

A Review Paper on Modeling & Designing of Human Statue -Tall Structure using Staad-Pro Software

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INTRODUCTION

Integrating design processing using various designing and modelling software's in high-rise sculpture creates new opportunities for aesthetics discovery. These technologies enable artists to make high rise sculptures and provide safety, modify and disseminate art and make possible a new type of work. By using a behaviour-based software architecture to control a sculptures movement, complex series of coordinated motion can be performed in response to the sculpture's environment and in relation to its internal state. Adding behaviour to sculpture changes the conversation between people and sculpture. As people directly influence the movement of sculpture, the results of this conversation can be stored by sculpture and used to modify the course of future interaction and behaviour. It provides the foundation of a new dialogue between the sculptor, sculpture and the audience.

After studying numerous statues of Patel across the country, a team of historians, artists, and academics chose to proceed with a design submitted by the Indian sculptor, Ram Sutar. The Statue of Unity is a much larger replica of a statue of the leader installed at Ahmedabad International Airport Commenting on the design.

HISTORY OF HIGH-RISE STATUE

Because ancient times could see buildings, which was made apart from being functional demonstrate the power and wealth of the investor. Such an exhibit of extravagant objects Not only does the immediate surrounding area, but also the neighbouring land have considerable impact. Seven wonders in those days there were some of the world's most famous buildings. Those seven buildings were being seen by tourists, who generated significant revenue for the surrounding area.

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The pyramid of chips (about 140 meters) and the light pillar of Alexandria (about 120 meters). They were not only exceptionally high their form could also be considered special. Different types of such things in Cityscape were highly desirable and were appreciated later. Some high-rise statues are described below.

LIST OF TALEST STAUE OF THE WORD

If you are a lover of history, other than the monuments, first thing, you are searching for a place, they are a reference. In general terms, I mean by idols. Figurines are important to the cultural and historical aspects of any destination. For

example, the image of the Sphinx in Egypt, certainly tells that the mythical creatures were worshiped at that time.

The Statue of Christ in Rio de Janeiro is considered to be one of the Seven Wonders of the World. Ancient forts and temples have been decorated with statues. Some are small and some are skyrocketing, but in the case of art and style of craft, each has their own specificity. Each of these idols has great stories. There is an attractive list of the world's tallest statues, given below.

1	Statue of Unity 182 m (597 ft)	Vallabhbbhai Patel	Narmada District, Gujaratindia 2018	Stands on a 58 m (190 ft) base. 240 m (787 ft) total monument height. The tallest statue in the world.	21°50'16.8"N 73°43'08.7"E
2-	Spring Temple Buddha 128 m (420 ft)	Buddha (Vairocana)	Lushan, HenanChina 2008	Stands on a 19.3 m (63 ft) lotus throne, and other stacked base platforms of various height. 208 m (682 ft) total monument height.	33.7751°N 112.4510°E
3-	LaykyunSekkyā 115.8 m (380 ft)	Buddha (Gautama)	KhatakanTaung, Myanmar2008	Stands on a 13.41 m (44 ft) lotus throne. 129.2 m (424 ft) total monument height.	22.0803°N 95.2893°E

4-	UshikuDaibutsu 100 m (330 ft)	Buddha (Amitābha)	Ushiku, Ibaraki PrefectureJapan	Stands on a 10 m (33 ft) lotus throne and 10 m (33 ft) pedestal/building. 120 m (394 ft) total monument height. World's tallest statue 1993–2008.	35.9827°N 140.2203°E
5-	Great Buddha of Thailand 92 m (302 ft)	Buddha (Gautama)	AngThongThailand	Concrete statue painted gold	14°35'35.6"N100°22'40.0"E

Table1.1 Comparison of high-rise statues

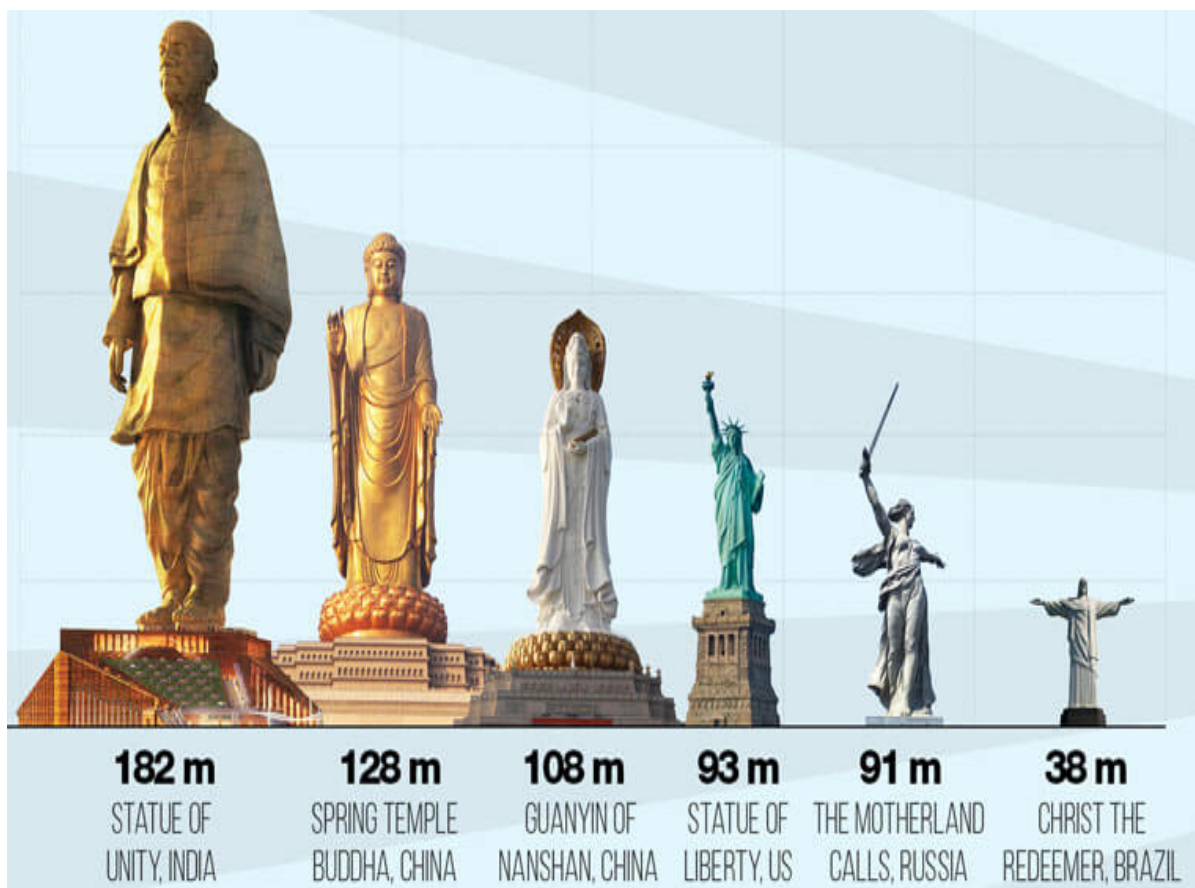


Figure: 1.1- FEW SELECTED FAMOUS STATUES OF THE WORLD

THE MOTHERLAND CELLS

The Motherland Calls sculpture situated in Volgograd, Russia, is also well known outside of the country. This impressive monument is located in the most emblematic part of the city, at the Mamayev Kurgan. The most bloody battles took place here during WWII. After war, it was decided to build a large memorial complex. The central place there occupies The Motherland Calls Sculpture. The author of the monument is the greatest sculptor, EvgenyVucetich. It took 8 years to erect the sculpture. Nikolai Nikitin was the structural engineer of the project. He managed to pick up the scale so the complex design structure wasn't destroyed or lost its harmony. The statue is a huge figure of a woman who steps forward with a raised sword. In this way the author has embodied the image of the motherland that encourages her sons to protect their land from the enemy. At the time of the opening, the statue, whose height is 87 meters, was the highest in the world. The main building materials were metal and concrete. About 2 400 tons of metal structures, as well as 5 500 tonnes of concrete were used to create the statue. One of the most difficult elements of the sculpture is the sword that is 33 meters long. It was originally made of the stainless steel sheathed with titanium sheets. This

the arrangement did not last long. The sword was strongly swayed in the wind and could cause a destruction of the monument. In 1972, it was replaced by the sword of the fluorinated steel, which decorates with a sculpture for more than forty years.

STATUE OF LIBERTY

Statue of Liberty Large, a woman's statue of copper, stands at the Liberty Island, New York City port. The symbol of American democracy, it was a gift from France, and it was made in the celebration of the centenary of American Independence (1876). It was designed by Bartholdy on an iron structure designed and manufactured by Gustave Eiffel. The Statue of Liberty, Its original name is "Liberty Enlightenment the World". It is a huge neoclassical sculpture on the Liberty Island of New York in the United States. It was designed by French sculptor Frederic AgusteBartholdy and the design of its metal was made by Grate engineer Gustav Eiffel. Copper is used for construction of this huge statue. It was a gift from the people of France to the people of the United States. The Statue of Liberty was dedicated on October 28, 1886.

The Statue of Liberty is a figure of Liberta, a romantic Roman independence goddess. She holds a torch on top of his head with his right hand, and a tabulaansata in his left hand is unheard of in a tabla, in which "July IV MDCCLXXVI" (4 July 1776) is the date of declaration of American independence. From the time of its erection in 1886 on an island in New York harbor, the Statue of Liberty (officially known as "Liberty Enlightening the World"), became a recognized symbol of New York City and the United States, as well as an icon of freedom and hope worldwide. The symbolic and iconic nature that immediately surrounded the Statue occurred in spite of a very stormy development period that featured vagaries of international politics, funding difficulties, the general lack of interest by the citizens of the United States, and the lateness of delivery (10 years). The United States has featured the image of the Statue of Liberty (or some of its key parts, arm, torch, and head) on at least 50 stamps and 10 items of postal stationery since the Statue's dedication on October 28, 1886. Worldwide, the number of stamps depicting the Statue of Liberty or one of its parts totals approximately 650 stamps (including varieties). In all,

over 100 nations have issued stamps honoring the Statue of Liberty. A large fraction of these worldwide tributes to the Statue were issued in connection with the celebration of the United States' Bicentennial in 1976 (20 issuing countries), the Centennial Celebration of the Statue itself in 1986 (56 issuing nations), and remembrances to the victims of September 11, 2001 (about 30 issuing nations). It is somewhat interesting to note that the Statue was intended to be ready for the Centennial Celebration of the United States in 1876, but because of construction and funding delays it was not dedicated until 10 years later. The tablet held by the Statue bears the date July 4, 1776 in Roman numerals, the date of the American Declaration of Independence. The United States did not produce its first postage stamp depicting the Statue of Liberty until 1922. This first Statue of Liberty design is shown in Figure 1 along with other United States stamps featuring the same image. In fact, the Statue of Liberty was featured on a foreign stamp, army correspondence and French poster stamps as well as privately printed domestic stamps, long before it finally appeared on any United States postage stamps or stationery.



Figure: 1.3- Statue of Liberty

Literature Survey

General

RESEARCH BACKGROUND

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8. **Keyvan Ramin (2015)** examined the exploratory demonstrating and numerical displaying for a four-story strengthened solid building that the examination of basic 3-D casings of changing floor statures and shifting a number of straights with various incline edges utilizing an extremely mainstream programming instrument STAAD Professional on both a slanting and a level part. Additionally Sap2000 programming had been utilized to demonstrate that the uprooting of floors is more prominent for a level part working than a slanting parcel building. Be that as it may, the expansion in shear was observed to be very more noteworthy in short segments contrasted with normal ones and a gigantic minute ought to be endured by slanting part structures. The more prominent firmness of the structure was likewise uncovered by non-straight static (Push-Over) investigation. As indicated by the outcomes, short segment are required to have more safe areas and are proposed to be strengthened with more bars. Likewise, more steel ought to be utilized as stirrups than as longitudinal bars. Likewise to exist structures, shear limit of short segments ought to be retrofitted by FRP, Steel Coat or different materials.
9. **Zaid Mohammada (2016)** Confined structures built on slope inclines indicate unexpected basic conduct in comparison to that on the plain ground. Since these structures are unsymmetrical in nature, they subsequently draw in huge measure of shear powers and torsional minutes, and show unequal circulation because of changing segment lengths. In present investigation, two unique setups of slope structures have been displayed and broke down utilizing ETABS v 9.0 limited component codes. A parametric report has been completed, in which slope structures geometrically differ in stature and length. Taking all things together.

PROBLEM IDENTIFICATIONS

Based on review of literature following problems were identified:

- There is no information available for modeling, Analysis and Design of human structure under varying soil. Climatic and different loading conditions.
- No information is available for modeling designing of statue under seismic zone 3.
- No information is available on Sketch up software

OBJECTIVES OF THE THESIS

Study of existing design of structure such as statue of liberty

CONCLUSION

It is evident from the above results that the seismic hazard has to be carefully evaluated before the construction of important and high-rise structures. It is most important for such type of high-rise structure that base is too small as compression to the top or chest of the structure. Normally the base of any high-rise structure or statue is larger than

the top of the statue or high-rise structure to provide lateral stability of the structure.

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