**Reimagining Traffic Safety & Bold Political Leadership in Los Angeles Report**

**Detailed Methodology**

**Data Sources**

We use three main sources of data to explore trends in vehicle stops and arrests. The source we use depends on the level of analysis given that not all datasets include detailed geographic information that is publicly accessible and allows for analysis by Council District.

1. LAPD Vehicle and Pedestrian Stop Data (2018-2020): This is a dataset published by the LAPD on the city’s Open Data Portal. It includes vehicle and pedestrian stop incidents in the city. We rely on this dataset for geographic analysis of vehicle stops by Council District as it is the only current source of detailed stop data at small neighborhood levels. This dataset is limited in its information about stops, only detailing which Division made the stop, whether it was a vehicle or pedestrian stop, and whether any post stop action was taken. It does not include the stop reason or what action was taken.
2. LAPD Arrest Data (2018-2020): We rely on this dataset published by the LAPD on the city’s Open Data Portal to analyze disparities in arrests for vehicle code charges. It includes geographic information that allows us to analyze arrests by Council District.
3. California Department of Justice Racial and Identity Profiling Act (RIPA) Data (2019): ACLU provided us RIPA data they received under a Freedom of Information Act request. RIPA data includes detailed information about vehicle stops, including the reason for the stop, the actions taken, and the result (whether an infraction, warning, or other).[[1]](#endnote-1)

We use American Community Survey 5-Year Estimates (2015-2019) for population estimates by race and ethnicity (Table DP05), and for poverty rate estimates by race and ethnicity (Table S1701).

**Definition of terms**

*Vehicle Stop Definitions*

For our analysis by City Council District and neighborhood, we filter the LAPD Vehicle and Pedestrian Stop Data just for vehicle stops. To analyze stop duration for traffic violations, we rely on the CADOJ RIPA data. We include stops where the stop reason listed was a traffic violation and exclude request for service calls.

*Arrest Definitions*

We include arrests for vehicle code charges and add an additional filter for arrests for Moving Traffic Violations or Miscellaneous Other Violations.

*Race/Ethnicity Definitions*

The US Census Bureau allows people to self-identify their race or ethnicity.[[2]](#endnote-2) The race categories for the population estimates are provided as single-race categories that are Latinx-exclusive, meaning that each race group does not include people who identify as multiracial or as Latinx (e.g. the category for White Angelenos is non-Latinx White alone), and people of all races who identify as Latinx are grouped together. The race categories for the poverty rate estimates are single-race Latinx-inclusive, meaning that each race group does not include people who identify as multiracial, but they do include people who identify as Latinx (except White, which is White non-Latinx). See the limitations of this data below, in the section Limitations.

In the LAPD traffic stop and arrest data, the race and ethnicity of the person(s) involved in the incident is their perceived race and ethnicity as determined by the officer.[[3]](#endnote-3) See the limitations of this data collection method below, in the section ‘Limitations’.

**Calculations**

*Calculating Rates by Council District*

Traffic stop and arrest rates were calculated using the LAPD Vehicle and Pedestrian Stop Data and Arrest Incident Data from the City of Los Angeles, 2018-2020. Incidents were reported by LAPD reporting district. We selected only records for vehicle-related incidents and aggregated the total number of stops and arrests by race or ethnicity to the reporting district. Reporting districts were assigned to city council districts by proportional allocation method. For example, if 100% of a reporting district’s area overlapped with a city council district, that city council district received 100% of total stops and arrests from that reporting district. If 50% of a reporting district’s area overlapped with a council district, that council district received 50% of the reporting districts total stops and arrests. This method was also used to estimate the population in each city council district, using population estimates from census tracts.

We calculated the three-year average of traffic stops and arrests by race and ethnicity in each city council district in order to smooth out anomalies in the data for any one year. The stop and arrest rates were calculated with the three-year average and the estimated population in the council district.

*Calculating Rates by Neighborhood (Basic Car)*

Traffic stop and arrest rates were calculated using the LAPD Vehicle and Pedestrian Stop Data and Arrest Incident Data from the City of Los Angeles, 2018-2020. Incidents were reported by LAPD reporting district. We selected only records for vehicle-related incidents and aggregated the total number of stops and arrests by race or ethnicity to LAPD Basic Cars,[[4]](#endnote-4) a geographic unit defined by the LAPD that approximates neighborhoods. We calculated a three-year average of stops and arrests in order to smooth out anomalies in the data for any one year, and then calculated the stop and arrest rates using the estimated population for each Basic Car.

We estimated the population by race and ethnicity in each Basic Car using the proportional allocation method to assign census tracts to Basic Cars, for example, if 50% of a census tract’s area overlapped with a Basic car, then that Basic Car received 50% of the estimated population from the census tract. The stop or arrest rate was not calculated for a race or ethnic group if a Basic Car had fewer than 100 people for that race or ethnic group. We also do not include poverty rates by race and ethnicity where fewer than 100 people for that race or ethnic group had estimated poverty counts.

**Limitations**

*US Census American Community Survey Race/Ethnicity Data*

One limitation of using single-race non-Latinx race definitions is that it deflates the true size of the American Indian or Alaska Native (AIAN) and Native Hawaiian or Other Pacific Islander (NHPI) communities, as many people who identify as AIAN or NHPI also identify as Latinx or as other races.

*LAPD Race/Ethnicity Data*

Race and ethnicity in stop and arrest data is based on LAPD officers’ reports, rather than self-identification by the persons involved in each incident. Officer perceptions of the people they stop are the proper lens to use for purposes of understanding racial profiling.

However, from a data accuracy standpoint, it also means that the stop and arrest rates for certain groups may be depressed, or in some cases absent, due to misidentification by officers. In other words, when we combine total population estimates from the American Community Survey, which is based on self-identification, with data based on officers’ reports, we can end up with rates not fully reflective of the experiences of every group. For example, the number of people identified as Other race by LAPD officers is disproportionate to the number of people who self-identify as Other race according to the American Community Survey. Therefore, the Other rate of stops and arrests skews higher compared to other groups because of this difference in reporting. Even so, we include this rate because the category Other is still capturing important stop and arrest data for people of color in Los Angeles. This approach is consistent with standard data analyses on racial and identify profiling. Additionally, rates for Asian subgroups and Native Hawaiians and Pacific Islanders are often missing due to few if any stop and arrest records identifying incidents for these groups. This could be due to officers misidentifying the race and ethnicity of these individuals.

*Geographic Conversions*

The proportional allocation method was used to estimate the number of traffic stops and arrests in each city council district, as well as to estimate the population in Basic Cars and the city council districts. The primary limitation of this method is that it assumes that the geographical spread of events and people is even throughout the geography—for example, that stops and arrests are spread evenly throughout a reporting district. However, without having the precise coordinates of traffic stops, for example, this method is the best estimate available. In order to account for the limitations of this method when analyzing population estimate, we have excluded stop and rate calculations where the population group is fewer than 100 people.

1. Recently the CADOJ published their 2019 RIPA data. We will explore updating this analysis to the newly available data. While RIPA data does include cross street information, we found these cross streets extremely difficult to geocode without a high degree of error and missing stops. [↑](#endnote-ref-1)
2. The race groups include: American Indian or Alaska Native, Asian, Black, Native Hawaiian or Other Pacific Islander, Other, Two or More Races, and White. People are also able to identify their ethnicity as Hispanic or Latino (Latinx), or Not Hispanic or Latino. [↑](#endnote-ref-2)
3. The LAPD descent categories are: Other Asian, Black, Chinese, Cambodian, Filipino, Guamanian, Hispanic/Latin/Mexican, American Indian/Alaskan Native, Japanese, Korean, Laotian, Other, Pacific Islander, Samoan, Hawaiian, Vietnamese, White, Unknown, and Asian Indian. We grouped the categories Other Asian, Chinese, Cambodian, Filipino, Japanese and Korean into the category Non-Latinx Asian. Records for people of Laotian, Vietnamese or Asian Indian descent were not included in the data for stops or arrests from 2018-2020. We grouped the categories for Pacific Islander, Samoan, Guamanian and Hawaiian under Native Hawaiian or Other Pacific Islander. [↑](#endnote-ref-3)
4. Basic Cars are geographic units approximating neighborhoods, for more information see the [LAPD Basic Car Plan online.](https://www.lapdonline.org/search_results/content_basic_view/6528) [↑](#endnote-ref-4)