
**ASSOCIATION OF GREATER MANCHESTER AUTHORITIES
GREATER MANCHESTER TRANSPORTATION UNIT**

**TRAFFIC COUNT FACTORS SECTION
OF TRANSPORT STATISTICS
GREATER MANCHESTER 2009**

SUMMARY

The 2009 Transport Statistics Greater Manchester Report (GMTU Report 1580) is scheduled for publication during Autumn 2010. Individual draft sections of the report are being published on the GMTU Website (www.gmtu.gov.uk) upon completion. This traffic factors section contains lists of GMTU traffic count factors.

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All enquiries to:
Greater Manchester Transportation Unit
3rd Floor
Heron House
47 Lloyd Street
Manchester
M2 5LE

Telephone: 0161 455 2061

Fax: 0161 455 2071

e-mail: gmtu@manchester.gov.uk

website: <http://www.gmtu.gov.uk/>

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APPENDIX 1
TRAFFIC COUNT FACTORS

Introduction

The GMTU Traffic Counts System (COUNTS) incorporates factors which are applied to single day counts to produce estimates of annual average flows. Three types of factor are involved. These are:

- (i) Split-shift to 12-hour factors which are used to estimate single day 12-hour vehicle-specific flows from shorter period counts. These factors are calculated from all available 12-hour continuous counts held on the COUNTS system;
- (ii) Factors to estimate average 12, 16, 18 and 24-hour flows from 12-hour counts. These are based on all available data from continuous Automatic Traffic Counting (ATC) sites throughout the county;
- (iii) Year to year factors.

A new year to year factor is added each year and factors (i) and (ii) have been updated periodically as new data has become available. This appendix presents factors that have been produced from 2009 data (split shift and 12-hour to longer period). These are applied to counts in 2010.

Factors currently applied to earlier counts are available on request.

Traffic Count Factors

A. Split Shift to 12-Hour

The factors and their associated standard deviations were derived from 12 hour manual classified counts undertaken at 42 motorway, 224 A road and 380 B, C or U road sites throughout the county during 2009 (fewer sites were used for am peak factors as this time period required 15 or 30 minute interval counts only).

$$\begin{array}{rclcl}
 \text{12-Hour Flow} & = & \text{AM Peak 2-Hour Count} & \times & \text{A1} \\
 \text{Estimate} & + & \text{Off-Peak 2-Hour Count} & \times & \text{A2 or A3} \\
 & & + & \text{PM Peak 2-Hour Count} & \times & \text{A4}
 \end{array}$$

Factors to estimate 12-hour motor vehicle counts to average 12, 16, 18 and 24-hour motor vehicle flows and the standard deviations of the estimates were derived from 2009 Automatic Traffic Count (ATC) data at 29 two-way motorway and 46-two way non-motorway sites throughout the county.

B. 12-Hour to 12-Hour Annual Average Weekday (AAWT)

$$\begin{array}{rclcl}
 \text{12-Hour Annual Average} & & \text{12-Hour Flow} & & \\
 \text{Weekday Estimate} & = & \text{weekday (W)} & \times & \text{B (W,M)} \\
 & & \text{month (M)} & &
 \end{array}$$

C. 12-Hour to 16-Hour Annual Average Weekday (AAWT)

$$\begin{array}{rclcl}
 \text{16-Hour Annual Average} & & \text{12-Hour Flow} & & \\
 \text{Weekday Estimate} & = & \text{weekday (W)} & \times & \text{C (W,M)} \\
 & & \text{month (M)} & &
 \end{array}$$

D. 12-Hour to 18-Hour Annual Average Weekday (AAWT)

$$\begin{array}{rclcl}
 \text{18-Hour Annual Average} & & \text{12-Hour Flow} & & \\
 \text{Weekday Estimate} & = & \text{weekday (W)} & \times & \text{D (W,M)} \\
 & & \text{month (M)} & &
 \end{array}$$

E. 12-Hour to 24-Hour Annual Average Weekday Traffic (AAWT)

$$\begin{array}{rclcl}
 \text{24-Hour Annual Average} & & \text{12-Hour Flow} & & \\
 \text{Weekday Estimate} & = & \text{weekday (W)} & \times & \text{E (W,M)} \\
 & & \text{month (M)} & &
 \end{array}$$

F. 12-Hour to 24-Hour Annual Average Daily Traffic (AADT)

$$\begin{array}{rclcl}
 \text{24-Hour Annual Average} & & \text{12-Hour Flow} & & \\
 \text{Day Estimate} & = & \text{weekday (W)} & \times & \text{F (W,M)} \\
 & & \text{month (M)} & &
 \end{array}$$

G. Year to Year Factors

Indices of motor vehicle traffic growth since 1979 are provided to allow counts to be factored to a common base.

A Split Shift to 12-Hour Factors

1. Factors

Road Class		Time Period	Car	LGV	OGV	Buses	Motor Cycle	Pedal Cycle	All Motor Vehicles
Motorways	A1	07:30-09:30	1.465	1.522	1.524	1.580	1.491		1.477
	A2	10:00-12:00	3.371	3.225	2.890	3.506	3.753		3.278
	A3	12:00-14:00	3.092	3.166	3.046	3.922	3.450		3.092
	A4	16:00-18:00	1.455	1.283	1.321	1.519	1.411		1.427
A Roads	A1	07:30-09:30	1.359	1.464	1.484	1.455	1.409	1.503	1.377
	A2	10:00-12:00	3.423	2.988	2.769	3.409	4.793	4.341	3.303
	A3	12:00-14:00	3.018	3.177	3.190	3.858	3.329	3.657	3.042
	A4	16:00-18:00	1.434	1.289	1.224	1.400	1.379	1.409	1.414
B C U Roads	A1	07:30-09:30	1.334	1.423	1.512	1.447	1.574	1.462	1.349
	A2	10:00-12:00	3.597	3.161	2.769	3.386	4.255	4.089	3.473
	A3	12:00-14:00	3.099	3.242	3.271	3.503	3.042	3.457	3.095
	A4	16:00-18:00	1.398	1.288	1.221	1.318	1.372	1.403	1.383

2. Standard Deviations Associated with Factors

Road Class		Time Period	Car	LGV	OGV	Buses	Motor Cycle	Pedal Cycle	All Motor Vehicles
Motorways	A1	07:30-09:30	0.044	0.045	0.068	0.245	0.301		0.041
	A2	10:00-12:00	0.433	0.326	0.291	1.869	1.608		0.331
	A3	12:00-14:00	0.194	0.223	0.228	1.330	1.363		0.167
	A4	16:00-18:00	0.144	0.070	0.088	0.322	0.211		0.109
A Roads	A1	07:30-09:30	0.058	0.109	0.159	0.217	0.327	0.480	0.057
	A2	10:00-12:00	0.425	0.348	0.543	1.232	2.909	2.982	0.343
	A3	12:00-14:00	0.269	0.331	0.737	1.986	1.492	2.119	0.242
	A4	16:00-18:00	0.074	0.079	0.161	0.242	0.272	0.424	0.067
B C U Roads	A1	07:30-09:30	0.068	0.108	0.332	0.334	0.683	0.491	0.068
	A2	10:00-12:00	0.647	1.042	1.180	1.431	2.729	2.577	0.506
	A3	12:00-14:00	0.417	1.005	1.492	1.309	2.048	2.226	0.332
	A4	16:00-18:00	0.103	0.153	0.419	0.239	0.683	0.494	0.095

**B. 12-Hour Weekday to 12-Hour Annual Average Weekday Factors -
MOTORWAY**

1. Factors

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Average Weekday Factor
January	1.093	1.077	1.050	1.044	1.010	1.511	1.703	1.056
February	1.066	1.044	1.015	1.016	0.986	1.449	1.655	1.024
March	1.035	1.018	0.999	0.993	0.963	1.409	1.544	1.001
April	1.019	1.003	0.983	0.977	0.954	1.421	1.597	0.986
May	1.017	1.011	0.992	0.984	0.960	1.422	1.588	0.993
June	1.018	1.004	0.995	0.983	0.953	1.407	1.553	0.990
July	1.027	1.017	1.001	0.997	0.971	1.417	1.563	1.002
August	1.036	1.019	1.007	0.992	0.984	1.403	1.595	1.012
September	1.008	1.001	0.985	0.979	0.948	1.344	1.540	0.992
October	1.001	1.001	0.980	0.976	0.946	1.345	1.518	0.981
November	1.017	1.010	0.993	0.990	0.973	1.427	1.582	0.996
December	1.013	0.997	0.985	0.992	0.987	1.438	1.640	0.994
Average Factor	1.028	1.016	0.998	0.993	0.968	1.415	1.587	1.000

2. Standard Deviations Associated with Factors

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
January	0.047	0.042	0.046	0.033	0.035	0.150	0.192
February	0.032	0.037	0.037	0.032	0.032	0.137	0.189
March	0.030	0.031	0.027	0.024	0.028	0.120	0.184
April	0.015	0.018	0.018	0.017	0.030	0.134	0.226
May	0.023	0.015	0.017	0.019	0.043	0.143	0.196
June	0.029	0.021	0.018	0.023	0.036	0.144	0.229
July	0.038	0.029	0.026	0.029	0.043	0.145	0.230
August	0.042	0.026	0.034	0.031	0.050	0.166	0.260
September	0.034	0.046	0.032	0.038	0.034	0.142	0.242
October	0.015	0.019	0.034	0.019	0.032	0.124	0.224
November	0.020	0.028	0.031	0.025	0.022	0.117	0.176
December	0.035	0.045	0.042	0.033	0.027	0.114	0.157

B 12-Hour Weekday to 12-Hour Annual Average Weekday Factors - NON-MOTORWAY

1. Factors

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Average Weekday Factor
January	1.043	1.036	1.023	1.011	0.993	1.376	1.712	1.026
February	1.032	1.019	1.000	1.004	0.975	1.328	1.701	1.005
March	1.015	0.996	0.987	0.983	0.969	1.311	1.638	0.990
April	1.018	0.992	0.983	0.976	0.970	1.353	1.701	0.987
May	1.018	1.001	0.993	0.987	0.972	1.352	1.682	0.994
June	1.034	1.011	1.007	1.000	0.991	1.372	1.703	1.008
July	1.038	1.013	1.009	1.010	1.012	1.389	1.705	1.016
August	1.096	1.072	1.060	1.056	1.052	1.416	1.779	1.056
September	1.026	1.008	1.003	0.999	0.984	1.319	1.663	1.003
October	1.017	1.007	0.997	0.996	0.979	1.325	1.643	0.999
November	1.009	0.995	0.982	0.984	0.971	1.325	1.647	0.988
December	0.985	0.971	0.962	0.963	0.963	1.354	1.605	0.968
Average Factor	1.023	1.006	0.998	0.995	0.980	1.337	1.660	1.000

2. Standard Deviations Associated with Factors

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
January	0.041	0.040	0.036	0.035	0.030	0.377	0.461
February	0.040	0.040	0.036	0.039	0.032	0.334	0.486
March	0.032	0.032	0.029	0.032	0.032	0.333	0.487
April	0.024	0.022	0.027	0.025	0.030	0.400	0.520
May	0.021	0.021	0.021	0.016	0.025	0.364	0.485
June	0.023	0.023	0.018	0.022	0.030	0.358	0.516
July	0.023	0.025	0.022	0.026	0.036	0.361	0.459
August	0.051	0.058	0.059	0.051	0.051	0.286	0.465
September	0.029	0.029	0.029	0.028	0.028	0.277	0.484
October	0.031	0.031	0.028	0.030	0.030	0.340	0.478
November	0.033	0.029	0.032	0.035	0.040	0.324	0.431
December	0.045	0.041	0.043	0.047	0.045	0.400	0.442

C 12-Hour Weekday to 16-Hour Annual Average Weekday Factors - MOTORWAY

1. Factors

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Average Weekday Factor
January	1.287	1.268	1.236	1.229	1.188	1.776	2.001	1.243
February	1.254	1.229	1.195	1.195	1.160	1.703	1.944	1.205
March	1.217	1.198	1.175	1.168	1.133	1.656	1.813	1.177
April	1.199	1.180	1.156	1.150	1.122	1.670	1.876	1.160
May	1.197	1.190	1.167	1.158	1.129	1.671	1.866	1.168
June	1.198	1.181	1.170	1.156	1.121	1.652	1.824	1.165
July	1.208	1.197	1.177	1.173	1.142	1.664	1.836	1.179
August	1.221	1.200	1.185	1.168	1.157	1.649	1.878	1.190
September	1.187	1.177	1.158	1.151	1.115	1.578	1.808	1.166
October	1.177	1.177	1.153	1.148	1.112	1.580	1.783	1.153
November	1.197	1.188	1.168	1.165	1.145	1.677	1.859	1.172
December	1.191	1.173	1.158	1.166	1.161	1.689	1.925	1.169
Average Factor	1.209	1.195	1.174	1.168	1.139	1.663	1.864	1.176

2. Standard Deviations Associated with Factors

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
January	0.063	0.057	0.064	0.048	0.048	0.159	0.200
February	0.046	0.054	0.054	0.045	0.041	0.144	0.200
March	0.042	0.048	0.042	0.037	0.039	0.127	0.198
April	0.024	0.030	0.031	0.027	0.037	0.143	0.250
May	0.032	0.026	0.031	0.027	0.050	0.151	0.213
June	0.031	0.028	0.025	0.027	0.039	0.151	0.255
July	0.042	0.032	0.031	0.033	0.047	0.154	0.254
August	0.042	0.025	0.035	0.035	0.057	0.180	0.289
September	0.039	0.054	0.039	0.042	0.041	0.153	0.273
October	0.027	0.035	0.048	0.031	0.038	0.133	0.247
November	0.037	0.047	0.051	0.045	0.042	0.128	0.189
December	0.048	0.061	0.059	0.050	0.048	0.122	0.166

C. 12-Hour Weekday to 16-Hour Annual Average Weekday Factors - NON-MOTORWAY

1. Factors

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Average Weekday Factor
January	1.224	1.214	1.200	1.186	1.165	1.606	1.996	1.201
February	1.209	1.193	1.171	1.176	1.142	1.550	1.983	1.177
March	1.188	1.166	1.155	1.152	1.135	1.530	1.908	1.159
April	1.193	1.162	1.151	1.143	1.136	1.578	1.982	1.156
May	1.192	1.172	1.162	1.156	1.138	1.577	1.960	1.164
June	1.211	1.184	1.179	1.171	1.161	1.601	1.984	1.181
July	1.215	1.186	1.181	1.182	1.184	1.620	1.986	1.189
August	1.287	1.259	1.246	1.237	1.232	1.655	2.075	1.237
September	1.203	1.182	1.175	1.171	1.153	1.542	1.939	1.175
October	1.192	1.180	1.168	1.166	1.147	1.547	1.914	1.170
November	1.181	1.166	1.147	1.150	1.135	1.543	1.916	1.156
December	1.152	1.135	1.125	1.126	1.126	1.573	1.865	1.132
Average Factor	1.199	1.178	1.168	1.165	1.147	1.561	1.935	1.171

2. Standard Deviations Associated with Factors

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
January	0.061	0.055	0.054	0.054	0.044	0.402	0.487
February	0.058	0.057	0.053	0.056	0.048	0.355	0.517
March	0.046	0.050	0.044	0.048	0.044	0.355	0.519
April	0.044	0.041	0.043	0.043	0.042	0.427	0.554
May	0.038	0.040	0.037	0.037	0.041	0.388	0.514
June	0.034	0.037	0.033	0.037	0.042	0.381	0.549
July	0.036	0.041	0.035	0.039	0.048	0.384	0.485
August	0.064	0.073	0.075	0.068	0.063	0.303	0.490
September	0.046	0.048	0.046	0.048	0.047	0.296	0.513
October	0.048	0.052	0.046	0.051	0.050	0.361	0.506
November	0.052	0.049	0.051	0.056	0.060	0.344	0.454
December	0.068	0.065	0.068	0.072	0.067	0.425	0.470

D. 12-Hour Weekday to 18-Hour Annual Average Weekday Factors - MOTORWAY

1. Factors

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Average Weekday Factor
January	1.329	1.308	1.275	1.268	1.226	1.832	2.064	1.282
February	1.293	1.268	1.233	1.233	1.197	1.757	2.006	1.243
March	1.256	1.236	1.212	1.205	1.169	1.708	1.871	1.215
April	1.237	1.218	1.193	1.186	1.157	1.723	1.935	1.197
May	1.235	1.228	1.204	1.195	1.165	1.724	1.925	1.205
June	1.236	1.218	1.207	1.193	1.156	1.704	1.882	1.202
July	1.246	1.234	1.215	1.210	1.178	1.717	1.893	1.216
August	1.260	1.239	1.222	1.206	1.194	1.701	1.937	1.227
September	1.225	1.214	1.195	1.187	1.150	1.628	1.866	1.202
October	1.214	1.214	1.189	1.184	1.147	1.630	1.839	1.189
November	1.234	1.226	1.206	1.202	1.181	1.731	1.917	1.209
December	1.229	1.210	1.194	1.203	1.197	1.742	1.986	1.206
Average Factor	1.248	1.233	1.211	1.205	1.175	1.715	1.923	1.214

2. Standard Deviations Associated with Factors

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
January	0.066	0.062	0.069	0.052	0.052	0.165	0.206
February	0.050	0.059	0.060	0.049	0.045	0.149	0.205
March	0.045	0.052	0.047	0.042	0.044	0.132	0.203
April	0.028	0.036	0.037	0.033	0.042	0.150	0.258
May	0.035	0.031	0.035	0.031	0.054	0.156	0.219
June	0.032	0.032	0.030	0.031	0.042	0.155	0.262
July	0.043	0.035	0.034	0.037	0.050	0.159	0.261
August	0.045	0.030	0.038	0.039	0.061	0.186	0.298
September	0.041	0.056	0.041	0.044	0.045	0.159	0.283
October	0.030	0.041	0.053	0.036	0.042	0.140	0.255
November	0.042	0.053	0.057	0.050	0.048	0.135	0.194
December	0.053	0.067	0.064	0.055	0.054	0.128	0.170

D. 12-Hour Weekday to 18-Hour Annual Average Weekday Factors - NON-MOTORWAY

1. Factors

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Average Weekday Factor
January	1.270	1.258	1.245	1.231	1.209	1.664	2.067	1.245
February	1.253	1.237	1.214	1.219	1.184	1.606	2.054	1.221
March	1.232	1.209	1.198	1.194	1.177	1.585	1.976	1.202
April	1.237	1.205	1.193	1.185	1.178	1.635	2.053	1.199
May	1.236	1.215	1.205	1.198	1.180	1.634	2.030	1.207
June	1.256	1.228	1.223	1.215	1.204	1.659	2.055	1.225
July	1.260	1.230	1.225	1.226	1.228	1.678	2.057	1.233
August	1.336	1.307	1.293	1.284	1.278	1.715	2.150	1.284
September	1.248	1.227	1.219	1.215	1.196	1.599	2.009	1.219
October	1.237	1.224	1.211	1.210	1.190	1.603	1.983	1.214
November	1.224	1.209	1.189	1.192	1.176	1.598	1.983	1.198
December	1.194	1.177	1.166	1.167	1.169	1.629	1.931	1.173
Average Factor	1.243	1.222	1.211	1.208	1.190	1.617	2.004	1.214

2. Standard Deviations Associated with Factors

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
January	0.073	0.066	0.067	0.066	0.057	0.408	0.491
February	0.069	0.068	0.065	0.067	0.061	0.361	0.522
March	0.059	0.063	0.058	0.061	0.059	0.361	0.525
April	0.059	0.056	0.058	0.059	0.058	0.434	0.560
May	0.053	0.055	0.052	0.053	0.057	0.395	0.519
June	0.049	0.053	0.050	0.054	0.058	0.386	0.554
July	0.053	0.056	0.052	0.055	0.063	0.389	0.489
August	0.075	0.083	0.086	0.081	0.076	0.310	0.494
September	0.061	0.065	0.062	0.064	0.064	0.303	0.519
October	0.063	0.068	0.062	0.066	0.067	0.367	0.510
November	0.068	0.066	0.067	0.072	0.077	0.349	0.457
December	0.084	0.082	0.085	0.089	0.088	0.431	0.474

E. 12-Hour Weekday to 24-Hour Annual Average Weekday Factors - MOTORWAY

1. Factors

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Average Weekday Factor
January	1.388	1.365	1.331	1.323	1.280	1.912	2.153	1.338
February	1.349	1.323	1.286	1.286	1.248	1.833	2.090	1.297
March	1.310	1.289	1.265	1.257	1.219	1.781	1.950	1.267
April	1.290	1.270	1.244	1.237	1.207	1.796	2.016	1.248
May	1.288	1.280	1.256	1.246	1.214	1.797	2.005	1.256
June	1.288	1.270	1.259	1.244	1.205	1.775	1.960	1.253
July	1.299	1.287	1.266	1.262	1.228	1.789	1.972	1.268
August	1.315	1.292	1.275	1.258	1.245	1.774	2.020	1.280
September	1.277	1.265	1.245	1.237	1.197	1.696	1.944	1.253
October	1.266	1.266	1.240	1.234	1.196	1.699	1.916	1.240
November	1.287	1.278	1.258	1.254	1.232	1.805	1.998	1.261
December	1.282	1.262	1.246	1.255	1.248	1.817	2.070	1.258
Average Factor	1.301	1.286	1.263	1.257	1.225	1.788	2.004	1.266

2. Standard Deviations Associated with Factors

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
January	0.084	0.082	0.089	0.070	0.070	0.181	0.207
February	0.068	0.080	0.081	0.066	0.061	0.163	0.205
March	0.060	0.071	0.066	0.058	0.056	0.142	0.204
April	0.041	0.051	0.052	0.046	0.049	0.154	0.256
May	0.044	0.046	0.052	0.041	0.055	0.156	0.215
June	0.032	0.042	0.043	0.039	0.042	0.154	0.261
July	0.046	0.046	0.046	0.046	0.054	0.157	0.262
August	0.048	0.041	0.049	0.048	0.060	0.184	0.299
September	0.042	0.059	0.048	0.048	0.044	0.163	0.286
October	0.046	0.063	0.069	0.051	0.049	0.148	0.258
November	0.063	0.074	0.080	0.070	0.067	0.156	0.197
December	0.073	0.087	0.086	0.075	0.070	0.145	0.172

**E. 12-Hour Weekday to 24-Hour Annual Average Weekday Factors
NON-MOTORWAY**

1. Factors

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Average Weekday Factor
January	1.307	1.294	1.281	1.266	1.244	1.712	2.125	1.280
February	1.289	1.272	1.249	1.253	1.217	1.652	2.112	1.255
March	1.267	1.243	1.232	1.228	1.210	1.629	2.031	1.236
April	1.272	1.239	1.227	1.219	1.211	1.681	2.110	1.233
May	1.271	1.250	1.239	1.232	1.214	1.680	2.086	1.241
June	1.292	1.263	1.257	1.249	1.238	1.706	2.113	1.260
July	1.296	1.265	1.260	1.261	1.263	1.726	2.114	1.268
August	1.372	1.344	1.329	1.320	1.314	1.764	2.210	1.320
September	1.283	1.262	1.255	1.250	1.230	1.645	2.066	1.254
October	1.273	1.260	1.247	1.245	1.225	1.650	2.040	1.249
November	1.258	1.243	1.222	1.225	1.209	1.643	2.038	1.232
December	1.227	1.210	1.199	1.200	1.203	1.675	1.984	1.206
Average Factor	1.278	1.256	1.246	1.242	1.224	1.663	2.061	1.249

2. Standard Deviations Associated with Factors

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
January	0.089	0.079	0.084	0.081	0.076	0.424	0.508
February	0.084	0.083	0.080	0.080	0.079	0.377	0.540
March	0.076	0.080	0.075	0.078	0.078	0.376	0.544
April	0.077	0.075	0.076	0.078	0.078	0.450	0.579
May	0.071	0.072	0.070	0.072	0.077	0.410	0.536
June	0.069	0.071	0.069	0.074	0.078	0.401	0.573
July	0.073	0.075	0.072	0.075	0.085	0.405	0.506
August	0.091	0.099	0.100	0.098	0.093	0.323	0.511
September	0.079	0.083	0.080	0.083	0.085	0.319	0.537
October	0.081	0.085	0.081	0.085	0.087	0.382	0.527
November	0.086	0.087	0.085	0.090	0.098	0.365	0.473
December	0.105	0.103	0.105	0.110	0.114	0.449	0.491

F. 12-Hour Weekday to 24-Hour Annual Average day Factors -MOTORWAY**1. Factors**

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Average Weekday Factor
January	1.271	1.249	1.217	1.210	1.170	1.746	1.965	1.223
February	1.233	1.209	1.176	1.176	1.141	1.673	1.906	1.186
March	1.196	1.178	1.155	1.148	1.114	1.625	1.777	1.157
April	1.178	1.160	1.136	1.130	1.102	1.638	1.836	1.140
May	1.176	1.169	1.148	1.138	1.108	1.638	1.827	1.147
June	1.175	1.160	1.149	1.135	1.099	1.617	1.784	1.144
July	1.186	1.175	1.156	1.152	1.121	1.630	1.796	1.157
August	1.202	1.180	1.164	1.149	1.136	1.618	1.842	1.168
September	1.168	1.156	1.137	1.130	1.093	1.546	1.771	1.144
October	1.155	1.156	1.133	1.128	1.092	1.550	1.745	1.132
November	1.176	1.168	1.149	1.145	1.125	1.646	1.820	1.152
December	1.170	1.153	1.138	1.146	1.140	1.657	1.886	1.149
Average Factor	1.188	1.174	1.154	1.148	1.119	1.631	1.825	1.156

2. Standard Deviations Associated with Factors

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
January	0.096	0.095	0.101	0.083	0.082	0.163	0.158
February	0.080	0.092	0.093	0.078	0.071	0.143	0.156
March	0.073	0.084	0.079	0.071	0.066	0.119	0.158
April	0.056	0.064	0.063	0.058	0.055	0.123	0.203
May	0.059	0.060	0.065	0.053	0.059	0.120	0.164
June	0.044	0.056	0.057	0.053	0.047	0.115	0.208
July	0.051	0.055	0.056	0.054	0.055	0.119	0.208
August	0.045	0.049	0.054	0.051	0.059	0.143	0.239
September	0.048	0.067	0.057	0.054	0.048	0.126	0.230
October	0.059	0.078	0.078	0.063	0.055	0.117	0.202
November	0.078	0.088	0.094	0.084	0.081	0.141	0.150
December	0.085	0.098	0.097	0.088	0.083	0.129	0.129

F. 12-Hour Weekday to 24-Hour Annual Average day Factors - NON-MOTORWAY

1. Factors

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Average Weekday Factor
January	1.209	1.198	1.185	1.171	1.150	1.571	1.949	1.185
February	1.193	1.178	1.156	1.160	1.126	1.517	1.936	1.162
March	1.172	1.150	1.140	1.137	1.121	1.495	1.861	1.143
April	1.178	1.148	1.136	1.128	1.120	1.542	1.934	1.141
May	1.176	1.156	1.147	1.141	1.123	1.542	1.913	1.148
June	1.195	1.169	1.163	1.156	1.145	1.565	1.935	1.165
July	1.198	1.170	1.165	1.166	1.168	1.584	1.939	1.173
August	1.279	1.251	1.238	1.223	1.217	1.624	2.030	1.224
September	1.190	1.171	1.163	1.159	1.140	1.514	1.897	1.163
October	1.180	1.168	1.155	1.154	1.134	1.516	1.872	1.158
November	1.165	1.156	1.131	1.133	1.118	1.506	1.866	1.141
December	1.132	1.117	1.107	1.108	1.106	1.528	1.813	1.114
Average Factor	1.183	1.163	1.153	1.150	1.132	1.527	1.890	1.156

2. Standard Deviations Associated with Factors

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
January	0.115	0.105	0.110	0.108	0.101	0.318	0.372
February	0.106	0.107	0.104	0.105	0.098	0.282	0.401
March	0.098	0.103	0.098	0.099	0.095	0.282	0.405
April	0.101	0.100	0.100	0.101	0.095	0.339	0.432
May	0.097	0.097	0.095	0.097	0.097	0.307	0.397
June	0.094	0.097	0.095	0.098	0.097	0.298	0.426
July	0.099	0.101	0.097	0.100	0.104	0.302	0.369
August	0.105	0.112	0.113	0.118	0.109	0.242	0.371
September	0.105	0.111	0.107	0.110	0.107	0.239	0.396
October	0.108	0.113	0.109	0.113	0.110	0.284	0.387
November	0.112	0.105	0.111	0.117	0.119	0.272	0.344
December	0.124	0.122	0.124	0.129	0.140	0.336	0.374

G. Year to Year Factors**Indices of Traffic Flows by Vehicle Type Since 1979****Motorways**

Year	Cars	LGV	OGV	Buses & Coaches	Motor Cycles	All Motors
1979	1.00	1.00	1.00	1.00	1.00	1.00
1980	1.06	1.01	1.01	1.05	1.19	1.03
1981	1.10	1.03	1.03	1.08	1.32	1.02
1982	1.15	1.05	1.05	1.13	1.38	1.09
1983	1.20	1.09	1.09	1.21	1.29	1.13
1984	1.26	1.16	1.14	1.35	1.21	1.17
1985	1.30	1.26	1.17	1.47	1.18	1.22
1986	1.36	1.40	1.19	1.62	1.14	1.28
1987	1.46	1.57	1.24	1.98	1.17	1.37
1988	1.57	1.75	1.31	2.31	1.15	1.48
1989	1.67	1.92	1.37	2.63	1.19	1.57
1990	1.75	2.00	1.40	2.77	1.22	1.63
1991	1.78	1.98	1.45	2.84	1.18	1.65
1992	1.87	2.13	1.41	2.98	1.19	1.73
1993	1.89	2.10	1.38	2.97	1.15	1.73
1994	1.87	2.12	1.52	3.21	1.04	1.73
1995	1.94	2.23	1.52	2.86	1.06	1.80
1996	2.04	2.38	1.50	3.15	1.15	1.88
1997	2.14	2.46	1.51	3.29	1.09	1.96
1998	2.16	2.51	1.50	3.32	1.23	1.98
1999	2.25	2.56	1.52	4.32	1.45	2.04
2000	2.25	2.64	1.50	3.93	1.51	2.04
2001	2.34	2.67	1.49	4.01	1.59	2.10
2002	2.43	2.80	1.50	3.73	1.65	2.18
2003	2.50	2.83	1.49	3.88	1.70	2.22
2004	2.60	3.02	1.56	4.35	1.56	2.31
2005	2.63	2.93	1.45	3.70	1.73	2.29
2006	2.60	3.11	1.42	3.48	1.78	2.29
2007	2.63	3.20	1.41	2.51	1.57	2.31
2008	2.60	3.23	1.42	2.54	1.88	2.29
2009	2.68	3.07	1.31	2.59	2.05	2.31

Other Roads

Year	Cars	LGV	OGV	Buses & Coaches	Motor Cycles	All Motors	Pedal Cycles
1979	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1980	1.02	0.99	0.99	0.97	1.02	1.03	1.09
1981	1.03	0.98	0.98	0.94	1.00	1.02	1.17
1982	1.05	0.98	0.98	0.91	0.98	1.04	1.24
1983	1.08	0.99	0.99	0.89	0.92	1.06	1.26
1984	1.12	1.02	1.01	0.89	0.90	1.09	1.24
1985	1.16	1.06	1.02	0.93	0.81	1.12	1.16
1986	1.21	1.16	1.06	1.03	0.76	1.18	1.16
1987	1.26	1.23	1.08	1.19	0.70	1.22	1.10
1988	1.30	1.30	1.10	1.35	0.66	1.26	1.07
1989	1.34	1.33	1.10	1.46	0.63	1.29	1.08
1990	1.37	1.39	1.09	1.54	0.58	1.31	1.05
1991	1.41	1.37	1.05	1.55	0.53	1.34	1.10
1992	1.39	1.37	0.95	1.60	0.47	1.32	1.12
1993	1.40	1.34	0.99	1.66	0.43	1.32	1.14
1994	1.42	1.38	1.01	1.78	0.40	1.34	1.08
1995	1.43	1.37	0.97	1.62	0.40	1.34	1.10
1996	1.44	1.36	0.95	1.58	0.38	1.35	1.17
1997	1.45	1.37	0.96	1.50	0.35	1.36	1.03
1998	1.45	1.37	0.93	1.50	0.35	1.36	0.94
1999	1.46	1.37	0.85	1.53	0.39	1.37	0.98
2000	1.45	1.40	0.85	1.50	0.42	1.36	0.92
2001	1.45	1.34	0.80	1.52	0.44	1.35	0.88
2002	1.45	1.34	0.74	1.50	0.45	1.35	0.81
2003	1.46	1.35	0.73	1.44	0.44	1.36	0.78
2004	1.46	1.39	0.76	1.43	0.42	1.36	0.75
2005	1.45	1.39	0.70	1.44	0.41	1.35	0.81
2006	1.45	1.42	0.67	1.44	0.39	1.35	0.82
2007	1.45	1.45	0.63	1.32	0.39	1.35	0.88
2008	1.44	1.42	0.62	1.29	0.40	1.32	0.94
2009	1.44	1.39	0.54	1.23	0.40	1.31	1.03