

Traffic Forecasts

Minnesota Department of Transportation

Contact

Gene Hicks gene.hicks@state.mn.us
Minnesota Department of Transportation
395 John Ireland Boulevard, MS 450
St. Paul, Minnesota 55155
Phone: 651-366-3856

Purpose

Traffic forecasts for major projects are needed to design adequate structural and geometric capacity. Air, noise, energy, and other impacts vary with traffic levels and must be anticipated so that their effects can be evaluated. Pavement type (bituminous or concrete) and strength are based on cumulative ESAL (Equivalent Single Axle Load) forecasts between the date of opening and the future design year (typically twenty years after project is open to traffic).

Threshold Criteria

Traffic forecasts are needed for construction on new alignment or reconstruction projects. For preservation projects, pavements are typically designed for current traffic volumes, so traffic forecasts are not required. Forecasts are completed when requested on preservation projects.

Actions Needed

Different types of traffic forecasts are required at three different stages in project development:

- 1) Corridor studies,
- 2) Preliminary Design, and
- 3) Final Design

Traffic Forecasts frequently involve an analysis of alternative scenarios, all leading to decisions regarding project viability and transportation policy.

Class I Actions (EIS)

Scoping Documents (SD) & Scoping Decision Document (SDD)

Traffic forecasts are done well in advance of the SD. Often these are corridor studies. Project need and preliminary evaluation of alternative impacts are influenced by the forecast. A forecast may be completed for each alternative considered. Normally they forecast traffic volumes twenty years beyond the estimated date the project will be opened to traffic.

Draft Environmental Impact Statement (DEIS)

The traffic forecast is normally the same used in scoping documents. Updates may be made if the letting is delayed more than two years. Minor adjustments are made to reflect access changes as alternatives develop.

Final Environmental Impact Statement (FEIS)

The traffic forecast is normally the same used in DEIS. Updates may be made if the letting is delayed more than two years. Minor adjustments are made to reflect access changes as alternatives develop.

Class II Actions (Categorical Exclusions)

Project Memorandum

Traffic forecasts are not needed for all Class II actions (see Threshold Criteria above). Traffic forecasts are completed before pavement selection and pavement design begins. Project need and preliminary evaluation of alternative impacts are influenced by the forecast. Normally it projects traffic volumes twenty years beyond the estimated date the project will be opened to traffic.

Class III Actions (EA/EAW)

Environmental Assessment (EA)

Traffic forecasts are done in advance of the EA. Project need and preliminary evaluation of alternative impacts are influenced by the forecast. A forecast may be completed for each alternative. Normally it projects traffic volumes twenty years beyond the estimated date the project will be opened to traffic.

Traffic Forecasts

Mn/DOT

Agencies Involved

Agency(s)	When they are involved and why
Metropolitan Planning Organizations (MPO)	<p>Each MPO has a model that forecasts traffic growth. The MPO controls the socio-economic data in their model. Traffic forecast discussions normally take place with the MPO when considering a project. The MPO does not have approval authority of trunk highway traffic forecasts. MPO's normally do their own separate forecasts for local street system</p> <p>Note: MPO's exist in urban areas with populations greater than 50,000. Currently in Minnesota the MPO's are the Twin Cities, Duluth-Superior, Rochester, St. Cloud, Fargo -Moorhead, Grand Forks-East Grand Forks and La Crescent-La Crosse.</p>

Guidelines / Regulations

Creator (Agency/Author)	Subject of guideline/regulation
Mn/DOT, Traffic Forecast Unit	Mn/DOT Procedure Manual for Forecasting Traffic on Minnesota's Highway Systems
Mn/DOT	MNESAL Traffic Forecasting Program in Excel format
Mn/DOT	Geotechnical Design Manual , Section 4-4 - Traffic Analysis (for information on ESAL forecasting)