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System approach in process of planning and project documentation preparation for highway corridors as an instrument for establishing the Trans-European Transport Network

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Abstract

A basic prerequisite for the successful realization of the highway corridors is production of plans and projects, which includes a system access and synchronization of multiple activities and actors. The paper analyses more recent experience in the planning and designing of the highway corridors in Serbia, which are the part of the trans-European transport network. Beside the European regulations, to establish trans-European networks, is important the existence of adequate legislative framework and strategic development documents, where the authors emphasize the Spatial plan of the Republic of Serbia and spatial plans for highway corridors. The paper represents the methodological approach and the interaction of two levels of planning - strategic and detailed, in correlation with the designing level, pointing to the significant parallel activities, such as strategic environmental assessments, environmental impact assessment and social acceptability of analysis and processing of spatial database in geographic information systems (GIS). The authors present a matrix of objectives, tasks and conditionality, as well as their procedure of verification, with overview of the state of planned development of motorway corridors in Serbia. The objective of transport corridors development in Serbia is the transformation and implementation of the new cross connection between Western and Eastern parts of the country, which is a condition for regional development and promotes the integration in trans-European networks. Through the conclusions the authors offer guidelines for a methodology of making this specific plans and projects, in order to optimize the time, synchronize phases and support decision making process. Approach in planning process and project documentation preparation for highway roads in Serbia is analyzed on current example of corridor Route 7-E 80, in the section Niš-Priština, as part of a regional transport development in Southeast Europe.

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1. Introduction

The Trans-European Transport Networks (TEN-T) contribute to achieving sustainable and multimodal development of the European transport systems and to eliminate traffic congestion. The transport networks play a great role in ensuring sustainable mobility, as well as transportation of goods and passengers, thus combining the competitiveness of EU and the welfare of its population. Considering expected increase in the number of Member States, the new infrastructure policy of EU envisages the formation of a “core network” by 2030 which will cover several major corridors, whereby the transformation of the east-west connections stands out along with the improvement of cross-border infrastructure, improvement of functioning of different types of transport and contribution to the goals of the European Union in the field of climate change (Screening Report Ch. 21). Serbia is surrounded by the trans-European transport corridors: IV (Budapest-Arad-Craiova-Sofia-Thessaloniki), IVa (Arad-Bucharest-Constanta), Vc (Budapest-Šamac-Sarajevo-Ploče) and VIII (Valona-Tirana-Skopje-Sofia). The Adriatic Motorway, located in the surroundings of Serbia, will link the Corridors Va and Vc (Rijeka-Ploče) with the Corridor VIII in Valona via Montenegro. The corridors are being built rapidly, particularly after Bulgaria and Romania joined the European Union. Geopolitically, Serbia is strategically positioned and is a key transport hub for linking the European Union with the West Balkans, as well as for developing the transport interconnections. The transport network comprises roads, railway lines, inland waterways, river ports and airports. The most important segments of TEN-T (the South-east multimodal axis) include Corridor X (Salzburg-Ljubljana-Zagreb-Belgrade-Skopje-Thessaloniki) with its legs – Xb (Belgrade-Budapest) and Xc (Niš-Sofia). The Corridor X comprises 792 km of roads and 760 km of rail lines. The Corridor VII (the Danube River) connects the Central Europe via the Republic of Serbia with the Black sea in the length of approximately 600 km. The main priority of Serbia is to integrate national road network into the TEN-T, so that, Republic of Serbia gives priority to the system of interoperable motorway corridors on which the same standards are applied along entire corridor in terms of the service level, safety, toll charging system, information and other services. The road transport in Serbia is a dynamic and dominant type of transport which participates approx. 80% in the total volume of transported cargo and approx.74% in the total number of the transported passengers. Adding to the need of the EU for the transformation of east-west connections and considering that existing transport system of Serbia is based on the Corridor X with its main north-south direction, demand for transport services in the territory of Serbia has been increasing in recent years on the „transversal directions“, i.e. the northeast-southwest direction (Ukraine/Romania-Serbia-Italy) and east-west direction (Bulgaria-Serbia-Bosnia & Herzegovina), which will result in new domestic and transit flows (Milijic et al, 2002). Exactly these directions are the strategic priorities of Serbia in further development of transport system and integration with the TEN-T. For this reason, the authors present a system approach to the planning and design documentation for new motorway corridors which need to be built soon with the aim to integrate national road network into the TEN-T.

2. The planning and design system for the motorway corridors in Serbia

The planning and design system for the motorway corridors in Serbia is defined by the Law on Planning and Construction of the Republic of ("Official Gazette of RS", No. 72/09, 81/09-correction, 64/10-CC, 24/11, 121/12, 42/13-CC, 50/13-CC, 98/13-CC, 132/14, 145/14, 83/18, 31/19) which defines the type, content (and procedure for the adoption of the planning documents and designs. In addition, the strategic framework for the road infrastructure development is established in the Spatial Plan of the Republic of Serbia and the Development strategy of railway, road, water, air and intermodal transport of Republic of Serbia from 2008 to 2015 ("Official Gazette of RS", No. 4/08), defining the development of road transport and infrastructure as one of the main goals, in a way which enables sustainable mobility of population and provides a support to the accelerated development and competitiveness. One of the priorities also includes the infrastructure corridor of E80 Motorway (Fig.1a), the Niš-Merdare section, which is analyzed in this paper as a case study (Regulation on the Spatial plan of the special

purpose areas with infrastructure corridor highway E-80, section Nis-Merdare, "Official Gazette of RS", No. 102/17).

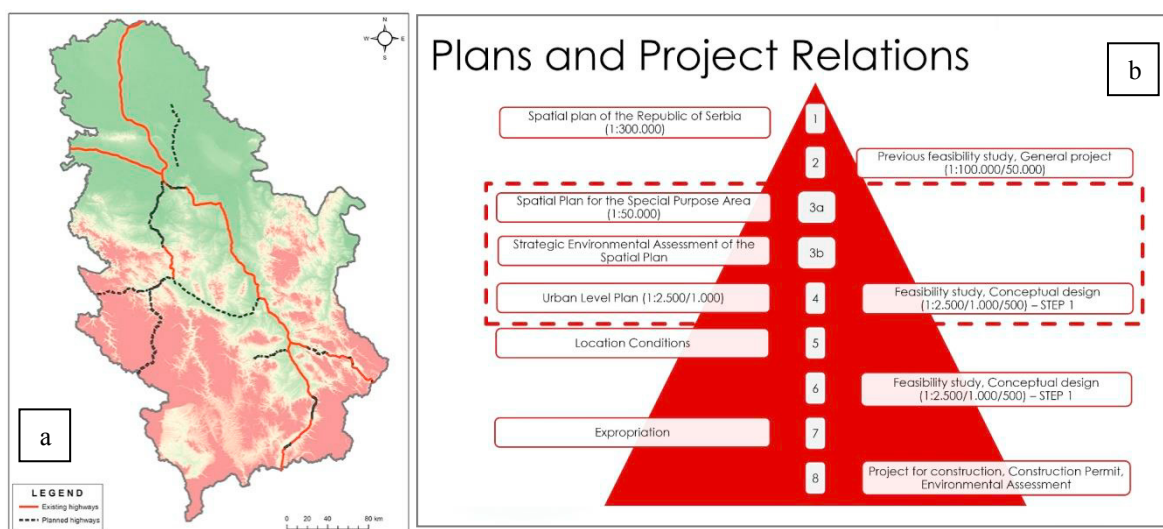


Fig. 1.a. Map of the existing and the planned motorway corridors in Serbia, b. Schematic representation of the stages of drawing up the planning and design documentation for the motorway corridors.

The special purpose area spatial plan (SPASP) is a main instrument in process of implementation of the Spatial Plan for the Republic of Serbia and in further planning of motorway infrastructure corridors. The purpose of drawing up the plan is to define planning basis and provide spatial conditions for the construction, functioning of motorway and development of other infrastructure systems in the corridor. The drawing up SPASP for motorway infrastructure corridors is determined by basic legal and planning framework defined by the Law on Public Roads ("Official Gazette of RS", No. 101/05, 123/07, 101/11, 93/12, 104/13), Law on Strategic Environmental Assessment and the Rulebook on the Content, Manner and Procedure of Drawing up the Spatial and Urban Planning Documents (Fig.1b). Parallel to drawing up the mentioned planning documentation, the legal regulations define and set the obligation of drawing up project documentation for motorways as follows: pre-feasibility study (with general design), feasibility study (with preliminary design), design for the building permit, as well as later detailed designs. The fact that SPASP have been drawn up for almost all the existing and planned motorway corridors in Serbia indicates significant experience in their planning. However, the practice also raises many issues and indicates problems which need to be solved in coming period, such as primarily relationship between planning and design, aligning of process of drawing up planning and technical documentation, relationship between spatial plans and planning documents at the local level, adequate consideration of impacts of motorway corridors on their surroundings, environmental protection and many other (Milijić et al, 2003). Some authors in the literature express similar attitudes, starting with pointing out the significance of transport as one of the three most important aspects of urban development, together with land use and environmental protection (Waddell, 2002), namely, the need to consider the sustainability of transport (Goldman & Gorham, 2006) and connecting land use with transport accessibility (Geurs & van Wee, 2014) and transportation planning (Guerra, et. al., 2018). Particularly significant are the views that in recent years transport plans have been necessary for new investments, as well as in the development of plans and the consideration of land use (De Gruyter et.al, 2018). Over the past few years, need for a direct implementation of spatial plans has particularly been emphasized, actually drawing up elements of detailed regulation in the spatial plans instead of in additional urban plans, thus creating the basis for issuing location conditions for needs of further design, determination of public interest and for solving the property relations. This determines that relationship and interdependence between the planning and technical documentation for motorway corridors must be solved in a system way and improved previous methodology for drawing up SPASP for the

motorway infrastructure corridors. This paper presents a methodological approach to drawing up and implementation of the Spatial Plan for the Infrastructure Corridor of E80 Motorway, the Niš-Merdare Section (hereinafter referred to as the Spatial Plan - SP), which was applied with aim of enhancing practice, but also for raising some general and theoretical issues associated with planning of infrastructure corridors and for directing further research. This paper also presents the main specificities of the SP which appeared as a result of the applied methodology, particularly those related to carrying out of strategic environmental assessment, implementation of protection measures and implementation of planning solutions.

3. Methodological approach to drawing up the SPASP for the E80 Motorway (SEETO route 7), the Niš-Merdare section

The road direction Niš–Merdare belongs to the route 7 according to the classification of the SEETO - Lezhe (Albania) - Priština – Niš. It is a part of the European E80 route, according to classification given in the „European Agreement on Main International Traffic Arteries“, connecting the Corridor X with the Adriatic Coast. The Corridor of E80, the Niš–Merdare section, runs through territory of three local self-government units (in central Serbia) in the total length of 77 km. Relative to plan coverage and level of elaboration of planning solutions, it is divided into two sectors: Sector 1 – in which the 700m wide motorway corridor (350 m from each side of the motorway corridor axis) makes a boundary of the Plan and encompasses the motorway belt, protection zone and the controlled development zone (except in some parts of building areas of settlements where the boundary is reduced); and, Sector 2 – in which the boundary of the Plan is determined by the boundaries of the cadastral municipalities through which the motorway corridor runs. The Spatial Plan covers existing and planned corridors of other main infrastructure systems with route and protection belts (direct or wider) which are within the coverage of the planning area. The consideration of the SP coverage and determination of boundaries in two different ways depending on necessary level of elaboration of planning solutions is a novelty in planning practice in Serbia. The need for defining elements of detailed regulation, and the coverage of area by a greater number of planning documents (regional spatial plan, spatial plans for the local self-government units, urban plans, etc.), have justified the narrowing of boundary of the SP for the Sector 1 to the very motorway corridor and its determination by analytical points. Such approach was possible considering prepared and available precise preliminary solutions for routes and motorway structures.

However, it was not possible to apply such approach in determining the boundaries for the Sector 2, for which only the strategic solutions at the level of the Pre-Feasibility Study and General Design were prepared, so that boundary was determined by boundaries of the cadastral municipalities, which at the same time was the case with all SPASP that were previously prepared. The drawing up of the SP and concept of construction and development of motorway and main infrastructure systems in corridor are based on two basic principles of sustainable development: 1) principle of sustainable development of infrastructure which implementation stimulates a balanced spatial development through creating conditions for connecting underdeveloped and isolated small rural areas with larger settlement and enabling them an access to main infrastructure systems; and 2) principle of reducing the environmental impact which implies consideration of environmental quality and defining planning solutions protection. In this context, it is necessary to base concept on prevention and protection from negative impacts which may occur as result of motorway construction and separation of traffic, and also as results of functioning of other main infrastructure systems in a corridor. The application of principle must prevent or mitigate different types of damaging environmental impacts, primarily regarding the noise protection, reduction of greenhouse gas emissions and prevention and reduction of possible environmental impacts during accidents in the corridor. In its graphics and textual part, the SP contains all prescribed elements, while this paper presents and comments only basic elements which appeared as a result of the applied methodology. The SP determines the total width of the motorway corridor of 700m. The motorway corridor comprises the following protection zone (Figure 2):

- Motorway belt (motorway land) – is an area required for construction of motorway, slip roads, grade separated intersections and motorway-related facilities. The motorway belt is specified as a land for public use and has a

width ranging from 70 m to 150 m, depending on terrain configuration and conditions for construction of motorway structures. The motorway belt boundary is at the same time a regulation line;

- Protection zone – is an area for which a strictly controlled regime of use (on both sides) is determined for purpose of protecting function of the motorway. The protection zone is specified as a land for other uses and has a width of 75 m from motorway belt boundary. In the zones of slip roads, motorway-related facilities and certain motorway structures, the protection zone is becoming narrower up to the width of approx. 40 m;
- Controlled development zone – is an area under regime of controlled development and environmental protection (on both sides). The controlled development zone is specified as a land for other uses and has width ranging from 200 to 240 m from the boundary of the protection zone.

The SP established the regime of use and development of the area in motorway corridor for following:

- Motorway belt- where a ban is established on construction of all structures that are not in function of motorway, slip roads, grade separated intersections and motorway-related facilities.
- Protection zone—where a regime of a strictly controlled use of area is established and where opening of a mine, quarry and landfill for disposal of municipal waste and other types of waste is prohibited; where construction of water supply and sewerage system or laying water mains and sewers and other facilities of technical infrastructure is permitted; the construction of new structures, except for structures in function of motorway, is not permitted and where the area can be used as a forest or agricultural land; reconstruction and rehabilitation of existing structures located on buildable land and forest or agricultural land is permitted, but without possibility of changing their outline and volumes, and unless function of motorway is not jeopardized and unless an adequate protection from negative effects of motorway (noise, vibrations and air pollution) can be provided through technical solutions.
- Controlled development zone –in which a regime of controlled use of area is established and where construction of landfills for disposal of waste and opening of mines and quarries is not permitted; the development of existing and new activities is permitted unless they are not in collision with functional and technical demands of existing and planned transport and technical infrastructure systems of national and regional importance; where there is an obligation of carrying out environmental impact assessment (The law on strategic environmental impact assessment (SEA), "Official Gazette of RS", No. 135/04, 88/2010), for the extension and reconstruction of existing and construction of planned production, storage, distribution, service and trade capacities, as well as other capacities; where priority in using the comprised parts of existing and the planned industrial zones is given to storage capacities, logistic centres, commercial and transport services, regional trade centres, etc.

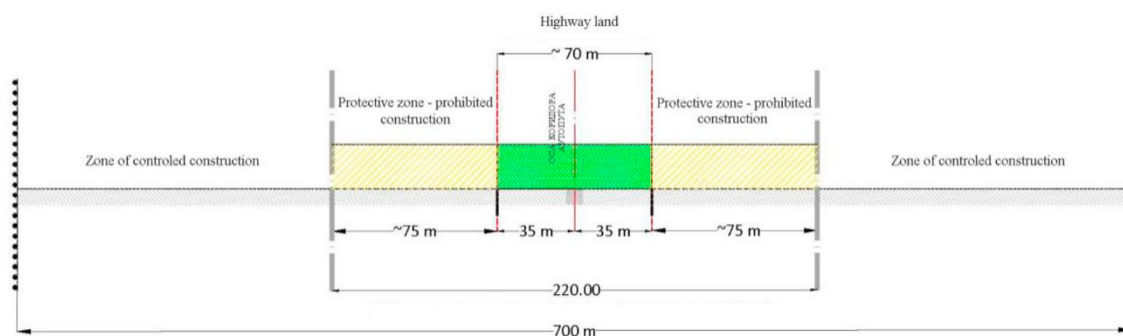


Fig. 2. Schematic representation of the cross section of the motorway corridor.

The determination of protection zone, regime of use and development of area, indicates a new methodological approach applied in drawing up this SP, primarily with the aim to achieve a compromise in spatial development between the function of motorway and other functions in area taking into account the current state, particularly

relative to the percentage of built-up land. The determined width of protection zone (75 m) and width of controlled development zone (200 to 240 m) exceeds to a great extent the min. width of 40 m as prescribed by the Law on Public Roads, thus setting a stricter requirements and limiting way of the use in a wider area. For example, any construction of new structures, except for those in function of motorway, is not permitted, while area can be used as a forest or agricultural land. However, the current state and built-up land are simultaneously taken into account, so reconstruction and rehabilitation of the existing structures is permitted, but without possibility of changing their outline and volume, and unless jeopardizing the function of motorway and unless an adequate protection from negative effects of motorway can be provided through technical solutions. Thus, planning solution is defined in a way that takes into account and enable existing functions in the area (housing, economy, etc.) under certain conditions, while at the same time introducing prohibition of and stricter regimes for new activities and functions in a wider area. It is important to mention that changing the land use and increasing category of the buildable land for needs of motorway construction correspond to the foreign experiences (Funderburg et al, 2010). The SP describes motorway corridor connections with surroundings through planned intersections, as well as alternative route for motorway corridor which will enable a toll-free traffic. However, the specificity of applied methodology lies in fact that, based on the General Design and preliminary designs, all motorway structures, including planned intersections (7) and grade separated intersections with the road network (45) and intersections with other infrastructure systems, as well as administrative boundaries (206), are defined in detail and analytically determined. Taking into account the basic criteria for functionality and safety, the SP determines the number, spatial distribution, area, structures and rules for development and construction for the motorway-related facilities as follows: functional motorway-related facilities –for maintenance, managing and providing the faster, safer, more comfortable and reliable transport of goods and transportation of people (motorway maintenance bases, control stations, toll stations); and the user-oriented facilities (rest area and service centres). A separate part of the SP comprises rule for development and construction of motorway structures and motorway-related facilities, which also determines implementation model for this Plan (Stefanović et al, 2015). Compared to the previous practice of drawing up similar plans, this SP defines rules completely at the level of an urban plan, meaning that rules also comprise all elements necessary for issuance of location conditions, such as use and conditions for the formation of a buildable lot in addition to technical standards and norms; position of buildings on the lot; lot coverage; eave height and ground level of first floor; architectural shaping; conditions for an access to lot, etc. For example, basic rules for need of building petrol filling stations are: basic purpose - commercial; at least one access and egress to and from petrol filling station; the building line towards motorway at distance not less than 40m from outer edge of motorway belt; max. lot coverage of 10%; max. number of floors -first floor; max. eave height of 5m from ground level of access road and max. canopy height of 6m; distance of the structure from side of lot boundary to be minimum one height of the structure; etc.

4. Methodological Approach to Strategic Environmental Assessment

The current state of environment and significance of the SP, characteristics of impacts of planned motorway-related facilities and other issues, were analyzed for need of carrying out strategic environmental assessment. An expert multi-criteria evaluation (semi-quantitative method) of the planning solutions was used relative to the set goals of Strategic environmental assessment (SEA) and relevant indicators (Regulation on the national list of indicators of environmental protection, "Official Gazette of RS", No. 37/2011), based on sustainable development (Josimović et al, 2015). The total of 11 planning solution relative to 10 goals of the SEA and 16 associated indicators were evaluated. The accent in process of valuation of planning solutions was put on analysis of their effects on potentially most sensitive environmental factors in the specific area, and particularly noise and air pollution on population and natural values of the area. The following goals were chosen for SEA: 1) protection of air quality; 2) improvement of quality of surface waters and groundwater; 3) preservation of agricultural and forest lands; 4) biodiversity conservation; 5) landscape conservation and improvement; 6) conservation of natural assets; 7) conservation of cultural property; 8) reducing the impact on population, settlements and facilities; 9) stimulating economic development and employment; and 10) protection from accidents. The evaluation of planning solutions comprised importance and magnitude, spatial extent and probability of impacts on the environment, namely defined goals of SEA. Besides, additional criteria were also derived according to duration of impacts, or according to

consequences. In this sense, the temporary/occasional and long-term effects were defined. One of the main tasks of SEA is to identify strategically important environmental impacts of planning solutions (Loro et al, 2014). In this context, it was adopted that impacts of importance for subject Plan are those which have strong or greater (positive or negative) effects on the entire area of the Plan (regional level) at the level of municipality/city or at the local level (Josimović et al, 2016). The planning solutions of the subject plan were evaluated and the strategic environmental impacts and elements of sustainable development identified based on the defined group of criteria, namely on goals and indicators of SEA. Summarizing the impacts of planning solutions to the goals, it was concluded that realization of planned motorway will produce positive and negative effects on area. The negative impacts are mostly characterized as small impacts of local character, i.e. they were not assessed as strategically important. These are predominantly impacts associated with possible increase of pollutants in atmosphere and noise intensity. Actually, this is a case of possible exposure of population to these impacts on sections where the motorway runs nearby settlements or residential buildings. On the other hand, it is possible to expect strong, strategically significant positive impacts, particularly effects on stimulating economic development of entire planning area through connecting this territory with national network and the TEN-T. For the positive planning effects to remain within estimated framework without burdening capacity of space, and in order to reduce the negative effects of planning solutions to minimum, the measures/guidelines for protection that are necessary to be implemented in process of planning and design documentation of motorway, were defined and listed, whereby the measures for air and noise protection are of particular importance.

5. Discussion and Conclusion

The strategic planning commitment of Serbia for developing and completing the national motorway network and its integration with the TEN-T has contributed to importance of and need for drawing up the SPASP for motorway corridors. It is possible to single out two approaches that were used in the previous practice of drawing up such spatial plans. The first approach, for the existing motorway sections (Corridor X), in which the accent was put on defining spatial distribution and rules of development and construction for motorway-related facilities; on the determination of protection zones and prescribing the regime of use and development of the area; as well as on the consideration of the way of connecting them with the surroundings. The other approach, for new motorway sections planned to be constructed (east-west transport links), in which motorway corridor and system of regulations binding for drawing up technical and planning documentation were defined in addition to the mentioned elements. This paper presents through a case study a methodology for creating a “new approach to drawing up” spatial plans on the example of the newly planned Niš-Merdare section of motorway corridor, along with specific results out of which some are present in practice for the first time, due to which applied methodological approach is justifiably characterized as a “new approach”. It refers primarily to simultaneous elaboration of planning solutions at two levels, determination of the zone of motorway protection and regime of use and development of area in corridor.

In the opinion of authors, such methodology responds to set tasks, particularly related to simultaneous elaboration of planning solutions at two levels: the strategic level of SP and the detailed level of the urban plan. The SP as such is fully usable for the issuance of necessary conditions and permits, establishment of public interest and solving of property relations. However, such practice and argumentation of results of new methodological approach indicate way of overcoming basic problem - the mutual alignment of process of planning and design of motorway corridors. It is necessary to solve almost all issues in one planning document, regarding rationalization of dynamics, costs and procedure, but this at the same time complicates process of planning and opens a question of whether this is justified. In order for such concept of planning motorway corridors to survive, it is necessary to harmonize, in terms of contents and procedures, all stages of drawing up planning and design/technical documentation, starting from legislation to proving it in practice. Considering the previous experiences, authors purpose that accent in drawing up SPASP in terms of content should be put on: consideration and defining of conditions for fitting the system into a wider area; an integrated planning of spatial development (protection and use of natural resources, demographic trends, functioning of network of settlements, economy, tourism, protection of natural assets and cultural property); defining protection belts and zones; the way of realizing links with surroundings; connections with network of roads of regional and local importance in a wider context; checking and confirming solutions through an inter-sartorial

cooperation and coordination (requirements, opinions, approvals); providing publicity and democracy of procedure (professional debates, public hearing); strategic environmental assessment; creating a basis for solving property relations on land; etc. In this case, accent in drawing up the design/technical documentation should be put on: carrying out previous works (collecting and processing the data); determining macro-location for corridor; defining, evaluating and selecting the alternative spatial and technical solutions; considering technological and economic feasibility; determining micro-location for structure (route); considering construction and maintenance costs; environmental impact assessment; creating a basis for construction; etc. In this way, two processes between which it is not possible to establish clear boundaries can be differentiated formally and according to the contents. However, in the opinion of authors, the procedural harmonization of the activities, along with necessary consideration of interdependence and conditionality of stages of planning and design, and particularly considering the levels of elaboration, remains the most complex issue in planning and design not only for the motorway corridors, but for all other large and important technical systems. Further spatial development and the integration of Serbia into TEN-T impose the need for further research of mentioned issues, which can have a strong foothold in the previous practice of planning and designing the motorway corridors.

References

- Development strategy of railway, road, water, air and intermodal transport of Republic of Serbia from 2008 to 2015. "Official Gazette of RS", No. 4/08.
- Funderburg G., R., Nixon, H., Boarnet G. M., Ferguson G. (2010). New Highways and Land Use Change: Results From a Quasi-experimental Research Design. *Transportation Research Part A: Policy and Practice*, Volume 44, Issue 2, pp. 76-98.
- Geurs, K. T., Wee B. van (2014) Accessibility evaluation of land-use and transport strategies: review and research directions, *Journal of Transport Geography* 12, pp. 127–140.
- Goldman, T. & Gorham, R. (2006) Sustainable urban transport: Four innovative directions. *Technology in society*, 28 (1-2), pp. 261-273.
- Gruyer C. De, Rose G., Currie G., Rye T. & Graaff E. van de (2018) Travel plans for new developments: a global review, *Transport Reviews*, 38:2, pp. 142-161, DOI: 10.1080/01441647.2017.1322643
- Guerra E., Caudillo C., Goytia C., Quiros T. P., Rodriguez C., (2018), Residential location, urban form, and household transportation spending in Greater Buenos Aires, *Journal of Transport Geography*, 72 (2018), pp. 76-85.
- http://www.eupregovori.rs/files/File/documents/skrining/ENG_Izvestaji_sa_skrininga/Pg_21/Screening_report_Ch_21.pdf
- Josimović, B., Marić, I., Milijić, S. (2015). Multi-Criteria Evaluation in Strategic Environmental Assessment for Waste Management Plan, A Case Study: The City of Belgrade. *Waste Management* 36, pp. 331-342. DOI: 10.1016/j.wasman.2014.11.003.
- Law of the Spatial plan of the Republic of Serbia, "Official Gazette of RS", No. 88/10.
- Loro M., Arce M. R., Ortega E., Belen M. (2014). Road-corridor Planning in the EIA procedure in Spain. A Review of Case Studies. *Environmental Impact Assessment Review*, Volume 44, pp. 11-22.
- Milijić S., Spasić N., Maksin Mičić M., (2003.), Corridor X in Serbia, approach to planning, arrangement and use, SPATIUM, September 2003., No 9., pp. 14-21, ISSN 1450-569X
- Milijić, S., Spasić, N., Mičić, M. (2002) Access to the drafting and application of the spatial plan of the areas with infrastructure corridors for example highway E-75, section Belgrade-Niš, in: Spasić, N. (ed.): *Recent approaches and experiences in planning and implementing*, Proceedings of Conference "Planning and implementation", Institute for Architecture and Urban & Spatial Planning of Serbia, Belgrade, 2002.
- Regulation of content, policy and procedure for documents of spatial and urban planning, "Official Gazette of RS" No. 20/15.
- Regulation on the national list of indicators of environmental protection, "Official Gazette of RS", No. 37/2011.
- Regulation on the Spatial plan of the special purpose areas with infrastructure corridor highway E-80, section Nis-Merdare, "Official Gazette of RS", No. 102/17.
- Report on Strategic environmental impact assessment of the Spatial plan of the areas with special purpose of infrastructure corridor highway E-80, section Nis-Merdare, on the environment, Ministry of construction, transport and infrastructure, Processors: Institute for Architecture and Urban & Spatial Planning, PE Institute for urban planning Niš, Institute for roads, Beograd, February 2017.
- Stefanović N., Danilović Hristić N., Milijić S., (2015), The Implementation Model of Planning Rules in Spatial Plans, SPATIUM, No 33, pp. 62-68.
- The law on planning and construction, "Official Gazette of RS", No. 72/09, 81/09-correction, 64/10-CC, 24/11, 121/12, 42/13-CC, 50/13-CC, 98/13-CC, 132/14, 145/14, 83/18, 31/19.
- The law on public roads, "Official Gazette of RS ", No. 101/05, 123/07, 101/11, 93/12, 104/13
- The law on strategic environmental impact assessment (SEA), "Official Gazette of RS", No. 135/04, 88/2010.
- Waddell, P. (2002) UrbanSim: Modeling urban development for land use, transportation, and environmental planning. *Journal of the American planning association*, 68(3), 297-314.