

Analysis of Architectural Influence Factors on Social Spaces of Shopping Malls

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Abstract – In this paper the most influential architectural factors on social spaces of shopping malls are considered.

Key words – mall, social space, architectural and planning organization, urban location, construction site, topography, terrain features.

I. Introduction

Urban location and construction site features (shape and topography) are among the most influential architectural factors. These factors directly affect shopping mall's general plan, its volume-spatial composition, number of floors as well as functional zoning inside it, thus making an impact on the architectural and planning organization of shopping mall's social space.

II. Urban location

Urban location is one of the major architectural factors that influence both architectural and planning organization of a shopping mall and its business success [2].

There are three types of urban location: *within the city structure*; *on the periphery*; *outside the city*. The difference between malls belonging to one of these is mainly associated with different urban density in city center and on periphery as well as different contingents of visitors (pedestrians or motorists and passengers of public transport).

Built in places with lots of free space, *malls outside the city* have prospect of "horizontal" development. Typically these malls are constructed near highways with heavy traffic and near public transportation lines. This causes their parkings to be above-ground and located mainly in main entrance areas.

Examples of such malls are "SCS" in Vienna (Austria) [8], "Smaralind" in Reykjavik (Iceland) and "Rivera" in Odessa (Ukraine).

As a result of these factors malls built outside the city are mostly one- or two-floored and have horizontal functional zoning. Their social spaces often have linear or L-shaped architectural and planning organization.

The peculiarity of *periphery malls* is their orientation both on pedestrians (residents of the periphery) and for motorists and users of public transport. As malls outside the city, periphery malls are also built near highways with heavy traffic and public transportation lines, that is at the entrance to the city.

Average number of floors among periphery malls increased to two or three. Because of the urban density most of such malls have both above-ground and underground parkings. Social spaces in periphery malls are more complex: along with linear and L-shaped, 'multiple crosses' architectural and planning organization is used quite often.


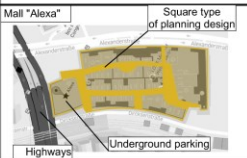

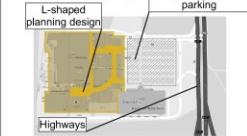

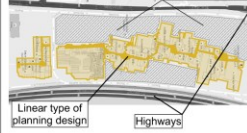
Types	Mall's characteristics	Examples
within the city structure 	- 3-5 floors; - "vertical" functional zoning; - underground parking; - different types of planning design.	Mall "Alexa" Square type of planning design 
on the periphery 	- 2-3 floors; - "horizontal" functional zoning; - underground parking + small above-ground part; - linear, L-shaped and 'multiple crosses' architectural and planning design types	Mall "King Cross Leopolis" L-shaped planning design Partly above-ground parking 
outside the city 	- 1-2 floors; - "horizontal" functional zoning; - above-ground parking; - linear and L-shaped architectural and planning design types	Mall "Shopping City Sud" Above-ground parking Linear type of planning design 

Fig. 1. Master plan of "Shoping City Sud" mall [1], [6], [8]

Examples of such malls are "Vasco Da Gama" in Lisbon (Portugal), "Field's" in Copenhagen (Denmark), "Janki" in Warsaw (Poland), "La Vache Noire" in Paris (France), "King Cross Leopolis" in Lviv (Ukraine) [6], "Caravan" in Dnipro (Ukraine).

Malls located within the city must reckon with the existing high density urban structure. Due to this factor average number of floors among such malls is from three to five. Thus urban malls are characterized by "vertical" functional zoning. There is also greater complexity and variety of architectural and planning organization of such malls' social spaces. Parkings are mostly located underground, small additional above-ground ones are sometimes added as exception.

Examples of such malls are "Alexa" in Berlin (Germany) [1], "Westfield" in London (UK), "Paradise" in Sofia (Bulgaria) – four storey with underground parking. "Centrum Galerie" in Dresden (Germany), "Berceo" in Logroño (Spain), "Islazul" in Madrid (Spain) and "Ocean Plaza" in Kyiv (Ukraine) have three floors.

III. Construction site features

Construction site features such as shape and topography have significant impact on a mall. Site's shape greatly affects architectural and planning organization of mall's social space.

Planning organization type of a mall depends on its construction site's size and shape. E.g. if the site's shape is triangle, than it's obvious that triangular planning scheme will be among the most effective ones for the social space and the mall itself. One can see this approach in "Paradise center" (Sofia, Bulgaria) [7], "Islazul" (Madrid, Spain) and "La Vache Noire" (Paris, France).

If some transportation or pedestrian paths cross the construction site, it becomes divided into a number of zones. This leads to the division of the mall's building into separate blocks, connected on the upper floors with a social space. As a result, social space gets complicated due to the following factors:

- splitting the social space into separate zones, according to the blocks of the building;

- formation of transitions between blocks where traffic is higher than in the rest of the social space;
- fragmentation of zones at lower (or other) floors.

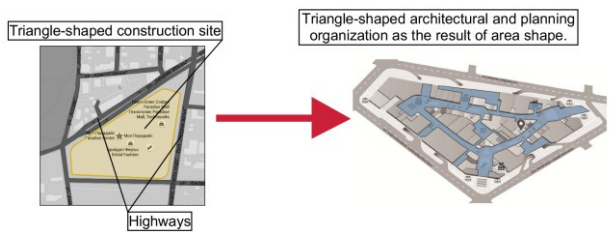


Fig. 4. "Paradise" mall. Master plan [5] and first floor scheme [7]

Examples of such malls are "Donauzentrum" (Vienna, Austria) [4] and "Cosmopolitan" (Kyiv, Ukraine).

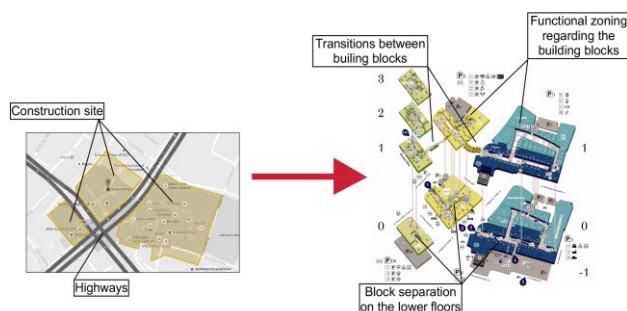


Fig. 5. "Donauzentrum" mall. Master plan [5] and floor scheme [4]

Topography can affect the entire volumetric-spatial design of a mall as well as be the reason of some planning, architectural or artistic decisions.

In most cases one will choose an area with flat topography or at least with minor deviations as a construction site of a mall. There are many cases showing that a minor difference in topography allows designing entrances to the mall on two levels at once. This approach allows organizing the distribution of visitors flow into two groups according to their entrance level.

Malls "Smaralind" (Reykjavik, Iceland) [3] and "Mediterranean Cosmos" (Thessaloniki, Greece) are a vivid example of this architectural and planning solution. Topography difference allowed to design entrances on first and second floors in these malls. There is a parking located in front of the first facade, while there are public transport stops and convenient communication for pedestrians near the second one. This allows to distribute visitors flow in two streams: motorists and pedestrians together with public transport users.

"La Vache Noire" (Paris, France) is an example of active usage of terrain features. In this case relief was the factor that affected both volume-spatial composition and artistic design of the building. Creators of "La Vache Noire" formed an actual park zone on the mall's roof with green terraces, trees, paths and benches for visitors' rest. Topography allowed to add an entrance to the roof directly from the street. Thus, the green roof, as part of the mall, serves as a park and recreation area not only for visitors but also for the whole neighbourhood area.

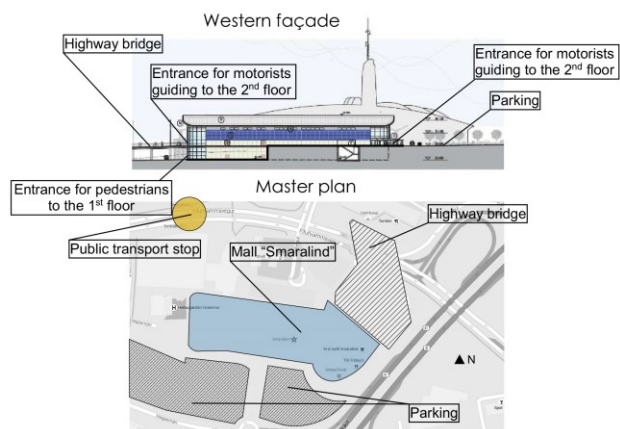


Fig. 6. "Smaralind" mall. Western facade [3]. Master plan [5].

Conclusion

The analysis of architectural factors that affect social spaces of malls allowed us to define the three types of malls' urban location: within the city structure; on the periphery; outside the city. Each of them has a set of specific characteristics: number of floors, type of parking, type of social space design, functional zoning type etc.

Planning type of social space is often a result of the construction site topography features. If transportation paths cross the site, mall gets divided into zones and this makes volume-spatial composition of social space much more complex. Terrain features are used in many malls to divide visitors flow or (in some cases) as the main principle of volume-spatial composition design.

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