

THE NEIGHBOURHOOD MOSQUE WITH WOODEN MINARET IN BOSNIA AND HERZEGOVINA FROM 16th AND 17th CENTURY: FOUR EXAMPLES OF RESTORATION IN TUZLA REGION

Edin JAHIĆ*

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INTRODUCTION

A number of extant historic buildings testify to the rich building activity during the Ottoman period in Bosnia and Herzegovina (1463–1878). Today, certain historic types, such as hammams, madrasas and hans, have lost their original purpose and importance. While many of them have long since disappeared, a few important monuments have been preserved, but now they have a completely different function. Unlike them, thanks to an unaltered function and permanent usage, only mosques remained in a notable extent. The most valued monumental domed buildings in Bosnia and Herzegovina exemplify classical Ottoman style of the 16th century.

In contrast to domed mosques which usually dominate the townscape, there are a respectable number of small neighbourhood (*mahalle*) mosques built throughout the country. These authentic structures are rather unpretentious in size and proportions, but valuable in their authenticity and environmental compatibility. While monumental mosques are recognised by domes, portals and high minarets, small neighbourhood mosques stand out with a wooden porch, and a hip roof with characteristic wooden minaret.

According to statistics from 1933, number of these, predominantly “wooden” buildings, significantly exceeded monumental domed mosques (Bećirbegović, 1990, 40–41). Since then, many factors have contributed to the continuous reduction in their number. Many of them have been neglected in socialist regime (mostly 1945–1960), and especially during the violent destruction in 1992–95 war. As they are built of perishable materials (wood, mud-brick, rubble), a considerable number disappeared due to a lack of maintenance, unprofessional interventions, and finally a community’s intention to build a new and bigger one. Due to a long-term use, different micro and macro climatic conditions, and material deterioration, many old neighbourhood mosques require regular repairs, re-roofing, or complete renovations. The contemporary restoration

* Architecture Program, Faculty of Engineering and Natural Sciences, International University of Sarajevo, BOSNIA AND HERZEGOVINA

practice demands serious research and direct investigation, as well as professional methodological approach to their maintenance, conservation, or restoration. If no systematic preservation is established, these small authentic structures can entirely disappear in the nearby future.

This study analyses four neighbourhood mosques in northeast Bosnia and Herzegovina dating back to the 16th and 17th century, which have been restored in last few decades. It is assumed that they possess authentic characteristics, which impose the importance of preserving this segment of the built heritage in Bosnia and Herzegovina. The condition before and after the restoration is also assessed. They are also compared with several matching examples from different places in Bosnia and Herzegovina.

THE RECOGNITION OF FORMS: MOSQUES WITH PITCHED ROOF

The notable examples of authentic Islamic architecture in Bosnia and Herzegovina are small neighbourhood mosques, built during the Ottoman period. Their founders were mostly local landowners, military commanders, or wealthy religious individuals. Unlike monumental Ottoman buildings which were constructed by skilled, usually foreign masons (Zlataar, 2003, 67-70), these mosques were largely built by local builders, called *dunderi* (Bejtić, 1953, 241). These local masters were mainly engaged in carpentry, but they were able to perform complete construction, together with a building layout, sizing and proportions. Although typologically originate from the Ottoman tradition, these structures eventually grew into a typical expression of a regional tradition that fully fits into both urban and rural environments.

In comparison to a less number of monumental domed structures, the majority of mosques is covered with pitched roof. According to architectural characteristics, pitched roof mosques are far more regionally differentiated (Bećirbegović, 1990, 51). The roof shape, pitch, and a roofing material, are closely related to a local tradition. Roofing with stone tiles prevails in Herzegovina; curved clay tiles (*čeremit*) are typical in Sarajevo region; while the use of wood shake (*šindra*) has been far more spread in the central and north Bosnia. While roofs in the north, as well as in higher areas of Bosnia, can be recognized by steep slope and deep eaves, by moving to the south, they tend to be lower, both with shorter, or even with no eaves at all. The roof mainly has a hip, but rarely a pyramidal form. The unique hip form that covers both prayer space and adjoined porch largely prevails. Although rare, there are several mosques with an internal wooden dome formed within the hip roof structure (1).

The mosques with pitched roof are further classified according to minaret type and form. Apart from those with stone minaret (2), mosques and masjids with wooden minaret are generally smaller, but far more numerous. The typical wooden minaret in Bosnia and Herzegovina consists of a polygonal shaft with more or less enclosed gallery (*sharafa*). Standing on the roof base, it rises up through the roof slope on the right side. As this type of the mosque was built for a local neighbourhood of a town or a village, they are rightly referred to as the neighbourhood (*mahalle*) mosques. Compared to a spacious *çarşı* mosque, which dominates with accentuated formal elements, such as domes, roofs and tall minarets, the mahalle mosque is often smaller in proportions and capacity, and at the same time built to fit into residential surrounding with white plain walls and wooden roof and porch. Therefore, in the mahalle panorama, only

1. Handanija mosque in Prusac, Turalibegova mosque in Tuzla, Tabačica and Šarića mosque in Mostar

2. According to statistical data from 1933, there were 158 mosques with pitched roof and stone minaret in Bosnia (16%), and 65 in Herzegovina (51%). See Madžida Bećirbegović (1990) *Džamije sa Druvenom Munarom u Bosni i Hercegovini*, Veselin Masleša, Sarajevo, 41.

wooden minaret indicates its presence. Considering a large number of such buildings within the tradition that has lasted more than four centuries, Bećirbegović (1990) identifies this type of a mosque as a specific expression of the domestic building tradition.

The mosques with wooden minaret are built of traditional materials: wood, clay (mud) and stone. In the past, the roughly hewn timber was mainly used for the roof and wall framing, while the sawn and finished, and sometimes profiled or carved timber, was used for windows, minbar, porch and *mahfil* beams, stairs, and other visible parts. Out of available wood species, oak, spruce and pine were the most valued. Typical roof shakes (*šindra*) were made of chopped coniferous wood with groove on a single side (Kadić, 1967, 98). Earthen material was used in two forms: as a sun-dried clay brick (*čerpič*), and as a clay-based plaster. The wet clay was usually mixed with a sand, chopped wheat straw, and animal hair. Both sun-dried brick walls and timber framing walls were rendered with clay-based plaster. For this purpose, common ingredients were clay, sand, animal hair and quicklime. Wall surfaces were mainly whitewashed, with only few details occasionally decorated with coloured paint. If available, rubble masonry was used to build walls as well as foundations. Massive walls were strengthened with horizontal oak tie beams (*hatule*). All these materials, when exposed to weather and without regular maintenance and repair, decay rapidly, especially clay and wood. Considering that wood prevails both in framing and appearance, this type of mosque is sometimes referred as wooden (Bećirbegović, 1990).

The most relevant reference which deals with small neighbourhood mosques is *Džamije sa drvenom munarom u Bosni i Hercegovini* (3). The author Madžida Bećirbegović, brings valuable study on various examples throughout the country, thus explaining and emphasising the true significance of this part of the autochthonous architecture of Bosnia and Herzegovina. After this reference is published (1990), many of these structures were lost, either by the war destruction (1992–95), or by different reasons, while some of them are restored or completely reconstructed after 1995.

HISTORICAL CONTEXT: TUZLA REGION IN THE PAST

According to Handžić (1975, 35), Tuzla was probably conquered at the same time as Srebrenica and Zvornik in 1460, earlier than the final fall of the Bosnian Kingdom (1463). The origin of Tuzla relates to saline sources that have been exploited since the Roman time. The exploitation of salt springs in the Ottoman period, largely initiated the development of two *kasabas* (towns) – Gornja and Donja Tuzla (4). This region was part of the Zvornik Sanjak, the Ottoman administrative unit established between 1477 and 1483 (5). Comparing to nearby towns, such as Zvornik, Gračanica, Brčko, or Bijeljina, Donja Tuzla developed faster, what finally contributed to moving the seat of *mutesarraf* (governor) from Zvornik to Tuzla in 1851.

Prior to Ottoman conquest, the late medieval town Sol (Donja Tuzla) was fortified with wood, and for the first time it was referred in Turkish sources from 1463 as *Agaç Hisar* (Wooden Town) (Handžić, 1975, 31-32). Compared to stone fortified medieval towns in region, such as Zvornik, Teočak, and Srebrenik, Donja Tuzla was the only one which was named as wooden. Although it was an important place in the northeast Bosnia, it has never had a monumental Ottoman structure. Reasons can be searched

3. English: *The Mosques with Wooden Minarets in Bosnia and Herzegovina* (Translated by E. Jahić)

4. Donja Tuzla later developed faster and grew into one of the most important towns in northeast Bosnia. More about this see Adem Handžić (1975) *Tuzla i njena okolina u XIV vijeku*, Svjetlost, Sarajevo, 207

5. In the 16th Century, Zvornik Sanjak spread over the territory of the northeast Bosnia and west Serbia, thus including 31 *nahiye*, 21 in Bosnia and 10 in Serbia. See Handžić (1975), 43.

within political, economic, or material circumstances. However, one of the obvious arguments may be the lack of a nearby quality quarry, and as a consequence, the underdeveloped tradition of stone-masonry. In addition, it is certain that the Tuzla region was abundant with forests, so the carpentry craft has advanced considerably.

The *kasaba* Donja Tuzla was continuously expanding since the beginning of the 16th century. Thus, at the end of the century, it consisted of nine neighbourhoods (*mahalles*), while additional three developed at the beginning of the 17th century. Their origins and titles are generally associated with a founder of the mosque or masjid, around which the settlement grew up. Before the end of 16th century, there were seven mosques and one masjid, while three mosques and one masjid were built before 1644 (Handžić, 1975, 188). Each of buildings were topped with wooden pitched roof. We can be sure that merely three mosques were built with a stone minaret before 1600. Due to large-scale reconstructions in 19th century, none of these three mosques preserved its early form (6). Out of a total of 12 mosques in Donja Tuzla, there were seven mosques and masjids with a wooden minaret and porch. They were likely modest in size, having thick mud-brick walls, and wooden porch in front of the entrance. Four of them were pulled down from 1945 to 1957 (Hadžimehanović, 1982, 122-40). Today, only three buildings with wooden minaret and porch exist in Tuzla. The Džindijska Mosque and the Mejdanska Mosque were lately restored, and are subjects of this study.

The oldest mosque in Donja Tuzla was built soon after 1533 in the Atik neighbourhood (*mahalle*). The prominent location at the highest place in the centre of the town indicates indisputable value of the mosque, which is, in early records, mentioned as *Časna* (honourable) Mosque. Since no name is linked to it, it can be considered to have been built from state funds for the needs of the crew and a small Muslim population. No reliable sources give precise information on its appearance. However, there is an assumption that the first mosque in Donja Tuzla, was likely built of mud-brick and wood, and with no minaret (Hadžimehanović, 1982, 119).

The sources on early mosques in wider region of Tuzla are very scarce. According to Handžić (1975, 143), soon after the Ottoman conquest, earliest mosques were built in captured fortresses for the needs of the military crew. Those were state mosques used and maintained by soldiers. They existed in Zvornik, Srebrenica, Kušlat, Teočak, Sokol and Srebrenik (Handžić, 1975, 143). The only surviving structure is the mosque in Kušlat (7), the medieval fortress south of Zvornik. It is assumed that the mosque was erected between 1460 and 1480. It stands on a high cliff visible from several positions. Almost square in plan, this austere and authentic structure is topped with very steep roof, together with wooden minaret which rises at the top. Inside the mosque, there is a spacious wooden *mahfil* resting on two posts.

Apart from the early structures within fortifications, mosques with wooden minarets were founded in many towns and villages of northeast Bosnia. Unfortunately, most of them are not systematically documented and valorised. According to the statistics from 1933, which is discussed by Bećirbegović (1990, 19-20), there were a total number of 258 mosques in the area of the Tuzla mufti (8). Only 41 (16%) were built with stone minaret, while 205 (84%) mosques had wooden minaret. If we take into account a total number of 93 half-ruined and 32 ruined mosques in the same area, there were only 133 (51,5%) in a solid condition. Since no later

6. Those are: Hacci Hasan (*Čaršijska*) Mosque (after 1548, reconstructed 1874), Turalibegova (*Poljska*) Mosque (1572, reconstructed around 1890), Kizlar (*Jalska*) Mosque (before 1600, reconstructed 1891–1910). Refik Hadžimehanović (1982) *Ljetopis Tuzlanskih Džamija, Takvim*, Sarajevo.

7. After being destroyed by the Serbian army in 1993, the mosque was restored in authentic form in 2011–13.

8. The area of Tuzla Mufti in 1933 approximately match the northeast Bosnia and Herzegovina. It consisted of: Bijeljina, Brčko, Gračanica, Gradačac, Kladanj, Maglaj, Srebrenica, Tuzla, Vlasenica and Zvornik.

9. Today's Tuzla, the administrative centre of northeast Bosnia and Herzegovina

information on these mosques is available, it is not possible to presume how many exist today. The periods of war destruction, firstly during World War II, and especially the last 1992–95 war, but also many other reasons contributing to the poor maintenance or disappearance of this part of the built heritage, definitely resulted in a significant reduction in their number and authenticity. The remaining mosques were maintained or rebuilt at the initiative of their users and with donor funds. Some of them have been under the formal protection of state agencies for decades, such as Fethiyye Mosque in Stari Teočak. The others got a status of protected cultural monument after the 1992-95 war. The examples are old mosques in Špionica (Srebrenik) and Tuholj (Kladanj), both in northeast Bosnia.

FOUR CASES OF RESTORATION IN TUZLA REGION

Four small mosques with wooden minaret in Tuzla region are chosen according to their present condition and apparent values, as well as the fact that each of them was restored in a few last decades. These samples illustrate the 16th and 17th century local tradition in northeast Bosnia. Their locations belonged to the administrative area of Zvornik Sanjak (Figure 1). The Džindijska Mosque and the Mejdanska Mosque are modest neighbourhood (*mahalle*) mosques, both located in Donja Tuzla town (9). The Atik Mosque in Čive is located near Tojšići settlement, about 10 kilometres to the southeast, whilst the Džebarska Mosque is located in a hamlet of the same name, approximately 20 kilometres south of Tuzla town. The first two mosques were built in expanding town (*kasaba*) environment, while the last two were built in typical rural area. In terms of typology, all belong to a single space type with a two-story porch, both under the wooden pitched roof with integrated wooden minaret.

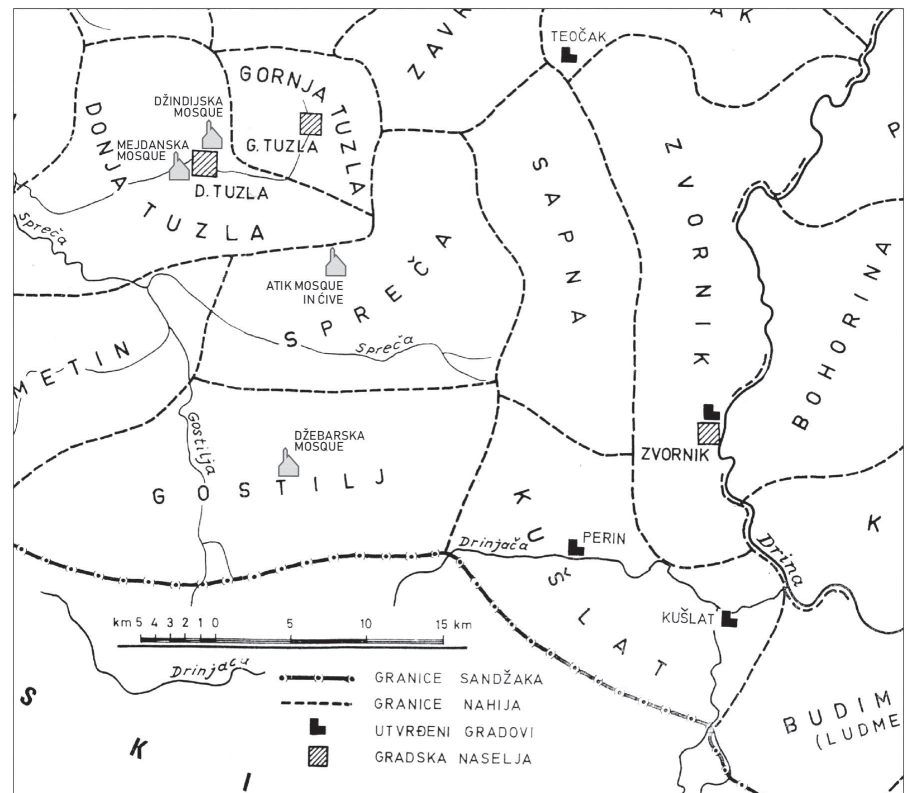


Figure 1. Map of the Tuzla Region Showing Locations of Four Mosques (From the Map of the Zvornik Sanjak in the 16th Century According to Handžić (1975))



Figure 2. The Džindijska Mosque according to Meringer (1899) (Watercolour painting by Simić)

No reliable data on their original form are available. Only a few photos, sketches and paintings show their earlier appearance. By the comparison and analysis of their condition before and after restoration, as well as on the common knowledge and available data of earlier form, it is possible to identify the quality and level of changes.

The Džindijska Mosque in Tuzla

The mosque was built in the Džindijska neighbourhood (*mahalle*) in Tuzla town, which had been developed shortly before the end of 16th century (Handžić, 1975, 186) by Mustafa Džindija (10). It is assumed that he founded a mosque as well. However, the mosque was mentioned in 1701 under the name of a certain Husein Čauš, who probably renewed it (Handžić, 1975, 186). The mosque was erected at the crossing of roads from which the main one led directly into one of the four main gates of fortified *kasaba*. The oldest known record of its appearance was made at the very end of the 19th century. In his brochure from 1899, Rudolf Meringer (1899, 237) brought water colour paintings with plans of several neighbourhood mosques in Tuzla. The image of the Džindijska Mosque shows wide gallery in the porch that is extended on three sides. Both gallery and roof eaves are supported by short bracing beams (*čusteci*) (11) (Figure 2).

However, the image of the mosque taken before 1982 (Figure 3), clearly shows changes made in the meantime. The building seemed fairly deteriorated, with no extensions of the exterior gallery, and with the roof covered with clay tiles. Still, some details of decorative carving on the timber posts were visible. Thanks to the initiative of several conscious individuals in Tuzla, this valuable example of vernacular Bosnian

10. Džindi (Turkish: *Cindi*), "...a man who knows the ridding skill, or soldier who knows well all rules of the ridding." Handžić (1975), 75.

11. Singular: *čustek*. Probably originates from Turkish word *köstek*.



Figure 3. The Džindijska Mosque Before Restoration 1982 (IGRO Univerzal, Photo Monography of Tuzla, 1983)

Figure 4. The Džindijska Mosque 2004 (Courtesy of M. Terzić)

architecture has been saved from the final disappearance (12). The building was completely restored, except mud brick walls which were reinforced and newly rendered (13). In addition, the roof was renewed with original roofing material, wood shakes (Figure 4). Almost twenty years later, deteriorated shake has been replaced by a plain board (*šimla*). The current condition of the roofing cover is very bad and requires immediate replacement.

The mosque measures approximately 12,5×8 m outside, and consists of a prayer room 7,3×6,15 m and two-story porch 3,65 m deep (Figure 5). The distinctive feature of massive mud-brick walls is tapered form slightly inclined towards the top both inside and outside. There are 16 windows in total, four in two levels on each side. Lower windows are rectangular and secured with a simple iron grid (*demir*), while upper ones are narrower and shaped with slightly pointed arch. The entrance door with semi-circular arch is framed with tall rectangular portal. The similar tall portal frames the semi-circular mihrab niche. The interior wooden gallery (*mahfil*) is set up alongside the entrance wall. It is supported by side walls and two timber posts. To climb up on, a very steep and narrow stairs are placed at the right corner. No particular decoration remained within the mosque or at the exterior.

12. Out of twelve mosques in Tuzla dating from Ottoman period, five are knocked down in fifties of 20th century. Refik Hadžimehanović (1982).

13. The Republic Institute for the Preservation of the Cultural Heritage Monuments of Socialist Republic of Bosnia and Herzegovina

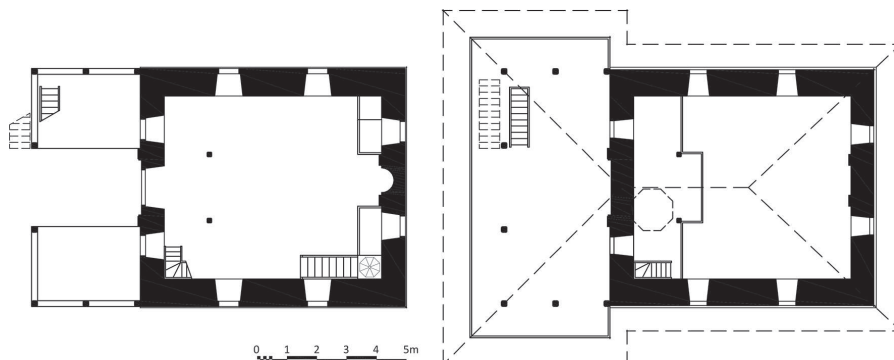


Figure 5. Plans of the Džindijska Mosque; Left: Ground Floor, Right: *Mahfil* (Drawing by E. Jahić)

The wooden porch consists of eight wooden posts supporting the exterior gallery and the roof. At the ground level, two side raised platforms (*sofe*) are covered with carpets to serve as a summer prayer extension (*son cemaat yeri*). The exterior gallery is extended over the sofe at three sides, measuring in total 10×4,6 m. Both gallery and walled prayer space are covered with steep bonnet roof, clad with wood boards. The minaret with 1,35 m thick shaft, ascends up from the roof base and ends up above the ridge. It is clad with vertically nailed board. The shaft ends with closed and slightly wider sharafa, with small openings at each side. The sharafa is topped with pyramidal roof cap clad with sheet metal.

The Mejdanska Mosque in Tuzla

A certain Dželāli Vāiz Mehmed-Efendi founded a masjid in Donja Tuzla before 1644, where he performed the duty of imam until 1664 (Handžić, 1975, 188). Later on, the masjid was mentioned as Vāiz Ali-Efendi Mosque in Dželāli or Mejdān neighbourhood (*mahalle*) in Donja Tuzla town (Handžić, 1975, 188). Today, it is known as the Mejdanska (*Meydan*) Mosque. Its location shows typical position of the mosque in the *mahalle* development during the Ottoman period. The mosque is situated near the crossing of two streets, on the triangular sloping site together with adjacent *Sibyan Mekteb*. As is the case of the Džindijska, the oldest recorded appearance was available through Meringer's brochure (1899, 237). The image shows a mosque with two-story porch with extended gallery, four windows on southwest side, and a roof covered with shakes (**Figure 6**). At the first glance it resembles the Džindijska Mosque.

As many other mosques in Bosnia and Herzegovina, it lost the original look during some of previous interventions, the most likely at the beginning of the 20th century (**Figure 7**). The building had six plain timber posts rising from the porch and supporting the front part of the roof. Instead of shakes,



Figure 6. The Mejdanska Mosque according to Meringer (1899) (Watercolour Painting by Simić)



Figure 7. The Mejdanska Mosque before 2005 (Photo by E. Jahić)



Figure 8. The Mejdanska Mosque after restoration (Courtesy of M. Terzić)

the roof had been covered with clay tiles. Since some of lower windows had been walled in, the interior looked pretty dull. As in the case of the Džindijska, the image brought by Meringer (1899), was pretty helpful in the last renovation in 2005 (14). The timber elements were restored in a quite correct manner (Figure 8). Only massive walls were kept and refurbished. The roof was covered with wood shakes, however, due to a low quality, the roofing material did not last as it was planned.

14. The official client was the Islamic Community of Tuzla, while the project was done by a local architect in accordance with the expert supervision of the Cantonal Institute for the Preservation of the Cultural Heritage Monuments in Sarajevo.

This is the smallest one among the four analysed cases. Its exterior size measures 9,10×6,7 m (Figure 9). The prayer room is almost square in plan and takes 5,54×5,15 m. Mud brick walls 78 cm thick contain 15 windows, four in two levels on each side, except the entrance wall. The mihrab is semi-circular and framed with a simple tall portal. The interior *mahfil* is supported by side walls and a single post. It takes almost half of the prayer room, with a muezzin extension on the right side. Very steep and narrow stairs at the right corner are placed bellow the *mahfil*. The porch is only two metres deep and consists of six wooden posts supporting the

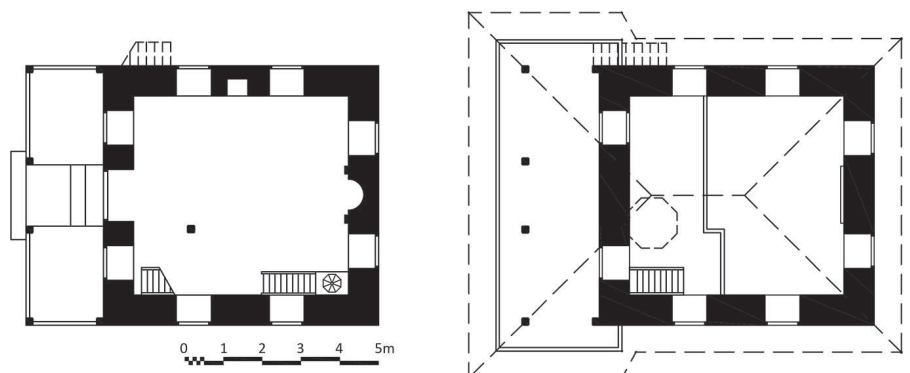


Figure 9. Plans of the Mejdanska Mosque; Left: ground floor, Right: *Mahfil* (Drawing by E. Jahić)

15. This was common practice in many small mosques in Bosnia and Herzegovina, especially at the beginning of the 20th Century.

16. Hand cut wooden battens or short boards fixed slantwise or grooved in beams or posts. Singular: *šašavac*

exterior gallery and roof. The sofe are surrounded with low parapet made of wooden board (*parmak*). Like in the Džindijska Mosque, the extended gallery over the sofe is reconstructed back. The hip roof and minaret are similar in form as of the Džindijska Mosque.

The Atik Mosque in Ćive

This mosque is situated on the hillside Ćive between two countryside settlements: Gornje Vukovije and Tojšići, both in the vicinity of Tuzla town. No reliable data about this mosque is reached, especially on its date of the construction. The fact that its name "Atik" was commonly associated to earliest mosques built in an area or town, tells us that it may be one of the oldest in Spreča *nahiye* (Bećirbegović, 1990, 109). The intrinsic fact on this building is a surrounding large graveyard with numerous old *ghazi* grave stones. Considering its formal characteristics, it may be founded not later than the 17th century.

As is the case with previous samples, no data on an earlier appearance of this building could be reached. Prior to its last restoration, the Atik Mosque seemed fairly time-worn, with the porch closed on with brick (15). The mosque was restored by the local community with the service of a skilled architect, in period of 1991, and then in 1998–1999. Timber elements were refurbished or completely replaced (Figure 10). Despite the lack of information on the mosque's earlier appearance, the architect succeeded to restore the most suitable look. Instead of original shakes, the roof is clad again with flat clay tiles. Brick walls in the porch are demolished and the wooden fence is made of tall plain boards, what seems quite suitable because of the remote location of the building (Figure 11). The wooden minaret is completely restored with a new material. It has a polygonal sixteen sided shaft 1,3 m wide. The sharafa is octagonal and it has small openings with wooden cases. Both minaret shaft and sharafa are clad with battens in a traditional herringbone pattern (*šašavci*) (Figure 12) (16). There is a low slope conical roof at the top, covered with sheet metal.

The exterior dimensions are close to 11,7×8,5 m. The prayer room is almost square 8,3×8,15 m (Figure 13). Unlike the common massive mud-brick or stone walls, the Atik Mosque is among few examples in Bosnia that has half-timbered walls with infill of solid brick. The original infill was

Figure 10. The Atik Mosque in Ćive during the restoration (Courtesy of H. Dropić)

Figure 11. The Atik Mosque today (Photo by E. Jahić)





Figure 12. The Minaret of the Atik Mosque
(Photo by E. Jahić)

probably plastered and whitewashed wattle-and-daub, which has long since gone. This construction method is still visible in a few older houses in the vicinity of the mosque (Figure 14). The timber frame beams are fixed in a way as to accommodate sixteen windows in two levels on four sides, measuring 65×85 cm. Lower windows are secured with a simple rectangular iron grid (*demir*).

The interior contains common elements of a prayer room, such as: mihrab, minbar, *kursi* and *mahfil*. Due to limited wall thickness, the shallow mihrab niche is accentuated by a rectangular projected portal. The *mahfil* is 3,2 m deep, together with the muezzin's place extended on the right side. The four timber posts carry the *mahfil* with no internal stairs. The front porch contains six timber posts which support the gallery and partially the roof. There is a single flight of stairs in the right sofa leading to the gallery and then, through the door, into the *mahfil*.

The Džebarska Mosque

An old mosque in Džebari hamlet is the fourth example of restoration. Since Džebari remained with a minor number of households in the last century, the mosque is presently situated on a secluded slope at the edge of Kuljan settlement. It was originally built near the former trade route between Sarajevo and Zvornik, when the Džebari area was far more frequent. Soon after the region has been conquered by the Ottomans, it is assumed that the mosque was built for the needs of a smaller crew.

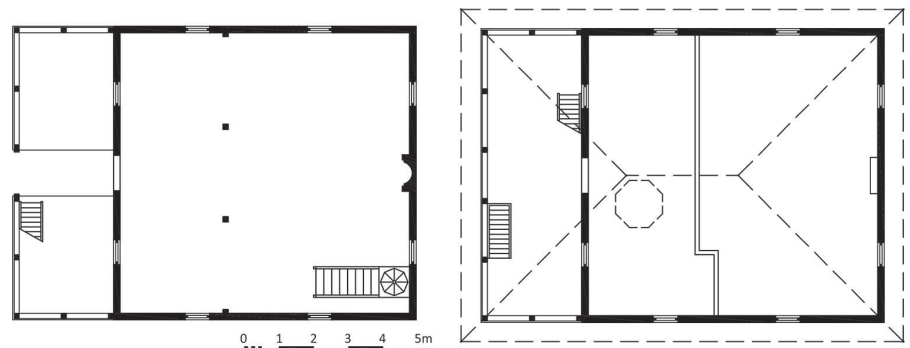


Figure 13. Plans of the Atik Mosque; Left: ground floor, Right: *Mahfil* (Drawing by E. Jahić)



Figure 14. Wattle-and-daub remains in the vicinity of the Atik Mosque (Photo by E. Jahić)



Figure 15. The Džebarska Mosque in the first half of the 20th century (Photo by unknown author)



Figure 16. The Džebarska Mosque at the beginning of restoration works in 2005 (Photo by E. Jahić)

According to Suljkić (Ibni Hasan (17), 1985), some elderly locals claimed that an oral tradition kept this mosque as an "exceptional" and one of "the oldest in the Tuzla region." However, as is the case with the Atik Mosque, no source brings any evidence on its foundation date, or early appearance.

The basis of the latest restoration was a sketch of unknown author, brought by Suljkić (Ibni Hasan, 1985), as well as the photo dating back to the mid-20th century (Figure 15). Both images clearly show that the mosque have a high wooden curtain enclosing the porch. The Džebarska Mosque was restored in 2005 by the local community with a service of a skilled architect. Before the restoration, the porch was, as in the previous case, walled up (Figure 16). Both beams of the roof structure and other timber elements seemed worn-out. There were also several visible cracks in the rubble walls, probably because of a shallow foundation on the sloped terrain. The mosque was completely restored, except rubble walls which were reinforced and newly rendered. The wooden veranda, the roof and minaret, were rebuilt according to available images (Figure 17). Interior elements were refurbished and reinstalled back, or eventually rebuilt where it was necessary.

The Džebarska Mosque measures approximately 12×8 m externally, and consists of a prayer room 7×6,2 m inside and two-story porch 3,3 m deep (Figure 18). The walls of the prayer room were built of local rubble, unequal in size and irregular in shape. They are nearly 90 cm thick, all strengthened with oak *hatule*, and plastered and whitewashed both inside and outside. Two lateral walls are pierced with four rectangular and quite small windows, except *qibla* side with two high windows, and entrance wall with two lower windows. The mihrab is simple semi-circular niche with no portal or decoration. The ceiling consists of oak beams and battens inserted in herringbone pattern into side grooves of the beams. The hand-made traditional woodworking of ceiling beams and *šašavci*, as well as the refurbishment of the deteriorated *mahfil* beams, were done by the local master (Figure 19).

Unlike two examples in Tuzla town, and similar to the Atik Mosque, both local climate and secluded location imposed almost fully enclosed appearance of the porch. It has a curtain made of profiled boards and diagonally laid cross-battens (*mušebak*). Eight timber oak posts, 20×20 cm, support the gallery together with roof. A single flight of stairs at the left sofa leads to the gallery. Interior *mahfil* is three metres deep, with the



Figure 17. The Džebarska Mosque after the restoration in 2006 (Photo by E. Jahić)

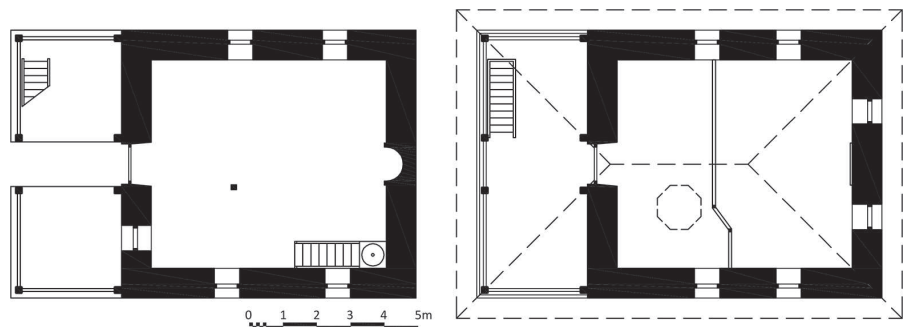


Figure 18. Plans of the Džebarska Mosque; Left: ground floor, Right: *Mahfil* (Drawing by E. Jahić)

muezzin extension on the right side, supported with a single timber post. Like as of Atik Mosque, there are no stairs within the prayer space. The access to the *mahfil* is via porch gallery, which is accessed by the exterior stairs.

The unique hip roof covers the mosque and the porch. It is assumed it was originally covered with shakes which were subsequently replaced by the clay tiles. Following the latest condition, the local community asked for new tiles again during the last restoration. The peculiarity of the mosque is also visible in the minaret. In comparison to many examples, the minaret stands almost exactly in the middle of the long side of the roof. Its shaft consists of eight grooved oak poles with slantwise inserted *šašavci*. It is finished with a slightly wider *sharafa* having small openings with cases at each side (Figure 20).



Figure 19. View of *Mahfil* in the Džebarska Mosque (Photo by E. Jahić)

Figure 20. The Minaret of the Džebarska Mosque after the restoration (Photo by E. Jahić)



COMMON AND DISTINCTIVE FEATURES

Four mosques in Tuzla region share common features in terms of typology, form, and construction methods. Except dimensions, variations are apparent in proportions, certain design solutions and details, and they are result of particular site conditions, as well as a deep-rooted construction practice.

The form, materials and structures of this type of the mosque generally correspond in a large extent to availability of materials: mud brick, stone, rubble or timber. All three materials and methods were simultaneously used in residential architecture of Bosnia and Herzegovina (Kadić, 1967; Meringer, 1899). If we look into traditional Bosnian two-story house, we can see that it was typically built with thick walls in the ground level, while half-timbered light walls were common in the upper story. Massive walls of the prayer room pierced with window openings correspond to a ground

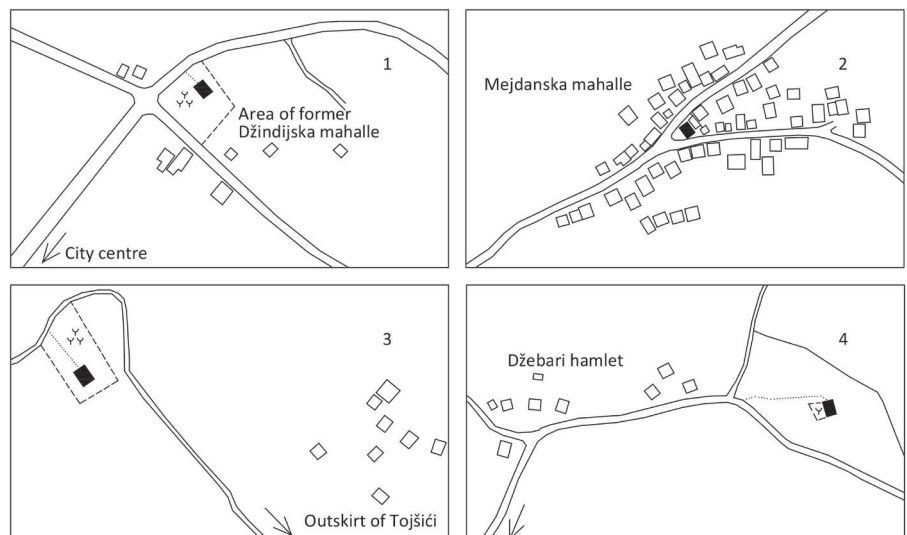


Figure 21. Maps showing location of mosques in present surrounding: The Džindijska Mosque (1); the Mejdanska Mosque (2); the Atik Mosque (3); the Džebarska Mosque (4)

18. Tabak Hacci Suleyman mosque in Sarajevo had two-story porch. Its gallery was extended only at front side, however it does not exist today.

floor of the traditional house, while semi-transparency of the mosque porch (also referred as *musandera*) correlate a similar concept of galleries in the traditional house (*divanhana; kamerija*). Although rarely used in mosque construction, the half-timbered walls, like as of the Atik Mosque in Ćive, find the equivalent in upper stories of the traditional Bosnian house. Both mosques and houses are exclusively topped with the hip roof and covered with either a wood shake, or a curved clay tile (*čeremit*). The sole formal elements which refer the essential purpose of the mosque are minaret, mihrab, and minbar.

The Džindijska and the Mejdanska Mosque in Tuzla town, the Atik Mosque in Ćive, and the Džebarska Mosque, show authentic features that deserve attention, and should be preserved for the similar future interventions. Unlike the majority of mosques in Bosnia and Herzegovina, with a single-story porch and two side sofe, the examined cases belong to a type with a double-story porch with a gallery above the sofe. Moreover, two mosques in Tuzla town are the sole examples with the extended gallery (18). The overall impression of the structural concept of the porch with extended gallery which is protected with deep eaves, exemplify a developed carpentry tradition in the Tuzla region. Main characteristics of four examples are shown in **Table 1**.

The differences are also found in the number and position of the stairs. This type of the mosque can have one or two stairs, an internal one in the prayer room and an external one stretching from the sofe to the gallery. In case of the Džindijska Mosque, there are both internal and external stairs at present, and there is no door in the front wall. However, based on Meringer's drawing, we can see that there had been external stairs directly below the gallery extension and not in left sofa, like at present (**Figure 2**) (**Figure 5**). It is not certain what the reason was because external stairs were not reintroduced to its original place.

Unlike the Džindijska Mosque with both internal and external stairs, the Mejdanska Mosque currently includes stairs within the prayer room. As in previous cases, according to an old floor plan drawing, it is quite clear that there were additional external stairs to climb up to the gallery (**Figure 6**) (**Figure 9**). There is no information when and why those stairs had been removed. This may have happened in the first half of the 20th century, when the porch gallery had been removed too. Comparing to Tuzla's mosques, the Atik and the Džebarska Mosque have no stairs inside the prayer room. The access to the *mahfil* is obtained by means of a door in the wall above the main entrance.

Regarding the roof form and its original cover, it is obvious that all four examples had pitched roof clad with shakes. An attempt to restore the

Table 1. The main characteristics of the four mosques in Tuzla Region

	Walls (Average thickness)	Stairs	Porch gallery [Depth × Width]	Minaret cladding	Present/original roofing
Džindijska Mosque	Tapered mud brick (90 cm)	Internal and external	Extended (4,70 × 10,10 m)	Board	Board/Shake
Mejdanska Mosque	Mud brick (78 cm)	Internal	Extended (2,65 × 8,0 m)	Board	Sheet metal/Shake
Atik Mosque in Ćive	Half-timbered walls (19 cm)	External	Normal (2,90 × 8,45 m)	Šašavci	Flat tiles/Shake
Džebarska Mosque	Rubble (88 cm)	External	Normal (3,25 × 7,95 m)	Šašavci	Flat tiles/Shake

original wooden roofing material did not bring the expected result. Considered as a decaying material, wood shakes should be replaced more frequently than other material. However, providing quality shake as well as roofing workers is less and less reliable. After it was covered with the original roofing material in 1982, deteriorated shakes on the Džindijska Mosque were replaced with a sawn board some two decades later. Soon after, this roofing material appeared as an inappropriate substitute, and today it is in a very bad state.

Following the foundation of brickworks in the Austro-Hungarian period (1878–1918), worn out shakes were mostly replaced with clay tiles. Since new material was not as demanding in terms of the roof pitch as wooden cover, it is not certain that existing roof forms and pitches always reflect the original ones. After the clay tiles became a common replacement of wood shakes on numerous houses and mosques a hundred or even more years ago, it may be understandable that it is set up again in mosques in Čive and Džebari. During the last restoration, The Mejdanska Mosque was also covered with shakes. Despite the intention to bring back the authentic look of the mosque, new shakes did not last as expected. The material deteriorated in a few years and it was finally replaced with a dark brown sheet metal in 2017.

The minarets of two Tuzla's mosques are presently clad with plain vertical board (*taraba*), as they were prior to the last restoration. Knowing that the above mentioned old paintings of two mosques are not large and clear enough, it is not possible to determine whether the cladding could be different. The two remaining mosques, the Atik Mosque and the Džebarska Mosque, have battens in herringbone pattern (*šasavci*) applied on minarets. This cladding technique is reintroduced on the ceiling of the second one, during the last renovation (19). Since the wooden minarets are exposed to weathering and consequently deteriorate faster, subsequent renovation may be critical in terms of providing skilled carpenters.

Although the cladding with *šasavci* was applied in numerous residential and other buildings in the same period, there are few remaining buildings exemplifying this traditional technique today. The drawings of numerous Sarajevo's neighbourhood (*mahalle*) mosques and masjids brought by Kemura's chronicle (1913), testify to the frequent use of this technique on minarets. A handsome example was Shayh Bagdadi Masjid in Bistrik, in Sarajevo (20). This technique was also applied in different parts of Bosnia, such as Sanjak in today's Montenegro. The two existing examples such as Kučanska Mosque in Rožaje and Vezir's Mosque in Gusinje (21), both dating back to the 18th century, have *šasavci* applied on tall minarets.

The four mosques in Tuzla region are analysed in terms of floor plan ratios, and compared with several examples from central and northeast Bosnia and Herzegovina (22). They show little divergence in relation to average (Table 2). Although less buildings are squared in plan, the prayer room is often slightly elongated. Its width ranges from 5 to 8 metres, which was possibly affected by available timber. The depth is usually 10–20% longer than the width. However, due to the porch and wall thickness, the external length is 30–60% longer than its width, and matches to a typical hip roof proportions. The possible explanation could be found in structural limitations and deeply rooted building tradition, but also in a builder's conception of a mosque size and form that fits into a neighbourhood surrounding.

19. A local carpenter who participated in the restoration of the mosque claimed that *šasavci* existed on the ceiling earlier.

20. It was demolished in 1953.

21. Rožaje and Gusinje belonged to Bosnia. They are presently municipalities in Montenegro with predominantly Bosnian population.

22. All examples belong to a type which comprises several common characteristics such as: a wooden minaret with enclosed *sharafa*, wooden porch, and interior *mahfil* aligned to the entrance wall.

Mosque	Prayer room Depth × Width [D × W] (m)	Depth to Width ratio [D/W]	External dimensions [L × W] (m)	Length to Width ratio [L/W]
Džindijska Mosque in Tuzla	7,3 × 6,2	1,2:1	12,6 × 8,1	1,6:1
Mejdanska Mosque in Tuzla	5,5 × 5,1	1,1:1	9,1 × 6,7	1,4:1
Atik Mosque in Čive	8,4 × 8,1	1:1	11,6 × 8,5	1,4:1
Džebarska Mosque	7,0 × 6,2	1,1:1	12 × 7,9	1,5:1
Brdska Mosque in Tuzla	8,4 × 7,3	1,1:1	13,5 × 8,7	1,6:1
Atik Mosque in Koraj	7,0 × 6,6	1,1:1	11,5 × 8,3	1,4:1
Čaršijska Mosque in Srebrenica	6,4 × 6,4	1:1	10,9 × 8,3	1,3:1
Avdipašina Mosque in Tešanj	9,5 × 8,0	1,2:1	13,5 × 9,5	1,4:1
Konatur Mosque in Travnik	7,5 × 6,5	1,2:1	12 × 8	1,5:1
Ibrahimbegova Mosque in Jajce	8,0 × 7,0	1,1:1	13,5 × 8,4	1,6:1
Behram Efendijina Mosque in Banja Luka	6,2 × 6,7	1,1:1	12 × 8	1,5:1
Atik Mosque in Fojnica	7,6 × 6,8	1,1:1	12,7 × 8,7	1,5:1
Sinan Voloder Masjid in Sarajevo	8,0 × 7,4	1,1:1	12,8 × 8,8	1,5:1
Ašik Memija Masjid in Sarajevo	8,2 × 6,8	1,2:1	12,6 × 8,3	1,5:1

Table 2. Comparative list of dimensional relations of the floor plans

Over the past, due to various reasons and mostly decaying materials, the four examined mosques have probably been renovated several times. Except few late 19th century paintings and 20th century photos and sketches, no data on their earlier appearances are available. The latest restorations were all done according to available data and common knowledge and understanding of this building type. Only the Džindijska Mosque was restored by the official government institution and by following the established procedure. The remaining three buildings were renovated by local communities who were also aware of the importance of their preservation. Compared with the changes and additions made in earlier interventions, and which obviously disrupted the original appearance, the latest restoration and renovation of all four structures brought back an earlier form, which is definitely closer to the authentic look. Caused by the lack of data, not all parts were restored as they should be. For instance, although they are clearly visible on the two old paintings, the external wooden stairs had not been reconstructed in two mosques in Tuzla town.

A valuable indicator of changes in the urban context of the four mosques is a difference between their former and current role, surrounding and significance (**Figure 21**). Both mosques in Tuzla were founded in the early expansion phase of the typical neighbourhood (*mahalle*) environment. Until the 1980s, the Džindijska Mosque was surrounded by the typical residential district. The position of houses with tight courtyards arranged along narrow lanes (*sokak*), testified on the long gone setting of the Ottoman neighbourhood (*mahalle*). The neighbourhood was mostly abandoned due to the terrain sinking, with houses being largely demolished (23). Consequently, the mosque lost its former meaning, and today stands as a reminder of the past, mainly visited on Friday prayers.

Contrary to its older model, the Mejdanska Mosque retained its original role. It is located in the centre of the densely populated settlement where is opened during the five prayer times. Although few recently built houses dominate over the traditional residential district, the mosque still kept the

23. The problem of the terrain sinking in Tuzla was a consequence of the salt water exploitation especially from 1950s to 1970s in the past century.

prominent position. It is also generally accepted by the neighbours and citizens alike as a symbol of this part of the city.

Unlike two urban examples, the Atik Mosque and the Džebarska Mosque were originally erected in the typical rural surroundings, and both were carefully positioned in relation to the settlements. Although they had far greater significance in the past, the long-term moving of the settlements closer to the main roads, as well as a construction of new and larger mosques, definitely contributed to their gradual neglect. Thus they presently have mainly historical significance and are rather visited on special occasions.

CONCLUSION

Small neighbourhood mosques with wooden minaret exemplify authentic building tradition in Bosnia and Herzegovina during the Ottoman period (1463–1878). Concerning several factors that affected their past and present existence and usage, particularly deterioration and low maintenance of perishable materials, these sensitive structures are in a position to gradually disappear if they are not properly valorised and systematically and legally protected. Hence the institutional framework of the heritage preservation should be respected by all interested and responsible sides.

Based on the analysis of the four case examples in Tuzla region, this study pointed to the authentic values of small neighbourhood mosques with wooden minaret in general, as well as some specificities in particular. The way they have been originally constructed is much the same as the one of the residential architecture of the same period. The Džindijska and the Mejdanska Mosque in Tuzla, the Atik Mosque in Čive, and the Džebarska Mosque, represent valuable examples of the cultural identity and continuity in their environments. Thanks to continuous use and past interventions, these small neighbourhood (*mahalle*) mosques serve as the unique trace of the past in current urban and rural areas of Bosnia and Herzegovina. The last restorations are characterised by the intention to bring their earlier and appropriate appearance back, then it was prior to it.

As a specific segment of the heritage, small mahalle mosques require continuous observation and systematic research and valuation. To maintain their authenticity, as well as to ensure their usage and exposure in their surroundings, this study demonstrated that these structures can be preserved with sustainable methods and common principles of the restoration and conservation, with due respect of the contemporary context, values and users' needs.

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Anahtar Sözcükler: Ahşap minareli cami; Džindijska (Cindi) Camiisi; Mejdanska (Meydan) Camiisi; Ćiva'da Atik Camiisi; Džebarska (Cebarska) Camiisi.

BOSNA HERSEK'TE AHŞAP MİNARESİ OLAN 16.-17. YÜZYIL MAHALLE CAMİİSİ: TUZLA BÖLGESİNDEN DÖRT RESTORASYON ÖRNEĞİ

Ahşap minaresi, sundurma ve dört iletkenli çatısı olan camii, Bosna Hersek'te (1463-1878) dört yüzyıl boyunca Osmanlılar döneminde inşa edilmiş olan otantik bir bina tipidir. Bu camiileri, yerel malzemeleri kullanarak ve yerel inşaat teknikleri uygulayarak, yerel ustalar yapmışlardır. Camiilere, uygun olmayan şekilde bakım yapılması ve değerlendirilmesi yanı sıra kasıtlı biçimde yıkılmaları, eski camiilerin olduğu yerlerde daha yeni ve modern camiilerin yapılması neticesinde, birçok küçük mahalle camiisi, son yüzyılda yavaş yavaş çökmekte ya da yıkılmaktadır.

Bu çalışmanın amacı; form, inşaat yöntemi, Bosna'da bulunan diğer uygun örnekler ile benzerlikler ve farklar yanı sıra ve restorasyon ile ilgili imkân ve problemler, günümüz kullanımı ve bakımı açılarından, Tuzla bölgesinde 16.-17. yüzyıldan kalma dört küçük mahalle camiisini incelemektir. Tuzla'da Džindijska (Cindi) ve Mejdanska (Meydan) camiileri, Ćiva'da Atik Camiisi ve Džebarska (Cebarska) Camiisi, ahşap minaresi, eğri ahşap çatısı ile tamamen kaplı iki katlı sundurması olan tek odalı cami tipindedir. Bu camiiler yıprandıktan ve görünüşü değiştikten sonra, restorasyonu yapılarak, camilerin eski, özgün formu sağlanmıştır. Kültürel kimlik ve sürekliliğin değerli sembolü olarak, yerel camii tipi olan bu camiiler, değerine, kullanıcıların ihtiyaçlarına ve çağdaş bağlama saygı duyarak sürdürülebilir restorasyon metotları ve prensipleri ile korunabilir.

THE NEIGHBOURHOOD MOSQUE WITH WOODEN MINARET IN BOSNIA AND HERZEGOVINA FROM 16th AND 17th CENTURY: FOUR EXAMPLES OF RESTORATION IN TUZLA REGION

The mosque with wooden minaret, porch and hip roof, represents the authentic building type which had been built on a large number through four centuries of the Ottoman period in Bosnia and Herzegovina (1463–1878). These structures were constructed using locally available materials and construction techniques, all done by domestic builders. Sometimes numerous, small neighbourhood (*mahalle*) mosques constantly decay and disappear in last hundred years, as a result of incompetent appraisal and maintenance, violent or deliberate demolition, and also unacceptable intentions to build a new, larger and more modern mosque in place of an old one.

This study aims to analyse four small neighbourhood mosques in the Tuzla region, dating back to the 16th and early 17th century, in terms of the authenticity of form, method of construction, similarity and differences with other matching examples in Bosnia, as well as problems and possibilities of their restoration, today's use and proper maintenance. Džindijska and Mejdanska mosque in Tuzla town, Atik mosque in Ćiva, and Džebarska mosque, belong to a single space type with a two-story porch, both under the wooden pitched roof with integrated wooden minaret. After being worn out and with an altered look, the restoration works had given them back previous, more authentic form. As a valuable symbol of the cultural identity and continuity, this autochthonous mosque type can be preserved with sustainable methods and principles of the restoration, with due respect of the contemporary context, values and users' needs.

EDIN JAHIĆ; B.Arch, M.Sc., PhD.

Received his B.Arch in 1985 and M.Sc. in architecture from University of Sarajevo Faculty of Architecture in 2003. Earned his PhD. degree in history and theory of architecture from University of Sarajevo, Faculty of Architecture in 2006. Major research interests include Islamic architecture, contemporary mosque design, contemporary urban issues of historic city centres. edinjahic62@gmail.com

