Attachment C — Demographics Analysis of Express Lane Regions

The demographic data for customers that use express lanes across the country are very difficult to obtain, as doing so requires detailed analyses of toll agencies' account holder data and user data, weighted to reflect the relative frequency of use for each person. While Metro has performed such an analysis of its users in the past, most peer agencies have not, and in those cases the data necessary to conduct a rigorous and precise user-focused comparative demographic analysis is not possible. Therefore, as a proxy for these data, this analysis considers census data for the areas (typically the encompassing county or counties) that are expected to function as the primary catchment areas for the corresponding express lanes demand.

The express lane regions considered in this analysis are listed in Table 1 below. Demographics are not provided for those areas of the country where express lanes are planned but not yet in operation.

Table 1: Express Lane Regions and Counties

Express Lane Region	Counties or Cities Included
Los Angeles	Los Angeles, Orange, Riverside
Atlanta	Fulton, Henry, Clayton, DeKalb, Gwinnett
Austin	Travis, Williamson
Baltimore	Baltimore City, Baltimore, Harford, Cecil
Dallas/Ft. Worth	Dallas, Denton, Tarrant
Denver	Denver, Adams, Weld, Broomfield, Boulder, Jefferson
Houston	Harris
Minneapolis/St. Paul	Hennepin, Ramsey, Scott, Dakota, Isanti, Anoka, Washington, Chisago
Salt Lake City	Salt Lake, Utah, Davis
San Francisco Bay Area	San Francisco, Alameda, San Joaquin, Santa Clara
Seattle	King, Snohomish, Pierce
South Florida	Miami-Dade, Broward, Palm Beach
Washington, DC	District of Columbia, Montgomery, Arlington, Fairfax, Fauquier, Warren, Stafford, Prince William, Fairfax City, Falls Church City, Manassas City, Fredericksburg City

To evaluate the similarity of a given express lane region to Los Angeles, a data analysis technique involving calculation of the Error Sum of Squares (ESS) was performed to quantitatively characterize the goodness of fit between the two regions. As the ESS is a quantitative measure of the differences between two datasets, the lower the ESS value, the better the match between that region and Los Angeles.

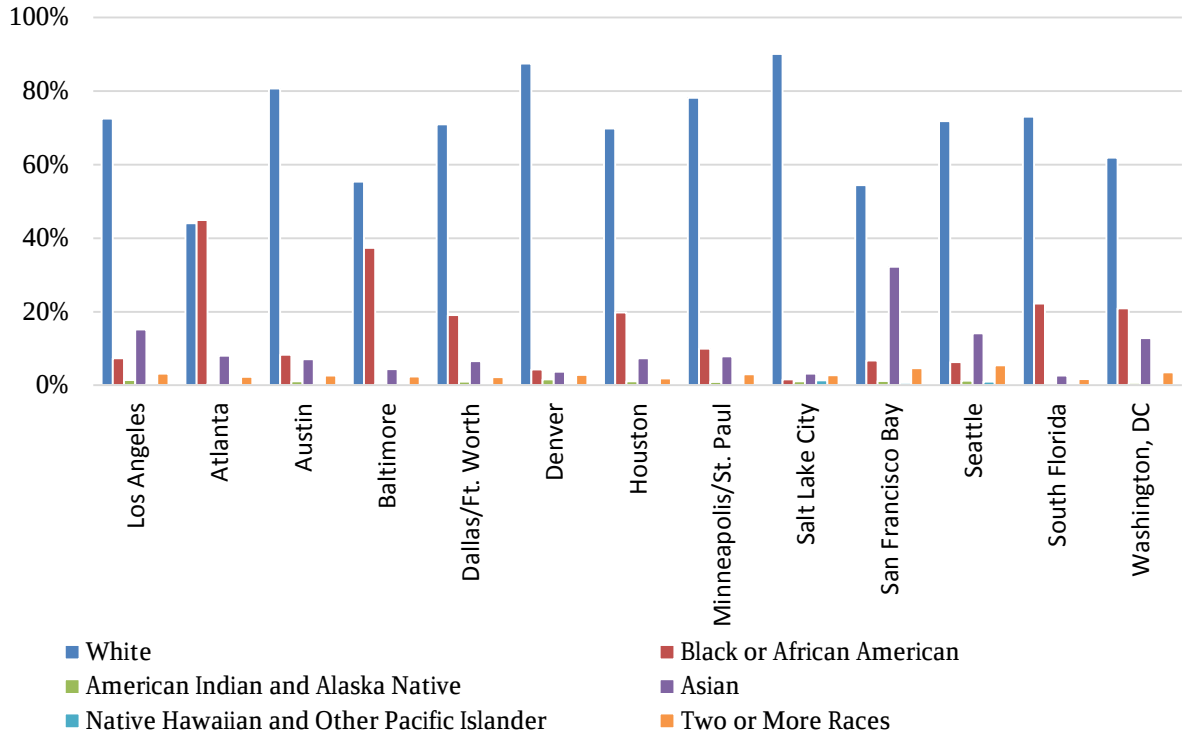
Race

An analysis of census data by region indicates that the Seattle, WA metropolitan area most closely resembles the Los Angeles metropolitan area with respect to racial distribution. The race distributions are presented graphically in Figure 1. Each of the individual regions and their accompanying ESS ratings are provided in Table 2 below.

Table 2: Region Similarity Rankings by Race (combined Hispanic/Non-Hispanic Ethnicities)

City	Difference Score (lower means more similar)
Seattle	0.0008
Minneapolis/St. Paul	0.0093
Austin	0.0135
Dallas/Ft. Worth	0.0216
Houston	0.0225
Washington, DC	0.0305
Denver	0.0366
South Florida	0.0383
Salt Lake City	0.0486
San Francisco Bay Area	0.0619
Baltimore	0.1312
Atlanta	0.2273

Figure 1: Distribution of Population by Race and Region (combined Hispanic/Non-Hispanic Ethnicities)



Income

An analysis of census data by region indicates that the Houston metropolitan area most closely resembles the Los Angeles metropolitan area with respect to income distribution. The income distributions are presented graphically in Figure 2. Each of the individual regions and their accompanying ESS ratings are provided in Table 3 below.

Table 3: Region Similarity Rankings by Income Distribution

City	Difference Score (lower means more similar)
Houston	0.000979
Denver	0.001043
Baltimore	0.001074
Dallas/Ft. Worth	0.001158
Atlanta	0.001201
Austin	0.001465
Minneapolis/St. Paul	0.002212
Seattle	0.002960
South Florida	0.003758
Salt Lake City	0.005044
San Francisco Bay Area	0.010458
Washington, DC	0.021843

Figure 2: Distribution of Population by Income and Region