

**Small Area Traffic Forecasting Analysis for
December 1998 Through 2000
By County and Year**

Working Paper- 02-01

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1. Introduction

The purpose of this working paper is to summarize the efforts of the Operations Analysis division in the preparation of highway demand forecasts from December 1997 through December 2000. This period was selected to coincide with the period that the 1997 Regional Transportation Plan, Destination 2020 was in effect. Forecasts prepared prior to this period had a horizon year of 2010, and forecasts prepared after this period used the year 2000 RTP Update and its related model.

The regional model is a key source of data for forecast analysis. The model (internally referred to as conform97) was exclusively used during the December 1997 through December 2000 period for the development of highway travel forecasts.

As part of our analysis process we prepared databases using the ArcInfo geographic information system. The following analysis includes the number of forecast requests per county per year, average growth rates (from CATS projections) and the growth rate variations between the South Suburban Airport and Existing Airport Improvements scenarios.

2. Number of Forecast Requests

The numbers of forecast requests are recorded by county and year. Table 2.1 has the number of requests for each year. The pie chart in Figure 2.1 illustrates the amount of forecasts located in each county from December 1997 through 2000. Every year CATS receives more requests for Cook than any other county. Kendall County only had requests in 1998, therefore Kendall County is not included anywhere in this analysis. Figure 2.2 shows a bar graph of the number of requests by year. There is a remarkably consistent amount of forecast requests from year to year. *Some forecasts were missing ADTs*

from the requestor. This usually occurred when a road was proposed but not built yet. The forecasts that were missing ADTs were not included in this analysis. In 1998, there were five requests that had no ADTs given in the requests. There were four missing in 1999, and seven missing in 2000.

Table 2.1 - Number of Requests					
County	1997 Nov- Dec.	1998	1999	2000	Total
Cook	12	57	60	58	187
DuPage	4	16	18	30	68
Kane	1	21	10	6	38
Lake	2	20	20	13	55
McHenry	1	4	0	18	23
Will	2	23	32	15	72
Totals	22	141	140	140	443

Figure 2.1 - Number of Forecast Requests from December 1997 through 2000

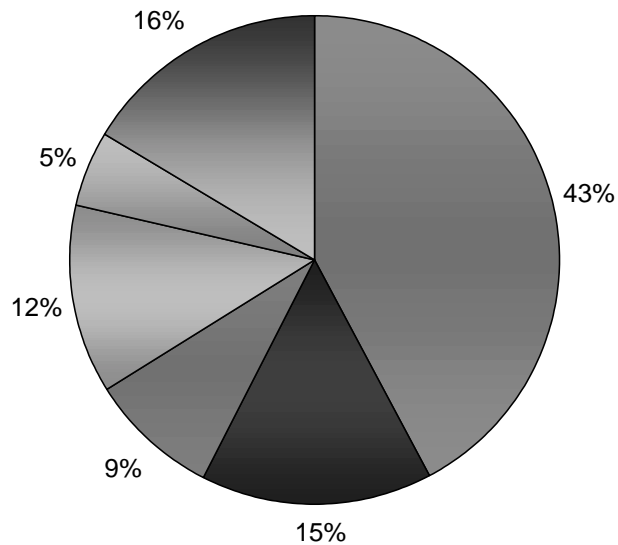
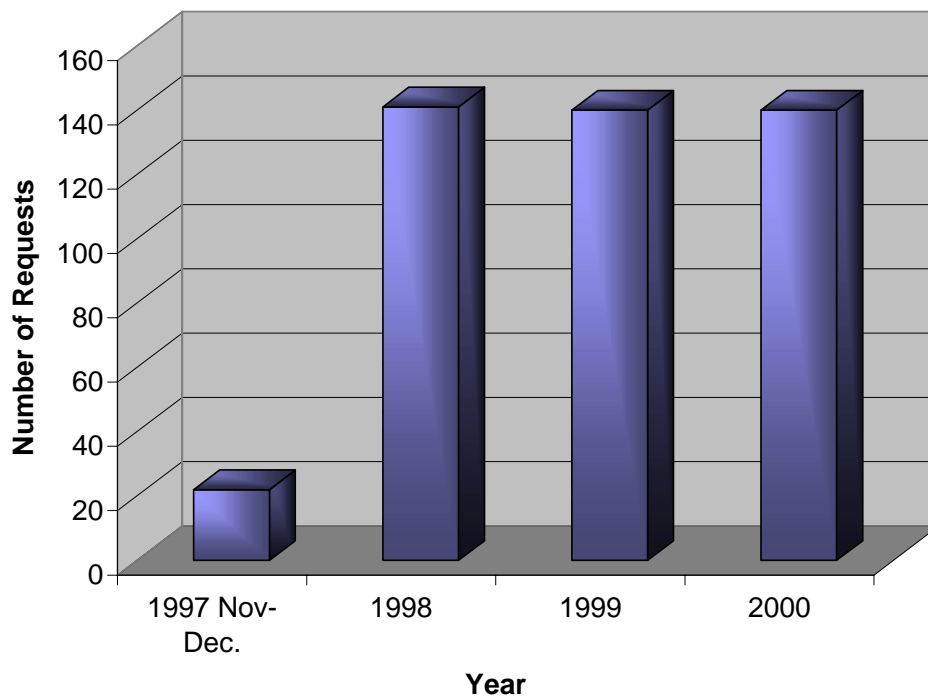


Figure 2.2- Number of Requests per Year



3. Average Growth Rates

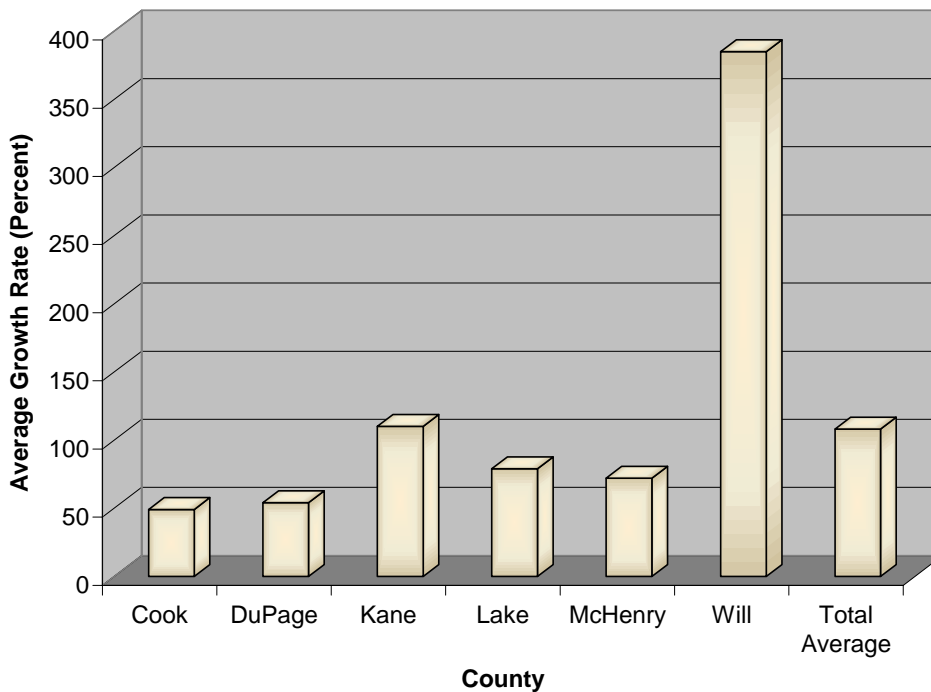
The growth rates for the years 1998 to 2000 were found by dividing the forecast ADT by the existing ADT (given by the requestor). The total average growth rate for each year was also found. The number of requests weights the totals and total average growth rates. These values are tabulated in Table 3.1.

County	1998	1999	2000	Total Average
Cook	37%	60%	56%	51%
DuPage	45%	81%	51%	58%
Kane	99%	141%	69%	105%
Lake	46%	87%	72%	68%
McHenry	43%	N/A	86%	78%
Will	272%	477%	356%	384%
Totals	87%	168%	93%	114%

A graph of this data is presented in Figure 3.1. The total average growth rate for all of the counties was 108%. Since the 1997 Conformity Analysis was only used in the month of December for 1997, there are too few data points to include 1997 in this analysis. The highest yearly average growth rate between 1998 and 2000 was 160% in 1999. The lowest overall growth rate occurred in 1998, at 68%.

The lowest county growth rate occurred in 1998 in Cook County, at 37%. From Figure 3.1, it is clear that Will County had the highest average growth rate of the counties. With the exception of Will County, the total average growth rates from 1998 to 2000 fell within the 48% to 110% range.

Figure 3.1- Average Growth Rate for 1998 Through 2000



4. SSA and EAI Scenarios

The Regional Transportation Plan includes two scenarios, the Existing Airport Improvements and the South Suburban Airport. The analysis that was used on this data in

the EAI and SSA scenarios was conducted in the same manner as the type of analysis that was used to find the average growth rates in section 3 above. This data is displayed in Table 4.1. The total average growth rates for the EAI and SSA scenarios are given for each year. The growth rates for the two scenarios were identical except in Will County and Cook County. The largest difference between the two values was in Will County in 1999, with 185% more growth in the SSA scenario.

County	1997			1998			1999			2000		
	EAI	SSA	**	EAI	SSA	**	EAI	SSA	**	EAI	SSA	**
Cook	55%	55%	0%	37%	37%	0%	57%	63%	6%	52%	60%	8%
DuPage	42%	42%	0%	45%	45%	0%	81%	81%	0%	51%	51%	0%
Kane	17%	17%	0%	99%	99%	0%	141%	141%	0%	69%	69%	0%
Lake	93%	93%	0%	46%	46%	0%	87%	87%	0%	72%	72%	0%
McHenry	64%	64%	0%	43%	43%	0%	N/A	N/A	N/A	85%	86%	0%
Will	20%	30%	10%	245%	298%	53%	384%	569%	185%	307%	405%	98%
Total	71%	71%		65%	71%		141%	179%		96%	114%	

** Percent increase of growth in SSA Scenario

As seen in Figure 4.1, the new south suburban airport affected Will County more than the other counties. It was expected that this would happen, because Will County is the proposed site for the new airport.

The EAI growth rate in Cook County was sometimes higher for forecasts around O'Hare Airport. The overall effect in Cook County shows higher growth in the SSA scenario because of the number of forecasts in southern Cook County.

Figure 4.1- Percent Difference Between SSA and EAI Scenario Growth Rates

