

# **MODEL CALIBRATION TECHNICAL REPORT SUMMARY**

The Genesee County Travel Demand Model is a representation of travel patterns of the major roads in the county. The model uses population and employment projections to project where people may be traveling on the Genesee County road network in the future out to the year 2035. The Model was developed through a cooperative effort consisting of GCMPC staff, MDOT and the modeling consultants Bernardin Lochmueller and Associates. The model has a 2005 base year, meaning that the outputs of the model were calibrated to 2005 traffic counts. Staff will utilize the model in determining the road network capacity deficiencies (congested areas), developing the list of capacity improvement (widening) projects for the 2035 LRTP, testing different alternative projects to alleviate congestion and for air quality conformity analysis on the LRTP and any future TIP projects that require analysis.

Development of this model took over a year and was guided by the Genesee County Model Development Committee. Some of the improvements from the previous model include:

- More detail in the Traffic Analysis Zones
- Additional road network detail including the Saginaw Rd/I-75 Interchange just outside Genesee County's southern border
- More types of trips including new categories: home based work classified by income, home based shopping, home based school trips K-12 and university
- Mode Choice - type of travel choices include (drive-alone, shared-ride, transit, pedestrian and bicycle travel)
- Full Transit Route Network and ridership information for each route
- Freight Model with freight flows for each truck route

- Time-of-Day Model with AM-peak, Mid-day peak, PM peak, and off-peak period level of service and traffic volumes
- Ability to run the model in a user-friendly interface with “multi-net” (multiple road networks stored in one database file)
- Use of local data wherever possible including the MI Travel Counts data for Genesee County and similar MPO’s in Michigan as well as an On-Board Transit Ridership Survey

This model is a significant improvement on the previous model and appropriate for a medium-sized MPO such as Genesee County. The Genesee County Model is run for the following years as part of this plan: 2005 (calibrated base year), 2011, 2018, 2025, and 2035. Various sections of the LRTP include analysis based on data from the model.