

ACCESS MANAGEMENT IN GREECE: EXISTING LEGISLATION – PROPOSALS

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The problems posed to Greece from access to roadside facilities, mainly in the suburban area are serious. Most Greek roads that serve the access to the roadside facilities suffer from traffic jams, travel time delays and lack of comfort and safety. These problems are due, largely, to the conventional deficiencies associated with the design and access control along these roads. The traffic volume generated by the roadside facilities, mainly during peak hours, is not at the present a design control issue based on the existing urban development framework. This design flaw has various backgrounds and reasons. The correction of this design flaw with specific measures in the existing legislation once endorsed is inevitable if the traffic problems especially on the arterial network are to be effectively addressed.

INTRODUCTION

The lack of a proper access management scheme in Greece is obvious to all Greek Cities and residential areas. The frequent accesses that are served by the main road network and by regional roads have impacts on the traffic- and urban planning, as well as the environment. These impacts are local congestion, increased accident rates, increased travel time and reduced traffic capacity (travel area reduction) of the roads as well as reduced comfort and safety levels, leading to a sooner than expected need of improvement works or even new roads construction beyond the common complaints for the service provided by the state to the taxpayers that use the road. Furthermore, the traffic problems are reflected to both the neighborhood scale and the city scale, because the road network is not adequately serving the access and mobility function of a built-up area. There are also impacts on the physiognomy of the landscape of the road and on the pollution of the environment (emissions, noise). These effects are due, to a large extent, to the lack of almost entirely access management in the country. Specifically, the existing land development legislation mostly refers to areas outside the urban planning and is focusing on:

- Specifications regarding a very limited and insufficient typical geometric design of the driveways, depending on the administrative and not functional category of the road that serves the access. (national, provincial, municipal roads);
- The competencies of the administrative bodies, which are responsible for the formal control and supervision of the planning and design activities, which also happen to be the ones responsible for the construction and maintenance of the roads that serve the facility.

The legislation does not include sufficient standards and policies concerning the study and control of the density of the accesses, the access distance from adjacent interchanges and intersections, the layout of the parking spaces and the traffic volume generated by the operation of each facility. Additionally, the dependence of any access standards available to the administrative road category and not to the functional category, creates significant problems both to the traffic or urban planning study (the administrative classification does not precisely match to the traffic requirements of the road network). In addition to this, a lack of coordination between the various competent and dispersed control authorities (fragmentation of responsibilities) contributes significantly to intensifying the problem. In the following, the details of the deficiencies associated with the access control framework in Greece will be presented and appropriate suggestions will be made on how to alleviate this design deficiency in the built-up areas of the country. This approach refers only to traffic flow characteristics and disregards the safety level or convenience of driving.

THE PROBLEM OF THE INADEQUATE ACCESS MANAGEMENT

Currently, because of the widespread use of the car also in this country, the criteria for the siting of certain land uses contained in city center functions (trade, offices) have changed. The predominant requirement for the site selection and location, where the facility will be built, are mainly the comfortable and easy traffic access, but also the existence of relatively low value land, with large lot dimensions and high Building Factor. The roadside area of main roads is turning into an attractive area for locating central uses. It provides easy access and adequate land to accommodate large

installations. From the intensive location of large scale facilities comes the overexploitation of the road network by those who visit them. This unilateral use of the road contributes to the creation of traffic, urban and environmental problems, and it has negative impacts on anyone else using the road. Moreover, quite soon works for new roads or improvement works on existing ones are needed, and when these are not realized on time, the area is threatened with abandonment and desolation, as already seen in other countries¹. (Figure 01).



FIGURE 01: View of the abandoned Dixie Square Mall, Harvey Illinois (USA)

(Source: <http://www.flickr.com/search/show/?q=abandoned+malls>)

A typical example of this situation in the metropolitan area of Athens is the road network in the municipality of Maroussi, in the part, bounded by Kifissias Avenue, Attiki Odos (urban freeway of Athens), Kimis Avenue and the Olympic Champion Spyros Louis Ave. In this area lies the Olympic Sports Center, in addition to several other oversized facilities that attract many visitors. These facilities are an attraction not only to the locals, but also to the residents of the entire area of the metropolitan area of Athens. The main factors that contributed to the development of the area in this way are two. The access to the facility from major roads (Attiki Odos, Kimis Ave. Spirou Loui) and the change of the laws from the State that define the building terms and land use of the area. With the change of land use from residential to city center, the establishment of major facilities with high traffic generation levels was permitted, as well as other commercial uses that were previously prohibited. "The Mall" is the first large retail facility that was constructed on the roadside area of Attiki Odos. The capacity of the shopping center in number of stores compared to that of regional city centers during 1992² is overwhelmingly higher. After the construction of 'The Mall' in 2004, the region gradually gained two other malls, the 'Avenue' and the 'Golden Hall', which are located on Kifissias Ave which is the main Avenue that connects the northern metropolitan area of Athens to the City center. In the same area there are also other major facilities, such as the exhibition space Helexpo, the multiplex Odeon Kosmopolis, the IASO hospital, and the Ministries of Education and Health (Figure 02).



FIGURE 02: Access to the facilities for land use "city center" on Kifissias Ave, in the municipality of Maroussi

These facilities, along with the Olympic Stadium, are attracting numerous visitors, thus creating traffic problems in the region. Each new facility takes advantage of the accessibility of the area, which is served both by major roads and by public transport (electric railway, suburban railway),

¹ Many examples of abandoned malls can be found online (www.deadmalls.com)

² Maratou Theodora, *Traffic and Land Uses*, PhD, Department of Urban and Regional Planning, NTUA, June 1994

hence downgrading the quality of the transportation network. These roads have seized long ago, to be able to cope with the traffic generated by the roadside land uses. This resulted in the degrading of the operation of the major roads and the road network of the surrounding area, whose predominant use is residential. These facilities are open to public all week long and many of them all day long (*Table 01*), resulting in traffic problems even outside peak hours.

TABLE 01: Daily traffic access per hour to the study area.

	08:00	10:00	12:00	14:00	16:00	18:00	20:00	22:00	00:00
MON									
TUE									
WED									
THU									
FRI									
SAT									
SUN									

hours with regional traffic access.

From further analysis of the existing information³ regarding the shopping center 'the Mall' one may observe the following: It is a shopping mall that contains 200 shops and 40 recreation areas. The operation of the 'Mall' generates traffic volume of 5.000 cars during peak hours. Furthermore, it is located on the roadside area of the service road of the urban freeway Attiki Odos and between two consecutive interchanges that are formed with Kimis Avenue and Kifissias Avenue crossroads, both of which are major arteries of the city. The distance of the facility from each interchange proves to be too short taking into account the queues that develop at the entrance and exit of the shopping center. The short distances of the facility driveways to the adjacent interchanges result in the creation of large vehicle queues on the ramps of each interchange. When we take into consideration the fact that these interchanges serve also as the access to the rest of the local facilities, the resulting traffic congestion is long and persistent on the whole local road network. Apart from the heavy traffic volumes, on the local street network the high parking demands that develop additionally are not sufficiently addressed thus resulting in a travel area reduction and a further increase of traffic flow impairment, negative environmental impacts and degrade of living standards in the area.

A similar example is the coastal Poseidonos Avenue, which happens to be the only connecting roadway between the southern suburbs of Athens metropolitan area (Palaio Faliro, Kalamaki, Elliniko, Glyfada, Varkiza, etc) with Piraeus (main harbor of Athens) and Athens City Center. During the afternoon hours the traffic congestion that is caused by the frequent access to the road abutting properties and facilities, mostly recreational in nature, attains unacceptable levels. But also in areas outside the urban plan the situation is not much better, especially near cities and large residential units. In the case of Varis Avenue, the frequent access to the roadside recreational facilities made imperative to start new improvement works on the road. Furthermore, a more recent example of access design misconception is that in the area near a major metro station 'Agios Dimitrios' a new shopping mall was constructed, on Bouliagmenis Ave., thus imposing additional traffic problems in an area that is already filled with retail facilities (*Figure 03*).



FIGURE 03: Generation of traffic burden caused by the mall on Vouliagmenis Avenue in the municipality of Agios Dimitrios

Problems like the ones described previously can be found in almost all Greek cities and especially near the city boundaries. Such an example is the deviation road in Larissa, a major city in the central

³ Research Study, *Less is Mall*, Govatsos Anastasios, Kalaitzidi Eleni, Kassimidi Marialena, Kotsikou Nikoleta University of Patras, Faculty of Architecture, June 2006

part of the country. Very soon, the new ring road of the city lost the necessary level of service and leading to the necessity of constructing a new arterial in parallel to the existing one.

RELATIVE CURRENT LEGISLATION IN GREECE

The way the space is addressed in this country by urban planning is completely different from the way spatial development is associated with traffic studies and road design.

According to the existing legislation, the urban planning divides the space in areas within or outside the urban plan (where explicit building rules are set), and also divides the access conditions and restrictions to the facilities according to their location (within or outside the urban plan). For the areas outside the urban plan, access control is required for all kinds of uses, apart from residential. For areas within the city plan, access control is required for uses with a parking of 30 lots or more⁴. Contrary, the legislation regarding the study and function of the roads (Greek policy for Road Design – ISR-FRC)⁵, addresses the road functional characteristics according to their traffic mobility importance in classification to levels (I, II, III, IV, V and VI), regardless of whether they pass through areas within or outside the city plan. At the same time, the density of the roadside construction is noted with the letters A, B, C, D and E and the desired correlations between density and functional street levels are set. Moreover, it is indicated that the access to road abutting properties should be served primarily by collector and local roads⁶.

The legislation concerning the access to roadside facilities defines mainly two parameters⁷:

- The distance of the facility from the axis and the limits of the street⁸, when the area is outside the urban plan (*Table 02*) or the distance of the building line, as it is defined by the street plan, if the area is within the urban plan.
- The design of the connection of the facility with the road that serves it, depending on the administrative category of the street⁹ (connection types A, B, C, D). The same applies when choosing the road connection type for areas both outside and within the urban plan.

TABLE 02: Distance of the establishments from the axis of the roads by administrative category in unzoned areas.

ADMINISTRATIVE CLASSIFICATION							
		Function Level	Roadside Area Building				
NETWORK DEFINITION (P.D. 455/22/5-7-76)			A	B	C	D	E
NATIONAL	Primary National	I, II	+	+	+	-	-
	Secondary National	II, III	+	+	+	-	-
	National of the Islands (except Evia, Crete, Rhodes, Corfu)	II, III	+	+	+	-	-
	Service roads with width > 7m	II, III, IV	+	+	+	+	-
	Tertiary National	III, IV	+	+	+	+	+
PROVINCIAL	Primary Provincial	III, IV, V	+	+	+	+	+
	Secondary Provincial	III, IV, V	+	+	+	+	+
	Provincial of the Islands (except Evia, Crete, Rhodes, Corfu)	III, IV, V	+	+	+	+	+
	Service roads with width ≤ 7m	II, III, IV	+	+	+	+	+
	Parts of tertiary National Road Network	III, IV	+	+	+	+	+
	Municipal	IV, V, VI	+	+	+	+	+

Problematic combination	Particularly problematic combination	Impossible combination
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A	Without roadside Building
B	With little roadside building (entering cities)
C	With roadside building (suburban, regions within urban plans)
D	With a lot of roadside Building (city centers, residential areas with main function - access)
E	With a lot of roadside Building (city centers, residential areas, with main function - parking)

I	Road connection between Regions
II	Road connection between Counties
III	Road connection between Provinces, Villages
IV	Road connection between Little Villages
V	Road connection between lots and areas

(Source: General Secretariat of Public Works)

⁴ Presidential Degree (P.D.) 11/04: Definition of parking spaces required by access control and P.D. 455/22/5-7-76

⁵ Directory of Roadwork Studies a/o/987/11-5-2001: functional road classification

⁶ Directory of Roadwork Studies a/o/987/11-5-2001, Chapter 2: Road Classification)

⁷ P.D. 1224/1981: Gas stations within urban plan (the same applies for all kinds of land uses)

⁸ P.D. 118/2006: Terms of use etc. Of pumps – gas stations

⁹ Ibid.

Additionally, for parking spaces up to 30 lots, when they are located within the urban plan, technical specifications are given, as well as constraints regarding the study of the parking space, that are approved by the relevant authority¹⁰. For parking spaces of more than 30 lots, the distance of the facility from traffic lights or another intersection that is considered to be important, is obligated to be larger than 30m¹¹.

In order to give authorization for large parking areas, the assent of the relevant Departments of Road Traffic of the Ministry of Infrastructure, Transportation and Networks is required, after taking into account the following criteria:

- the function of the road, which will serve the access to the parking space, which will be constructed
- the traffic volume of the road during peak hours (existing –expected)
- Entrance – Exit location of the parking space
- Impact on the level of service of the affected intersections
- Impact on operation of schools, playgrounds, nursing homes and generally areas of social welfare.

Especially for establishing a parking station with 200 lots, or more, the interested parties are required to submit a traffic impact study which shows that the traffic conditions allow the establishment of a parking station based on urban planning and traffic parameters¹². There is no strict standard about the content and the way such a study is carried out. The quality of the traffic impact study is the result more or less of the competence of the designer and the existing traffic data. Moreover, the legislation refers to the bodies responsible for monitoring the studies. They are the same that control the construction and maintenance of the roads serving the facility¹³. The primary and the secondary network are the responsibility of the Ministry of Infrastructure, Road Traffic and Networks. The tertiary network is the responsibility of each Municipality, and for parking stations in areas within the urban plan with 30 lots or more, the responsibility goes to the Directory of Traffic of the Ministry of Infrastructure, Road Traffic and Networks, regardless of the administrative category of the road. What is seen here is a fragmentation of the authorities responsible for traffic control.

COMMENTS ON CURRENT LEGISLATION IN GREECE

As shown above, there is no statutory method of exact specification of the traffic impact of the access. This method will be based on the appropriate correlation of traffic data of the access, with those of the road which serve it, in order to maintain the traffic capacity of the road at desired levels and provide comfort and safety. Also, the reduced ability for accurate and reliable predictions, do not help the study of alternative proposals of urban or traffic content, or both, so as to solve the problem.

Furthermore, the correlation and coordination of urban planning with the traffic planning and road studies is problematic. The Greek legislation that defines the standards regarding the access study and control, does not relate them with the functional category of the road that serves the access of the facility, but with the administrative category. Neither has the correlation between administration and functional category been defined¹⁴. The lack of this correlation has many negative impacts. For example, in municipal streets, a properly designed driveway is not required, not matter how large the road abutting facility is. There are, however, municipal streets, which happen to be the only connecting streets between residential units, areas of tourism, etc. This means, that they actually belong to the functionally higher connecting streets of category II or III, according to the ISR – FRC classification.

Additionally, the lack of common base between urban planning of the roadside area and the traffic planning of the roads, i.e. a common design framework is reducing the capability of implementation of appropriate measures in each case. These deficiencies in the legislation are causing conditions of overexploitation of the road network, which constitutes a public good. Many of the roadside facilities, which mostly happen to be economic businesses of fast profit and of limited operation time, are a disproportionate burden to the function of the road network, against the inhabitants and the users of the streets. Furthermore, they adversely affect the national economy, since very soon new road construction will be required, with a huge economic and environmental cost.

¹⁰ Ministerial Decision 98728/7722 of 15.2/2-3-1993: Definition of parking spaces required by access control

¹¹ P.D. 455/22/5-7-76

¹² Ibid, article 3

¹³ P.D. 188/2006 moderation of R.D.465/70

¹⁴ Directory of Roadwork Studies/a/o/987/11-5-2001 (Instructions for Studies of Road works: Functional Road Category)

SUGGESTIONS FOR COMPLETING THE EXISTING LEGISLATION

From the analysis above, it can be concluded that the current legislation regarding the specifications of the access and their control methodology needs extensive revision and supplement. As a first approach, it is recommended that, the following issues should be examined: first, the traffic characteristics of the driveway, in order to define the traffic volume, and afterwards, the correlation between traffic and urban planning, so that the appropriate restrictions and the conditions under which the access to the road abutting property is to take place can be applied (joint development). Moreover, because the legislation regarding the access control depends on the administrative category of the streets, there should be a correlation between the functional and the administrative category of the roadway system of the country.

1. The Traffic Characteristics of the Access

The traffic characteristics of the access to a road abutting property, which should be assessed to allow for, subsequent definition of rules and criteria on their design, are at this initial access management introductory phase:

- The generated traffic volume by the roadside facilities during peak hours, as well as that of the servicing road
- The maximum number of the facilities which can be established on the roadside area, according to the urban planning, and which require a driveway construction between two adjacent intersections on the servicing road and
- The appropriate design of the entrance and exit of the facility lot (driveway), as well as the determination of the proper distance of the entrance – exit from the road intersections (corner clearance).

Additionally, there should be a correlation between the functional road category and the tools of urban planning, so as to correlate the functional road category to the urban and traffic restrictions of the access to the roadside area. The generated traffic volume of the access depends on the type and size of every facility that requires access, in relation to the road network that serves it (road categories).

The shopping center 'The Mall', for example, is defined as a facility of retail shops of 56.500m², on a branch of an overpass of the main road network of Athens (administrative category). Its functional category is CII (according to ISR - FRC) and it is located in an area of land use of 'city center'¹⁵. Therefore, in order to be able to measure the traffic volume generated by roadside facilities, knowledge of the traffic volume each facility creates is needed, with regard to the type and size of land use, and according to the functional category of the street that serves it.

The creation of a Table that will contain the traffic volume and the surface size of the units of each kind of land use located on the roadside area is suggested, in relation to the functional category of the road that provides access to them (a type of traffic generation vocabulary¹⁶). (see *Table 03* and *Diagram 01*).

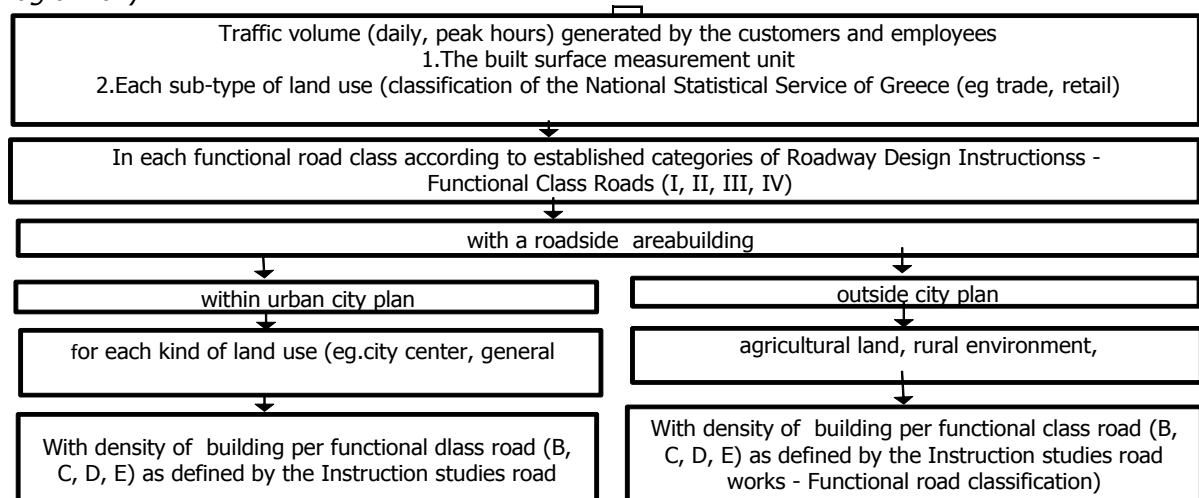


DIAGRAM 01: Determination of the categories of the unit of land use

Source: Maratou Theodora, Traffic and Land Uses, PhD, Department of Urban and Regional Planning, NTUA, June 1994)

¹⁵ P.D. 23.2/6.3.1987 'categories and content of land use'

¹⁶ Traffic Authority of New South Wales, "Land Use Traffic Generation Data and Analysis", by Traffic Authority of New South Wales, 52 Rothschild Avenue, Rosebery, N.S.W. 2018. In association with N.S.W. Planning & Environment Commission. 1980

TABLE 03: Example of Table with the traffic load and the surface size of the unit of each type of land use of the roadside area per functional road category

KIND of LAND USE												
Road functional category		unit	Within urban plan							outside urbanplan: Industrial area (I), agriculture area (A), natural environment(N)		
			city center ²					resident (general (G), pure (P), professional installation (PI))				
			M	S	L	D	N	G	P	PI	I	A
I,II,III,I V,V, VI	A,B,C,D,E	t.v. ^{1.}										
		peak t.v.										
		s.s.										

1. t.v.=traffic volume (vehicles per hour), s.s.= surface size

2.centers:metropolis (M), suburban(S), local(L) of district(D),of neighborhood(N)

(Source: Maratou Theodora, Traffic and Land Uses, PhD, Department of Urban and Regional Planning, NTUA, June 1994)

The traffic volume generated by each facility is not the only parameter that is required. The overall traffic volume of every access point to the facilities between two adjacent intersections of the servicing road should also be considered. Using the preceding Table, it is possible to determine the overall traffic volume created by the facilities between two adjacent intersections. By knowing the traffic volume and the surface size of each unit of land use, the total surface of the roadside growth area between two crossings, as well as the road traffic capacity or design Level of Service it belongs, there is the possibility to define the maximum building factor for this area. Also, it seems to be possible to define the building factor separately, for each kind of land use of the area, so that the desirable synthesis of land uses that is defined by the urban planning is maintained. Additionally, the geometric design of the driveway depends on the access design type, the distance between the entrance and the exit from the road intersections, and the route that it is used along the road network. For example, in the case of the shopping center 'The Mall', apart from the traffic problems that exceed the traffic capacity of each branch of the Kifissias Ave. overpass, it also does not have the desirable distance between its entrances or exits to the intersections in their vicinity (corner clearances), in order to ensure enough space for the traffic queue development. Thus, additional arrangements are required for the access design, that will seamlessly serve the produced traffic volume from these facilities, (the definition of the required queue length, the use or not of traffic lights, the existence or not of a separate road that will connect the facility with the main road, the use or not of an overpass/underpass, the definition of the minimum road distance of the entrance and the exit from the intersections and many more). The combination of measures according to each case from these two sections could give positive results to the access problem. The Table should be completed with data regarding the traffic volume and the surface size of the measuring unit of each land use of the roadside area, depending on its functional road category. And with data regarding the required area for entrance and exit and the least required distance from the intersections that serve the access of each unit, regardless its land use, depending on its functional road category. The groups of land use with common traffic volume will come out of this Table, which means common Building Factor and common access type. The rest of the urban factors, such as the minimum lot size required and the building percentage will have to be re-defined, after the synthesis of the access traffic is examined, in addition to peak hour and other circulation characteristics.

2. Common Base of Reference for Urban Planning and Functional Road Categories.

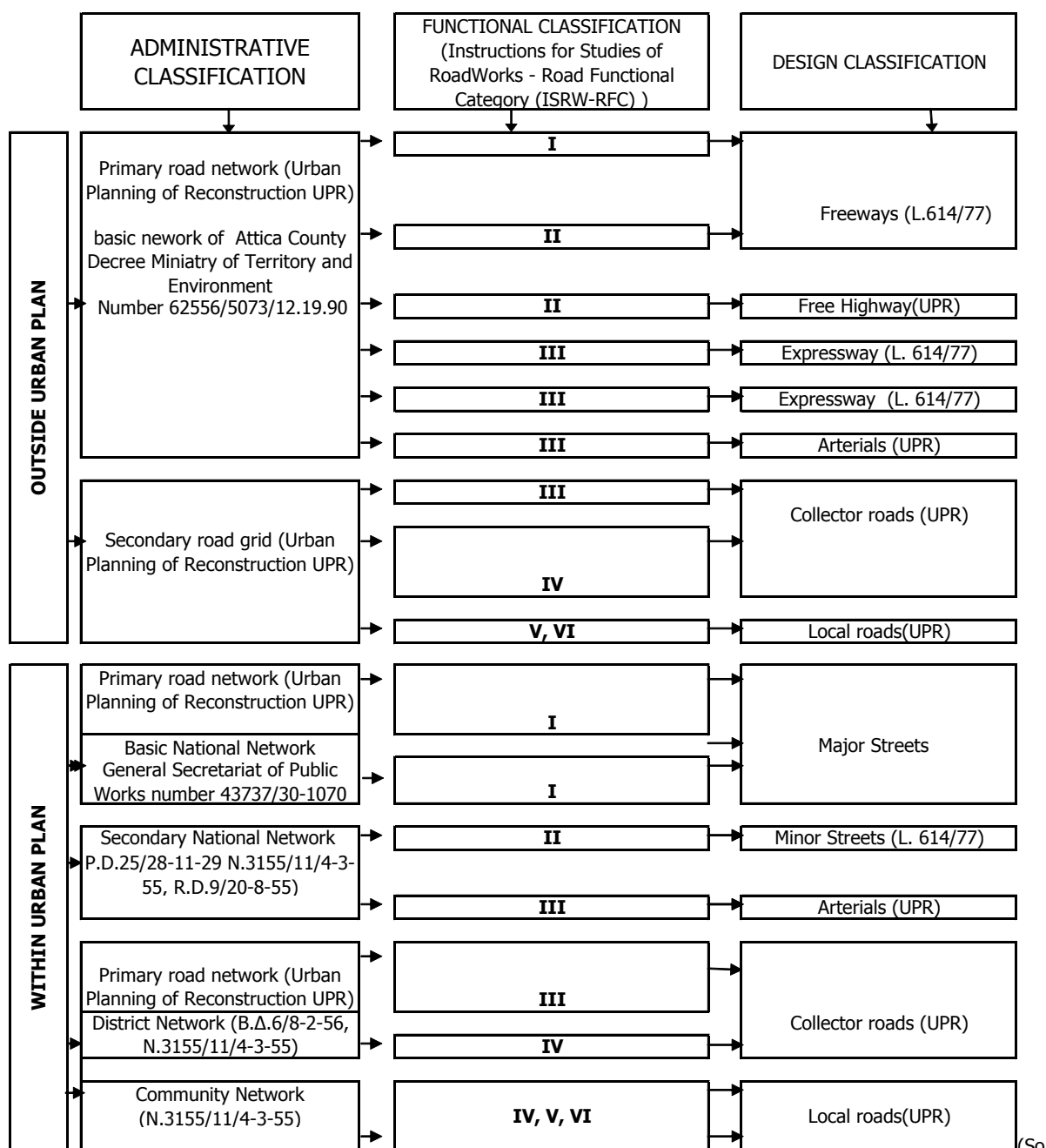
The functional road category defines the characteristics (mainly the density) of the roadside area with the letters A, B, C, D, E, which could be used as a common reference point between urban and traffic planning¹⁷. This definition, though, is qualitative and not quantitative. There are no quantitative limits on the density of each letter category. These limits are crucial, in order for the maximum building factor, the minimum lot size, the built up surface, the desired layout, the distances between building line and street line and many others to be identified with the help of the Table above. Now, with the existing legislation, the designs regarding the urban part can only intuitively realize the limitations of the roadside area.

¹⁷ The definition of the character of the roadside area with the functional street level can be seen in the Directory of Roadwork Studies a/o/987/11-5-2001, Chapter 2, Table 2.3 and Table 2.4.

3. Correlation of Administrative and Functional Road Category.

Since the legislation regarding the access depends on the administrative road category, the functional road category should be correlated with the administrative road category. In order to control the traffic volume of the access, we should know the limits of the characteristics of the road that are defined by the functional road categories. A first attempt to correlate the two categories can be seen in *Table 04*.

TABLE 04: Correlation of the functional and administrative road categories and design categories.



Source: PhD, Maratou Th., «Traffic and Land Uses», July 1994)

Hence, in order to have the desired produced traffic volume from the access to a facility, we should know:

- the produced traffic volume according to the type and the size of each use in every urban category of general use and for every functional road category
- the correlation between the functional and the administrative road category, in order to create the access restrictions, since all the legislation regarding the access has been depending on the administrative road category

- the building factor, the minimum lot size, the synthesis, the area of land uses of general use of the roadside area

By knowing the facts above, we can define the connection restrictions, which can be:

- Urban criteria by setting:
 - the kind of land use that is being sited (for example the permission of siting of a land use in a certain urban location and functional road category as well). Tools for implementing these control restrictions are the building regulations, through urban planning (expansion of city limits, change of street plan, urban control zones)
 - the size of the facility of that particular land use in this specific urban location and functional road category. A tool for implementing control limitation is the building codes, and more specifically the building factor, the minimum lot size and the maximum built surface allowed.
 - the control of the distance of the entrance - exit from the intersections. A tool for controlling this is the street plan, with a layout provision and with definition of the minimum distance of the entrance - exit to the parking space.
- Traffic criteria by setting:
 - the maximum queue length and the minimum driving distance of the entrance – exit to the road intersections
 - the possible use of traffic lights
 - the connection course and the connection type (intersection, overpass/underpass)
- Driveway design, which will also include the geometrical design of the access type according to contemporary scientific research results.

It is suggested to introduce new standards that will derive from scientific research and justification. They will include areas both within and outside the urban plan and will relate to the study and access control. In these new standards, it is crucial to coordinate and correlate the urban and the traffic planning, so that the relevant information is used during the generation of the studies, and a prediction or solution is made for solving the problems caused by the access.

These standards will:

- Fit the geometric design of the access according to new scientific research results
- Match the design category of the access node to the functional road category. A first attempt for this definition can be seen at *Table 04*, where the administrative road category is related to the functional road category.
- Control, according to standards - indicators, the access density and the distance from the intersections, the layout of the parking facilities, the traffic volume generated by the facilities
- Develop a methodology for studying and controlling the access, in order to elaborate studies with urban, traffic or design restrictions or in combination. For example, when large retail, leisure etc facilities are located in great density on a building block and there is no service or frontage road, or an additional road network to account for the traffic volume, alternative solutions should be presented that prevent traffic congestion.
- Define in detail the procedures and control bodies, so that there is no fragmentation of the control authority
- Control the possibility of permit , or not, certain types of land uses and the size of the facility during the study of urban plans (expansion of the city limits, modification on street plans)
- Identify the building factor depending on the total traffic volume generated by the access to the roadside facilities, so that it lies within the limits of the traffic volume of the road.
- Identify the building line, built up surface and the minimum lot size according to good management of the traffic access. For example, the minimum lot size required for corner lots at intersections should be larger, and correlate with the type of land use that the facility will hold, a layout plan should be created and the minimum distance between the entrance – exit from the intersection should be defined, by taking into consideration the size and type of the facility. Supplementary for the setting of the above standards is the completion of the suggested Table with the traffic volume and the surface size of the measuring unit of each type of land use, located on the roadside area, according to the functional road category.

It should be noted that no specific national recent research on these issues exists. Additionally, none of the results from the research to date has been implemented, because there is no clear procedure, in order for the competent legal bodies for the study, construction, control and function of the road network to be bound to implement the results of the research.

CONCLUSIONS

With the suggestions described, it is believed that the traffic problems associated with road abutting facilities will be reduced, the roads will be capable to maintain their traffic capacity that their functional

category requirement, according to traffic planning predictions; the local traffic congestions will be reduced and the quality of the road traffic character will be sustained.

In order to produce applicable results, at a satisfactory level, the research should be continued and specialized information should be developed, for each type and size of roadside land use, depending on traffic generation and in relation to the functional category of the road that serves the access.

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