**Off-Model Calculator Inputs**

Series 14 data needed for 2016 (base year), 2020, 2025, 2035, 2050 (scenario years)

EMFAC SB375 CO2 Emission factors by year

Bikeshare  - Regional model data for each scenario year and MGRA:

Confirmation from planning staff:

* Car substitution rates (regular and ebikes)
* Average bike trip distance (regular and ebikes)
* Bikes / 1,000 population per MSA
* Bike lane supply (miles)
* Number of e-bikes in bikeshare
* Use of 2017 EMFAC CO2 emissions factors

Model Inputs for each MGRA (from Ying):

* Model Year
* Scenario name
* total population
* MSA\_ID
* Bikeshare Flag

Carshare – Regional model data for each scenario year and MGRA:

Confirmation from planning staff:

* Percent membership in one-way carsharing
* Daily VMT reduction per round-trip/one-way carsharing member
* Threshold for urban vs. suburban population density
* Percent of urban/suburban/college employees/college students/military population expected to become carshare members
* Use of 2017 EMFAC CO2 emissions factors

Model Inputs for each MGRA (from Ying):

* Year
* total population
* adult population (pop 18-65 years old)
* total population density (MGRA population / MGRA total area)
* total employment
* college student enrollment
* MSA\_ID
* Carshare Flag
* Univ\_Flag
* MLB\_Flag

Vanpool:

Confirmation from planning staff:

* Average vanpool occupancy
* SANDAG least cost subsidy (by year and van size)
* List of Vanpool ODs
* Average value of time for work trips and marginal disutility of time
* Coordinates of zip code centroids and external gateways

Use of 2017 EMFAC CO2 emissions factorsModel inputs for each MSA OD by year (from Ying):

* Average one-way weekday travel time for non-military
* Average one-way weekday travel time for military
* Daily work trips with one-way distance > 50 mi

Model inputs for each MGRA (from Ying):

* Total population

Model inputs for each MSA (from Ying):

* For each scenario year and MSA, jobs by industry category (SANDAG ABM classification) (really only need emp-fed\_non\_mil, emp\_fed\_mil, and emp\_total

SCAG county total employment forecast

Microtransit -- For each scenario year:

* Disaggregate trip list (indivTripData\_3.csv)
* TAP to TAP Commuter rail transit skim, AM Peak, (total in-vehicle time (mf1036), first wait time (mf1027), transfer wait time (mf1028), fare (mf1030), transfer walk time(mf1033))
* MGRA to TAP walk connectors (walkMgraTapEquivMinutes.csv)
* TAZ-to-TAZ travel time, drive alone toll by medium VOT [STM\_2016.CSV], AM Peak (mf461)
* TAZ-to-TAZ travel distance, drive alone toll by medium VOT [dist\_2016.CSV], AM Peak (mf462)
* Total employment by MGRA
* Total population by MGRA

Pooled Rides – For each scenario year:

* Disaggregate trip list (indivTripData\_3.csv)
* Auto ownership model result (aoResults.csv)
* TAZ-to-TAZ travel time, Drive alone toll by medium VOT [STM\_2016.CSV], AM Peak (mf461) and Midday (mf587)
* TAZ-to-TAZ travel time, Shared-ride 2P HOV toll by medium VOT [HTM\_2016.CSV], AM Peak (mf473) and Midday (mf594)
* TAZ-to-TAZ travel distance, Drive alone toll by medium VOT [dist\_2016.CSV], AM Peak (mf462) and Midday (mf588)