

## 9.4 Transit Fares

Zone-to-zone transit fares are required as inputs to the mode choice model, reflecting boarding fares, transfer discounts, and (where applicable) zonal fares along the transit paths.

### 9.4.1 Transit Pass and Discount Models

By default, SACSIM assumes a potential transit user will pay the [single-ride adult cash fare](#) for each transit trip and pay the price, if applicable, for any transfers. However, significant shares of transit users either use a transit pass or receive a significantly discounted fare.

DAYSIM's transit pass model predicts whether a person would own a transit pass based on his/her age, type, access to transit from his/her home, employment status, and student status. If a person owns a transit pass, then the fare cost of taking a trip by transit is zero. Model users can adjust the coefficients for predicting transit pass ownership or turn the pass ownership model off if desired.

DAYSIM also predicts whether a person will pay a discounted fare, as well as how much that discount is, by applying a percentage discount to the adult cash fare based on the person's age (e.g. for a senior/child discount) and student status (e.g. students ride for free or pay a discounted fare).

Both fare discounts and the transit pass model are configurable in the DAYSIM configuration file, though there is a separate coefficient file for adjusting the transit pass model coefficients.

### 9.4.2 Limits of Transit Fare Estimation

While SACSIM captures the bulk of transit fare types, it cannot capture all of them. Examples of fare types not estimated by SACSIM include day passes and week passes that, respectively, allow unlimited boardings during a 24-hour day or 7-day week. Also, even within the discount factors applied above, SACSIM does not capture the full variation of discounts that apply across different operators, e.g., while one operator allows students to ride for free, another operator may just give them a discounted fare. Ideally, SACSIM would capture all fare policies and variations, but doing so would add considerable complexity to the model while only very marginally improving model accuracy.

### 9.4.3 SACOG Transit Operator Base Fares and Transfer Policies

Table 9-6 lists the undiscounted adult cash fares for operators included in SACSIM. Boardings and transfer fares are defined for each group of transit services.

Note that although fares in Table 9-6 are stated in year 2016 dollars, for the model fare input table, "ptfare.txt", all fares are converted to year 2000 dollars. This is consistent with other dollar cost model inputs such as auto operating cost.

**Table 9-6 Year 2016 Transit Fares (in 2016 Dollars)**

<b>Fare Group</b>	<b>Transit Service</b>	<b>2016 Adult Cash Fare, in 2016 Dollars</b>	<b>Discount(s)</b>	<b>Monthly Passes</b>
1,2	RT LRT & Bus	\$2.75	Seniors, youth	Yes
3	Yolobus Express	\$3.25	Seniors, youth	Yes
4	Yolobus Local / Intercity	\$2.25	Seniors, youth	Yes
5	Roseville Commuter	\$3.25	Seniors, youth	Yes
6	Roseville Local	\$1.50	Seniors, youth	Yes
7	Yuba-Sutter Commuter	\$4.00	Seniors, youth	Yes
8	Yuba-Sutter Local	\$1.00	Seniors, youth	Yes
9	El Dorado Transit Commuter	\$5.00	Seniors, youth	Yes
10	El Dorado Transit Local	\$1.50	Seniors, youth	Yes
11	Placer County Transit Commuter	\$4.25-\$5.75	Seniors, youth	Yes
12	Placer County Transit Local	\$1.25	Seniors, youth	Yes
13	Unitrans	\$1.00	Seniors, UCD goClub members	Yes
14	Heavy Rail	Varies	Seniors	Yes
15	South County Link (Galt)	\$3.25	Seniors, youth	Yes
16	E-Tran Commuter	\$2.25	Seniors, youth	Yes
17	E-Tran Local	\$2.25	Seniors, youth	Yes
20	Folsom Local	\$2.50	Seniors, youth	Discount groups only

Source: SACOG 2020.