



Latvian State Roads Yearbook

2009



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Introduction

The economic recession in 2009 seriously influenced the road sector. State budget funding was dramatically reduced. In general the year 2009 was an enormous step back and the road financing decreased to the level of 2006. At the same time tender prices decreased due to growing competition in construction market and construction works were performed for comparatively lower costs.

The renewal of state roads continued during the crisis owing to the co-financing from European Union structural funds. Roads with bituminous pavements were reconstructed, renewed or build in the total length of 222 km and 8 bridges were reconstructed in the total length of 338.5 m. Some of the most remarkable projects are the reconstructed overpass on the Riga bypass / road A5 over the road A10, as well as, the completed section Jēkabpils – Varakļāni of the European transit network route E22. The works were started in sections from Riga bypass / road A4 to Koknese and from Ludza to Nirza. It is expected that in 2011 it will be possible to drive on a renewed and partly on a newly built road in the route from Riga bypass to Koknese. This project will certainly be a benefit for road users, as well as, for the whole country. In 2009 with the European co-financing the works started also in ten different sections on regional roads that connect regions and district centres, as well as, provide connection to state main roads.

In general the condition of road network continues to deteriorate even if the traffic intensity and amount declines. Already one fifth of roads with bituminous pavement and one third of roads with gravel pavement are assessed as collapsed and various restrictions are implemented on 44 bridges. The main cause is continuously insufficient financing of state roads.

However, there is good news. A trend may be observed that the number of killed or injured in traffic accidents continued to decrease. In 2009 there were one fourth less killed in car accidents in comparison to the year before. It was favoured not only by the decrease of traffic and the work of institutions providing traffic safety but also great attention paid to traffic safety improvements, including improvements for less protected traffic participants such as pedestrians and cyclists.

State Road Network

General

Territory of Latvia – 64 589 km².

Population as at December 31, 2009 - 2 248 400.

Total length of roads and streets – 73 074 km.

Average road network density – 1.132 km per 1 km².

Number of registered vehicles – 1 168 357, out of which 611 192 vehicles have passed vehicle inspection.

Number of registered vehicles per 1000 inhabitants – 520.

Number of registered cars – 904 308, out of which 511 571 cars have passed vehicle inspection.

Number of registered cars per 1000 inhabitants – 402.

Total length of roads

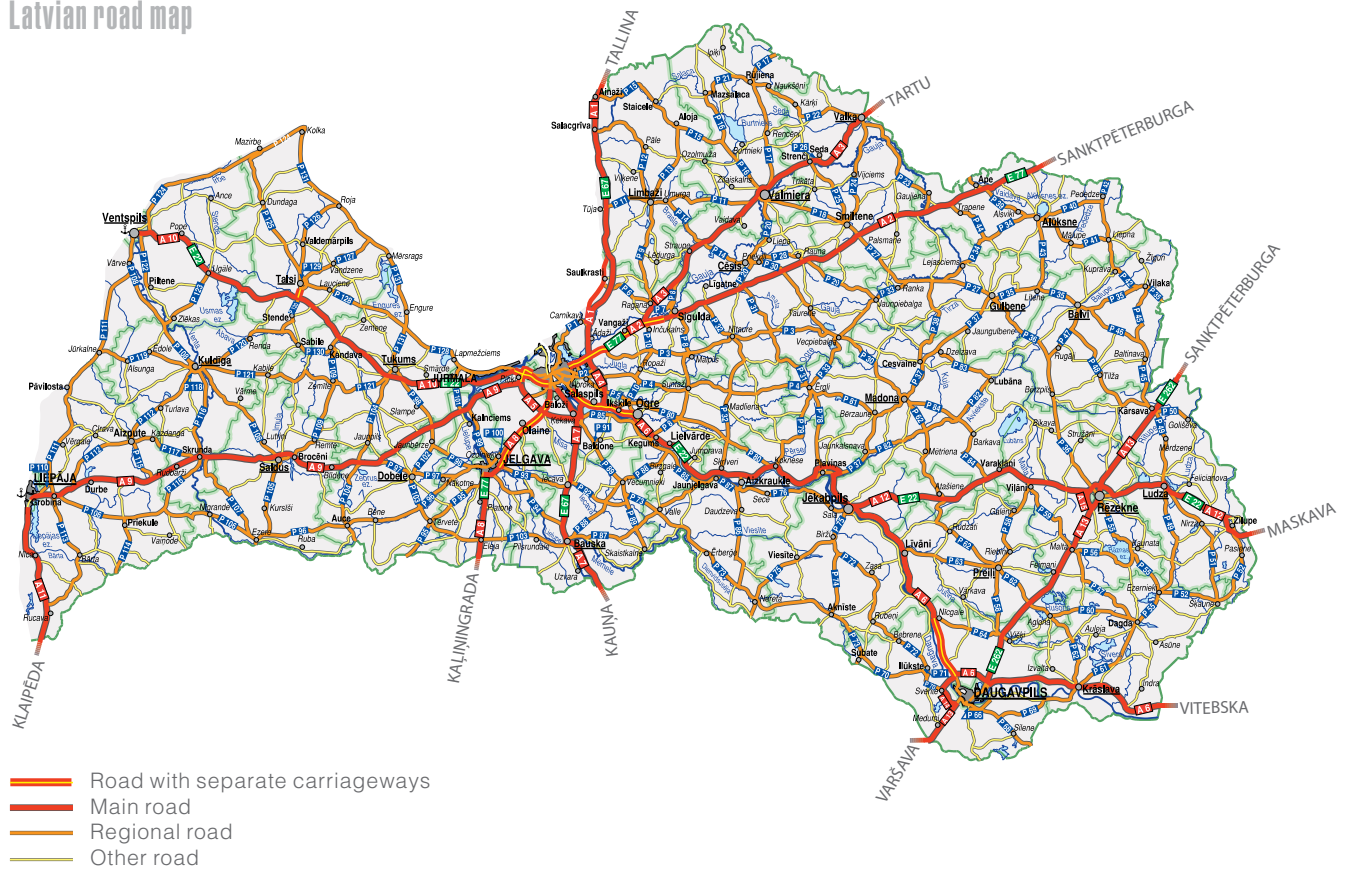
Classification of roads	Road length as at December 31, 2009 km			Total
	Bituminous pavement	Crushed stone and gravel pavement	Without pavement	
State roads:	8 322	11 855		20 178
Main roads (A)	1 653			1 653
Regional roads (P)	4 039	1 287		5 327
Local roads (V)	2 630	10 568		13 198
Municipal roads and streets:	5 637	33 617		39 254
roads	1 058	30 324		31 382
streets	4 579	3 293		7 872
Forest roads		6 216	3 926	10 142
Private roads	500	3 000		3 500
Total roads and streets	14 459	54 688	3 926	73 074

State roads

SJSC "Latvian State Roads" is responsible for roads with the total length of 20 178 km. The average density of state road network is 0.312 km per 1 km².

SJSC "Latvian State Roads" is responsible for 932 bridges of which 876 are made of reinforced concrete, 15 – stone, 35 – steel and 6 – timber. The total length of bridges is 29 969 metres.

Latvian road map



Value of state road network

According to data gathered by district units the total length of the state road network as at January 1, 2010, was 20 178 km including 1 653 km of main roads (8.2% of total road network), 5 327 km of regional roads (26.4%) and 13 198 km of local roads (65.4%).

The balance sheet value of the state road network including engineering structures and traffic organisation equipment as at January 1, 2010, was the following:

Balance index	Main roads	Regional roads	Local roads	Total
Initial value	965 073 052	1 046 783 147	1 205 781 218	3 217 637 417
Depreciation	410 115 490	581 883 025	654 135 257	1 646 133 772
Remaining value	554 957 562	464 900 122	551 645 961	1 571 503 645

State road equipment and its value

Unit	Amount	Value Lats
Barriers	434.6 km	12 899 268
Traffic counting points	93 items	97 791
Parking and rest areas	216 items or 314 600 m ²	2 919 543
Road signs	112 728 items	7 901 355
Steel girders	113 items	772 366
Signal posts	70 677 items	747 531
Vehicle pavilions	1 540 items	2 556 508
Benches	9 411 items	194 817
Bus stop extensions	8 328 items	9 837 344
Pedestrian roads	88.4 km	3 925 322
Pedestrian protective barriers	11.7 km	649 953
Lighting	3 275 items	3 742 910
Traffic lights	114 items	676 393
Water drainage	63 sets	2 671 899
Load weighing lanes	4 items	604 228
Noise barriers	1.07 km	405 314
Police stations	1 item	2 235

Total length of the state road network by district

District	Total length of the road network		Bituminous pavement		Gravel pavement	
	km	km	%	km	%	
Aizkraukle	747	270	36.1	477	63.9	
Bauska	710	257	36.2	453	63.8	
Jelgava	574	350	60.9	224	39.1	
Ogre	681	288	42.3	393	57.7	
Rīga	1013	823	81.2	190	18.8	
Central region, total	3725	1987	53.3	1738	46.7	
Dobele	583	204	35.0	379	65.0	
Kuldīga	728	333	45.8	394	54.2	
Liepāja	931	412	44.2	520	55.8	
Saldus	611	227	37.1	384	62.9	
Talsi	945	471	49.9	474	50.1	
Tukums	858	404	47.1	454	52.9	
Ventspils	675	310	45.9	365	54.1	
Kurzeme region, total	5331	2362	44.3	2969	55.7	
Balvi	613	226	36.9	386	63.1	
Dagda	807	280	34.7	527	65.3	
Daugavpils	853	395	46.3	458	53.7	
Jēkabpils	837	217	26.0	620	74.0	
Ludza	828	228	27.5	601	72.5	
Preiļi	665	235	35.3	430	64.7	
Rēzekne	859	329	38.3	530	61.7	
Latgale region, total	5463	1911	35.0	3552	65.0	
Alūksne	620	195	31.5	425	68.5	
Cēsis	1070	290	27.1	780	72.9	
Gulbene	592	201	33.9	391	66.1	
Limbaži	799	370	46.3	430	53.7	
Madona	1005	279	27.8	726	72.2	
Smiltene	775	346	44.7	428	55.3	
Valmiera	798	381	47.7	417	52.3	
Vidzeme region, total	5660	2062	36.4	3597	63.6	
Total	20178	8322	41.2	11855	58.8	

Total length of state main roads by district

District	Total length of the road network	Including state main roads
	km	km
Aizkraukle	747	58
Bauska	710	50
Jelgava	574	65
Ogre	681	44
Rīga	1 013	294
Central region, total	3 725	511
Dobele	583	15
Kuldīga	728	21
Liepāja	931	94
Saldus	611	51
Talsi	945	38
Tukums	858	79
Ventspils	675	49
Kurzeme region, total	5 331	346
Balvi	613	-
Dagda	807	46
Daugavpils	853	136
Jēkabpils	837	78
Ludza	828	84
Preiļi	665	57
Rēzekne	859	114
Latgale region, total	5 463	515
Alūksne	620	46
Cēsis	1 070	54
Gulbene	592	-
Limbaži	799	56
Madona	1 005	-
Smiltene	775	71
Valmiera	798	53
Vidzeme region, total	5 660	280
Total	20 178	1 653

Total length of state regional roads by district

District	Total length of the road network	Bituminous pavement	Gravel pavement
	km	km	km
Aizkraukle	250	177	73
Bauska	176	115	60
Jelgava	168	159	9
Ogre	258	167	92
Rīga	235	235	-
Central region, total	1087	853	234
Dobele	169	141	29
Kuldīga	251	218	33
Liepāja	242	199	43
Saldus	164	107	57
Talsi	281	266	15
Tukums	224	180	44
Ventspils	166	123	43
Kurzeme region, total	1498	1234	264
Balvi	215	158	57
Dagda	171	171	-
Daugavpils	160	127	34
Jēkabpils	179	103	75
Ludza	143	73	70
Preiļi	143	120	23
Rēzekne	149	109	41
Latgale region, total	1160	860	300
Alūksne	188	89	98
Cēsis	295	151	144
Gulbene	171	128	43
Limbaži	221	211	10
Madona	357	215	142
Smiltene	182	144	37
Valmiera	168	153	15
Vidzeme region, total	1582	1091	490
Total	5327	4039	1287

Total length of state local roads by district

District	Total length of the road network	Bituminous pavement	Gravel pavement
	km	km	km
Aizkraukle	438	35	404
Bauska	485	92	393
Jelgava	341	126	216
Ogre	379	77	302
Rīga	483	293	190
Central region, total	2126	622	1504
Dobele	398	48	350
Kuldīga	456	95	361
Liepāja	596	119	477
Saldus	396	69	327
Talsi	626	167	459
Tukums	555	145	410
Ventspils	461	139	322
Kurzeme region, total	3487	782	2705
Balvi	397	68	329
Dagda	591	64	527
Daugavpils	557	133	424
Jēkabpils	580	36	545
Ludza	602	71	531
Preiļi	465	58	408
Rēzekne	596	106	489
Kurzeme region, total	3788	536	3252
Alūksne	387	60	326
Cēsis	720	85	636
Gulbene	422	73	348
Limbaži	522	102	420
Madona	648	64	584
Smiltene	522	131	391
Valmiera	577	175	403
Vidzeme region, total	3798	691	3107
Total	13198	2630	10568

Bridges on state roads by district

District	Bridges, total		Reinforced concrete		Stone		Steel		Timber	
	Quantity	m	Quantity	m	Quantity	m	Quantity	m	Quantity	m
Aizkraukle	44	1485	44	1485						
Bauska	35	965	34	960	1	5				
Jelgava	53	2367	51	2064			2	303		
Ogre	37	1221	34	1037			3	184		
Rīga	87	4874	81	3803			6	1071		
Central region, total	256	10912	244	9349	1	5	11	1558		
Dobele	23	501	21	459	1	11	1	31		
Kuldīga	20	725	20	725						
Liepāja	44	1075	41	947	1	3	2	125		
Saldus	22	675	22	675						
Talsi	29	595	24	543	2	14	2	29	1	9
Tukums	41	908	32	734	4	94	4	74	1	6
Ventspils	35	1197	34	1173	1	24				
Kurzeme region, total	214	5676	194	5256	9	147	9	258	2	15
Balvi	18	534	18	534						
Dagda	20	450	19	446					1	4
Daugavpils	52	1512	48	1173	1	5	3	334		
Jēkabpils	28	755	25	694			3	61		
Ludza	28	868	27	863			1	5		
Preiļi	28	629	27	614	1	15				
Rēzekne	30	1049	30	1049						
Latgale region, total	204	5797	194	5373	2	20	7	400	1	4
Alūksne	23	546	20	500	1	15	1	13	1	18
Cēsis	51	1413	44	1046	1	13	4	324	2	30
Gulbene	20	743	20	743						
Limbaži	42	1257	41	1243			1	14		
Madona	41	1250	38	1156	1	11	2	83		
Smiltene	37	1016	37	1016						
Valmiera	44	1359	44	1359						
Vidzeme region, total	258	7584	244	7063	3	39	8	434	3	48
Total	932	29969	876	27041	15	211	35	2650	6	67

Location of bridges on state roads by district

District	Bridges, total		Main roads		Regional roads		Local roads	
	Quantity	m	Quantity	m	Quantity	m	Quantity	m
Aizkraukle	44	1485	7	461	23	525	14	498
Bauska	35	965	2	55	13	382	20	528
Jelgava	53	2367	12	983	19	685	22	699
Ogre	37	1221	4	72	16	609	17	541
Rīga	87	4874	49	3655	16	611	22	608
Central region, total	256	10912	74	5226	87	2812	95	2874
Dobele	23	501	1	23	8	192	14	286
Kuldīga	20	725	1	142	9	372	10	211
Liepāja	44	1075	8	136	11	361	25	578
Saldus	22	675	3	100	8	309	11	266
Talsi	29	595	-	-	12	313	17	282
Tukums	41	908	8	173	14	273	19	462
Ventspils	35	1197	4	90	7	409	24	698
Kurzeme region, total	214	5676	25	664	69	2229	120	2783
Balvi	18	534	-	-	14	400	4	134
Dagda	20	450	1	27	6	140	13	283
Daugavpils	52	1512	26	1020	10	169	16	323
Jēkabpils	28	755	4	124	13	279	11	352
Ludza	28	868	6	204	4	119	18	545
Preiļi	28	629	1	19	13	312	14	298
Rēzekne	30	1049	13	436	3	92	14	521
Latgale region, total	204	5797	51	1830	63	1511	90	2456
Alūksne	23	546	3	134	9	193	11	219
Cēsis	51	1413	4	127	17	376	30	910
Gulbene	20	743	-	-	10	359	10	384
Limbaži	42	1257	5	155	17	429	20	673
Madona	41	1250	1	9	22	707	18	534
Smiltene	37	1016	4	122	9	412	24	482
Valmiera	44	1359	2	74	15	631	27	654
Vidzeme region, total	258	7584	19	621	99	3107	140	3856
Total	932	29969	169	8341	318	9659	445	11969

Road Traffic

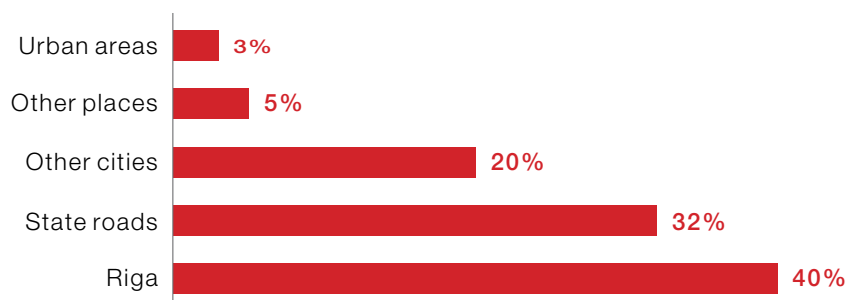
Average annual daily traffic intensity



Registered road traffic accidents

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Registered road traffic accidents	30 614	30 454	36 468	39 593	45 555	48 912	47 353	52 102	61 383	54 323	35 058
Registered road traffic accidents with injured	4 442	4 482	4 766	5 083	5 379	5 081	4 466	4 302	4 781	4 196	3 160
Number of killed	604	588	517	518	493	516	442	407	419	316	254
Number of injured	5 244	5 449	5 852	6 300	6 639	6 416	5 600	5 404	6 088	5 408	3 930

Registered road traffic accidents with killed/injured by accident location



Registered road traffic accidents with killed/injured on state roads

Road	Road traffic accidents with killed/injured				Killed				Injured			
	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
A1	39	44	58	35	9	8	6	8	57	62	96	47
A2	55	73	44	40	10	14	9	9	72	115	64	58
A3	32	35	32	16	7	8	2	1	43	50	50	27
A4	23	39	28	14	2	9	2	3	35	64	39	20
A5	22	34	29	25	5	13	3	6	30	40	42	31
A6	100	112	91	51	29	21	15	10	113	163	148	75
A7	44	56	43	46	7	10	3	8	75	76	69	70
A8	50	38	34	27	14	11	5	3	53	47	39	40
A9	73	78	62	39	14	19	15	13	101	136	95	50
A10	75	68	45	42	11	9	4	3	109	95	65	67
A11	5	8	5	4	1	0	0	1	4	11	8	7
A12	35	30	25	34	7	9	5	2	42	36	28	56
A13	30	32	26	21	7	2	5	5	41	43	32	23
A14	1	4	3	1	0	2	3	0	1	3	4	2
A15	1	0	1	0	2	0	0	0	2	0	1	0
Total (A1–A15)	585	651	526	395	125	135	77	72	778	941	780	573
Total on regional roads	485	558	491	337	88	94	80	60	657	801	660	439
Total on local roads	274	321	306	266	32	31	36	38	395	444	457	372
Total	1344	1630	1323	998	245	260	193	170	1830	2186	1897	1384

Main roads

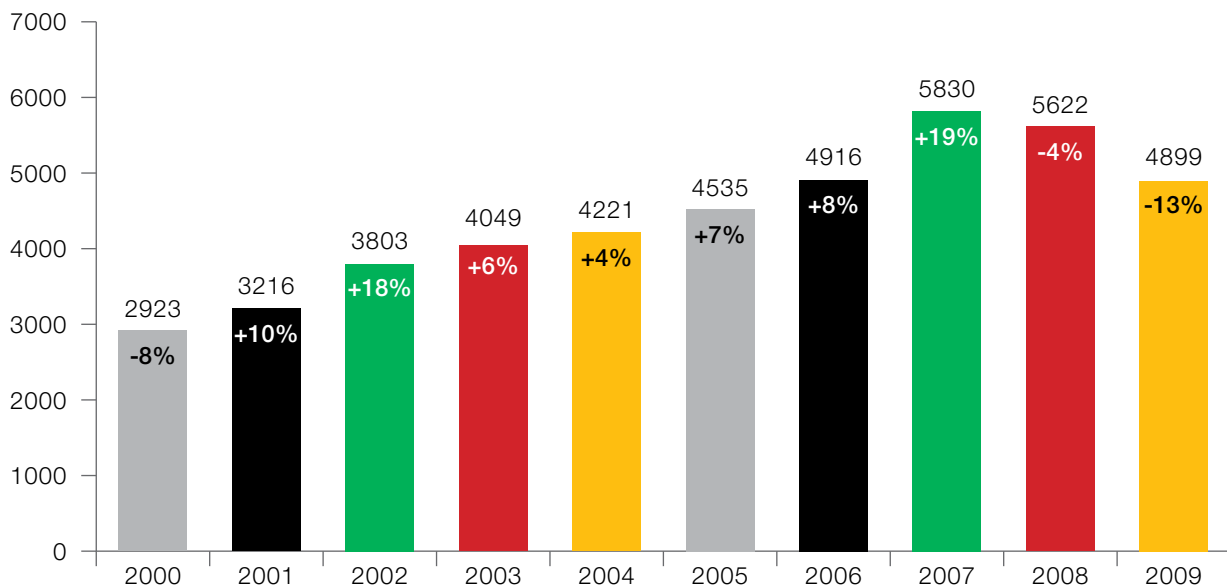
- A1 – Riga (Baltezers)–Estonian border (Ainaži)
- A2 – Riga–Sigulda–Estonian border (Veclaicene)
- A3 – Inčukalns–Valmiera–Estonian border (Valka)
- A4 – Riga bypass (Baltezers–Saulkalne)
- A5 – Riga bypass (Salaspils–Babīte)
- A6 – Riga–Daugavpils–Krāslava–Byelorussian border (Paternieki)
- A7 – Riga–Bauska–Lithuanian border (Grenctāle)
- A8 – Riga–Jelgava–Lithuanian border (Meitene)
- A9 – Riga (Skulte)–Liepāja
- A10 – Riga–Ventspils
- A11 – Liepāja–Lithuanian border (Rucava)
- A12 – Jēkabpils–Rēzekne–Ludza–Russian border (Terehova)
- A13 – Russian border (Grebņeva)–Rēzekne–Daugavpils–Lithuanian border (Medumi)
- A14 – Daugavpils bypass (Kalkūni–Tilti)
- A15 – Rēzekne bypass

- On state roads
- 31.6 % of all road accidents were registered;
 - 66.9 % of all killed were registered;
 - 35.2 % of all injured were registered.

Traffic counting system

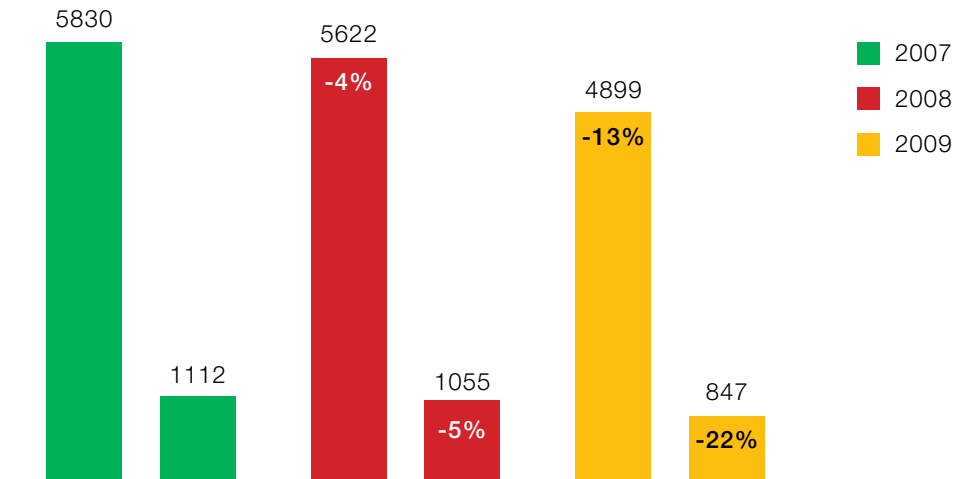
State main roads are equipped with stationary traffic counting points a number of which are permanent counting points with automated data collection and transmission and in other points traffic counting devices are placed periodically. Stationary traffic counting points are located on roads of regional importance, as well as, high intensity local roads. In other road sections mobile counting devices are used and visual counting method is applied. After evaluating traffic counting data it may be observed that for the past two years the total traffic flow is continuing to decrease.

Changes in average daily traffic flow within state road network in comparison to previous years



The reduction of truck traffic was two times larger than the decrease of car traffic which could be explained with the decrease in economic activities.

Total average daily traffic and truck traffic intensity on state main roads

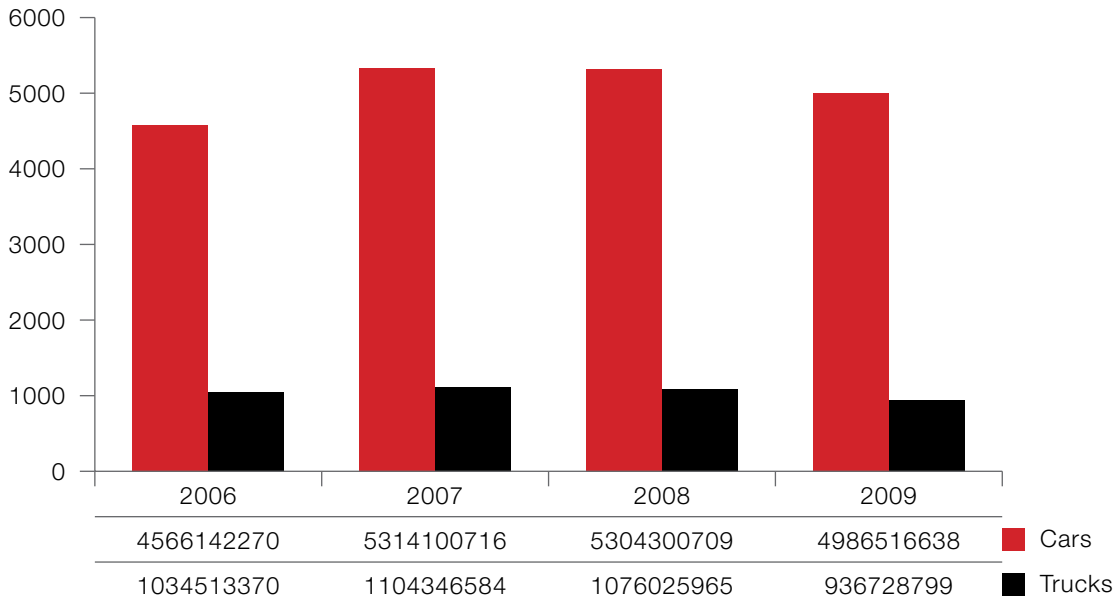


The highest decrease in average traffic intensity is observed on road A5 Riga bypass (Salaspils – Babīte) and the most remarkable fluctuations in traffic may be observed on roads with higher traffic intensity.

Changes in average daily traffic on state main roads in comparison to previous year

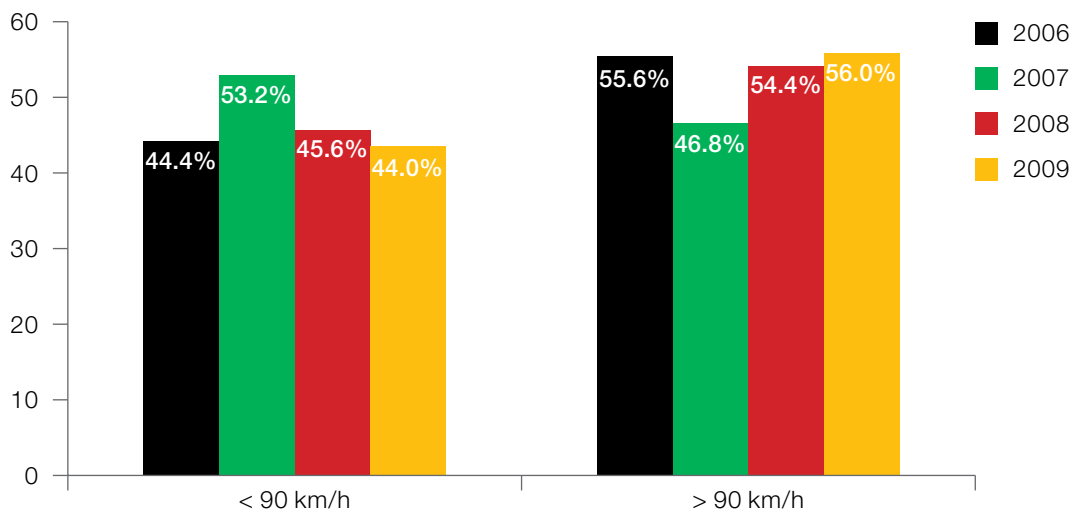


Vehicle mileage on state roads (million km)



Vehicle speed is an important parameter in traffic counting process. Every year the percentage of drivers exceeding 90 km speed limit increases.

Changes in driving speed



Results of visual assessment of roads and bridges

Technical condition of bituminous pavement*

Pavement condition	Main roads	Regional roads	Local roads	Total length	Share of total length	Share of total length of main roads
	km	km	km	km	%	%
Very good	317	449	258	1024	13	19
Good	301	525	417	1243	15	17
Satisfactory	444	1001	860	2305	27	26
Poor	425	913	626	1963	23	24
Very poor	250	1161	454	1865	22	14
Total	1737	4048	2615	8400	100	100

*The difference from road total length mentioned before may be explained with the specific character of visual assessment.

Technical condition of gravel roads*

Pavement condition	Regional roads	Local roads	Total length	Share of total length
	km	km	km	%
Good	163	1164	1327	11
Satisfactory	640	5568	6209	53
Poor	489	3785	4274	36
Total	1292	10517	11809	100

*The difference from road total length mentioned before may be explained with the specific character of visual assessment.

Technical condition of bridges

Technical condition	Bridge quantity	Main roads	Regional roads	Local roads	Share of total number
Good	171	53	72	46	18
Satisfactory	220	44	74	102	24
Poor	384	40	118	226	41
Very poor	157	32	54	71	17
Total	932	169	318	445	100

Various restrictions have been introduced on 44 bridges.

Technical condition of roads

The level of road user comfort depends on surface evenness. The measurement unit is International Roughness Index (IRI): summed up vertical fluctuations in metres per one road kilometre.

IRI	Description of road surface
0 to 2.5	Very even road surface; driving conditions are comfortable
2.5 to 3.5	Even road surface but vehicle fluctuations are observed
3.5 to 4.5	Uneven road surface, vehicle fluctuations are observed
4.5 to 6.0	Very uneven road surface but traffic is still possible
Over 6.0	Very uneven road surface and traffic safety is substantially diminished

In accordance with data of 2009 the average IRI value on state main roads is 2.94. In comparison with the last year a trend may be observed that the indicator gradually decreases which means that surface evenness on state road increases. It may be explained with the implemented improvements on state main roads in the framework of EU Cohesion Fund projects. The road programme enabled to perform works that improved the road sections in critical condition, especially, from the evenness point of view.

Changes of IRI value on state main roads

Road no.	2005	2006	2007	2008	2009
A1	2.59	1.82	1.28	1.35	1.34
A2	2.91	2.85	2.76	2.69	2.50
A3	3.23	3.39	3.07	3.14	2.63
A4	2.13	2.18	2.10	2.26	2.11
A5	2.84	2.99	3.04	3.46	2.07
A6	3.29	3.12	3.17	2.98	2.68
A7	2.60	1.72	1.67	1.71	1.64
A8	3.16	3.26	3.30	3.35	3.10
A9	2.89	2.86	2.92	2.69	2.54
A10	2.60	2.64	2.73	2.54	2.45
A11	3.21	3.45	3.49	3.41	2.98
A12	4.05	4.37	4.44	3.82	2.83
A13	3.43	3.42	3.28	3.14	2.96
A14	3.60	3.90	3.92	3.98	3.47
A15	3.73	3.76	3.79	3.98	3.76
IRI, average	3.09	3.05	3.00	2.97	2.94

State road section with the lowest IRI index is road A12 Jēkabpils–Rēzekne–Ludza–Russian border (Terehova) from km 108 to 109.

Other state road sections with low IRI index

Road	From km	To km	IRI
A12	108	109	7.23
A12	128	129	6.94
A12	112	113	6.92
A12	126	127	6.42
A12	124	125	6.31

In addition to evenness measurements also the depth of ruts is measured. The deeper the ruts the higher risk to traffic safety. Ruts deeper than 25 mm present threats to traffic safety. In accordance to data of 2009 the average depth of ruts on state main roads is 7.5 mm. The lowest average index of this parametre per 1 km is on the road A14 Daugavpils bypass (Salaspils–Babīte). The state road section with the least deep ruts is road Riga (Baltezers)-Estonian border (Ainaži).

Changes of rut depth on state main roads

Road	2008	2009
A1	3.71	3.95
A2	8.01	8.17
A3	9.74	9.42
A4	8.08	10.06
A5	10.94	6.11
A6	8.21	8.05
A7	5.60	5.73
A8	8.59	8.35
A9	7.11	6.65
A10	5.65	6.45
A11	5.32	4.87
A12	8.06	8.09
A13	6.26	9.82
A14	8.83	10.50
A15	7.76	7.62
Average	7.46	7.59

Road Financing

Financing of state road programmes, million Lats

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Financing from state consolidated budget	39.4	41.4	47.9	56.2	53.6	57.1	99.5	136.1	164.9	93.4
EU financed projects	1.1	2.9	0.04	8.9	23.2	84.6	83.3	66.8	69.8	35.4
Total	45.7	50.4	47.9	65.1	76.8	141.7	182.8	202.9	234.7	128.8

Actual and foreseen road financing, million Lats

	2005	2006	2007	2008	2009	2010
State roads	57.1	99.5	136.1	164.9	93.4	69.3
Municipal roads and streets	20.9	31.8	58.2	70.9	28.3	20.4

State road financing in 2009

No.	Programmes, sites, works	thousand Lats
1.	MAINTENANCE AND MANAGEMENT COSTS	58 467.829
1.1.	MAINTENANCE	50 897.450
1.1.1.	Routine maintenance	49 765.572
1.1.1.1.	Routine maintenance of state roads	44 087.030
1.1.1.2.	Maintenance of bituminous pavements (surface treatment)	208.731
1.1.1.3.	Painting of horizontal markings within the state road network	5 357.564
1.1.1.4.	Maintenance of gravel pavements	112.246
1.1.2.	Co-financing for routine maintenance of urban transit roads	744.845
1.1.3.	Co-financing for routine maintenance of roads over "Latvenergo" hydro-technical structures	18.254
1.1.4.	Subsidy to Road Museum	11.250
1.1.5.	New technology research programme	221.406
1.1.6.	Maintenance of technical equipment of Traffic Information Centre	-
1.1.7.	Payment for connections of electrical equipment	28.846
1.1.8.	Maintenance of road weather stations	84.133
1.1.9.	Maintenance of Traffic Information Centre	13.423
1.1.10.	Maintenance of traffic counting system	9.722

State road financing in 2009 (cont. from page 21)

No.	Programmes, sites, works	thousand Lats
1.2.	MANAGEMENT	5 729.972
1.2.1.	Management of road network	4 967.251
1.2.2.	Inventory of state roads	47.932
1.2.3.	Standardisation	104.601
1.2.4.	Audit of state road traffic safety	9.902
1.2.5.	Registration of state road lands in the Land Register	210.326
1.2.6.	Public information on road sector issues	-
1.2.7.	VAT payment for income	34.745
1.2.9.	Management and services of land acquisition	340.495
1.2.10.	Interest payment to State Treasury	14.720
1.3.	DESIGN AND PROJECT PREPARATION	1 840.406
1.3.1.	Road research, studies and designs	473.996
1.3.2.	Bridge research, studies and designs	100.899
1.3.3.	State road construction designs	1 005.171
1.3.4.	Bridge construction designs	118.188
1.3.5.	Construction designs for traffic organisation equipment	14.516
1.3.6.	Preparation of public and private partnership projects	127.636
2.	CAPITAL INVESTMENTS	34 978.863
2.1.	PERIODICAL MAINTENANCE AND RECONSTRUCTION	34 432.257
2.1.1.	Roads	21 978.844
2.1.1.1.	Improvement of state main roads	7 987.036
2.1.1.2.	Improvement of state regional and local road sections with bituminous pavement and construction of new sections	7 921.627
2.1.1.3.	Improvement of state local roads for regional support	483.993
2.1.1.4.	State road improvement in connection with the closing of railway lines	2 290.559
2.1.1.5.	Co-financing for the reconstruction of urban transit streets	3 203.022
2.1.1.6.	Construction of truck control points	92.607
2.1.2.	Bridges	6 227.670
2.1.2.1.	Periodical maintenance of bridges	204.600
2.1.2.2.	Reconstruction of bridges	6 023.070
2.1.2.3.	Co-financing for periodic maintenance and reconstruction of "Latvenergo" bridges	-
2.1.3.	Traffic organisation and road equipment	6 225.743
2.1.3.1.	Periodical maintenance of technical equipment of traffic organisation	1 248.542
2.1.3.2.	Traffic safety improvement projects	4 825.381
2.1.3.3.	Development of Road Weather Information System	57.224
2.1.3.4.	Development of technical instruments for Traffic Information Centre	50.932
2.1.3.5.	Development of traffic counting system	43.664

State road financing in 2009 (cont. from page 22)

No.	Programmes, sites, works	thousand Lats
2.2.	OTHER COSTS	546.607
2.2.1.	Project management and construction supervision for ERDF projects	192.178
2.2.2.	Project management for EU Cohesion Fund projects	202.087
2.2.5.	Payments for land acquisition	45.902
2.2.6.	Payments for the development of road inventory system	106.439
Total		93 446.692

Implementation of projects financed by the Cohesion Fund in the road sector

No.	Programmes, sites, works	thousand Lats
1.	TEN road network improvements, 1st project	23 551.324
2.	V67 Via Baltica, Saulkrasti bypass	538.986
Total		24 090.310

Financing of regional road development programme (ERDF)

No.	Programmes, sites, works	thousand Lats
1.	P73 Vecumnieki–Nereta–Subate, km 75.0–84.8	660.891
2.	P124 Ventspils–Kolka, km 56.3–67.3	1 521.315
3.	P73 Vecumnieki–Nereta–Subate, km 84.8–94.7	230.510
4.	P62 Krāslava–Preiļi–Madona, km 62.2–70.7	254.463
5.	P33 Ērgļi–Jaunpiebalga–Salīņkrogs, km 46.22–60.65	121.922
6.	P57 Malta–Sloboda, km 10.81–21.08	265.522
7.	P62 Krāslava–Preiļi–Madona, km 126.58–139.96	148.896
8.	P36 Rēzekne–Gulbene, km 56.47–65.60	174.842
9.	P76 Aizkraukle–Jēkabpils, km 00.0–13.0	343.853
10.	P45 Vijaka–Kārsava, km 32.0–42.3	338.889
11.	P4 Rīga–Ērgļi, km 81.0–90.7	160.454
12.	P124 Ventspils–Kolka, km 27.8–39.79	379.781
Total		4 601.338

Projects financed by the Cohesion Fund for 2007 – 2013

No.	Programmes, sites, works	thousand Lats
1.	E22 Tinūži–Koknese (land acquisition, construction)	5 781.921
2.	E22 Ludza–Terehova (land acquisition, construction)	921.843
Total		6 703.764

Results Achieved

Routine road maintenance

51.453 million Lats what was 24% less than in 2008 were spent for routine maintenance works during 2009 covering a total length of 20 279 km of state roads. The total length of maintained roads differs because it includes roads with two carriage ways, coverleaf junctions and exit ramps.

Routine maintenance works (million Lats)

Programme	2005	2006	2007	2008	2009
Road winter maintenance	10.647	11.059	11.718	18.032	17.783
Bridge, interchange and culvert maintenance	0.506	0.519	0.685	0.712	0.763
Traffic organisation	1.248	1.317	1.648	2.034	1.622
Pavement routine maintenance	9.861	15.515	19.891	21.149	18.956
Maintenance of bituminous pavements (surface treatment)	-	-	-	3.682	0.196
Painting of horizontal markings	-	-	-	6.430	4.604
Maintenance of gravel pavements	-	-	-	4.801	0.107
Road cleaning and inspection	2.337	3.585	6.020	7.775	5.695
Maintenance of road weather stations	0.085	0.071	0.057	0.114	-
Programme management and construction supervision	0.939	1.288	1.742	2.539	1.727
Elimination of ruts and depressions in bituminous pavements	-	-	-	0.956	-
Total	25.623	33.354	42.717	67.267	51.453

The most important routine maintenance task during 2009 was to ensure continuous traffic along state roads in compliance with the Regulations of the Cabinet of Ministers No. 871 of October 19, 2004 "Regulations on requirements for state and municipal road routine maintenance works and supervision" and maintenance classes approved by the Ministry of Transport. In 2009 the unit prices for routine maintenance works decreased to the price level determined in open tender in 2007.

In the 4th quarter of 2009 the level of winter maintenance was substantially reduced in comparison to winter of 2008/2009. In 2009 expenditures for winter road maintenance amounted up to 17.783 million Lats which was 0.249 million Lats less than in 2008 but still exceeded the financing planned for 2009 for 1.846 million Lats. Snow cleaning and removal works amounted up to 8.675 million Lats and road de-icing works amounted up to 7.665 million Lats. There is a large deficit in periodic bridge maintenance and repairs. During 2009 only emergency works were performed on bridges, overpasses and culverts in the amount of 0.763 million Lats. Other works are postponed to a time when the economic crisis will be passed.

During 2009 expenditures for traffic organisation amounted up to 1.622 million Lats, which was 0.412 million Lats less than a year before. The number of road sections equipped with lighting and traffic lights increased because of the implementation of traffic safety improvements (periodical maintenance or reconstruction). In 2009 the maintenance of equipment was performed in the amount of 0.330 million Lats. Road signs are still subject to malicious damage and theft. Equipment, especially safety guard-rails and lightning lines are damaged in car

accidents. Total equipment losses amounted to 0.569 million Lats. Horizontal marking on state roads with bituminous pavement was renewed in the amount of 4.604 million Lats or 28.4% less than in 2008.

In 2009 surface maintenance was performed in the amount of 18.957 million Lats that was 10.4% less than in 2008. Expenditures on bituminous pavement maintenance during 2009 amounted to a total of 9.389 million Lats or 9.7% less than in 2008. Pothole repairs on deteriorated bituminous pavements amounted to 603.1 thousand m² and the renewal of surface unevenness amounted to 484.9 thousand m² or to 69 km of road in poor condition. The works started in 2008 were finished in 2009 in the amount of 0.196 million Lats or 5.3% of the corresponding figure from the previous year.

Compared to the previous year expenditures for the maintenance of gravel pavements amounted to 9.567 million Lats or 8.8% less than in 2008. Compared to 2008 the physical volumes of grading and profiling works in 2009 decreased by 39.3% whilst the volumes of road levelling volumes decreased by 38%. 193.3 thousand cubic metres of gravel were utilised for the renewal of gravel pavements and the elimination of indents, potholes and sand pits on state roads, which was 11.4% less than in 2008. The works started in 2008 were finished in 2009 in the amount of 0.107 million Lats or 2.2% in comparison to the corresponding figures in 2008.

In the circumstances of insufficient financing in 2009 road treatment works were performed in the amount of 5.344 million Lats or 26.5% less than in previous year. The largest physical work amounts consisted of cleaning and renewal of ditches, improving road shoulders, mowing of grass, bush cutting and improvement of right-of-way.

Main part of household garbage collection and utilisation was performed on state main and regional roads of Riga district, as well as, on state main roads near borders.

Expenditures for routine state road maintenance works in 2009

Type of maintenance works	Measurement unit	Quantity	Costs Lats
1.1.1.1. Routine state road maintenance			
Road winter maintenance	-		17 783 257
Snow removal	track km	114 499.2	524 061
Snow removal	km	146 280.8	1 607 112
Snow removal with de-icing	km	185 654.5	6 111 395
De-icing	km	80 361.3	1 670 507
Formation of grooves in ice	track km	69 698.8	490 559
Main road winter maintenance	km	1 758.5	6 037 510
Road winter maintenance	km	36 545.1	169 550
Winter service duty	hours	124 872.0	687 954
Other winter service works	-	-	484 609
Maintenance of bridges, interchanges, pedestrian tunnels and culverts	-	-	762 995
Bridge and interchange maintenance	-	-	170 336
Culvert maintenance	-	-	447 785
Tunnel maintenance	-	-	144 874

Expenditures for routine state road maintenance works in 2009 (cont. from page 25)

Type of maintenance works	Measurement unit	Quantity	Costs Lats
Traffic organisation	-		1 621 978
Maintenance of bus stops, pavilions and rest areas	-		290 665
Replacement of road sign posts	it.	8 628	167 044
Replacement of road signs on existing posts	it.	5630	364 933
Road sign renewal	m ²	16.9	1 137
Painting of road markings	m ²	4 507.9	30 017
Signal post replacement	it.	4 949	106 341
Signal post washing	it.	2 492	5 060
Fixing reflectors on signal posts	it.	607	1 064
Replacement of damaged guard-rails	running m	2 404.8	139 014
Guard-rail washing	m	44 391,0	18 419
Installation of reflectors on guard-rails	it.	1 005	5 488
Guard-rail improvements	m	1 999.8	26 237
String guard-rail treatment	m	164.0	383
Maintenance of equipment packages necessary for the equipment of places dangerous for traffic	it./month	340	52 680
Replacement of information signs	sign with post	1 643	61 841
Road lighting and lighting equipment maintenance	Ls	-	167 739
Lightning equipment maintenance and road lighting	Ls	-	162 318
Other traffic organisation works	-		21 598
Pavement routine maintenance	-		18 956 457
Bituminous pavements	-		9 389 132
Crack filling	m	106 849.0	87 858
Pothole repairs	m ²	603 074.9	7 379 479
Pavement cleaning	1000 m ²	3 028.3	44 848
Repair of bleedings	m ²	9 040.3	1 454
Protection of humped sections	m ³	973.9	16 601
Renewal of pavement skid resistance	m ²	484 890.7	1 048 260
Indent repairs	t	2 122.5	166 705
Levelling by milling	m ²	6 941.2	19 750
Other pavement maintenance works	Ls	-	624 177
Gravel pavements	-		9 567 325
Road grading	km	108 231.5	3 618 333
Road profiling	km	1 527.6	70 587
Pavement renewal	m ³	136 231.9	3 911 069
Indent and pothole repairs on gravel roads	m ³	58 057	1 144 628
Road levelling (dragging)	track km	104 614.9	811 469
Other pavement maintenance works	Ls	-	11 239

Expenditures for routine state road maintenance works in 2009 (cont. from page 26)

Type of maintenance works	Measurement unit	Quantity	Costs Lats
Road treatment	-		5 344 008
Elimination of scouring	m ³	8 830.4	215 354
Slope strengthening in scourings	m ²	2 384	21 749
Ditch cleaning and renewal	m ³	195 208.5	876 546
Cleaning of covered systems for rainwater drainage	Ls	-	7 541
Shoulder profiling	km	5 676.4	147 451
Shoulder repairs	m ³	19 132.3	555 207
Removal of accumulated shoulder gravel	m ³	56 581.4	321 125
Bush cutting	ha	203.6	173 786
Mechanical sprout cutting	track km	24 095.8	826 637
Sprout cutting with hand bush cutter	ha	392.8	87 808
Mechanical bush cutting with simultaneous crushing	ha	6.1	6 525
Mechanical mowing of grass	track km	56 332.2	249 074
Manual mowing of grass	m ²	3 234 809.8	245 854
Mechanical mowing of grass in road median and right of way	ha	700.2	20 005
Cutting of hogweeds in road right-of-way	ha	319.7	107 821
Tending of greenery	-		334 838
Operative road treatment	km	55 618	428 612
Treatment of road right-of-way	km	4 211	194 468
Treatment of household garage containers	m ³	10 293.9	416 450
Other road treatment works	-		
Road inspection	-		350 781
Road inspection	km	200 423.2	219 158
Operative traffic information co-ordination	hours	40 356.0	131 623
Programme management and work control	-		1 531 091
1.1.1.1. Total		-	46 350 567
1.1.1.2. Maintenance of bituminous pavements (surface dressing)			
On state local roads	km	33.00	196 020
Programme management and work control	-	-	7 840
1.1.1.2. Total			203 860

Expenditures for routine state road maintenance works in 2009 (cont. from page 27)

Type of maintenance works	Measurement unit	Quantity	Costs Lats
1.1.1.3. Painting of horizontal markings in state road network			
Painted horizontal markings in 2008, total,	m ²	609 657.7	4 604 331
including:			
state main roads	m ²	337 953.3	
state regional roads	m ²	267 537.0	
state local roads	m ²	4 167.3	
Programme management and work control			184 173
1.1.1.3. Total			4 788 504
1.1.1.4. Maintenance of gravel roads			
State local roads	km	12.750	106 480
Programme management and work control			4 289
1.1.1.4. Total			110 739
Routine maintenance works, total			51 453 670

Track kilometre is equal to a kilometre of road treated in the width of road maintenance machinery.
Running metre is equal to the length of road element or structure per road metre.

Winter road maintenance

The level of winter maintenance

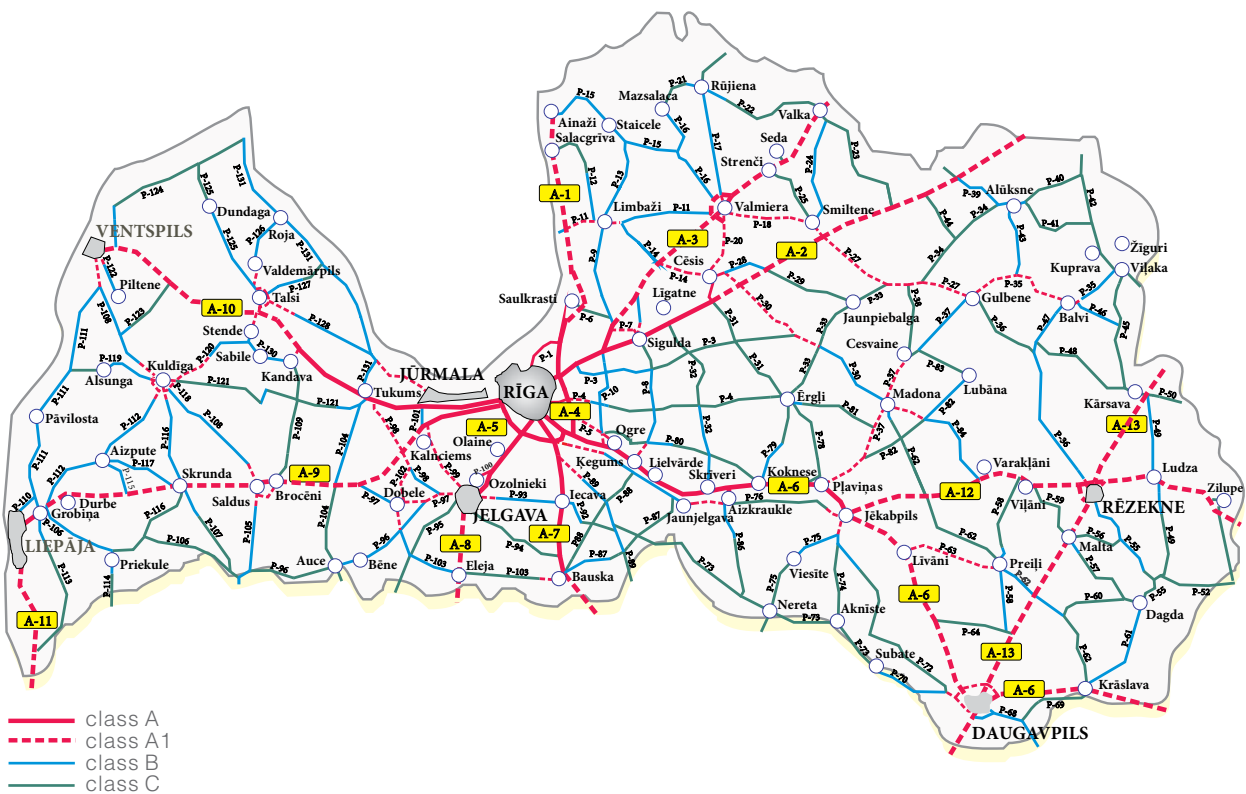
Winter maintenance class	State road maintenance km		
	winter 2005/2006	winter 2008/2009	winter 2009/2010
A	583.2	996.4	612.7
A1	2085.5	2899.9	1995.4
B	2381.1	1755.6	2499.0
C	12535.8	12885.5	12334.1
D	2722.5	1759.0	2837.8
Total	20308.1	20296.4	20279.0

The state road maintenance classes are determined by the Regulations of the Cabinet of Ministers No. 871 of October 19, 2004 "Regulations on requirements for state and municipal road routine maintenance works and supervision", Appendix 2, Chart 1.

In winter 2009/2010 the financing for road winter works was by 5.8 million Lats less in comparison to figures of the previous season, therefore the maintenance level was substantially decreased during winter 2009/2010. According to Paragraph 5.3 of the Regulations No. 871 of the Cabinet of Ministers the maintenance classes were diminished in proportion to the available financing for some roads. In comparison to winter 2008/2009 the total length of state main roads of maintenance class A was reduced by 317.6 km and the length of regional roads by 66.1 km. The total length of regional roads of maintenance class A1 was reduced by 1132.2 km and the length of state local roads by 68.7 km, and the total length of state local roads of maintenance class B was reduced by 131.5 km. The total length of roads of maintenance class B increased in the winter 2009/2010 due to state territorial reform and closing of schools which required the provision of transportation for pupils. Thereby the roads of maintenance class D had to be promoted to class B.

In winter 2009/2010 the level of state road periodical maintenance decreased to the level of 2005/2006 due to insufficient financing.

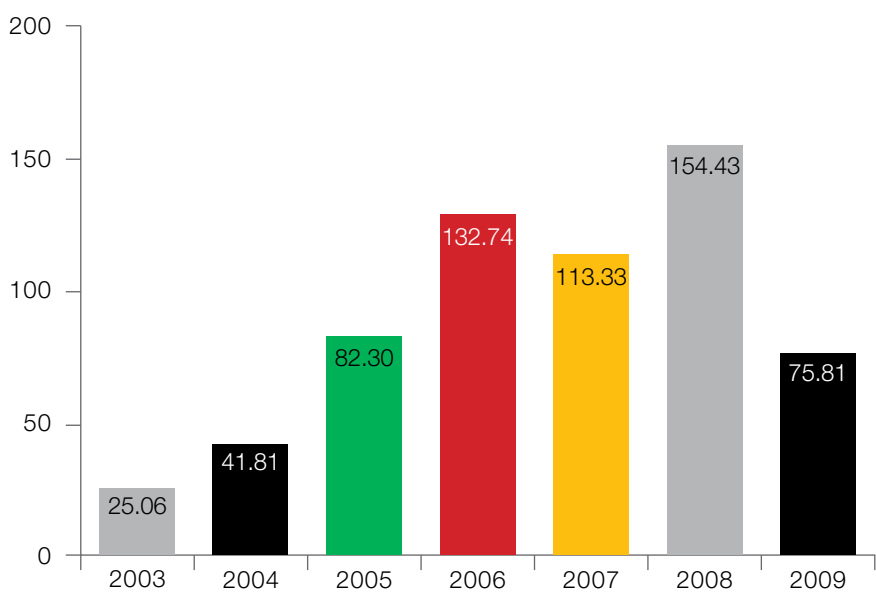
State main and regional road winter maintenance in 2008/2009



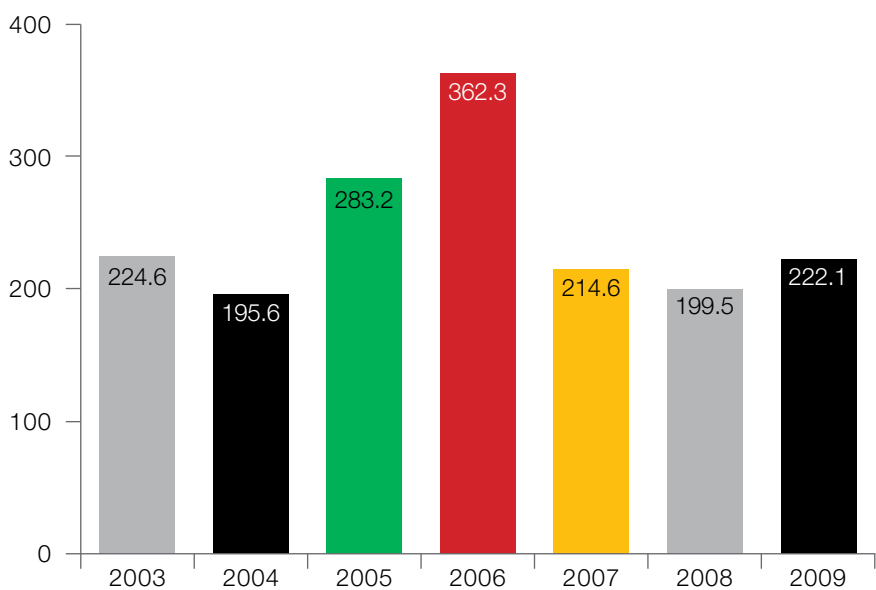
Construction works

In 2009 the works were carried out for 75.8 million Lats and bituminous pavements were reconstructed or renewed in the length of 222.1 km.

Construction works (million Lats)



Renewal of bituminous pavements (km)



The construction of road A12/ E22 from km 6.7 to km 54.6 was completed. In 2009 roads in total length of 61.66 km for 94.79 million Lats were renewed within the framework of the programme “EU Cohesion Fund projects in the road sector”.

Within the framework of the programme “Improvement of state regional roads” construction works were completed on road P73 Vecumnieki–Nereta–Subate section Rite–Apserde and the road P125 Ventspils–Kolka section Mazirbe–Vaide. In total 20.8 km of roads were renewed for 7.06 million Lats. The programme was co-financed by ERDF.

Within the framework of the programme “Periodic maintenance and reconstruction of bituminous pavements on state main roads” 49.98 km of roads were reconstructed for 9.52 million Lats. Within the framework of the programme “Periodic maintenance of bituminous pavements of state regional and local roads” 78.12 km of roads were renewed for 9.06 million Lats.

Within the programme “Improvement of state local roads for regional support” 9.9 km of roads with gravel pavement were renewed in 2009 at a total cost of 5.40 million Lats.

Within the programme “State road improvement in connection with the closing of railway lines” 5.7 km of roads were renewed for 12.06 million Lats.

Within the programme “Periodical bridge maintenance” a 122 m long bridge over the river Gauja on road P18 Valmiera–Smiltene was renewed for 91.1 thousand Lats. In 2009 within the framework of programme “Bridge reconstruction” 8 bridges with the total length of 338.5 m were reconstructed for 6.34 million Lats.

In 2009 the total costs for the programme “Improvement of traffic safety” amounted up to 5.20 million Lats. On state main roads and regional roads 4 interchanges were reconstructed and a pedestrian bridge was built on the road A8 Riga–Jelgava–Lithuanian border (Meitene) in Dalbe. The total costs of the programme “Traffic organisation and road equipment programme” amounted up to 1.948 million Lats and steel guard-rails in the length of 50.86 were installed.

Projects co-financed by the EU Cohesion Fund

The EU co-financing of road construction and reconstruction projects continued in 2009.

Cohesion Fund financing is planned for the development of roads of European importance. The reconstruction of road E22/A12 section Jēkabpils–Varakļāni was completed in autumn. Total costs of construction works amount up to 79.4 million Lats and 85% of this financing will be reimbursed from the Cohesion Fund. Regional road sections on P5 Ulbroka – Ogre and P80 Tīnūži–Koknese were reconstructed with the co-financing of the Cohesion Fund with the aim to serve as connections between the planned Latgale road and Riga bypass A4 (Baltezers–Saulkalne) until the Eastern Entrance in the Riga city is built.

The financing from the European Regional Development Fund (ERDF) provides regional development and is attracted to the reconstruction of state regional roads, for example, paving of gravel roads with bituminous pavement. In 2009 the construction of road P124 Ventspils–Kolka section Mazirbe–Vaide and road P73 Vecumnieki–Nereta–Subate section Rite–Apserde was finished. Accordingly the costs were 2.8 and 4.2 million Lats. Co-financing of both sections from the consolidated state budget amounted up to 15%. Major projects of regional road development in Latgale, Vidzeme, Zemgale and Kuzeme, as well as, near Riga are planned until 2013 owing to large contribution from ERDF. It is expected that the improvements of road safety on regional roads simultaneously will support the development of economic activity in many districts and populated areas which were isolated until this moment.

Traffic safety improvement projects

No. Works	Unit	2007	2008	2009
1. Traffic safety improvement projects	it./thous. Lats		12/4.8	7/4.5
2. Reconstructed intersections	it.	8	17	16
3. Eliminated black spots	it.	8	6	3
4. Construction of pedestrian and cyclist sidewalks	running m	18 296	19 339	10 791
5. Construction of pedestrian passages in separate grades	it.	3	-	1
6. Construction of lightened pedestrian passages at grade	it.	1	-	2
7. Installation of lighting	running m	37 450	32 450	12 601
8. Installation of animal fences	running m	12 640	-	-
9. Painting of horizontal markings	m ²	573 637	862 477	609 674
10. Renewal of road signs	it.	9 311	12 109	1 792
11. Installation of road guard-rails	running m	33 706	97 868	89 929
12. Installation of pedestrian parapets	running m	12 640	6 346	3 335
13. Installation of signal poles	it.	5 784	6 037	7 354

Traffic safety improvement projects implemented in 2009

1. Traffic safety improvement project on road A1 Riga–Estonian border (Ainaži) intersection with Gauja street in Ādaži parish
2. Traffic safety improvement project on road A6 Riga–Daugavpils–Krāslava–Byelorussian border (Paternieki) in Kegums
3. Reconstruction of intersection on road A12 Jēkabpils–Rēzekne–Ludza and road A13 Russian border (Grebņeva)–Rēzekne–Daugavpils–Lithuanian border (Medumi)
4. Construction of pedestrian bridge on road A8 Riga–Jelgava–Lithuanian border (Meitene) in Dalbe
5. Reconstruction of intersection on road P128 Sloka–Talsi and road P131 Tukums–Ķesterciems–Mērsrags–Kolka
6. Installation of lighting on road A1 Riga (Baltezers)–Estonian border (Ainaži) intersection with road Riga–Carnikava
7. Height restriction brackets on road P87 Bauska–Aizkraukle before Riga HPS

Co-operation with municipalities

The subsidy allocated to municipalities for municipal roads and streets until July 1, 2009, was transferred to 75 municipalities and after July 1, 2009, to 107 district municipalities and largest cities. In total, 28 265 thousand Lats were transferred.

Financial management specialists of “Latvian State Roads” regularly consult the municipalities on road financing and management of subsidies. The amount of provided consulting increased due to territorial reform and subsequent changes in the relations between LSR and municipalities.

In 2009 an agreement was signed between Valka city council, Jēkabpils city council, Bauska city council, Saldus city council and Ilūkste city council on the allocation of co-financing for the improvement of transit streets in cities.

The approval and implementation of the programme “Improvement of state local roads for regional support in 2009” was suspended due to the economical situation.



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Latvian State Roads Yearbook

2009