Travel Projections:

WHY:

At the center of the Concept-Development (CD) process is the proper development of travel projections, which are good estimates of future vehicular traffic volumes along a specific roadway. It is important to remember that each travel projection is unique to the CD study being conducted and to the defined study area. It is the methodology that is utilized that should be documented within the CD study’s final report.

HOW:

Data Requirements:

Recent Traffic Counts –

- Obtained from Bureau of Data Development (BDD), or a consultant firm.
- Unless otherwise indicated, counts should be taken for at least 48-72 hours on Tuesdays, Wednesdays and Thursdays.
- Classified (i.e., truck) counts should be taken at the same time.
- Where required for intersection Levels of Service (LOS) analysis, turning movement counts should be conducted during AM and PM peak hours.

Growth Factor/Compound Growth Rates Conversion Table

Demographic Data –

- Population data from 2000 Census.
- Rutgers Population/Employment Forecasts

Land Use Data –

- Municipal/County Planning Departments
- Municipal/County Engineering Departments
- NJDOT Bureau of Major Access Permits

Other Data –

- Previous Travel Projection (recent) forecasts
- Previous (recent) Traffic Studies completed
- Regional Transportation Model outputs*

Take a field trip –

- Assess road conditions
- Assess development potential (compare with municipal input)
- Assess traffic conditions during AM and/or PM peak periods

* For use in growth rate development only. Do not use derived data for LOS analysis.
Procedure:

Growth Rate –
- Obtain as many data sources as available
- Compare source data on a municipality by municipality basis
- Compare source data road segment by road segment
- Confirm proposed new development information with affected Municipalities
- Based on above data, develop growth rate
- Using Growth Factor Conversion Table, convert growth rate to growth factor
- Compare growth rate with previous travel projections/traffic studies conducted along the roadway

Traffic Design Data –
- Base Year Average Daily Traffic (ADT) - 2-way: usually provided on traffic count sheets from BDD
- Future Year (FY) ADT - 2-way: formula > Growth Factor (times) Base Year ADT
- K-factor: formula > (2-way peak hour/2-way ADT) (times) 1.10
- FY Design Hour Volume (DHV)**: formula > FY ADT (times) K-factor
- FY Directional Distribution***: formula > peak direction count/peak hour count
- Heavy Truck % (Peak Hour): formula > # heavy trucks/total vehicles (peak hour)

Pavement Design Data –
- Base Year ADT - 1-way ADT: formula > 2-way ADT/2
- Future Year ADT – 1-way ADT: formula > 2-way ADT/2
- Heavy Truck % (24-hour): formula > # heavy trucks/total vehicles (24-hours)
- Total Truck % (24-hour): formula > # heavy trucks/total vehicles (24 hours)

** Determines the 30th highest peak hour volume.

*** % of traffic per direction during peak hour