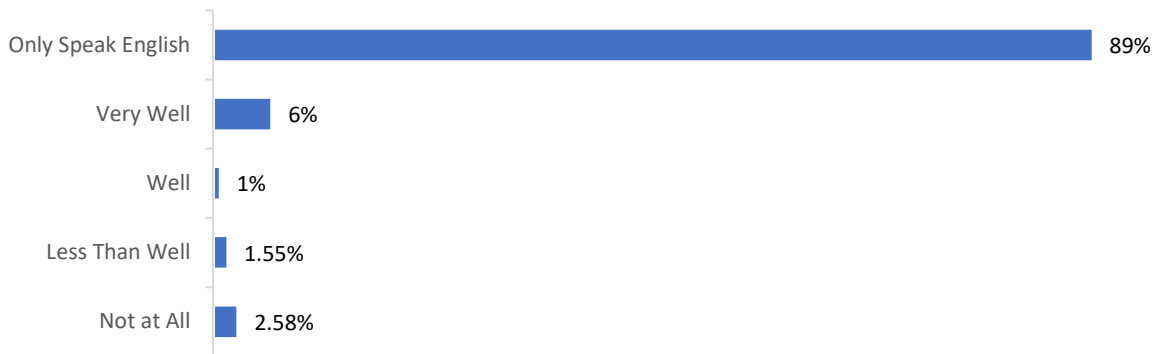
### English Proficiency

Minority riders were more likely than non-minority riders to speak another language at home and have limited English proficiency (defined as speaking less than “very well”), although the majority of both groups spoke only English at home or were proficient in English.

English Proficiency of Minority Riders



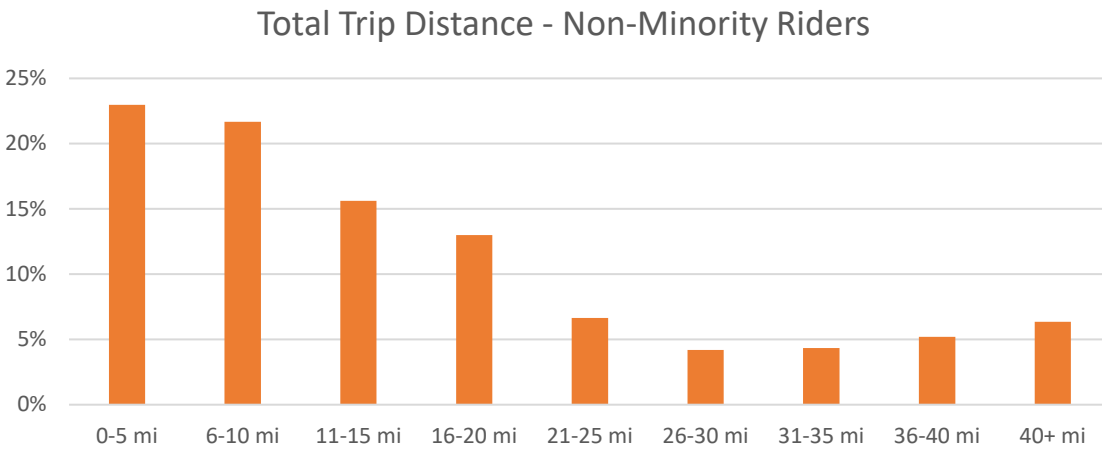
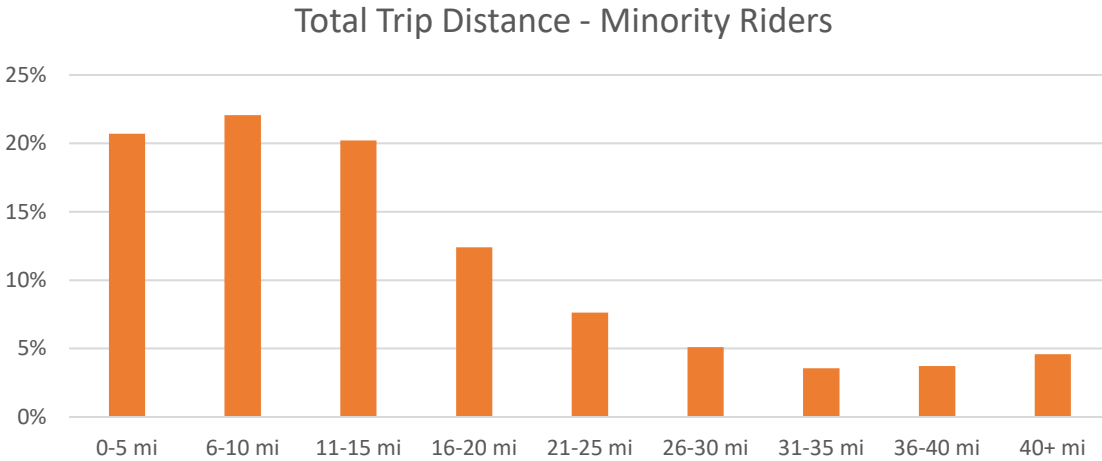
English Proficiency of Non-Minority Riders





## Total Distance Travelled

Riders were asked for the total distance that they planned to travel one-way on the journey they were on when surveyed. Minority and non-Minority riders had similar patterns in the total distance they planned to travel. Most people in either group were traveling less than 15 miles total.



## Trip Purpose

Non-minority riders are more likely to use transit for commuting purposes, that is, trips between home and work, shown as blue on the charts below. This likely reflects the fact that these riders are also more likely to commute at the peak hour, when transit service is most frequent.

Accordingly, non-minority riders are more likely to use other travel modes, such as driving, for non-commuting trips where driving is more convenient.

On the other hand, minority riders were slightly more likely to use transit to travel to destinations other than home or work. These destinations could include appointments, childcare pick-up, shopping, and visiting friends or family. Many riders surveyed were traveling in between one of these destinations and home (shown as orange in the chart), or not traveling to or from home at all (shown in gray). They could have been traveling in between work and an appointment, or in between shopping trips, for example. This likely indicates a greater reliance on transit overall, because transit may be less convenient when used for these purposes outside of central business districts and peak hour travel.

### Trip Purpose - Minority Riders

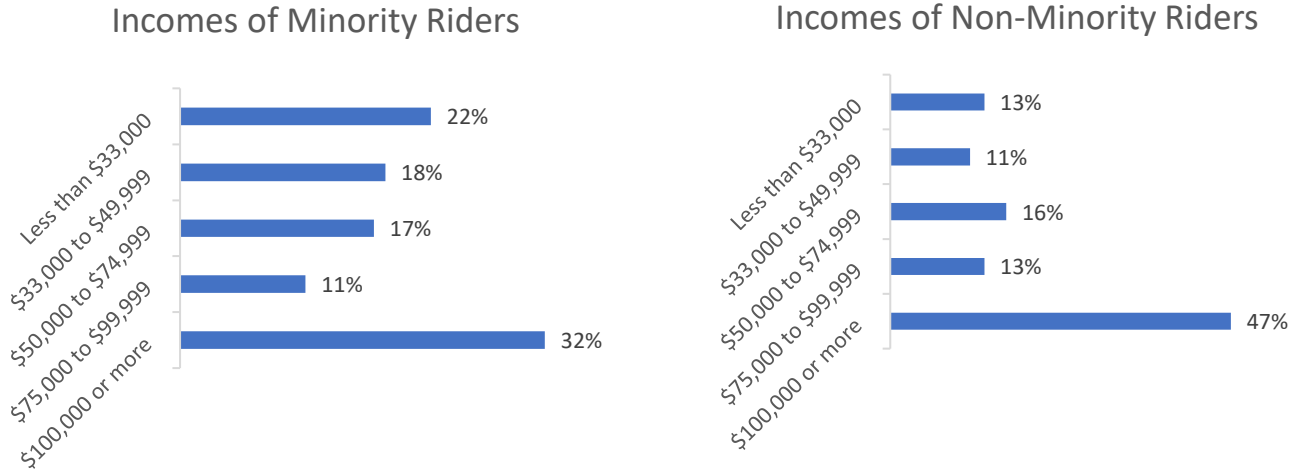


### Trip Purpose - Non-Minority Riders



## Income

Compared to non-Minority riders, Minorities were more likely to earn less than \$75,000 per year. This is reflective of income inequality in the region and the country as a whole.



## Conclusion

The data show that Sound Transit ridership is diverse, with minority riders generally more likely than non-minority riders to be dependent on transit, have lower incomes, and speak other languages.

This survey data used in this analysis does have some limitations. In any survey, there is a margin of error that represents uncertainty we have when attempting to generalize the characteristics of a sample to an entire population. Additionally, though this survey was available in multiple languages, research on survey methodology shows that Limited English Proficient respondents may still be less likely to complete a survey because it is more difficult to interact with the surveyor, request the language they need, or understand the benefit of completing a survey.

Another limitation is that the survey was conducted on weekdays only from 6 am – 9 pm. Thus, riders on weekends or other times of day are not well represented; these riders are more likely to be minorities and be LEP. Finally, on-board surveys can tend to underrepresent riders who are making short trips, as these riders may feel they don't have the time to complete the survey.

Given these limitations, it is likely that the actual share of minority riders on Sound Transit is higher than 43%. Future surveys will attempt to bridge this gap by surveying on weekends and in the late evenings or early morning hours. Surveyors could also prepare better outreach materials in other languages to increase the chance that a LEP rider would understand what the survey is for and choose to participate. Sound Transit staff will use this data with caution and understand these caveats when reporting these statistics.