



Trip Assignment

■ Level of Service (LOS)

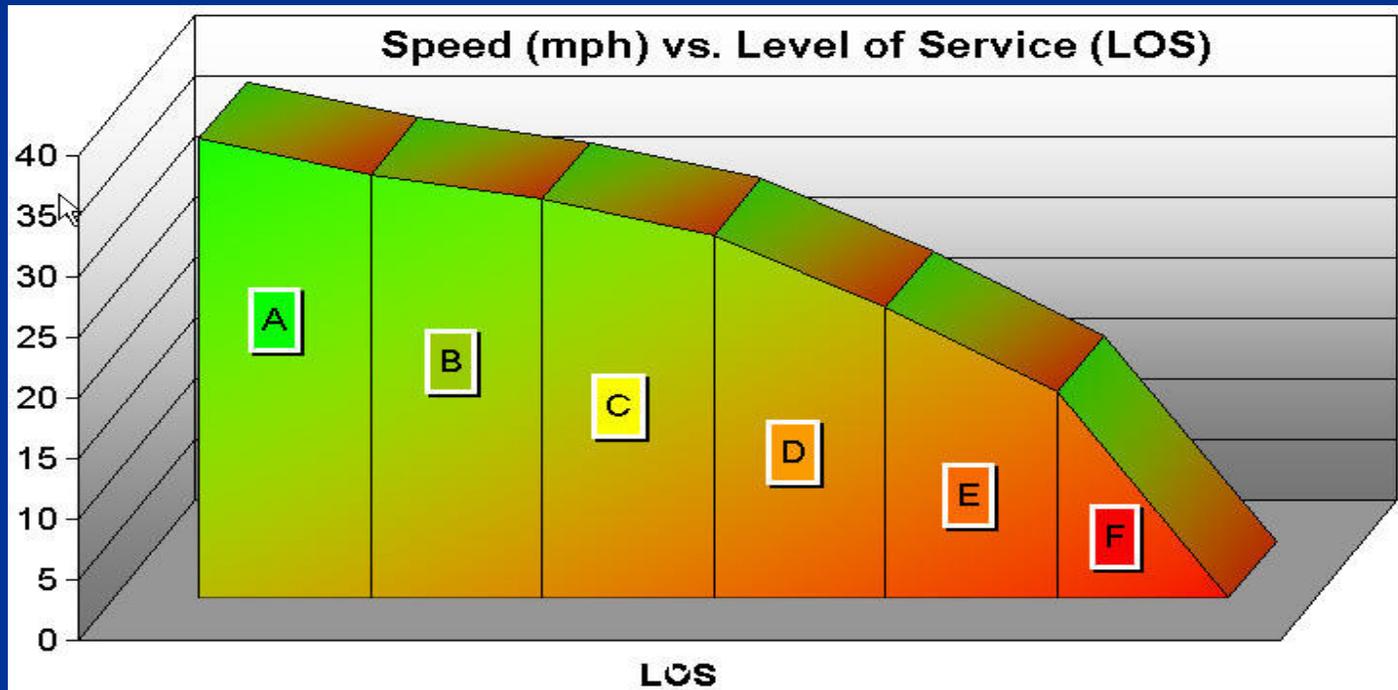
TABLE 23. LEVEL OF SERVICE – PERCENT REDUCTION IN SPEED USED IN LINCOLN MPO MODEL

Level of Service	Percent Reduction in Posted Speed
A	0
B	1-7
C	8-15
D	16-32
E	33-48
F	>48



Trip Assignment

■ Level of Service (LOS)





Model Calibration/Validation

- Percent Error
- Coefficient of Determination (R^2 -Goodness of Fit)
 - *Goal* > 0.88 $R^2 = 0.90$
- Root Mean-Square Error
 - *Goal* $< 35\%$ $RMSE=21.5\%$
- Screenline Analysis



Model Calibration/Validation

■ Percent Error

TABLE 24. PERCENT ERROR BY FUNCTIONAL CLASSIFICATION

FUNCTIONAL CLASS	SUM OF COUNTS	SUM OF ASSIGN	NUMBER OF COUNTS	PERCENT ERROR	PERCENT ERROR TARGET*
Collector	267,981	214,851	51	-19.83%	25.0%
Interstate/freeway	352,200	349,309	21	-0.82%	7.0%
Major Arterial	1,291,935	1,327,761	58	2.77%	10.0%
Major Collector County	69,119	78,299	44	13.28%	25.0%
Minor Arterial	4,693,779	4,649,079	364	-0.95%	15.0%
Principal Arterial (Div)	927,313	962,444	76	3.79%	10.0%
Average Network Stats	7,602,327	7,581,743	614	-0.27%	5.0%

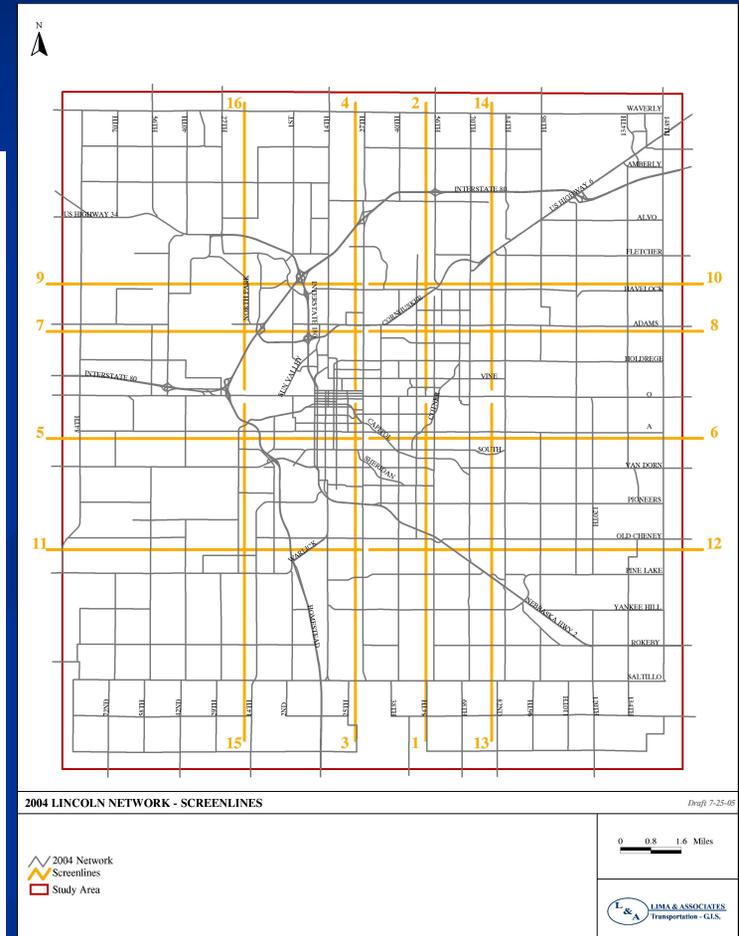
“Calibrating and adjustment of system planning models” December 1990, FHWA

Model Calibration/Validation

■ Screenline Analysis

TABLE 26. SCREENLINE ANALYSIS RESULTS

Screenline	Model Assigned Volume	Actual Count	Percent Difference
1	116,428	129,977	5.63
2	107,766	106,621	-1.06
3	163,562	163,594	0.02
4	157,019	156,926	-0.06
5	104,183	110,158	5.74
6	102,276	97,368	-4.80
7	56,510	53,778	-4.83
8	90,927	95,426	4.95
9	58,467	52,726	-9.82
10	50,477	48,014	-4.88
11	27,300	27,743	1.62
12	76,906	73,074	-4.98
13	65,494	72,476	10.66
14	54,253	53,876	-0.69
15	55,779	60,924	9.22
16	64,900	64,896	-0.01

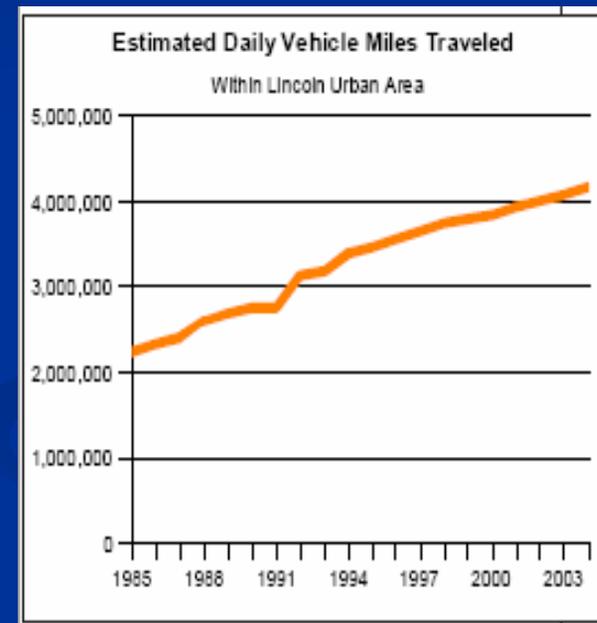


Model Output Statistics

■ Vehicle Miles Traveled & Vehicle Hours Traveled

TABLE 27. 2004 VMT & VHT BY FUNCTIONAL CLASS

FUNCLASS	VMT	VHT
Collector	142,400	5,311
Interstate/freeway	770,642	12,109
Major Arterial	739,743	17,925
Major Collector County	113,192	2,084
Major Collector State	20,016	364
Minor Arterial	2,082,606	58,717
Minor Collector (rural)	9,454	191
Principal Arterial (Div)	860,728	19,560
Ramps	69,703	2,166
Others	44,590	884
TOTAL	4,853,074	119,311





Comparisons to the 1998 Model

■ Comparable Model Outputs

TABLE 28. 1998 MODEL AND 2004 MODEL COMPARISON

Variable	1998	2004
Population	234,266	253,700
Dwelling Units (DU)	95,230	105,714
Vehicle Trips	844,220	906,526
Person Trips	n/a	1,478,358
Vehicle Trips/DU	8.87	8.58
Vehicle Trips/Person	3.60	3.57
Person Trips/ DU	14.36	13.98



Remaining Process-Phase II

- January
 - MPO Technical Committee Approval-January 19th
 - 2030 Land Use Model
- February-June
 - 2030 Transportation Alternatives
- July
 - Completion of 2030 Draft Plan





Questions?

