STADIUM FUTBOLLI

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Ky punim është përpiruar dhe dorëzuar në përbushjen e kërkesave të pjeshhme për Shkallën Bachelor
Abstract

"Where crowd gather, history is made."

This diploma thesis provides the project of a Football stadium which is located in the heart of the capital city of Kosovo, Pristina. Frequent changes of people’s lifestyles has leaded and created the need to improve the general qualities of living. The fact that most of the population in Kosovo is covered by youth indicates that cities need to provide more public recreational spaces where people could gather and socialize. Among that, it’s obvious that most of the youth are interested in sports and especially in football, so a new football stadium is more than needed at this time. Designing and building a new stadium would allow the proper development in profitable aspects not only for the citizens but for the state organizers as well.

This stadium is a vehicle for exploring and expressing my ideas about the role of structure in architecture, and about an architect’s realm of control in a building project. The typology of a stadium allows for a limited number of functional requirements while, at the same time, allowing for, if not demanding, a creative structural solution.

Spiro Kostof
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Introduction

Fig. 9: Chronology of the most innovative stadium designs
By the definition we can say that a "stadium is a place or venue for mostly outdoor sports or other events and consists of a field or stage completely surrounded by a tiered structure designed to allow spectators to stand or sit and view the event."² "Pausanias noted that for about half a century the only event at the ancient Greek Olympic festival was the race that comprised one length of the *stade* at *Olympia*, where the word "stadium" originated."³ As early as the eighth century B.C., the Greeks built stadiums to facilitate foot races. Soon, as more events attracted more spectators, countless more arenas and stadiums were built, the most glorious example of which is, of course, the Roman Colosseum.

"In modern times, a stadium is officially a stadium when at least 50% of the actual capacity is an actual building, like concrete stands or seats."⁴ The influence of a stadium is tremendous in its immediate surroundings, and, in some cases, can be felt around the world. Given all the activities surrounding a game, it is appropriate to position and design the stadium to facilitate these various activities. Furthermore, the sheer size of a stadium automatically has a monstrous effect on the landscape in terms of its visibility, as well as the demands for space for the actual stadium and all the associated activities like parking. Therefore, the stadium’s influence does not stop at its physical boundaries. The design must define a new landscape for the surrounding area.
The methodology of design

When we are dealing with sporting venues, in particular with football stadiums we should consider more significant specificity compared to other profile buildings. In the process of developing the design of the stadium except norms and standards set for this type of building, by the way of organization, orientation, distances, the traffic, the lightning etc., I always had in mind the location of the parcel, because the parcel that I am designing the stadium is one of the most influential parts of the city. I always had to account on nearby buildings like: Newborn, Police building, “Rilindja” building which are the most representative marks of the neighborhood where the football stadium is located in, by this the stadium will be admitted to the location site and not be rejected. The generation of the stadium form, its structural interpretation creates adequate space for around 50,000 spectators. With standard dimensions this stadium gives everyone the opportunity to have visual access of sporting arena.

Site

The conceptual design of the football stadium is located as mentioned before in the city of Pristina, in the middle of four different roads which are “Fehmi Agani”, “Tirana”, “Garibaldi Street” and “Luan Haradinaj”. By being situated in this parcel, this part of the city saves its identity where the most important landmarks are located.

One of the most important aspects of a stadium is its accessibility to the stadium. The wide access to the stadium from both sides of the object is considered as a space which can also serve as an emergency exit for the fact that the widths of these openings are counted to integrate emergency itself with the part of the stores under the stands of the spectators. The overall development of green spaces around the facility increase the overall qualities of the object identification. Entrances are accompanied by high and low greenery spaces, with adequate paths for walking, in this way the use of space is easier and more suitable. These green spaces are also for protective measure of the facility from atmospheric influences in it. Other areas outside the facility are not affected by his acoustic noise created as buffer zones within the facility. Also intermediate green areas stop noise and divert it. In addition, it is encompassed by massive bluestones in the ground connecting it symbolically to the original colors of the club of the city Fc. Pristina.
Facade

The façade used in the stadium is glass with steel contours to make the visibility from outside more over standing. The façade also includes some parts of panels that go with the flow of the stadium seats, and also the stairs make the way into façade by following the panels and that send you in every part of the floor sections of the stadium. The exterior of the stadium is mostly covered with white and blue colors to represent the symbol colors of the home team Fc. Pristina.

Functions inside the stadium

The performative aspect of the facility remains at a high level due to the fact that besides the entertainment possibilities while attending football matches, this stadium can turn into other entertainment areas where thus increase the overall value of the object. The stadium building can be decomposed into three main areas, namely the activity, spectators and service area.

Because the football stadium is located in an overpopulated area of the city, it is quite needed that some parts of the stadium to be used for other different purposes. In the ground level and the upper floor of the stadium there is a mall, other than shopping for clothes or food there are bars and shops that offer merchandising for the home team. Also in the ground level of the stadium there are eight entrances to the seating part of the stadium to avoid the overcrowding between spectators entering to their seats. In the lower floor at the west part of the stadium the entrance is only for players, media and VIP, in the ground floor of that part are the players dressing rooms for home and visiting team, while the first floor is followed by a fitness wellness for the players to use during the training or while they have free time, also there are two rooms for media to cover the game during playtime. As for the upcoming floor, the area in that section is huge for the reason to give the supporters more breathing room and getting to socialize with each other during the halftime of the game, that part includes three VIP lounges, toilets, shops, and three restaurants. The selling points are attractive and easily accessible, they are evenly spread around the stadium so that audience do not have to wait long for their needs, and also it is difficult and almost impossible to move from one sector to another. The stadium is divided into four sectors, each with its own access point.
Efficiency

Stadium is used for football matches throughout the day opening the main atrium enables constant contact with the sun and also provides the audience with shading parts of the stadium as well, while the windows on the façade are organized in such a way that the entire section of the stadium from the outside will have a very appropriate visual access inside the stadium, and in the upper side of the stadium there are some openings that will be used for natural ventilation of the stadium by using the air to automatically freshen up.

Sight

![Diagram of spectator distances](image)

Fig.10: Distance of spectators from the field of play

This graphic delineates the optimum and maximum viewing distances for football. The region within the orange circle is ideal for watching a game. The next bigger region is the recommended maximum distance which is determined by describing a 150m arc from each of
the corners. Beyond the outer ring, the ball would virtually disappear from view. This image demonstrates that the majority of the stadium’s seats fall within the recommended distance, and all of them fall within the maximum distance. This is consistent with the goal of providing the best game day experience possible, which includes being able to clearly watch the game being played.

The blue lines represent lines of sight from various seats throughout the stadium. In the plan view, the lines outline a 60 degree field of vision from particular seats. This range approximates the range of a person’s vision looking straight ahead. In the section view, the blue lines demonstrate the ability of a person to see the field from various seats. The upper deck seating has a greater slope than the lower deck, to ensure that the people who sit the farthest away from the field still are able to see.

**Playing surface**

The field in this stadium is natural grass, because natural grass remains the most user-friendly of surfaces, and the only permissible choice for football. The advantages of natural grass are: It is aesthetically attractive, it gives a speed of rebound resistance, it is less injurious to players who fall than most alternative finishes, a cool surface in hot climates, and also it will continually self-repair and regenerate
References:

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2 NUSSLI Group "Stadium Construction Projects"
3,4 A Brief History of the Olympic Games by David C. Young, p. 20
   FIFA 4th Edition - Football stadiums technical recommendations and requirements