

# Model Fact Sheet

## Identification

- Model name: Lexington Area TransCAD Model
- Model area: Fayette and Jessamine counties
- Purpose of model: General planning, traffic forecasting, & conformity
- Model Developer: Bernardin-Lochmueller & Associates, Inc.
- Model software used: TransCAD
- Date model work began & finished: 5/2002 – 1/2004
- Model years  
(base year, future year, interim years) 2000, E+C, 2010, 2020, 2030  
& 2004 through tech support

## Technical Specifications

- # TAZs/# links 445 TAZ 4,162 links
- Trip generation equations Cross-classification & regression w/ strat. curves
- Trip rates borrowed from 2000 Knoxville, TN study
- EE methodology synthesized from 1994 survey, KY statewide travel model, etc.
- BPR equations used NCHRP 3-55[2], etc.
- Assignment methodology User equilibrium
- Truck model? No
- Mode choice? No
- Time-of-day modeling? Yes – AM, PM, Midday, & Off Peak
- Air quality compatibility? Yes – built in AQ\_PLuS air quality tool
- Script/batch file description  
(how developed) GISDK code
- Model running time 40 – 80 min; heavily dependant on computer speed, input assumptions, and run options

## Calibration/Validation

- RMSE 25.37%
- Screenline summary (Y/N; how many) Yes - two
- Methods used for calibration adjustments were made to all model steps
- Urban/rural statistics? yes
- Unusual calibration measures taken  
(k-factors; matrix estimation) limited k-factors were developed
- VMT model/KYTC comparison yes – and adjustment factors in AQ\_PLuS
- VMT increase in future year 1.81% growth from 2000 to 2030

## Data Collection/Network Development

- Special counts  
(Y/N; how many; where) KYTC HIS & CTS counts, I-75 count from ATR
- SE Data
- Base data source 2000 Census, KY DOE, UK, American Business Directory, Greater Lexington Chamber of

	Commerce, Kentucky Cabinet of Workforce Development
<ul style="list-style-type: none"> <li>• Future estimate source</li> <li>• Population/employment ratio</li> </ul>	LFUCG land-use model, BLA forecasts, etc.
• Other data (e.g. Origin-Destination)	1.47
• Base network developed from?	1994 O-D study, KY statewide model, etc.
• Other networks:	MINUTP model, conflated & HIS data added
<ul style="list-style-type: none"> <li>• Scenarios/alternative networks</li> <li>• E+C</li> </ul>	Long range plan build-out to 2010, 2020, & 2030 projects identified by LFUCG