

**ROAD INFRASTRUCTURE OF THE WESTERN REGION AND OF
THE TIMIS COUNTY – PRESENT AND PERSPECTIVES
INFRASTRUCTURA RUTIERA A REGIUNII VEST SI A
JUDETULUI TIMIS -PREZENT SI PERSPECTIVE**

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Summary:

The Western region is crossed by different European corridors, European main and secondary roads, national roads, county and communal roads. All these form an extended network which facilitates the transportation in the area and implicitly the extension of the economical activities.

Even if the quality of the roads is not very good, in the last years there were progresses related to their construction and the restoration so that we can state that the Western region and the Timis county have a proper road infrastructure. The study presents the main transportation routes which cross the region and also the perspectives for the road infrastructure development in Timis county.

Key words: *road infrastructure, corridors, public roads*

INTRODUCTION

The existence of a proper physical infrastructure represents the premise of any sustained economical development. The Western region has a very well developed road network, almost equally distributed in the territory. In order evaluate the current situation and the potential of the road infrastructure from the Western region we will analyze the data from 2010 concerning:

- Pan – European corridors which cross the region;
- European roads network;
- National roads network;
- County and communal roads network.

MATERIAL AND METHOD. RESULTS AND DISCUSSIONS

The Pan – European corridors were established during the third Pan – European Transportation Conference. The general concept of was defined at the first conference in Prague in 1991, at the second conference

(Crete 1994) two transportation corridors were defined – so called Helsinki Corridors or Pan – European corridors. These were identified as the main transportation routes from Eastern Europe and it was understood that the investments in the transportation infrastructure must be realized with priority in these two corridors. As a result of the lobby made by the Balkan countries for a better connection between the Western Europe and the Balkans, at the third conference (Helsinki, 1997) the tenth corridor was added to the network, increasing the connectivity of the Balkan area. The role of the ten corridors is to create links between the Western Europe and the Eastern Europe but also between the countries of Eastern Europe.

The transportation corridors include cross border routes and railroads between the European countries but also between airports, seaports and river ports which serve as nodes along these corridors. As a result of the European Union extension in 2004 and 2007, more corridors are integrated parts of the TEN-T network. Each corridor has a road component and a railroad component, except the Corridor VII which is represented by the Danube downstream Wien. The corridors presented in the below map form a network extended from West to East and from North to South. The Romanian Territory is crossed by three of these corridors:

- Corridor IV: Berlin - Prague – Budapest – Constanța – Thessaloniki - Istanbul;
- Corridor VII: Danube
- Corridor IX: Helsinki – St. Petersburg – Moscow – Kiev – Liubashevka – Chisinau – Bucharest – Dimitrovgrad - Alexandropolis

Two of these (Corridor IV and VII) cross also the Western region. Corridor IV has on the Romanian territory two branches which separate on the Western Region. The road component of the first branch is Nadlac – Arad – Timisoara – Lugoj – Deva – Sibiu – Pitesti – Bucuresti – Cernavoda – Constanta. This highway, planned for the future to connect Budapest with the Black sea, is foreseen to cross the region from West to East and will satisfy the needs for quick links between Timisoara, Arad and Deva, contributing in the meantime to better traffic conditions on the other roads from the region. It is necessary to appropriately connect the roads from the region to the highway, insuring the transition to the usage of high speed roads.



The railroad component of the first branch has the following route Curtici – Arad – Alba-Iulia – Brasov – Ploiesti – Bucharest – Constanta. The second branch of Corridor IV (to Istanbul) has a road component Timisoara – Lugoj – Craiova – Calafat and a railroad component Arad – Timisoara – Craiova – Calafat.

Corridor VII is overlapping the Danube course, from Wien to the Black sea. Five European roads, presented in the below map, are crossing the Western region on the North – South and East – West directions. Three of them are classified as main European roads and the other two are secondary European roads.

Main roads:

- E 68 – enters the country from Hungary (Nadlac) and makes the link through Arad – Deva – center of the country (Sibiu, Brasov) with Bucharest. We can consider that this insures a good road link between the county centers Arad and Deva mainly due to the recent modernization.
- E 70 – enters the country from Serbia (Moravita) and makes the link through Timisoara with the South of the country and Bucharest.
- E 79 – enters the country from Hungary to Oradea (Bors) and makes the link with the South of the country via Jiu Pass (Hunedoara county).

Secondary European roads:

- E 671 – passes through Arad and Timisoara insuring a good link between the two county centers, a road which was recently upgraded to European standards.

- E 673 – makes the link through Faget between the East of the country and Banat – Lugoj, shortening the link between Deva and Timisoara.



The road infrastructure from the border area is modernized and needs only partial investments. On the Western region territory there are four road border crossing points between Hungary and Romania, three in Arad county (Nadlac, Turnu and Varsand) and one in Timis county (Cenad – Kiszombor). Concerning the links with Serbia, at the level of the Western region there are four border crossings: Jimbolia and Moravita in Timis county, Naidas and Moldova Noua in Caras – Severin.

As shown in the following two tables, at 1st December 2010 the region had a total network of public roads of 10428 km (12.65%). We can notice that from the total public roads, 3109 km are modernized (only 12.35%) far from the country average (30.55%). We can see that also in the region, in Arad, Hunedoara, Timis and Caras – Severin counties the percentage of the modernized roads is lower than the national average. From the total public roads of the Western region a high percentage represent only a thin coverage (2820 km), meaning almost 27%.

From the total public roads of the region, the national roads represent 1912 km and the county and communal ones 8516 km. We have to mention also the fact that most of these roads are in an inappropriate shape, urgent repairs are needed in order to insure proper circulation conditions.

Also, it can be observed that the density of the public roads in the region is 32.6 km/100100 km² of territory, being under the national

average of 34,6 km/100 km². Per component counties, it can be noticed that the differences are significant between the highest density in Hunedoara county (46.6 km/100 km²) and the lowest in Caras – Severin county (22,9 km/100 km²). In Timis county the density of public roads is 33.7 km/100km².

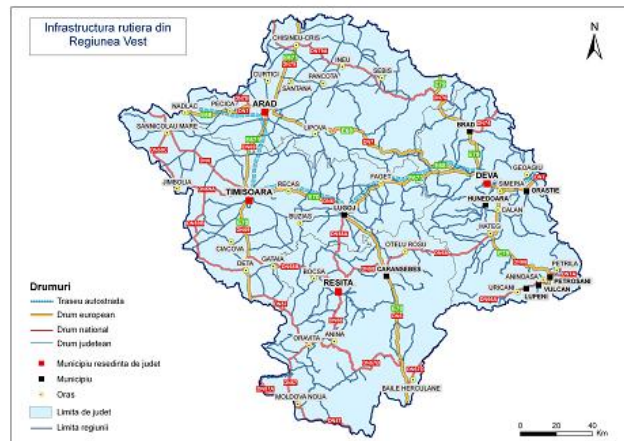


Table 1 Public roads, in Western region, at the end of 2010

Region / county	Public roads Total (km)	where (km):		Density of public roads (km per 100 km ² territory)
		Modernized	With thin covering	
Total Romania	82.386	25.171	22.300	34,6
%	100	30,55	27,06	-
West	10.428	3.109	2.820	32,6
%	100	29,81	27,04	-
Arad	2.260	660	731	29,1
Caras-Severin	1.949	899	544	22,9
Hunedoara	3.289	780	572	46,6
Timiș	2.930	770	973	33,7

Source: INS- Romanian annual statistic 2011

Related to the road network inside the Western region, it can be observed in the below table that there are 1912 km of national roads (11.81% of the total national roads at country level) and 8516 km of county and

communal roads (13.14% of the total national roads at country level). Most of the national roads of the region are modernized. If we analyze the network of national roads of the region from qualitative point of view we can see the following:

- the greatest number of km of national road is in Timis county (29.45% of the total per region) followed by Caras – Severin, Arad and Hunedoara;
- in our county 559 km (99.28%) of national roads are modernized and in Arad county they are fully modernized;
- per counties, the number of km of national roads with thin coverings is reduced.

Table 2. Types of public roads, in Western region, at the end of 2010

Region / County	From total public roads (km):					
	National roads	where (km):		County and communal roads	where (km):	
		Modernized	With thin covering		Modernized	With thin covering
Total România	16.552	12.246	1.063	65.834	9.925	21.237
West	1.912	1.868	39	8.516	1.241	2.781
Arad	405	405	-	1.855	255	731
Caras Sever in	561	543	18	1.388	356	526
Hunedoara	383	361	17	2.906	419	555
Timiș	563	559	4	2.367	211	969

Source: INS- Romanian annual statistic 2011

The biggest problems are raised by the county and communal roads. From the total km of this category in the Western region, only 14.57% are modernized, 32.65% are with thin covering and the rest are earth roads; most of these modernized roads are in improper shape, urgent repairs are needed in order to insure

Concerning the roads at regional level, we can say that some troubles, which still persist, diminish the possibilities of a vast economical development, meaning the proper link of the region to the markets and to the internal and international economical exchanges. These are emphasized mainly by:

- The lack of highways, having as result the unjustified intensification of the traffic on roads which are not appropriate for inter – regional and international transportation;
- The lack of the un-finished links to towns or cities of the region, which makes the traffic difficult in these cities and increase the duration of the movement;
- The low carrying capacity of the existent roads with accelerated degradation effects;
 - Poor marking, signalization and illumination with negative effects on the traffic safety;
 - The high percentage of un-modernized county roads, limiting the traffic possibilities and capacity.

The poor technical shape of the road infrastructure of the Western region affects today the quick links between Deva – Resita, Timisoara – Resita and Timisoara – Deva county centers. In the development strategy of Timis county for the period 2009 – 2015 there are several investments for the improvement of the road infrastructure from the county. The measures from the strategy can be grouped as follows:

□ **M 1.1.2 Rehabilitation and modernization of the national road infrastructure which cross the Timis county:**

1. Rehabilitation and modernization of the national roads network: Lugoj - Timisoara
2. a detour variant for Timisoara
3. a detour variant for Lugoj
4. to eliminate the natural calamities effects on bridges and footbridges; bridge consolidations

□ **M 1.1.3 rehabilitation and modernization of the county road infrastructue.** Main investment objectives are:

- Rehabilitation DJ 691, between Timisoara – Pischia - Masloc – Arad county limit,
- Modernization county road Cladova – Ohaba Lungă
- Rehabilitation DJ Buziaş-Lugoj,
- Rehabilitation DJ 682- Arad county limit – Periam – Saravale – Sânnicolau Mare
- Rehabilitation DJ 572, between Berzovia (Caraş-Severin county) – Buziaş (Timiş county) – Lipova (Arad county)
- Modernization DJ 592D, between Lugoj - Racovița

- Rehabilitation DJ 692 on the road DN 69 – Carani – Periam – Lovrin,
- Rehabilitation DJ 681A on the road Fârdea – Surduc – Traian – Vuia – Mănăștiur,
- Rehabilitation DJ 591 on the road Timișoara – Cenei ,
- Increase capacity on DJ Giroc – Timișoara
- Enlargement to four lanes on DJ 592 Timișoara – Moșnița Nouă,
- Rehabilitation DJ 682 Beba Veche – Sânnicolau Mare in order to improve the access and the mobility of the manpower in the Western border area of Timis county.
- Rehabilitation and modernization of county road network of Timis county in order to interconnect to the national road infrastructure from the reference area and to the highway.

CONCLUSIONS

- the Western region has a very well developed road network;
- Timis county has a road network almost equally distributed through the territory.
- the Pan – European transportation corridors include cross border roads and railroads between the EU countries but also airports and ports;
- Romania is crossed by three Pan-European corridors, two of them cross also the Western region;
- five European roads (three classified as main European roads and two secondary European roads);
 - In the Western region there are 1912 km of national roads;
 - The highest number of km of national roads is in Timis county, followed by Caras – Severin, Arad and Hunedoara counties;
 - The biggest problems are represented by the county and communal roads which are insufficiently modernized;
 - Most of the communal roads are not rehabilitated.
 - The development strategy of Timis county has many rehabilitation projects for the roads of the county and for their link to the national and European infrastructure.

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