

THESIS REPORT

S. BEANT SINGH MEMORIAL & CENTRE FOR PERFORMING AND VISUAL ARTS

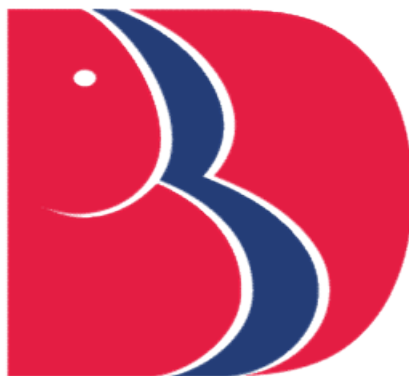
A Thesis Submitted
in Partial Fulfillment of
the Requirements
for the Degree of

BACHELOR OF ARCHITECTURE
In
ARCHITECTURE

By
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(Roll No.-1140101095)

Under the Supervision of

Ar. URVASHI TIWARI



BBD UNIVERSITY

SCHOOL OF ARCHITECTURE BBDU LUCKNOW

MAY, 2020

**SCHOOL OF ARCHITECTURE AND PLANNING
BABU BANARASI DAS UNIVERSITY, LUCKNOW (U.P.).**

CERTIFICATE

This is to certify that this thesis entitled “ **S. BEANT SINGH MEMORIAL & CENTRE FOR PERFORMING AND VISUAL ARTS** ” Submitted by **YASHASWI SHARMA**, Roll no. **1140101095** embodies the work of Submission to the school of Architecture, BBD UNIVERSITY ,Lucknow in partial fulfillment of the requirement to award a degree in Bachelor of Architecture.

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Recommendation Accepted
Not Accepted

External Examiner

External Examiner

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Certificate of thesis submission for evaluation

1. Name : YASHASWI SHARMA
2. Roll No. : 1140101095
3. Thesis Title: Sardar beant singh memorial and center of performing and visual arts
4. Degree for which the thesis is submitted: Bachelor's Degree in Architecture
5. Faculty of University to which the thesis is submitted: Yes/No
6. Thesis preparation guide was referred to preparing the thesis. Yes/No
7. Specifications regarding thesis format have been closely followed. Yes/No
8. The content of the thesis have been organized based on the guidelines. Yes/No
9. The thesis has been prepared without resorting to plagiarism. Yes/No
10. All the sources used have been cited appropriately. Yes/No
11. The thesis has not been submitted elsewhere for a degree. Yes/No
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ACKNOWLEDGEMENT

The completion of this thesis project has been one of the most significant academic challenges I have ever taken. I would like to acknowledge some people who have helped me throughout in accomplishing the Thesis Project.

At this moment of accomplishment, first of all I would like to thank my Thesis Guide, Ar. URVASHI TIWARI. This work would not have been possible without her guidance, support and encouragement. Under her guidance, I successfully overcame many difficulties and learned a lot. Her valuable suggestions helped me to make my work better.

Heartiest thanks to Ar. Mohit Agarwal Dean AND AR. SANGEETA SHARMA HOD, School of Architecture BBD UNIVERSITY , Lucknow for giving me the opportunity to do the thesis on this topic. Their constant guidance and support helped us to improve our work, with their suggestions and encouragement.

I would never have been able to finish my Thesis without the support of my batch mates Himanshu Chaubey Hamza Prasoon Sharma , for all the support through out this thesis.

Regards
YASHASWI SHARMA
1140101095
B. Arch. V Year.



DEDICATION

This research endeavour is dedicated to my family who have graciously supported me all the way through this entire process. Without their motivation, support and sustained help, this effort would not have been achievable. I would like to dedicate this to my parents who laid the foundation by inculcating in me the principles, ethics and discipline that have served me well in all aspects of life.

I proffer a special thank you to each.



ABSTRACT

This research is on **S. BEANT SINGH MEMORIAL & CENTRE FOR PERFORMING AND VISUAL ARTS** which includes case studies on museum and memorial . The casestudies are of two museum and memorial who are totally different from each other that is based on vertical planning. The main motive of my design is how we can do landscaping and to understand movement . The literature study is also done. Study of plans and sections of memorial and museum is done in the research.

After doing so much study on memorial and museum . I have implemented my own design along with my own concept. The concept is cubism and my theme is art nouveau. Cubism is an early twentieth century art movement which brought European painting and sculptures. Tried to combine few cubes together to built up the form. Form is centered on the dissolution and reconstitution of three-dimensional form, using simply geometry.angular forms are also thus created to connect the space. In this way design is implemented and planning is done keeping in mind the comfort of the user and also keeping in mind the environmental conditions.



C O N T E N T S

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S. BEANT SINGH
MEMORIAL & CENTRE
FOR PERFORMING AND
VISUAL ARTS



INTRODUCTION



A **memorial** is an object which serves as a focus for memory of something, usually a person (who has died) or an event. Popular forms of memorials include landmark objects or art objects such as sculptures , statues or fountains and parks .

The most common type of memorial is the gravestone or the memorial plaque . Also common are war memorials commemorating those who have died in wars. Memorials in the form of a cross are called intending crosses .

Online memorials and tributes are becoming increasingly popular especially with the increase in natural burial where the laying of gravestones, or memorial plaques, is often not permitted.

When somebody has died, the family may request that a memorial gift (usually money) be given to a designated charity , or that a tree be planted in memory of the person . Those temporary or makeshift memorials are also called grassroots memorials.

Sometimes, when a high school student has died, the memorials are placed in the form of a scholarship , to be awarded to high-achieving students in future years.



LITERATURE STUDY

DRESDEN MUSEUM OF MILITARY HISTORY

Location	: Germany
Architect	: Ar. Daniel Libeskind
Client	: The Federal Republic of Germany – Ministry of Defence
Build up area	: 22,500 sq.mt
To commemorate	: First World War
Project Year	: 1976 , Renovated in 2011

Objective of study

To learn about form and function of war museum and how it interacted with the existing fabric of the area.

The walls at odd angles give the observer the sense of disorientation that is at the same time calmed by the transition from wider to narrower rooms

EXHIBITS

- Military Technology
- Equipment
- Uniform
- Art and Photography
- Animal Sculptures {That served as the subjects at military experiments}



THROUGH THE TRANSFORMATION , ADDING NEW CHARACTER TO THE BUILDING

- The museum looks like the bow of a ship breaking through an iceberg , pointing in the direction from which the British and American bombers come to attack the city
- Two visitor approaches : thematic sections and a chronological four.
- Visitor circulation in top to bottom as in Guggenheim Museum , New York by Frank Lloyd wright



LITERATURE STUDY

DRESDEN MUSEUM OF MILITARY HISTORY

INTERIOR



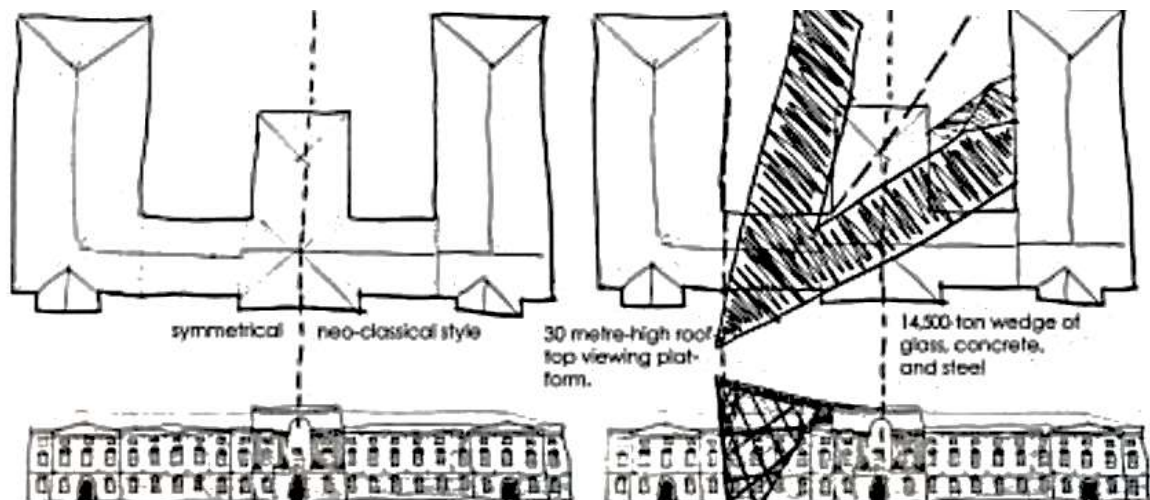
APPROACH

Allows to have a clear vision towards the centre of the city , accompanied by a road axis transversal to the building

INFERENCE

NEGATIVE

- The space feel under population
- Too often visitors fascinate at the forms or spaces rather than looking at the exhibits.
- The exhibits have good lighting and displaying layout but lack signage providing information people don't get the actual meaning of the displays



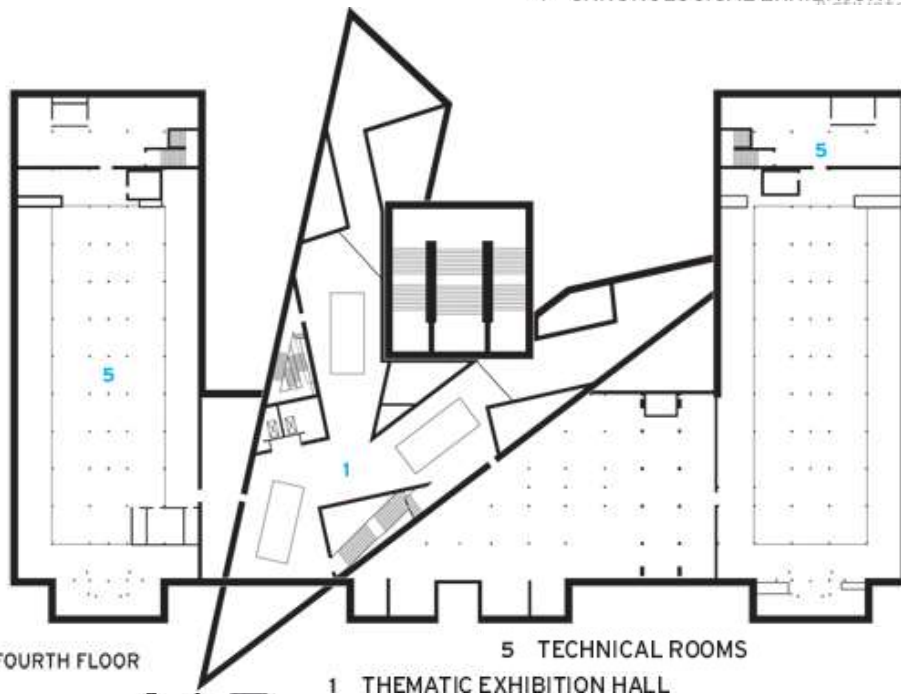
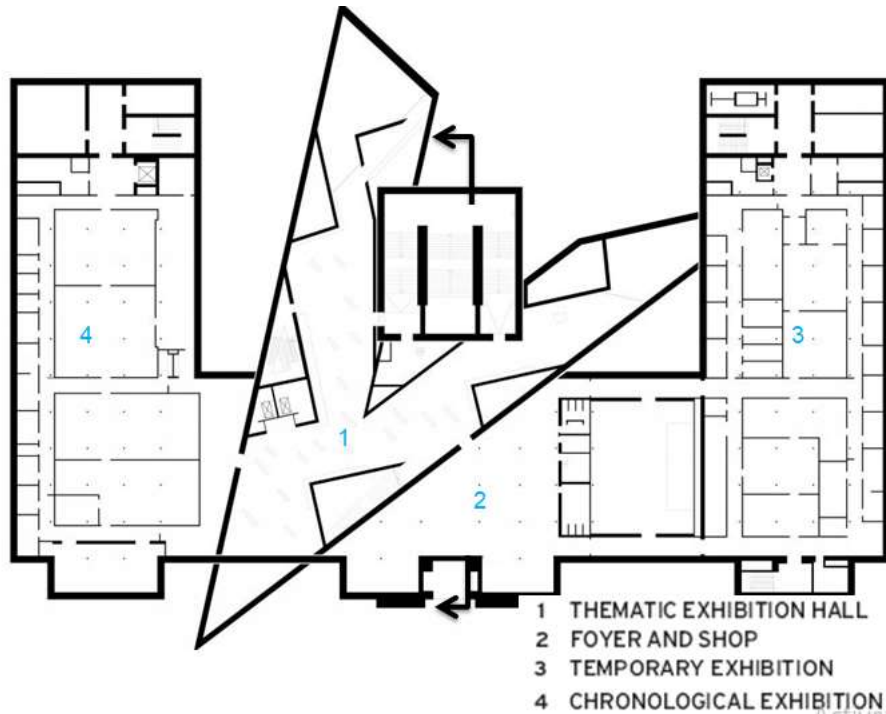
Old museum

New Museum



LITERATURE STUDY

DRESDEN MUSEUM OF MILITARYHISTORY



FOURTH FLOOR



LITERATURE STUDY

IMPERIAL WAR MUSEUM LONDON

Location : Lambeth Rd. London
Architect : Foster and partners
Interior Design : Caisson Mann
Build up area : 22,500 sq.mt
To commemorate : First World War
Project cost : 40 million pound – 5 billion rs
Project Year : Renovated in 2014 . In 1814 it was Royal hospital converted to museum in 1836

Objective of study

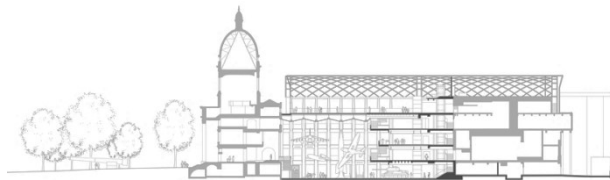
To learn about :

- Spaces of war museums
- Ways to portray the exhibits
- Create an impulse in the visitors
- How to make the museum accessible for all type of visitor differently

CONCEPT OF TRANSFORMATION

Three concept

- Clarity of circulation
- Chronology
- Consolidation



THROUGH THE TRANSFORMATION

- Chronological arrangement : GF First World War Galleries to Top Floor with current conflicts
- Western floor lowered – step – free access
- Case away from gallery can be open even when museum is closed
- Connecting to surrounding – western façade windows opened



LITERATURE STUDY

IMPERIAL WAR MUSEUM LONDON

CONCEPT OF EXHIBITS

- First World War Galleries
- Exhibition
- Secret War
- Witness to War
- Lord Ashcraft Gallery
- Peace and Security 1945-2014
- Visitors see the conflict through the eyes of those who lived and died
- Their voices are presented through letters, diaries and quotations
- Each object will give a voice to the people who created them used them or cared for them

EXHIBITS

- Weapons and ammunition
- Equipment
- Uniforms, Flags, Badges
- Art and Photographs
- Mementoes
- Records
- Vehicles, Aircraft, Ships

INFERENCE

Positive

- Central atrium brings in plenty of natural light.
- Visitors get to experience – visitors are educated rather than just seeing
- Teachers what to do when it comes audio – visual workshop

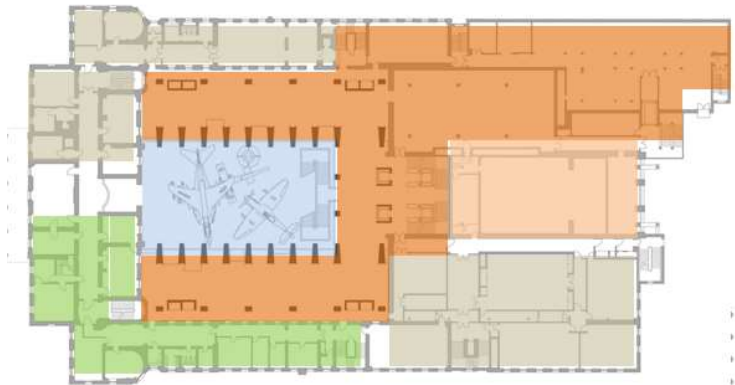
Negative

- The spaces are over – crowded by exhibits difficult to group up everything
- Frightening for kids – barrier could have been there

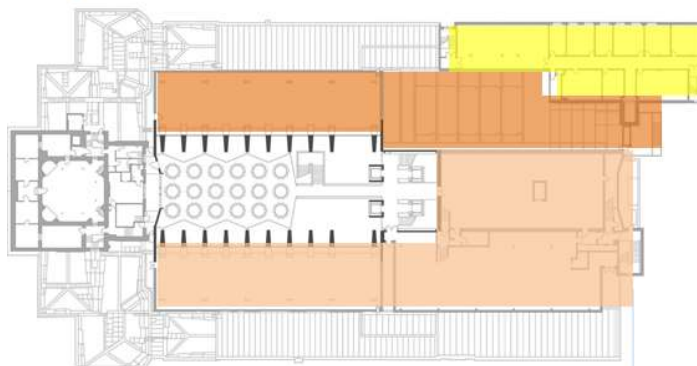
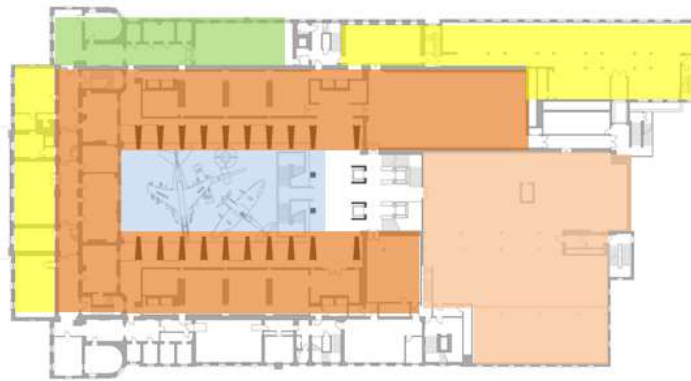


LITERATURE STUDY

IMPERIAL WAR MUSEUM LONDON

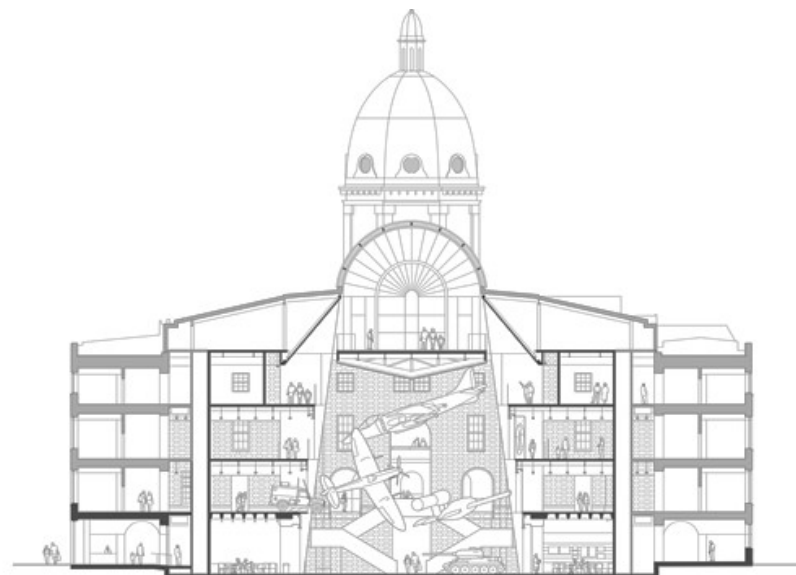
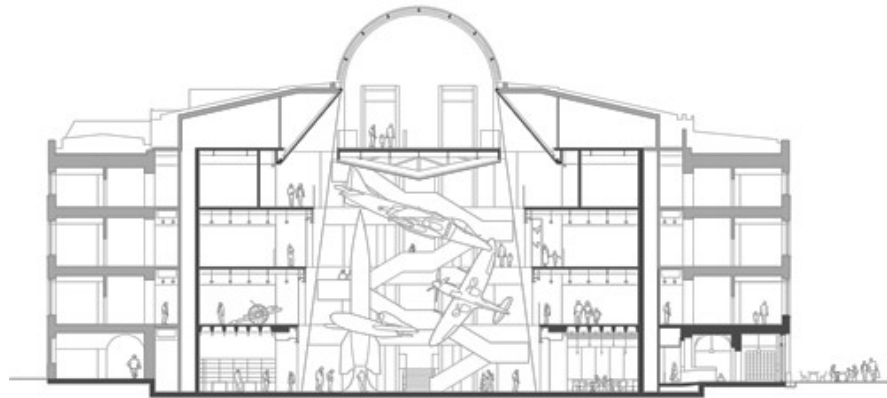
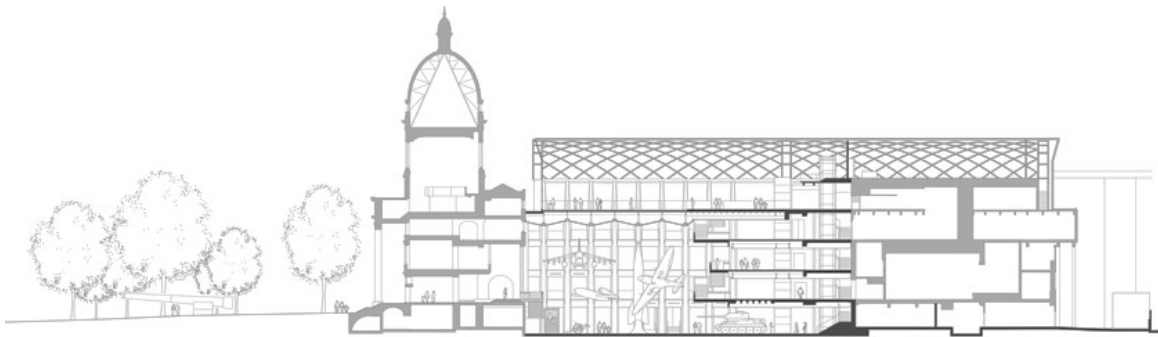


- | | |
|---------------------------------------|-------------------|
| Admissions + Maintained space | Permanent Display |
| Educational hall , library | Atrium |
| Users facility – toilet , cafe , shop | Temporary Space |



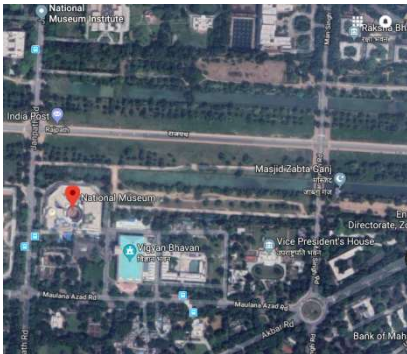
LITERATURE STUDY

IMPERIAL WAR MUSEUM LONDON



CASE STUDY

NATIONAL MUSEUM, NEW DELHI ARCHITECT - GWYER COMMITTEE



Location : Jan path , New Delhi

Established Year : 1949

Site Area : 9.5 acre

Exhibits : Art , Cultural and Heritage of India

Working Hours : 10AM-6PM

SITE SURROUNDINGS

EAST - VIGYAN BHWAN

WEST - JAWAHARLAL NEHRU BHAWAN

NORTH – RAJPATH ROAD

SOUTH – ARCHAEOLOGICAL SURVEY OF INDIA

NEAREST STOPS

Central secretariat metro station – 1.2 k.m.

Indira gandhi international airport – 14.5 k.m.

New delhi railway station – 3.8 k.m.

Nearest stops :- National Museum bus stop

APPROACH ROAD

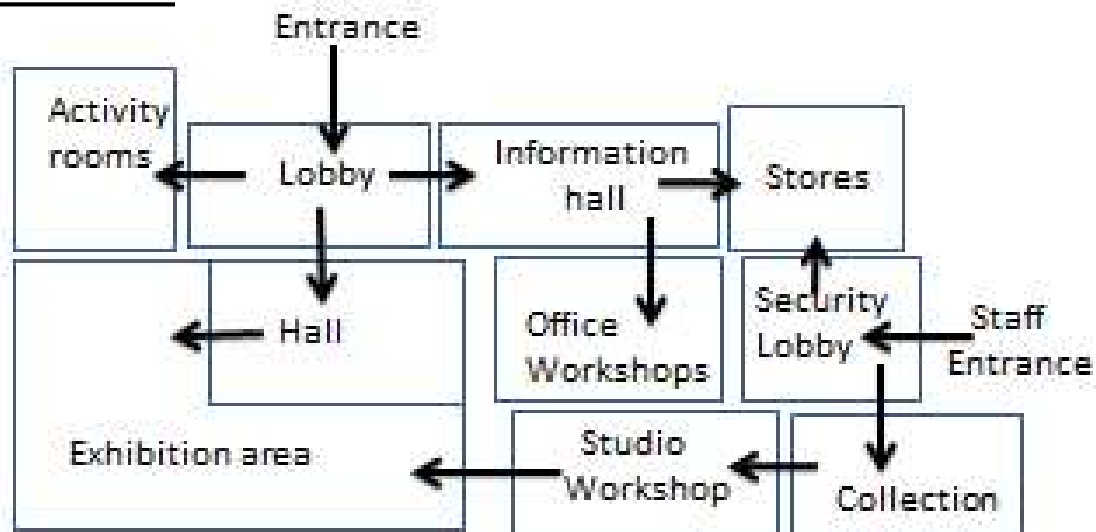
- Access to the museum is from main Maulana Azad road
- Inclined – entry from right side of building
- Two main entries from main road – one is Temporarily closed
- Separate entrance for VIP
- Store sculptures painting , Baggage Counter , Workshop , Vegetation , Water Body etc. are seen within site .



CASE STUDY

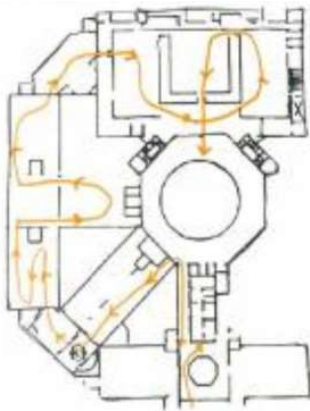
NATIONAL MUSEUM, NEW DELHI ARCHITECT - GWYER COMMITTEE

LAYOUT



CIRCULATION

- Museum has radial circulation
- Visitor enter in exhibition area from gallery left hand side of token counter
- All exhibition hall is connected with each other with a centre circulation



AUDITORIUM

- 250 Seating capacity
- 190 seats on ground level
- 60 seats in balcony with projection room in between
- Balcony only used for V.I.P purpose
- Used for showing movies of art and culture
- Connecting with main entrance lobby
- Area : 340 mt sq



CASE STUDY

NATIONAL MUSEUM, NEW DELHI ARCHITECT - GWYER COMMITTEE

NEAREST STOPS

Central secretariat metro station – 1.2 k.m.

Indira gandhi international airport – 14.5 k.m.

New delhi railway station – 3.8 k.m.

Nearest stops :- National Museum bus stop

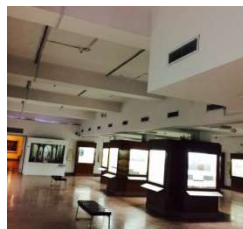
FORM AND FUNCTION

- The building seems to merge with the surrounding buildings – as per DDA guidelines
- Building comprises of four stories with a basement
- Basic plan of the building is fan shaped with a circular courtyard in between surrounded by a covered veranda
- Wings are linked with the courtyard according to different requirement are need
- Building is made using high strength R.C.C and red sand stone

ENTERENCE LOBBY



Dome above hexagonal lobby



Central art piece



Ticket Counter



Museum shops



CASE STUDY

NATIONAL MUSEUM, NEW DELHI ARCHITECT - GWYER COMMITTEE

EXHIBITION

- The museum has 200,000 works of art
- It also houses manuscripts , musical instrument , decorative art and textile , western art and armours
- Some of the galleries are
- Indus valley civilization
- Maurya art
- Gupta art
- Late medieval art

LIGHTING

- Artificial lighting is done in all the galleries with daylight exhibits kept to minimum
- Natural lighting is only used in centre
- In jewellery exhibition area the light is focused on the jewellery only



SERVICES



PARKING

- Proper parking facilities are not given
- Clock room is located near parking

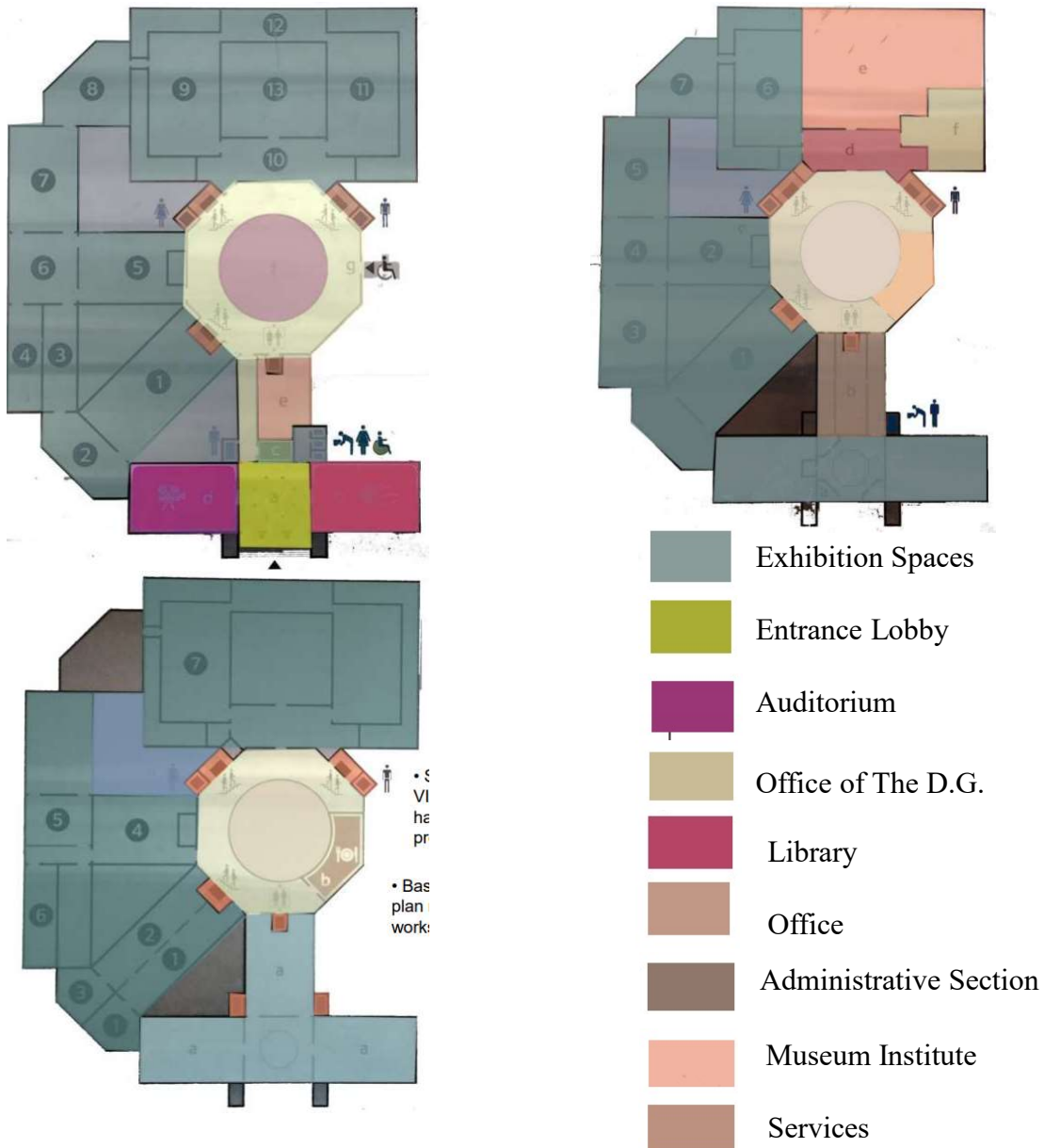
LANDSCAPE

- Ashoka , Devdaru , Meeta , Neem , Tulsi , Neem , Plam tree



CASE STUDY

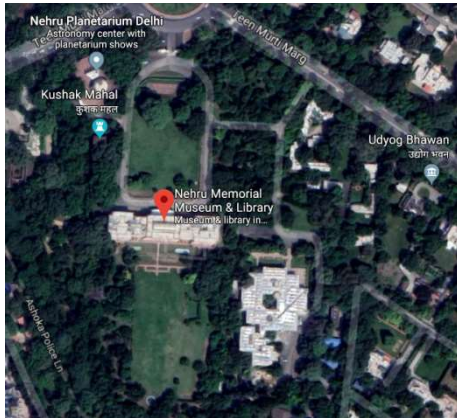
NATIONAL MUSEUM, NEW DELHI ARCHITECT - GWYER COMMITTEE



CASE STUDY

NEHRU MEMORIAL, NEW DELHI

SITE APPROACH



NEAREST STOPS

Central secretariat metro station – 4 k.m.
Indira Gandhi international airport – 10.5 k.m.
New Delhi railway station – 6.2 k.m.

Museum Entrance:

- Security and Museum Staff in the room on the left side at the entrance.
- Information Desk in the room on the right side of the entrance. Headphones, etc.

The Nehru Memorial Museum and was established under the following objectives

- To maintain a Museum of Jawaharlal Nehru personalia, memorabilia, mementoes and other objects pertaining to his life and the Indian freedom movement.
- To acquire, maintain and preserve papers of nationalist leaders of Modern India and other eminent Indians who distinguished themselves in any field.
- To establish and maintain a library on the history of Modern India.
- To organize, undertake, conduct, encourage and promote study and research in the field of modern Indian history.
- To institute and award fellowships and to foster academic contacts within India as well as with other countries through exchange of personnel and research materials.

WATER SUPPLY

Under ground

- 50,000 L
- Used for Fire Over Head
- 3,00,000 L Used for Drinking Toilet

TOILETS

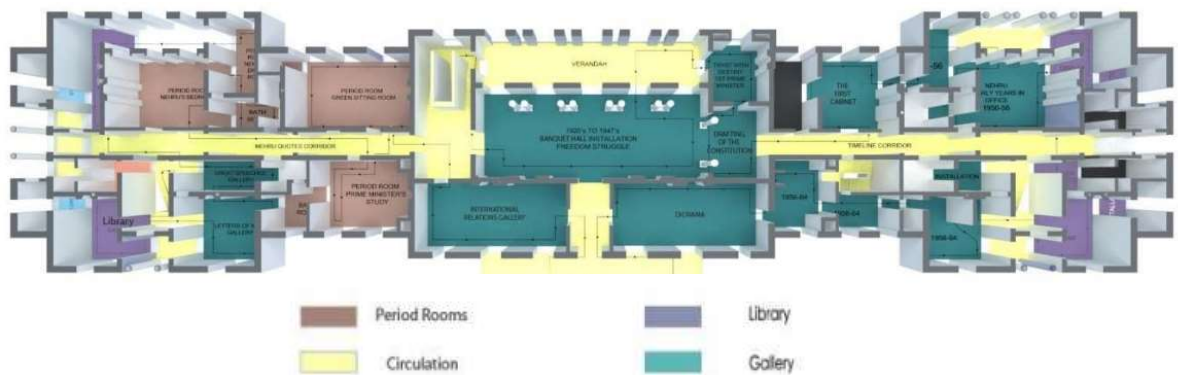
- 1Male and 1 Female unit on each floor
- 4 WC and 2 Wash Basin

LIFT

- Total lift : 2
- Passenger Lift
- 6 person at time
- Barrier free movement



NEHRU MEMORIAL, NEW DELHI



CONCEPT STAGE

MEMORIAL AND CENTER OF PERFORMING AND VISUAL ARTS

What is visual and performing arts?

The visual Arts gives a way to express feeling, emotion, opinion, or taste through visual means, for instance, photography, painting, sculpting and drawing. Performing Arts have ways to express an opinion, emotion, feeling, or taste, through means of performance, like, theatre, public speech, dance, music, and more.

AIM

Center of performing and visual art is a place where various activities of social interaction like plays, concerts, art & crafts exhibitions, dance and other similar programs are organized. It helps in preserving the culture of a particular region or country. The center helps in holding workshops and promoting training in the field of art and culture.

OBJECTIVE OF THE PROJECT

To develop and promote the rich diversity and uniqueness of the various art forms of the country and to upgrade and enrich the consciousness of the people about their cultural heritage.

To undertake such programs as seminars workshops etc. With a view to encourage the youth towards the cultural art of the country.



VISION

The center stands for a vision that looks at India as a place where it is possible to initiate dialogues in an atmosphere of amity and understanding. The Centre's dedication to the values of liberal humanism is best reflected in its activities and calendar of events. These cover a wide range, from lectures, seminars, panel discussions, international and national conferences to a variety of cultural events of music, cinema, performing and visual arts, both classical and folk. Entry to these are not restricted as all programs are open to the wider public of the city.

CONCEPT

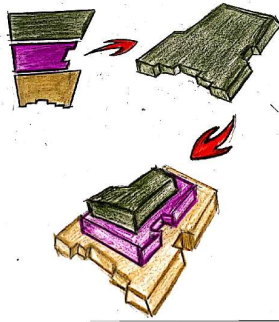
The main idea behind the scheme is “Interlocked Geometry”. This idea was conceived after a thorough study of variety of buildings across the world. The study lead to the conclusion that every building form is evolution of series of alterations in basic geometric forms to achieve the specific output.

The design of convention center is evolved from the organized and symmetrical interlocking of very basic polygons altered to a minimum to achieve the evident scheme of the concept. Also keeping in mind the sophistication in the simplicity of the grid iron pattern of Chandigarh city.

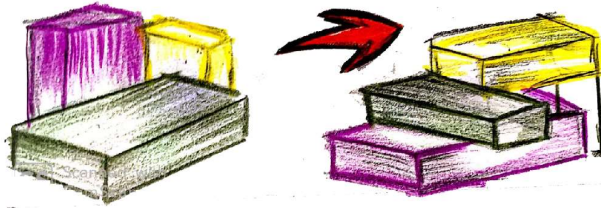
The elevations with plain concrete texture featuring existing brutalism in the architecture of the city. Besides the interlocked symmetry, the idea was to maintain the character of the city designed by Sir Le Corbusier.



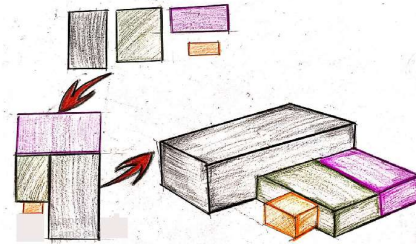
FORM EVOLUTION



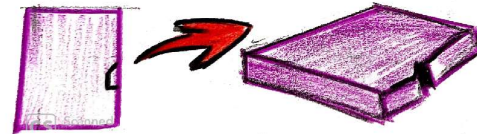
FORM EVOLUTION FOR MUSEUM



FORM EVOLUTION FOR GUEST HOUSE



FORM EVOLUTION FOR AUDITORIUM



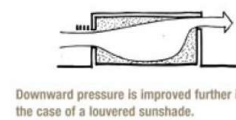
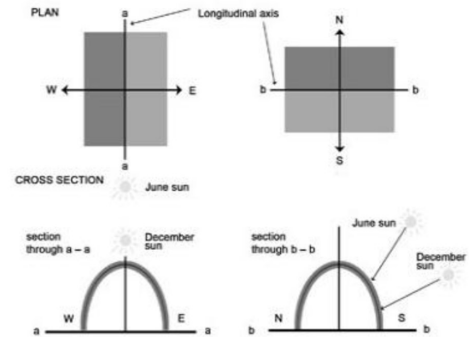
FORM EVOLUTION FOR CAFETERIA

BUILDING ORIENTATION

Orient the building with longer axis in the east-west direction. The building with glazed curtain wall facing northwest shows a substantial reduction in load compared to southwest orientation.

South orientation receives maximum solar radiation during winters which is preferable as composite climate receives severe winters. East west receive maximum solar radiation during summer and vice versa.

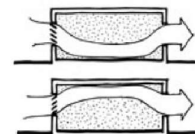
Thus , attention need to be paid while designing west facade and spaces behind west facade. Shading of roof through design features like pergolas will help in creating shade pockets.



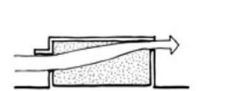
Downward pressure is improved further in the case of a louvered sunshade.



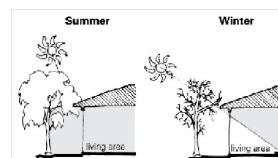
A gap between canopy and wall ensures a downward pressure.



Louvers can direct airflow upward or downward.



canopy over a window tends to direct air upward.



Summer

Winter

living area

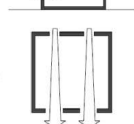
_cross-ventilation



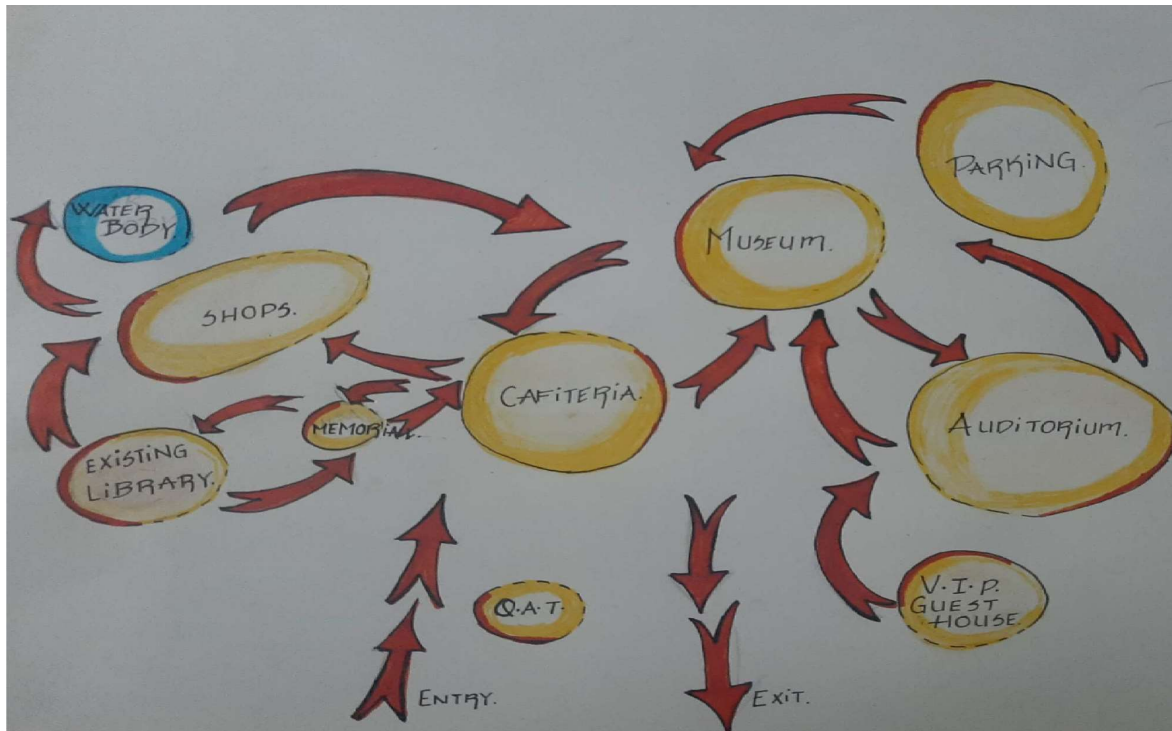
_higher up windows to allow hot air to escape



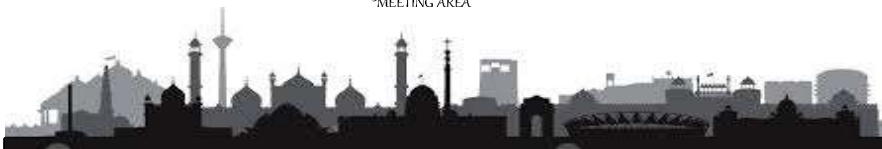
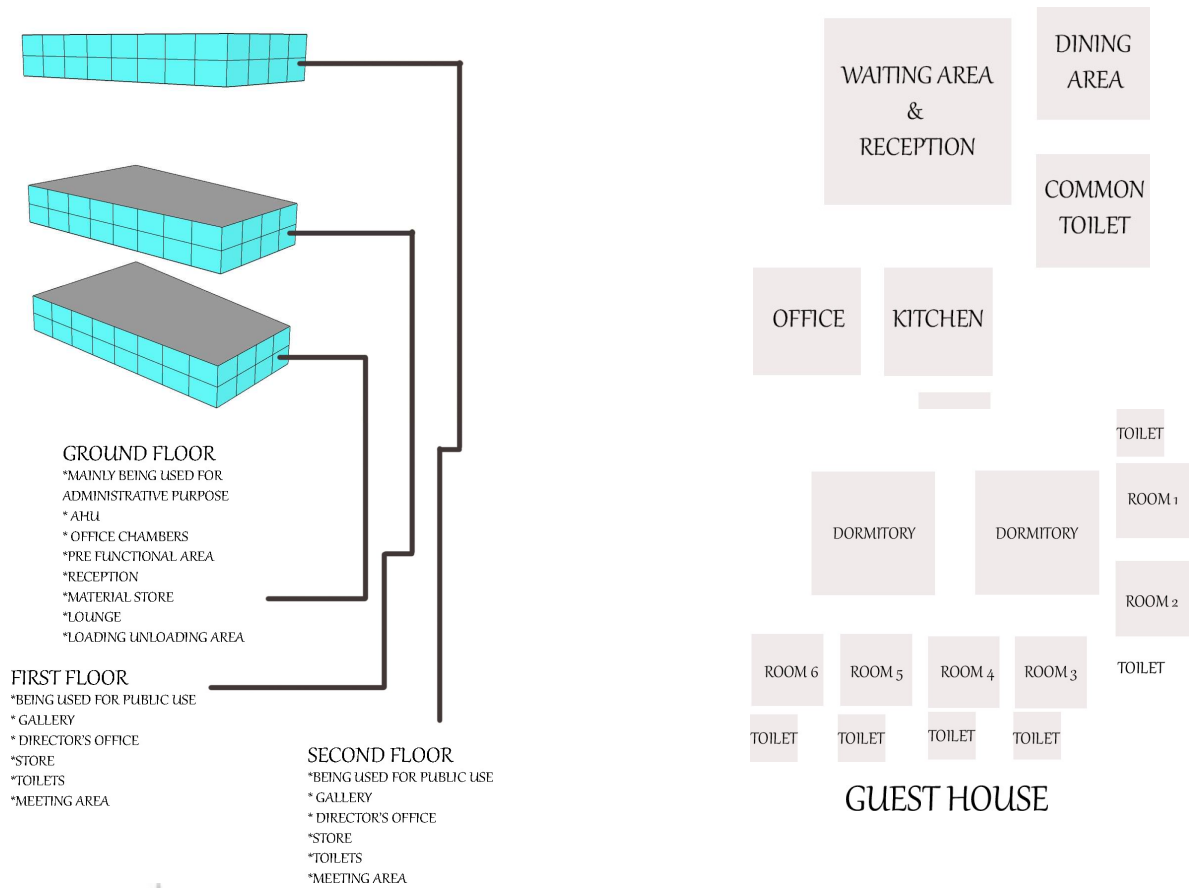
_smaller inlet windows facing prevailing winds and larger outlet windows on opposite side



ZONING



VERTICAL STACKING



SITE ANALYSIS

THE LOCATION – CHANDIGARH , Uttar Pradesh

Chandigarh is a city and a union territory in India that serves as the capital of the two neighbouring states of Haryana and Punjab. The city is unique as it is not a part of either of the two states but is governed directly by the Union Government, which administers all such territories in the country.

Chandigarh is bordered by the state of Punjab to the north, the west and the south, and to the state of Haryana to the east. It is considered to be a part of the Chandigarh capital region or Greater Chandigarh, which includes Chandigarh, and the city of Panchkula (in Haryana) and cities of Kharar, Kurali, Mohali, Zirakpur (in Punjab). It is located 260 km (162 miles) north of New Delhi, 229 km (143 miles) southeast of Amritsar.

It was one of the early planned cities in post-independent India and is internationally known for its architecture and urban design. The master plan of the city was prepared by Swiss-French architect Le Corbusier, which transformed from earlier plans created by the Polish architect Macie Nowic and the American planner Albert Mayer. Most of the government buildings and housing in the city, were designed by the Chandigarh Capital Project Team headed by Le Corbusier, Jane Drew and Maxwell Fry. In 2015, an article published by BBC named Chandigarh as one of the perfect cities of the world in terms of architecture, cultural growth and modernisation.



SITE ANALYSIS

Etymology

The name *Chandigarh* is a compound of *Chandi* and *Garh*. *Chandi* refers to Hindu goddess Chandi and *Garh* means fortress. The name is derived from Chandi Mandir, an ancient temple devoted to the Hindu Goddess Chandi, near the city in Panchkula District.

The motif or sobriquet of "The City of Beauty " was derived from the City Beautiful movement that was a popular philosophy in North American urban planning during the 1890s and 1900s. Architect Albert Mayer, the initial planner of Chandigarh, lamented the American rejection of *City Beautiful* concepts and declared "We want to create a beautiful city..." The phrase was used on as a logo in official publications in the 1970s, and is now how the city describes itself

Early history

The city has a prehistoric past. Due to the presence of a lake, the area has fossil remains with imprints of a large variety of aquatic plants and animals, and amphibian life, which were supported by that environment. As it was a part of the Punjab region, it had many rivers nearby where the ancient and primitive settling of humans began. So, about 8000 years ago, the area was also known to be a home to the Harappans .

Modern history

Chandigarh was the dream city of India's first Prime Minister, Jawaharlal Nehru. After the partition of India in 1947, the former British province of Punjab was split between (mostly Sikhs) East Punjab in India and (mostly Muslim) West Punjab in Pakistan . The Indian Punjab required a new capital city to replace Lahore, which had become part of Pakistan during the partition . Therefore, an American planner and architect Albert Mayer was tasked to design a new city called "Chandigarh" in 1949. The government carved out Chandigarh of nearly 50 Pwadh speaking villages of the then state of East Punjab, India. Shimla was the temporary capital of East Punjab until Chandigarh was completed in 1960 .

Albert Mayer, during his work on the development and planning of the new capital city of Chandigarh, developed a superblock-based city threaded with green spaces which emphasized cellular neighborhood and traffic segregation. His site plan used natural characteristics, using its gentle grade to promote drainage and rivers to orient the plan. Mayer discontinued his work on Chandigarh after developing a master plan for the city when his architect-partner Matthew Nowicki died in a plane crash in 1950. Government officials recruited Le Corbusier to succeed Mayer and Nowicki, who enlisted many elements of Mayer's original plan without attributing them to him.



SITE ANALYSIS

Le Corbusier designed many administration buildings, including the High Court, the Palace of Assembly and the Secretariat Building. Le Corbusier also designed the general layout of the city, dividing it into sectors. Chandigarh hosts the largest of Le Corbusier's many *Open Hand* sculptures, standing 26 metres high. *The Open Hand (La Main Ouverte)* is a recurring motif in Le Corbusier's architecture, a sign for him of "peace and reconciliation. It is open to give and open to receive." It represents what Le Corbusier called the "Second Machine Age". Two of the six monuments planned in the Capitol Complex which has the High Court, the Assembly and the Secretariat, remain incomplete. These include Geometric Hill and Martyrs Memorial; drawings were made, and they were begun in 1956, but they were never completed.

On 1 November 1966, the newly formed state of Haryana was carved out of the eastern portion of East Punjab, in order to create a new state for the majority Haryanvi-speaking people in that portion, while the western portion of East Punjab retained a mostly Punjabi-speaking majority and was renamed as Punjab. Chandigarh was located on the border of both states and the states moved to incorporate the city into their respective territories. However, the city of Chandigarh was declared a union territory to serve as capital of both states.

As of 2016, many historical villages in Chandigarh are still inhabited within the modern blocks of sectors including *Burail* and *Attawa*, while there are a number of non-sectoral villages that lie on the outskirts of the city. These villages were a part of the pre-Chandigarh era.

GEOGRAPHY AND ECONOMY

LOCATION

Chandigarh is located near the foothills of the Sivalik range of the Himalayas in northwest India. It covers an area of approximately 114 km². It borders the states of Haryana and Punjab. The exact cartographic co-ordinates of Chandigarh are 30.74°N 76.79°E . It has an average elevation of 321 metres (1053 ft).

The city, lying in the northern plains, includes a vast area of flat, fertile land. Its northeast covers sections of Bhabar and while the remainder of its terrain is part of the Terai. The surrounding cities are Mohali, Patiala, Zirakpur and Roopnagar in Punjab, and Panchkula and Ambala in Haryana.

Chandigarh is situated 114(28 miles) northeast of Ambala, 229 km (143 miles) southeast of Amritsar and 250 km (156 miles) north of Delhi .



SITE ANALYSIS

CLIMATE

Chandigarh has a humid subtropical climate characterised by a seasonal rhythm: very hot summers, mild winters, unreliable rainfall and great variation in temperature (-1°C to 46°C OR 30.2°F to 114°F). The average annual rainfall is 1110.7 mm. The city also receives occasional winter rains from the Western Disturbance originating over the Mediterranean Sea.

The western disturbances usually bring rain predominantly from mid-December till end of April which can be heavier sometimes with strong winds and hails if the weather turns colder (during March–April months) which usually proves disastrous to the crops. Cold winds usually tend to come from the north near Shimla, capital of Himachal Pradesh and from the state of Jammu and Kashmir, both of which receive their share of snowfall during wintertime.

Spring: The climate remains the most enjoyable part of the year during the spring season (from February-end to early-April). Temperatures vary between (max) 13°C to 20°C and (min) 5°C to 12°C .

Autumn: In autumn (from September-end to mid November.), the temperature may rise to a maximum of 30°C . Temperatures usually remain between 10° to 22° in autumn. The minimum temperature is around 6°C .

Summer: The temperature in summer (from Mid-April to June-end) may rise to 44°C . The temperatures might sometime rise to 44°C in mid-June. Temperatures generally vary between 40 and 42°C .

Monsoon: During monsoon (from early-July to mid-September), Chandigarh receives moderate to heavy rainfall and sometimes heavy to very heavy rainfall (generally during the month of August or September). Usually, the rain bearing monsoon winds blow from south-west/south-east. Mostly, the city receives heavy rain from south (which is mainly a persistent rain) but it generally receives most of its rain during monsoon either from North-west or North-east. The maximum amount of rain received by the city of Chandigarh during monsoon season is 195.5 mm in a single day.

Winter: Winters (November-end to February-end) are mild but they can sometimes get quite chilly in Chandigarh. Average temperatures in the winter remain at (max) 5°C to 14°C and (min) -1°C to 5°C . Rain usually comes from the west during winters and it is usually a persistent rain for 2–3 days with sometimes hailstorms. The city witnessed bone-numbing chill as the maximum temperature on Monday, 7 January 2013 plunged to a 30-year low to settle at 6.1 degrees Celsius.



SITE ANALYSIS

ECOSYSTEM

Most of Chandigarh is covered by dense banyan and eucalyptus plantations. Ashoka, cassia, mulberry and other trees flourish in the forested ecosystem. City has forests surrounding that sustain many animal and plant species. Deer, sambars, barking deer, parrots, woodpeckers and peacocks inhabit the protected forests. Sukhna Lake hosts a variety of ducks and geese, and attracts migratory birds from parts of Siberia and Japan in the winter season.

The Parrot Bird Sanctuary Chandigarh situated in sector 21 of the city provides home to a large number of parrots. Sukhna Wildlife Sanctuary was declared a wildlife sanctuary in 1998.

LANDSCAPE

Sukhna Lake, a 3 km artificial rain-fed lake in Sector 1, was created in 1958 by damming the Sukhna Choe, a seasonal stream coming down from the Shivalik Hills .

Chandigarh has a belt of parks running from sector to sector. It is known for its green belts and other special tourist parks. Sukhna Lake itself hosts the Garden of Silence. The Rock Garden, also known as Nek Chand Rock Garden after its founder, is located near the Sukhna Lake and has numerous sculptures made by using a variety of different discarded waste materials like frames, mudguards, forks, handle bars, metal wires, play marbles, porcelain, auto parts, broken bangles etc. The 30-40 acre Zakir Hussain Rose Garden contains nearly 825 varieties of roses in it and more than 32,500 varieties of other medicinal plants and trees. Other gardens include the Garden of Fragrance in Sector 36, Garden of Palm in Sector 42, Butterfly Park in Sector 26, Valley of Animals in Sector 49, the Japanese Garden in Sector 31 and the Terraced Garden in Sector 33. Shanti Kunj Garden located between rose garden and cricket stadium in Sector 16 is another garden full of flora and fauna. This garden contains plenty of medicinal plants which are used to cure many diseases. the Botanical Garden and the Bougainvillea Garden . There is also a Government museum and art gallery in sector 10-C having collections of sculptures and miniature paintings



SITE ANALYSIS

TRANSPORTATION-

Air



Chandigarh Airport has scheduled commercial flights to major cities of India including Delhi, Mumbai, Kolkata, Hyderabad, Bangalore, Pune, Chennai, Leh, Srinagar, Jaipur, Lucknow, Ahmedabad and Indore. The airport has international flights to Bangkok, Dubai and Sharjah.

Road



Chandigarh has the largest number of vehicles per capita in India. Wide, well maintained roads and parking spaces all over the city ease local transport. The Chandigarh Transport Undertaking (CTU) operates public transport buses from its Inter State Bus Terminals (ISBT) in Sectors 17 and 43 of the city. CTU also operates frequent bus services to the neighbouring states of Punjab, Haryana, Himachal Pradesh and to Delhi.

Chandigarh is well connected by road to the following nearby cities, by the following highway routes:

- NH 7 to [Patiala](#) in the southwest.



- NH 152 to [Ambala](#) in the south
(NH 44 catches up from Ambala to [Panipat-Delhi](#)).



- NH 5 to [Shimla](#) in the northeast, and to [Ludhiana](#) in the west.



Rail

Chandigarh Junction railway station lies in the Northern Railway zone of the Indian Railway network and provides connectivity to most of the regions of India. It provides connectivity to eastern states with link to cities like Kolkata, Dibrugarh; southern states with trains to Visakhapatnam, Thiruvananthapuram, Bangalore, Chennai, Madurai and Kollam; western states with trains to Rewari, Jaipur, Ahmedabad, Mumbai and Pune; central states with trains to Bhopal and Indore; other northern states with trains to Lucknow, Amritsar, Ludhiana, Ambala, Panipat and Kalka.

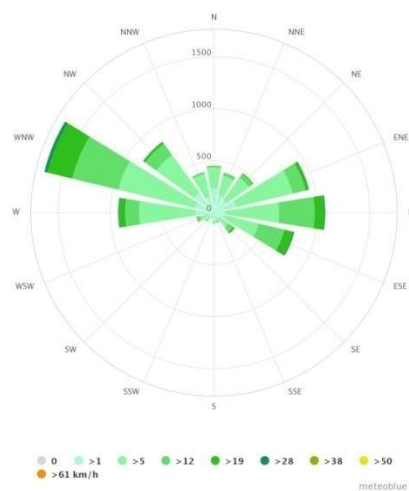
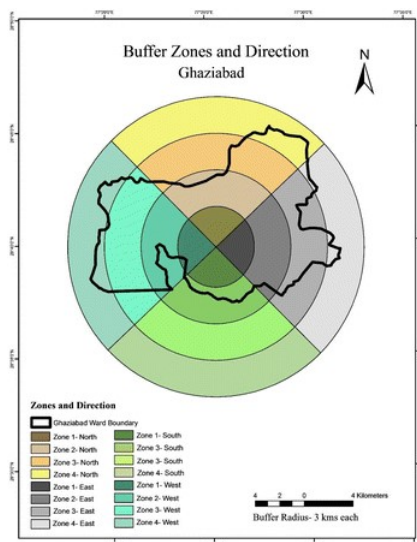


SITE ANALYSIS

CLIMATIC ANALYSIS

COMPOSITE CLIMATE

- A variable landscape and seasonal vegetation characterize this zone.
- The intensity of solar radiation is high in summers, low in winters.
- The maximum day time temperature in summer is in the range of 30- 43 degrees celsius, night time values from 27- 32 degrees celsius.
- In winters the value is between 10- 25 degrees celsius during the day & 4- 10 degrees celsius at night.
- The relative humidity is about 20- 25% in dry periods and 55- 95% in wet periods.
- The region receives strong winds during monsoon from the south west & dry cold winds from the north east.
- In summer the winds are hot & dusty.



Buffer Zones & Directions



PROJECT DETAIL

Project:

**S. BEANT SINGH MEMORIAL & CENTRE FOR
PERFORMING AND VISUAL ARTS:**

Project Profile :

- SAMADHI
- LIBRARY
- MUSEUM
- CAFÉ
- AUDITORIUM
- O.A.T

Location :

CHANDIGARH , PUNJAB

Co-Ordinates :

LATITUDE 30-43'
LONGITUDE 76-50'

Altitude :

333 mm above MSL

Project Area :

28.75 Arce



PROJECT DETAIL

INTRODUCTION

It has been decided to develop and raise a memorial in the memory of Late S. Beant Singh, former Chief Minister, Punjab on a plot measuring 3 acres in Sector- 42-D, at Chandigarh. Building a Memorial which is just a mass of concrete and stones and is a passive architectural structure or form may not be the best way of paying tribute to a hero, who led a life full of action and dynamism and finally laid down his life fighting terrorism. It is only befitting that a lasting tribute is paid to the Late S. Beant Singh by making a Memorial which is vibrant, pulsating with life, and is visited and used meaning-fully by people of the region, if not the whole country, so that his memory is continuously on perpetuated. It would therefore be only appropriate to raise a memorial which symbolises among other things the themes of national integration, communal harmony and secularism.

It has also been decided to set up a centre for performing and visual arts on the additional land measuring 8.9 acres (approx.) available adjacent to S. Beant Singh Memorial. The adjoining Leisure Valley stretch measuring about 28.75 acres is also to be landscaped and developed in harmony and integrated manner. The centre would be planned and designed in such a manner so as to lend subtly and completely with the memorial. This is quite achievable as there can not be a greater unifying force than art. All great arts, past or present, have a profoundly stirring impact on the human mind and spirit and act as a cementing force, transcending the barriers and limitation of caste, creed, class, religion, province and nationalities, unifying people from remote and diverse parts. The centre for the Performing & Visual Arts would therefore serve to only complement and further accentuate the underlying theme of the Memorial.

AREA OF SITE- The total area of site is 11.9 acres (518364 sq.ft.)

ARCHITECTURE OF LOCALITY- Modern

ADJACENT LAND- Post Graduate Government College for Girls , Dr Ambedkar Institue of Hotel Management

ROAD LINE- VIKAS MARG , UDHYAN PATH

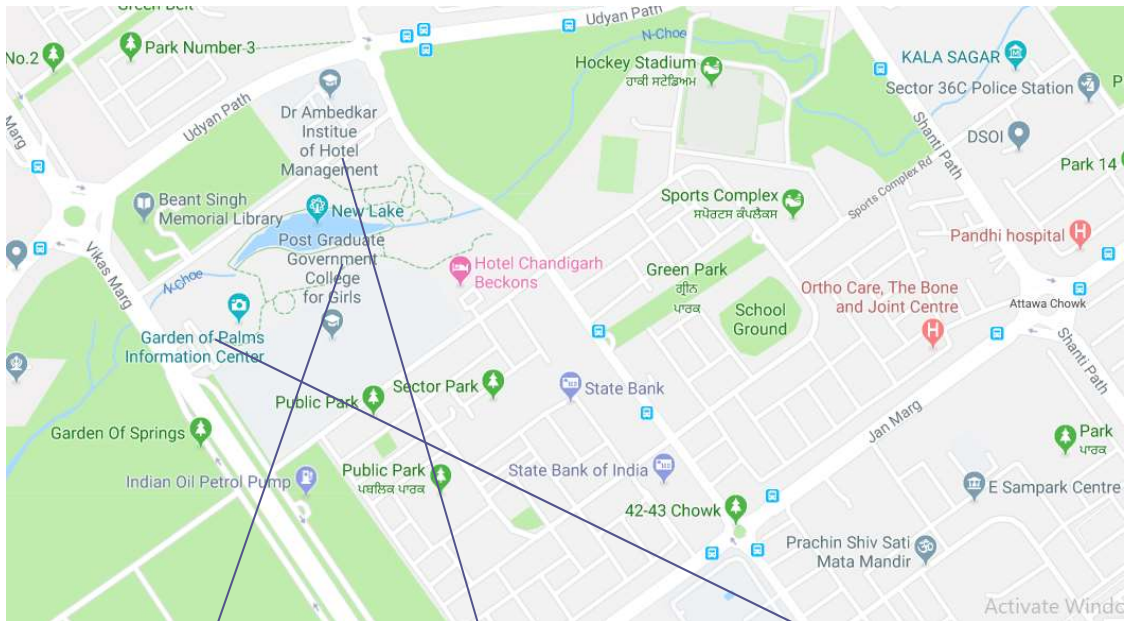
RAILWAY LINE- 8KM

AIR LINE - 10KM



PROJECT DETAIL

COMMUNITY SERVICE



PROJECT DETAIL

EXISTING SITE CONDITION



SITE ANALYSIS

EXISTING SITE CONDITION



DESIGN BRIEF

A Samadhi designed as a unique architectural form embodying the values of fearlessness, valour, secularism, national unity, integration and communal harmony which the Late S. Beant Singh symbolized.

In addition to the Samadhi, the Memorial would consist of a Centre for National Integration and Communal Harmony which would have two components:-

- An all – religion (Sarwadharm) repository which would serve to inspire love and respect towards all religions and would highlight the theme of secularism and communal harmony. It would therefore include pictorial depictions of the exponents of all religions and their noble messages to mankind all of which essentially emphasise the need for superior values of love, truth, kindness and secularism etc. There could also be a gallery and a Museum on the theme of secularism and communal harmony, housing wax/ fiber glass / bronze figures of the national heroes and great saints spanning the last 2000 years of Indian history on the lines of the wax-works at Madame Tussaud's in London.
- The other component of the Centre for National Integration and Communal Harmony would be a state-of-the-art library which would be an exclusive referral and research centre for art scholars and learners and would possess a unique and large quality-collection of volumes on all religions as also on the Central themes of National Unity, Integration, Communal Harmony and Secularism. Library would also be developed into an extremely well0-equipped centre with respect to literature and traditional and contemporary, classical and art forms, particularly the visual and the performing arts.

It is proposed to have a Conference Hall for 200 persons with a media centre and other Allied requirements.

The concept of the Centre for Performing and Visual arts is broadly proposed to have:-

- The centre for the Performing Arts would have a state-of-the-art modern auditorium with a seating capacity of 1000 persons with a provision for a revolving stage, the most modern sound and acoustic system, and other allied facilities such as rehearsal rooms and green rooms etc.



DESIGN BRIEF

- A multipurpose flexible hall with a provision for folding partition to adjust the area as per requirements particularly for the purpose of experimental theatre and various other art events, the staging of which requires ample flexibility with regard to stage set-ups and seating would also be a part of this centre.
- The centre would also provide facilities for holding work-shops and also a display gallery for contemporary Exhibitions.
- The Centre cannot be complete without a Cafeteria which merges with the over all ambience of the Complex.

This site measuring 3 acres for the memorial, 8.9 acres (approx.) for the Centre for Performing & Visual Arts and approximately 28.75 acres stretch of the adjoining Leisure Valley along Outer Dakshin Marg and Udyan Path in Sector- 42-D, Chandigarh, has been earmarked for the Project. The site is easily accessible from within the City and the adjoining state of Punjab .

General Requirements:

Reception / waiting be provided separately for various components.

Area of various components / items not specified in the client's Brief but necessary for a particular purpose, may be purposed by the Architect and provided in the scheme.

The architectural design character of the project should be in harmony with the Chandigarh Architecture.

Parking lots should be un-obtrusive and designed to allow free pedestrian movement.

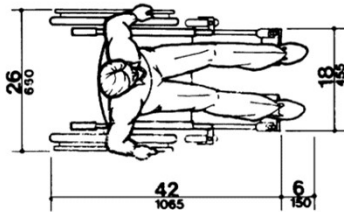
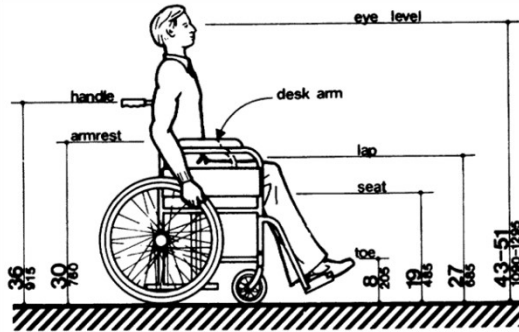
Separate parking lots be provided for different activities based on the capacity of each facility.

Ramps, lifts and stairs may be provided where-ever necessary.

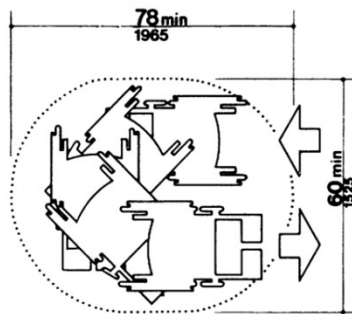
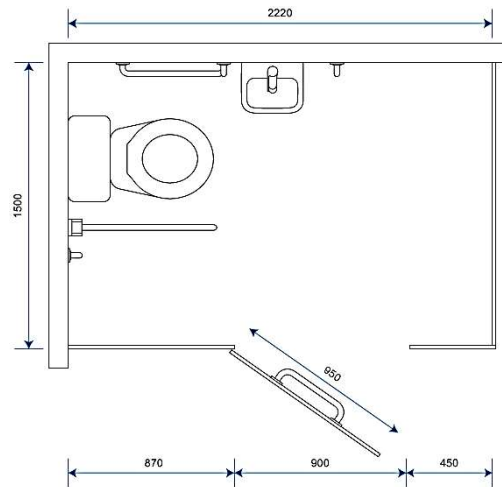
Public conveniences (separate for ladies and gents to be provided at appropriate locations)



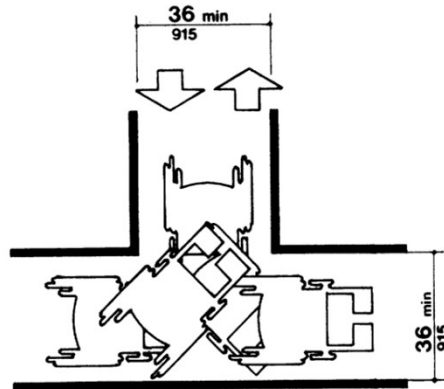
For Disabled People



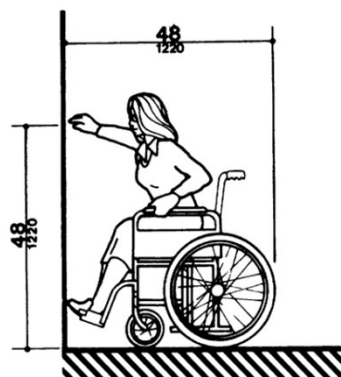
Wheelchair dimensions



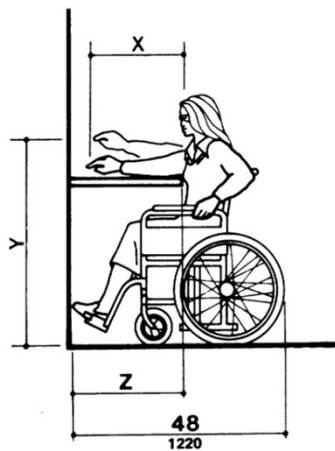
Space needed for smooth U-turn



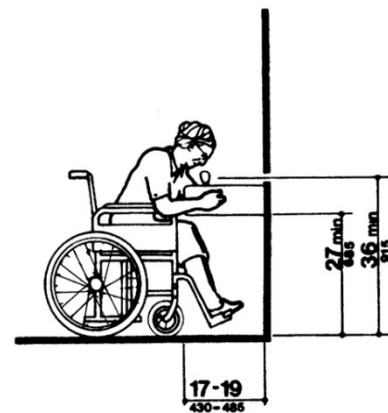
T-shaped space for 180-degree turns



Forward reach limits

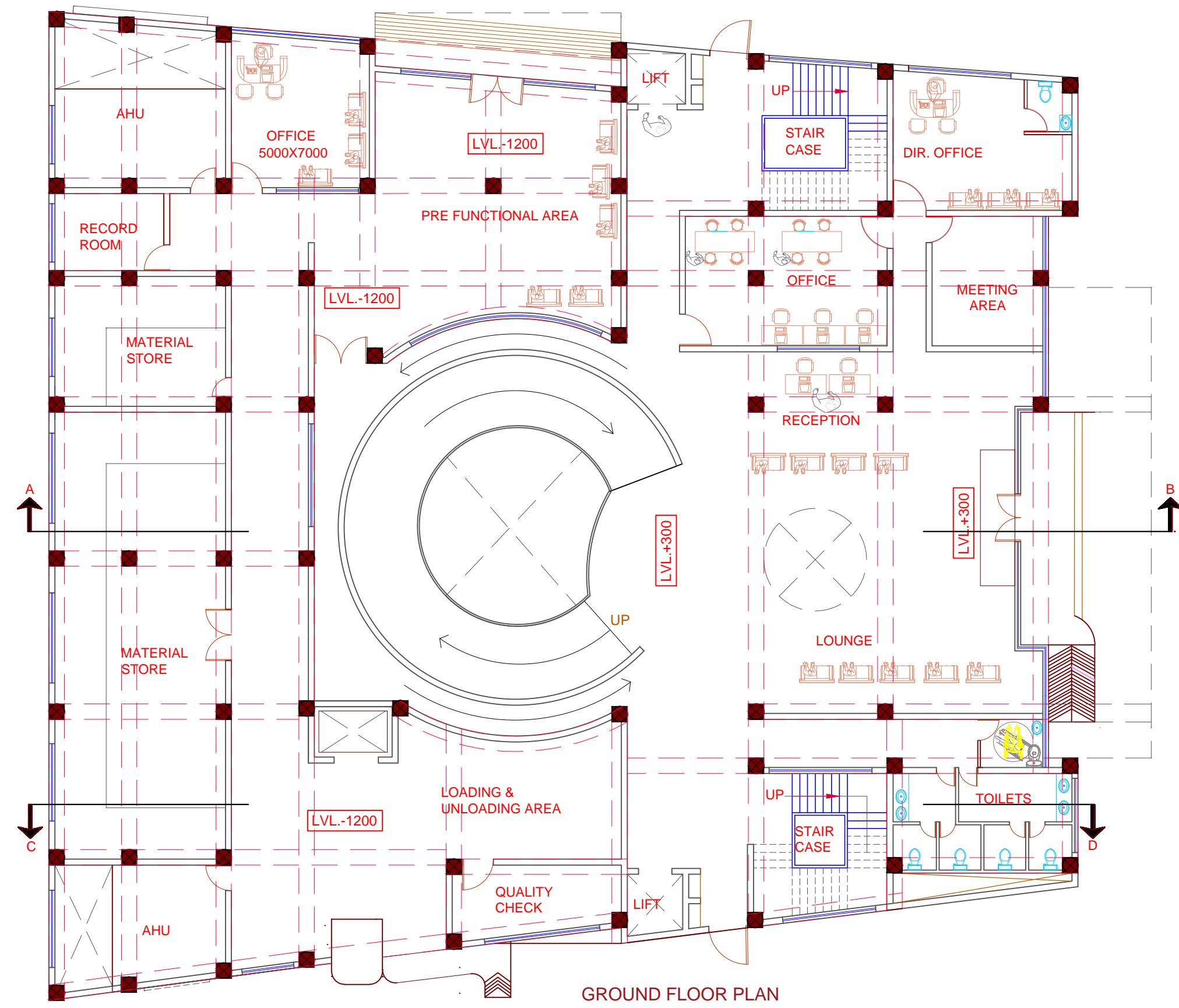


NOTE: X shall be ≤ 25 in (635 mm); Z shall be $\geq X$. When X < 20 in (510 mm), then Y shall be 48 in (1220 mm) maximum. When X is 20 to 25 in (510 to 635 mm), then Y shall be 44 in (1120 mm) maximum.

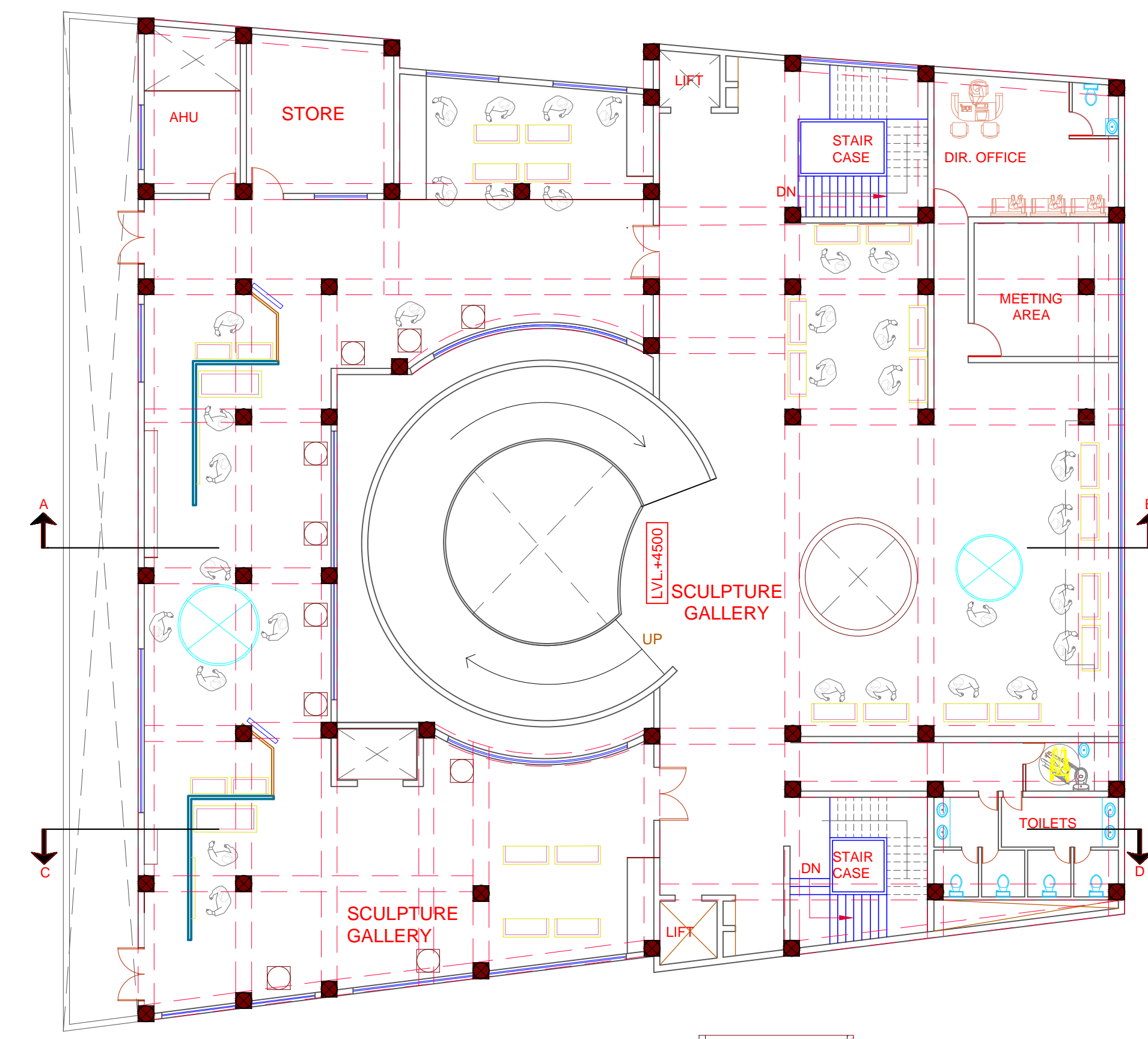


Drinking fountain, cantilevered type

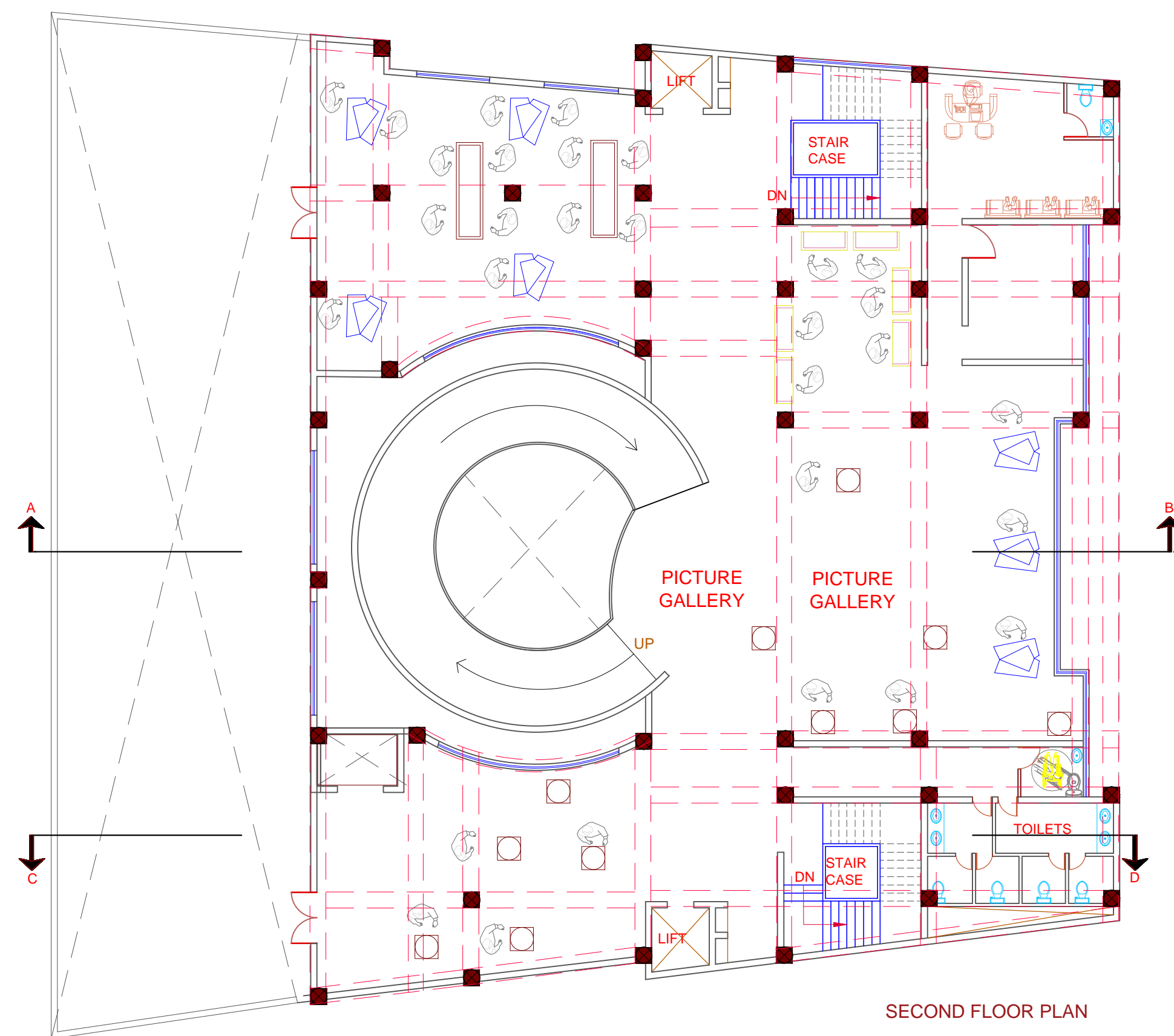




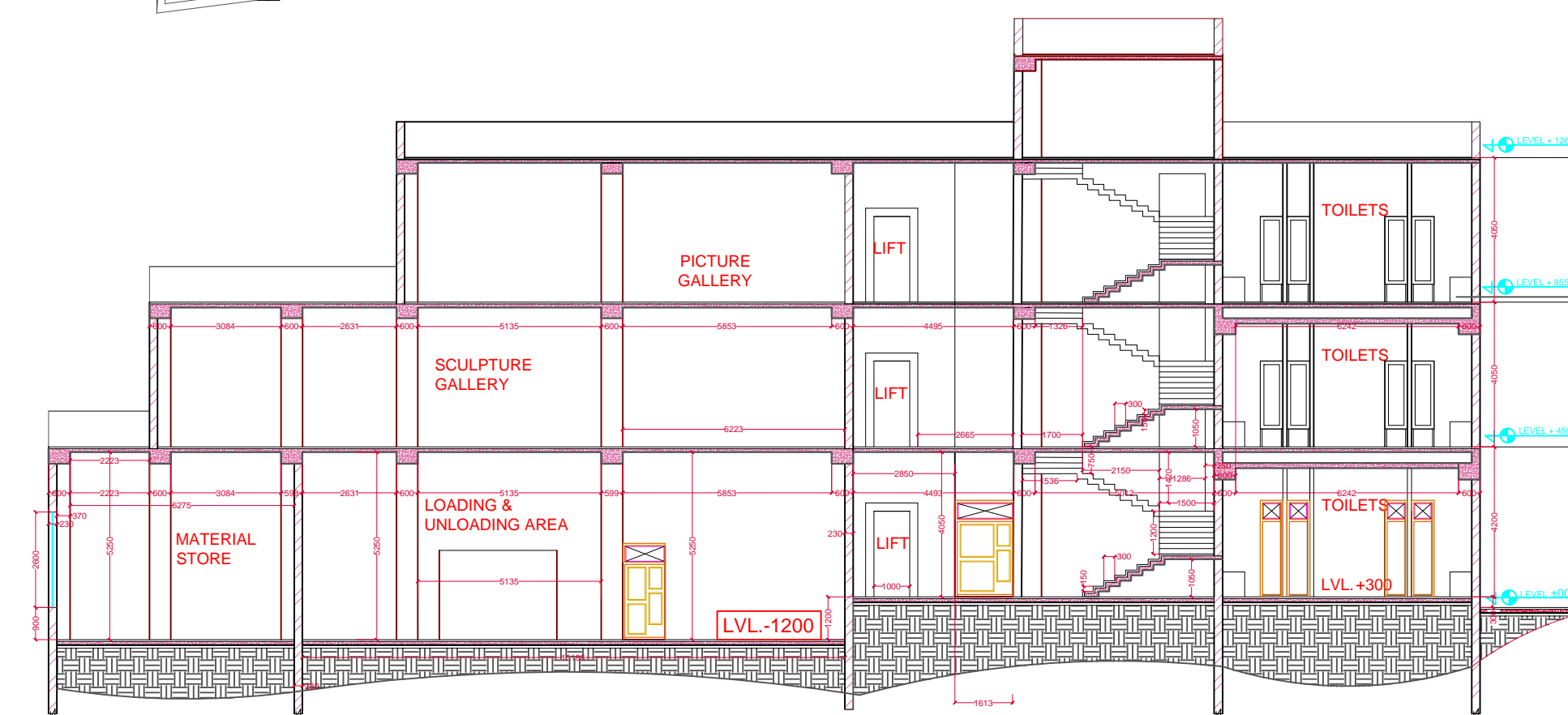
GROUND FLOOR PLAN



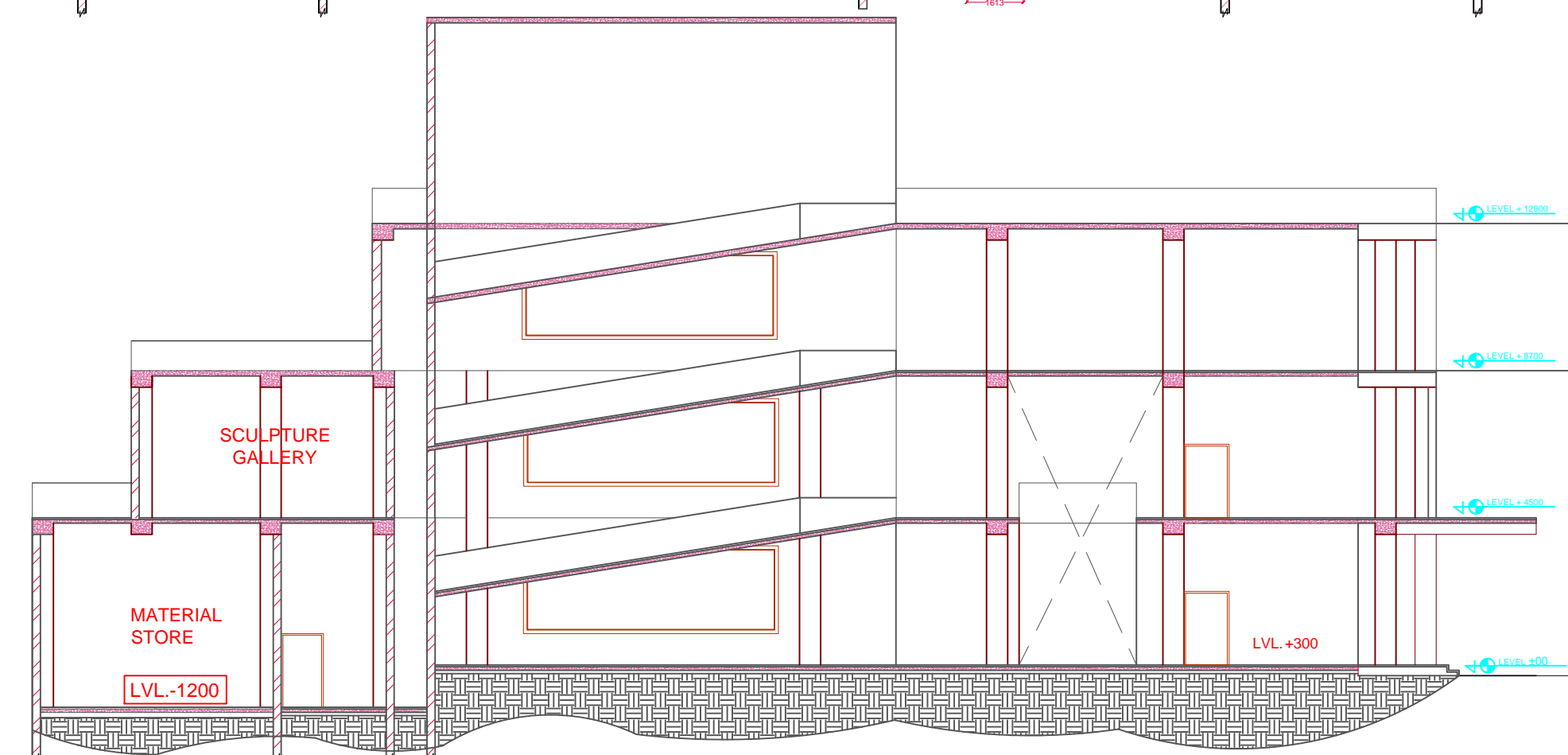
FIRST FLOOR PLAN



SECOND FLOOR PLAN



SECTION CD



SECTION AB



SUBJECT **ARCHITECTURAL DESIGN**

ASSIGNMENT **MEMORIAL & CENTRE FOR PERFORMING VISUAL ARTS**
SECTOR - 43 CHANDIGARH

AR- 1001

MUSEUM

SUBMITTED BY **YASHASWI SHARMA**

STUDIO **ARCHITECTURAL DESIGN**

YEAR **5th YEAR**

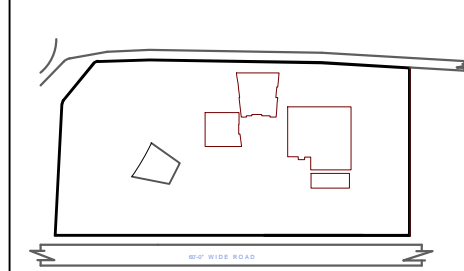
SECTION **AR 5-3**

SHEET NO. 2

NORTH



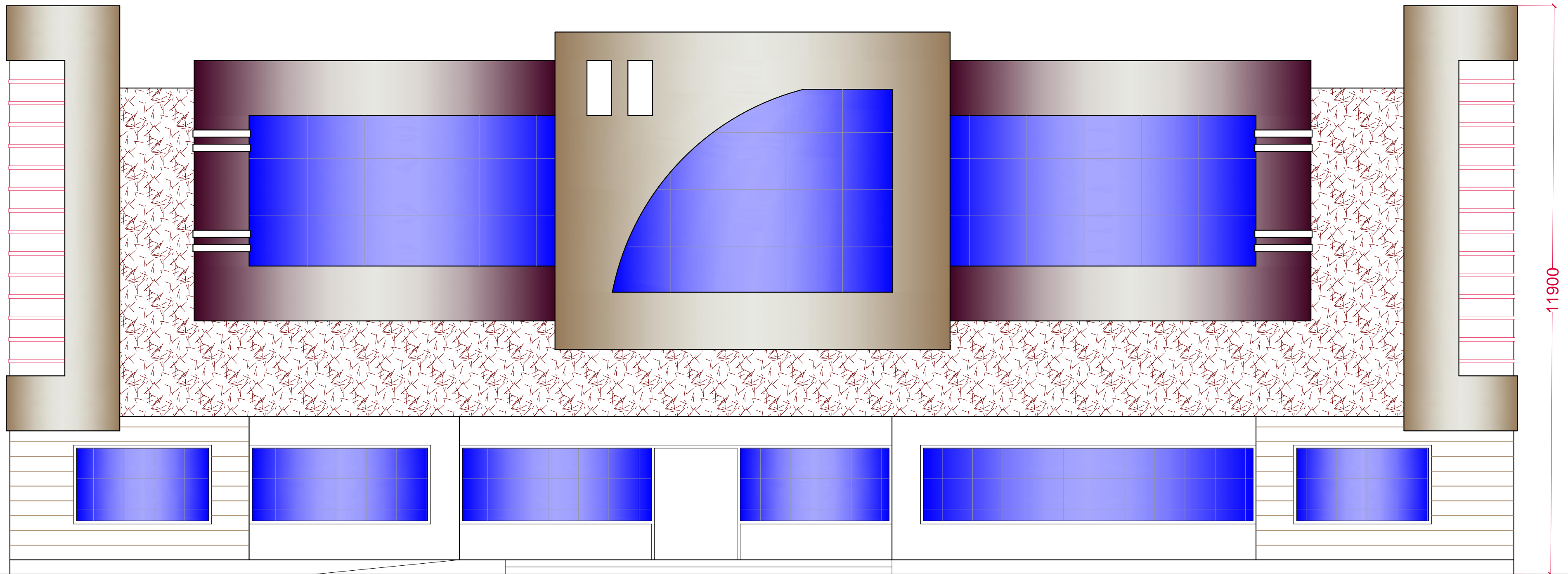
KEY PLAN



DATE OF SUBMISSION

GUIDE NAME
AR. URVASHI TIWARI

THESIS COORDINATOR
AR. URVASHI TIWARI
AR. SHAILESH YADAV

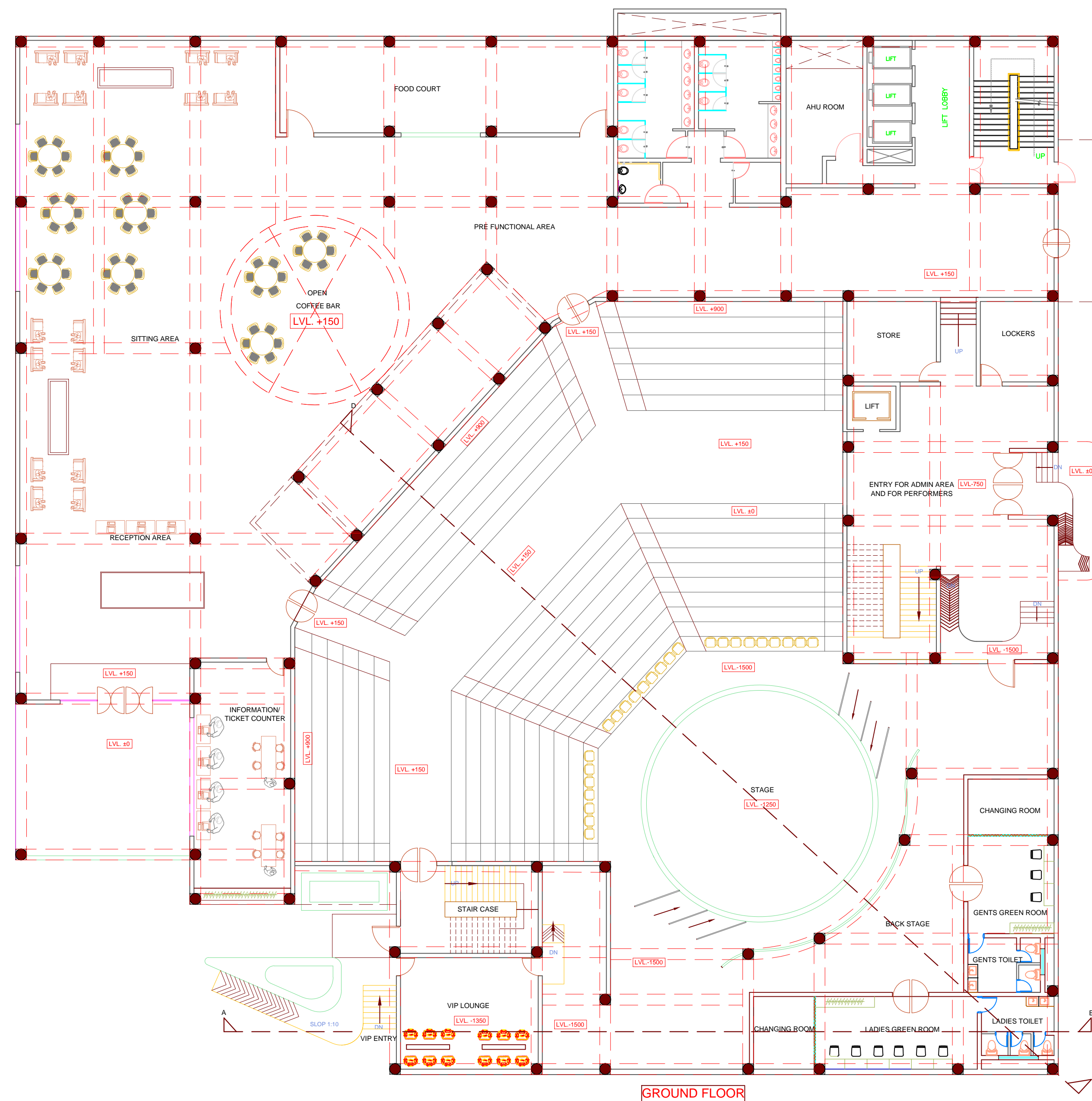


SUBJECT	ARCHITECTURAL DESIGN	AR- 1001
ASSIGNMENT	MEMORIAL & CENTRE FOR PERFORMING VISUAL ARTS SECTOR - 43 CHANDIGARH	

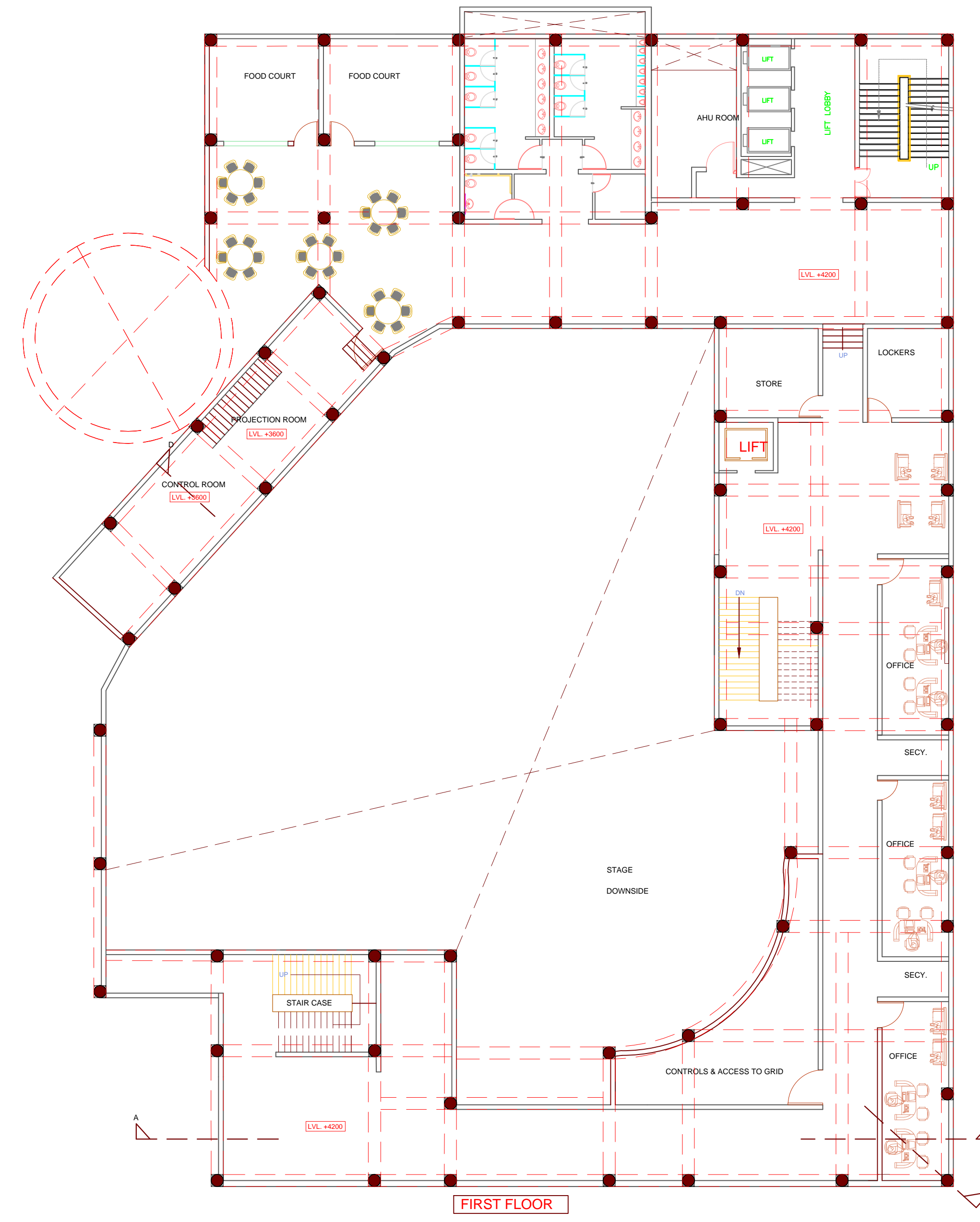
MUSEUM ELEVATION		
SUBMITTED BY YASHASWI SHARMA		
STUDIO	ARCHITECTURAL DESIGN	YEAR 5th YEAR
SECTION		AR 5-3

SHEET NO. 3	
NORTH	

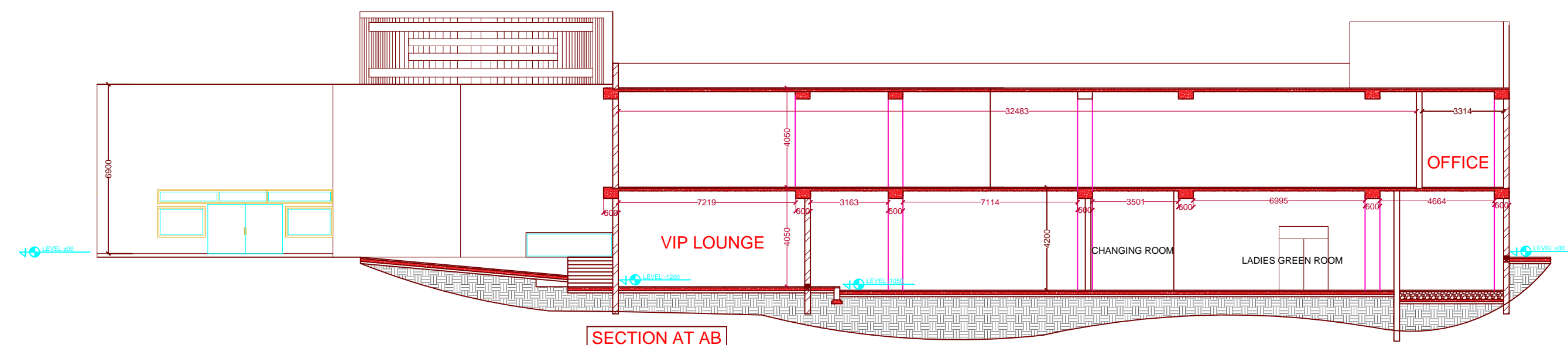
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GUIDE NAME AR. URVASHI TIWARI
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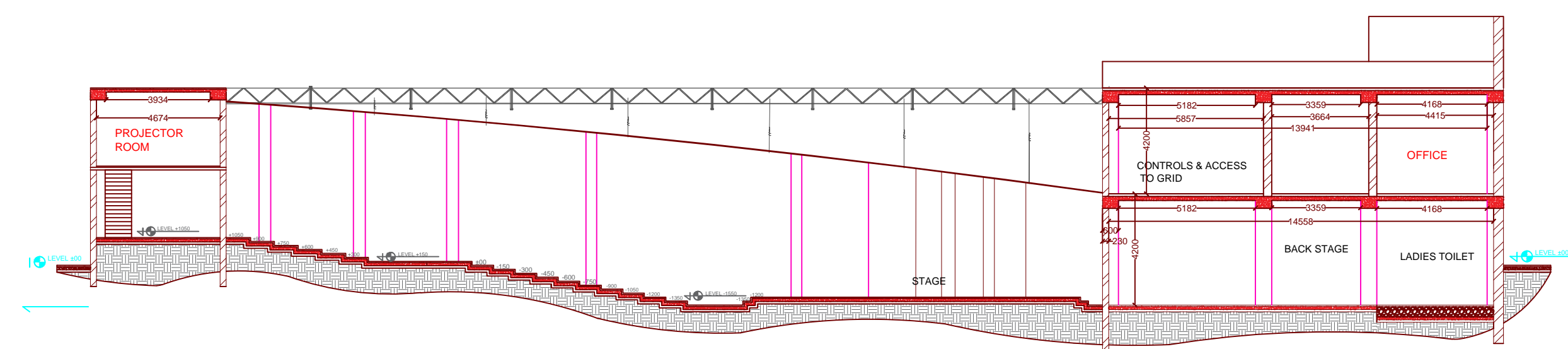
GROUND FLOOR



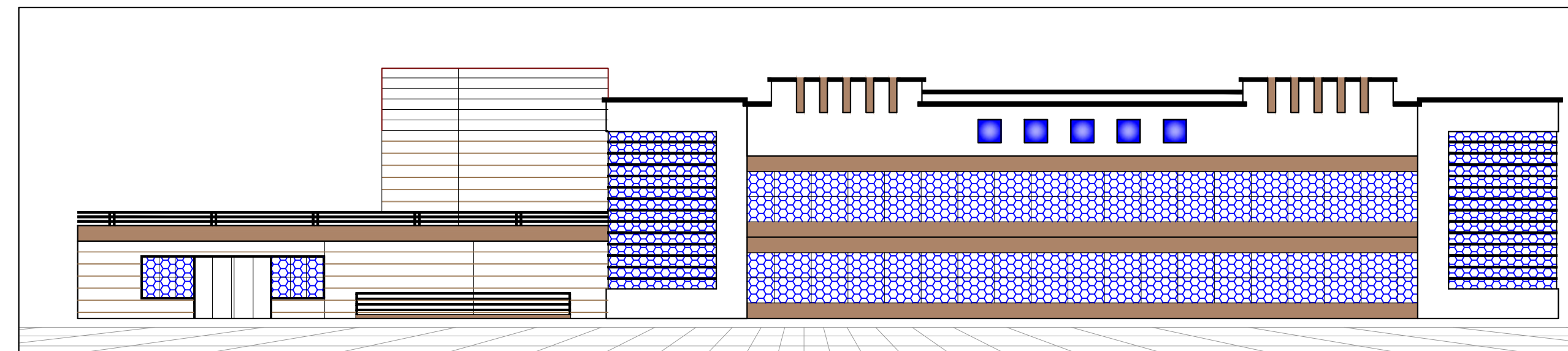
FIRST FLOOR



SECTION AT AB



SECTION AT CD



FRONT ELEVATION



SUBJECT **ARCHITECTURAL DESIGN** AR- 1001

ASSIGNMENT **MEMORIAL & CENTRE FOR PERFORMING VISUAL ARTS**

SECTOR - 43 CHANDIGARH

AUDITORIOM

SUBMITTED BY **YASHASWI SHARMA**

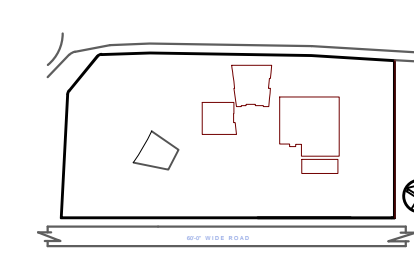
STUDIO **ARCHITECTURAL DESIGN** YEAR **5th YEAR** SECTION **AR 5-3**

SHEET NO. 4

NORTH



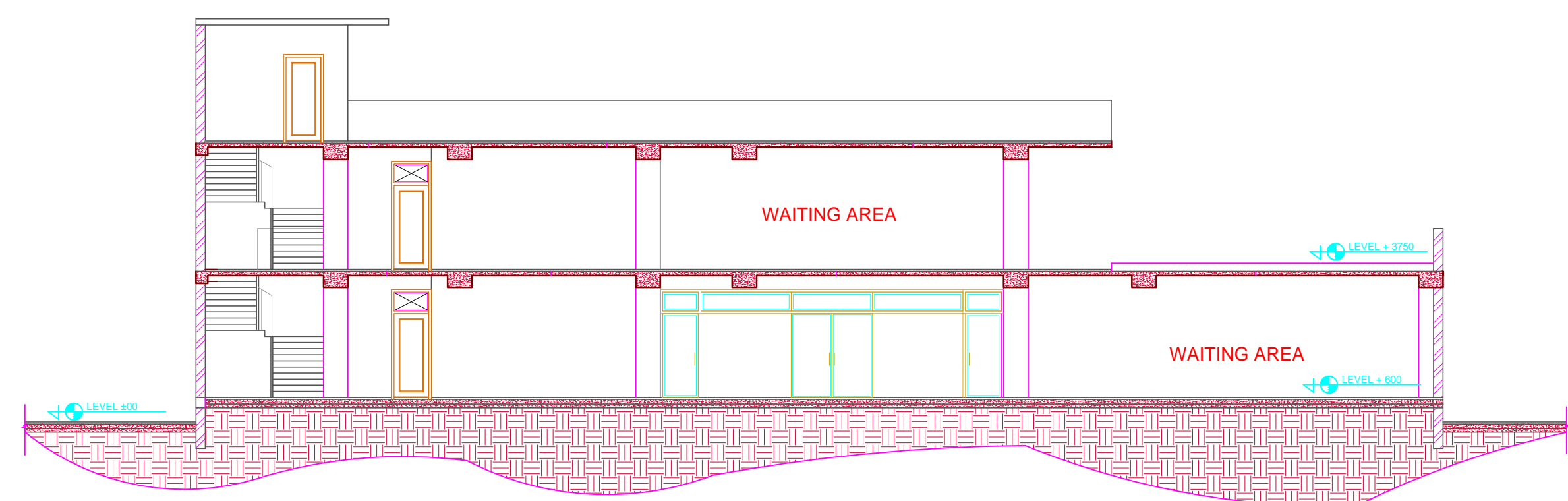
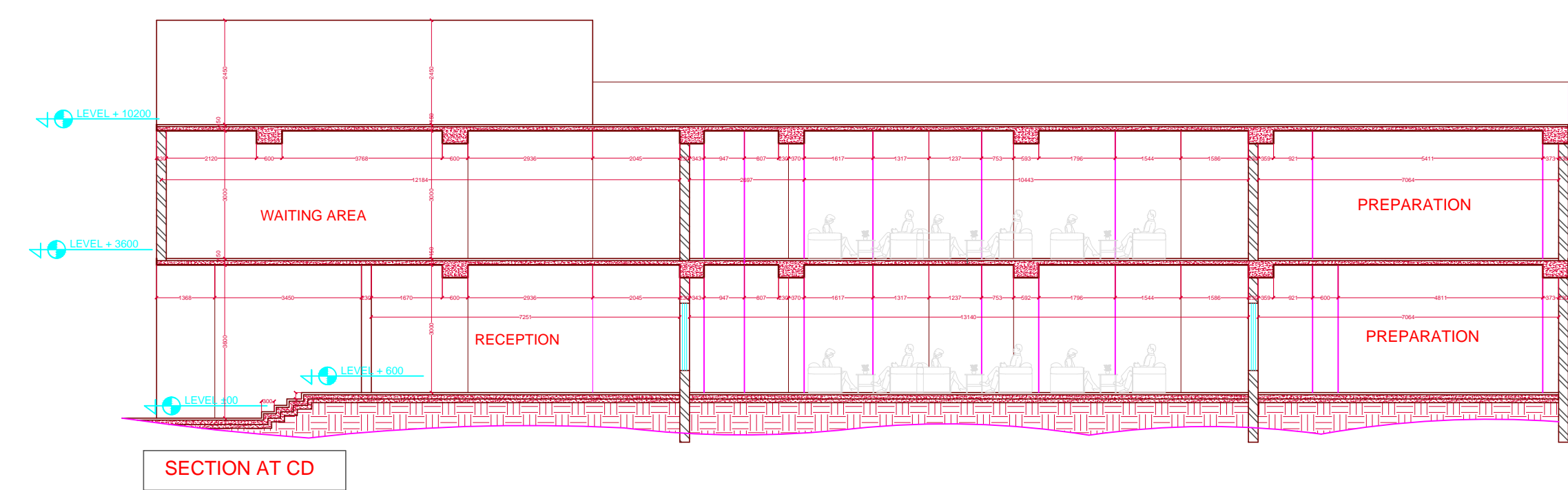
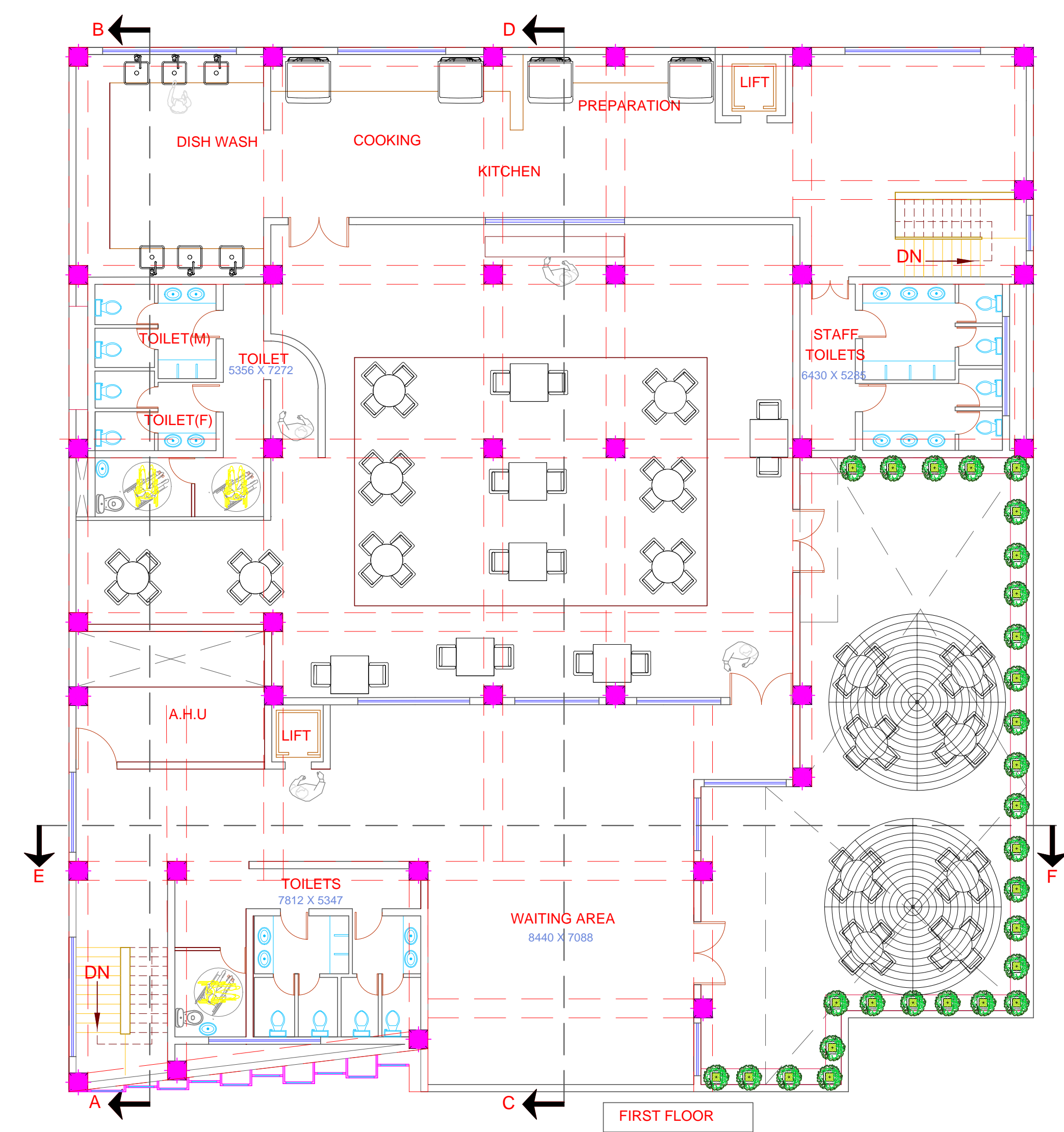
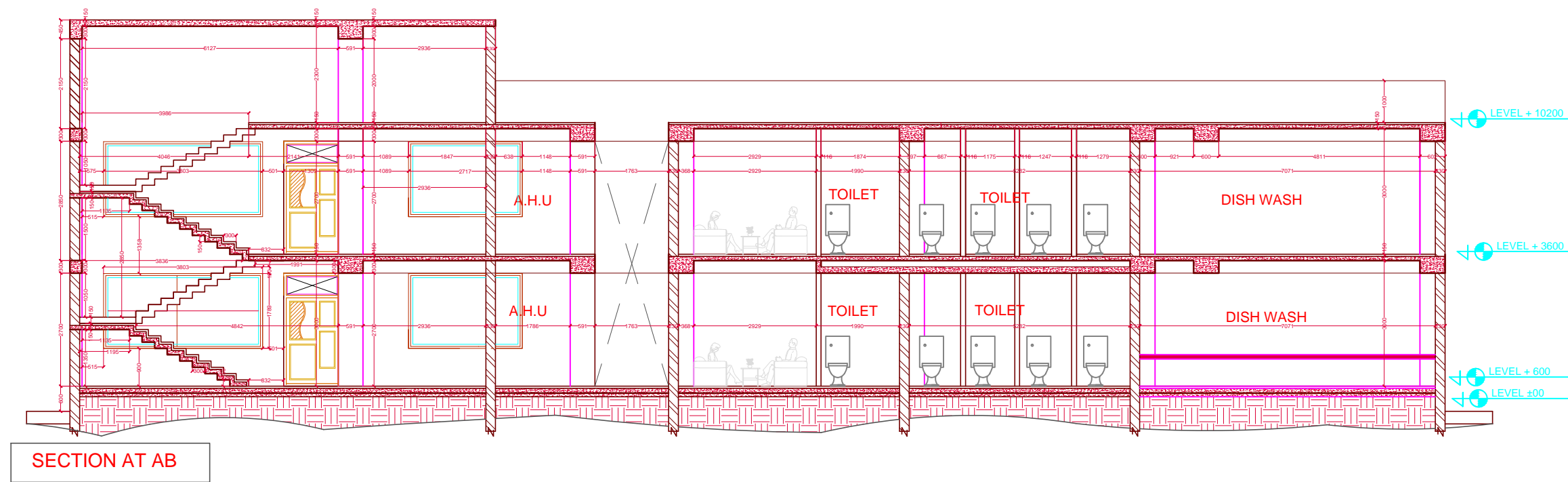
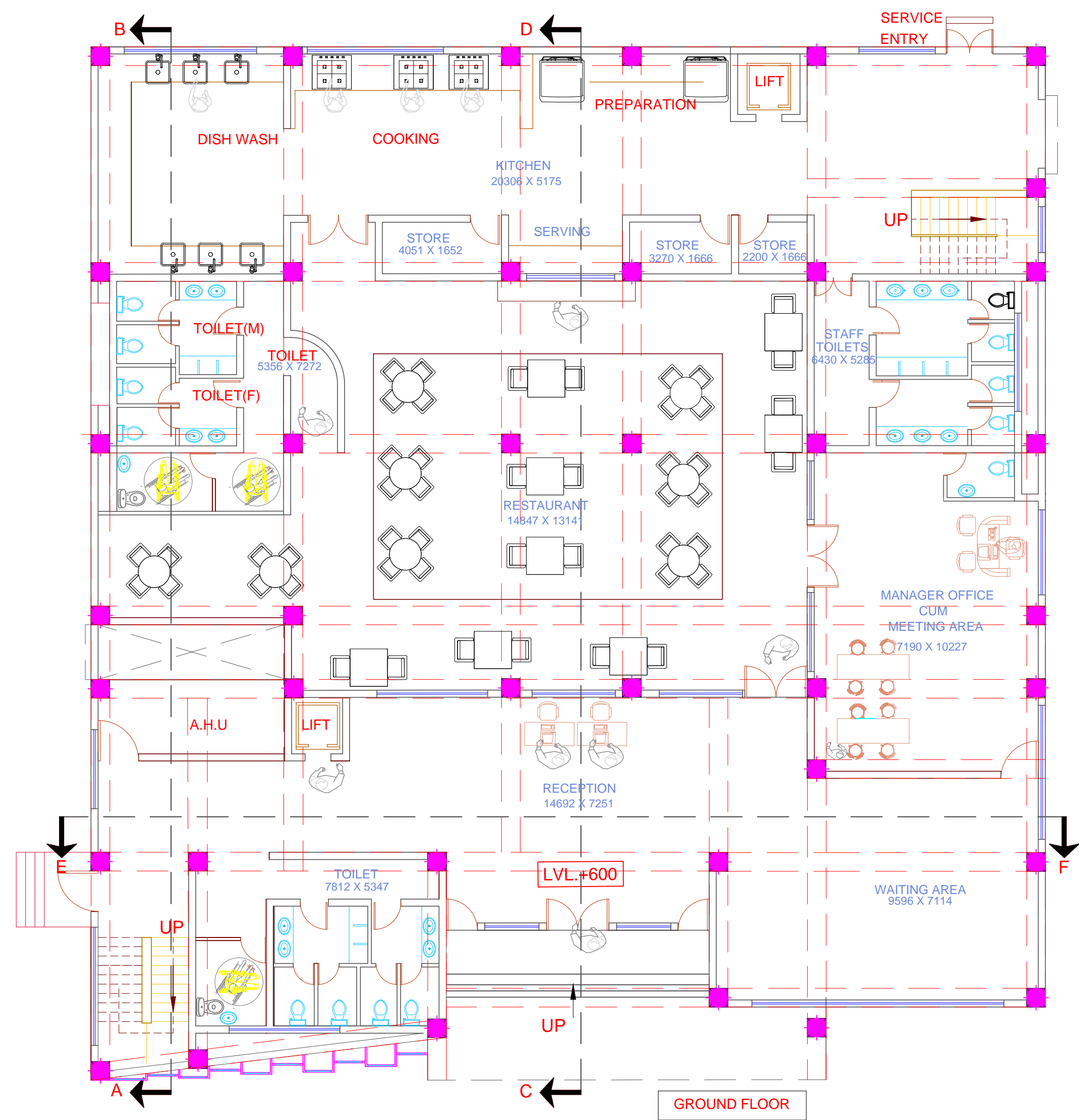
KEY PLAN



DATE OF SUBMISSION :-
16/05/2020

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ASSIGNMENT **MEMORIAL & CENTRE FOR PERFORMING VISUAL ARTS**
SECTOR - 43 CHANDIGARH

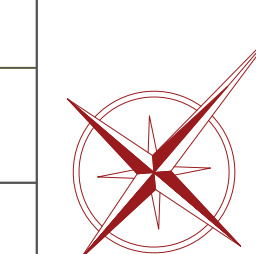
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STUDIO **ARCHITECTURAL DESIGN** YEAR **5th YEAR** SECTION **AR 5-3**

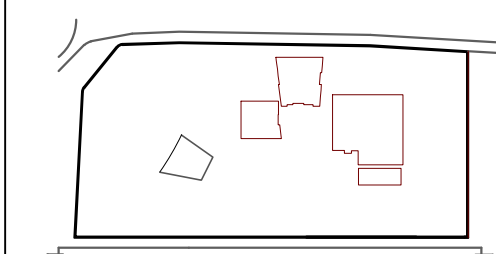
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SHEET NO. 5

NORTH



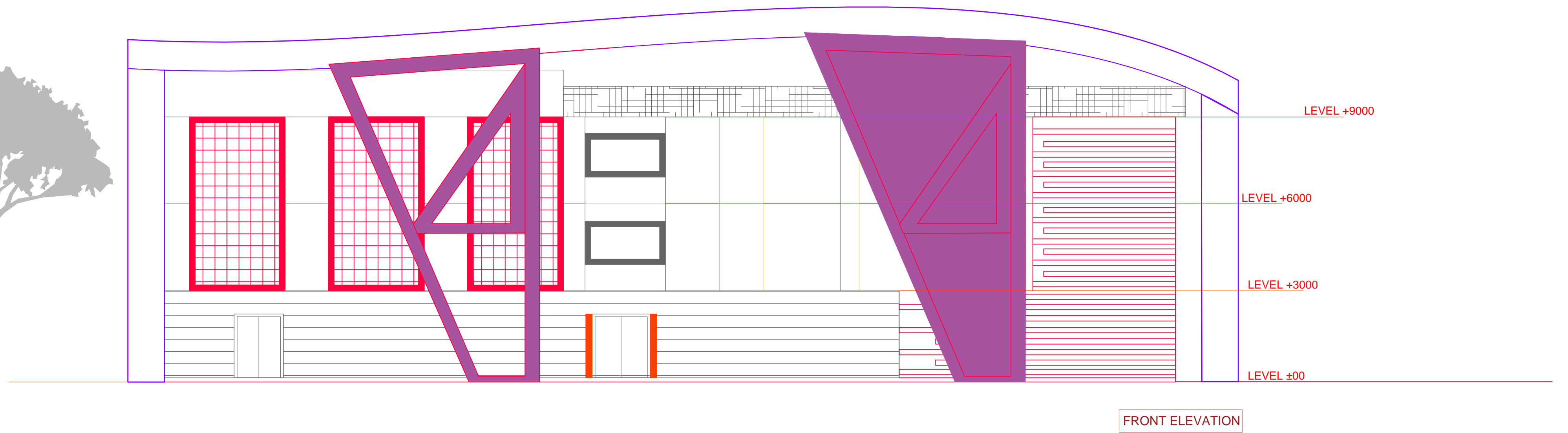
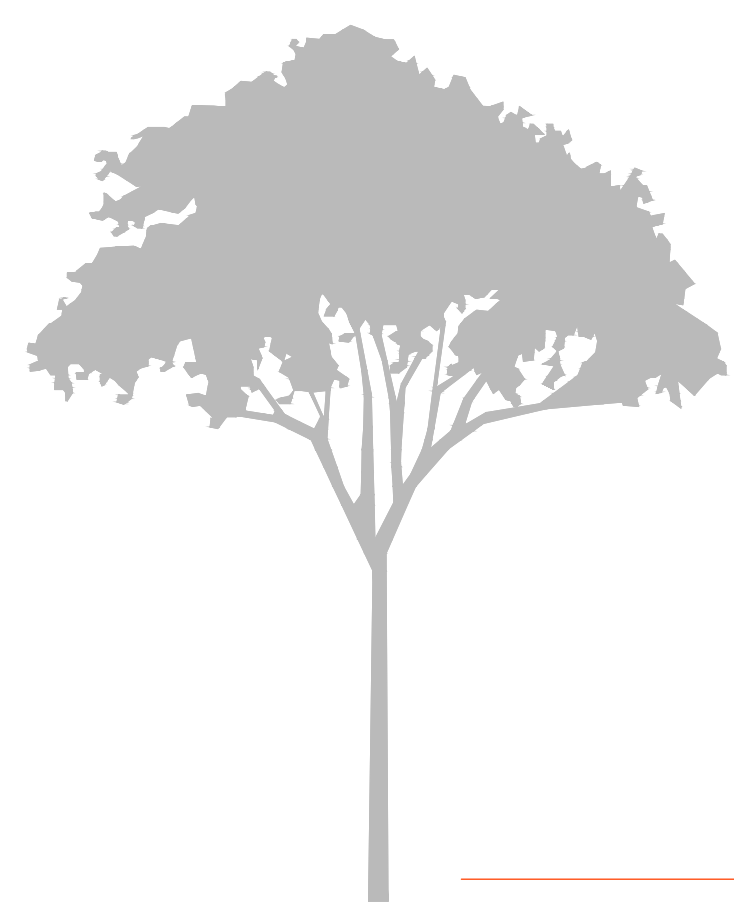
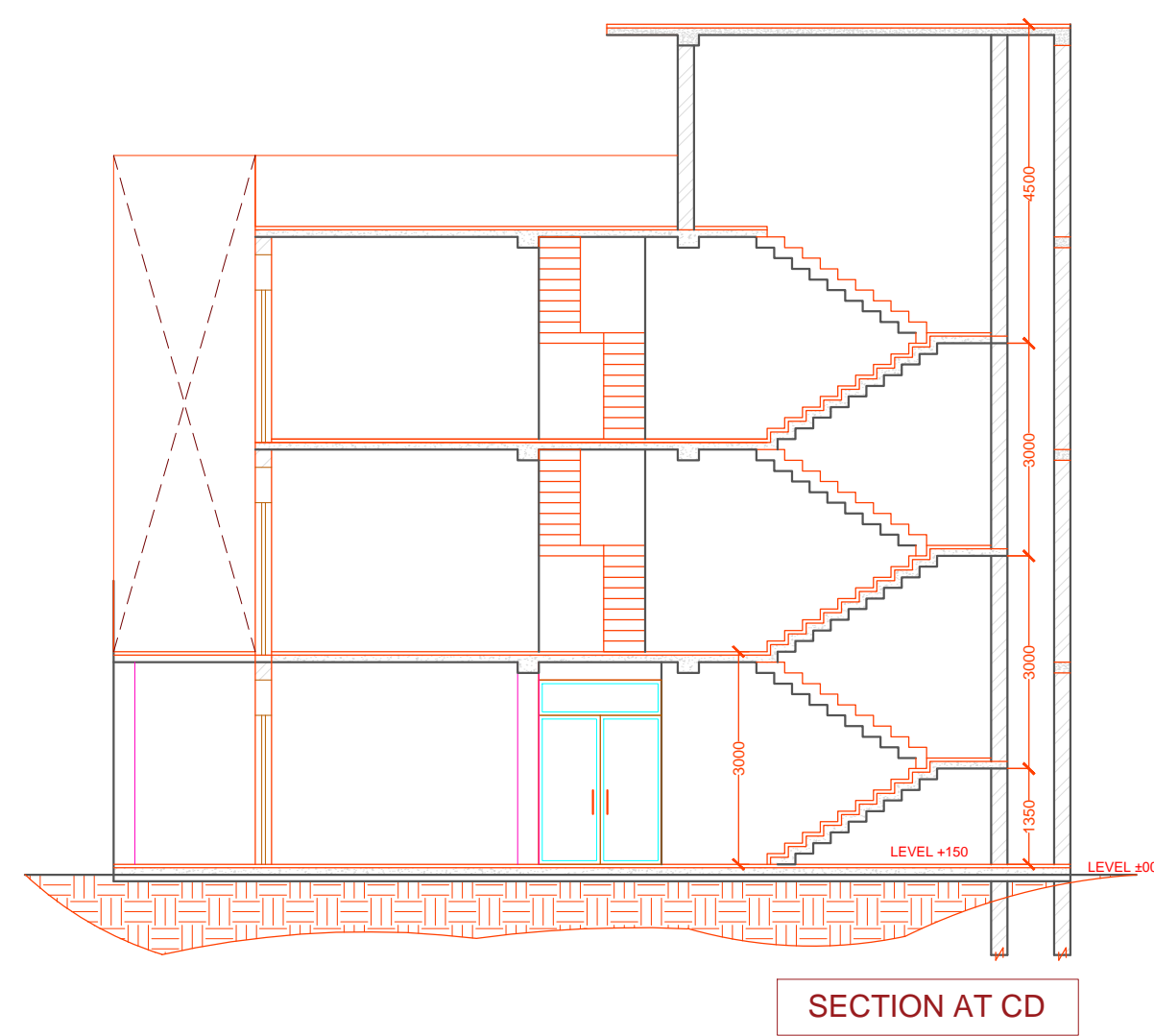
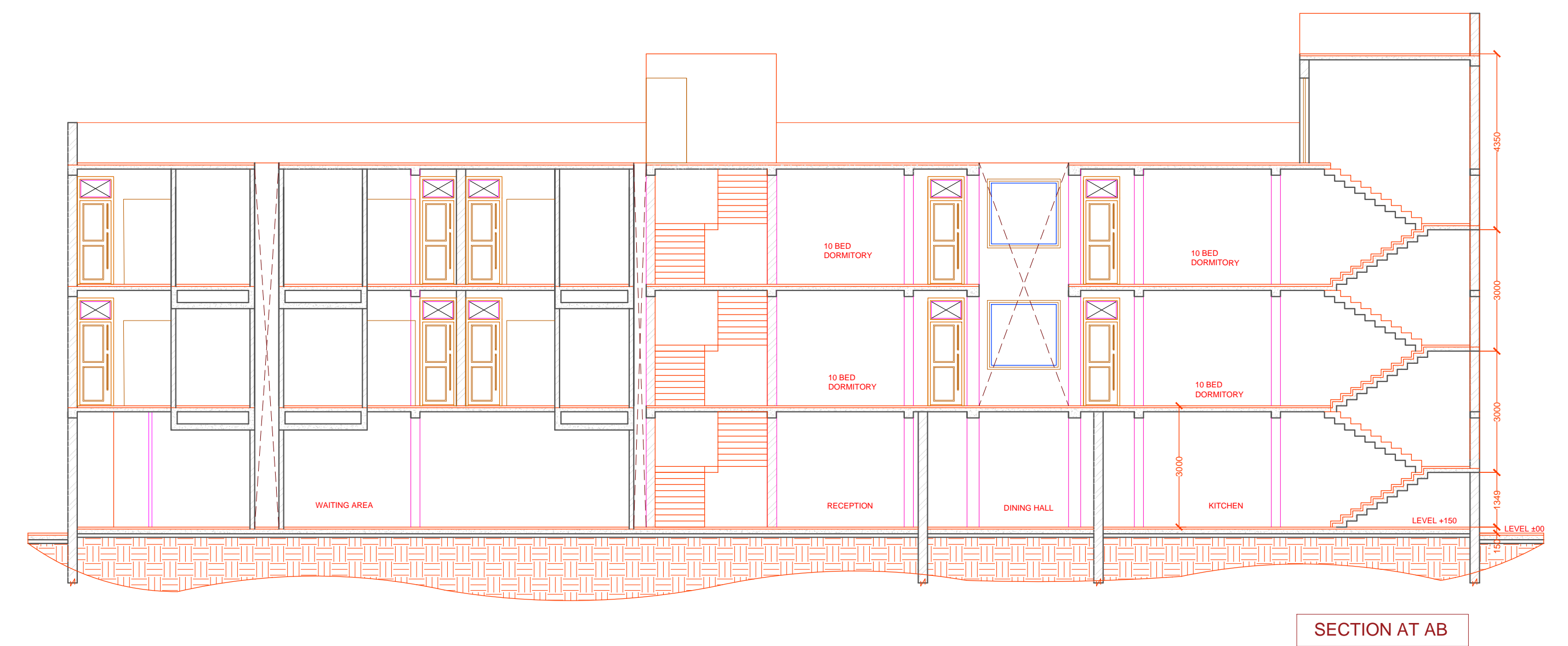
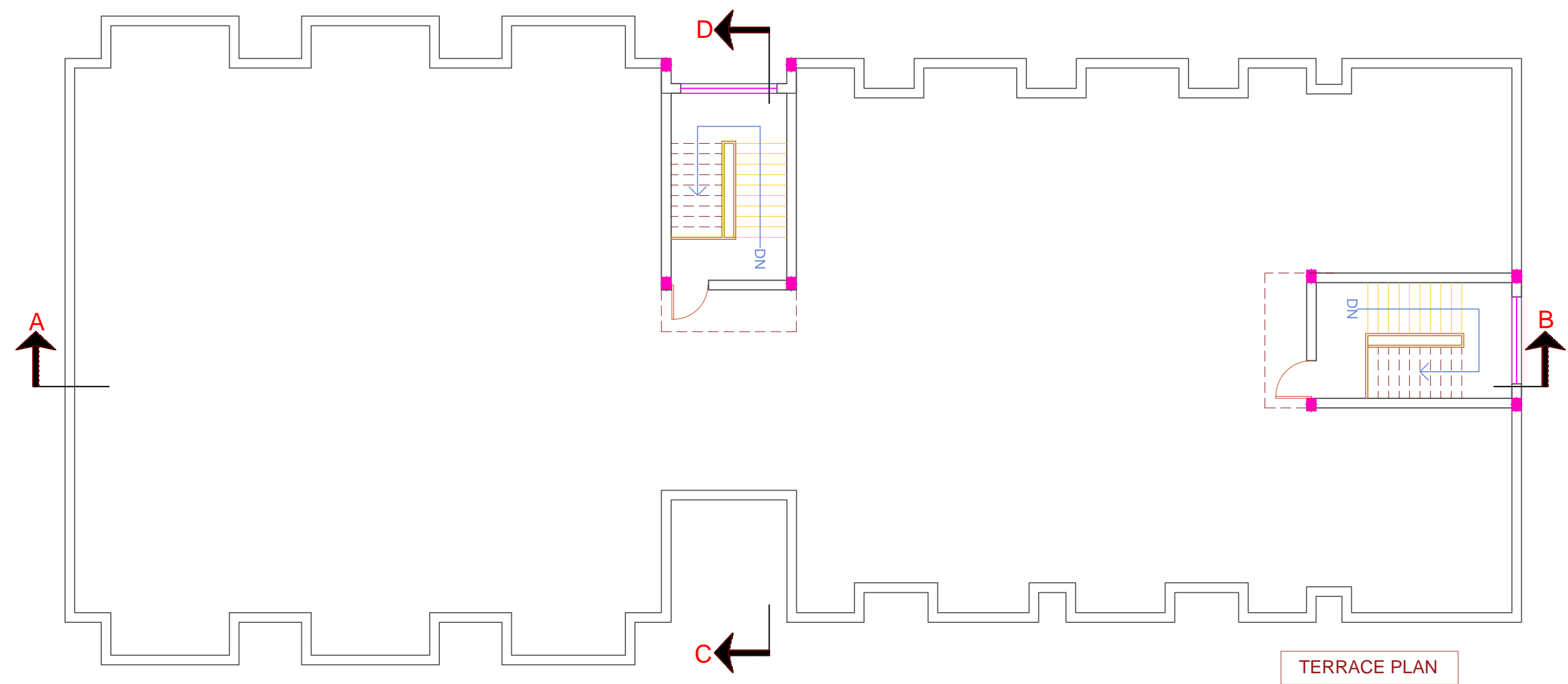
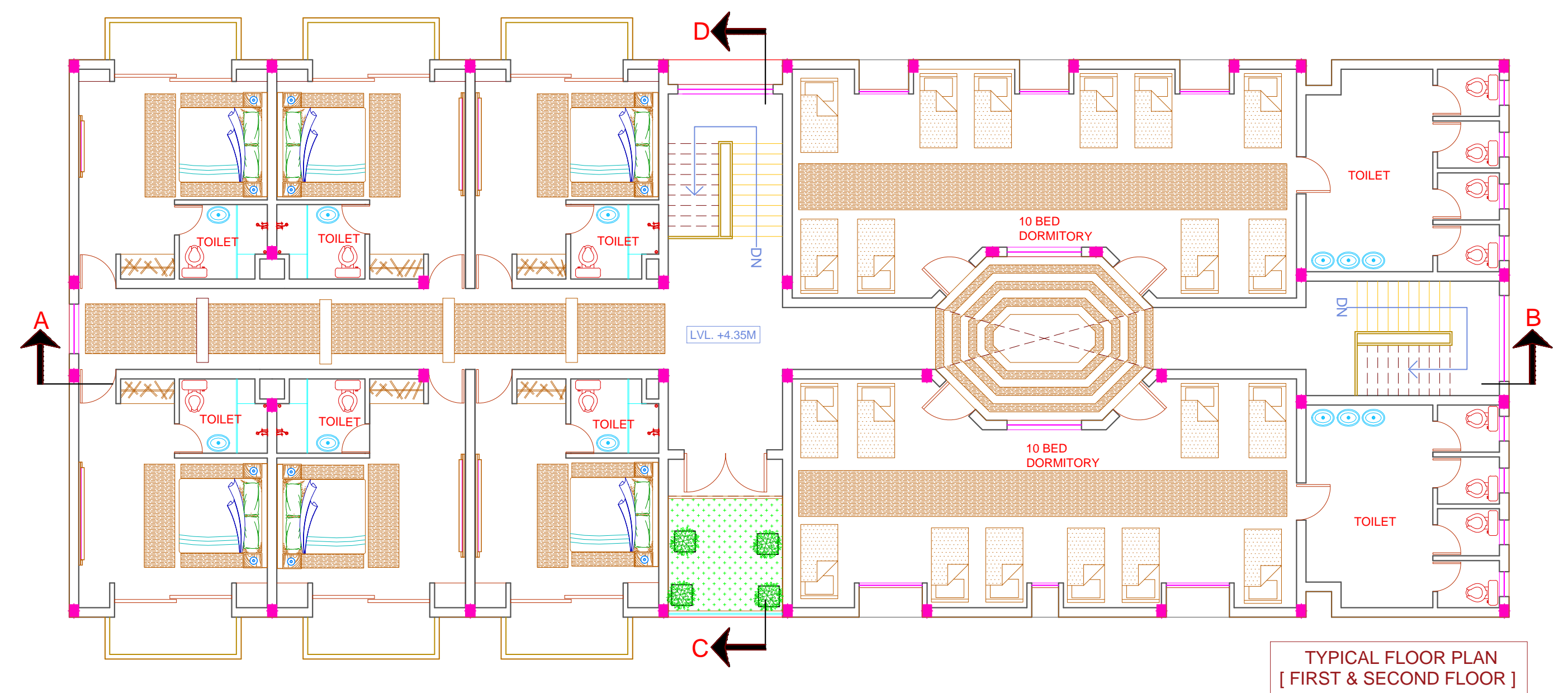
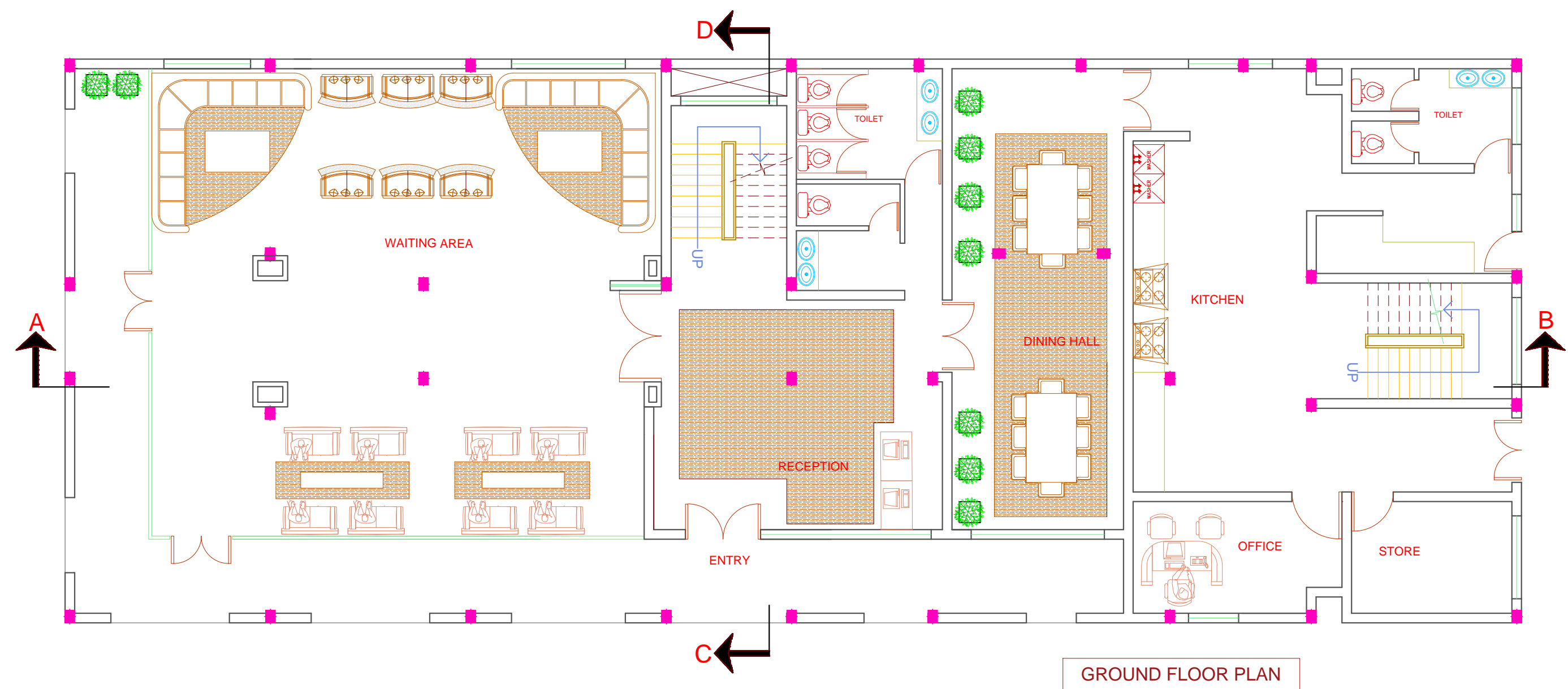
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ASSIGNMENT **MEMORIAL & CENTRE FOR
PERFORMING VISUAL ARTS
SECTOR - 43 CHANDIGARH**

GUEST HOUSE

SUBMITTED BY **YASHASWI SHARMA**

STUDIO **ARCHITECTURAL DESIGN** YEAR **5th YEAR** SECTION **A**

SHEET NO. 6

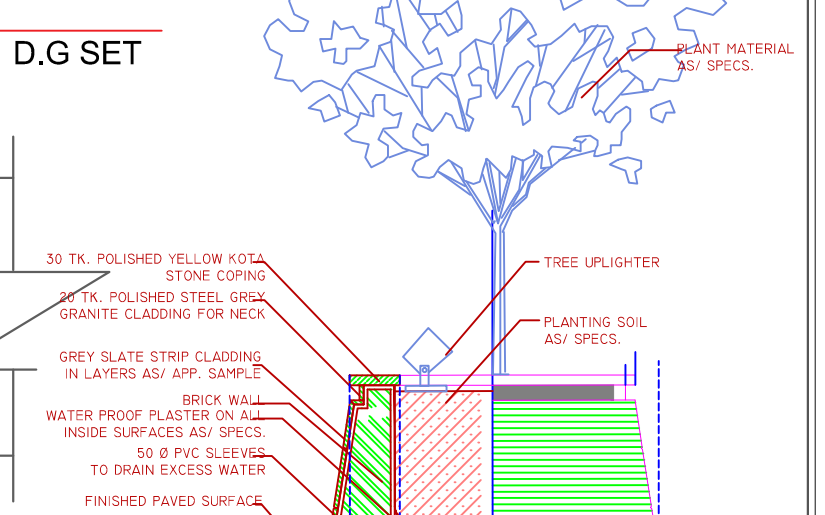
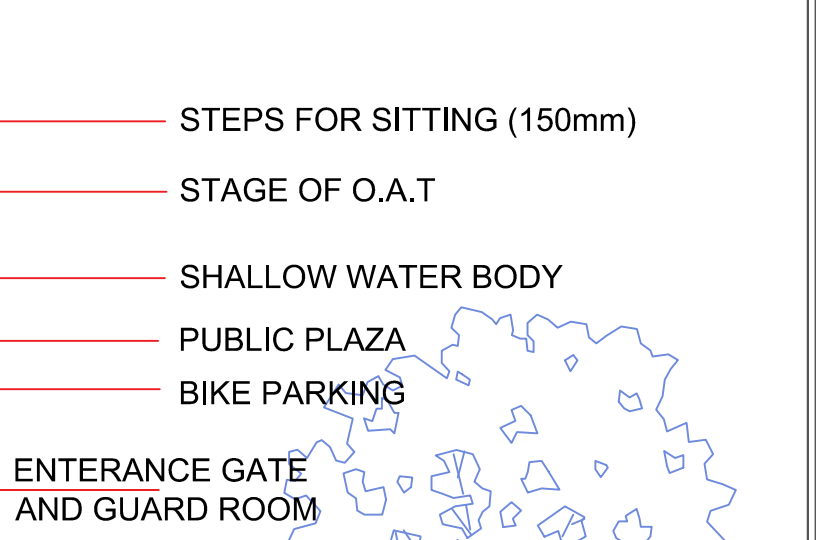
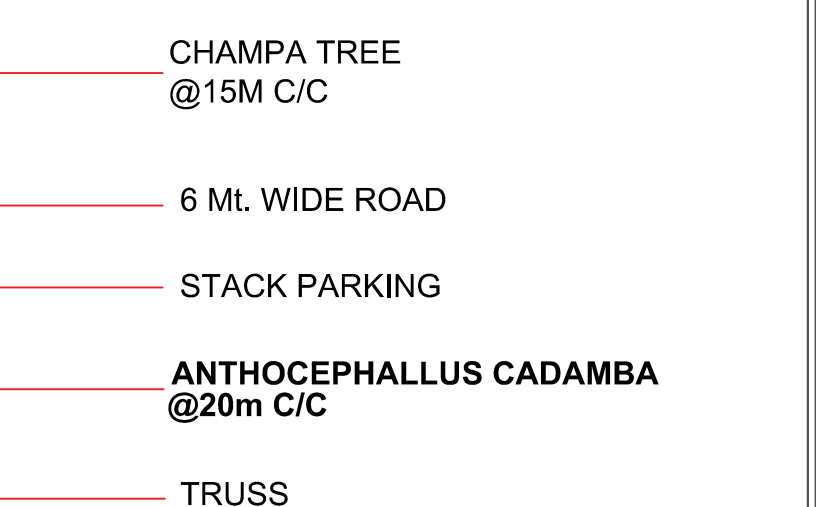
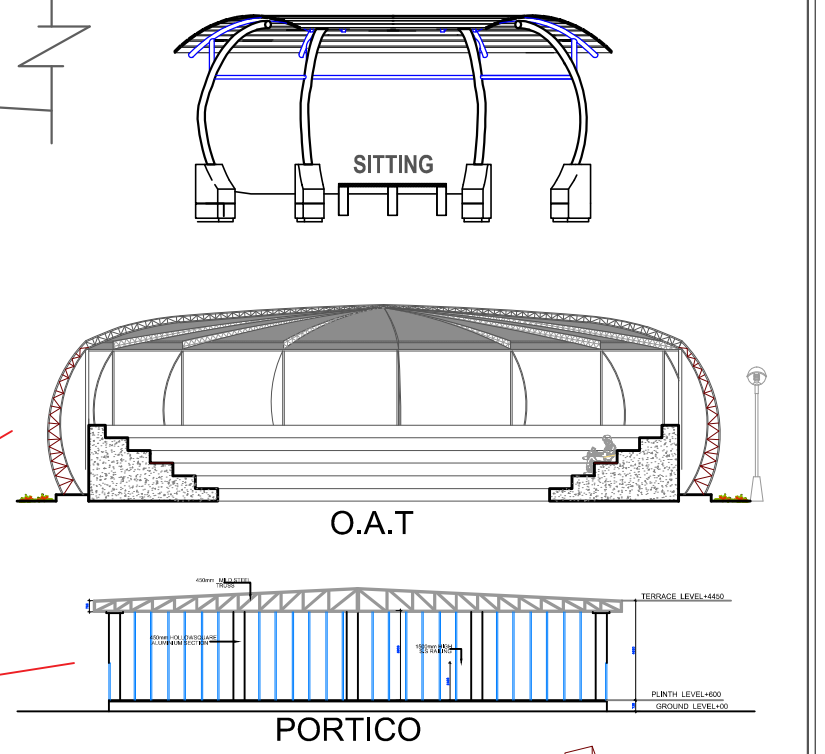
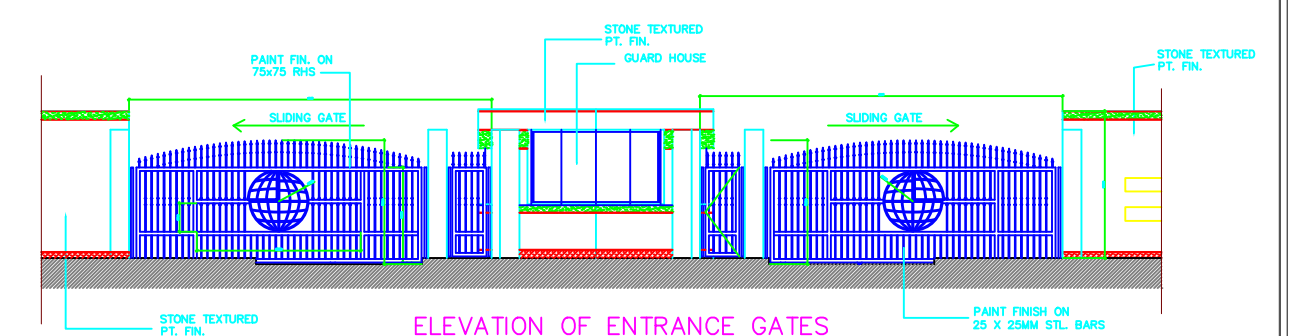
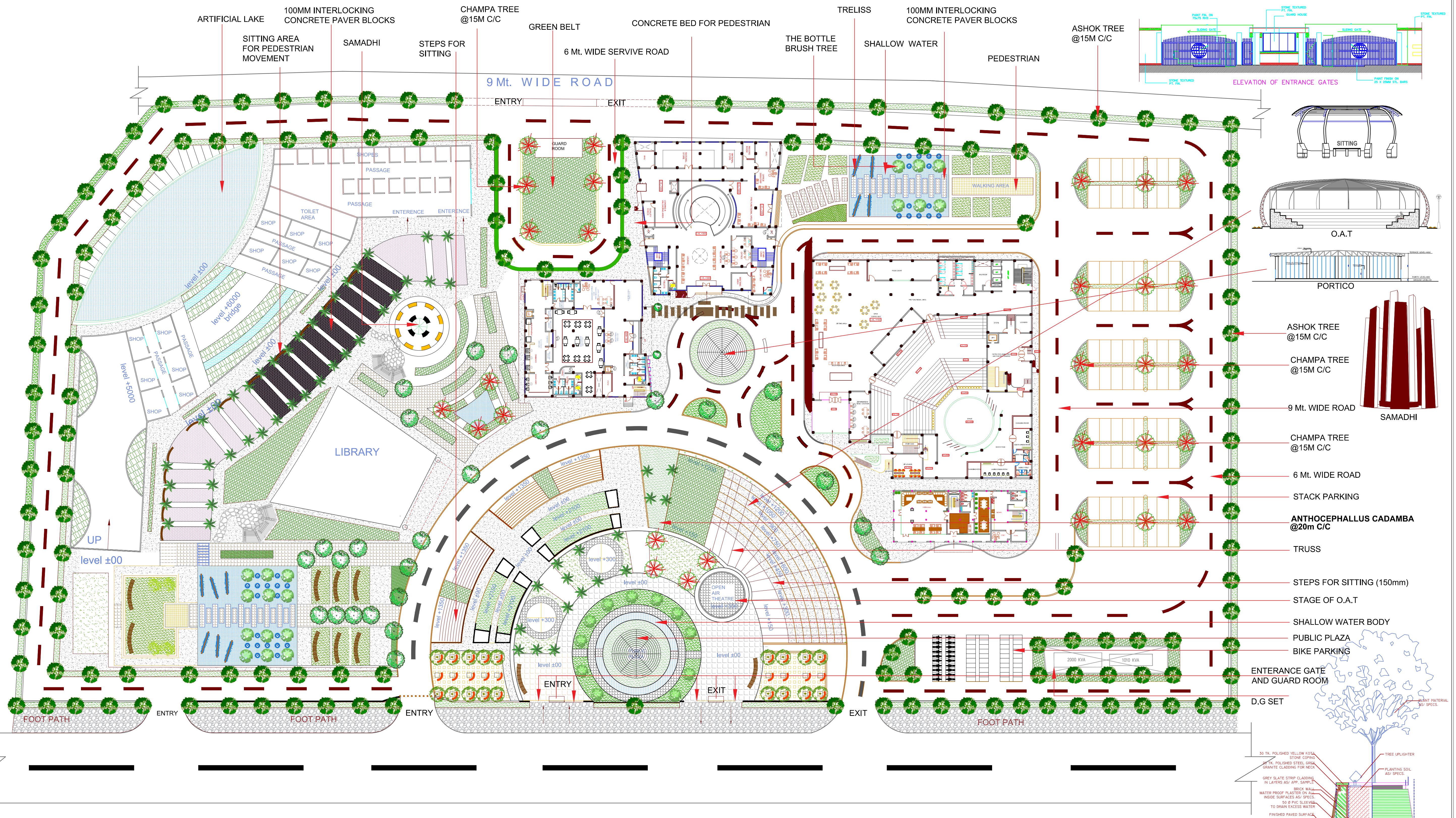
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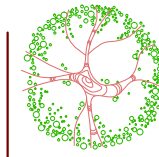
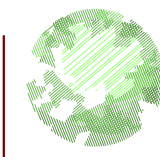

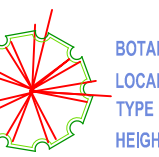
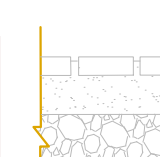
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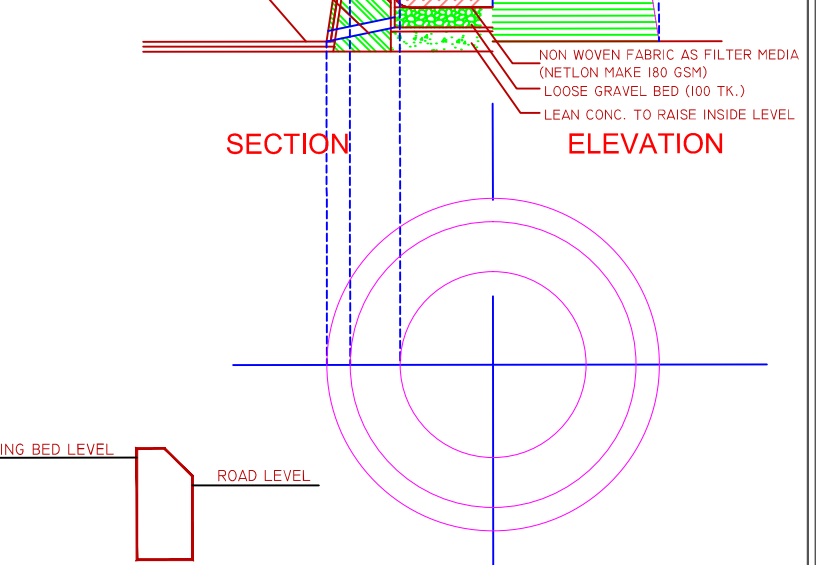
DATE OF SUBMISSION

GUIDE NAME
AR. URVASHI TIWARI

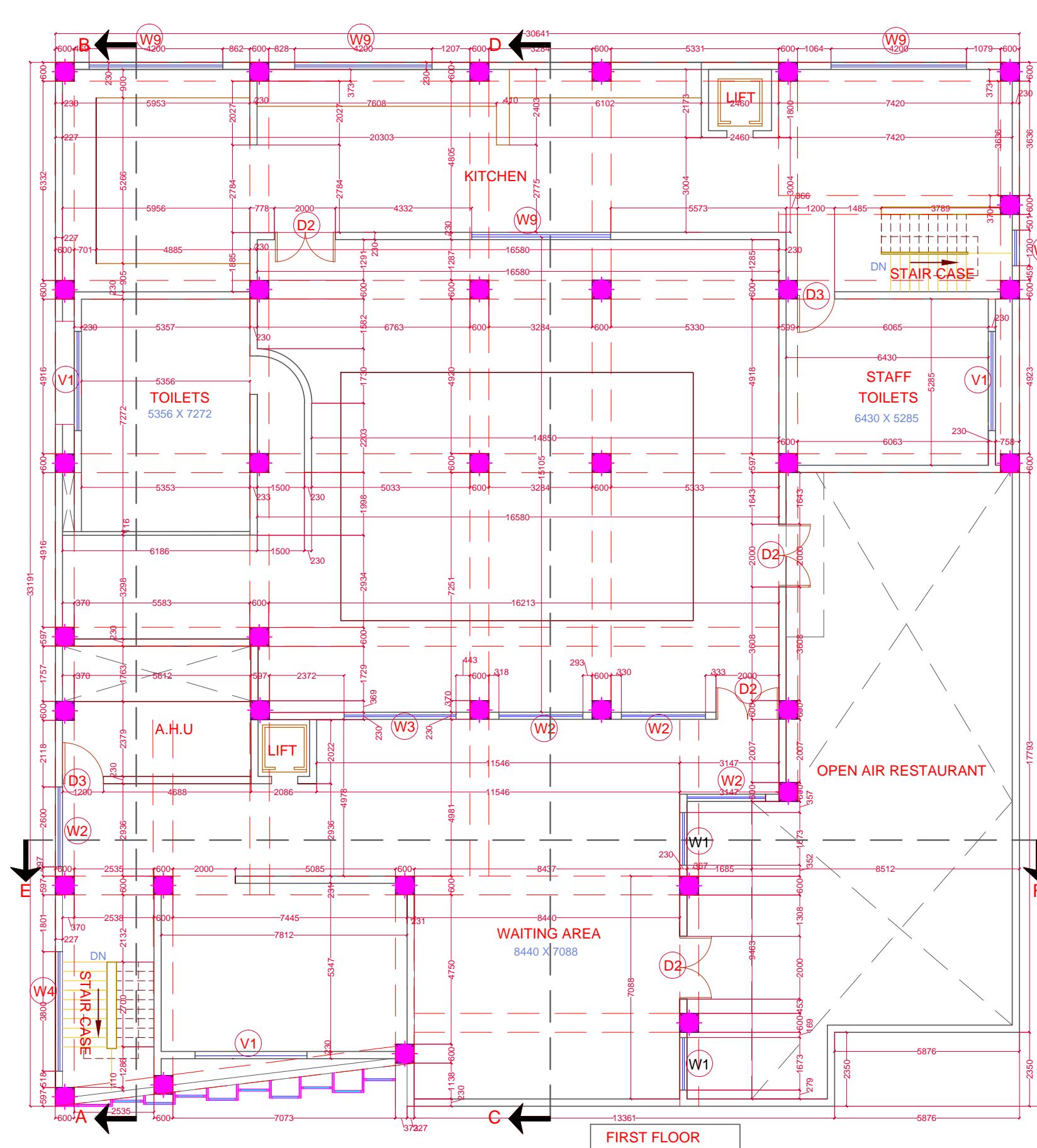
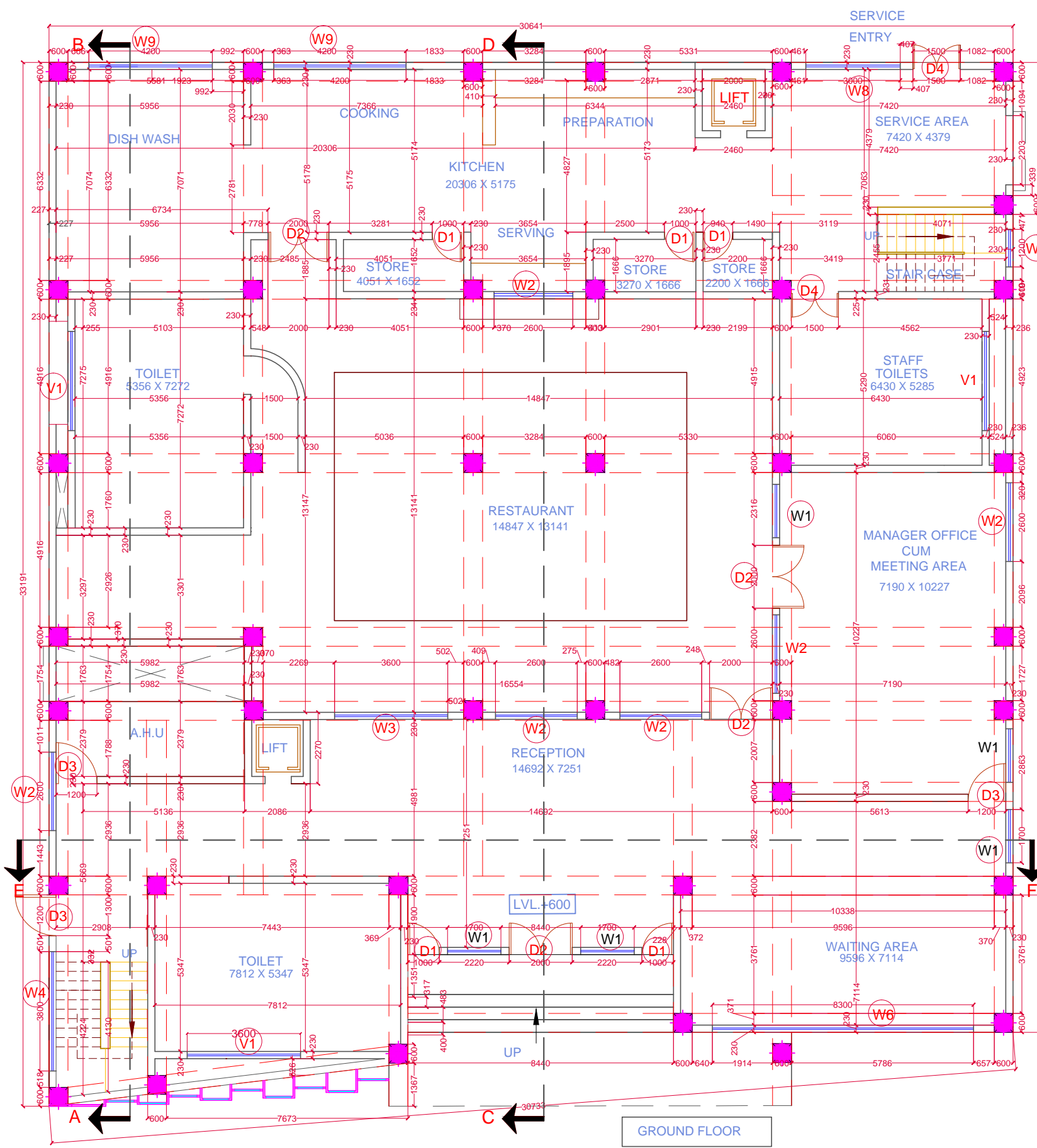
THESIS COORDINATOR
AR. URVASHI TIWARI
AR. SHAILESH YADAV



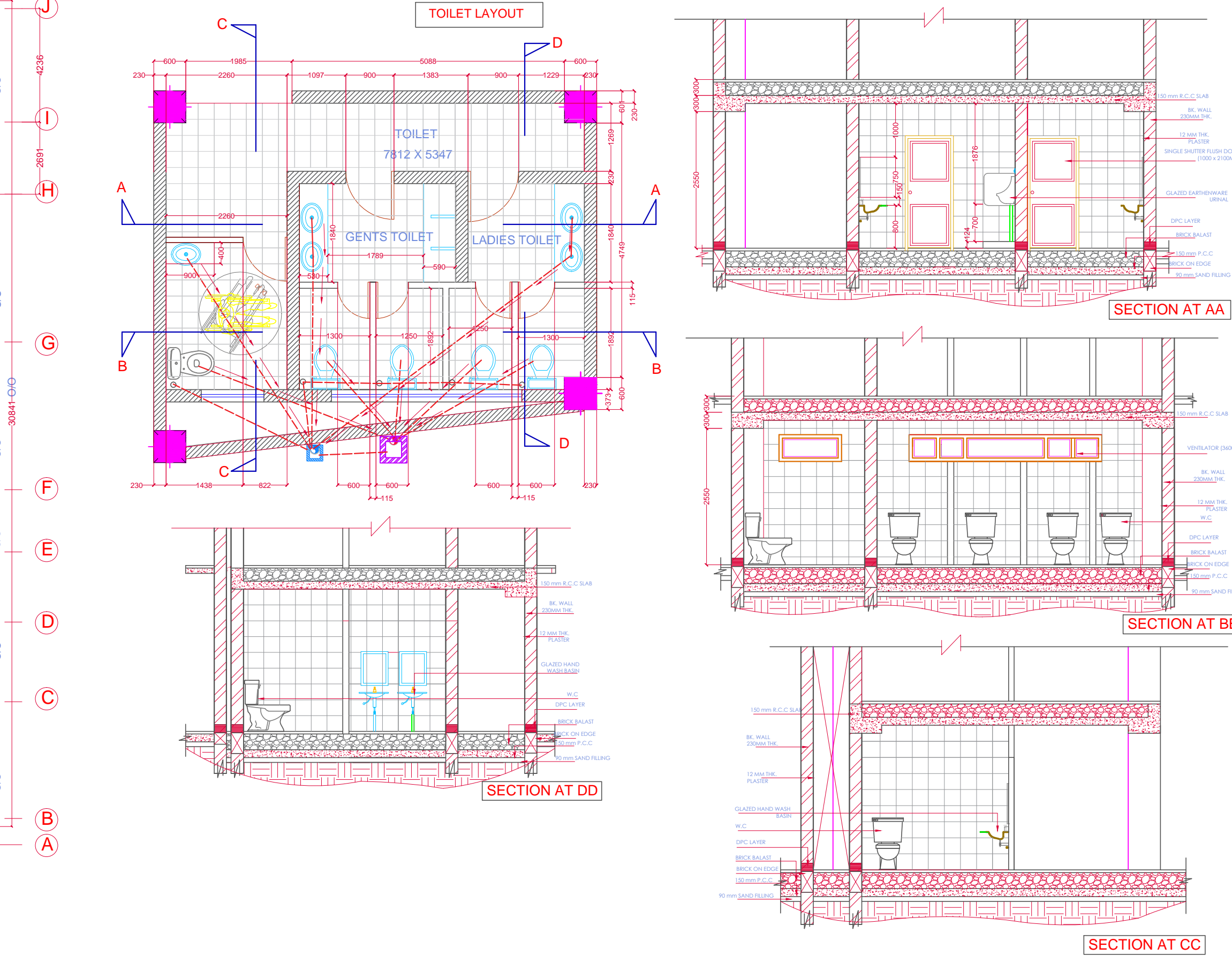
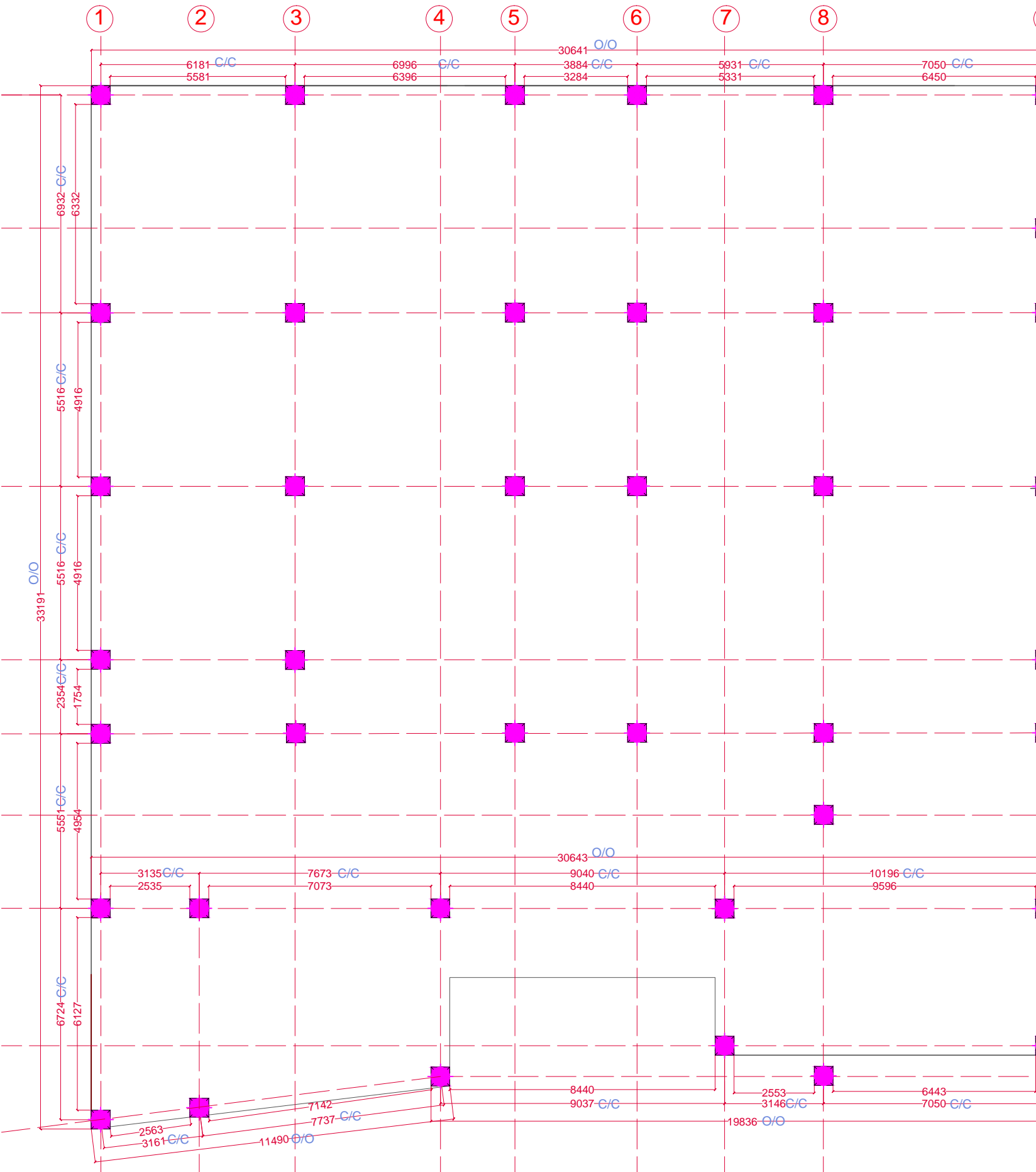
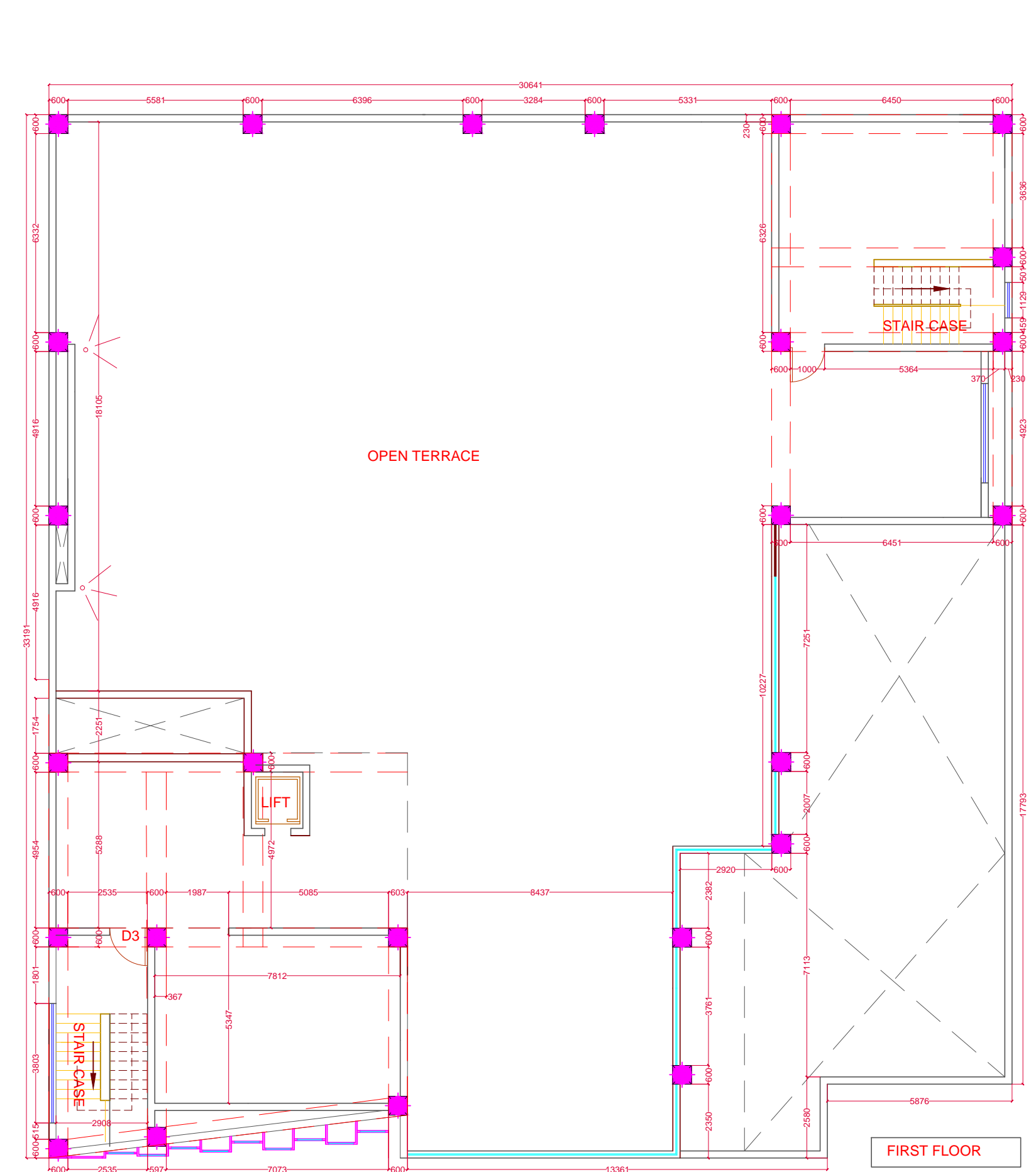
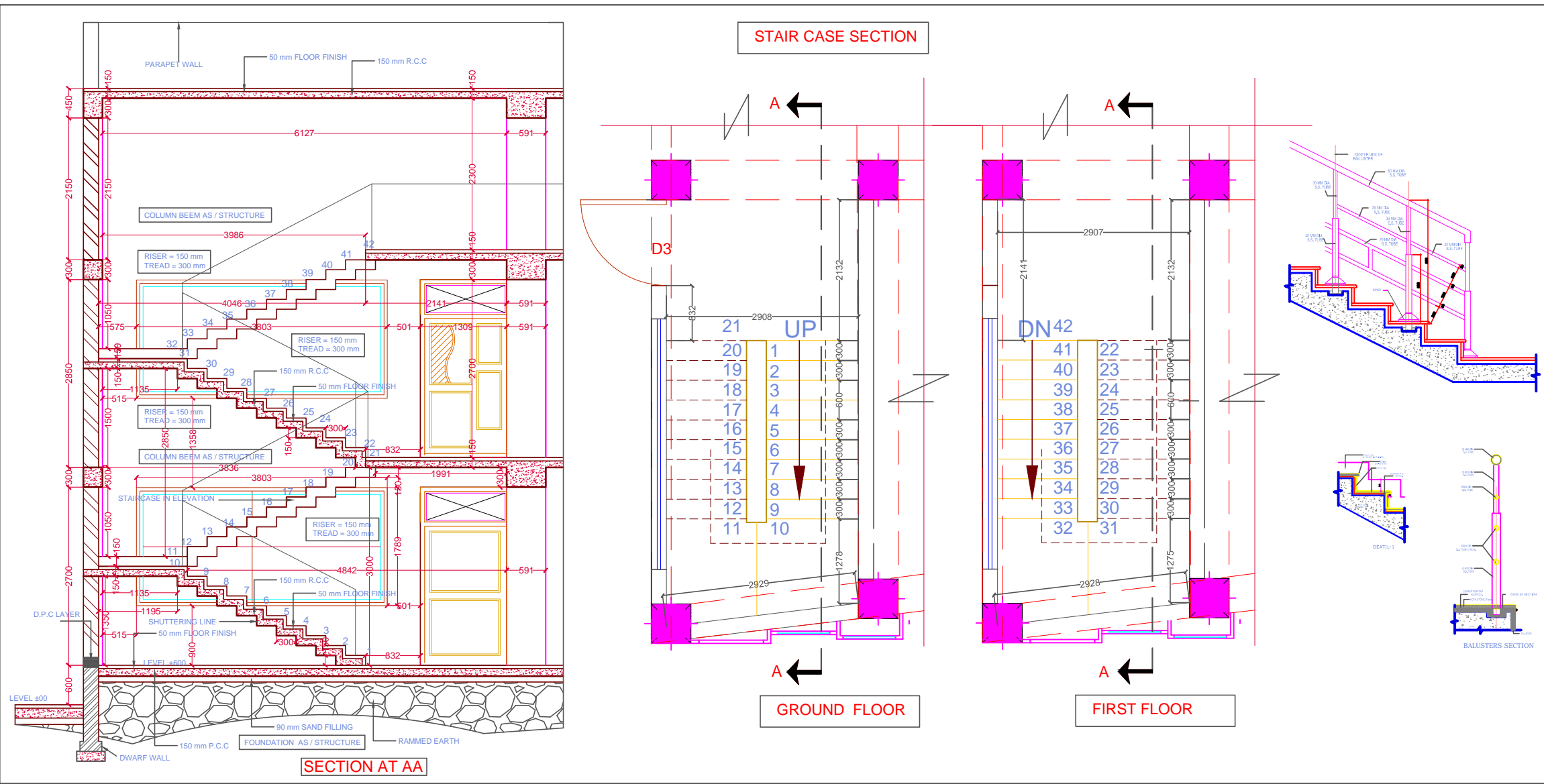
 BOTANICAL NAME LOCAL NAME HEIGHT SPREAD FLOWERING SEASON COLOUR OF FLOWER FRAGRANCE LIGHT REQUIREMENT TYPE REMARK USAGE	<p>Anthocephalus cadamba KADAMBA DECIDUOUS / QUICK GROWING 15M-21M 12M-15M AUG-SEP ORANGE YES FULL SUN PREFERS WARM MOST CLIMATE. IT CAN BE SUCCESSFULLY GROWN IN SUBHUMID CLIMATE. IT REQUIRES DEEP WELL DRAINED LIGHT SOIL. IT IS A BEAUTIFUL TALL TREE WITH DENSE FOLIAGE & CONICAL CROWN. MUCH ADMIRER FOR ITS GOLDEN BALL OF FLOWERS. VERY SUITABLE FOR ROAD SIDE PLANTATION</p>
 BOTANICAL NAME LOCAL NAME TYPE HEIGHT SPREAD FLOWERING SEASON COLOUR OF FLOWER FRAGRANCE LIGHT REQUIREMENT REMARK USAGE	<p>Cassia fistula AMALATAS DECIDUOUS / SMALL TO MED SIZED 10M - 15M 9M - 13M SCENTED FLOWERS APPEAR THROUGHOUT YEAR YELLOW - FULL SUN GROWS IN WIDE RANGE OF CLIMATIC CONDITIONS. IT CAN ALSO WITH STAND EXCESSIVE DROUGHT. IT IS ONE OF THE MOST BEAUTIFUL TREES IN INDIA SO PLANTED IN PARKS IN CLUMPS & ALSO ALONG SMALL CITY ROADS</p>
 BOTANICAL NAME LOCAL NAME TYPE HEIGHT SPREAD FLOWERING SEASON COLOUR OF FLOWER FRAGRANCE LIGHT REQUIREMENT REMARK USAGE	<p>Callistemon lanceolatus THE BOTTLE BRUSH TREE EVERGREEN TREE 7 M - 10M FLOWER THROUGHOUT THE YEAR BRIGHT RED - FULL SUN GROWS WELL IN WARM HUMID AND MOIST SOIL. PLANTED AT THE BACKGROUND OF SMALL GARDENS, AROUND THE BORDERS OF LAKES, POOLS AND TANKS</p>
 BOTANICAL NAME LOCAL NAME TYPE HEIGHT SPREAD FLOWERING SEASON COLOUR OF FLOWER FRAGRANCE LIGHT REQUIREMENT REMARK USAGE	<p>Saraca asoka ASHOK EVERGREEN 10-15 M 2.5 - 4 M STAR SHAPED YELLOWISH GREEN - MARCH - APRIL FULL SUN GROWS IN ANY TYPE OF SOIL. PLANTED TO DEFINE AVENUES</p>
 BOTANICAL NAME LOCAL NAME TYPE HEIGHT SPREAD FLOWERING SEASON COLOUR OF FLOWER FRAGRANCE LIGHT REQUIREMENT REMARK USAGE	<p>Plumeria alba CHAMPA, FRANGIPANI, PAGODA TREE EVERGREEN 4 M 3 M SCENTED FLOWERS APPEAR THROUGHOUT THE YEAR WHITE WITH YELLOW THROAT YES FULL SUN FLOWERS BETTER IN POOR AND POROUS SOIL</p>
 BOTANICAL NAME LOCAL NAME TYPE HEIGHT SPREAD FLOWERING SEASON COLOUR OF FLOWER FRAGRANCE LIGHT REQUIREMENT REMARK USAGE	<p>GOLDEN DURANTA (VARIGATED ORNAMENTAL HEDGE) -GD DWARF SMALL LEAVES ARALIAS (4'-5') -AR EG. ORNAMENTAL SHINNING GREEN PATCHY LEAVES.</p>



SUBJECT	ARCHITECTURAL DESIGN	AR- 1001	LANDSCAPE	SHEET NO. 7	DATE OF SUBMISSION
ASSIGNMENT	MEMORIAL & CENTRE FOR PERFORMING VISUAL ARTS SECTOR - 43 CHANDIGARH			NORTH KEY PLAN	GUIDE NAME AR. URVASHI TIWARI
SUBMITTED BY	YASHASWI SHARMA				THESIS COORDINATOR AR. URVASHI TIWARI AR. SHAILESH YADAV
STUDIO	ARCHITECTURAL DESIGN	YEAR	5th YEAR	SECTION	AR 5-3



DOOR WINDOW SCHEDULE				TYPE	WIDTH	HEIGHT	NO.	LEVEL
W1				1	1700	2100	2	2600
W2				2	2600	2100	2	2600
W3				3	3600	2100	2	2600
W4				4	3000	2100	2	2600
W5				5	3000	2100	2	2600
W6				6	3000	2100	2	2600
W7				7	3000	2100	2	2600
W8				8	3000	2100	2	2600
W9				9	3000	2100	2	2600
D1				1	1000	2100	2	2600
D2				2	1000	2100	2	2600
D3				3	1000	2100	2	2600
D4				4	1000	2100	2	2600
V1				1	3000	500	2	2600
V2				2	3000	500	2	2600
V3				3	3000	500	2	2600
V4				4	3000	500	2	2600
V5				5	3000	500	2	2600
V6				6	3000	500	2	2600
V7				7	3000	500	2	2600



SUBJECT
ARCHITECTURAL DESIGN

ASSIGNMENT
**MEMORIAL & CENTRE FOR
PERFORMING VISUAL ARTS
SECTOR - 43 CHANDIGARH**

AR- 1001

CAFE

SUBMITTED BY
YASHASWI SHARMA

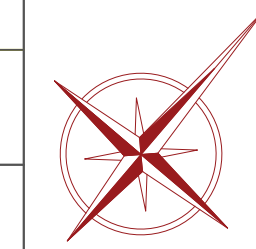
STUDIO
**ARCHITECTURAL
DESIGN**

YEAR
5th YEAR

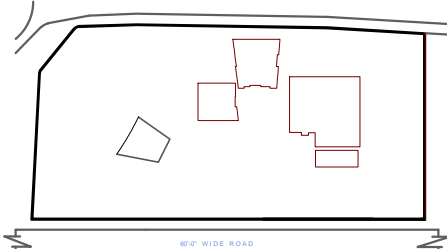
SECTION
AR 5-3

SHEET NO. 8

NORTH



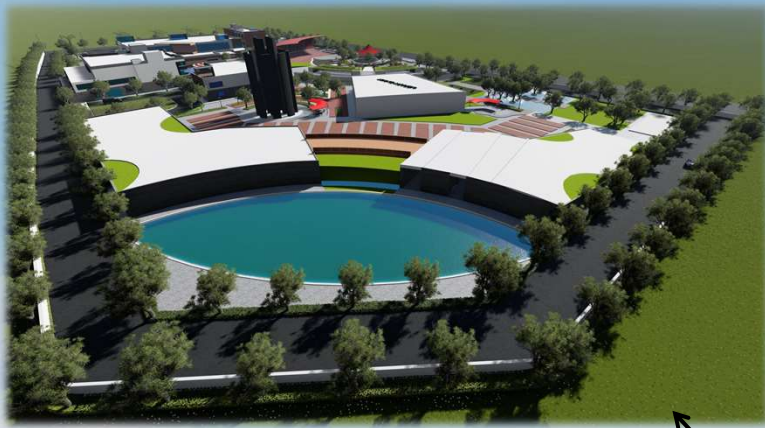
KEY PLAN



DATE OF SUBMISSION

GUIDE NAME
AR. URVASHI TIWARI

THESIS COORDINATOR
**AR. URVASHI TIWARI
AR. SHAILESH YADAV**



BEANT SINGH MEMORIAL AND CENTRE FOR PERFORMING AND VISUAL ARTS [VIEWS]