7.4 Transit Travel Speeds and Stop Times

Travel speeds of buses operating in mixed flow are determined by means of a time factor relating bus speed (including stops) to auto speed. Time factors were determined separately for peak and off-peak local bus service by comparing the scheduled transit travel times with the model's respective highway travel times.

For buses, delays from stopping, deceleration, and acceleration are implicitly represented in the time factors (TIMEFAC) discussed in the line attributes. Portions of the highway network are not detailed enough to explicitly represent each bus stop, so the time factor gives a reasonable estimate unbiased by the relative fineness or coarseness of the highway network. Table 7-3 provides the default time factors for a variety of typical operating contexts.

Table 7-3 Highway to Bus Transit Time Factors

Service Type	Time Factor
Urban Fixed Route (most RT bus routes)	2.01
Urban Fixed Route w/in Sac. CBD	2.25
Urban BRT w/ Signal Priority	1.78
Rural Fixed Route	1.62
Commuter Bus (Freeway Segments)	1.18

Source: SACOG 2020.

For most of the LRT system, light rail vehicles operate on exclusive right-of-way, with pre-emption of traffic signals at crossings of surface streets. For this reason, travel times are less subject to road conditions, and more stable and predictable. LRT travel times are influenced by the characteristics of the track they operate on, performance of the LRV's, and the spacing of stations. Table 7-4 provides the performance characteristics of LRVs used for estimation of travel times. Although for base year (in this case, 2016) it is not necessary to have a method of estimating LRV travel times, since they can be observed directly, for future lines an estimation method is required.

Table 7-4 Light Rail Vehicle Operating Assumptions

Variable	Performance
Acceleration Rate	2.5 mph/sec
Deceleration Rate	-2.5 mph/sec
Maximum Running Speed	55 mph
Station Dwell Time	0.5 minutes

Source: SACOG 2020.