



Chicago Metropolitan
Agency for Planning

Vehicle Miles Traveled on Expressways in the Chicago Region Recent Trends - 2011 Update

August, 2011

CMAP Congestion Management Process
Author: Jose Rodriguez

Table of Contents

Introduction.....	1
Factor 1. Illinois Tollway Toll Increases and Construction	2
Factor 2. Major Road Reconstruction in the Southland.....	4
Factor 3. Regional Variations in Residential and Employment Growth.	7
Factor 4. Increasing Cost of Motor Fuel.....	11
Factor 5. Changes in Travel Mode Share	13
Factor 6. Increased Regional Unemployment.....	14
Summary.....	16

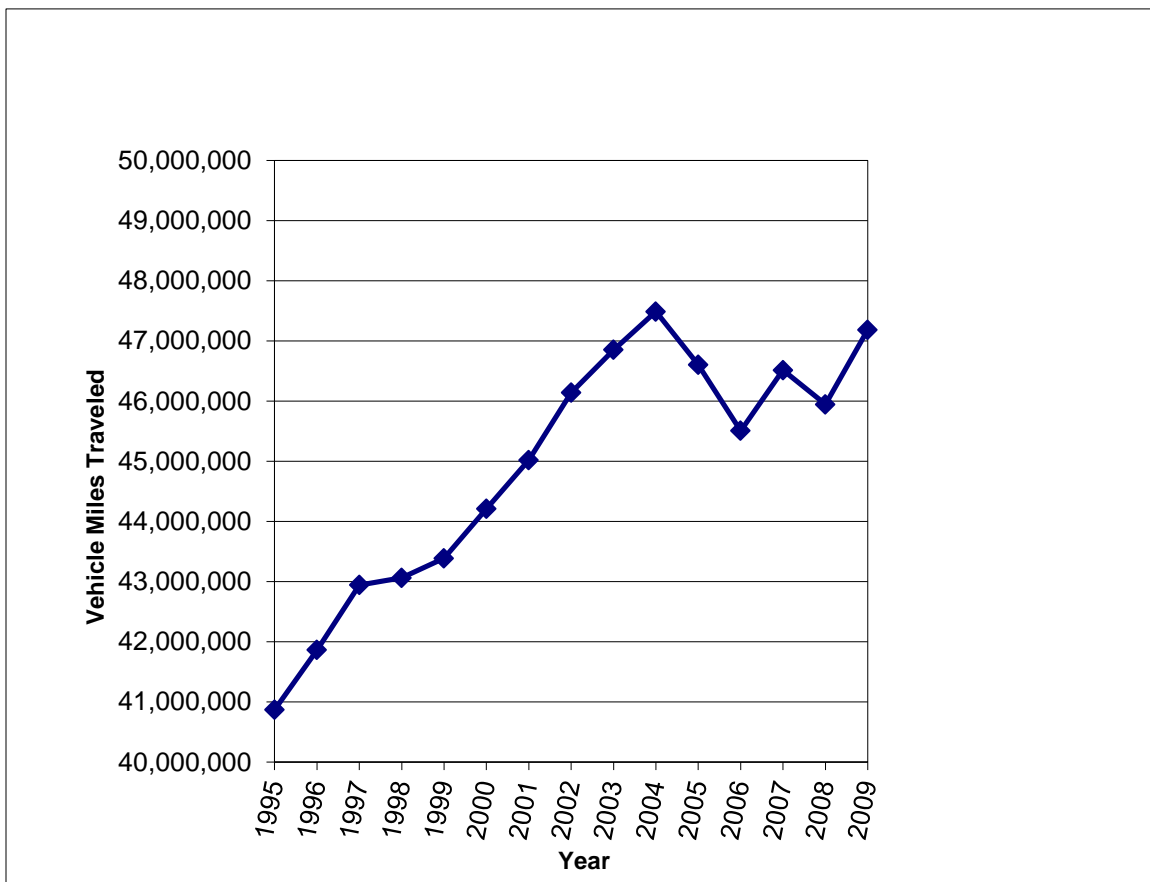
Figures and Tables

Figure 1. Expressway VMT in Northeastern Illinois, 1995-2009	1
Table 1. Average Daily Vehicle Miles Traveled by Year by Facility, Metropolitan Area Tollways, 1996-2009.....	3
Table 2. Average Daily Vehicle Miles Traveled by Year by Facility, South Corridor Expressways.....	5
Figure 2. Aggregated Average Daily VMT by Year: South Corridor Expressways	6
Figure 3. Aggregated Average Daily VMT by Year for US 41/ South Lake Shore Drive.....	6
Table 3. ADTs on Dan Ryan Alternate Routes.....	7
Table 4. Estimated Population Change, Metropolitan Chicago, 2000 through 2009.....	9
Table 5. Average Daily VMT Growth on NE Illinois Expressway Systems.....	10
Figure 4. Retail Gasoline Prices	12
Figure 5. VMT Change by Price of Gasoline.....	12
Table 6. Means of Transportation to Work.....	13
Table 7. Annual RTA System Unlinked Passenger Trips.....	14
Table 8. Number of Residents in Labor Force Currently Employed, by County ..	15
Table 9. Number of Private Sector Employment Positions, by County	15

Introduction

Vehicle miles traveled (VMT) on expressways in metropolitan Chicago grew steadily from 40.9 million in 1995 to 47.5 in 2004. From 2004 to 2009, however, previous annual growth was interrupted. Regional expressway VMT in 2009 was 47.2 million, about the same as in 2004. This paper explores factors affecting those trends.

Figure 1. Expressway VMT in Northeastern Illinois, 1995-2009



Source: CMAP

Analysis indicates that recent VMT changes may be attributed to several factors:

- (1) reconstruction and price increases for much of the Illinois Tollway (including the introduction of Open Road Tolling);
- (2) road reconstruction projects in the region's Southland;
- (3) regional variation in employment and residential growth;
- (4) changes in the cost of motor fuel;
- (5) changes in travel mode share;
- (6) higher regional unemployment.

The paper will show that each factor may affect regional facilities differently. The result is variation in the volume trends among regional expressway facilities. Each factor's impact on expressway volumes explored below.

Factor 1. Illinois Tollway Toll Increases and Construction

Toll increases and construction were the first factors that interrupted long-term growth in regional expressway VMT in 2005. A toll increase was implemented in 2005 to finance improved highway operations, system reconstruction, and congestion relief. Transponder technology was implemented for the collection of most tolls at highway speeds, improving highway operations through "open road tolling." Construction projects financed with the toll rate replaced worn bridges and pavement, and provided congestion relief in the form of additional highway capacity.

Open road tolling was in place system-wide by the end of 2006. Most remaining congestion relief projects were largely complete by the end of 2009, though some work was wrapped up in 2010.

The price increase was implemented on January 1, 2005. Passenger vehicles with I-Pass transponders did not face any toll rate increase. Tolls for passenger vehicles paying cash were raised 100%. From 2004 to 2005, passenger cars using I-Pass went up 53.3%; passenger cars paying cash fell 49.1%. The weighted percentage toll change of 28.4% resulted in a 3% decline in passenger vehicle transactions (toll price elasticity -0.11). Commercial vehicle I-Pass use rose 15.1%, while commercial vehicle cash transactions fell 41.5%. The weighted percent toll for commercial vehicles rose 165%, which was a factor in a 10.8% decline in commercial vehicle use of the Tollway (toll price elasticity: -0.07).¹

As the effects of the toll increases took place in 2005, large-scale construction was also being undertaken. The construction may have disrupted traffic and reduced VMT. Disaggregating these effects is difficult. A full understanding will require a review of the data collected after construction was completed in 2010.

The annual VMT for each segment comprising the Illinois Tollway system in the NE Illinois Expressway network is explored in the following table. The table shows the effects of the toll increase and construction, but also the recent economic recession, regional variations in residential growth, and the wrap-up of construction on the Dan Ryan expressway, which is an alternative route for through-traffic. See Table 1 (p. 6).

¹ Illinois Tollway and Wilbur Smith Associates. *Illinois Tollway Value Pricing Pilot Study*. January, 2007. p. 26. Note that the study calculated the price elasticities for toll rates only. Calculating the price elasticity using total trip costs (using distance and travel time costs) might better predict the effects of other travel price changes.

**Table 1. Average Daily Vehicle Miles Traveled by Year by Facility, Metropolitan Area Tollways, 1996-2009
(Data in Thousands)**

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
I-94/Edens Spur East-Bound (EB)	121	122	121	121	121	120	120	127	121	113	115	115	98	108
I-94/Edens Spur West-Bound (WB)	117	119	120	119	119	117	118	121	120	113	116	115	98	103
I-88/Reagan Memorial Tollway EB from IL 47 to I-290	1,341	1,366	1,320	1,457	1,477	1,532	1,650	1,700	1,757	1,745	1,757	1,745	1,652	1,678
I-88/Reagan Memorial Tollway WB from I-290 to IL 47	1,361	1,372	1,325	1,458	1,504	1,571	1,698	1,737	1,788	1,721	1,776	1,782	1,646	1,686
I-355/Veterans Memorial Tollway NB from I-55 to I-290	792	845	851	900	965	1,006	1,065	1,076	1,122	1,092	1,098	1,128	956	1,323
I-355/Veterans Memorial Tollway SB from I-290 to I-55	809	877	878	913	971	1,034	1,064	1,086	1,128	1,110	1,130	1,130	1,012	1,297
I-90 Jane Addams Memorial Tollway EB from US 20 to Kennedy Exp	1,854	1,814	1,862	2,057	2,016	2,164	2,093	2,132	2,221	2,156	2,104	2,129	2,061	2,041
I-90 Jane Addams Memorial Tollway WB from Kennedy Exp to US 20	1,752	1,817	1,773	1,972	1,906	2,057	2,016	2,088	2,189	2,123	2,052	2,163	2,058	2,023
I-94/I-294 Tri-State Tollway EB from US 41 (S of WI State Line) to Bishop Ford Freeway	4,596	4,785	4,787	4,758	4,778	4,872	5,116	5,241	5,274	4,998	4,944	5,163	4,753	4,680
I-94/I-294 Tri-State Tollway WB from Bishop Ford Freeway to US 41 (S of WI State Line)	4,352	4,504	4,520	4,479	4,626	4,739	4,974	5,071	5,155	4,783	4,793	4,821	4,450	4,383
Total	17,096	17,621	17,558	18,235	18,484	19,213	19,913	20,380	20,875	19,954	19,886	20,292	18,783	19,322
<i>Change from Previous Year</i>	626	525	-63	677	249	729	700	467	495	-922	-68	406	-1,508	539

Source: CMAP, based on IDOT and Illinois Tollway data.

Notes:

1. To assure comparability of the data over time, this data, and the I-355 data in particular, exclude the I-355 extension to I-80 from the totals.
2. I-355 extension opened in November, 2007, affecting volumes on the existing sections of I-355.
3. Toll rate increase took effect in 2005.
4. Major construction took place from 2005 through 2009. By the end of 2009, additional capacity and open-road tolling were in place.
5. High fuel prices and an economic recession dampened travel demand in 2008.
6. The Tri-State Tollway and Veterans Memorial Tollway are alternates for the Dan Ryan and Kennedy Expressways. The end of construction on the Dan Ryan Expressway in 2007 may have dampened demand in 2008.

Factor 2. Major Road Reconstruction in the Southland

Major expressway reconstruction projects on Chicago's South Side and in the South Suburbs (collectively, the "South Corridor") have encouraged travelers to seek alternate routes or to utilize transit. VMT levels have been trending down since 2002-2003 on several segments within the South Corridor. Construction activities were as follows:

- I-57 from I-94/Dan Ryan Expressway to I-80: 2002-2003²
- I-80-94/Kingery Expressway, I-94/Bishop Ford Freeway, IL 394: 2004-2007³
- I-90/94 Dan Ryan Expressway: 2004-2007, with major construction focused during 2006-2007.⁴
- I-80/I-94 Borman Expressway (Indiana) 2003-2009, with major construction on sections near Illinois border focused on 2003-2005. Work continues in the vicinity of I-65.⁵
- I-90/Chicago Skyway Toll Bridge: 2001-2004, with major construction focused on 2003-2004.

During these construction projects, Southland expressway volumes declined substantially. Some of this traffic was likely diverted to arterials and South Lake Shore Drive. When these projects wrapped up at the end of 2007, these diversions ended and the previous volumes were restored. The data for the expressways and Lake Shore Drive are shown in Table 2 (p. 8) and are displayed graphically in Figures 2 and 3 (p 9).

² <http://www.dot.state.il.us/i57/i57.html>. Accessed July, 2008

³ <http://www.dot.il.gov/press/r071907.html> Accessed July 2008

⁴ <http://www.dot.il.gov/press/r030206.html> Accessed July 2008

⁵ <http://www.in.gov/indot/div/projects/borman/about/time.html> Accessed July, 2008

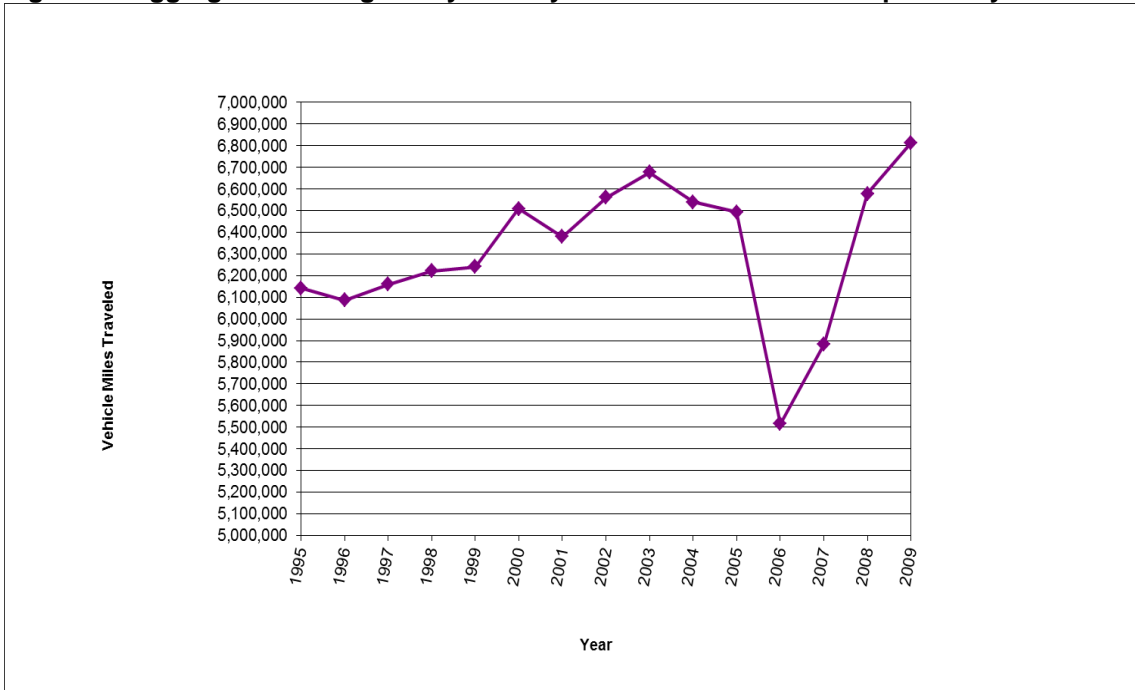
**Table 2. Average Daily Vehicle Miles Traveled by Year by Facility, South Corridor Expressways
(Data in Thousands)**

Segment	Decline from Previous Year														
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
I-90/94 Dan Ryan Locals EB from Eisenhower Expy to Bishop Ford Freeway	1,081	1,058	1,053	1,058	1,044	1,074	1,047	1,082	1,098	1,073	1,154	1,065	862	958	877
I-90/94 Dan Ryan Locals WB from Bishop Ford Freeway to Eisenhower Expy	1,008	990	1,022	1,033	1,029	1,087	1,097	1,111	1,085	1,047	1,040	740	855	867	934
I-90/94 Dan Ryan Express Lanes EB from N of 22nd to Skyway Interchange	464	432	439	442	438	446	439	447	456	432	349	183	302	293	318
I-90/94 Dan Ryan Express Lanes WB from Skyway Interchange to N of 22nd	448	453	473	474	476	469	463	463	471	435	406	357	277	329	339
I-57 NB from I-80 to Wentworth	612	622	642	667	695	698	697	694	743	750	788	728	781	830	899
I-57 SB from Wentworth to I-80	594	604	633	654	662	681	691	679	676	744	830	737	744	883	918
I-94 Bishop Ford Freeway EB from Dan Ryan Expressway to Tri-State Tollway	741	760	759	759	772	795	736	783	844	832	768	688	817	1,033	1,038
I-94 Bishop Ford Freeway WB from Tri-State Tollway to Dan Ryan Expressway	731	713	687	688	683	787	771	830	818	790	763	676	859	982	1,045
I-80/94 Kingery Expy EB from Bishop Ford Freeway to Indiana State Line	231	231	236	217	213	231	222	235	245	219	199	171	202	217	224
I-80/94 Kingery Expy WB from Indiana State Line to Bishop Ford Freeway	234	224	216	229	230	241	216	235	241	217	198	170	184	185	221
Total	6,143	6,087	6,160	6,221	6,241	6,508	6,379	6,561	6,677	6,540	6,494	5,514	5,884	6,579	6,814
Net Change from Previous Year		-56	73	61	20	268	-129	182	116	-136	-46	-980	369	695	235

Source: CMAP, based on IDOT and Illinois Tollway data.

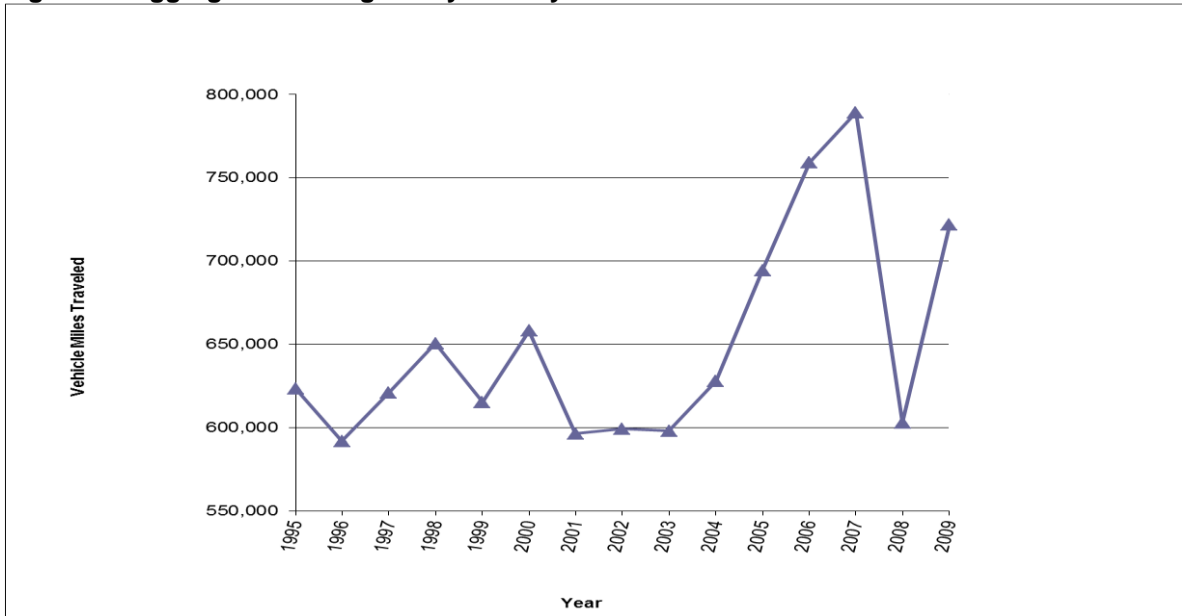
Note: Major construction on I-90/94 Dan Ryan Expressway, 2006-2007

Figure 2. Aggregated Average Daily VMT by Year: South Corridor Expressways



Source: CMAP, based on IDOT data. Note: South Corridor Expressways include Dan Ryan Local and Express Lanes, I-57, Bishop Ford Freeway, and Kingery Expressway.

Figure 3. Aggregated Average Daily VMT by Year for US 41/South Lake Shore Drive



Source: CMAP, based on IDOT data.

There is evidence to suggest substantial changes in arterial traffic volumes during Dan Ryan Expressway reconstruction. Traffic counts obtained from the City of Chicago also indicate a significant increase in Average Daily Traffic (ADT)

between Winter 2006 and Fall 2006 on several N-S arterial-level routes. See Table 3.

Table 3. ADTs on Dan Ryan Alternate Routes

Average Daily Traffic on Dan Ryan Expressway Alternate Routes, Pre- and During Construction Activity in 2006

 -during Dan Ryan Reconstruction Activity

Location	Date	ADT	AM Peak Hour* (7:30-8:30am) ADT
Ashland Avenue at 62nd Street	3/14/2006	23471	1357
	10/31/2006	36058	2523
Ashland Avenue at 82nd Street	3/14/2006	26259	1698
	10/4/2006	34296	2276
Michigan Avenue at 54th Street (one way Southbound)	3/2/2006	7932	291
	10/11/2006	10781	380
Cottage Grove at 72nd Street	3/1/2006	17769	1099
	12/19/2006	21444	1163
Jeffery Blvd at Marquette Rd	3/8/2006	21209	1434
	9/6/2006	29174	2294
Jeffery Blvd at 81st Street	3/8/2006	13373	814
	9/6/2006	19475	1384

*For all locations, the 7:30-8:30am period total ADT was used, though in some cases not the peak hourly total
Source: CMAP

This factor also may explain reduction of VMT on two alternate routes that are part of the Illinois Tollway system. VMT on the Tri-State Tollway south of I-90 declined by 555,935 and on the Veterans Tollway by 289,732 between year 2007 and year 2008.

Factor 3. Regional Variations in Residential and Employment Growth.

A much larger share of the region’s residential growth between 1995 and 2006 occurred in the outlying western and southwestern suburbs – Kane, Kendall, and Will Counties – than in the established suburban areas of Lake, DuPage, and Cook Counties.

The region’s expressway system has been significantly expanded to serve these new southwest suburban trip origins. Recent expansions include the extension of I-355 in Will County and additional lanes on I-55 in Will County. Additional lanes on I-80 are being constructed in Will County as of this writing.

Nevertheless, the locations of certain emerging trip origins and destinations may not be well served by the current expressway system. For example, a trip that once originated in Berwyn, a near-west suburban Cook County community, utilizing I-290 and I-88 to travel to far-west suburban Naperville may now originate in Plainfield, in Will County, using the north-south arterial IL Route 59 to reach the same destination. IL Route 59 Average Annual Daily Traffic at the Will-DuPage county line grew from 35,800 in 2001 to 40,500 in 2003 and 45,400 in 2007.⁶ Newer residential areas in Kane County may utilize Randall Road in a similar fashion to travel to Fox River bridge crossings, ultimately arriving at DuPage County or Northwest corridor job centers without utilizing expressways.

Variations also occurred among expressways. Among regional toll roads, the VMT rebound on I-355 in 2006 may have been because of a larger Will County residential base. I-55, serving northern and western Will County, has seen relatively few year-to-year decreases in VMT.⁷ Conversely, the closer-in north, northwest and west suburbs have shown more moderate growth in this period.

These trends had a major impact on VMT throughout the decade. In addition, while growth in Kane, Kendall, McHenry, and Will Counties has recently slowed, these counties still lead the region in population growth (see Table 4). All else being equal, VMT growth can be expected to be stronger in these fast-growing counties.

Expressways serving some combination of the southwest and far west suburbs had the highest annual VMT growth in terms of compound annual growth rates (CAGR) during the period 1995 to 2004, whereas the expressways serving Cook County and the northern suburbs had smaller annual growth rates (see Table 5). Moreover, the declining population in Cook County and much lower than anticipated population growth in collar counties may have limited VMT growth between 2008 and 2009, despite the emergence from the recent recession, the end of several major regional construction programs, and lower fuel prices.

⁶ Illinois Department of Transportation, *Average Daily Total Traffic, State Primary System, Years 2001, 2003, and 2007*.

⁷ 6 of 24 annual I-55 VMT totals, northbound and southbound on I-55, showed declines, the lowest number of declines on the expressway system. Note that the VMT trend on I-55 is partly masked by a lack of data south of Naperville Road on I-55. These road segments are not served by loop detectors. Loop detectors serve as a basis for CMAP metropolitan expressway VMT estimates on IDOT facilities. Likewise, I-80 west of US 45 does not have loop detectors. I-55 spot ADT volumes south of I-80 increased from 50,000 in 2001 to 68,000 in 2007 (also related to a new intermodal terminal on the site of the former Joliet Arsenal). On I-80 west of I-55, spot ADT volumes fell from 39,400 to 36,700.

**Table 4. Estimated Population Change, Metropolitan Chicago, 2000 through 2009
(Data in Thousands)**

Area	Population Estimates				CAGR 2000-07	% Change 2007-08	% Change 2008- 2009
	2000	2007	2008	2009			
	1-Jul	1-Jul	1-Jul	1-Jul			
Chicago	2,896	2,837	2,853	2,851	-0.21%	0.58%	-0.06%
Suburban Cook County	2,482	2,448	2,442	2,436	-0.23%	-0.28%	-0.24%
Cook County Subtotal	5,378	5,285	5,295	5,287	-0.22%	0.18%	-0.14%
DuPage County	907	929	931	933	0.37%	0.14%	0.22%
Kane County	408	501	508	512	3.18%	1.29%	0.85%
Kendall County	55	97	103	105	9.39%	6.42%	1.32%
Lake County	648	710	712	713	1.36%	0.31%	0.02%
McHenry County	262	316	319	321	2.84%	0.85%	0.73%
Will County	508	674	681	685	4.28%	1.10%	0.61%
Region	8,166	8,512	8,548	8,555	0.60%	0.43%	0.08%
State of Illinois	12,439	12,853	12,902	12,910	0.52%	0.38%	0.07%

Source, U.S. Census Bureau, Annual Estimates of the Population for Counties of Illinois: April 1, 2000 to July 1, 2009 (CO-EST2008-01-17), CMAP

**Table 5. Average Daily VMT Growth on NE Illinois Expressway Systems
(Data in Thousands)**

Expressway	Average Daily VMT		Change in VMT, 1995-2004	CAGR (%), 1995-2004	Avg Daily VMT	Change in VMT, 2004-2008	CAGR (%), 2004-2008	Avg Daily VMT	Change in VMT, 2008-2009	% change, 2008-2009
	1995	2004			2008			2009		
I-80/94 Kingery Expressway (S Suburban)	465	437	-29	-0.7%	402	-34	-2.0%	445	43	10.6%
I-90/94 Dan Ryan Express Lanes (Chicago)	912	868	-44	-0.5%	623	-245	-8.0%	657	35	5.6%
US 41/South Lake Shore Drive (Chicago)	623	628	5	0.1%	603	-25	-1.0%	722	119	19.7%
I-90/94 Dan Ryan Local Lanes (Chicago)	2,089	2,119	31	0.2%	1,825	-294	-3.7%	1,811	-14	-0.8%
US 41/North Lake Shore Dr(Chicago)	1,111	1,129	18	0.2%	1,220	91	2.0%	1,185	-34	-2.8%
I-290 Eisenhower (Chicago)	3,100	3,209	109	0.4%	3,113	-95	-0.8%	3,145	31	1.0%
I-94 Edens Expressway (N Suburban)	2,595	2,708	114	0.5%	2,686	-22	-0.2%	2,732	46	1.7%
I-90/94 Kennedy Expressway (Chicago)	3,379	3,527	148	0.5%	3,472	-55	-0.4%	3,547	75	2.2%
Elgin-O'Hare Expressway (NW Suburban)	435	460	25	0.6%	445	-15	-0.8%	502	57	12.9%
I-94/Edens Spur (N Suburban)	226	242	16	0.8%	196	-45	-5.0%	211	15	7.7%
I-90/94 Kennedy Reversibles (Chicago)	272	296	24	1.0%	333	36	2.9%	395	63	18.8%
I-94/Bishop Ford Freeway (S Suburban)	1,472	1,622	150	1.1%	2,015	393	5.6%	2,084	69	3.4%
I-290 Eisenhower Extension (NW Suburban)	2,540	2,824	284	1.2%	3,061	236	2.0%	3,007	-54	-1.8%
IL 53 (NW Suburban)	788	913	124	1.6%	955	42	1.1%	1,007	52	5.4%
I-294/I-94 Tri-State Tollway (Near Suburban)	8,716	10,428	1,712	2.0%	9,203	-1,226	-3.1%	9,063	-140	-1.5%
I-57 (S Suburban)	1,206	1,495	289	2.4%	1,713	218	3.5%	1,816	103	6.0%
I-55 (SW Suburban)	3,410	4,376	967	2.8%	4,693	317	1.8%	481	112	2.4%
I-90 Addams Tollway (NW Suburban)	3,420	4,410	990	2.9%	4,118	-292	-1.7%	4,064	-54	-1.3%
I-88/Reagan Tollway (W Suburban)	2,589	3,545	955	3.6%	3,298	-247	-1.8%	3,364	66	2.0%
I-355 Veterans Mem Tollway (Far Suburban)	1,250	1,882	732	4.5%	2,593	-282	-3.3%	2,620	652	33.1%
REGION TOTAL	40,865	47,486	6,621	1.7%	45,942	-1,543	-0.8%	47,184	1,241	2.7%

Source: CMAP, based on IDOT and Illinois Tollway data.

Factor 4. Increasing Cost of Motor Fuel

Up to 2005, regular grade gasoline prices in metropolitan Chicago averaged less than \$2.00 per gallon. Successive seasonal price spikes resulted in \$4.00/gallon gasoline by June, 2008. See Figure 4 (p. 15). Prices did fall to below \$2.00/gallon by late November 2008 and remained under this level until March 2009. By May 2009, prices rose above \$2.50 per gallon and had minor fluctuations not exceeding \$3.00 per gallon until the end of calendar year 2009.

Fuel-cost related reductions in VMT have been documented on a national scale by the Federal Highway Administration (FHWA) in its *Traffic Volume Trends* publication⁸. This pattern began to emerge in 2006 regionally and nationally. For example, 12-month national VMT fell from 3.033 trillion to 2.993 trillion in the periods ending in August 2007 and August 2008, respectively. This was a decline of about 1.3%.

The relationship between national VMT trends and VMT growth is shown in Figure 5 (p. 15). The chart shows that national VMT has tended to decline at prices near and above \$3.00 per gallon. Further analysis of this data is planned to account for economic growth.

Regionally, VMT declines were substantial during summer, 2008. FHWA's *Urban Congestion Report – National Executive Summary* showed peak-period Chicago-area VMT falling steeply in early 2008, with average year-over-year declines averaging 4.6% for the first five reporting periods ending in 2008.⁹ As prices fell later in the year, this impact was probably secondary to larger economic trends. Regional VMT changes for year-over-year periods tended to be less pronounced after the summer of 2008. These were as follows: -2% for October to December 2008, -1% for January to March 2009, 2% for April to June 2009, 1% for July to September 2009, and -1% for October to December 2009¹⁰.

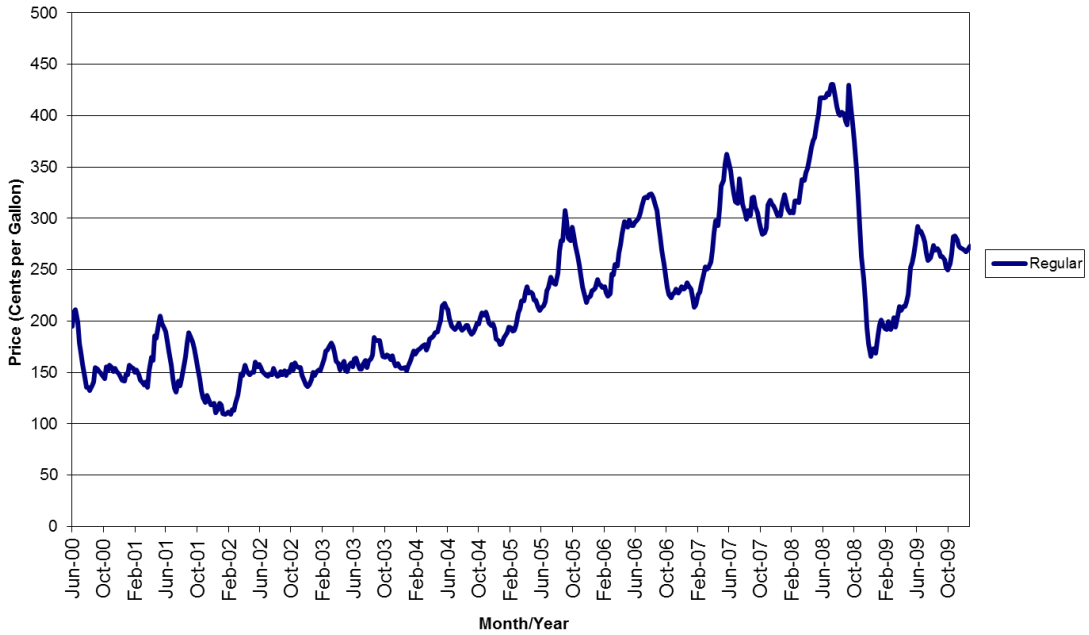
⁸ <http://www.fhwa.dot.gov/ohim/tvtw/tvtpage.htm>

⁹ Federal Highway Administration. *Urban Congestion Reports, National Executive Summary*. Periods Nov. 2007 – Jan. 2008 through Mar. – May 2008.

¹⁰ Federal Highway Administration. *Urban Congestion Reports, Periods October – December 2008 to October December 2009*.

Figure 4. Retail Gasoline Prices

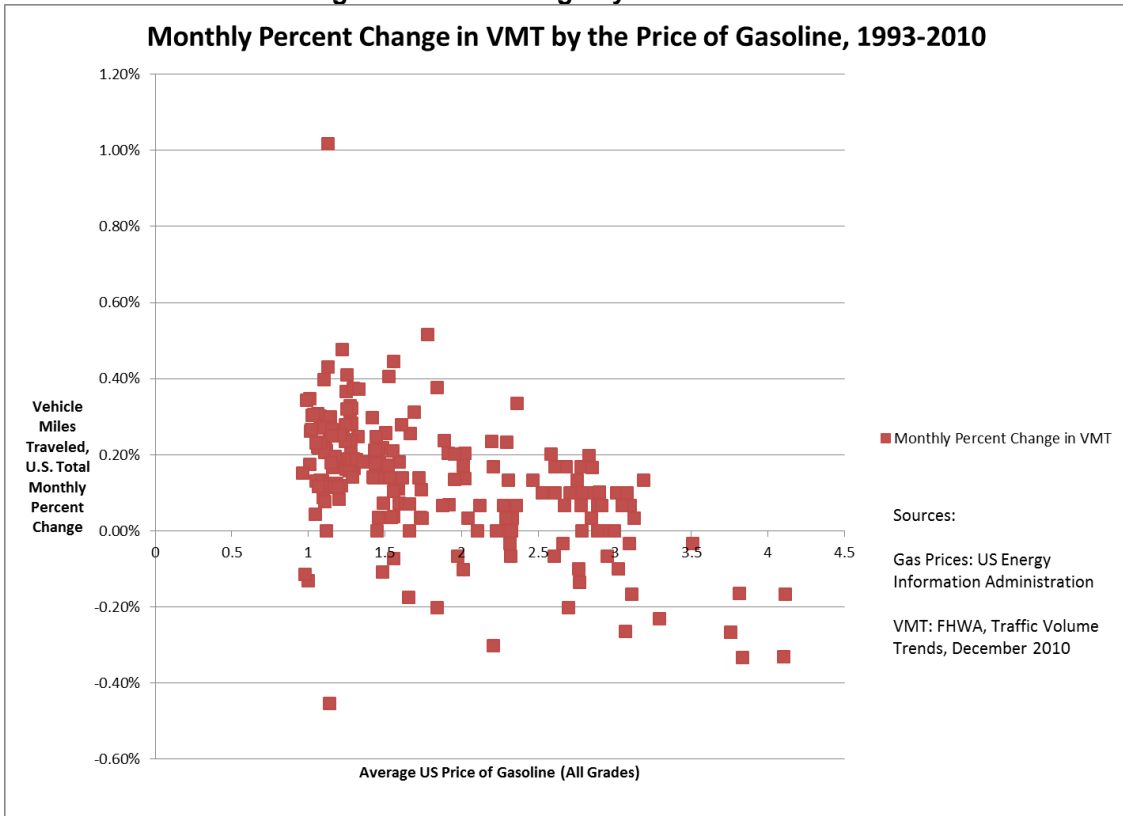
Chicago Retail Regular Grade Gasoline Prices
2000-2009



Source: US Department of Energy, Energy Information Administration

Figure 5. VMT Change by Price of Gasoline

Monthly Percent Change in VMT by the Price of Gasoline, 1993-2010



Factor 5. Changes in Travel Mode Share

Journey-to-Work data from the 2000 and 2009 American Community Survey (2000 Census Supplement) confirm that recent commuting trends have continued. A separate paper is in process studying recent changes in mode share in detail. Table 6 shows data highlights.

Here are a few key points from Table 6:

- The number of workers regularly working at home continued to rise.
- Transit mode share fell, but the number of work trips was nearly steady.
- The number and share of workers driving alone to work rose.

Table 6. Means of Transportation to Work

Means of Transportation to Work	Year 2000		Year 2008		Year 2009	
	Workers	% Share of Total	Workers	% Share of Total	Workers	% Share of Total
Transit (excluding Taxi)	497,319	13.3%	496,735	12.3%	495,396	12.5%
Light Vehicle						
Drove Alone	2,590,171	69.1%	2,815,768	69.9%	2,751,483	69.5%
Carpool	388,487	10.4%	369,292	9.2%	347,864	8.8%
Walked	136,870	3.6%	120,620	3.0%	129,863	3.3%
Worked at Home	104,106	2.8%	158,768	3.9%	162,905	4.1%
Other (including Bike and Taxi)	33,644	0.9%	66,131	1.6%	69,662	1.8%
Total	3,750,597		4,027,314		3,957,173	

Source: U.S. Census Bureau, American Community Survey, Years 2000, 2008, 2009

These changes were partly the result of demographic changes noted earlier in this paper. As more people leave transit-rich areas to live in areas with less transit service, fewer workers will use transit to travel to work; more people will drive. Though transit mode-share has grown substantially in the collar counties, this growth has not overcome the base transit service shortages in these counties.

In spite of falling transit mode-share for work trips, the Chicago Transit Authority, Pace Suburban Bus Service, and Metra commuter rail service all saw increases in ridership from 2004 to 2008, though ridership declined in 2009. Overall, unlinked passenger trips on the Regional Transportation Authority system rose from 534.2 million in 1995 to 653.5 million in 2008, an increase of 22.3% (an annual compound growth rate of 1.563%). System ridership fell to 639.5 million in 2009 during the economic recession. See Table 7.

Table 7. Annual RTA System Unlinked Passenger Trips (in millions)

Year	CTA Bus	CTA Rail	Total CTA	Metra	Pace	System
1995	307.3	119.3	426.6	70.4	37.2	534.2
1996	303.3	124	427.3	70.6	37.5	535.4
1997	288.9	151	439.9	72.3	37.9	550.1
1998	291.7	153.6	445.3	74.5	39.3	559.1
1999	300.3	166.5	466.8	76.6	40.2	583.6
2000	303.3	176.3	479.6	78.8	38.6	597
2001	303.1	181.7	484.8	79.2	37	601
2002	304.8	180.4	485.2	76.8	34.8	596.8
2003	293.5	181.1	474.6	74.8	33.7	583.1
2004	296	178.7	474.7	74.4	34.1	583.2
2005	305.5	186.8	492.3	77	36.9	606.2
2006	299.6	195.2	494.8	80.8	38.0	613.6
2007	309.3	190.3	499.5	83.3	39.1	621.9
2008	328.2	198.1	526.3	86.8	40.4	653.5
2009	318.7	202.6	521.3	83.1	35.1	639.5

Source: RTA-Regional Transportation Asset Management System (RTAMS)

RTA ridership data also shows the year 2004 as an inflection point for ridership trends. Total ridership had declined from 2001 to 2003; in 2004, a modest gain was posted (100,000) and the system had continuous increases in total unlinked trips from 2004 through 2008. In year 2009, all RTA services with the exception of CTA Rail showed declines; overall system ridership fell by 14 million unlinked trips.

Failure of increasing transit ridership to be reflected in higher transit work trip mode share is an opportunity for future research. For example, it is unclear from this data how much of the 31.6 million increase in unlinked trips from 2007 to 2008 was attributed to the introduction of free fares for senior citizens on all of the RTA systems (March 2008). It is also unclear at this time if the free fare program also resulted in VMT losses on the region's expressway system.

Factor 6. Increased Regional Unemployment

Increased unemployment probably tempered regional VMT. Between March 2008 and March 2009, there was an increase in the number of unemployed persons in each of the six counties comprising the Illinois Department of Employment Security-designated Chicago Metro Area. Also, between March 2008 and March 2010, there was a net loss of private-sector employment positions in all six counties (Tables 8 and 9).

Table 8. Number of Residents in Labor Force Currently Employed, by County

	Cook	DuPage	Kane	Lake	McHenry	Will	6 counties
March 2008	2,490,666	512,103	254,533	347,222	172,158	345,851	4,122,533
March 2009	2,345,140	482,182	239,661	323,927	161,918	325,643	3,878,471
Net Change	-145,526	-29,921	-14,872	-23,295	-10,240	-20,208	-244,062
(%)	-5.84%	-5.84%	-5.84%	-6.71%	-5.95%	-5.84%	-5.92%
March 2010	2,599,961	523,075	274,034	360,296	182,104	369,675	4,309,145
Net Change	254,821	40,893	34,373	36,369	20,186	44,032	430,674
(%)	10.87%	8.48%	14.34%	11.23%	12.47%	13.52%	11.10%

Source: Illinois Department of Employment Security, *Local Area Unemployment Statistics*, March 2008, March 2009 and March 2010.

Table 9. Number of Private Sector Employment Positions, by Location (County)

	Cook	DuPage	Kane	Lake	McHenry	Will	6 counties
March 2008	2,176,935	537,781	176,018	285,422	85,070	160,771	3,421,997
March 2009	2,068,502	501,878	163,004	269,455	79,411	154,307	3,236,557
Net Change,	-108,433	-35,903	-13,014	-15,967	-5,659	-6,464	-185,440
(%)	-4.98%	-6.68%	-7.39%	-5.59%	-6.65%	-4.02%	-5.42%
March 2010	2,004,132	484,910	155,665	257,955	74,895	155,494	3,133,051
Net Change,	-64,370	-16,968	-7,339	-11,500	-4,516	1,187	-103,506
(%)	-3.11%	-3.38%	-4.50%	-4.27%	-5.69%	0.77%	-3.20%

Source: Illinois Department of Employment Security, Where Workers Work 2011, December 2010.

Between March 2008 and March 2009, the percentage of employed persons decreased more in Lake County than in any other county; most of the region saw reductions of between 5.84% and 5.93% whereas Lake County has seen a reduction of 6.71%. In terms of positions lost, Kane (7.39%), DuPage (6.68%), McHenry (6.65%) and Lake (5.59%) Counties have a greater percentage of positions lost between March 2008 and March 2009 than the regional (six county) average. The rate of loss for private-sector positions abated in 2009, but the same four counties continued to have disproportionate losses. These job losses may have had continuing effects on expressway volumes, particularly in suburban areas.

Summary

This brief paper summarized vehicle miles traveled (VMT) trends and identified factors that may have caused recent changes in VMT on expressways in metropolitan Chicago. The paper analyzed trends up to 2009.

The paper reviewed six important factors:

- Illinois Tollway toll increases and construction;
- Major road construction;
- Regional variations in residential and employment growth;
- Increasing cost of motor fuel;
- Changes in travel mode share;
- Increase in regional unemployment in 2008

Each factor affects regional facilities differently, resulting in variation in the volume trends among regional expressway facilities. Each factor's impact on expressway volumes was reviewed. This information may be useful in understanding recent changes in VMT, and in understanding recent travel behavior so as to better plan for the operations of the region's expressway system.