

Corpus Christi Metropolitan Planning Organization

Population and Employment Maps

Introduction:

Demographics such as population, household income, household size, and employment play a key role in transportation planning process. Changes in these demographics have a direct impact on travel behavior and travel patterns. Travel patterns and behavior help in estimating demand for travel which in turn provides the information to project on what transportation improvements would be required for the next 20-year planning horizon.

The study area consisting of: Nueces and San Patricio counties had an estimated population of 380,783 in 2000. The region consists of 1,873 square miles with a population density of 203.30 residents per square mile.

Travel Demand Forecasting:

The MPO provided the Texas Department of Transportation, Transportation Planning and Programming Division, the employment and population data for the base year 2005, forecasted year 2035, and the existing transportation network to validate and calibrate the travel demand model for the two-county area (Nueces and San Patricio Counties). The model is calibrated through an iterative process where the data is adjusted until assigned traffic volumes match counted volumes.

The 2005 Base Year Model is capable of replicating existing traffic volumes and Vehicle Miles Traveled (VMT). The forecast model 2035, assumes that by providing the base year model with forecasted demographic data and forecasted highway systems, the MPO can estimate travel demand on the future system. Once the Travel Demand Model is validated, forecasted demographics and network improvements can be used to validate the base year trip rates, trip length, frequency distributions, and roadway speed and capacity values.

The Travel Demand Model is a valuable tool because it provides data that will help public officials and the MPO to make decisions on which projects and road improvements should be developed in the area, not only a long term, but also a short term for the Transportation Improvement Program. The travel demand model is also a valuable tool in helping to:

- Identify major employment centers
- Establish and improve zoning and land use policies
- Establish and improve utilities' systems.
- Encourage economic development
- Analyze traffic impacts due to new development
- Analyze travel patterns

Updates:

The MPO staff plans to update population, employment, and network data every five years to facilitate the decision making process and the public's understanding of the transportation infrastructure development process. The Corpus Christi MPO in cooperation with Texas Department of Transportation (TxDOT) and the Texas Transportation Institute (ITT) in the next five year period will be reviewing the demographic data and its preparation to enhance the confidence in the data and its output results in the form of travel demand model.

As stated earlier, population forms the basis of estimating trips. For accurate simulation of existing travel demand, demographic information is compiled for a reasonable size unit called the Traffic Analysis Zone (TAZ). An in-depth analysis of demographic trends was done to estimate the base year and the future years' trip generation to estimate the transportation system needs for the future.

The Maps below respectively show population and total employment by TAZs for the year 2006 and 2035. The MPO, in cooperation with the City of Corpus Christi, developed the 2005 base year and 2035 population and employment data projection to be used in the Travel Demand Model currently being processed by the Texas Department of Transportation in Austin.

For data and map information contact MPO Transportation Planner Victor Mendieta at (361) 884-0687 or e-mail at victormendieta@swbell.net