7.3 Transit Access Coding and Network Additions

Transit access coding refers to the use of links explicitly coded in the highway network, links manually added to the highway network in order to provide access to transit stations or stops, and links which are "auto-generated" by Cube to provide access to transit stations or stops, and to provide transfers from one line to another line. These three sets of links, in combination, are included in a "transit background network" which is subsequently used in transit path-building, skimming and assignment.

7.3.1 Links Explicitly Coded in Highway Network

Transit access links include all highway links, except for freeway mainline and freeway ramp links. Walk paths from traffic analysis zones to the first-boarding transit station or stop include centroid connectors, all surface streets, and explicitly coded pedestrian/bike-only links. Additionally, walk paths can include "contra-flow" direction on one-way surface streets.

7.3.2 Transit Access Links Manually Added to Highway Network

One major subset of these links are links representing exclusive transit links. The biggest categories of these links are rail lines, such as the Sacramento Regional Transit light rail lines, or the portions of the Capital Corridor train service within the SACOG region. However, in the future these links could include bus-only roadway segments. These links are not actually "access links", but are alignments for transit lines to operate on. These links are included in the "transit_links.csv" file.

A second subset of these links are access links which connect between the highway network and the rail stations in the above-described rail transit links. These links allow for paths to be built from the highway network to stations or stops on exclusive guideway transit links, and for transfers between transit lines operating on exclusive guideways, and transit lines operating in mixed traffic. These links are included in the "station_links.csv" file.

A third subset of these links connect from park-and-ride lots to the nearest traffic analysis zone. The drive portion of park-and-ride transit trips are skimmed and assigned in the vehicle assignment process, and the transit portion of these trips are assigned from the park-and-ride lot node to the final destination, via the transit access links and transit lines. The connection between the park-and-ride lot TAZ, through the park-and-ride lot node and to the transit station, is built through links included in the "pnr.dbf" file.

7.3.3 Auto-Generated Transit Access Links

Links for two access modes are generated through Cube PT path-building software. One mode is walk access and egress links, which consolidate the more complicated paths built on the actual network components described above into single links connecting from TAZ to a range transit stations or stops (coded as MODE = 13). Another mode is transfer links which connect between one or more transit lines, and other transit lines, where the lines do not have stations or stops in common (MODE =12). Examples include: rail-to-bus station connections; and rail-to-rail station connections, if the rail lines do not share a common station.