PCA Portland Cement Association
THE Monitor Flash Report
Breaking Analysis of the Economy, Construction and Cement Industries
Contact: > Ed Sullivan, Chief Economist 847.972.9006 > esullivan@cement.org

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Green Building and Highway Requirements: National Perspective

Point 1: During the past 25 years, investment in highways and roads has not kept pace with demographic changes. During this period licensed drivers increased 37%, vehicle registrations increased 55%, vehicle miles travelled increased 51% and highway lane miles increased only 4.9%. Lack of investment in highways has led to increased traffic congestion, wasted fuel, higher CO2 emissions, wasted time and increased logistical costs to the detriment of economic growth. According to the Urban Mobility Report, during the past 25 years:

- Traffic delays facing the average commuter increased from 14 hours in 1982 to 38 hours per year in 2007.
- Wasted fuel accrued to congestion delays increased from half a billion gallons in 1982 to more than 3 billion gallons in 2007.
- Emissions attributed to congestion delays increased from 4.5 million metric tons of CO2 in 1982 to 27.2 million metric tons in 2007 – a six-fold increase
- Wasted fuel, time and higher transportation costs resulted in a cumulative cost on the economy of roughly $80 billion annually in 2007, compared to less than $15 billion in 1982.

Point 2: On-going demographic changes during the next 25 years will bring even more pressure on the highway infrastructure. Consider the following by 2033:

- The United States is expected to add 49 million licensed drivers, an increase of 24% over 2007 levels.
- Vehicle registrations is expected to increase by 58 million vehicles over 2007 levels.
- Total vehicle miles travelled is expected to increase 49% over 2007 levels.

Point 3: Lacking accelerated investment in highways, traffic congestion will worsen leading to increases in wasted fuel, CO2 emissions, wasted time and to overall cost to the nation's economy. If the trends of the past 25 years are sustained, PCA estimates the following by 2033:

- Peak traffic delays facing the average commuter is expected to increase from 38 hours per year to nearly 50 hours per year in 2033.
- Wasted fuel accrued to congestion delays is expected to increase from more than 3 billion gallons in 2007 to 6.5 billion gallons in 2033.
- Annual emissions attributed to congestion delays increased from 27.2 million metric tons of CO2 in 2007 to nearly 60 million metric tons by 2033.

- Wasted fuel, time and higher transportation costs will result in a cumulative cost on the economy of roughly $150 billion annually.

Point 4: The ability to maintain or expand existing highway infrastructure under may be compromised by competing state expenditure responsibilities and diminished federal support.

- States are largely responsible for the expansion and maintenance of public highways.

- Currently, nearly 23% of total state spending is directed at Medicaid. As the population ages, Medicaid spending will increase. Medicaid spending is expected to account for 34% of total state spending by 2030 – potentially at the expense of highway and infrastructure spending.

- Revenues from federal gasoline taxes, which are fed into the Highway Trust Fund and used to support highway spending, remain at 18.3 cents per gallon and have not been increased since 1994. Since that time, construction costs have increased dramatically. $1 dollar of gasoline tax revenue in 1994 that supported $1 of highway spending now supports only 66 cents of highway spending – diminishing the effectiveness of federal support. The Congressional Budget Office expects the Highway Trust Fund will face bankruptcy in 2009. Federal gasoline taxes are not scheduled for review until 2011.

- Without increased emphasis on infrastructure spending traffic congestion will worsen leading to increases in wasted fuel, CO2 emissions and to overall cost to the nation's economy. ***A comprehensive approach to climate change legislation must take into consideration all factors that contribute to green house gas emissions.***

Point 5: The need to accelerate highway investment, coupled with new budgetary pressures suggest that states must re-assess how to best stretch scarce infrastructure investment dollars.

- Because concrete roads are more durable, they require fewer re-surfacings and lower maintanence costs during the lifetime of a road – saving states 20% or more in paving costs compared to asphalt roads.

    - Asphalt pavements, according to various state DOT records, require resurfacing at an average age of 9.9 years, and in some cases as short as 6 years. That implies 3 to 5 resurfacings during a 30 year time horizon.

    - Average age of a concrete pavement before any need for maintenance is 25 to 30 years or longer. That implies ONE resurfacing during a 30 year time horizon.

- Asphalt prices have increased 33% over the past two years – raising the initial paving costs for highways. High oil prices, the key factor behind the increase in asphalt, are likely to remain high.

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State and Metropolitan Tables

Arizona

	2000	2005	2007	2032	Annualized* Change 2005-2000	Annualized* Change 2032-2007
Demographic Trends						
Licensed Drivers	3,434	3,943	4,169	8,359	102	168
- Percent Change (%)	-----	-----	-----	-----	3.0%	4.0%
Congestion Measures						
Lane Miles	118,437	128,569	131,213	198,206	2,026	2,680
- Percent Change (%)					1.7%	2.0%
Lane Miles Per Driver	34.5	32.6	31.5	23.7	-2	-8
- Percent Change (%)					-1.1%	-1.0%
Annual Travel Delays, Hours Per Traveler						
- Phoenix	32	48	50	102	3.1	2.1
Congestion Impacts						
Wasted Fuel Due to Congestion, Total Gallons in Thousands **						
- Phoenix	50,833	58,922	61,788	127,437	8089	65649
Added CO2 Emissions Due to Congestion, Metric Tons **						
- Phoenix	462,121	535,655	561,709	1,158,522	73533	596813
Economic Congestion Cost, Million $ **						
- Phoenix	1,161	1,687	1,806	3,724	526	1919

Sources: Urban Mobility Report, Federal Highway Administration, Bureau of Census, PCA Estimates
*** Changes reflected in lane miles per driver are not annualized**
****Total Change Per Period.**

California

	2000	2005	2007	2032	Annualized* Change 2005-2000	Annualized* Change 2032-2007
Demographic Trends						
Licensed Drivers	21,244	22,896	23,595	34,364	330	431
- Percent Change (%)	-----	-----	-----	-----	1.6%	1.8%
Congestion Measures						
Lane Miles	371,689	379,356	379,356	423,563	1,533	1,768
- Percent Change (%)					0.4%	0.5%
Lane Miles Per Driver	17.5	16.6	16.1	12.3	-1	-4
- Percent Change (%)					-1.1%	-0.9%
	42	56	57	100		
Congestion Impacts						
Wasted Fuel Due to Congestion, Total Gallons in Thousands **						
- Los Angeles	490,833	383,674	402,927	709,610	-107159	306684
- San Francisco	116,667	100,525	105,922	255,427	-16142	149505
- San Diego	52,500	71,123	78,578	204,667	18623	126089
- San Jose	34,167	34,710	39,704	86,689	543	46985
- San Bernardino	30,833	39,627	39,499	80,975	8794	41476
- Sacramento	19,167	29,244	31,457	65,076	10077	33619
Total Surveyed	744,167	658,903	698,085	1,402,444	-85,264	704,359
Added CO2 Emissions Due to Congestion, Metric Tons						
- Los Angeles	4,462,121	3,487,945	3,662,970	6,451,004	-974176	2788033
- San Francisco	1,060,606	913,864	962,923	2,322,061	-146742	1359137
- San Diego	477,273	646,573	714,343	1,860,607	169300	1146264
- San Jose	310,606	315,545	360,943	788,082	4939	427140
- San Bernardino	280,303	360,245	359,078	736,136	79942	377058
- Sacramento	174,242	265,855	285,969	591,599	91612	305630
Total Surveyed	6,765,152	5,990,027	6,346,227	12,749,489	-775,124	6,403,262
Economic Congestion Cost, Million $						
- Los Angeles	12,489	9,325	11,114	16,164	-3164	5051
- San Francisco	2,739	2,414	2,906	5,196	-325	2290
- San Diego	1,105	1,708	2,051	3,810	603	1759
- San Jose	909	899	1,113	2,062	-10	948
- San Bernardino	691	955	1,049	1,917	264	868
- Sacramento	461	729	826	1,530	268	704
Total Surveyed	18,394	16,030	19,060	30,680	-2,364	11,620

Sources: Urban Mobility Report, Federal Highway Administration, Bureau of Census, PCA Estimates
*** Changes reflected in lane miles per driver are not annualized**
****Total Change Per Period.**

Colorado

	2000	2005	2007	2032	Annualized* Change 2005-2000	Annualized* Change 2032-2007
Demographic Trends						
Licensed Drivers	3,107	3,341	3,450	5,144	47	68
- Percent Change (%)	-----	-----	-----	-----	1.5%	2.0%
Congestion Measures						
Lane Miles	176,993	181,981	183,703	214,984	998	1,251
- Percent Change (%)					0.6%	0.7%
Lane Miles Per Driver	57.0	54.5	53.3	41.8	-2	-11
- Percent Change (%)					-0.9%	-0.9%
Annual Travel Delays, Hours Per Traveler						
-Denver	28	45	46	85	3.4	1.6
Congestion Impacts						
Wasted Fuel Due to Congestion, Total Gallons in Thousands **						
-Denver	41,667	42,519	43,789	80,909	852	37120
Total Surveyed	41,667	42,519	43,789	80,909	852	37,120
Added CO2 Emissions Due to Congestion, Metric Tons **						
-Denver	378,788	386,536	398,081	735,533	7748	337452
Total Surveyed	378,788	386,536	398,081	735,533	7,748	337,452
Economic Congestion Cost, Million $ **						
-Denver	1,045	1,176	1,287	2,378	131	1091
Total Surveyed	1,045	1,176	1,287	2,378	131	1,091

Sources: Urban Mobility Report, Federal Highway Administration, Bureau of Census, PCA Estimates
*** Changes reflected in lane miles per driver are not annualized**
****Total Change Per Period.**

Washington D.C.

	2000	2005	2007	2032	Annualized* Change 2005-2000	Annualized* Change 2032-2007
Demographic Trends						
Licensed Drivers	348	330	337	432	-4	4
- Annual Percent Change (%)	-----	-----	-----	-----	-1.0%	1.1%
Congestion Measures						
Lane Miles	3,774	3,529	3,546	3,636	-49	4
- Annual Percent Change (%)					-1.3%	0.1%
Lane Miles Per Driver	10.8	10.7	10.5	8.4	0	-2
- Annual Percent Change (%)					-0.3%	-0.8%
Annual Travel Delays, Hours Per Traveler						
-District of Columbia	46	60	61	80	2.8	0.8
Congestion Impacts						
Wasted Fuel Due to Congestion, Total Gallons in Thousands **						
-District of Columbia	86,667	90,861	95,715	126,131	4194	30416
Total Surveyed	86,667	90,861	95,715	126,131	4,194	30,416
-District of Columbia	1,881	1,514	1,572	1,572		
Added CO2 Emissions Due to Congestion, Metric Tons						
-District of Columbia	787,879	826,009	870,134	1,146,645	38130	276511
Total Surveyed	787,879	826,009	870,134	1,146,645	38,130	276,511
Economic Congestion Cost, Million $ **						
-District of Columbia	1,984	2,331	2,712	3,574	347	862
Total Surveyed	1,984	2,331	2,712	3,574	347	862
-District of Columbia	2325					

Sources: Urban Mobility Report, Federal Highway Administration, Bureau of Census, PCA Estimates
*** Changes reflected in lane miles per driver are not annualized**
****Total Change Per Period.**

Florida

	2000	2005	2007	2032	Annualized* Change 2005-2000	Annualized* Change 2032-2007
Demographic Trends						
Licensed Drivers	12,853	13,374	13,589	23,594	104	400
- Percent Change (%)	-----	-----	-----	-----	0.8%	2.9%
Congestion Measures						
Lane Miles	253,349	264,087	267,326	329,238	2,148	2,476
- Percent Change (%)					0.8%	0.9%
Lane Miles Per Driver	19.7	19.7	19.7	14.0	0	-6
- Percent Change (%)					0.0%	-1.2%
Annual Travel Delays, Hours Per Traveler						
- Miami	38	50	50	72	2.4	0.9
- Orlando	36	54	54	79	3.6	1.0
- Tampa-St. Petersburg	25	45	45	71	4.1	1.0
- Jacksonville	18	39	39	67	4.3	1.1
Congestion Impacts						
Wasted Fuel Due to Congestion, Total Gallons in Thousands **						
- Miami	45,000	105,181	108,916	156,053	60181	47137
- Orlando	21,667	26,049	28,024	40,725	4382	12701
- Tampa-St. Petersburg	23,333	35,281	36,933	58,319	11948	21386
- Jacksonville	8,333	13,997	15,190	25,866	5664	10676
Total Surveyed	98,333	180,508	189,064	280,963	82,175	91,900
Added CO2 Emissions Due to Congestion, Metric Tons **						
- Miami	409,091	956,191	990,146	1,418,662	547100	428517
- Orlando	196,970	236,809	254,767	370,231	39839	115464
- Tampa-St. Petersburg	212,121	320,736	335,757	530,172	108615	194415
- Jacksonville	75,758	127,245	138,091	235,147	51488	97056
Total Surveyed	893,939	1,640,982	1,718,761	2,554,213	747,042	835,452
Economic Congestion Cost, Million $ **						
- Miami	1,190	2,730	3,143	4,503	1540	1360
- Orlando	589	738	830	1,206	149	376
- Tampa-St. Petersburg	636	1,005	1,116	1,762	369	646
- Jacksonville	209	376	428	729	167	301
Total Surveyed	2,624	0 4,849	5,517	8,200	2,225	2,683

Sources: Urban Mobility Report, Federal Highway Administration, Bureau of Census, PCA Estimates
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****Total Change Per Period.**

Georgia

	2000	2005	2007	2032	Annualized* Change 2005-2000	Annualized* Change 2032-2007
Demographic Trends						
Licensed Drivers	5,550	5,940	6,109	8,681	78	103
- Percent Change (%)	-----	-----	-----	-----	1.4%	1.7%
Congestion Measures						
Lane Miles	241,087	248,138	250,538	289,399	1,410	1,554
- Percent Change (%)					0.6%	0.6%
Lane Miles Per Driver	43.4	41.8	41.0	33.3	-2	-8
- Percent Change (%)					-0.8%	-0.7%
Annual Travel Delays, Hours Per Traveler						
- Atlanta	38	60	61	90	4.3	1.2
Congestion Impacts						
Wasted Fuel Due to Congestion, Total Gallons in Thousands **						
- Atlanta	87,500	96,066	90,026	133,343	8566	43317
Total Surveyed	87,500	96,066	90,026	133,343	8,566	43,317
Added CO2 Emissions Due to Congestion, Metric Tons **						
- Atlanta	795,455	873,327	818,418	1,212,210	77873	393791
Total Surveyed	795,455	873,327	818,418	1,212,210	77,873	393,791
Economic Congestion Cost, Million $ **						
- Atlanta	1,609	2,581	2,392	3,543	972	1151
Total Surveyed	1,609	2,581	2,392	3,543	972	1,151

Sources: Urban Mobility Report, Federal Highway Administration, Bureau of Census, PCA Estimates
*** Changes reflected in lane miles per driver are not annualized**
****Total Change Per Period.**

Texas

	2000	2005	2007	2032	Annualized* Change 2005-2000	Annualized* Change 2032-2007
Demographic Trends						
Licensed Drivers	13,462	14,659	15,185	23,594	239	336
- Percent Change (%)	-----	-----	-----	-----	1.8%	2.2%
Congestion Measures						
Lane Miles	639,853	648,624	652,908	698,939	1,754	1,841
- Percent Change (%)					0.3%	0.3%
Lane Miles Per Driver	47.5	44.2	43.0	29.6	-3	-13
- Percent Change (%)					-1.4%	-1.2%
Annual Travel Delays, Hours Per Traveler						
- Dallas/Fort Worth	41	58	60	100	3.5	1.6
- Houston	41	56	58	92	3.0	1.4
Congestion Impacts						
Wasted Fuel Due to Congestion, Total Gallons in Thousands **						
- Dallas/Fort Worth	73,333	106,201	112,480	188,487	32868	76007
- Houston	116,667	92,559	97,520	156,576	-24108	59057
Total Surveyed	190,000	198,760	210,000	345,064	8,760	135,064
Added CO2 Emissions Due to Congestion, Metric Tons **						
- Dallas/Fort Worth	666,667	965,464	1,022,543	1,713,520	298797	690976
- Houston	1,060,606	841,445	886,544	1,423,422	-219161	536878
Total Surveyed	1,727,273	1,806,909	1,909,087	3,136,942	79,636	1,227,855
Economic Congestion Cost, Million $ **						
- Dallas/Fort Worth	2,253	2,747	3,241	5,431	494	2190
- Houston	1,950	2,225	2,688	4,315	275	1628
Total Surveyed	4,203	4,972	5,929	9,747	769	3,818

Sources: Urban Mobility Report, Federal Highway Administration, Bureau of Census, PCA Estimates
*** Changes reflected in lane miles per driver are not annualized**
****Total Change Per Period.**

Illinois

	2000	2005	2007	2032	Annualized* Change 2005-2000	Annualized* Change 2032-2007
Demographic Trends						
Licensed Drivers	7,961	7,871	8,029	10,297	-18	91
- Percent Change (%)	-----	-----	-----	-----	-0.2%	1.1%
Congestion Measures						
Lane Miles	288,879	290,519	291,972	295,632	328	146
- Percent Change (%)					0.1%	0.1%
Lane Miles Per Driver	36.3	36.9	36.4	28.7	1	-8
- Percent Change (%)					0.3%	-0.8%
Annual Travel Delays, Hours Per Traveler						
- Chicago	37	46	47	86	1.9	1.6
Congestion Impacts						
Wasted Fuel Due to Congestion, Total Gallons in Thousands **						
- Chicago	145,833	141,612	152,596	280,496	-4221	127900
Total Surveyed	145,833	141,612	152,596	280,496	-4,221	127,900
Added CO2 Emissions Due to Congestion, Metric Tons **						
- Chicago	1,325,758	1,287,382	1,387,240	2,549,968	-38376	1162728
Total Surveyed	1,325,758	1,287,382	1,387,240	2,549,968	-38,376	1,162,728
Economic Congestion Cost, Million $ **						
- Chicago	3,494	3,968	4,495	8,263	474	3768
Total Surveyed	3,494	3,968	4,495	8,263	474	3,768

Sources: Urban Mobility Report, Federal Highway Administration, Bureau of Census, PCA Estimates
*** Changes reflected in lane miles per driver are not annualized**
****Total Change Per Period.**

Indiana

	2000	2005	2007	2032	Annualized* Change 2005-2000	Annualized* Change 2032-2007
Demographic Trends						
Licensed Drivers	3,976	4,521	4,763	9,140	109	175
- Percent Change (%)	-----	-----	-----	-----	2.7%	3.7%
Congestion Measures						
Lane Miles	193,637	197,772	199,378	214,984	827	624
- Percent Change (%)					0.4%	0.3%
Lane Miles Per Driver	48.7	43.7	41.9	23.5	-5	-18
- Percent Change (%)					-2.0%	-1.8%
Annual Travel Delays, Hours Per Traveler						
-Indianapolis	24	43	45	73	3.9	1.1
Congestion Impacts						
Wasted Fuel Due to Congestion, Total Gallons in Thousands **						
-Indianapolis	14,167	16,098	20,055	32,825	1931	12770
Total Surveyed	14,167	16,098	20,055	32,825	1,931	12,770
Added CO2 Emissions Due to Congestion, Metric Tons **						
-Indianapolis	128,788	146,345	182,316	298,407	17558	116091
Total Surveyed	128,788	146,345	182,316	298,407	17,558	116,091
Economic Congestion Cost, Million $ **						
-Indianapolis	337	478	562	920	141	358
Total Surveyed	337	478	562	920	141	358

Sources: Urban Mobility Report, Federal Highway Administration, Bureau of Census, PCA Estimates
*** Changes reflected in lane miles per driver are not annualized**
****Total Change Per Period.**

Pennsylvania

	2000	2005	2007	2032	Annualized* Change 2005-2000	Annualized* Change 2032-2007
Demographic Trends						
Licensed Drivers	8,229	8,461	8,555	9,827	46	51
- Percent Change (%)	-----	-----	-----	-----	0.6%	0.6%
Congestion Measures						
Lane Miles	249,169	251,431	252,859	264,550	452	468
- Percent Change (%)					0.2%	0.2%
Lane Miles Per Driver	30.3	29.7	29.6	26.9	-1	-3
- Percent Change (%)					-0.4%	-0.4%
Annual Travel Delays, Hours Per Traveler						
Philadelphia	23	38	38	45	3.0	0.3
Pittsburg	8	16	16	20	1.6	0.2
Congestion Impacts						
Wasted Fuel Due to Congestion, Total Gallons in Thousands **						
- Philadelphia	37,500	70,902	78,348	91,605	33402	13257
- Pittsburgh	6,667	9,215	10,923	13,475	2548	2552
Total Surveyed	44,167	80,117	89,271	105,080	35,950	15,809
Added CO2 Emissions Due to Congestion, Metric Tons **						
- Philadelphia	340,909	644,564	712,256	832,773	303655	120517
- Pittsburgh	60,606	83,773	99,299	122,497	23167	23198
Total Surveyed	401,515	728,336	811,556	955,270	326,821	143,715
Economic Congestion Cost, Million $ **						
- Philadelphia	1,131	2,076	2,365	2,765	945	400
- Pittsburgh	201	317	356	439	116	83
Total Surveyed	1,331	2,393	2,721	3,205	1,062	483

Sources: Urban Mobility Report, Federal Highway Administration, Bureau of Census, PCA Estimates
*** Changes reflected in lane miles per driver are not annualized**
****Total Change Per Period.**

Minnesota

	2000	2005	2007	2032	Annualized* Change 2005-2000	Annualized* Change 2032-2007
Demographic Trends						
Licensed Drivers	2,941	3,084	3,143	3,986	29	34
- Percent Change (%)	-----	-----	-----	-----	1.0%	1.1%
Congestion Measures						
Lane Miles	271,176	271,244	272,306	272,651	14	14
- Percent Change (%)					0.0%	0.0%
Lane Miles Per Driver	92.2	88.0	86.6	68.4	-4	-18
- Percent Change (%)					-0.9%	-0.8%
Annual Travel Delays, Hours Per Traveler						
- Miineapolis-St. Paul	30	43	44	62	2.7	0.7
Congestion Impacts						
Wasted Fuel Due to Congestion, Total Gallons in Thousands **						
- Miineapolis-St. Paul	37,500	41,820	47,143	67,254	4320	20111
Total Surveyed	37,500	41,820	47,143	67,254	4,320	20,111
Added CO2 Emissions Due to Congestion, Metric Tons **						
- Miineapolis-St. Paul	340,909	380,182	428,575	611,398	39273	182823
Total Surveyed	340,909	380,182	428,575	611,398	39,273	182,823
Economic Congestion Cost, Million $ **						
- Miineapolis-St. Paul	1,041	1,099	1,277	1,822	58	545
Total Surveyed	1,041	1,099	1,277	1,822	58	545

Sources: Urban Mobility Report, Federal Highway Administration, Bureau of Census, PCA Estimates
*** Changes reflected in lane miles per driver are not annualized**
****Total Change Per Period.**

Massachusetts

	2000	2005	2007	2032	Annualized* Change 2005-2000	Annualized* Change 2032-2007
Demographic Trends						
Licensed Drivers	4,490	4,613	4,664	5,352	25	28
- Percent Change (%)	-----	-----	-----	-----	0.5%	0.6%
Congestion Measures						
Lane Miles	74,505	75,815	76,374	83,331	262	278
- Percent Change (%)					0.4%	0.4%
Lane Miles Per Driver	16.6	16.4	16.4	15.6	0	-1
- Percent Change (%)					-0.2%	-0.2%
Annual Travel Delays, Hours Per Traveler						
Boston	37	46	46	80	1.9	1.4
Congestion Impacts						
Wasted Fuel Due to Congestion, Total Gallons in Thousands **						
Boston	49,167	62,521	63,004	109,465	13354	46461
Total Surveyed	49,167	62,521	63,004	109,465	13,354	46,461
Added CO2 Emissions Due to Congestion, Metric Tons **						
Boston	446,970	568,373	572,767	995,137	121403	422371
Total Surveyed	446,970	568,373	572,767	995,137	121,403	422,371
Economic Congestion Cost, Million $ **						
Boston	1,361	1,820	1,864	3,239	459	1375
Total Surveyed	1,361	1,820	1,864	3,239	459	1,375

Sources: Urban Mobility Report, Federal Highway Administration, Bureau of Census, PCA Estimates
*** Changes reflected in lane miles per driver are not annualized**
****Total Change Per Period.**

Maryland

	2000	2005	2007	2032	Annualized* Change 2005-2000	Annualized* Change 2032-2007
Demographic Trends						
Licensed Drivers	3,382	3,710	3,849	6,113	65	91
- Percent Change (%)	-----	-----	-----	-----	1.9%	2.4%
Congestion Measures						
Lane Miles	67,017	67,990	68,450	73,579	195	205
- Percent Change (%)					0.3%	0.3%
Lane Miles Per Driver	19.8	18.3	17.8	12.0	-1	-6
- Percent Change (%)					-1.5%	-1.3%
Annual Travel Delays, Hours Per Traveler						
-Baltimore	27	44	45	69	3.3	1.0
Congestion Impacts						
Wasted Fuel Due to Congestion, Total Gallons in Thousands **						
-Baltimore	27,500	40,814	47,175	72,196	13314	25021
Total Surveyed	27,500	40,814	47,175	72,196	13,314	25,021
Added CO2 Emissions Due to Congestion, Metric Tons **						
-Baltimore	250,000	371,036	428,867	656,332	121036	227464
Total Surveyed	250,000	371,036	428,867	656,332	121,036	227,464
Economic Congestion Cost, Million $ **						
-Baltimore	734	1,126	1,316	2,014	392	698
Total Surveyed	734	1,126	1,316	2,014	392	698

Sources: Urban Mobility Report, Federal Highway Administration, Bureau of Census, PCA Estimates
*** Changes reflected in lane miles per driver are not annualized**
****Total Change Per Period.**

Michigan

	2000	2005	2007	2032	Annualized* Change 2005-2000	Annualized* Change 2032-2007
Demographic Trends						
Licensed Drivers	6,925	7,105	7,179	8,162	36	39
- Percent Change (%)	-----	-----	-----	-----	0.5%	0.5%
Congestion Measures						
Lane Miles	256,155	255,353	258,903	332,026	-160	2,925
- Percent Change (%)					-0.1%	1.1%
Lane Miles Per Driver	37.0	35.9	36.1	40.7	-1	5
- Percent Change (%)					-0.6%	0.5%
Annual Travel Delays, Hours Per Traveler						
-Detriot	30	54	54	43	4.8	-0.4
Congestion Impacts						
Wasted Fuel Due to Congestion, Total Gallons in Thousands **						
-Detriot	61,667	76,062	89,858	71,498	14395	-18360
Total Surveyed	61,667	76,062	89,858	71,498	14,395	-18,360
Added CO2 Emissions Due to Congestion, Metric Tons **						
-Detriot	560,606	691,473	816,895	649,985	130867	-166910
Total Surveyed	560,606	691,473	816,895	649,985	130,867	-166,910
Economic Congestion Cost, Million $ **						
-Detriot	1,626	2,174	2,477	1,971	548	-506
Total Surveyed	1,626	2,174	2,477	1,971	548	-506

Sources: Urban Mobility Report, Federal Highway Administration, Bureau of Census, PCA Estimates
*** Changes reflected in lane miles per driver are not annualized**
****Total Change Per Period.**

Missouri

	2000	2005	2007	2032	Annualized* Change 2005-2000	Annualized* Change 2032-2007
Demographic Trends						
Licensed Drivers	3,856	4,135	4,253	6,036	56	71
- Percent Change (%)	-----	-----	-----	-----	1.4%	1.7%
Congestion Measures						
Lane Miles	251,209	259,596	262,325	309,374	1,677	1,882
- Percent Change (%)					0.7%	0.7%
Lane Miles Per Driver	65.1	62.8	61.7	51.3	-2	-10
- Percent Change (%)					-0.7%	-0.7%
Annual Travel Delays, Hours Per Traveler						
-St. Louis	24	33	34	49	1.9	0.6
Congestion Impacts						
Wasted Fuel Due to Congestion, Total Gallons in Thousands **						
-St. Louis	26,667	23,342	30,083	43,857	-3325	13774
Total Surveyed	26,667	23,342	30,083	43,857	-3,325	13,774
Added CO2 Emissions Due to Congestion, Metric Tons **						
-St. Louis	242,424	212,200	273,481	398,700	-30224	125218
Total Surveyed	242,424	711	273,481	398,700	-30,224	125,218
Economic Congestion Cost, Million $ **						
-St. Louis	687	711	838	1,222	24	384
Total Surveyed	687	711	838	1,222	24	384

Sources: Urban Mobility Report, Federal Highway Administration, Bureau of Census, PCA Estimates
*** Changes reflected in lane miles per driver are not annualized**
****Total Change Per Period.**

Nevada

	2000	2005	2007	2032	Annualized* Change 2005-2000	Annualized* Change 2032-2007
Demographic Trends						
Licensed Drivers	1,371	1,596	1,697	3,639	45	78
- Percent Change (%)	-----	-----	-----	-----	3.3%	4.6%
Congestion Measures						
Lane Miles	79,050	72,618	73,628	94,422	-1,286	832
- Percent Change (%)					-1.6%	1.1%
Lane Miles Per Driver	57.7	45.5	43.4	25.9	-12	-17
- Percent Change (%)					-4.2%	-1.6%
Annual Travel Delays, Hours Per Traveler						
-Las Vegas	21	39	41	76	3.6	1.4
Congestion Impacts						
Wasted Fuel Due to Congestion, Total Gallons in Thousands **						
-Las Vegas	15,000	54,707	40,125	74,324	39707	34198
Total Surveyed	15,000	54,707	40,125	74,324	39,707	34,198
Added CO2 Emissions Due to Congestion, Metric Tons **						
-Las Vegas	136,364	497,336	364,776	675,669	360973	310893
Total Surveyed	136,364	497,336	364,776	675,669	360,973	310,893
Economic Congestion Cost, Million $ **						
-Las Vegas	354	1,413	1,058	1,959	1059	901
Total Surveyed	354	1,413	1,058	1,959	1,059	901

Sources: Urban Mobility Report, Federal Highway Administration, Bureau of Census, PCA Estimates
*** Changes reflected in lane miles per driver are not annualized**
****Total Change Per Period.**

New York

	2000	2005	2007	2032	Annualized* Change 2005-2000	Annualized* Change 2032-2007
Demographic Trends						
Licensed Drivers	10,871	11,072	11,158	12,291	40	45
- Percent Change (%)	-----	-----	-----	-----	0.4%	0.4%
Congestion Measures						
Lane Miles	239,035	240,166	241,325	247,172	226	234
- Percent Change (%)					0.1%	0.1%
Lane Miles Per Driver	22.0	21.7	21.6	20.1	0	-2
- Percent Change (%)					-0.3%	-0.3%
Annual Travel Delays, Hours Per Traveler						
- New York	40	46	46	55	1.2	0.4
Congestion Impacts						
Wasted Fuel Due to Congestion, Total Gallons in Thousands **						
- New York	188,333	241,976	265,562	316,472	53643	50910
Total Surveyed	188,333	241,976	265,562	316,472	53,643	50,910
Added CO2 Emissions Due to Congestion, Metric Tons **						
- New York	1,712,121	2,199,782	2,414,199	2,877,019	487661	462820
Total Surveyed	1,712,121	2,199,782	2,414,199	2,877,019	487,661	462,820
Economic Congestion Cost, Million $ **						
- New York	6,537	7,383	8,320	9,915	846	1595
Total Surveyed	6,537	7,383	8,320	9,915	846	1,595

Sources: Urban Mobility Report, Federal Highway Administration, Bureau of Census, PCA Estimates
*** Changes reflected in lane miles per driver are not annualized**
****Total Change Per Period.**

North Carolina

	2000	2005	2007	2032	Annualized* Change 2005-2000	Annualized* Change 2032-2007
Demographic Trends						
Licensed Drivers	5,690	6,228	6,457	10,147	107	148
- Percent Change (%)	-----	-----	-----	-----	1.9%	2.3%
Congestion Measures						
Lane Miles	209,335	216,937	219,336	262,202	1,520	1,715
- Percent Change (%)					0.7%	0.8%
Lane Miles Per Driver	36.8	34.8	34.0	25.8	-2	-8
- Percent Change (%)					-1.1%	-1.0%
Annual Travel Delays, Hours Per Traveler						
-Charlotte	26	45	46	79	3.8	1.3
Congestion Impacts						
Wasted Fuel Due to Congestion, Total Gallons in Thousands **						
-Charlotte	10,000	14,340	14,728	25,310	4340	10581
Total Surveyed	10,000	14,340	14,728	25,310	4,340	10,581
Added CO2 Emissions Due to Congestion, Metric Tons **						
-Charlotte	90,909	130,364	133,893	230,087	39455	96194
Total Surveyed	90,909	130,364	133,893	230,087	39,455	96,194
Economic Congestion Cost, Million $ **						
-Charlotte	226	409	417	717	183	300
Total Surveyed	226	409	417	717	183	300

Sources: Urban Mobility Report, Federal Highway Administration, Bureau of Census, PCA Estimates
*** Changes reflected in lane miles per driver are not annualized**
****Total Change Per Period.**

Ohio

	2000	2005	2007	2032	Annualized* Change 2005-2000	Annualized* Change 2032-2007
Demographic Trends						
Licensed Drivers	8,206	7,708	7,863	10,083	-100	89
- Percent Change (%)	-----	-----	-----	-----	-1.2%	1.1%
Congestion Measures						
Lane Miles	248,722	265,159	269,692	374,144	3,287	4,178
- Percent Change (%)					1.3%	1.5%
Lane Miles Per Driver	30.3	34.4	34.3	37.1	4	3
- Percent Change (%)					2.7%	0.3%
Annual Travel Delays, Hours Per Traveler						
-Cleveland	12	13	13	14	0.3	0.0
Congestion Impacts						
Wasted Fuel Due to Congestion, Total Gallons in Thousands **						
-Cleveland	10,833	8,840	10,946	11,865	-1993	919
Total Surveyed	10,833	8,840	10,946	11,865	-1,993	919
Added CO2 Emissions Due to Congestion, Metric Tons **						
-Cleveland	98,485	80,364	99,511	107,867	-18121	8356
Total Surveyed	98,485	80,364	99,511	107,867	-18,121	8,356
Economic Congestion Cost, Million $ **						
-Cleveland	269	236	297	322	-33	25
Total Surveyed	269	236	297	322	-33	25

Sources: Urban Mobility Report, Federal Highway Administration, Bureau of Census, PCA Estimates
*** Changes reflected in lane miles per driver are not annualized**
****Total Change Per Period.**

Oregon

	2000	2005	2007	2032	Annualized* Change 2005-2000	Annualized* Change 2032-2007
Demographic Trends						
Licensed Drivers	2,495	2,693	2,777	4,068	40	52
- Percent Change (%)	-----	-----	-----	-----	1.6%	1.9%
Congestion Measures						
Lane Miles	137,402	137,717	134,797	172,869	63	1,523
- Percent Change (%)					0.0%	1.1%
Lane Miles Per Driver	55.1	51.1	48.5	42.5	-4	-6
- Percent Change (%)					-1.4%	-0.5%
Annual Travel Delays, Hours Per Traveler						
-Portland	26	38	40	70	2.4	1.2
Congestion Impacts						
Wasted Fuel Due to Congestion, Total Gallons in Thousands **						
-Portland	21,667	24,007	27,066	47,236	2340	20171
Total Surveyed	21,667	24,007	27,066	47,236	2,340	20,171
Added CO2 Emissions Due to Congestion, Metric Tons **						
-Portland	196,970	218,245	246,054	429,422	21276	183368
Total Surveyed	196,970	218,245	246,054	429,422	21,276	183,368
Economic Congestion Cost, Million $ **						
-Portland	572	625	742	1,294	53	553
Total Surveyed	572	625	742	1,294	53	553

Sources: Urban Mobility Report, Federal Highway Administration, Bureau of Census, PCA Estimates
*** Changes reflected in lane miles per driver are not annualized**
****Total Change Per Period.**

Tennessee

	2000	2005	2007	2032	Annualized* Change 2005-2000	Annualized* Change 2032-2007
Demographic Trends						
Licensed Drivers	4,251	4,352	4,394	4,949	20	22
- Percent Change (%)	-----	-----	-----	-----	0.5%	0.5%
Congestion Measures						
Lane Miles	183,640	190,759	192,961	233,441	1,424	1,619
- Percent Change (%)					0.8%	0.8%
Lane Miles Per Driver	43.2	43.8	43.9	47.2	1	3
- Percent Change (%)					0.3%	0.3%
Annual Travel Delays, Hours Per Traveler						
-Memphis	19	30	30	38	2.3	0.3
Congestion Impacts						
Wasted Fuel Due to Congestion, Total Gallons in Thousands **						
-Memphis	8,333	9,234	11,361	14,408	901	3047
Total Surveyed	8,333	9,234	11,361	14,408	901	3,047
Added CO2 Emissions Due to Congestion, Metric Tons **						
-Memphis	75,758	83,945	103,280	130,980	8188	27700
Total Surveyed	75,758	83,945	103,280	130,980	8,188	27,700
Economic Congestion Cost, Million $ **						
-Memphis	243	317	351	445	74	94
Total Surveyed	243	317	351	445	74	94

Sources: Urban Mobility Report, Federal Highway Administration, Bureau of Census, PCA Estimates
*** Changes reflected in lane miles per driver are not annualized**
****Total Change Per Period.**

Utah

	2000	2005	2007	2032	Annualized* Change 2005-2000	Annualized* Change 2032-2007
Demographic Trends						
Licensed Drivers	1,463	1,600	1,658	2,587	27	37
- Percent Change (%)	-----	-----	-----	-----	1.9%	2.2%
Congestion Measures						
Lane Miles	87,435	91,011	92,100	112,598	715	820
- Percent Change (%)					0.8%	0.9%
Lane Miles Per Driver	59.7	56.9	55.6	43.5	-3	-12
- Percent Change (%)					-1.0%	-0.9%
Annual Travel Delays, Hours Per Traveler						
-Salt Lake City	11	27	28	64	3.2	1.5
Congestion Impacts						
Wasted Fuel Due to Congestion, Total Gallons in Thousands **						
-Salt Lake City	5,833	9,327	10,828	25,090	3494	14262
Total Surveyed	5,833	9,327	10,828	25,090	3,494	14,262
Added CO2 Emissions Due to Congestion, Metric Tons **						
-Salt Lake City	53,030	84,791	98,439	228,092	31761	129653
Total Surveyed	53,030	84,791	98,439	228,092	31,761	129,653
Economic Congestion Cost, Million $ **						
-Salt Lake City	145	250	297	689	105	392
Total Surveyed	145	250	297	689	105	392

Sources: Urban Mobility Report, Federal Highway Administration, Bureau of Census, PCA Estimates
*** Changes reflected in lane miles per driver are not annualized**
****Total Change Per Period.**

Washington

	2000	2005	2007	2032	Annualized* Change 2005-2000	Annualized* Change 2032-2007
Demographic Trends						
Licensed Drivers	4,155	4,682	4,912	8,943	105	161
- Percent Change (%)	-----	-----	-----	-----	2.5%	3.3%
Congestion Measures						
Lane Miles	167,211	173,964	176,038	214,984	1,351	1,558
- Percent Change (%)					0.8%	0.9%
Lane Miles Per Driver	40.2	37.2	35.8	24.0	-3	-12
- Percent Change (%)					-1.5%	-1.3%
Annual Travel Delays, Hours Per Traveler						
-Seattle	45	45	47	89	0.0	1.7
Congestion Impacts						
Wasted Fuel Due to Congestion, Total Gallons in Thousands **						
-Seattle	43,333	54,707	59,396	113,920	11374	54523
Total Surveyed	43,333	54,707	59,396	113,920	11,374	54,523
Added CO2 Emissions Due to Congestion, Metric Tons **						
-Seattle	393,939	497,336	539,965	1,035,632	103397	495667
Total Surveyed	393,939	497,336	539,965	1,035,632	103,397	495,667
Economic Congestion Cost, Million $ **						
-Seattle	1,122	1,413	1,596	3,060	291	1465
Total Surveyed	1,122	1,413	1,596	3,060	291	1,465

Sources: Urban Mobility Report, Federal Highway Administration, Bureau of Census, PCA Estimates
*** Changes reflected in lane miles per driver are not annualized**
****Total Change Per Period.**