

Performance Measure Summary – Pensacola, FL-AL

There are several inventory and performance measures listed in the pages of this Urban Area Report for the years from 1982 to 2007. There is no single performance measure that experts agree “says it all.” The best comparison of congestion levels and trends is done between regions of similar size, over several years, and with a few measures of congestion. Examining a few measures over many years reduces the chance that data variations or the estimating procedures may have caused a “spike” in any single year. A few key points should be recognized by users of the Urban Mobility Report data.

Use the Trends – The multi-year performance measures are better indicators, in most cases, than any single year. (*5 years is 5 times better than 1 year*).

Use several measures – Each performance measure illustrates a different element of congestion. (*The view is more interesting from the top of a few measures*).

Compare to similar regions – Congestion analyses that compare areas with similar characteristics (for example population, growth rate, road and public transportation system design) are usually more insightful than comparisons of different regions. (*Los Angeles is not Peoria*).

Compare ranking changes and performance measure values – In some performance measures a small change in the value may cause a significant change in rank from one year to the next. This is the case when there are several regions with nearly the same value. (*15 hours is only 1 hour more than 14 hours*).

Consider the scope of improvement options – Any improvement project in a corridor within most of the regions will only have a modest effect on the regional congestion level. (*To have an effect on areawide congestion, there must be significant change in the system or service*).

Performance Measures and Definition of Terms

Travel Time Index – A measure of congestion that focuses on each trip and each mile of travel. The ratio of travel time in the peak period to travel time in free-flow. A value of 1.30 indicates a 20-minute free-flow trip takes 26 minutes in the peak.

Peak Travelers – Number of travelers (using any travel mode) who begin a trip during the morning or evening peak travel periods (6 to 9 a.m. and 4 to 7 p.m.).

Annual Delay per Traveler – A yearly sum of all the per-trip delays. This measure illustrates the effect of the per-mile congestion as well as the length of each trip. The extra time required to travel in the peak period is divided by the number of travelers who begin a trip during the peak period (6 to 9 a.m. and 4 to 7 p.m.).

Total Delay – The overall size of the congestion problem. Measured by the total travel time above that needed to complete a trip at free-flow speeds. The ranking of total delay usually follows the population ranking (larger regions usually have more delay).

Free-Flow Speeds (60 mph on freeways and 35 mph on arterials) – These values are used as the national comparison thresholds. Other speed values may be appropriate for urban areas or sub-regions.

Excess Fuel Consumed – Increased fuel consumption due to travel in congested conditions rather than free-flow conditions.

Public Transportation – Regular route service from all public transportation providers in an urban area.

Operations Treatments – Freeway incident management, freeway ramp metering, arterial street signal coordination and arterial street access management.

Congestion Cost – Value of travel delay for 2007 (estimated at \$15.47 per hour of person travel and \$102.12 per hour of truck time) and excess fuel consumption (estimated using state average cost per gallon).

Annual Increase Needed to Maintain Constant Congestion Level – Number of lane-miles that must be added to the road system each year – or – the number of new transit riders or carpoolers that must be added to keep congestion levels the same as the previous year.

Urban Area – The developed area (population density more than 1,000 persons per square mile) within a metropolitan region. The urban area boundaries change frequently (every year for most growing areas). The annual change in miles traveled, therefore, includes both new travel due to growth and travel that previously occurred in areas designated as rural.

Number of Rush Hours – Time when system might have congestion.

The Mobility Data for Pensacola FL-AL

Inventory Measures	2007	2006	2005	2004	2003	2002
Urban Area Information						
Population (1000s)	355	350	345	340	330	325
Rank	82	82	82	82	82	82
Urban Area (square miles)	210	210	210	210	205	200
Population Density (persons/sq mile)	1,690	1,667	1,643	1,619	1,610	1,625
Peak Travelers (1000s)	196	192	188	184	178	173
Freeway						
Daily Vehicle-Miles of Travel (1000s)	1,520	1,460	1,425	1,410	1,350	1,270
Lane-Miles	140	140	140	140	135	130
Arterial Streets						
Daily Vehicle-Miles of Travel (1000s)	5,865	5,855	5,800	5,600	5,230	4,920
Lane-Miles	860	860	860	845	810	785
Public Transportation						
Annual Psgr-Miles of Travel (millions)	5.4	6.0	6.2	7.6	8.0	8.0
Annual Unlinked Psgr Trips (millions)	1.1	1.2	1.3	1.7	1.7	1.7
Cost Components						
Value of Time (\$/hour)	15.47	15.06	14.58	14.10	13.73	13.43
Commercial Cost (\$/hour)	102.12	98.77	94.06	86.24	82.38	79.96
Fuel Cost (\$/gallon)	2.98	2.66	2.34	1.99	1.53	1.41
System Performance	2007	2006	2005	2004	2003	2002
Congested Travel (% of peak VMT)	35	34	31	30	29	28
Congested System (% of lane-miles)	32	31	27	26	26	26
Congested Time (number of "Rush Hours")	7.2	7.2	7.0	6.8	6.6	6.4
Annual Increase Needed to Maintain Constant Congestion Level:						
Lane-miles	36	48	52	51	42	31
Transit Riders or Carpoolers (millions)	9	12	13	13	10	7
Annual Excess Fuel Consumed						
Total Fuel (1000 gallons)	3,122	3,068	2,689	2,528	2,333	2,096
Rank	72	70	71	72	72	74
Fuel per Peak Traveler (gallons)	16	16	14	14	13	12
Rank	50	48	52	51	56	60
Annual Delay						
Total Delay (1000s of person-hours)	5,469	5,416	4,788	4,498	4,202	3,783
Rank	71	70	69	70	69	70
Delay per Peak Traveler (person-hours)	28	28	25	24	24	22
Rank	44	43	50	50	50	53
Delay due to Incidents (percent)	53	53	53	53	53	53
Travel Time Index	1.13	1.13	1.11	1.11	1.11	1.10
Rank	52	53	58	58	59	61
Congestion Cost						
Total Cost (\$ millions)	106	101	86	77	69	60
Rank	71	70	71	72	70	72
Cost per Peak Traveler (\$)	543	525	456	416	387	348
Rank	45	46	52	52	52	56

Note: System Performance statistics for 2000 through 2007 data reflect the effects of operational treatments.

Note: Zeros in the table reflect values less than 0.5.

The Mobility Data for Pensacola FL-AL, Continued

Inventory Measures	2001	2000	1999	1998	1997
Urban Area Information					
Population (1000s)	315	305	300	295	290
Rank	83	82	82	82	81
Urban Area (square miles)	195	190	185	185	185
Population Density (persons/sq mile)	1,615	1,605	1,622	1,595	1,568
Peak Travelers (1000s)	165	157	152	148	143
Freeway					
Daily Vehicle-Miles of Travel (1000s)	1,200	1,150	1,120	1,080	1,030
Lane-Miles	125	120	115	110	105
Arterial Streets					
Daily Vehicle-Miles of Travel (1000s)	4,600	4,455	4,325	4,215	4,195
Lane-Miles	755	720	705	700	670
Public Transportation					
Annual Psgr-Miles of Travel (millions)	7.3	7.8	7.6	8.8	8.3
Annual Unlinked Psgr Trips (millions)	1.6	1.7	1.7	1.8	1.7
Cost Components					
Value of Time (\$/hour)	13.22	12.85	12.43	12.17	11.98
Commercial Cost (\$/hour)	80.88	80.75	74.23	72.61	74.32
Fuel Cost (\$/gallon)	1.51	1.54	1.14	1.07	1.17
System Performance	2001	2000	1999	1998	1997
Congested Travel (% of peak VMT)	27	27	26	26	27
Congested System (% of lane-miles)	26	26	26	27	26
Congested Time (number of "Rush Hours")	6.0	6.2	6.2	6.0	6.4
Annual Increase Needed to Maintain Constant Congestion Level:					
Lane-miles	29	33	39	39	42
Transit Riders or Carpoolers (millions)	7	8	9	9	10
Annual Excess Fuel Consumed					
Total Fuel (1000 gallons)	1,860	1,816	1,734	1,642	1,719
Rank	76	74	73	73	72
Fuel per Peak Traveler (gallons)	11	12	11	11	12
Rank	64	62	65	62	57
Annual Delay					
Total Delay (1000s of person-hours)	3,333	3,257	3,110	2,932	3,110
Rank	72	72	72	72	70
Delay per Peak Traveler (person-hours)	20	21	20	20	22
Rank	58	55	61	57	48
Delay due to Incidents (percent)	53	53	53	53	52
Travel Time Index	1.10	1.10	1.09	1.09	1.10
Rank	62	63	69	64	57
Congestion Cost					
Total Cost (\$ millions)	53	51	46	42	45
Rank	74	73	72	72	70
Cost per Peak Traveler (\$)	321	322	303	288	314
Rank	62	60	61	59	53

Note: System Performance statistics for 2000 through 2007 data reflect the effects of operational treatments.

Note: Zeroes in the table reflect values less than 0.5.

The Mobility Data for Pensacola FL-AL, Continued

Inventory Measures	1996	1995	1994	1993	1992
Urban Area Information					
Population (1000s)	285	280	275	270	270
Rank	81	81	81	80	80
Urban Area (square miles)	180	180	180	175	175
Population Density (persons/sq mile)	1,583	1,556	1,528	1,543	1,543
Peak Travelers (1000s)	138	134	129	125	123
Freeway					
Daily Vehicle-Miles of Travel (1000s)	975	930	890	860	820
Lane-Miles	105	100	100	95	95
Arterial Streets					
Daily Vehicle-Miles of Travel (1000s)	3,945	3,710	3,425	3,305	3,205
Lane-Miles	645	625	605	600	595
Public Transportation					
Annual Psgr-Miles of Travel (millions)	7.7	7.3	6.6	6.3	7.7
Annual Unlinked Psgr Trips (millions)	1.6	1.5	1.4	1.3	1.3
Cost Components					
Value of Time (\$/hour)	11.71	11.37	11.06	10.78	10.47
Commercial Cost (\$/hour)	74.17	71.54	69.53	67.77	66.19
Fuel Cost (\$/gallon)	1.30	1.20	1.08	1.13	1.12
System Performance	1996	1995	1994	1993	1992
Congested Travel (% of peak VMT)	25	22	20	20	19
Congested System (% of lane-miles)	26	22	21	22	22
Congested Time (number of "Rush Hours")	6.0	5.8	5.4	5.2	4.8
Annual Increase Needed to Maintain Constant Congestion Level:					
Lane-miles	43	33	26	24	22
Transit Riders or Carpoolers (millions)	10	7	6	5	5
Annual Excess Fuel Consumed					
Total Fuel (1000 gallons)	1,487	1,194	1,012	980	897
Rank	73	74	78	76	75
Fuel per Peak Traveler (gallons)	11	9	8	8	7
Rank	59	62	62	62	64
Annual Delay					
Total Delay (1000s of person-hours)	2,652	2,158	1,821	1,777	1,608
Rank	71	74	77	74	75
Delay per Peak Traveler (person-hours)	19	16	14	14	13
Rank	56	59	61	60	60
Delay due to Incidents (percent)	52	52	52	52	52
Travel Time Index	1.09	1.08	1.07	1.07	1.07
Rank	60	62	65	61	58
Congestion Cost					
Total Cost (\$ millions)	38	30	24	23	21
Rank	71	74	78	76	75
Cost per Peak Traveler (\$)	273	222	188	186	167
Rank	58	61	61	60	63

Note: System Performance statistics for 2000 through 2007 data reflect the effects of operational treatments.

Note: Zeroes in the table reflect values less than 0.5.

The Mobility Data for Pensacola FL-AL, Continued

Inventory Measures	1991	1990	1989	1988	1987
Urban Area Information					
Population (1000s)	265	265	260	255	250
Rank	80	80	80	80	80
Urban Area (square miles)	175	175	170	170	170
Population Density (persons/sq mile)	1,514	1,514	1,529	1,500	1,471
Peak Travelers (1000s)	119	117	114	111	108
Freeway					
Daily Vehicle-Miles of Travel (1000s)	770	760	720	700	650
Lane-Miles	95	90	90	90	85
Arterial Streets					
Daily Vehicle-Miles of Travel (1000s)	2,960	2,955	2,880	2,795	2,785
Lane-Miles	580	570	565	555	540
Public Transportation					
Annual Psgr-Miles of Travel (millions)	6.9	5.4	5.2	6.0	6.1
Annual Unlinked Psgr Trips (millions)	1.3	1.1	1.1	1.1	1.2
Cost Components					
Value of Time (\$/hour)	10.17	9.75	9.25	8.83	8.48
Commercial Cost (\$/hour)	64.55	62.47	59.16	56.03	54.62
Fuel Cost (\$/gallon)	1.10	1.05	1.08	1.00	1.00
System Performance	1991	1990	1989	1988	1987
Congested Travel (% of peak VMT)	17	18	17	17	18
Congested System (% of lane-miles)	21	22	22	22	22
Congested Time (number of "Rush Hours")	4.2	4.6	4.2	4.0	4.2
Annual Increase Needed to Maintain Constant Congestion Level:					
Lane-miles	15	32	35	37	38
Transit Riders or Carpoolers (millions)	3	6	7	7	7
Annual Excess Fuel Consumed					
Total Fuel (1000 gallons)	724	753	682	647	677
Rank	75	75	75	74	69
Fuel per Peak Traveler (gallons)	6	6	6	6	6
Rank	63	63	61	59	53
Annual Delay					
Total Delay (1000s of person-hours)	1,283	1,331	1,192	1,138	1,192
Rank	75	75	75	72	68
Delay per Peak Traveler (person-hours)	11	11	10	10	11
Rank	62	61	63	61	53
Delay due to Incidents (percent)	52	52	52	52	52
Travel Time Index	1.06	1.06	1.06	1.05	1.06
Rank	56	56	56	59	51
Congestion Cost					
Total Cost (\$ millions)	16	16	14	12	13
Rank	75	75	75	73	68
Cost per Peak Traveler (\$)	134	136	119	112	116
Rank	63	61	63	62	56

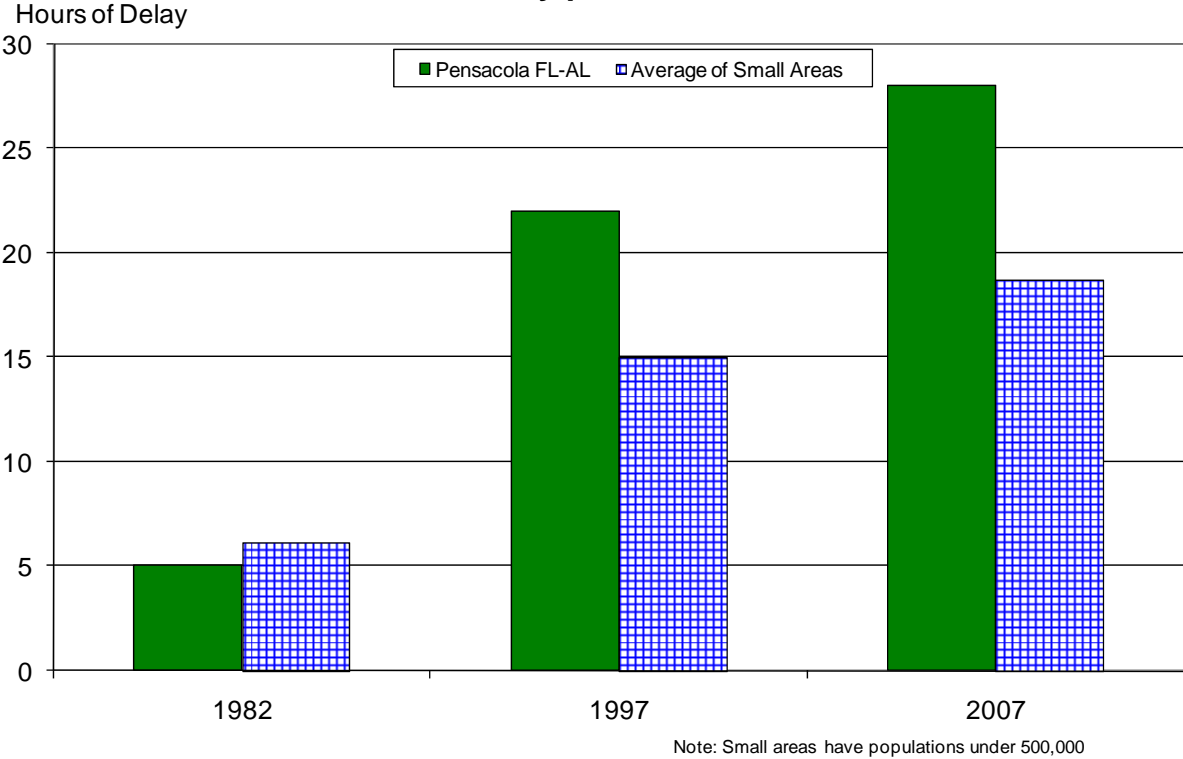
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The Mobility Data for Pensacola FL-AL, Continued

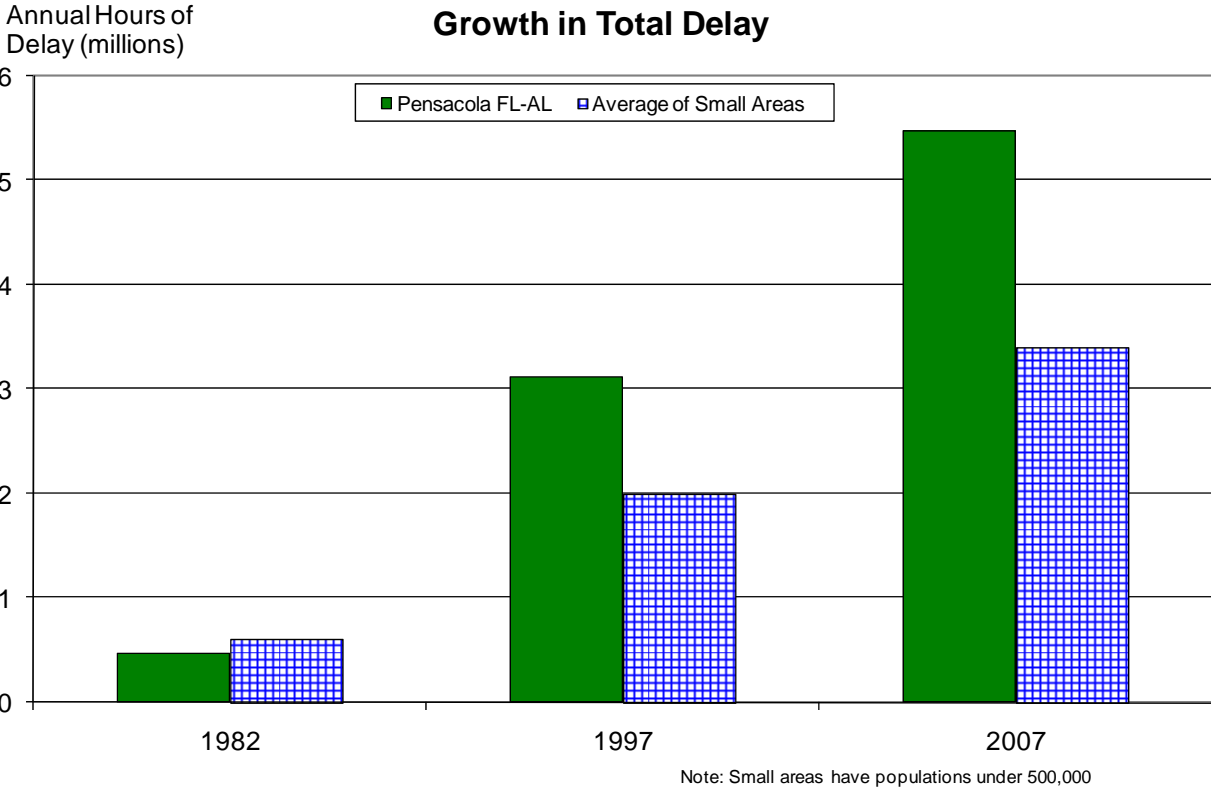
Inventory Measures	1986	1985	1984	1983	1982
Urban Area Information					
Population (1000s)	245	240	235	230	225
Rank	80	80	80	80	80
Urban Area (square miles)	165	165	165	160	160
Population Density (persons/sq mile)	1,485	1,455	1,424	1,438	1,406
Peak Travelers (1000s)	105	102	99	96	93
Freeway					
Daily Vehicle-Miles of Travel (1000s)	620	600	550	530	500
Lane-Miles	85	85	80	80	75
Arterial Streets					
Daily Vehicle-Miles of Travel (1000s)	2,705	2,325	2,220	2,100	2,055
Lane-Miles	530	515	495	495	475
Public Transportation					
Annual Psgr-Miles of Travel (millions)	5.9	6.3	5.8	5.8	5.8
Annual Unlinked Psgr Trips (millions)	1.1	1.4	1.2	1.2	1.2
Cost Components					
Value of Time (\$/hour)	8.18	8.03	7.75	7.43	7.20
Commercial Cost (\$/hour)	52.63	55.80	54.65	52.70	52.13
Fuel Cost (\$/gallon)	0.98	1.28	1.29	1.32	1.38
System Performance	1986	1985	1984	1983	1982
Congested Travel (% of peak VMT)	15	10	10	9	9
Congested System (% of lane-miles)	17	13	13	13	13
Congested Time (number of "Rush Hours")	4.2	3.0	3.0	2.9	2.9
Annual Increase Needed to Maintain Constant Congestion Level:					
Lane-miles	--	--	--	--	--
Transit Riders or Carpoolers (millions)	--	--	--	--	--
Annual Excess Fuel Consumed					
Total Fuel (1000 gallons)	535	310	308	261	260
Rank	73	81	78	81	81
Fuel per Peak Traveler (gallons)	5	3	3	3	3
Rank	61	71	67	64	58
Annual Delay					
Total Delay (1000s of person-hours)	943	551	565	461	457
Rank	73	81	78	81	80
Delay per Peak Traveler (person-hours)	9	5	6	5	5
Rank	60	72	63	66	62
Delay due to Incidents (percent)	52	52	52	52	52
Travel Time Index	1.05	1.03	1.03	1.03	1.03
Rank	55	69	66	63	62
Congestion Cost					
Total Cost (\$ millions)	10	6	6	4	4
Rank	71	77	76	80	79
Cost per Peak Traveler (\$)	92	56	57	46	47
Rank	61	72	67	70	64

Note: System Performance statistics for 2000 through 2007 data reflect the effects of operational treatments.
 Note: Zeroes in the table reflect values less than 0.5.

Growth in Delay per Peak Traveler



Growth in Total Delay



**Benefits from Public Transportation Service and Operations Strategies in
Pensacola FL-AL**

Operations Strategies	2007	2006	2005	2004
Freeway Ramp Metering				
Percent of Roadway Miles	--	--	--	--
Annual Delay Reduction (1000 hours)	--	--	--	--
Freeway Incident Management				
Cameras				
Percent of Roadway Miles	--	--	--	--
Service Patrols				
Percent of Roadway Miles	--	--	--	--
Annual Delay Reduction (1000 hours)	--	--	--	--
Arterial Signal Coordination				
Percent of Roadway Miles	63	63	61	62
Annual Delay Reduction (1000 hours)	30	33	29	26
Arterial Access Management				
Percent of Roadway Miles	21	16	14	14
Annual Delay Reduction (1000 hours)	84	89	58	43
HOV Lanes				
Daily Passenger-miles of travel (1000s)	--	--	--	--
HOV User Delay Savings	--	--	--	--
Total Effect of Operations Treatments				
Annual Delay Reduction (1000 hours)	114	122	88	69
Annual Delay Saved per Peak Traveler (hours)	1	1	0	0
Annual Congestion Cost Savings (\$million)	2.2	2.3	1.6	1.2
Travel Time Index with Strategies	1.129	1.128	1.112	1.109
Travel Time Index (Base)	1.131	1.130	1.114	1.110
Public Transportation Service	2007	2006	2005	2004
Existing Service				
Annual Passenger-miles of travel (million)	5.4	6.0	6.2	7.6
Unlinked Passenger Trips (million)	1.1	1.2	1.3	1.7
Travel Time Index (combined road and transit)	1.131	1.130	1.114	1.110
Condition if Public Transportation Service were Discontinued				
Travel Time Index	1.132	1.130	1.115	1.111
Annual Increase				
Delay (1000 hours)	57	32	51	56
Delay per Peak Traveler (hours)	0	0	0	0
Congestion Cost (\$million)	1.2	0.6	0.9	1.0

**Benefits from Public Transportation Service and Operations Strategies in
Pensacola FL-AL, Continued**

Operations Strategies	2003	2002	2001	2000
Freeway Ramp Metering				
Percent of Roadway Miles	--	--	--	--
Annual Delay Reduction (1000 hours)	--	--	--	--
Freeway Incident Management				
Cameras				
Percent of Roadway Miles	--	--	--	--
Service Patrols				
Percent of Roadway Miles	--	--	--	--
Annual Delay Reduction (1000 hours)	--	--	--	--
Arterial Signal Coordination				
Percent of Roadway Miles	64	67	69	67
Annual Delay Reduction (1000 hours)	16	14	23	21
Arterial Access Management				
Percent of Roadway Miles	8	8	7	7
Annual Delay Reduction (1000 hours)	39	38	46	38
HOV Lanes				
Daily Passenger-miles of travel (1000s)	--	--	--	--
HOV User Delay Savings	--	--	--	--
Total Effect of Operations Treatments				
Annual Delay Reduction (1000 hours)	55	52	69	59
Annual Delay Saved per Peak Traveler (hours)	0	0	0	0
Annual Congestion Cost Savings (\$million)	0.9	0.8	1.1	0.9
Travel Time Index with Strategies	1.107	1.102	1.096	1.097
Travel Time Index (Base)	1.108	1.103	1.098	1.099
Public Transportation Service	2003	2002	2001	2000
Existing Service				
Annual Passenger-miles of travel (million)	8.0	8.0	7.3	7.8
Unlinked Passenger Trips (million)	1.7	1.7	1.6	1.7
Travel Time Index (combined road and transit)	1.108	1.103	1.097	1.098
Condition if Public Transportation Service were Discontinued				
Travel Time Index	1.108	1.103	1.099	1.100
Annual Increase				
Delay (1000 hours)	30	38	67	64
Delay per Peak Traveler (hours)	0	0	0	0
Congestion Cost (\$million)	0.5	0.7	1.1	1.0

**Comparison of Several Key Mobility Performance Measures
Small Group – less than 500,000 population urban areas**

Urban Area	Delay per Traveler	Travel Time Index	Total Delay	1982 to 2007	
				Delay per Traveler	Total Delay
Knoxville, TN	H+	H	H+	F	F+
Charleston-North Charleston, SC	H+	H+	H+	F+	F+
Cape Coral, FL	H+	H+	H+	F+	F+
Columbia, SC	H	0	H+	F+	F+
Wichita, KS	L-	L-	L-	S-	S-
Little Rock, AR	H	0	H	F+	F+
Spokane WA	L-	L-	L-	S-	S-
Pensacola, FL-AL	H+	H	H+	F+	F+
Corpus Christi, TX	L-	L-	L-	S-	S-
Anchorage, AK	L-	L	L-	S-	S-
Eugene, OR	L-	L	L-	S-	S-
Salem, OR	L	0	L	0	S-
Beaumont, TX	L-	L-	L-	S-	S-
Laredo, TX	L	H	L-	0	S-
Brownsville, TX	L-	L	L-	S-	S-
Boulder, CO	L-	0	L-	S-	S-

0 – Average congestion levels or average congestion growth
H Higher congestion; H+ Much higher congestion; F Faster congestion growth; F+ Much faster growth
L Lower congestion; L- Much lower congestion; S Slower congestion growth; S- Much slower growth

Key Mobility Performance Measure Labels

Note: Designation of an urban area congestion problem as “Much higher”, “Much faster growth”, etc. is determined using a general indicator of the accuracy of the congestion estimates. For regions with the same indicator label, there may be no difference in congestion levels. Different values are used for the indicators in regions over 1 million population and below 1 million population.

Measures	Differences Within These Values May Not Indicate a Difference in Congestion Level	
	Above 1M Population	Below 1M Population
2007 Values Delay per Traveler - Travel Time Index - Total Delay -	5 Hours 5 Index Points 5 Hours x Average Population	3 Hours 3 Index Points 3 Hours x Average Population
1982 to 2007 Trends Delay per Traveler - Total Delay -	5 Hours 5 Hours x Average Population	3 Hours 3 Hours x Average Population