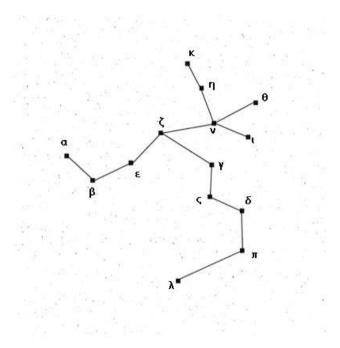


INTRODUCTION



Astronomy is considered as the oldest natural science. From the beginning of the mankind people have been observing stars and their movement, which was important from religious, mythological, calendrical, astrological and cosmological aspects. Ancient civilizations have been erecting buildings with such function which would help them in more precise star observation. Throughout history these buildings have been transformed in more refined shapes and sizes, but remaining with the same function.



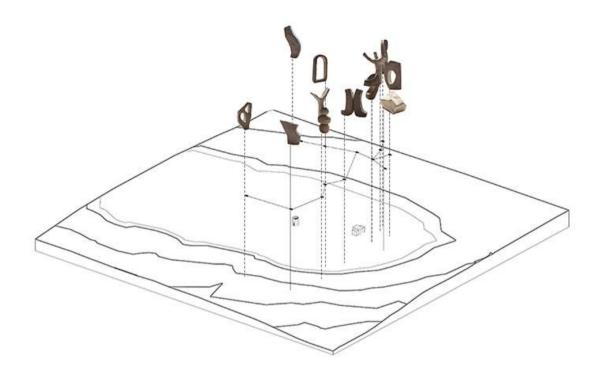
Figure 1-El Caracol, Yucatan, Mayan Observatory

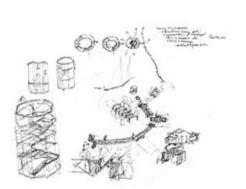


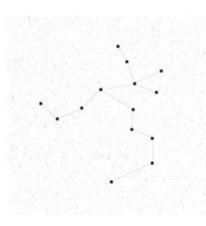
Figure 2-Jantar Mantar, Jaipur, Indian Observatory

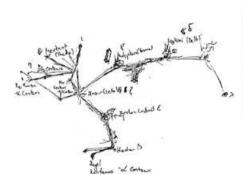
Idea for such building was implemented on the former property of mathematician and astronomer Nagy Károlyi, where the observatory was used in his research work. Once one of the most modernly equipped scientific sites in Hungary, today only the remaining of the buildings are slowly disappearing in the dense forest. Consequences from historical events which occurred on the plot and lack of sources necessary for maintenance of the site created visible traces on the buildings, which are today standing in the ruins and reminding of once majestic property. The question has risen in what way can the spirit of former astronomical garden be revived, so the remaining buildings and their function does not fall into oblivion.

CONCEPT









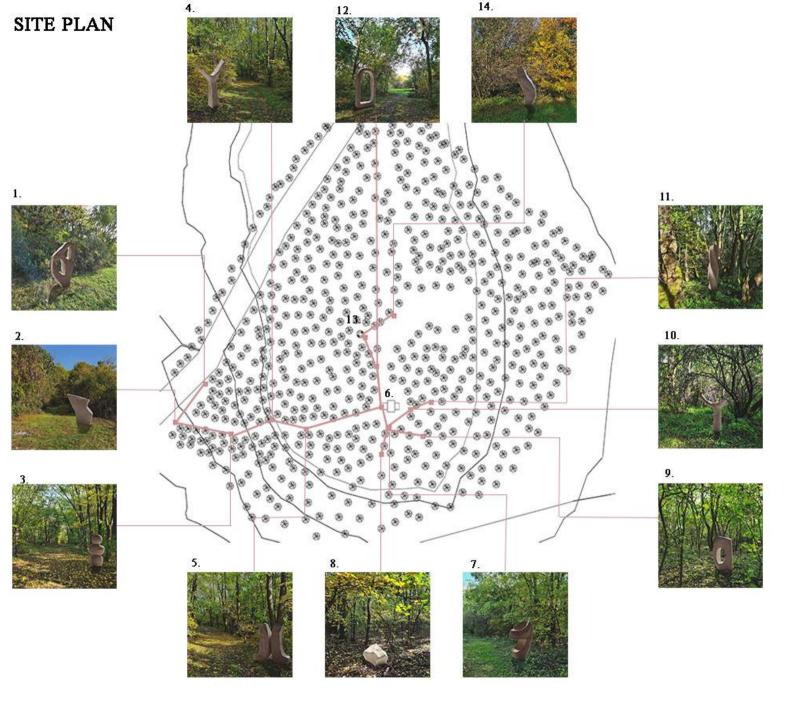
Design for the project started as an idea to create a garden and a path leading through the garden, which would take visitors from the busy road surrounding the site, into peaceful surroundings. As every road has milestones which are determining the road, there was a need to provide such, that would help visitors to orientate and reach different parts of the "astronomical garden" easily. With the aim to have minimal intervention in order to leave the nature almost untacked, main focus was put on how to create the path, which would help to revive the spirit of the function which the site had. In the process of the research, the idea to bring back astronomical spirit lead to the further analysis of astronomy and the constellations, which are one of the main focuses of the astronomy as the science, and main passion of Nagy Károly himself.

There are eighty-eight constellations recognized by the International Astronomical Union. Some of them are more, and some of them less known. At the location of the site, constellation of Centaurus is located. Consisted out of bigger and smaller stars, Centaurus constellation is well known and famous for some of the biggest and shiniest stars in the Milky way.

With that information, the idea arrived to project the constellation of the Centaurus to the site, which as up in the sky, it is determined by its stars, so would be on the site. The stars, or the milestones, determine the path and lead visitors into the universe of this astronomical garden.

Like almost every star, which is recognized by the International Astronomical Union has name, usually represented by the Greek alphabet letters, so each one has second name, usually taken from the Arabic or Chinese cultures, which are famous for their knowledge in the stars and their observation. Each milestone represents a star, and by following that principle, each one is represented individually in the abstract way according to the meaning they have, and that lead to various shapes of each milestone, what gives the diversity and beauty of this garden and its elements.

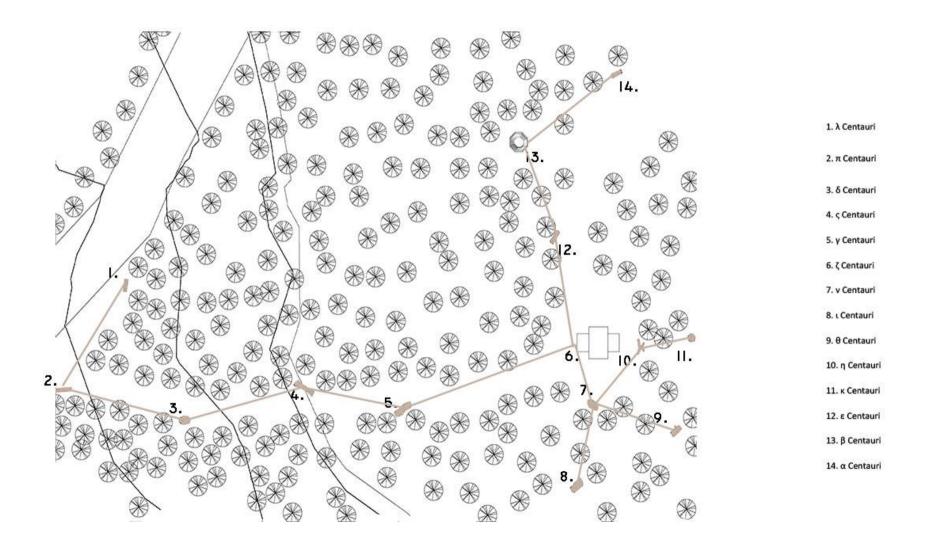
Since the site can be visited both during the day and night time, the remaining tower has been restored, with newly built staircase inside of the structure, which allows visitors during daytime to use it as a lookout tower and enjoy the view of the meadow, woods, nearby quarry and the silhouette of the ruins of Zsambek monastery, and during nighttime to welcome the lovers of star observation, and provide better view and feeling, due to smaller light pollution compared to urban settlements in the vicinity of the site. The staircase intervention serves as a support for the ruins, since there was a need for interference to prevent the collapse of the tower in the future.



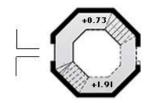
- 1. λ Centauri ''running chicken nebula''
 - 2. π Centauri ''double main sequence''
 - 3. δ Centauri Ma Wei "third star of horse's tail"
 - 4. ς Centauri Alnair "from the southern fish's tail"
 - 5. γ Centauri Mukhtilifain "two things"
 - 6. ζ Centauri Alnair ''the bright one''
 - 7. v Centauri ''ellipsoidal variable star''
 - 8. 1 Centauri Alhakim "wise one"
 - 9. θ Centauri Menkent "shoulder"
 - 10. η Centauri "shell star"

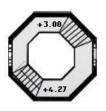
 - 12. ε Centauri "1st star of southern gate"
 - 13. β Centauri Hadar "the settled area"
 - 14. α Centauri Rigil Kentaurus "the foot of the Centaur"

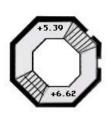
SITE PLAN

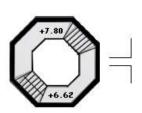


TECHNICAL DRAWINGS

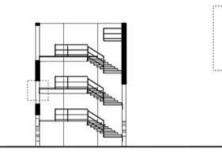








LEVELS OF OBSERVATORY TOWER







SECTIONS OF OBSERVATORY TOWER

AND DETAILS



SITE PLAN SECTIONS

MATERIALS











When choosing the material, it was important to select the proper one, in order to represent the "stars" in the most adequate way, and at the same time to use materials which do not require maintenance and are in harmony with the surroundings.

With the research of the area and the geological composition of the soil, it was clear that the area was full of limestone, dolomite, marble and andesite stones, which would fulfill the requirements as the materials of the sculptures, and contribute from an ecological point of view simultaneously, since there is a quarry in the vicinity of the site, from which the materials could be used.

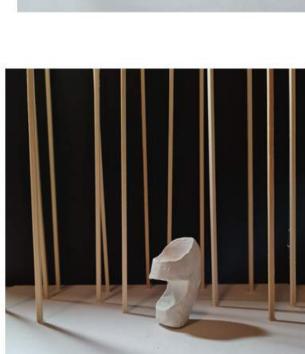
In the quarry a wide range of colors of stones can be found, which helps to better represent the sculptures, since each star/sculpture has different characteristics and meanings and will create diversity among them.

As every sculpture represents in an abstract way the name or the meaning of the star in the Centaurus constellation, so should the material fit to the used form. For the sculptures representing human body or life with its shape, such as α Centauri, or known as Rigil Kentaurus, meaning "the foot of the Centaur", or θ Centauri, also known as Menkent, meaning "the shoulder", material with reddish color, such as dolomite, fits the suitable appearance used in sculptures for this representation. For ϵ Centauri, which means "1st star of the southern gate", limestone as material is used, because it enhances in the best way the shininess of the sculpture representing the bright gate. Sculptures representing stars δ , ς and η Centauri, whose meaning is related to animals, have material with grey color, such as andesite.

As for the material of the staircase, using the example of the remaining loadbearing parts of the tower, steel has been used in order to maintain the harmony with the structure and provide loadbearing support and prevent the tower from collapsing in the future.











Astronomy is considered as the oldest natural science. Since the beginning of mankind people have been observing stars and their movements, which was important from religious, mythological, calendrical, astrological and cosmological aspects. Ancient civilizations have been erecting buildings with such function, which would help them observe the stars more precisely. Such civilizations, like Maya and Inca used heavens for guidance. Their observatories were built aligned with the motion of the celestial bodies. Throughout history these buildings have been transformed in more refined shapes and sizes but remaining with the same function.





Figure 2 Jonton Mantan, Japan, Indian Observatory

An idea for such a building was implemented on the former property of mathematician and astronomer Nagy Károlyi, where the observatory was used in his research work. Once one of the most modernly equipped scientific sites in Hungary, today only the remaining of the buildings, slowly disappearing in the dense forest. Consequences from historical events which occurred on the plot and lack of sources necessary for maintenance of the site created visible traces on the buildings, which are today standing in the mins and reminding us of a once majestic property. The question has risen in what way can the spirit of the former astronomical garden be revived, so the remaining buildings and their function do not fall into oblivion.

