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7 Existing and Forecast Year Travel Demand Model

The BCDCOG serves as the CHATS Metropolitan Planning Organization (MPO) and is responsible for creating a comprehensive plan for the CHATS planning area. The 640,280-acre region includes cities, towns, suburban communities, and rural areas. The primary responsibilities of any MPO are: 1) develop an LRTP which is, at a minimum, a 25-year transportation vision for the metropolitan area; 2) develop a transportation improvement program (TIP), which is the agreed-upon list of specific projects for which federal funds are anticipated; and 3) develop a unified planning work program (UPWP).The UPWP identifies, in a single document, the annual transportation planning activities that are to be undertaken in support of the goals, objectives, and actions established in the LRTP.

One key function of BCDCOG is to update, analyze and maintain a traffic model for the region. The traffic model disaggregates the entire region into traffic analysis zones (TAZs), takes into account the existing traffic on the roads, and includes assumptions about growth rates and the type of development that are projected to occur based on future land use.

The current regional travel demand forecasting model for BCDCOG and the LCRT study area is the CHATS four-step travel demand model. The CHATS model was provided by, and is maintained and calibrated by, BCDCOG. The most current CHATS model has a base year of 2015 and a horizon year of 2040; however, an update to the model is currently underway.

The CHATS model has been used in similar regional planning efforts such as the update to the LRTP, BCDCOG Park-and-Ride Study, and the Regional Transit Framework Study. The CHATS model has been used to report current travel demand in the region and forecasts system performance measures, such as future year average annual daily traffic (AADT), congested speeds, volume to capacity ratios etc. Population and employment are key user supplied inputs to the model. The model can estimate intrazonal (within a zone) as well as interzonal (between zones) traffic. The model forecasts utilized for this analysis run on the existing plus committed project networks.

For purposes of the LCRT analysis, the model will be calibrated to effectively review the proposed LCRT alignment’s impact on future traffic operations in the study area. In an effort to calibrate the CHATS model, a traffic collection methodology has been developed, traffic volumes have been collected, and a forecasting methodology has been developed. Refer to Appendix D for detailed information on the existing and calibrated CHATS model.