

INSTITUTE OF FILM MAKING
at Kirtipur, Kathmandu

By :
SAUJAN NARAYAN SHRESTHA
750140

A thesis submitted in partial fulfillment
of the requirements for the
Degree of Bachelor of Architecture



Purbanchal University
KHWOPA ENGINEERING COLLEGE
DEPARTMENT OF ARCHITECTURE
Libali, Bhaktapur, Nepal

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This is to certify that the thesis entitled **INSTITUTE OF FILM-MAKING** at *Kirtipur, Kathmandu*, submitted to the Department of Architecture of Khwopa Engineering College by **Mr. Saujan Narayan Shrestha** of Class Roll No. 40/ B.Arch./075 has been declared successful for the partial fulfillment of the academic requirement towards the completion of the degree of Bachelor of Architecture of Purbanchal University.

Dr. Subik K. Shrestha
Supervisor

Ar. Rashish Lal Shrestha
Thesis Coordinator

Ar. Ila Shrestha
(External Juror)

Ar. Archana Bade Shrestha
Head of Department of Architecture

Declaration

I declare that this thesis titled “INSTITUTE OF FILM MAKING” is my original work and has not been submitted for any other degree or qualification at any other institution. This work is a result of my own research and analysis, and all sources of information and ideas that have been referenced are properly acknowledged.

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Saujan Narayan Shrestha

1st September, 2024

Abstract

Nepal is rich in its cultural diversity as well its historical significance. Despite of those richness, we are still not able to create stories reflecting our greatness in the form of art, plays and movies. We have failed to make noticeable mark on a global film industry. However, we are evolving from the conventional techniques of making movies to the modern technology. Also, there are emerging actors, directors, writers and producers willing to make an impact on the film industry and most of them have been successful in the present era of Nepali movies. But the number is very low in terms of the actual movies being produced and released.

This is mostly because of the type of education system that has been prevailing in Nepal. Students lack practical knowledge as what they learn in school is drastically different from what they do in the actual profession, which makes their entry into the film industry much more difficult. This is due to the way the education system has been structured in the country which has created a huge gap between theory and practice. The institutions are not able to provide necessary facilities which are highly important in the film industry due to the lack of resources which highly impact the quality of the education they receive.

The purpose of this thesis is to bridge the gap between the theory and practice of filmmaking through the design of a creative space for learning and presentation with introspective domain, exchange domain and presentation domain guiding the major requirements. In addition to the student, project also aims to include the public which are the inseparable part of the film industry to witness the creative process of filmmaking through organization of various events, film festivals and many more creating the interaction between the public and the film personnel, students and the professionals and other various professions. The film school will be tied together with the film studios, allowing the students to work closely with actual filmmaker. By this association, students get better opportunities to work with well-known filmmakers and get the much-needed practical experience and inspiration.

Keywords: Film School, film maker, studios

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Chapter 1 Introduction

This thesis is about a Film Institute in Kirtipur. This chapter introduce about Film and Film Institute, the history of film institute in the world context and Nepal, the history on Nepali Film, the process of film making, justification of project, its objectives, scopes and limitation, methodology.

1.1 Introduction

1.1.1 What is Film?

Film, also known as a movie or motion picture, is a work of visual art that uses moving images to communicate ideas, stories, perceptions, feelings, beauty, or atmosphere. It is created by capturing a series of still photographs or frames on film or digitally, which are then projected onto a screen in rapid succession to create the illusion of continuous motion. Films are often accompanied by sound and other sensory stimulations to enhance the viewer's experience.

1.1.2 What is Film Institute?

Film Institute is an educational establishment or group dedicated to the study, creation, and promotion of motion pictures and filmmaking. A variety of programs, courses, and workshops covering numerous aspects of film production are usually offered by these institutes, including directing, screenwriting, cinematography, editing, sound design, and film theory. Along with offering space and equipment for students to make their own movies, film institutes can also give them access to networking and collaboration opportunities in the film business. Various film institutes may also conduct research and store films, adding to the cinematic heritage.

1.1.3 History in the World Context

In the world context, the formal teaching of film began with theoretical in Filmmaking process in the 1890s. The earliest film schools emerged in Europe and the United States in the late 19th and early 20th centuries. IT were often associated with technical institutions or universities and focused on the technical aspects of filmmaking, such as cinematography and editing.

Moscow Film School (VGIK) established in 1919. VGIK is one of the oldest film schools in the world and has produced many influential filmmakers (History of Film n.d.).

In 1930S-1940S, In Hollywood, film education was primarily conducted within the studio system.

After World War II, Film schools began to emerge in various countries, including the United States, France, the United Kingdom, and Japan.

During 1960s - 1980s, several major film institutes and schools were established, including the American Film Institute (AFI) in 1967, the National Film and Television School (NFTS) in the UK in 1971, and La Fémis in France in 1986 (History of Film n.d.).

From 1990s till present, the advent of digital technology has revolutionized the film industry and impacted film education. Film institutes adapted their curricula to incorporate digital filmmaking techniques, computer-generated imagery (CGI), and other technological advancements.

1.1.4 History in the Context of Nepal

In the context of Nepal, Ratna Rajya Laxmi Campus, a constituent campus of Tribhuvan University, Kathmandu, Nepal, began offering courses in filmmaking and mass communication in the 1960s. Founded in 2000, the Academy of Cinema and Performing Arts (ACPA) in Kathmandu offers diploma and degree courses in filmmaking, acting, and related fields.

The Nepal Film Development Board, established in 2001, plays a significant role in promoting and supporting the Nepali film industry. The advancement of digital technology during this period had an impact on filmmaking and film education in Nepal. The increasing accessibility of digital cameras, editing software, and online resources provided aspiring filmmakers with more affordable tools and platforms to learn and create films.

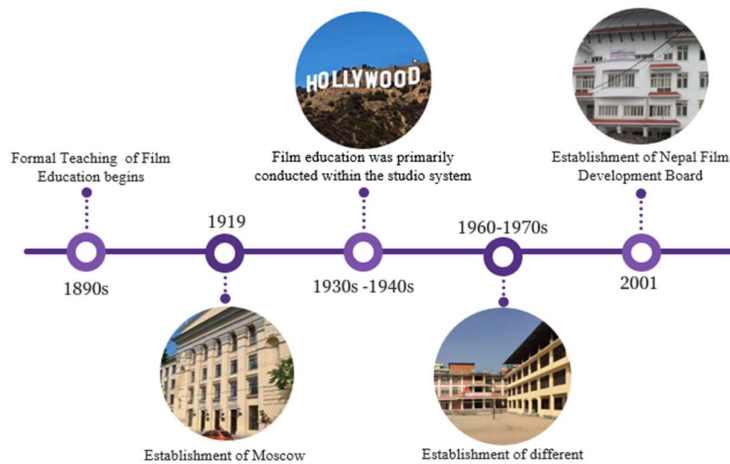


Fig 1. 1 Timeline of Film School in context of World and Nepal
Source: Author

1.1.5 History on Nepali Film

- 1951: The first Nepali-language film, "Satya Harishchandra," was produced from Kolkata, India.

- 1964: "Aama" (Mother) explored themes of social change and generational conflict, offering a glimpse into Nepali society. It was produced in Nepal.
- 1975: "Gorkha," directed by Hira Singh Thali, brought to life the story of Prithvi Narayan Shah, the founder of the Shah dynasty and unifier of modern Nepal.
- 1987: "Saat Samundar Paar" (Across Seven Seas) chronicled the adventures of King Amshuverma, a legendary ruler from Nepal's ancient Kirat dynasty.
- 2012: "Kings of Mustang" documented the unique culture and traditions of the Mustang region, offering a window into Nepal's rich cultural heritage.
- Animation Takes the Stage:
- 2016: "Shankhadhar Bakhha" (The Legend of Shankhadhar) became Nepal's first animated feature film, telling the story of a social reformer who fought against debt bondage.

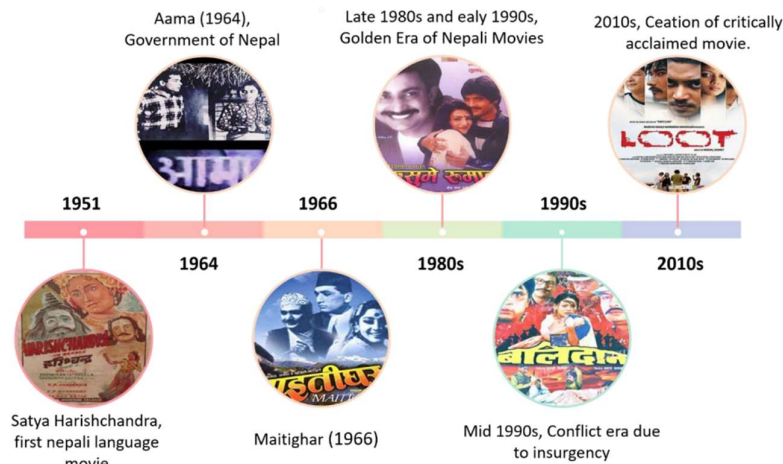


Fig 1. 2 Timelines of Nepal Movies
Source: Malla, 2019

1.1.6 Present Film Institute in Nepal

In the present context of Nepal, Nepal has several film institutes, including:

Nepal Film Campus: Offering a 4-year Bachelor's Degree in Film Studies with specialization courses in Acting, Cinematography, Direction, and Screenwriting.

Kantipur Film Academy: Aims to function as a premier interdisciplinary professional film academy to elevate the Nepali film industry.

Others: Oscar International College,

Everest Film Academy,

Nepal Film Academy and

National Film Academy

1.1.7 Process of Film-making

Filmmaking is the process of making a film, generally in the sense of films intended for extensive theatrical exhibition. Filmmaking involves a number of discrete stages including an initial story, idea, or commission, through screenwriting, casting, shooting, sound recording and pre-production, editing, and screening the finished product before an audience that may result in a film release and exhibition. Filmmaking takes place in many places around the world in a range of economic, social, and political contexts, and using a variety of technologies and cinematic techniques.

Film production consists of five major stages: (Steiff 2005)

1. Development: The first stage in which the ideas for the film are created, rights to books/plays are bought etc., and the screenplay is written. Financing for the project has to be sought and obtained.
2. Pre-production: Arrangements and preparations are made for the shoot, such as hiring cast and film crew, selecting locations and constructing sets.
3. Production: The raw footage and other elements for the film are recorded during the film shoot.
4. Post-production: The images, sound, and visual effects of the recorded film are edited and combined into a finished product.
5. Distribution: The completed film is distributed, marketed, and screened in cinemas and/or released to home video.

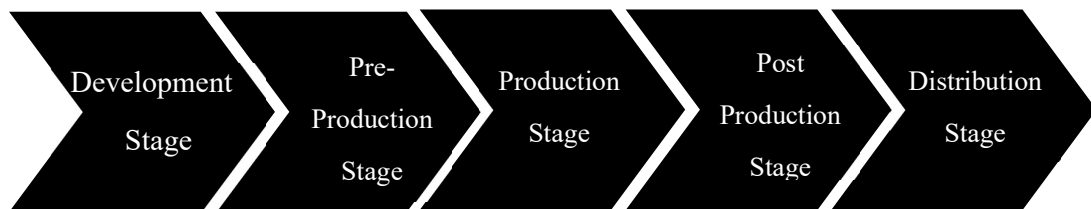


Fig 1. 3 The process of film making from development stage to distribution stage
Source: Author

1.2 Project Justification

In present context, the standards required for the institution of filmmaking to actually be an institution of filmmaking hasn't maintained. Mainly institutional building in Nepal is converted which could not cater to the need of the users and the program. Limited to providing the theoretical portion of the knowledge.

To design the spaces to be flexible and adaptable to accommodate various types of performances, rehearsals, and educational activities.

1.3 Objectives

The following are the objectives of this project:

- To understand about the spaces for study, recreation and collective activities, teach and promote film making skills.
- To select an appropriate site for the implementation of developed program and analysis.
- To design a common ground as a courtyard, amphitheatre for the student and professional for interaction, collaboration and a sense of community.
- To make art and film education open for all, introducing public gathering spaces.

1.4 Scope and Limitation

The scope of film institute in Nepal is growing as the film industry in the country is expanding. Film institutes will provide aspiring filmmakers with the necessary skills and knowledge to succeed in the industry. Graduates from film institutes in Nepal will have opportunities to work in various roles such as directors, producers, cinematographers, editors, and more. It provides shooting spaces, seminars, and guest lectures to enhance students' understanding of the industry. The site is located in TU area, Kirtipur which have different TU affiliated colleges, departments which can be a great opportunity for the thesis topic.

The project is limited to academic education. According to TU academic subject curriculum, the spaces are designed. Since the site is small, this project does not imply film city.

1.5 Methodology

The research uses qualitative research strategy in which case study as a part of a mixed method is used. The methodology was done in two phase:

Research Phase

Design phase

The research phase includes Literature Review and Architectural case studies.

Literature review is an overview of existing literature which is done to gather information about the topic, including the sources used by others who have previously conducted research, analysis and evaluation of existing information. Literature review helped to understand and know about the internal and external spaces required for film institutes. Architectural Case studies is an intensive study of realized examples of similar designed places or buildings which is used or analyzed in order to illustrate a thesis or principle and

generalize the findings. From the references of literature reviews, the spaces are observed in the case study site for better knowledge for the further planning.

The design phase includes Site selection, Program Formulation, Planning and Final Design. The project and the surrounding area's potential are taken into consideration when choosing the site. The location was visited, and the surrounding area, landscapes, and elements are analyzed. A 100-meter walk around the surrounding building is also conducted. It is noted which way the wind flows and also about sun direction. The Kirtipur Municipality Building By-Laws are cited for the building regulations. The research phase helped to separate, plan, and finalize the spaces for the film institutes.

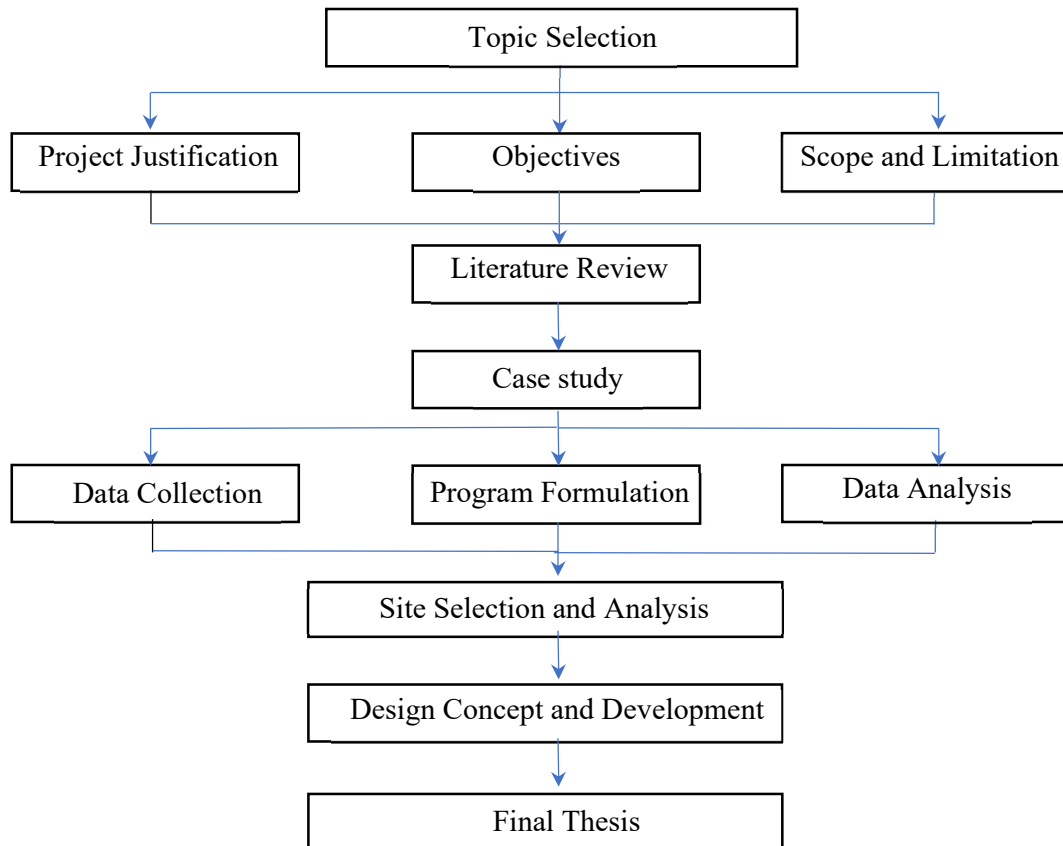


Fig 1. 4 Methodology Chart
Source: Author

Chapter 2 Literature Review

After giving an introduction to film institutes, next section discusses about the important spaces required for the film institutes, primary spaces which are Movie theatre, Classroom, Shooting Studio, Photography Studio., Sound Recording Studio, Amphitheatre and Secondary spaces are Canteen, Hostel, Admin room, Restaurant, Parking.

Space requirements for the institution of filmmaking

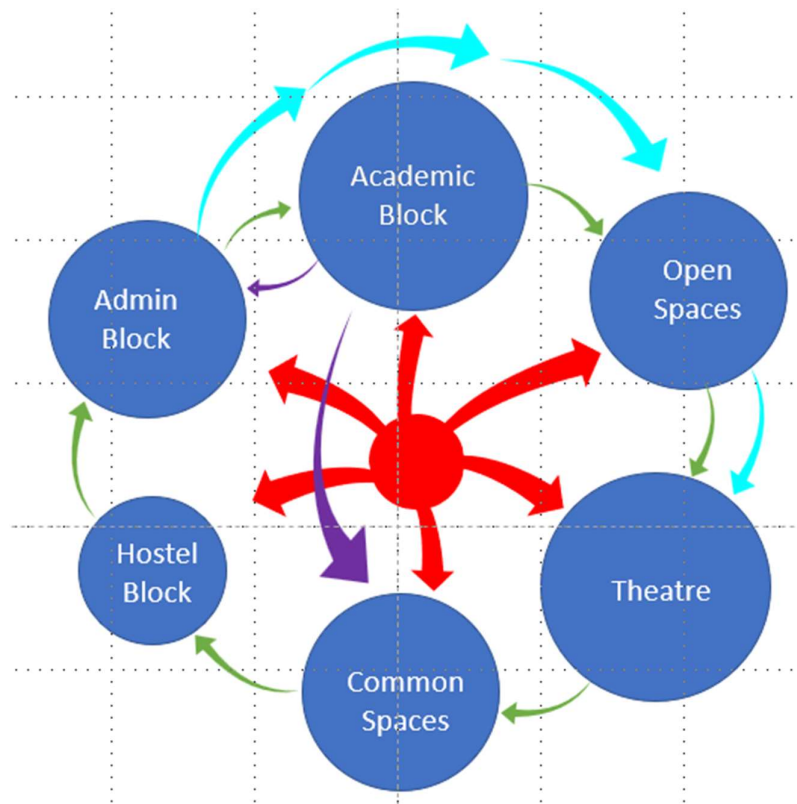


Fig 2. 1 Interrelationship of different spaces in a film institution
Source: Author

Figures showing a central space connected to other spaces (Academic Block, Movie Theatre, Common Spaces and Admin block). Students and staff have an access to all areas. The public will visit to Theatre arena and admin block for permission or other purpose. The scope of student going to the admin spaces are lesser.

A film institute is made up of various discipline that are different from one another. They work to complement one another. They merge holistically to create a wonderful experience. The disciplines such as performance arts, directing, audio-graphic and editing department

should be placed in different blocks, each blocks interconnecting with each other through other interactive spaces.

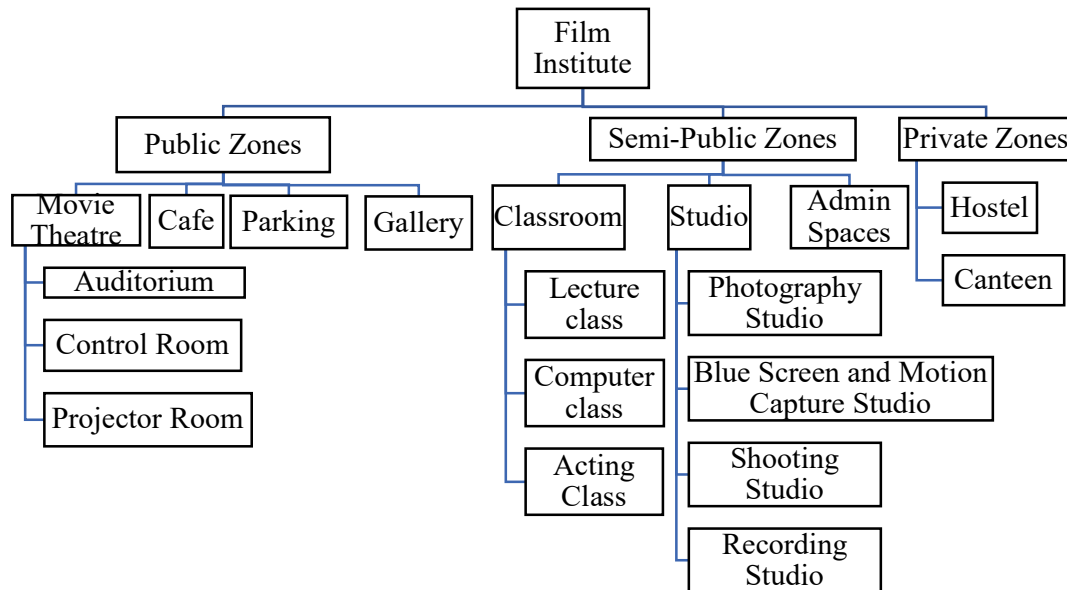


Fig 2. 2 Chart showing the spaces required divided according to different zones
Sources: Author

The figures showing the spaces division according to the zones which are:

- Public zones
- Semi-public zones and
- Private zones.

The spaces are divided with the hierarchy in each zone. Public zones have movie theatre, Café, Parking and Gallery spaces. Movie theatre includes auditorium with 80 seats, control room and projector room. Gallery spaces includes the statue display segment, picture display segment and movie display room. Restaurant is designed with dining, reception, etc. The public are only allowed to enter in this space when there will be the program or events. The semi-public zones include classroom, studios, Admin spaces, etc. Admin spaces are used for staffs, if the public have to enter should take a permission to visit the staff respective room. Classroom are normal classroom and computer classroom for lecture and acting class for practice whereas studios are shooting studio, blue screen and motion graphic studio, photography studio and recording studio. For the private spaces, hostel and canteen are designed where the canteen is mostly used by hostel resident and non-hostel resident student and also by the staff.

2.1 Auditorium/ Movie Theatre

An auditorium is a large, enclosed room built to enable an audience to attend live lectures, stage performances, concerts, and other gatherings. There are many types and forms of auditoriums that can vary depending upon the type of function, purpose, volume, size, and shape. For example, auditoria spaces suitable for music will be different from spaces for drama, dance, music theater, opera, or even conference use (Layak Architect 2022).

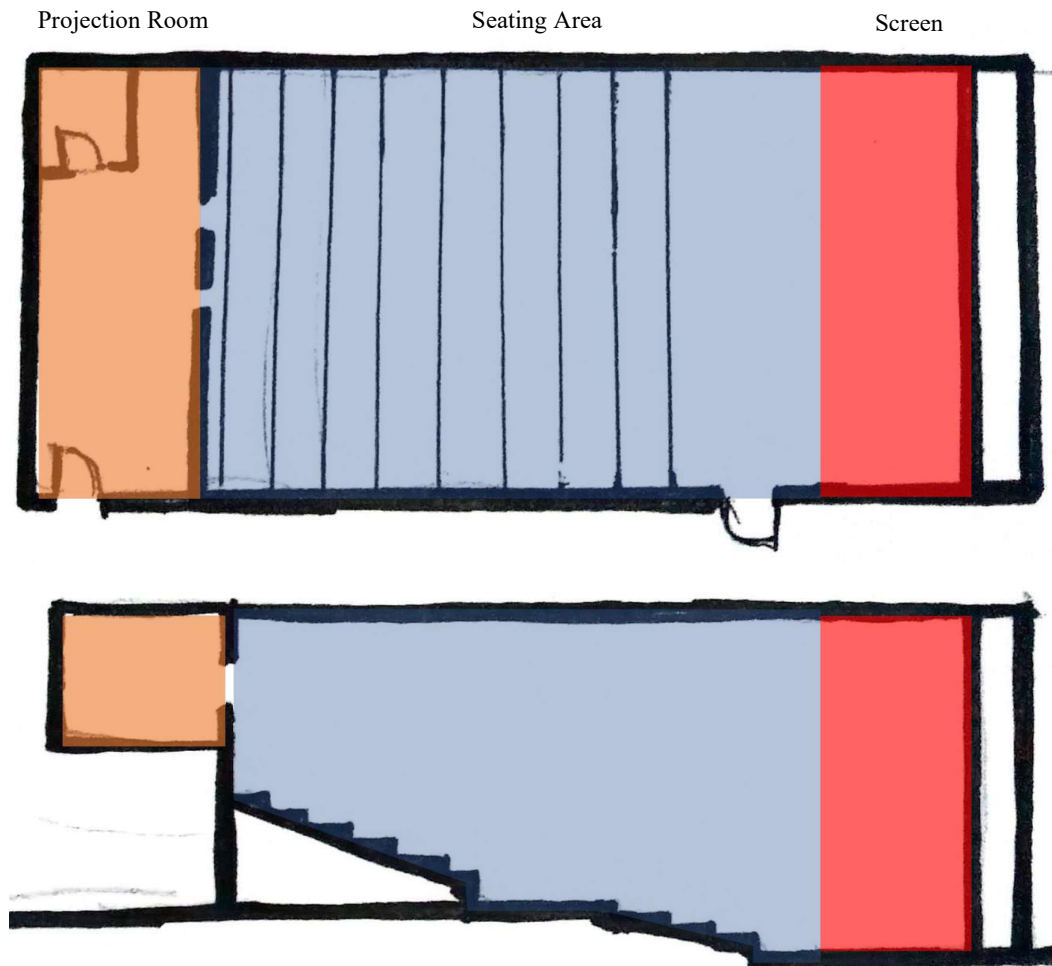


Fig 2. 3 Plan and Section of theatre showing the space through different colours
Source: Author

Auditoriums typically features a stage or platform for speakers and performers, back stage area for performers and their team, seating for the audience, and acoustics designed to enhance the sound quality of the performance or presentation. All the seats in the auditorium face the stage, where they attend live lectures, performances, drama, seminars, larger meetings, community events, and other occasional functions (Layak Architect 2022).

Main Hall

- The maximum viewing distance should not be greater than twice the width of the widest picture to be projected.
- The width of the seating pattern should vary from 1 time the widest projected picture of the first row to 1.3 times at the row farthest from the screen.
- The viewing angle from the front row to the center of the picture screen should not exceed 30 degrees.
- Area of 0.5m² per person for seating arrangement.
- It should not have natural light walls and ceiling should be made up of non-reflective material.

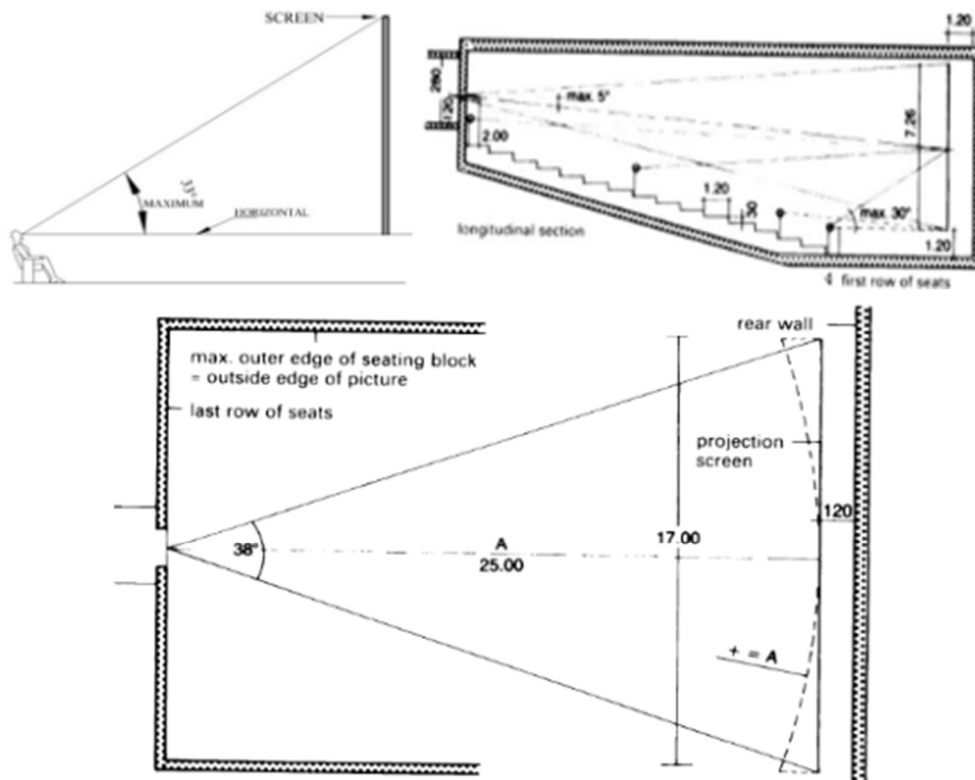


Fig 2. 4 Viewing Angle(left), Optimum Hall Section (Right)and Plan (Bottom)
Source: Neufert (1936)

Seating

Normally 14 seats per aisle.

Rows of seats opening on to an aisle at one end only shall have not more than 7 seats, except continental.

Seats without dividing arms must allow 450 mm per person.

Escape route should have a width of 1m per 150 persons (minimum width can be 0.8m).

There shall be a space of not less than 350 mm between the back of one seat and the front of the seat behind.

At least 1 percent of seats designated for wheelchair users, with minimum of two.

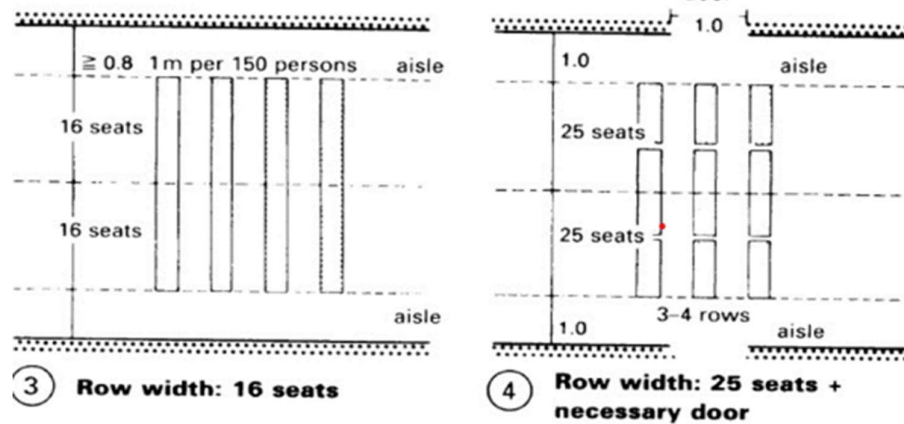


Fig 2. 5 Seating Layout
Source: Neufert (1936)

Screen

- Center of projected beam should not deviate more than 5 vertically from the center of screen and it should be deflected via a deflection mirror.
- Minimum distance of projection screen from wall should be 3'-9".
- Lower edge of projection screen should be at least 3' -9" above the floor.
- Large projection screens are curved with a radius centered at last row of seats.

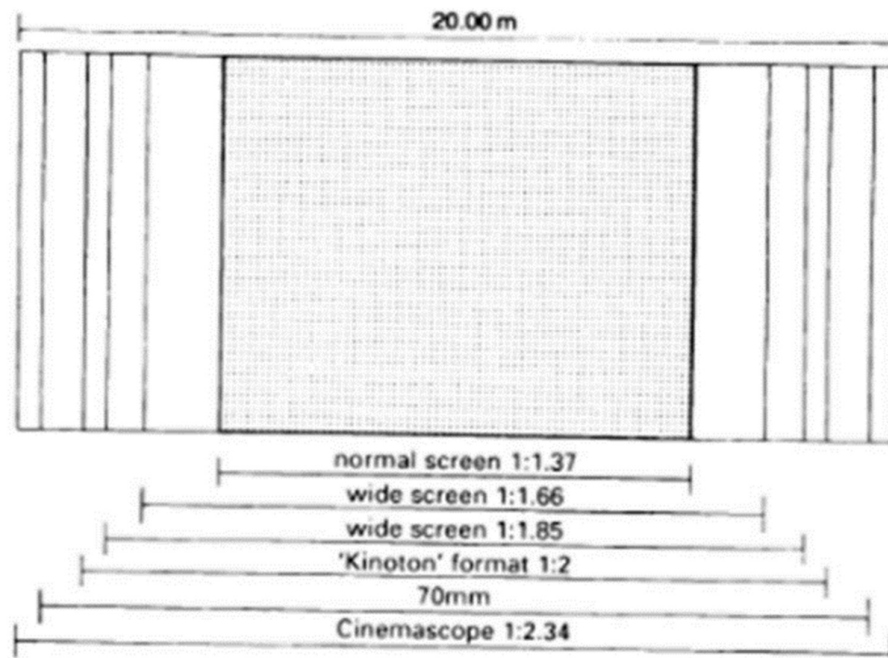


Fig 2. 6 Screen Size
Source: Neufert (1936)

Projection Room

- Projection window should be at least 2.1m high from the last row floor.
- Height of projection room should be at least 2.75m.
- Projection room can vary in sizes.

Consideration to be made in Auditorium

1. Acoustical Considerations
2. Lighting Considerations
3. Safety Considerations

1. Acoustical Considerations

The sound should be well heard and understand. Factors to be considered are:

- Absorption of Sound
- Reverberation and Echoes
- Edge diffraction and sound shadow
- Dispersion at modelled surfaces

Special consideration should be given to balcony, overhangs, as not to comprise in acoustical as well as visual quality of space (Shakya 2012).

2. Lighting Consideration

It is important to have lighting that facilitates lip reading and sign language. It should be easy to change both artificial and natural light, and the surroundings should be planned to minimize reflection and glare. For stage performance, lighting is a crucial part of the staging process. With lighting fixtures on the balcony fronts, side and back walls, ceiling, and not simply the stage.

For the audience to be able to find their seats, and see programs, there must be lighting. In addition to highlighting architectural elements, decorative lighting additionally impacts the overall atmosphere of the room.

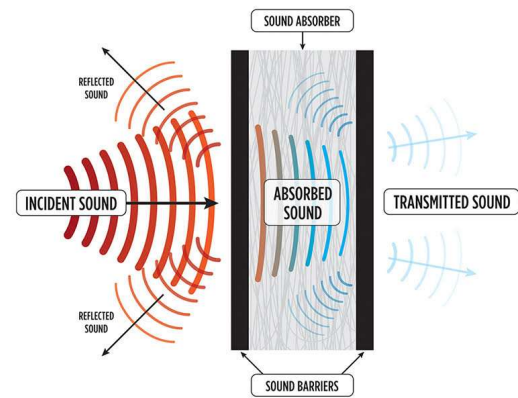


Fig 2. 7Acoustic panel will reflect the sound creating sound barriers



Fig 2. 8 Lighting consideration

Escape routes must be adequately lit at all times during the performances, as well as before and after. To enhance their beauty, foyers, bars, and ticket offices require inventive lighting design. Greater illumination will be needed in the seating area for maintenance, cleaning, and most likely for auditions and rehearsals (Layak Architect 2022).

3. Safety Consideration

Auditorium is a space where large number of people congregates, it is necessary that safety considerations are made possible in all areas. Safety in case of any hazards should be linked to the presence of ample number of exit doors and protected escape routes to safety.

For every 500 seats, there must be two distinct exits from each auditorium level with exit door width 3200mm, and for every extra 250 seats, there must be an additional exit. The exit door should not be less than 1200mm.

Adequate signage, lighting, and guidance to help people locate their exits, and facilities will make crowd movement safer and more efficient.

Most theatres have a fire curtain to close off the performing area from the auditorium at the proscenium line. The fire curtain is used to protect the audience from three hazards: fire, gasses and smoke. The fire curtain will not protect against toxic chemicals.

Fire Exits Should never be closed.

Universal Accessibility

When designing cinema halls with the needs of differently-abled individuals in mind, following should be considered:

Regulations require a minimum of 1/100th of the audience capacity, whichever if the greater. Their location as discrete areas can be at the rear, front, side or within the seating.

Wheelchairs can be centrally positioned by forming a bay off a cross-gangway. A wheelchair user should be able to sit with a party of friends not in wheelchairs.

Sightlines from the wheelchair should be checked, as should the sightlines of those audience members behind. Some wheelchair users can transfer into auditorium seats.

Accessible Entrances: Main entrances should have ramps or automatic doors to facilitate easy access for individuals with mobility challenges. Emergency Exits are also accessible and clearly marked.

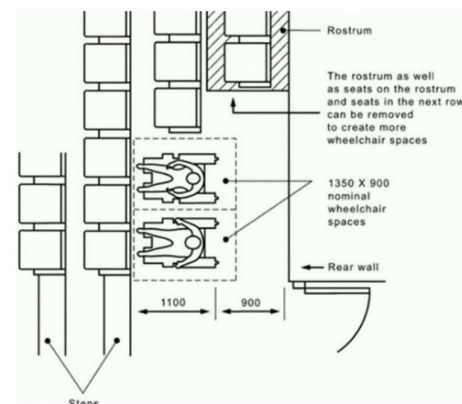


Fig 2. 9 A spaces for differently abled

2.2 Classroom

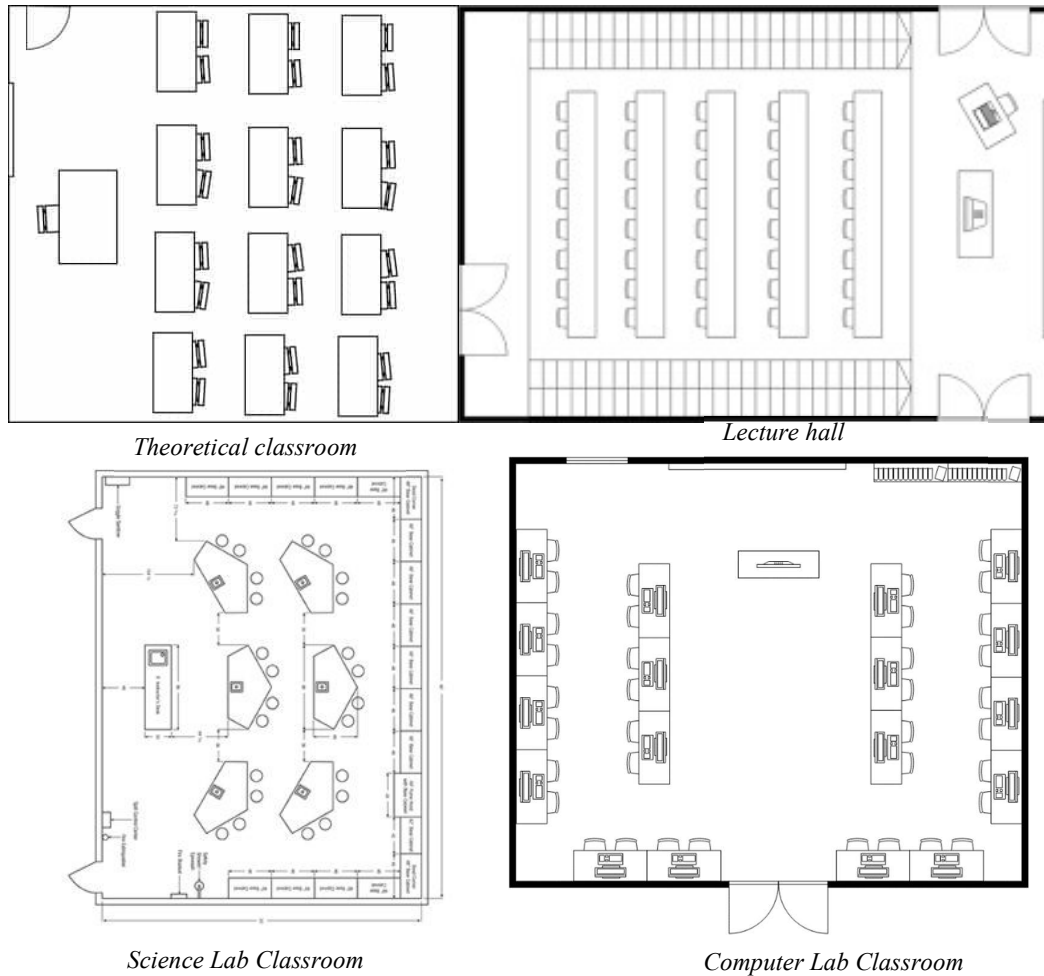


Fig 2. 10 Types of Classroom

Source: Helpforprofessor, VisualParadigmOnline, Pinterest

General purpose teaching area includes standard classrooms, supplementary classrooms, rooms for special courses, etc. All rooms should be situated in quite zone of the school and special attention should be given to acoustic considerations.

Rectangular or square (8 X 9) m for 35 student rooms having windows on only one side of the room possibly drawing north light into the room is comfortable for reading condition. Classroom should be so placed in a building that it is accessible to students without overcrowding of corridors or stairways. Coat racks, adequate Bulletin boards lining the corridors, and ample toilet facilities should be provided nearby.

2.2.1 Theoretical Class

Purpose: Focuses on theoretical aspects and foundational knowledge.

Presentation: Lectures and presentations with visual aids.

Seating: May have traditional seating arrangements without tiers.

Subject Focus: Covers a wide range of subjects in various fields of study.

2.2.2 Lecture Hall

Purpose: Large room for instructional purposes in colleges and universities.

Capacity: Typically accommodates more student than of theoretical class.

Seating: Tiered seating arrangement for clear views.

Audio-Visual Equipment: Equipped with microphones, projectors, screens, and sound systems.

2.2.3 Computer Class

Purpose: Space for practical training and hands-on exercises.

Equipment: Individual workstations with computers and necessary software.

Network Connectivity: Provides internet access and network connectivity.

Specializations: Tailored to specific fields such as programming, graphic design, video editing, etc.

Classroom should be so placed in a building that it is accessible to students without overcrowding of corridors or stairways. In part this depends on temperature, humidity, background of light and sound, and seating space. The support spaces should take into consideration of audio-visual equipment, access for disabled, circulation spaces.

In classroom that requires fixed seating, floor should be sloped to provide good sight lines.

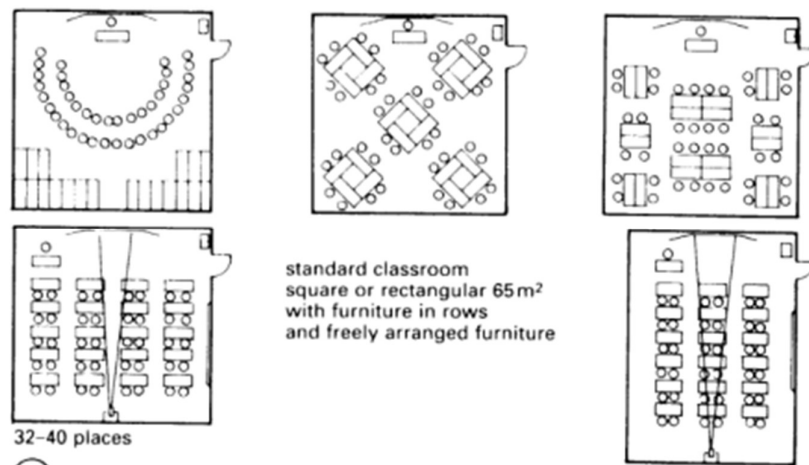


Fig 2. 11 Layout of Classroom
Source: Neufert

Traditional Lecture Setup: This common seating arrangement consists of rows of fixed seating, with students facing the instructor and their backs to one another. It supports a more traditional "sage on the stage" learning environment.

Flexible Seating: Some theoretical classes may opt for a more flexible seating arrangement, allowing for various configurations. This can include traditional classroom-

style seating, circular arrangements, or even movable furniture to facilitate group discussions and interactive learning.

2.3 Video Editing Classroom

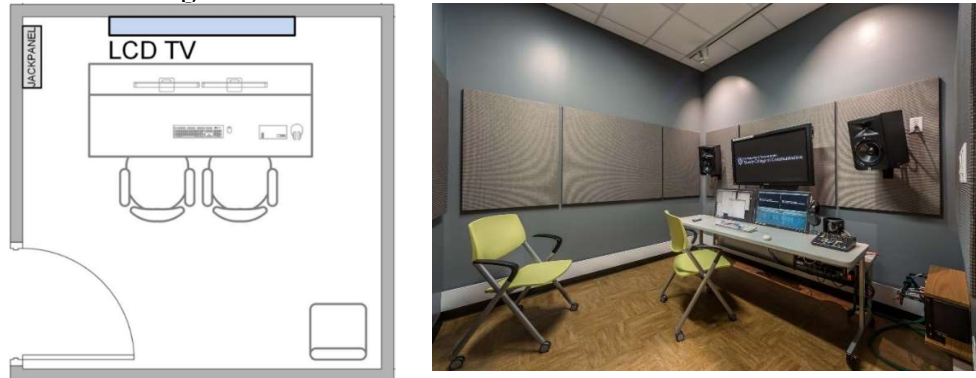


Fig 2. 12 Video editing plan and furniture layout with sound insulation

Pre-production, production, and post-production are the three processes that make up the standard video production workflow. Media resources are produced in the course of production and then changed in the post-production phase. After the video editor gets these media assets, the video editing workflow starts. The video editor then edits the video segments within the selected video editing software to produce initial product. Some common qualities to consider when editing the video segments for this initial version of the video output are trimming, cutting, and transitioning. The next stage is to add visual components that will be included in the finished film, such as graphics, color correction, subtitles, and effects. The video editor mixes the audio after the visual components have been included in the project before repeatedly watching the finished product. (Tholsby 2023)

Architectural considerations for video editing studio.

- A seal light proof room should be used for video editing.
- For ventilation and to throw out the heat generated by equipment, proper design and installation of air conditioning system should be done.
- This room should have racks on which to arrange unused film and film being edited can be placed.
- A furniture that supports comfortable seating and posture during long editing sessions. Adjustable desks can accommodate standing or sitting preferences.
- The monitors are positioned at eye level to reduce strain on the neck and eyes.

2.4 Sound Editing and Recording Classroom

A sound editing room is a specialized space in a film institute or school where professionals and students work on the post-production sound aspects of film projects. Modern audio editing gear, software, and acoustically treated spaces are provided in these studios to make sound editing, mixing, and mastering easier.

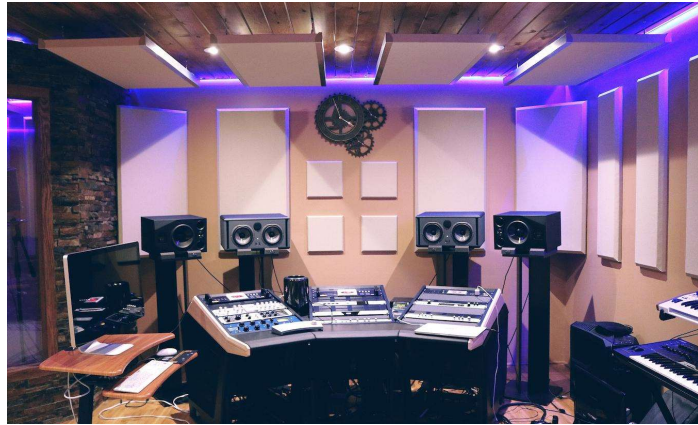


Fig 2. 13 Sound Editing Classroom having acoustic panel in wall

The sound editing room of a film school offers students with direct training in a variety of methods and processes related to film sound editing. Under the supervision of knowledgeable instructors or mentors, they gain practical expertise with industry-standard equipment and instruments.

Studio should be designed considering room acoustics and should be light proof i.e. no light should enter the studio spaces so that the best quality of sound and visual can be delivered.

Minimum ceiling height should be 19'.

All door in studio should be double glazed

For visual connection between control room and recording room, observation window with the glass should be provided and should be of size 6' x 9'. The glass panel of size 8mm thick and 12mm thick with air gap of 30cm separating them (Shetty 2020-21).

Recording studio is classified into three types:

- Home or Project Studio:
 - Control Room: A dedicated space for recording and mixing equipment.
 - Dimensions: Varying sizes, but recommended ratios for optimal acoustics.
 - Acoustic Treatment: Essential for controlling reflections and creating accurate monitoring.
- Separate Studio and Control Room:
 - Studio Room: Designed for musicians or performers to play or record.
 - Control Room: Houses mixing equipment and provides precise monitoring.

- Scoring Stage and Control Room:
 - Scoring Stage: Large room with excellent acoustics for recording orchestral music.
 - Control Room: Monitors and controls the recording process.



Fig 2. 14 Home or Project Studio

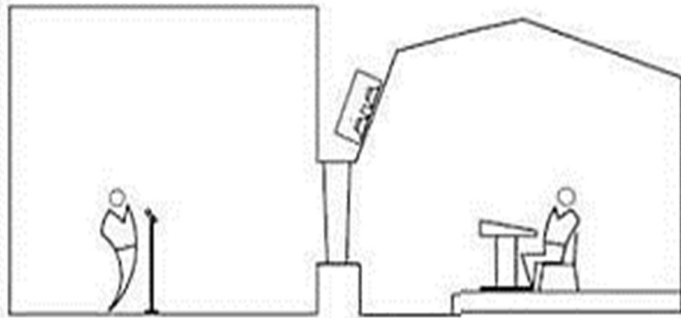


Fig 2. 15 Separate Studio and Control Room

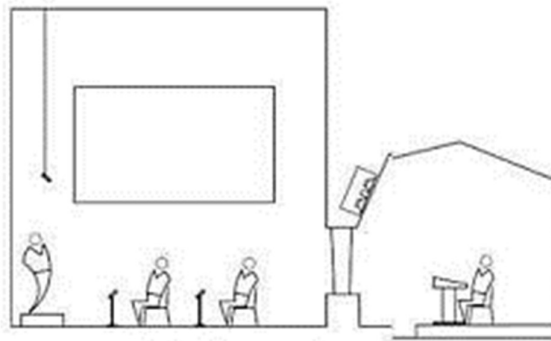


Fig 2. 16 Scoring Stage and Control Room

Separate studio and Control Room will be used in the design separated with studio and control room, providing isolation of sound and reducing external noise.

2.5 Acting Class

An acting class in a film institute is a specialized educational program focused on training aspiring actors in the techniques and skills necessary for performing on camera, particularly in film and television productions. These classes are typically offered by film institutes or film schools that specialize in various aspects of filmmaking. The primary goal of an acting class in a film institute is to provide students with comprehensive training in acting techniques tailored specifically for the medium of film. These programs, which are taught by experienced instructors with backgrounds in acting and filmmaking, concentrate on character development, scene study, improvisation, on-camera skills, audition preparation, and industry insights. Through practical instruction, script analysis, and performance opportunities, students acquire the skills and information required to seek employment in the television and film industries (Shetty 2020-21).

The rooms are equipped with enough furniture and supplies for a range of acting class exercises. They are clean and well-lit with both natural and incandescent lighting. Wall should be free of protrusions and sharp corners. The size of classroom should be 90 sq. m.

Specification:

- New sprung floor
- Mirrors and bars
- Overhead grid with permanent lighting instruments

Dressing room:

It should offer complete privacy and should be at least 5'x5' to allow for easy movement. The dressing room should also offer a small chair and table as well as hooks to hang clothes. A bathroom should be provided. Storage space must be separated beforehand and the size of storage area depends upon the equipment's materials and the materials that are to be stored. (Malla 2077)

2.6 Photography Studio

A photography studio is a room set aside specifically for taking pictures. It typically includes various equipment and backdrops to facilitate professional photography sessions. Photography studios come in a variety of shapes and sizes, from compact, transportable sets for on-location shoots to wide fixed venues



*Fig 2. 17 Photography Studio
Source: Max Media Academy*

furnished with excellent lighting, backdrops, accessories, and editing capabilities.

The size of the studio will depend on factors like the types of photography plan to undertake (portrait, fashion, product, etc.) and the equipment to be used. Ceilings should be at least 10-12 feet otherwise, it will be difficult to use cranes, booms, overhead lighting. To install ceiling rail system for strobes. A studio room should be at least 25 feet wide on both sides without any columns (Aydin 2019).

The availability of natural light and should be controlled it through windows, curtains, or blinds. For artificial lighting, use of combination of continuous lighting, strobe lights, and modifiers (soft boxes, umbrellas, etc.) to achieve desired lighting effects.

For backdrop choose like seamless paper, fabric, or vinyl to be durable and versatile. Allocate space for storing cameras, lenses, tripods, props, and other equipment in an organized manner. There should be easy access to frequently used items during shoots.

Neutral colors like white, gray, or beige on walls and floors to minimize color casts and provide a clean background. Incorporate accent colors or textures to add visual interest without distracting from the main subject. It is better to paint the ceiling in black or dark gray as well. Use of sound proofing materials to minimize external noise interference during audio recording or video shoots. Acoustic panels or diffusers to control reverberation and create a conducive environment for audio recording.

2.7 Animation lab

Animation classes typically cover a range of topics, including principles of animation, character design, storyboarding, 2D and 3D animation techniques, digital modeling, texturing, rigging, lighting, rendering, and animation software tools like Adobe Animate, Autodesk Maya, Blender, etc.

Film institute often provide access to specialized animation labs equipped with the latest software and hardware necessary for animation production.

2.7.1 Workstations

Workstations in animation studio consist of a powerful desk top and one to two monitors depending upon the work. These workstations are used for content creation and editing making animated movies. Windows and other artificial light sources should be placed such that they will not produce glare on screen and necessary thing should be within the reach area of the artist.

Generally, workstations in animation studio include 3D modeling unit, story board and development unit, art and design unit.

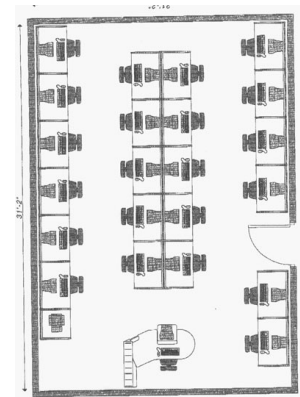


Fig 2. 18 Animation Class
Source: Knapp Hall
Computer

2.8 Green Screen and Motion Capture Room

Motion Capture, motion tracking are terms used to describe the process of recording and translating that into a digital model.

In film making, it refers to recording actions of human actors and using that information to animate digital character model in 2D or 3D computer animation.



Fig 2. 19 Green Screen Capturing Room

In motion captured session, movement of one or more actors are sampled many times per second.

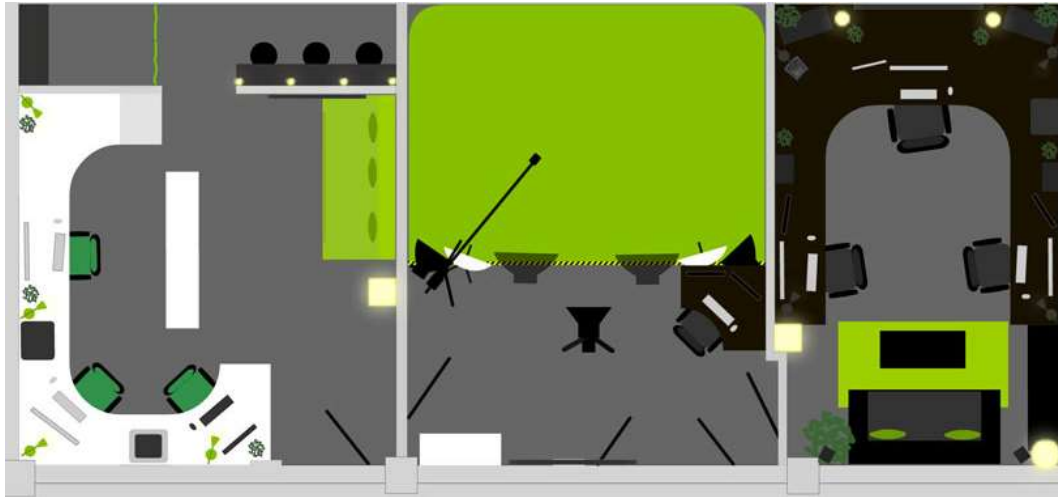
Ceiling Height: min. 3m

The spaces are:

Green screen studio

Green Room

2.9 Edit suite



*Fig 2. 20Green Screen Capturing Room
Source: SceneQStudio*

2.10 Equipment Used in Film Studio

2.10.1 Camera Dolly

A camera dolly is a piece of equipment used in the film and television industry to create smooth, controlled camera movements. Camera dollies are used to move the camera in a straight line, or to follow a moving subject, allowing the camera operator to capture stunning and dynamic shots that add energy and visual interest to a film. (Andrus n.d.)

There are several types of camera dollies used in the film industry,

- Track dollies
- Hand Dollies
- Hydraulics Dollies
- Cable-cam Dollies

each with its own unique features and benefits.

There are riding dolly's and also dolly's that support only the camera, so that the operator needs to walk alongside. Any dolly that is compact in size when set on floor wheels is called a "doorway dolly". (MAGAR 2024)

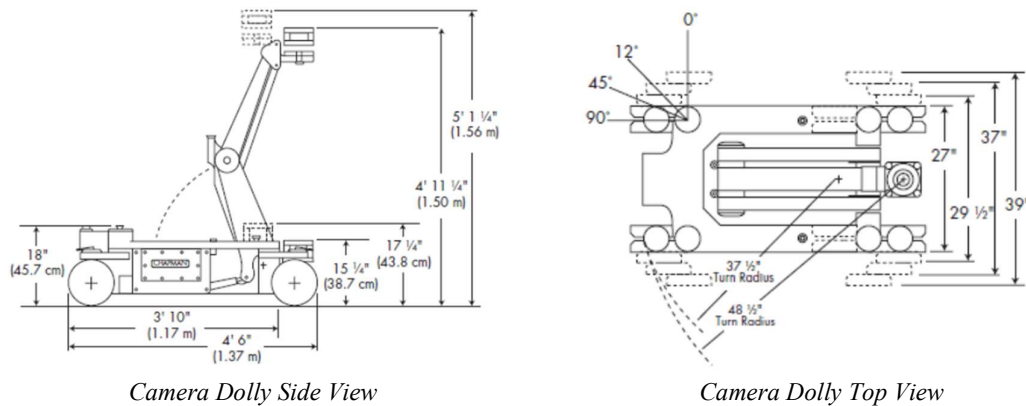


Fig 2. 21 Camera Dolly Views with its dimensions
Source: (IV 2001)

- Minimum Camera Mount Height - 19''/0.483m
- Maximum Camera Mount Height - 62''/1.57m
- Vertical Boom Travel - 43''/1.09m
- Minimum Camera Mount Height (Low plate setup) - 4''/0.102m
- Maximum camera Mount Height (Low plate Setup)-64''/1.63m

2.10.2 Camera Jibs and Cranes

In cinematography, a jib is any boom device used to mount a camera on one end, and a counterweight with camera controls on the other. In principle, it operates like a see-saw, with the balance point located closer to the counterweight, which allows the end of the arm with the camera to move through an extended arc. Typically, a jib permits the camera to be moved vertically, horizontally, or a combination of the two. A small jib can be mounted on a tripod, but many larger, purpose-built jibs have their own support stands, often on wheels. Modern jibs are normally modular and can be assembled in various lengths. (Kaasterly 2023)



Fig 2. 22 Camera Jibs images with dimensions
Source: Robotic Camera Crane | Broadcast Robotic Studio Camera, n.d.

2.11 Amphitheatres

An Amphitheatre is an open-air spaces with tires of seats surrounding central area, an open-air auditorium. The environment mentally also pleases n heal the humans while being in the very place. Amphitheatre architecture design is a multifaceted endeavor that requires careful consideration of various factors. By prioritizing audience experience, acoustics, functionality, and aesthetics, architects can create captivating venues that foster a vibrant cultural hub. (Sharon 2024)

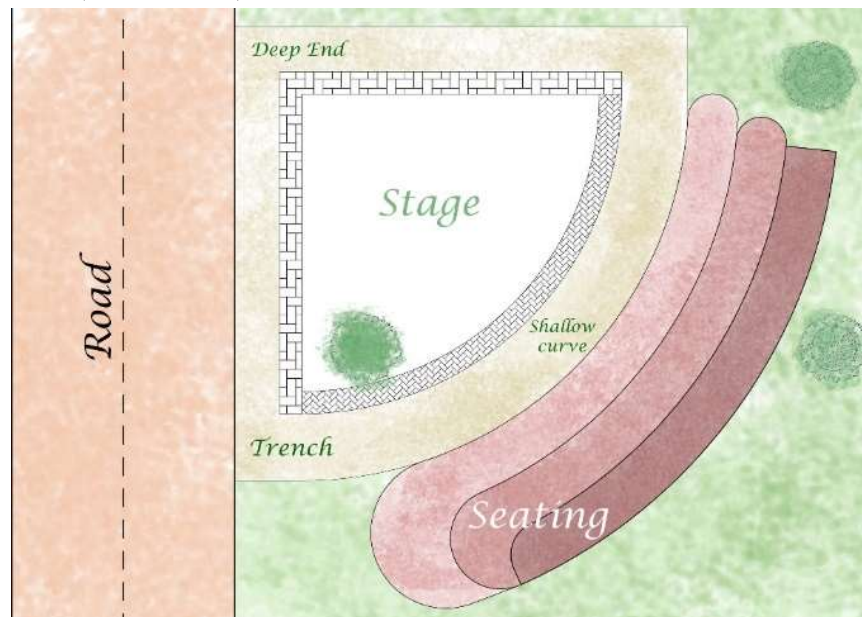


Fig 2. 23 Amphitheatres

Design Consideration:

- Shape and Orientation: The shape and orientation of the seating and stage can be designed to reflect and direct sound towards the audience.
- Materials Selection: Careful selection of materials, historical look (stone and wood) and modern materials (concrete, metals, fabrics) for seating and stage surfaces can help to absorb or reflect sound waves in a way that enhances clarity.
- Utilizing natural slopes for seating tiers.
- Incorporating landscaping elements like trees and gardens to create a visually appealing environment.
- Designing the stage and seating to harmonize with the surrounding architecture.

Amphitheaters should be designed to be accessible to all audience members. This includes features like:

- Ramps and elevators to provide access to different seating tiers.
- Designated seating areas for people with disabilities.
- Assistive listening devices for those with hearing impairments.

Weather Protection: Open-air amphitheaters need to consider the elements. Design strategies include:

- Retractable canopies or permanent roof structures to provide shade and shelter from rain.
- Proper drainage systems to prevent flooding during heavy rain.

2.12 Administration Block

It is one of the most important units which controls the overall units of any institution. This block includes principal's room, vice principal's room, director's room, staff room, account section, reception, waiting lounge etc. It has the power of controlling the whole institute.

Reception- The reception area is based on functional needs. For example: for visitor's traffic, security requirements, reception activities, etc.

A reception also needs convenient location for side tables and waiting areas.

Principal room 15-25 sq. m.

Vice-principal room 15-25 sq. m.

HR room 15-25 sq. m.

Staff room: area per person 3.2 sq. m.

Waiting area

Meeting Room:

Meeting room for 4 staffs: 12 sq.m.

Meeting room for 6 staffs: 14 sq.m.

Meeting room for 12 staffs: 22 sq.m.

Circulation space - Corridors and aisles, provided within an office to allow for access to various work areas.

Enclosed workstation - Generally it is a work station with four-sided, floor to ceiling enclosures using drywall or removable partitions. Open workstation is used as well.

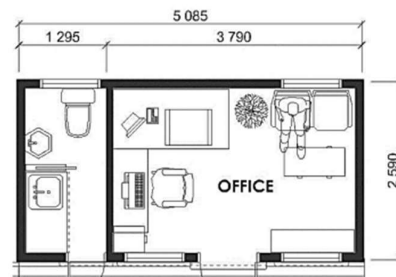


Fig 2. 24 Office Floor Plan

Storage room - Storage rooms are utilitarian spaces. Access doors and aisles need to be large enough to move the stored material.

2.13 Library

A library is a structure or space where the general public or members of an organization can use or borrow collections of books, periodicals, and occasionally.

It offers access to content either physically or digitally, and it could be a real place, a virtual place, or both. Books,

newspapers, manuscripts, movies, maps, prints, documents, microform, CDs, cassettes, videotapes, DVDs, Blu-ray Discs, e-books, audiobooks, databases, and more forms can all be found in a library's collection.

Minimum ceiling height varies with different factors. Area where there are block stack, the min height required is 7'-6".

In large reading room, minimum clear height required is 9'-6".

In case of mezzanine floor, the ceiling height should be min of 15'-6".

Floor area is determined by number of users and the types of spaces.

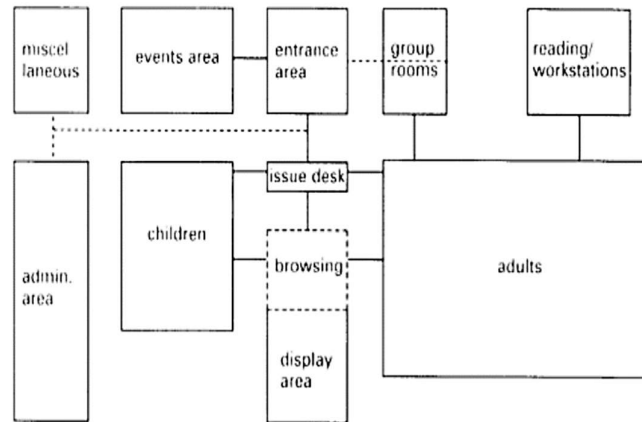


Fig 2. 25 Space Requirement for Library furnitures

Source: Neufert 1936

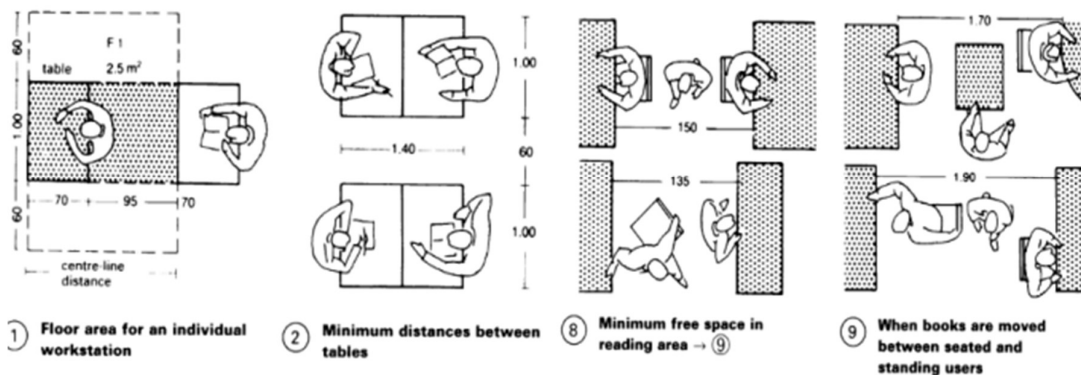


Fig 2. 26 Library furniture standard gaps for proper flow of the person

Source: Neufert, 1936

2.14 Dormitories

There may be hostel or dormitory facilities available for students. These accommodations are often convenient for students who are attending from out of town or from other

countries. In this space, the student studies, sleeps, dresses, and socializes. The hostel is typically located on or near the campus of the film institute, providing easy access to classes, studios, and other facilities. Hostel rooms may vary in size and layout. Common options include single rooms, double rooms (shared by two students), and dormitory-style rooms (shared by multiple students). Hostel facilities often include basic amenities such as beds, study desks, chairs, closets or wardrobes, and shared bathrooms. Some hostels may also provide additional amenities like communal kitchens, common areas for socializing or studying, laundry facilities, and recreational spaces. Institutes typically have security measures in place, such as security personnel, key card access, CCTV cameras, and emergency procedures. Living in a hostel provides opportunities for students to connect with their peers, form friendships, and collaborate on projects. The room size should be min of 90 sq. ft., height of min 8'-6".

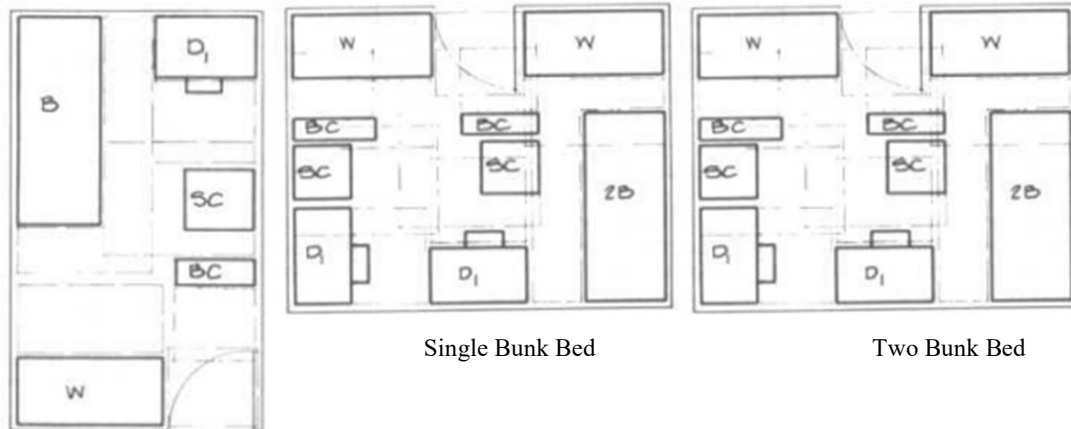


Fig 2. 27 Arrangement of furnitures in dormitories
Source: Neufert 1936

2.15 Canteen

Canteens should be designed to create a welcoming and inclusive communal space. Factors such as seating arrangements, lighting, ventilation, and the integration of functional elements like kitchens and serving areas should be taken

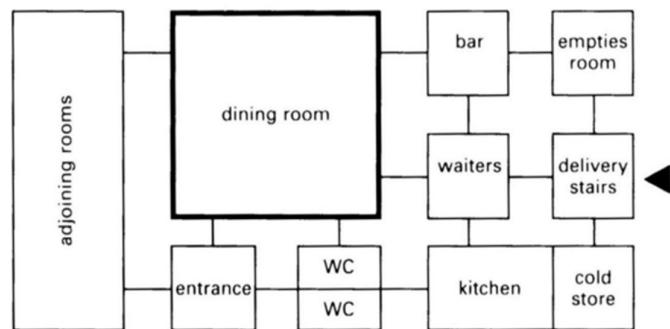


Fig 2. 28 A typical cafeteria zoning

into account. Additionally, the design should promote relaxation, encourage social interaction, and support the well-being of the individuals using the space.

The purpose:

- To be able to eat comfortably, one person requires area of around 60cm wide by 40 cm deep.
- Kitchen and store should be linked with each other.

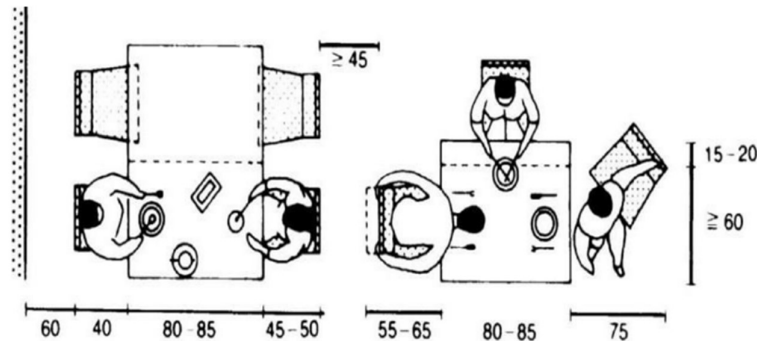


Fig no. 32 Space requirement for server and dinner
Source: (Neufert, 1936)

In primary space planning, the rule for determining the area requirement of a restaurant is:

Dining room: 60% of total area, 1.5-2 sq. m. per person

Kitchen, cooking, storage, preparation: 40% of total area

Storage and ancillary: 1.5-2 times the kitchen

Net kitchen area: 15-20% cooking-5-6sq.m

Per seat area: 1.3-2.15 sqm

S/T (service area/ total area): 20-25%

Service aisles: 0.9-1.35 m (150 ppl)

Walkway width: min 1.1 m

Height: min 2.1 m

Window area: 1/10 of restaurant area

Distance between table including chair: 1.75 m

Passage between chair: 18 inches

2.16 Parking

Like any other educational institution, film institutes should have parking spaces to meet the demands of their guests, staff, teachers, and students. The institute's size, location, and local laws are only a few of the variables that may affect the number and arrangement of parking places. Most film institute set aside a specific amount of spots for students to park. Members of the professors and staff are frequently assigned special parking spaces. To make access easier for staff members, these areas could be situated nearer to the institute's buildings. Film institutes are often required to provide accessible parking spaces for people with disabilities.

Dimension:

- Dimension of bus: 11m x 2.5m
- Inside turning radius: 14 m
- Outside turning radius: 18 m

Architectural consideration

For parking

- Parking types :
- Parallel parking
- 30° parking
- 45° parking
- 60° parking
- 90° parking

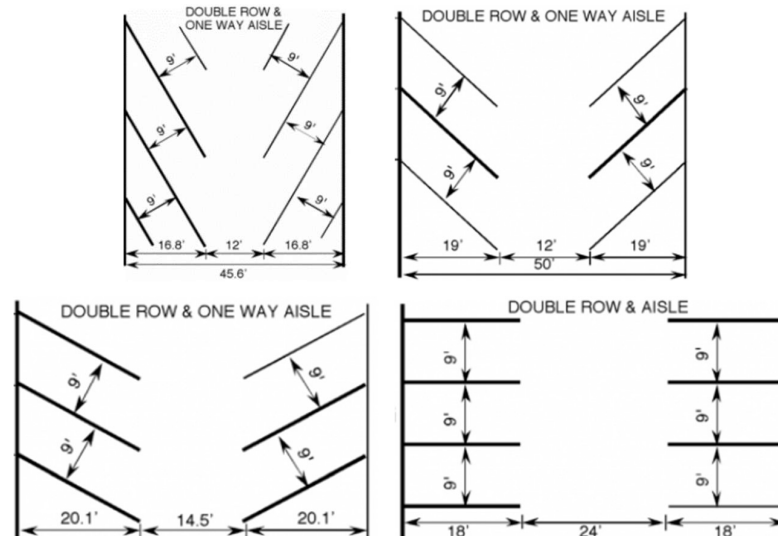


Fig 2. 29 Parking

2.17 Supporting Spaces

2.17.1 Corridors

- Provision of heat units, drinking fountains, fire extinguishers, lockers, doors, display cases.
- Length should not exceed 45m.
- Min. Width should be 1.5m.

2.17.2 Staircase

- Max. Riser height= 210 mm
- Min= 125 mm
- Max. Nosing= 32mm
- Height of handrail= 864--965mm
- Handrail dia. =37--68mmmin.
- Minimum width of staircase: 1.25m.

2.17.3 Universal Accessibility

- Corridors at least 915mm wide.
- Doors 815mm clear opening with lobbies
- 460mm wider than the door on the latch side.

- Specially designed fittings and grab bars.
- Between beds and furniture, 910mm space is required; 685mm for knee space; switches set 1.2m high.

2.18 Courses in Film School

These are the course details for the Bachelor's degree in Film Studies.

Table 1 Tribhuvan University Affiliated Film Course

First Year		
Paper	Code No	Subjects
1	C. Eng 401	Comp. English
2	BFS 421	Psychology and Film Studies
3	BFS 422	Basic Film History
4	BFS 423	Film as Art Form
5	BFS 424	Film making Fundamentals I
Second Year		
6	C. Nep 402	Comp. English
7	BFS 425	Psychology and Film Studies
8	BFS 426	Specialization I
9	BFS 428 (A, B, C, D, E)	Acting, Direction, Cinematography, Editing, Sound)
10	BFS 427	Specialization II
Third Year		
11	C. Eng 403	Comp. English
12	BFS 429	Film Theory and Criticism
13	BFS 432	Acting, Direction, Cinematography, Editing, Sound
14	BFS 430	Specialization III
15	BFS 431	Specialization IV
Fourth year		
16	C. Nep 404	Comp. Nepali Studies
17	BFS 433	Research Methodology and Term Paper
18	BFS 434	Specialization V (Theory + Internship)
19	BFS 435	Specialization VI (Final Project Workshop + Writing)
20	BFS 436	Specialization VII (Final Film)

Chapter 3 Case Studies

After discussion of literature reviews, to get familiar with spaces, different national and international case studies were done related to film institutes.

National Case Studies

1. Oscar International College

I studied about the courses provided and the spaces needed according to the academic curriculum. I understood different classroom types that are needed in institutes and about the theatre.

2. Nepal Film Campus

I studied about the courses provided and the spaces needed according to the academic curriculum. I understood different classroom types with the furniture arrangements that are needed in institutes. I studied about the architectural features like exposed brick façade, courtyard, pavilions. I've measured necessary rooms needed for film institutes.

3. Sarwanam Theatre

I studied about the performance theatres, back stages, rehearsal room, etc and measured the important spaces. I studied about the users flow in the theatre.

International Case Studies

1. Kantana Film and Animation School

I studied about the concept and how the form is segregated from each other but is connected by the corridor. I learned about the use of double corridor spaces integrating the nature and the building creates a shadow and light creates aesthetic landscape.

2. Whistling Wood International School for Film, Communication and Creatives Arts

I studied about the form, concept and about different blocks of the project. How the bricks can be used in simple form in plan with different parametric form in elevation.

3. Red Sea Institutes of Cinematic Arts

I studied about the form development, the concept of how the film making process is shown through the continuous path, the materials used in the building.

National Case Studies

3.1 Oscar International College



Fig 3.1. 1 Exterior View of Oscar International College
Source: Author

3.1.1 General Information

Oscar International College is the first college of Nepal offering BFS (4 years course). It is located in Sukedhara, Kathmandu. It was established in 2061 BS. It has an area of 856 sq. m. with 56.6% GCR and FAR of 1.05.

3.1.2 Courses offered

- Acting
- Sound Design
- Directing/ Screenplay
- Editing
- Motion Picture Photography

3.1.3 Plan Description

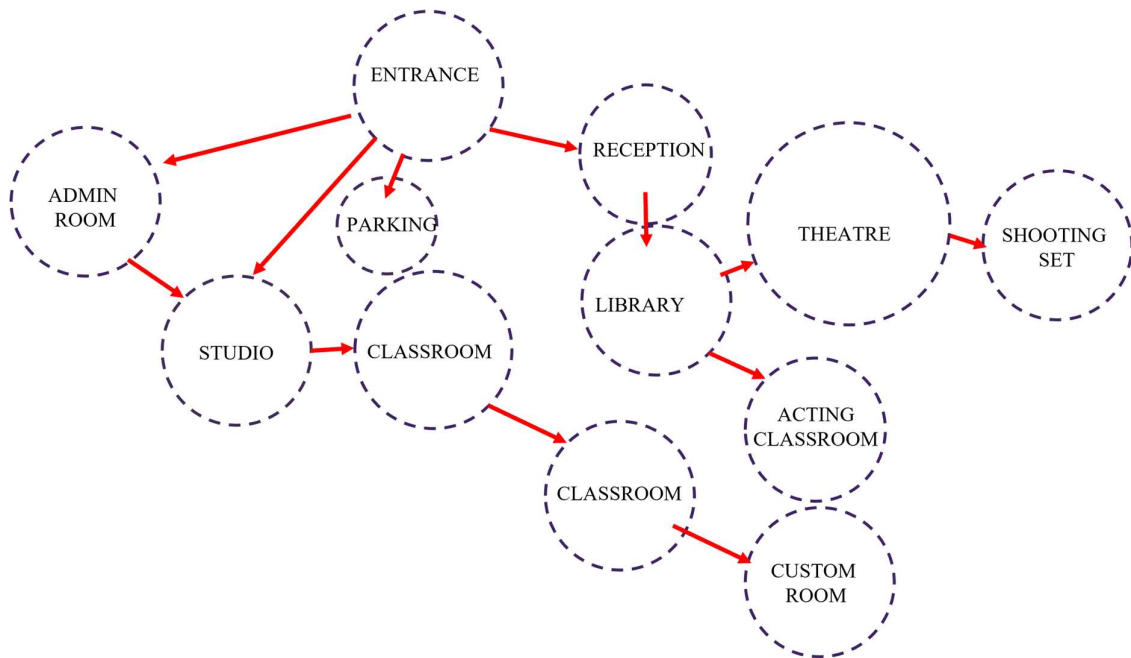


Fig 3.1. 2 Zoning of Spaces of both the block of Oscar International College
Source: Author

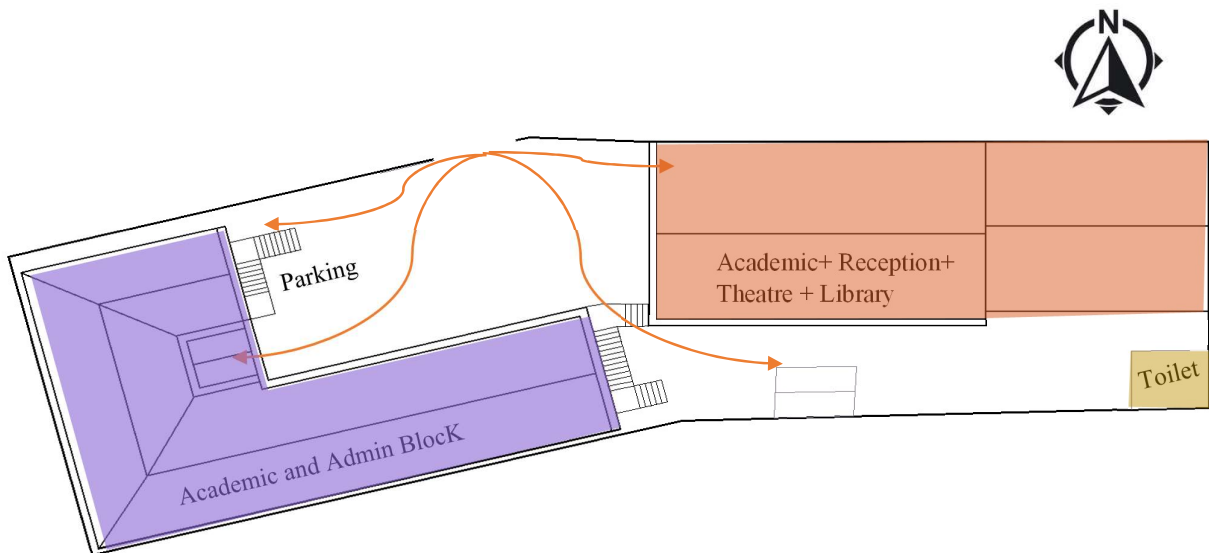


Fig 3.1. 3 Master plan showing the circulation of users and the blocks
Source: Author

In admin and academic block, there are 4 classroom, 2 editing classroom, Principal room, Director's Room, Canteen, Guard House and Equipment Store Room. The block is faced to the North. Each lecture classroom can accommodate 30 students. The block has single corridor so, there will be a proper ventilation and proper lighting and a view to the courtyard (played sports or for parking).

3.1.4.1 Classroom

3 types of classroom can be seen in this block where 3- lecture classroom and 1- video editing classroom and 1- sound editing classroom. The lecture classroom has an normal layout as shown in figure. There are 2 practical classroom which are used after movie shooting. Video editing room have L shaped furniture layout with 7 chair and desktop and Sound editing room furniture is layout at center surrounding with sound box at the edges supported with the stand.



Classroom with 4 seater furniture

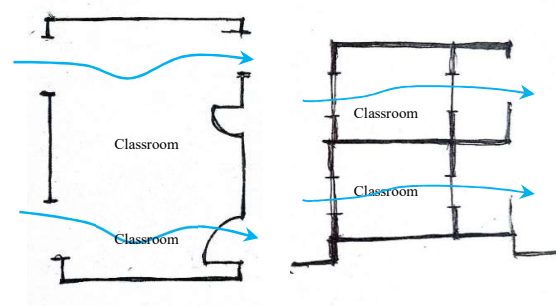


Diagram showing cross ventilation of the classroom and building through plan and section



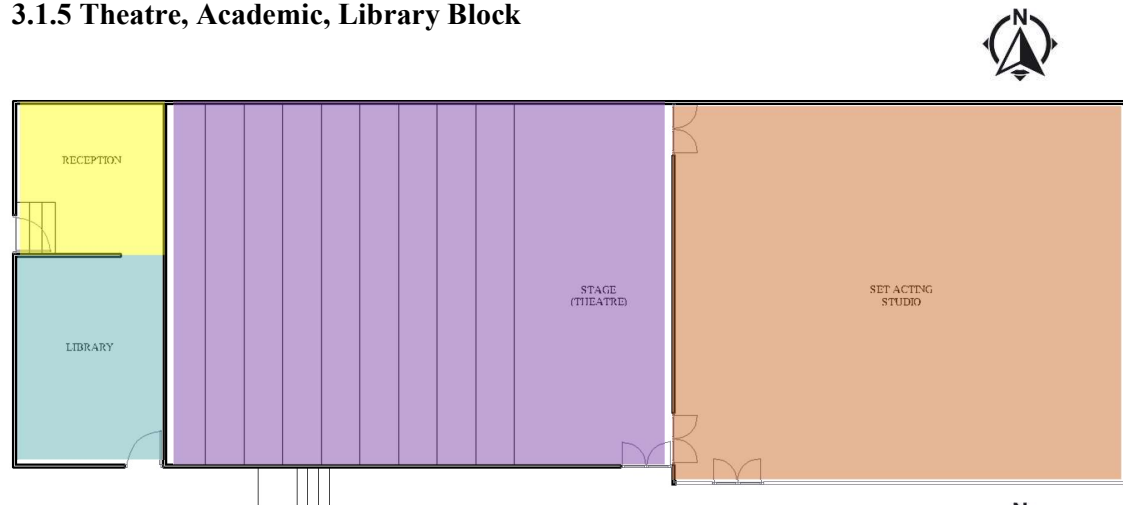
Video Editing Room



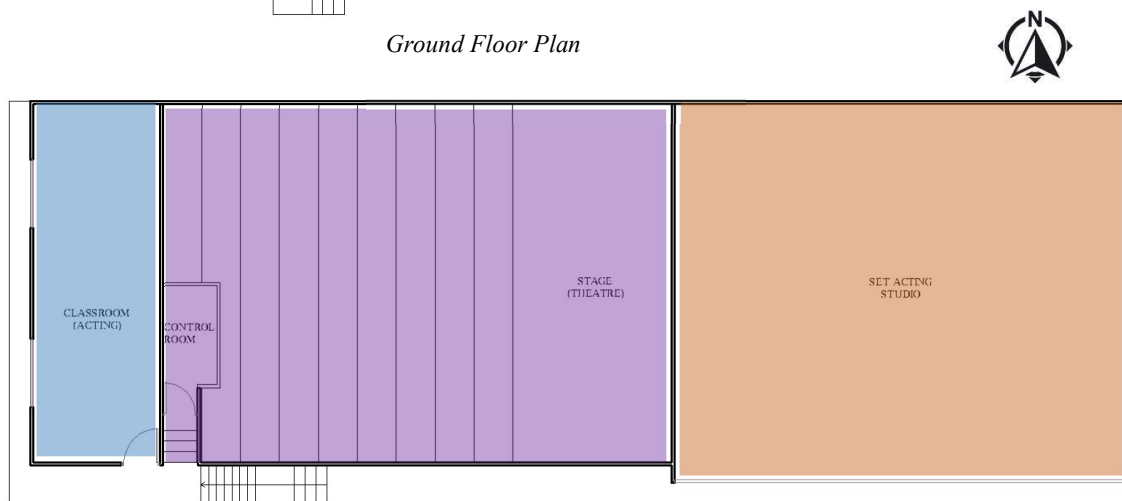
Sound Editing Room

*Fig 3.1. 5 Types of Classroom
Source: Author*

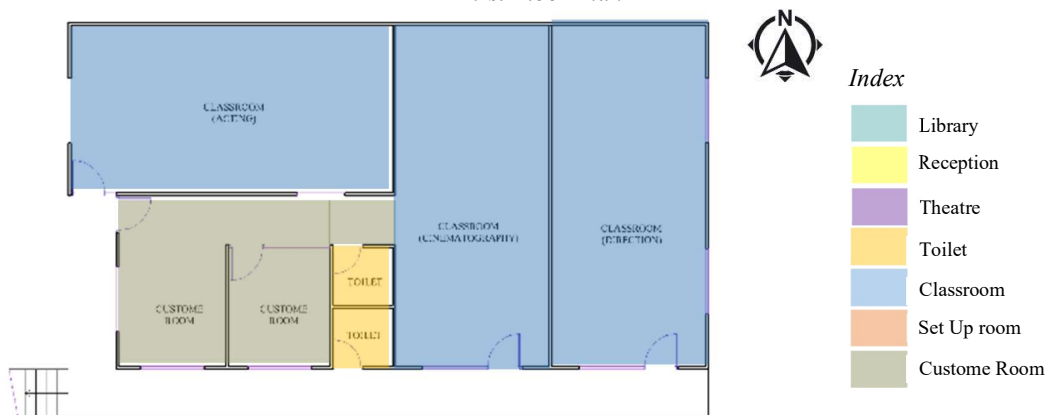
3.1.5 Theatre, Academic, Library Block



Ground Floor Plan



First Floor Plan



Second Floor Plan

Fig 3.1. 6 Different floor plan of theatre block showing the spaces through colours
Source: Author

3.1.5.1 Reception and Library

On the right near the main entrance is the reception area and is stepped down from the ground. The reception has 1 staff member and 3-2seater sofa. There is library on the same access but the space seems insufficient and less books are available.



Reception



Library

Fig 3.1. 7 Furniture arrangement in Reception and Library

Source: Author

3.1.5.2 Theatre and Acting Set Studio

In theatre of an area of 11.7 x 8.4 m, has auditorium has a capacity of 150 with straight row seating arrangement, control room in the first floor and is accessible from outside and the projector is hung in the truss for showing the movie. On the back of the theatre, the spaces are used as movie shooting sets with an area of 8.8 x 10.5m. Acting Set studio has different furniture for the planning of set. After the script is ready, students manage the set according to their story and they shot.



Auditorium and Front Stage



Acting Set Studio

Fig 3.1. 8 Seating arrangement and stage in Theatre and furnitures used for Acting set studio

Source: Author

This block has 4 classroom- 1 acting classroom on first floor and 3 lecture classroom on the second floor. The different seen was the furniture layout as the lecture classroom have 3-seater bench and desk whereas acting class had open space room as the student act, they need space to move.



Acting Classroom



Theory Classroom

Fig 3.1. 9 Types of classroom
Source: Author

3.1.6 Building Features

- There are no special architectural features
- It is a C shaped building creating court
- It is East oriented.
- Framed structure

3.1.7 Landscapes



Front outdoor spaces with parking



Back side outdoor spaces

Fig 3.1. 10 Landscape usage : Parking, pergola and for outdoor shooting studio
Source: Author

There seems to have insufficient parking spaces inside the campus periphery. The bike is parked in another plot, if the parking is fully packed. Near to the entrance is the fountain.

All open spaces are paved with stone paving. On the front of theatre block is a pergola, for seating spaces and spaces for playing table tennis. On the back, has the separate toilet, which is used during the program or events.

The elevation colour is white and black, a concept from the colour of film reels and creating a monochromatic effects. All the outdoor landscape is used for outdoor movie shooting.

3.1.7 Analysis:

- There is provision of similar size classrooms for all activities.
- Adequate lightings and ventilation due to the single corridor system.
- The parking spaces will be insufficient if the car is parked.
- Less area had been provided for the library with less seating spaces.
- There are no ramp for universal access.
- There is less provision of outdoor shooting spaces for landscape elements.
- Use of black aluminium façade panels in roof and slab and prefab boards, shows the use of minimalistic colour which symbolize the classic and timeless nature of filmmaking, creativity and artistry, the interplay of light and shadow in storytelling.

3.2 Nepal Film Campus



Fig 3.2. 1 An Exterior View of Nepal Film Campus

Source: Author

3.2.1 General Information

Nepal film Campus was established in 2062 BS. It is located in Pingalsthan, Gaushala with an area of 5 ropanis (27380 sq. ft.). It was designed by Ar. Dibesh Raj Bhattarai.

3.2.2 Academic Course

Nepal film Campus has class for +2 level of general stream affiliated to National Examination Board, Nepal Government since 2021. NSV teaches Music, Film, Dance, Psychology, History of Arts and Fine Arts as major subjects in +2 Level. Other Compulsory subjects are English, Nepali and social Studies. This is completely practical and first and experience-based learning school. Students are supposed to learn and participate in different activities based on curriculum and related industries. Along with their studies, students are sent to internship for a hands-on practice and experience of what they have learnt at school.

For Bachelor level, NFS provides courses for Film and Drama. The course is 4-years sessions where the first year is completely based on theory related to drama. The subject for first year includes Drama, Psychology, research and English. The second year to fourth year is advance than first year where the student can choose respective field of film such as directory, Acting, sound, cinematography and editing.

Current bachelor sessions include 30 students each year (teach 120 student in 4 years).

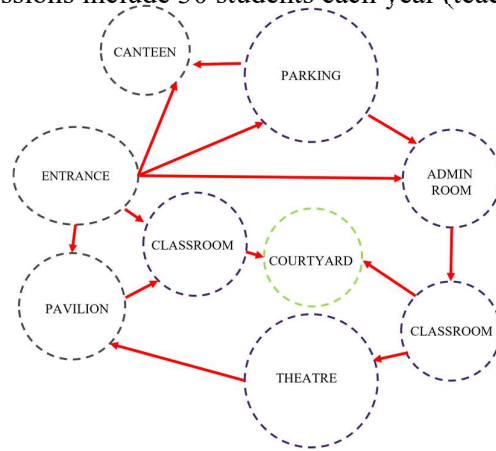


Fig 3.2. 2 Zoning showing different spaces of NFC
Source: Author

3.2.3 Space Planning

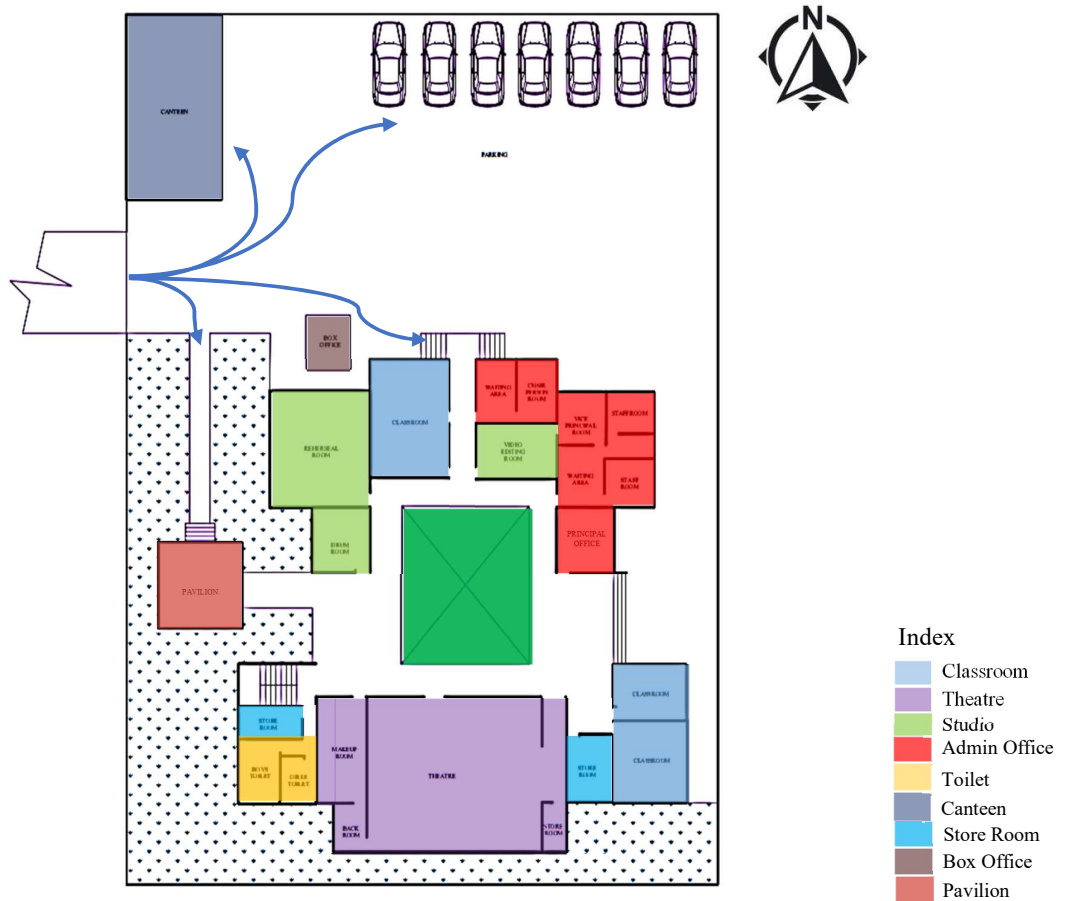
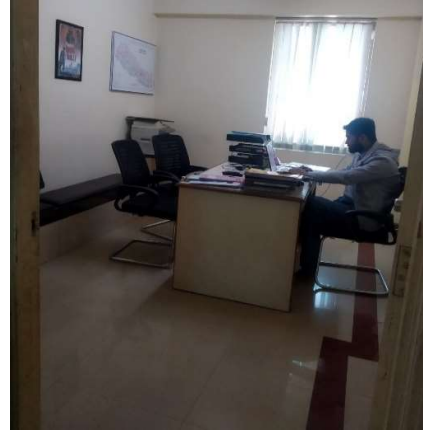


Fig 3.2. 3 Diagram showing different rooms through different colours
Source: Author

Sufficient parking is provided on the north of the site. Temporary structures on the side of main gate used for box office, guard house and canteen. On the south of the site, main building is located. There are classroom, admin room, staff room and theatre in ground floor. There are 5 classrooms in ground floor, one of them measures 5.3 x 8.5m in size. The classroom is categorized into 3 theoretical classroom, 1 rehearsal class, 1 music class and 1 editing classroom.



1. Classroom with Table Arm Desk



2. Staff Office Room (Admin)



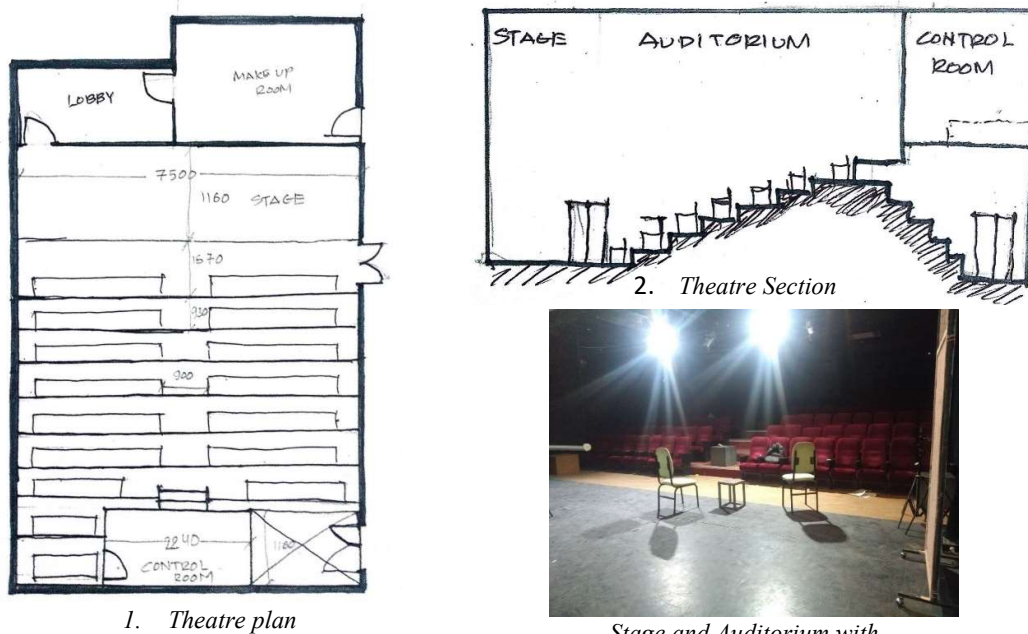
3. Video editing Studio



4. Rehearsal Room for performing act, dance

3.2.4 Theatre

An auditorium has a capacity of 100 people. The auditorium is divided into back stage, front stage, auditorium, control room. Auditorium is of straight row and has 8 chairs in one column. Back board is cladded in wall, the use of HMI light and is focused on the stage. There is control room on the top of auditorium and is accessible from different access. The front stage has a dimension of 7.5 x 1.16m. The back stage has Lobby and 1 make up room and make up room can be accessible both ways. Theatre will be used for the college, and also be used by an outsider for an annual function. Theatre is used both as film and performance theatre.



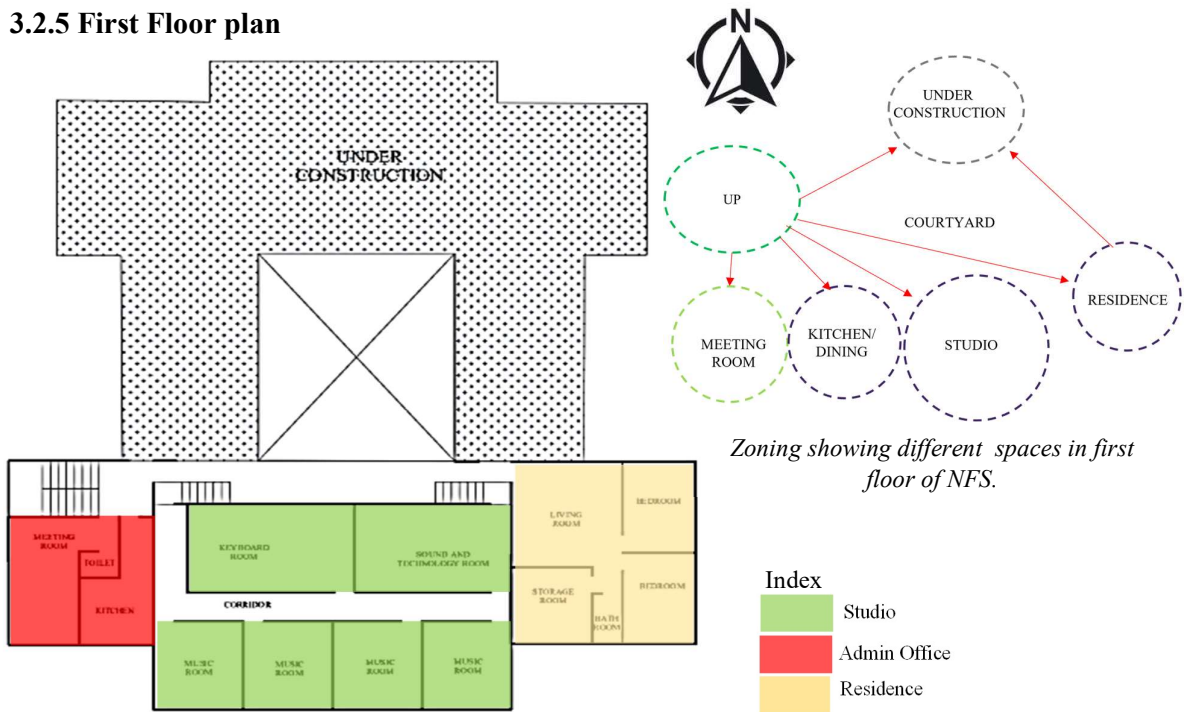
1. Theatre plan

Stage and Auditorium with
100 seating capacity

Fig 3.2. 4 Spaces in theatres (Left), Section of Theatre, layout of auditorium (Right, Up) and Picture from stage to auditorium (Right, Down)

Source: Author

3.2.5 First Floor plan



1. Building On-Construction
(Addition of First and Second floor)

Fig 3.2. 5 First floor plan seperated the spaces through colours

Source: Author

On first floor, there are different rooms for music related activities such as guitar room, madal and tabala room, sitar room, keyboard room, vocal practice room, etc. There will be the additional for Master after the completion of the on-going construction works.

3.2.6 Courtyards

The courtyard is in square shape. The present situation of the courtyard as shown in as the construction phase of first floor is ongoing. The courtyard helps in social interaction and also provide proper natural and ventilation.



Fig 3.2. 6 Courtyard
Source: Author

3.2.7 Analysis

- The theatre is used by the college itself as well as the outsider for their annual functions.
- Use of exposed bricks on the façade seems aesthetic.
- Hollow concrete block is used in the recording studio which helps in sound insulation.
- There is no provision for hostel for student.
- Courtyard spaces helps for lighting and ventilation inside the building.

3.3 Sarwanam Theatre

3.3.1 General Information

Sarwanam Theatre is located in Kalikasthan, Kathmandu. It was established in 1982 AD. The area of 237.12 sq. m. (7 ana). Sarwanam Theatre was designed by Zero Dia Nepal Team (Ar. Satyendra Raj Bhattarai, Ar. Simal Shrestha and Ar. Toran Prasad Pandit)

3.3.2 Academic Course

Sarwanam theatre provides 3 months Production Oriented Theatre Workshop

More than 100 students apply for theatre course where only 30 of them are selected. The course is available twice a year during winter and summer.

The theatre course involves:

- Acting
- Direction
- Play writing
- Production
- Body movement
- Music and poetry
- Yoga and others

Types of performance

- Street Drama
- Experimental presentation of short stories and poems in stage
- Advertisement Play
- Sarwanam music
- Playback Theatre
- Community development through theatrical activities



Fig 3.3. 1 Exterior View of Sarwanam Theatre
Source: Author

3.3.3 Space Planning

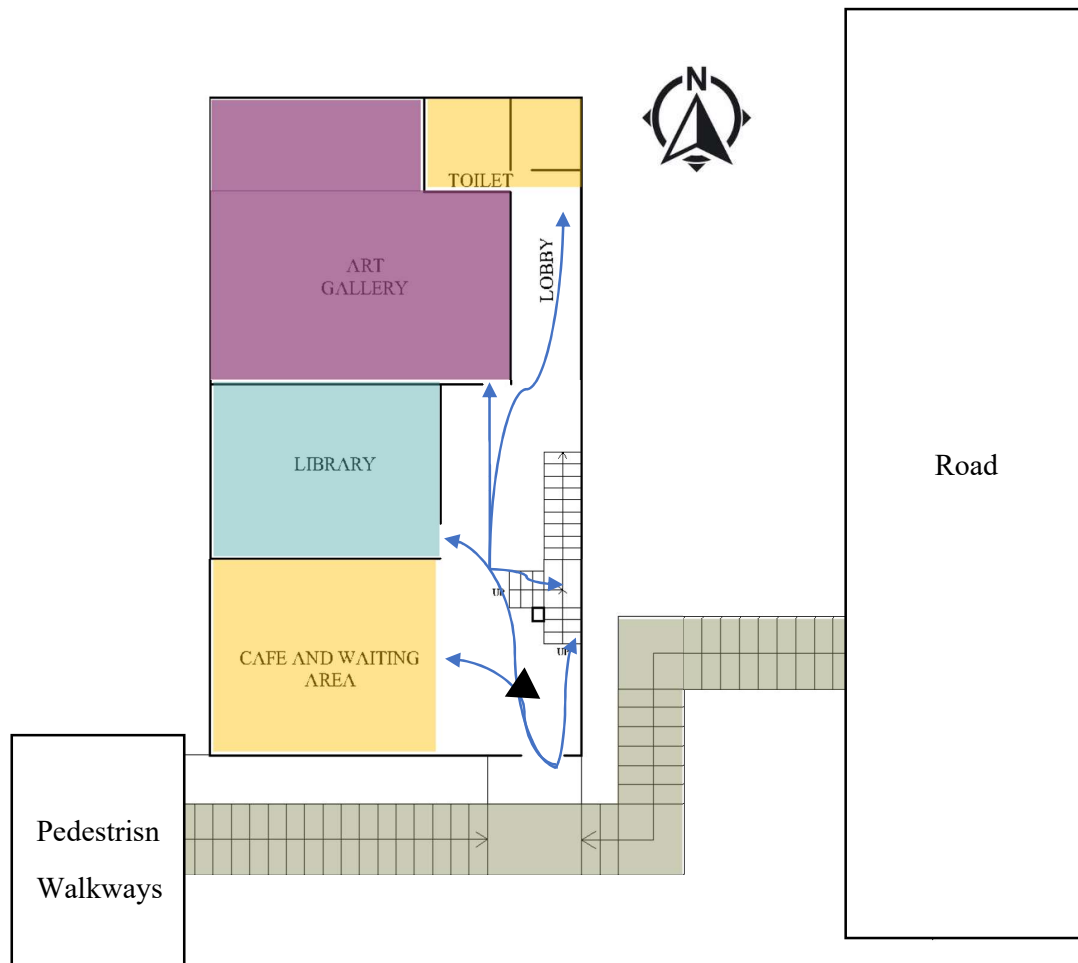


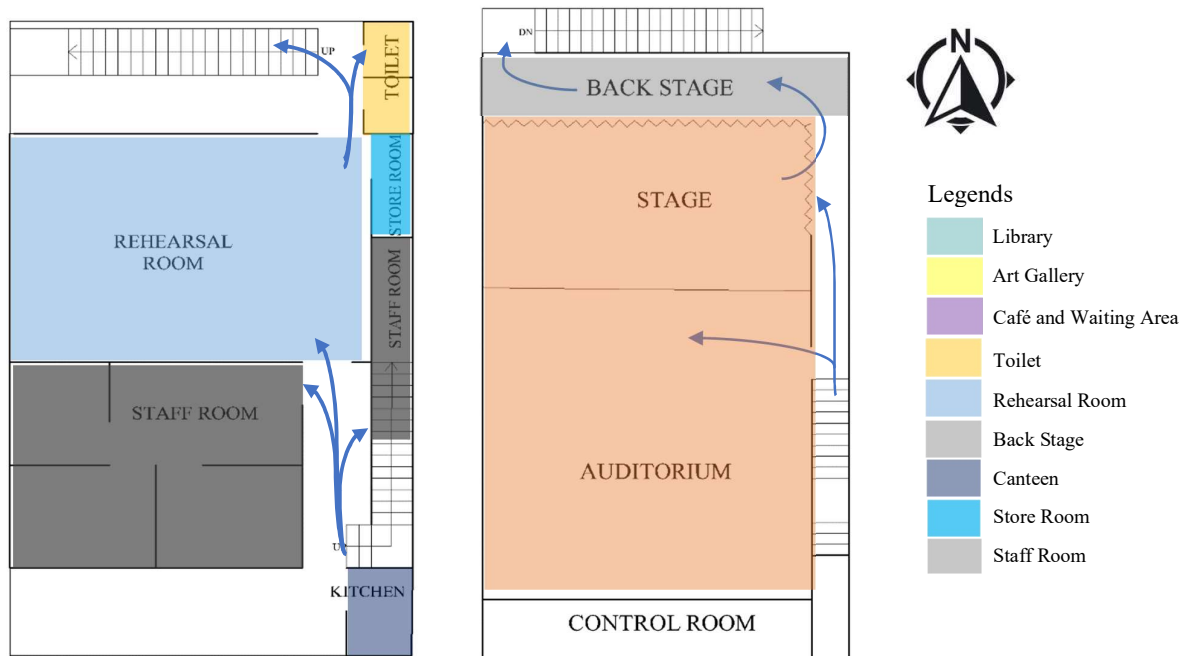
Fig 3.3. 2 Master Plan (Ground Floor Plan)
Source: Author

While entering inside a main entrance there is a cafeteria and waiting space, has an proper natural lighting. Library is separated by 4 inch wall, and aluminium and glass wall, that can be access for people to study about drama. It has an area of (5.1 x 4.5)m The library is currently being multipurposed as meeting hall and for other administrative purpose. The art gallery has an area of (7.1 x 6.7)m is used to present arts like sketch, books, etc. mostly Mithila Arts. Toilet is provided at north of the building.



Fig 3.3. 3 Interior Spaces in Sarwanam theatre: Furniture layout in Café(Top Left), Library (Bottom) and Gallery(Top Right) spaces

Source: Author



Basement Floor Plan

First Floor Plan

Fig 3.3. 4 Basement plan and First floor plan seperating spaces by colours

Source: Author

The basement floor has office room, rehearsal room, store room and toilet. Rehearsal Room (7.85 x 6.5)m is provided for the training for student. Parquet flooring is used for smooth and even surface for dancers and performers as shown in 3.3.5 to move on and can help to absorb sound and reduce noise. From the rehearsal room, the performer can reach to auditorium through the door of back stage using the steel staircase, it seems an easy access for performers.

The first floor is accessed through staircase with a width of 1.2 m. In first floor, there are theatre control room and changing room. The theatre is divided into Auditorium (fig 3.3.6), (7.2 x 6.5) m, Front stage (6.5 x 2.9) m and Back stage. Just above the corner of auditorium is control room (1.5 x 1.9 x 1.70) m, that can be accessible with the steel staircase. The theatre has capacity of 150 people. The auditorium has a straight row seating arrangement as shown in fig 3.3.6 and is layout with 3.2 x 0.4 m bench, Stage has black curtains which helps to control lighting, focus the audience's attention, hide elements of the set, and create a professional and cohesive stage design. HMI light, fluorescent light is used and is focused on the stage. AC is provided on the back of auditorium for cool air flow to the stage.



Fig 3.3. 5 Rehearsal Room, front wall contain mirror, has store room and outdoor stair leads to the back stage of stage

Source: Author



Fig 3.3. 6 Auditorium with 150 seating capacity and control room on back of top floor

Source: Author



Fig 3.3. 7 Overall Section showing basement floor of rehearsal room, office room, ground floor with café, waiting area, library, art gallery, and second floor with theatre and back stage
Source: Zerodia Nepal

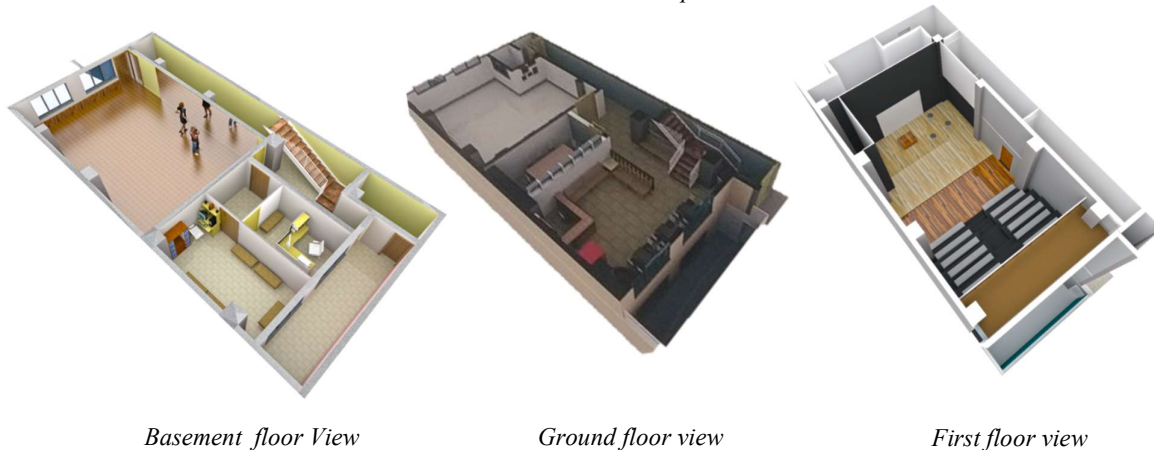


Fig 3.3. 8 3d views of interior spaces of all floors
Source: Author

3.3.5 Analysis

- Backstage of theatre has no changing room. Changing room is located on the next floor with 1 small changing room which might not be sufficient while the performance is being played.
- The black curtains in theatre is used for controlling light intensity, focus the audience's attention to the stage.
- Narrow staircase leading to theatre may cause difficulty on transporting theatre goods.
- No store area is provided for theatre.

International Case Studies

3.4 Kantana Film and Animation School

It is located in Nakhon Pathom, Thailand (Asia). It has an area of 4 acres (16000 sq. m. building area 2000 sqm.). The date of completion was 2011. The client of this project was Kantana group. Kantana Film and Animation School was designed by Boonserm Permthada. The project accommodate 200 capacity of students.



Fig 3.4. 1 View of Empty window of Kantana School

Source: Archdaily

The building form is rectilinear.

Climate: Tropical

Topography: Contoured

Courses : Direction and screenplay, Cinematography, Acting, Sound design, Editing, Art direction, Animation

Building Materials: Concrete and Steel – with an extraordinary use of thailand's traditional

Building medium – brick.



Fig 3.4. 2 Kantana Film Institute-Map

Source: Help Arch

3.4.1 Evolution of Design Concept

Three phases of the institute's design and construction were completed by the architect. The stage of academic research was the first one. The second stage, or the architectural design stage, took place in 2008 and 2009. The third was the construction phase, lasting for a year and a half, and the institute formally opened in June 2011.

The Kantana intended to make considerable use of handcrafted bricks because the architect wished to get back to the fundamentals of Thai architecture. Making thousands of handcrafted bricks for this purpose revitalized an impending brick plant closure.

“The concept for this design was nature, architecture and people. Since nature is a major component of traditional Thai architecture, the project might be associated with being Thai. The intention behind the tall wall was to serve as a backdrop for the man, the tree, and the sun as their shadows are cast against one another. The purpose of this pathway area is to encourage students' focus as they make their way to their classes.

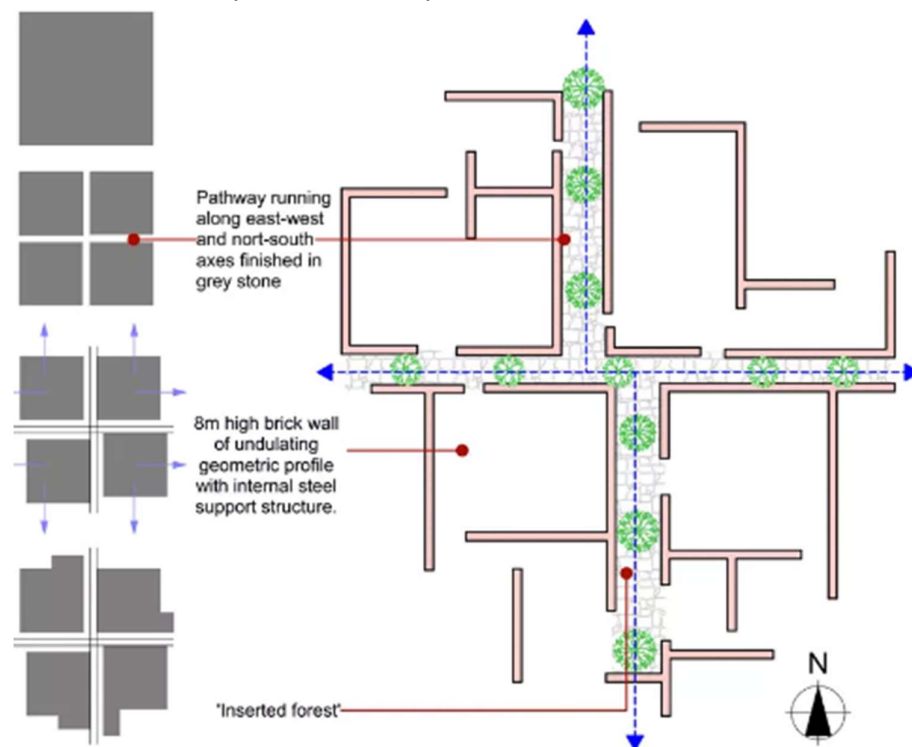


Fig 3.4. 3 Conceptual drawing with draft floor plan showing how a simple square form is transformed to a final form and a central line is used as lobby and green areas.

Source: Ojwang Sheila Atieno

3.4.2 Plan Description

It is a seat of education housing five major activities namely: administration, lecture hall, library, studio and a canteen. the single-storey complex is arranged around two prominent axes that serve as the main circulation walkways or, as defined by the architect, the “forests”. the functional spaces are clearly defined by the central circulation walkways.

- 1) the administration is located in the north-east section,
- 2) the library in the south-east,
- 3) the lecture hall in the south-west and
- 4) the studio in the north-west.
- 5) the canteen is situated at the end of the south walkway and is semi-open.

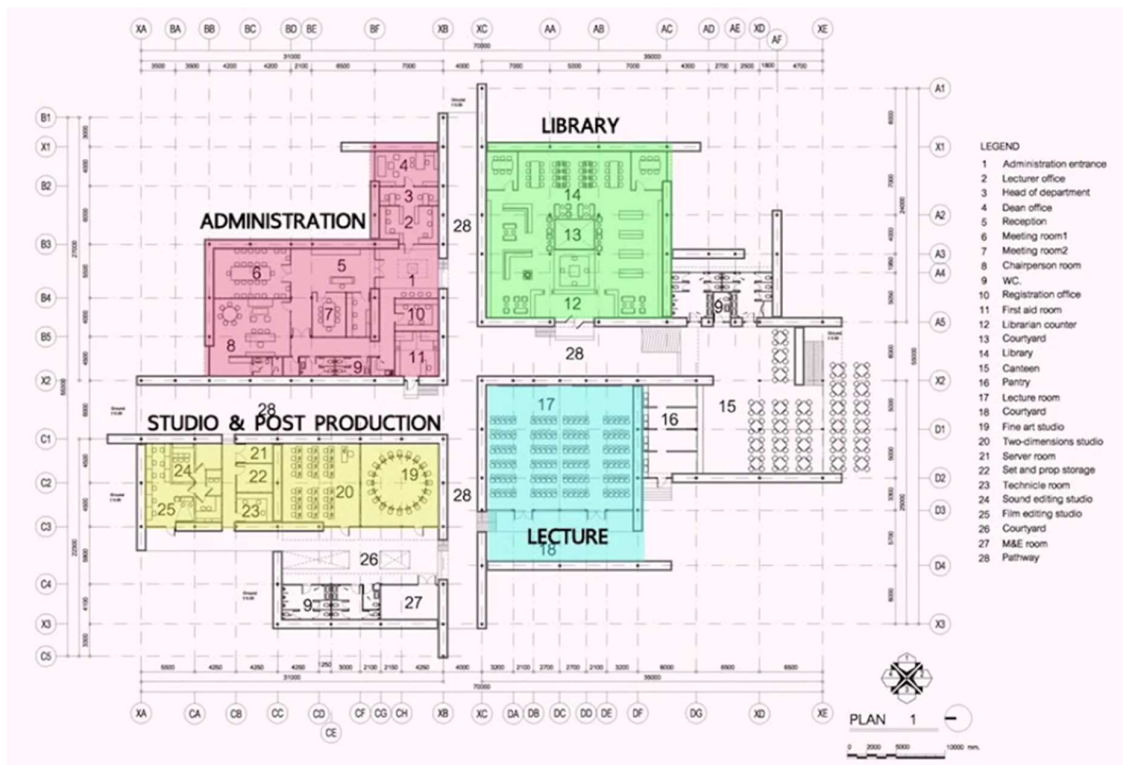


Fig 3.4. 4 Floor Plan showing different spaces like administration, library, studio and post production and lectures

Source: Ojwang Sheila Atieno

North façade experience solar heat from as high as 36 C to as low as 10C. Minimal Window openings to cut off heat intake into building. Solar façade receives most solar heat. It has least window openings. West and East façade receives afternoon sun and is characterized by both empty and glazed window.

3.4.2.1 Administration Office

The administration office is a multi-function space containing a chairperson's office, a program office and a general office. they are connected to the courtyard, and the sunlight from the court makes these spaces pleasant to work in. chairperson's office is fully air conditioned.

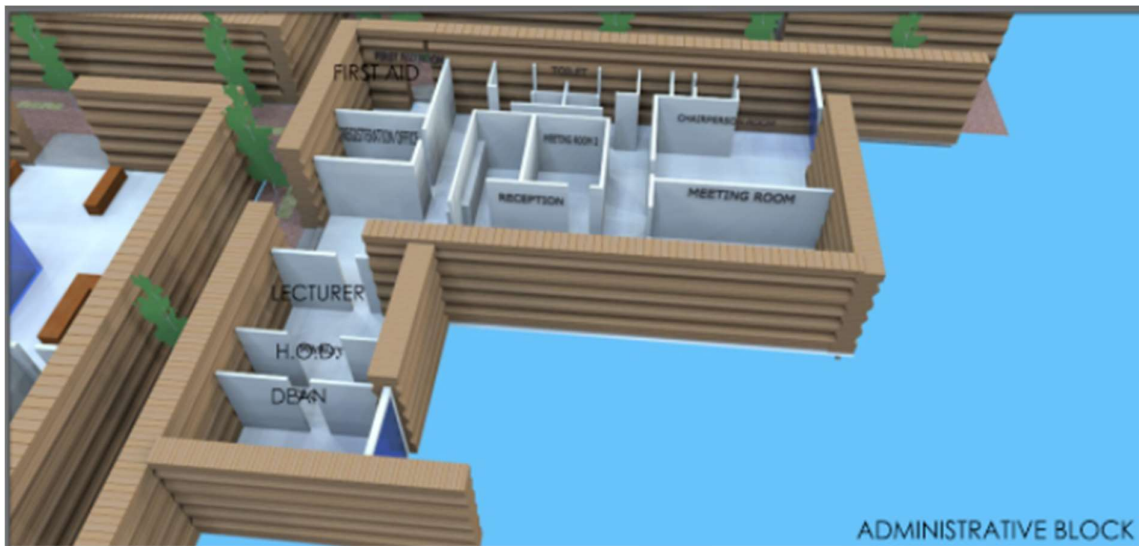


Fig 3.4. 5 Administration block 3d with different rooms
Source: Ojwang Sheila Atieno

3.4.2.2 Lecture Hall

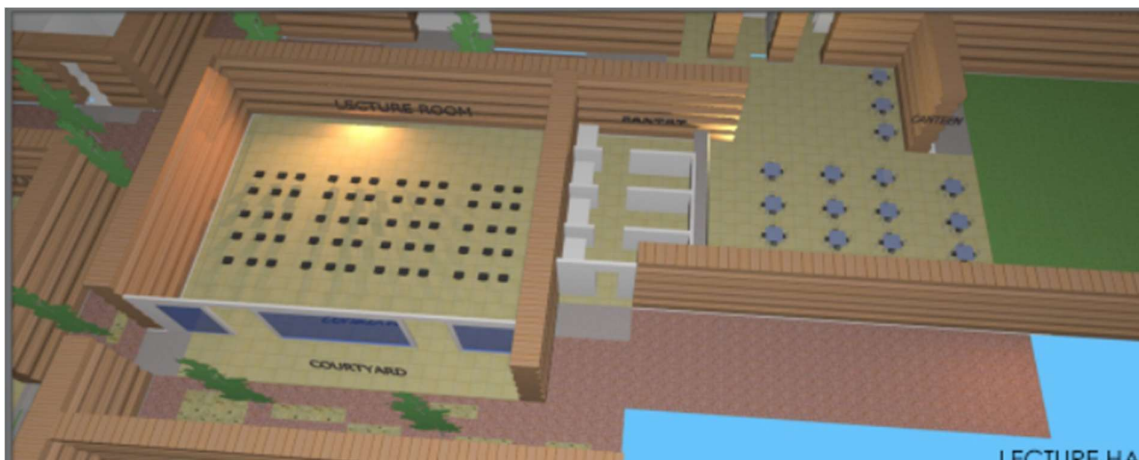


Fig 3.4. 6 Lecture Hall 3d with different rooms
Source: Ojwang Sheila Atieno

The lecture hall and the studio each have their own linear courtyards creating openness within the perimeters of the individual spaces. these courtyards are ideal spaces to relax in between or after lectures. The court of the lecture hall is bounded by a freestanding wall.

3.4.2.3 Studio

The studio is designed for experimental activities and is well planned. The workshop is a good example of the interior character of “darkness”. It helps the students to feel peaceful and to focus while producing their film or animation projects. Rooms with softer lights that he refers to as “dimness”, which provides enough light and creates an appropriate mood for the function demanded. (Arch 2022)

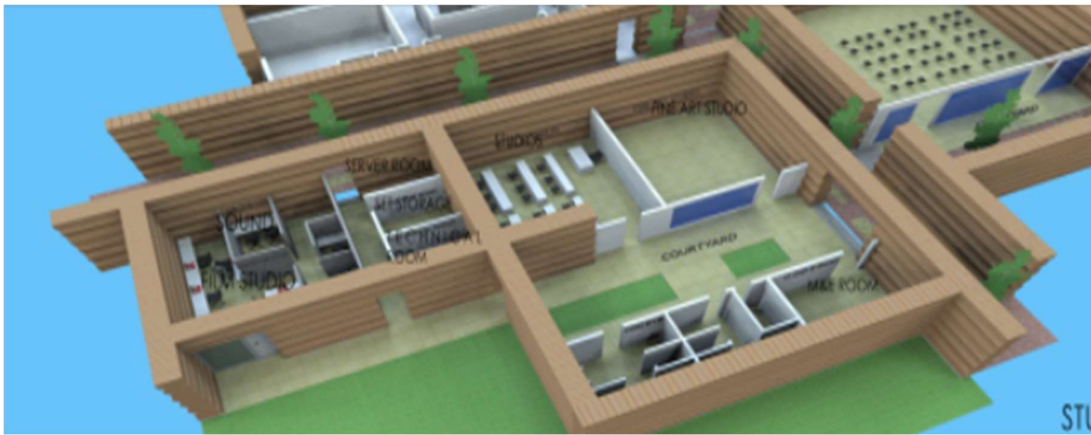


Fig 3.4. 7 3D room of Studio block
Source: Ojwang Sheila Atieno

3.4.2.4 Library

The library has, in its centre, an open courtyard or a light-and-air well. the daylighting in the library is superb due to the presence of this courtyard and the people can also hear the sounds of nature from it: the trees, the birds and the rain.



Fig 3.4. 8 3D room of Library
Source: Ojwang Sheila Atieno



Fig 3.4. 9 Interior Room of Library
Source: Ojwang Sheila Atieno

3.4.2.5 Canteen

The canteen, situated at the end of a pathway, is open towards the south, which gets a good amount of breeze all year round. the openness or the “non-room” quality of the space also makes it a multiuse space. (Arch 2022)

Corridor Walkways

The four directional walkways allow a relationship to be built between people and the building. As they walk into this walkway—dubbed the "forest" by the architect—students are free to reflect and focus. The area that now surrounds the institute was formerly completely covered with forest. (Arch 2022)

3.4.3 Structure, Materials, Technology

1. Structural system

The building has a reinforced-concrete post and beam frame system.

2. Materials

- Structure: reinforced-concrete columns and beams;
- Walls: double-layered brick (exterior), painted hollow concrete blocks (interior), glass with steel frame (exterior),
- Walkway and courtyard walls: double-layered handmade brick walls;
- Brick walls: more than 600,000 bricks sized 4 x 12 x 24 centimetres were used in this building. Bricks were staggered to make a special receding and protruding surface to the wall, with interior steel supports in horizontal and vertical direction. The double layers have from 90-centimetre to 1.30-metre spaces within them.

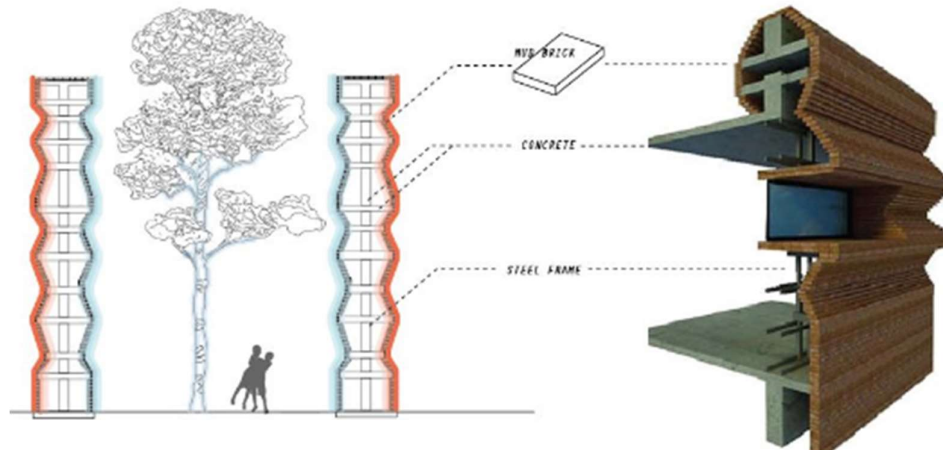


Fig 3.4. 10 Clay Brick Wall- Heat Insulator
Source: Ojwang Sheila Atieno

- Floor: epoxy mixed cement floors – different colours & patterns for different rooms;
- Roof: corrugated metal roof with sprayed on insulation inside. Library and
- Administration offices have reinforced-concrete roofs;
- walkway: stone pebbles and blocks make the walkway floor. Width of the north-south walkway is 4.50 meter and the east-west walkway is 2.80 meter.

3.4.4 Inferences

- The use of open, flexible spaces, natural light, and collaborative work areas inspires the student for creativity and innovation.
- The architect prioritizes sustainability in architecture which involve energy-efficient design, green building materials, and renewable energy sources.
- The school has ramp for differently abled, so the design is inclusive.

3.5 Whistling Woods International Institute for Film, Communication and Creative Arts, Film City, Goregaon



Fig 3.5 1 Exterior View of Institute
Source: Shiksha

3.5.1 General Information

Whistling Woods International Institute for Film, Communication and Creative Arts is located in Film City, Mumbai, India. It was established in 2006 AD with an area of 22258 sq. m. (43.7 ropani). It was designed by IAG consultants. The building type is institutional building and the topography is contoured.

3.5.2 Courses Offered

- | | |
|--------------------------|----------------------|
| 1. Filmmaking | 5. Fashion |
| 2. Animation | 6. Music |
| 3. Acting | 7. Short Course Unit |
| 4. Media & Communication | 8. Virtual Academy |

3.5.3 Concept & Design

Radial Planning.

- Segregated in 4 blocks and all are well connected to each other. Connecting bridge is also designed in order to connect on different levels.
- Acoustical treatment is done in most of the rooms like classroom, lab, auditorium, etc.
- Plaza, Open and Semi Covered spaces for interaction.
- Skylight has designed for daylight in atrium.

3.5.4 Zoning

Block is divided into 4 Blocks

- BLOCK A: Administration Block
- BLOCK B: Multipurpose Hall and Auditorium
- BLOCK C: Academic
- Block D: Recreational facilities

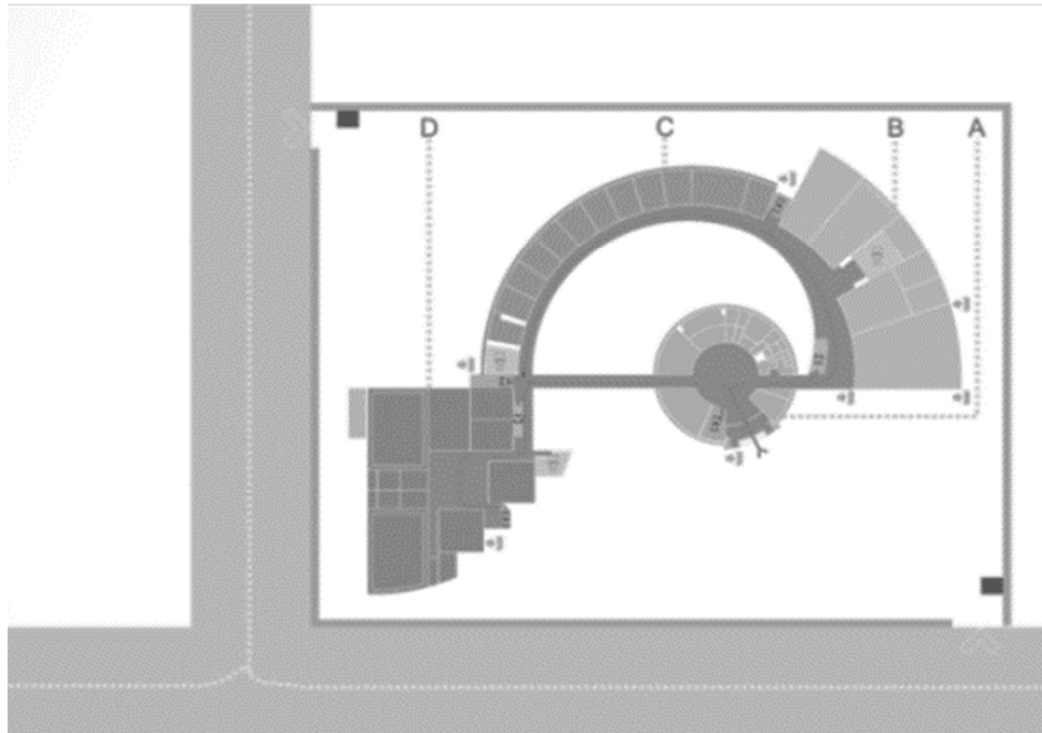


Fig 3.5 2 Zoning
Source: Help Arch

3.5.4.1 Block A

Administration Block.

It is a circular building with a central atrium and all the floor has corridor faced in atrium. The Ground Floor consists of Admissions & Offices. The First Floor consists of Reception and Visiting faculty and the entry is at this floor level. The Second Floor consists of Cyber Café, Faculty offices are in the Third Floor. Library, Dean/President/Management in the Fourth Floor Chairman's office in the Fifth Floor. The block is located at center as a main today of the project.



Fig 3.5 3 Central Atrium (Left) and Block A exterior View facade (Right)
Source: Help Arch

3.5.4.2 Block B

Auditorium and multipurpose hall

The auditorium has a big lobby and can be accessed directly from outside. The capacity of the auditorium is 250 people. There are two multi-purpose halls on this floor. The size of the hall is 6x9m and height is 6m.

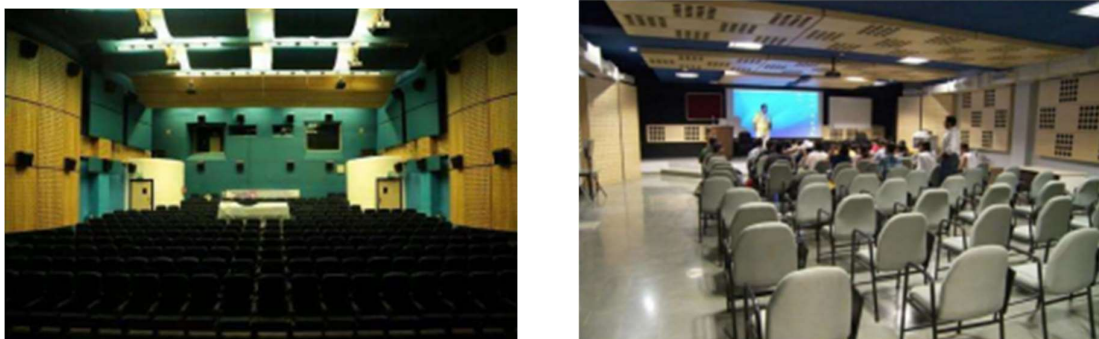


Fig 3.5 4 Auditorium Hall (Left) and Multipurpose Hall (Right)
Source: help Arch

3.5.4.3 Block C (Academic Block)

The academic block comprises of 2 floors, with 13 classrooms on each floor. There are around 450 students in the institute. The classrooms are placed along a singly loaded corridor overlooking into the courtyard. The functions accommodated in this block are as follows:

- Level 1 editing lab
- Level 1 sound recording lab
- Pre-production lab.
- Music room
- Audio visual rooms.
- Lecture halls



Fig 3.5 5 Block C (Left) and Outdoor Spaces (Right)
Source: Help Arch

3.5.4 Block D

A table tennis game is kept in this central space along with the student lounge. The other recreational activities provided are coffee shop, gymnasium, also there is a facility of ATM. There is a film studio and a TV studio on the ground floor along with changing rooms. The size of both the studios is 12x12x12m. The second floor consists of the Animation dept. The department provides 1 computer lab, 2 studios and 2 light tables room. Each room is facilitated for 35 students. Ground floor consists of the service area with AHU units, maintenance rooms, stores, central machine room, workshop and the foundation hall (A.V room). The courtyard can't be accessed from the ground floor of this block. Music mixing and sound recording rooms are completely sound proof along with the control room. The

editing rooms are equipped for 15 students with computer tables. The sound recording rooms do not have big screen for viewing and the size is around 4x4m.

3.5.5 Building Services

- The rooms which need to be totally sound proof are provided with double glazing glass doors.
- While the walls are cladded with thick foam boards with perforated wooden panels fixed on them. All other service rooms are accommodated in the Block D.
- Whole building has centralized air conditioning system and the AHU unit and the plant is placed in Block D.

3.5.6 Inferences

- The campus is designed to incorporate ample open spaces and natural light, creating a conducive environment for creative thinking and collaboration.
- The architectural design of Whistling Woods International Institute is visually striking and aesthetically pleasing, reflecting the artistic nature of the disciplines taught at the institute.
- Site is located on a remote area inside film-city, and there is no provision of a hostel or accommodation.
- The corridors of the Block D are too dark because of no natural lighting.

3.6 Red Sea Institute of Cinematic Arts (RSICA)



Fig 3.6 1 Exterior View of RSICA
Source: Archdaily

3.6.1 General Information

Red Sea Institute of Cinematic Arts (RSICA) is located in Aqaba, Jordan which was established in year 2008 AD has an area of 30000 sq. m. It was designed by Symbiosis design. The building type is of institutional building.

3.6.2 Concept

The building of the school is designed to be both playful and instructive, capturing suggested emulations of the layers that make up a film. The way the material is organized allows the learner to understand an extensive number of intangible goods, or often impossible concepts, and situations that are best understood by those who have been there.

In order to claim most of the property for landscaping, several operations were transferred to the foundation levels, which resulted in a harmless artistic presentation of the buildings above.

The motif of the landscape is minimalism; reflecting pools catch sunlight and passing clouds above, boulders from the Rum desert are staged as mystical elements, and oasis are introduced as sub-grade light wells. (Vinnitskaya 2011).

On the other side of the campus are state-of-the-art three-screen public cinemas, and a magnificent boutique concept hotel that shares space with the main RSICA complex and offers a unique experience of film and film-making.

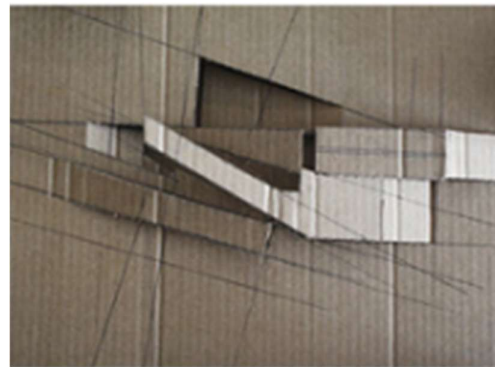


Fig 3.6 2 Concept
Source: Archdaily

Designed to harmonize with its stunning surroundings, the institute's modernist architecture blends seamlessly with the natural beauty of the Red Sea coastline.

A rich landscape palette essential for film making including sea, mountains desert as well as colourful tourism, entertainment and cultural projects.

Features

Film School with 160 seat screening room, Media Library, 2 large sound stages, set stage, equipment storage rooms, Green Room, camera lab, animation lab, edit and audit suites, Smart classrooms and Hovering Café

Administration building and staff residences

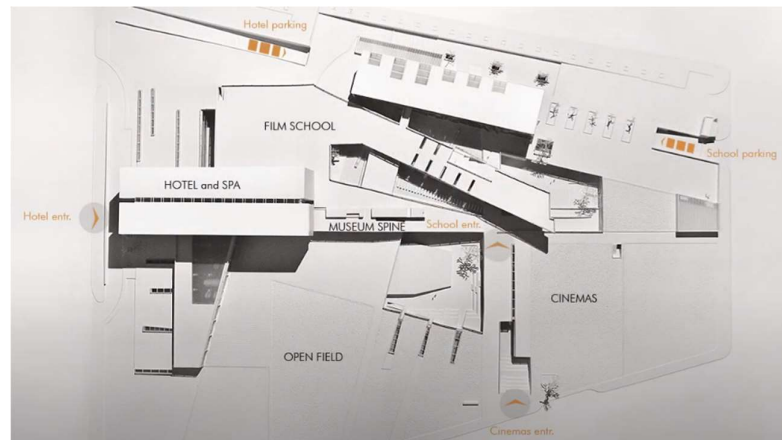


Fig 3.6 3 Spaces in the institute
Source: Archdaily

80 room Boutique Hotel Project is a community consisting a central film school, public cinema halls, a film themed hotel boutique with a hybrid film spa, all linked by film museum spines which together posed as an engaging backdrop to an open field.

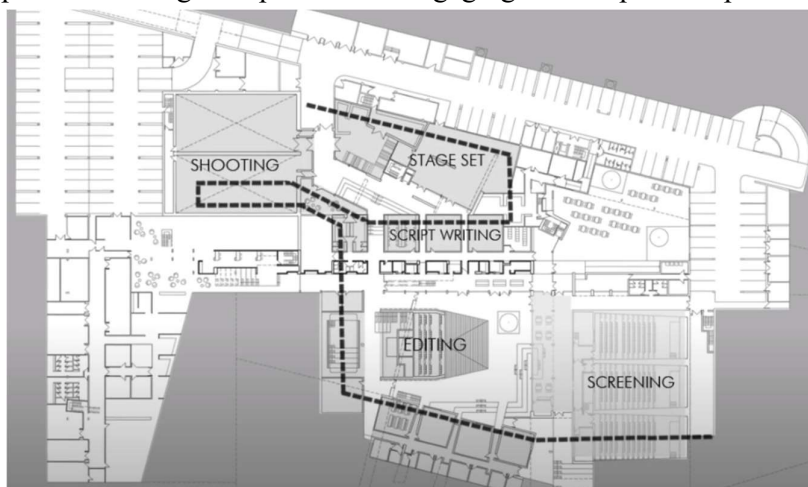


Fig 3.6 4A picture showing different spaces of preproduction, production and post production
Source: Arch Daily

The building facilities that entail preparatory and technical works in the pre-production, production and post-production chronology are laid out in plan in a clear sequence. Not only students, but also visitor will be able to clearly read the sequences of film making in actual plan, especially where some function re exposed through transparency to circulation areas. Light showers down in many areas and often through deep skylight like light shadow are enhances as matter in variety of forms.



Fig 3.6 8 Section showing how the light enters to room through different glazing
 Source: Archdaily

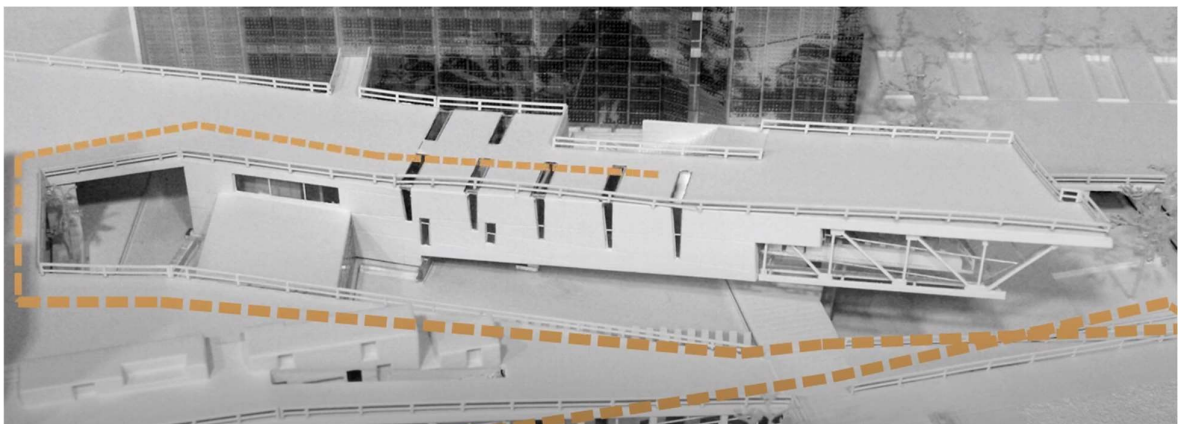


Fig 3.6 7 Roof Design sweep from below ground and hover to top
 Source: Archdaily

3.6.4 Light as a matter

The buildings take advantage of natural light conditions to create a variety of effects from intense to fading out. Students are given the chance to study the properties of light through the staging of the lighting. Sculptural skylights let in a lot of light, frequently falling in sharp cuts across huge areas.

The building's forms rise and fall over the ground, creating ever-changing routes and spaces that invite movement from a variety of odd vantage points and provide students the chance to explore the physical transformations needed for understanding and developing scenery.

(Vinnitskaya 2011)

3.6.5 Shadows as a matter

Similar to light, shadows can take on different shapes. In dark spaces, shadows can be both stationary and moving, while in other forms, they can be bright and textured.

3.6.6 Inferences

- The institute features unique building forms, creative spaces, and interactive environments that inspire creativity and collaboration among students and faculty.
- Large windows, skylights, and outdoor spaces placed to maximize daylighting, ventilation, and connection to nature, creating a healthy and inspiring environment for learning and creativity.

3.7 Findings in the Case Studies

Spaces	Oscar International College	Nepal Film Campus	Sarwanam Theatre	Kantana Institute	WWIICC	RSICA
Theatre	✓	✓	✓	✗	✓	✓
Gallery	✗	✗	✓	✗	✓	✓
Classroom	✓	✓	✓	✓	✓	✓
Indoor Shooting Studio	✗	✗	✗	✗	✓	✗
Outdoor Shooting Studio	✗	✗	✗	✓	✓	✓
Amphitheatres	✗	✗	✗	✗	✗	✗
Games/Sports	✓	✓	✗	✓	✓	✓
Hostel	✗	✗	✗	✗	✗	✓

Table 2 Findings in the Case Studies

3.8 Comparative Analysis between National Case studies and International Case Studies

Contents	Oscar College	Nepal Film Campus	Sarwanam Theatre	Kanatana Film and Animation Institute	Whistling International Institute for Film, Communication and Creative Arts	Red Sea Institute of Cinematic Arts (RSICA)
Location	Sukhedhara, Kathmandu	Pingalasthan, Gaushala	Kalikasthan, Kathmandu	Makhon Pathom, Thailand	Mumbai, India	Aqaba, Jordan
Site Area	855.89 sq. m. (1-10) R	4070 sq. m. (5 R)	222.57 sq. m. (7 anna)	16,000 sq. m. (31-7 R)	22257.7 sq. m. (43-12) R	30,000 sq. m. (58-15) R
Architects	Er. Sagar Parajuli	Ar. Dibesh Raj Bhattarai	Zero Dia Design	Boonserm Prethada	IAG Consultants	Symbiosis Design
Building Type	Institutional	Institutional	Theatre and Institutional	Institutional	Institutional	Mixed (Institutional and Hotel)
Topography	Flat	Flat	Sloped	Contoured	Contoured	Contoured
Objectives	study condition of film institute in Nepal and the course provided. understand facilities and spaces provided in campus.	study condition of film institute in Nepal and the course provided. understand facilities and spaces provided in campus.	Understand how the theatre works study the space required for drama.	To study the organization of spaces and to study the relationship between the natural and environment.	To study the programs included in the film institute and the organization of the spaces.	To study the integration of cinema and architecture through the spaces.
Orientation	North and South Oriented	North Oriented	South Oriented	South Oriented	South Oriented	North Oriented
Material Used	Steel framed structures	Brick and Concrete Foundation	Brick and Concrete Foundation	Brick	Brick	Concrete, Glass, Steel
Lighting	Max use of natural lighting	Use of natural lighting form courtyard	Artificial lighting in library and art gallery	Max use of natural light	Max use of natural light.	The availability of natural light is utilized in the buildings that change in brightness from bright to colored out.
Zoning And Circulation	Single Corridor in a block	Single Corridor	Three storey, main entrance from the step paths.	Single Floor design, inserted forest as a circulation space	Vertical circulation through corridor and also central spaces.	Circulation spaces encourage movement
Volumetric Studies	L-shaped and rectangular Block	3 floors -Square shaped with courtyard in center	Rectangular	Single storey interconnected buildings	Use of curves and solid	various level creating different degree in elevation
Auditorium Hall	150 seats	100 seats	150 seats	mix use seminar hall for 50 people	160 seats screening room	2 halls
Students	60 per year	30-35 per year	30 per course	144 per batch	750 per batch	

Table 3 Comparative Analysis between National Case Studies and International Case Studies

Chapter 4. Site Study Analysis/ Justification

4.1 Site Introduction

4.1.1 General Information

Location: Kirtipur, Kathmandu

Area: 11078 sq. m. (21-12-1-2.6) R

Topography: Slight Contour

Orientation: North

Present Use of the site: Playground

Access: 8m wide road (TU Road)

Vegetation/Ecology: Mainly large trees, shrubs, grass and bushes

4.1.2 Kirtipur Municipality Building and Planning By-Laws:

Maximum GCR: 30% of plot area

FAR: 1.25

Minimum Parking Space: 15%

Set Back: 1.5 m

ROW: 14m , 7m from center of road to left/right

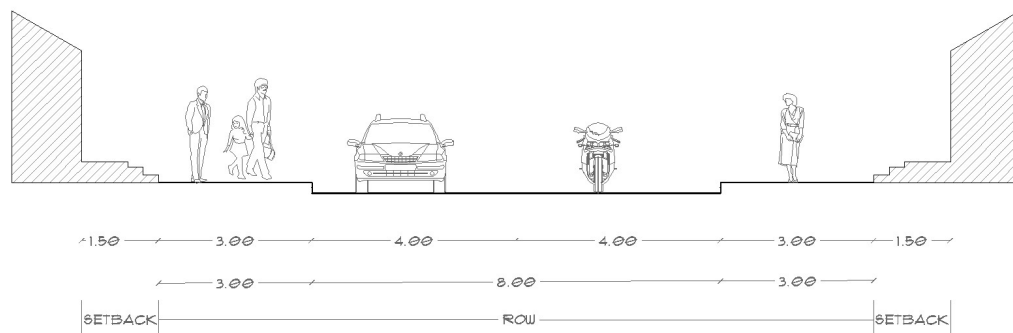


Fig 4. 1 Setback and Row according to Kirtipur Municipality

4.1.3 Site Justification:

- Site lies on the TU area, institutional zone and the surrounding consists of other academic and research institutions.
- A scenically attractive area for study and other leisure activities.
- Possibility of site for future expansion.
- Around site is perfect spot for outdoor movie shooting.
- Less vehicular and traffic noise

4.2 Physical Features of Site

- The site is located at 27°40'41" N and 85°17'13" E.

- Altitude- 1343.6m above the sea level
- It has contour height of normally 0.7-0.8 m and maximum is 1m.



Fig 4. 2 Landmarks from Balkhu to Kirtipur

4.2.1 Approach to the site

Very clear access, on the 8m wide road and near to 16 m wide main road. From Balkhu Chowk, it takes 26 min to reach to the site from the main road, 10 min to reach TU gate and 16 min from TU Gate to the site.

Northern part of road has road, entry is possible through front and side of the site.

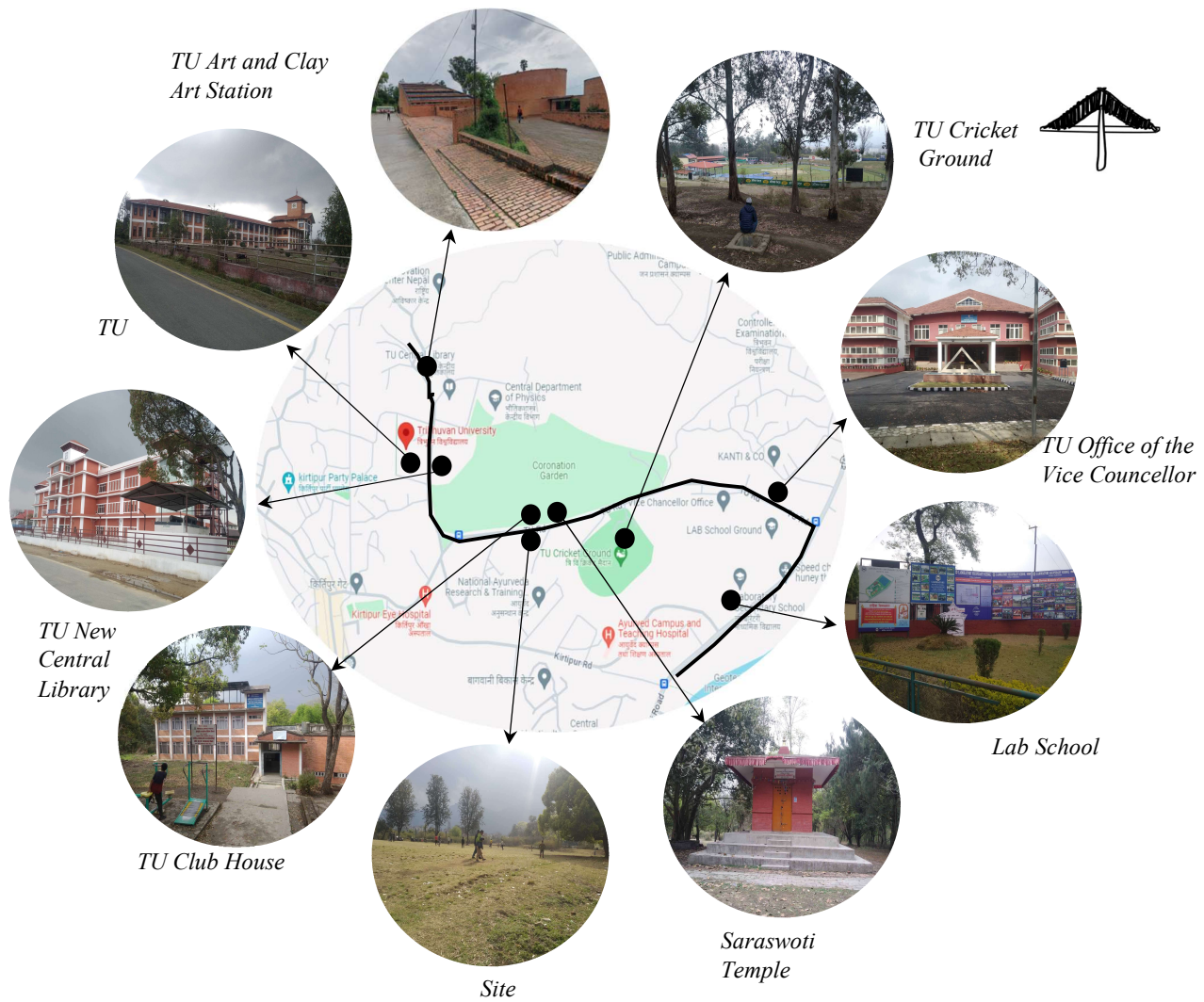


Fig 4. 4 Sure Surrounding Building

4.2.2 Street Network and Neighbourhood Study

Near the site, the width of the road is 16m, 12m, 10m, 8m, 6m as shown in fig 4.4. Main highway is Dakshinkali Highway which reach to TU main gate and has the width of 16m. The road, known as TU road, begins at 8 meters and leads to the project site. The Kirtipur bus stop may be reached by 12m Road, which is Kirtipur Road. A 6 m by 4 m road is located inside each department of the TU buildings.

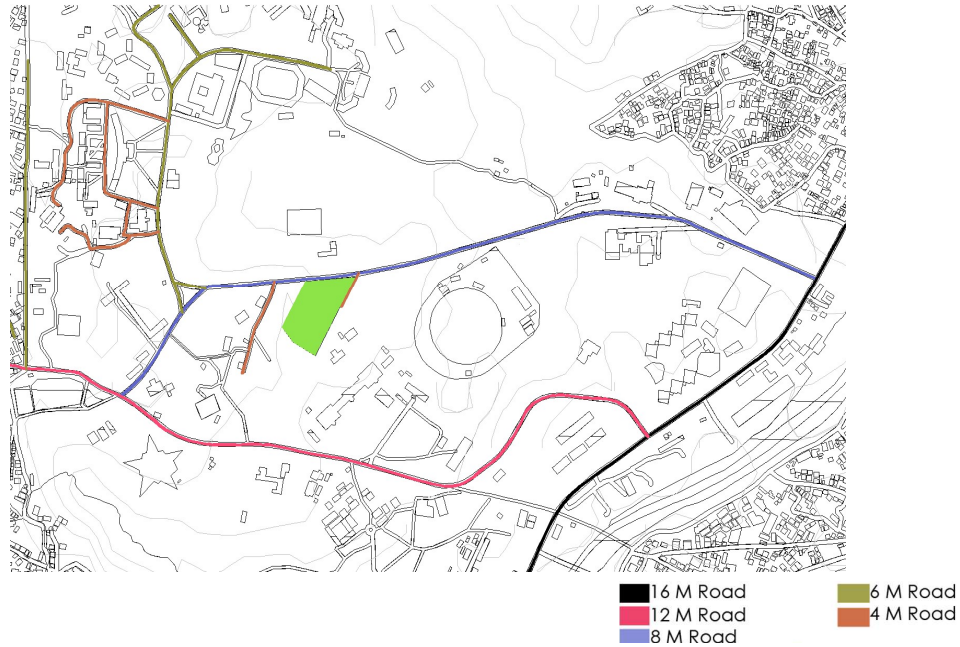


Fig 4. 5 Street Network with width of Road

The site surrounding consists of mostly of institutional block, was the reason of choosing the site for this project. Since, there are institutional block, there are also boys and girls hostel and also staff quarter. The main landmarks of the site is TU cricket ground where many people visits when the match starts and also during the events, the TU roads are crowded. Near the site includes, temples, the abstract statue made from the nepal Fine arts on the Coronation Ground.

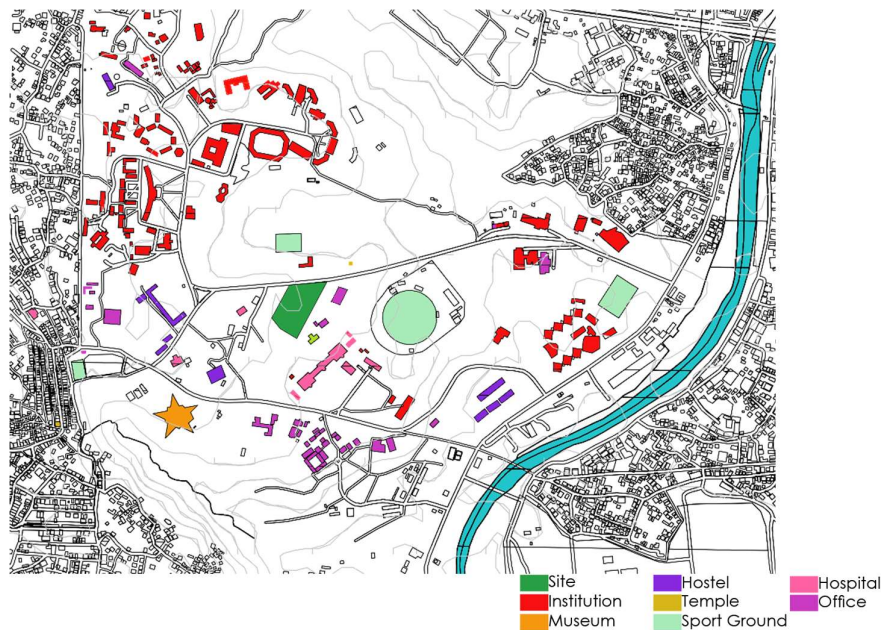
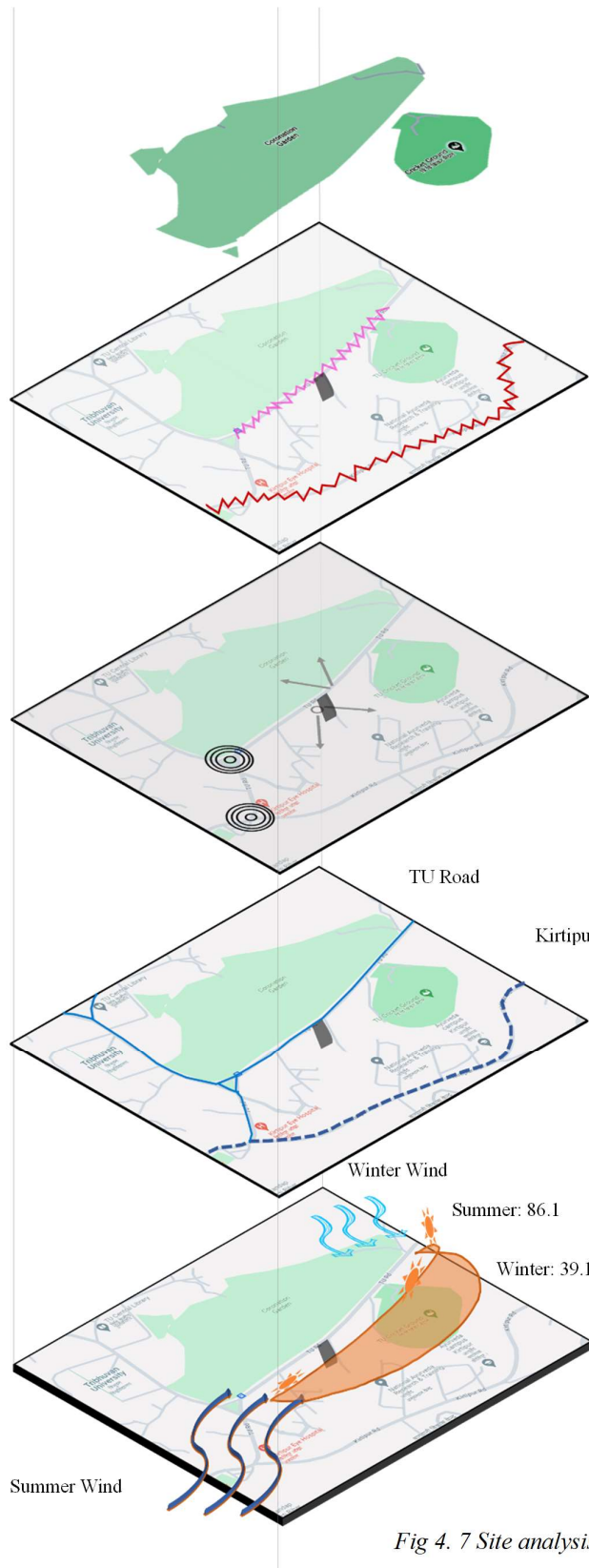


Fig 4. 6 Neighbourhood Study

4.3 Sun Analysis Diagram



Open Green spaces:

Coronation Garden,
Cricket Ground,
Tinkune Park

Noise of Kirtipur Road and TU Road

TU Road has noise when there
will be
match in cricket ground.

Nodes and Views

Kirtipur Road and TU
Road

Sunpath in summer and
winter solstice,
Wind direction

Fig 4. 7 Site analysis Diagram

4.4 Site plan and Section

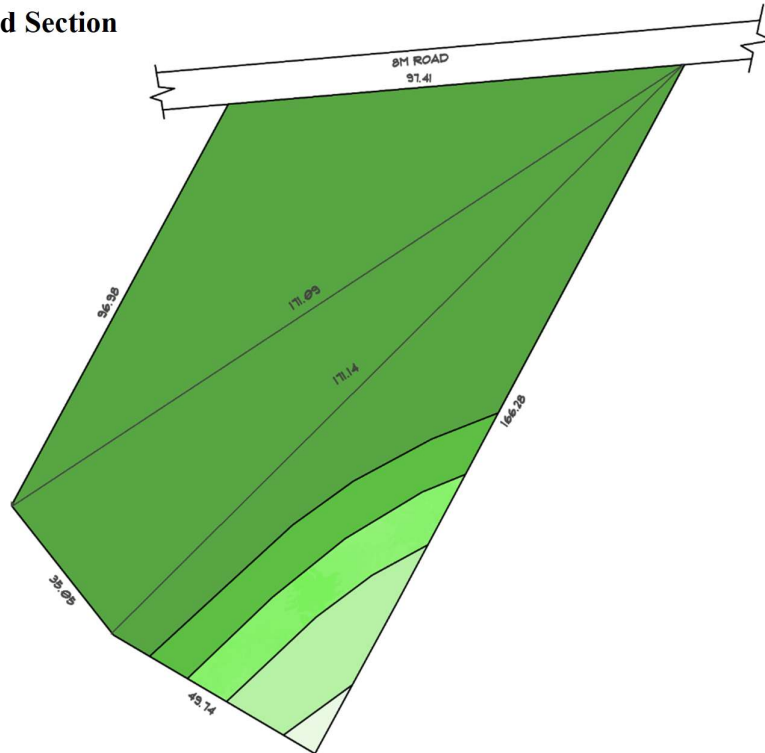


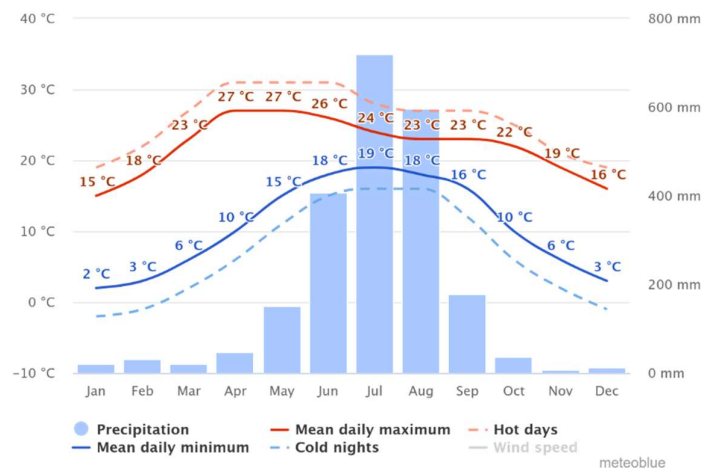
Fig 4. 9 Site plan with dimension



Fig 4. 10 Section

4.5 Climatic factor

4.5.1 Average temperatures and precipitation



Precipitation: 721 mm on July and 7 mm on November

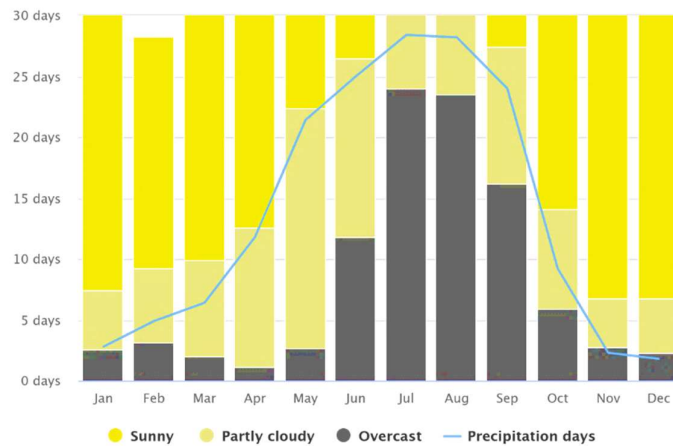
Mean Daily Maximum Temperature: 27°C or 80.6°F

Mean Daily Minimum Temperature: 2°C or 35.6°F on Jan and 3°C or 37.4°F Dec

Max Hot Days: April – June

Max Cold Nights: December – January

4.5.2 Cloudy, sunny, and precipitation days



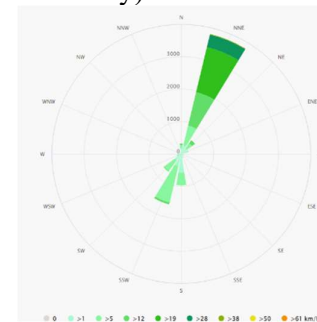
Max. Sunny Days and Min. Overcast Days: Nov – May

Min. Sunny Days and Max. Overcast Days: July – September

Max. and Min. Precipitation Days: (June - August) and (November - January) respectively

4.5.3 Wind Rose Diagram

Wind rose diagram shows the prevailing wind of the selected location. As shown, the site prevailing wind is from NNE direction.



4.6 SWOT Analysis

Strength	Weakness
The site is located on TU area so it is located in an institutional Zone Easy access to the site Less Vehicular Flow and Noise The site is surrounded by nature, so it create an fresh and peaceful environment.	No pedestrian walkways. The site has damaged old pavilion. Old trees in the center and front of the site.
Opportunities	Threat
The site is located on TU area so the project can get an opportunities to collaborate with each other. The site is surrounded by nature, includes religious elements, statues, so it will be ideal spot for outdoor movie shooting.	There is cricket ground near the site, During the game , there is max flow of people and have less security, create a threat. Utility pole at the front of the site.

Table 4 SWOT Analysis

Chapter 5. Program Formulation

5.1 Target Group

The project target 3 groups:

- Student
- Staffs
- Visitors

The projects are of educational purposes, so the primary groups are students, teachers whereas if any programs, event takes place, the visitors are welcomed.

5.1.1 Student

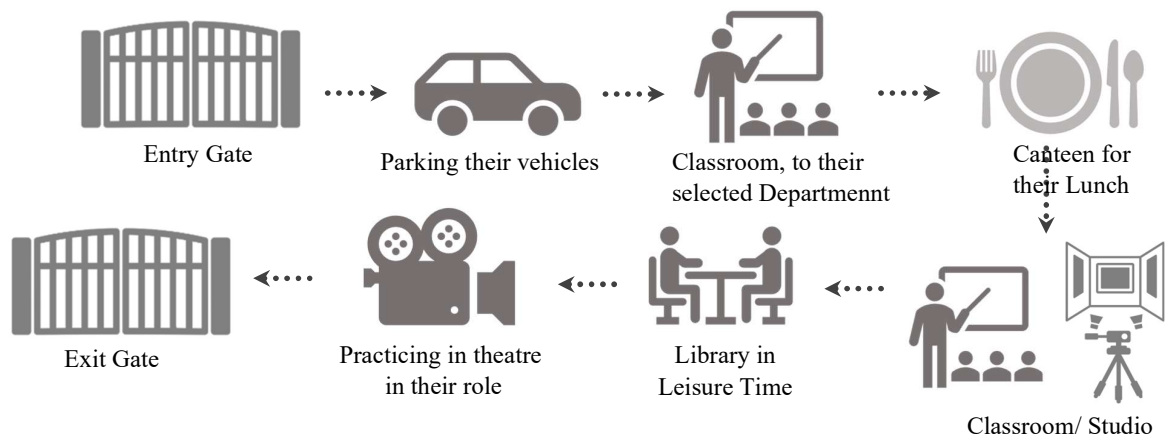


Fig 5.1. 1 Life mapping of Student

5.1.2 Staffs

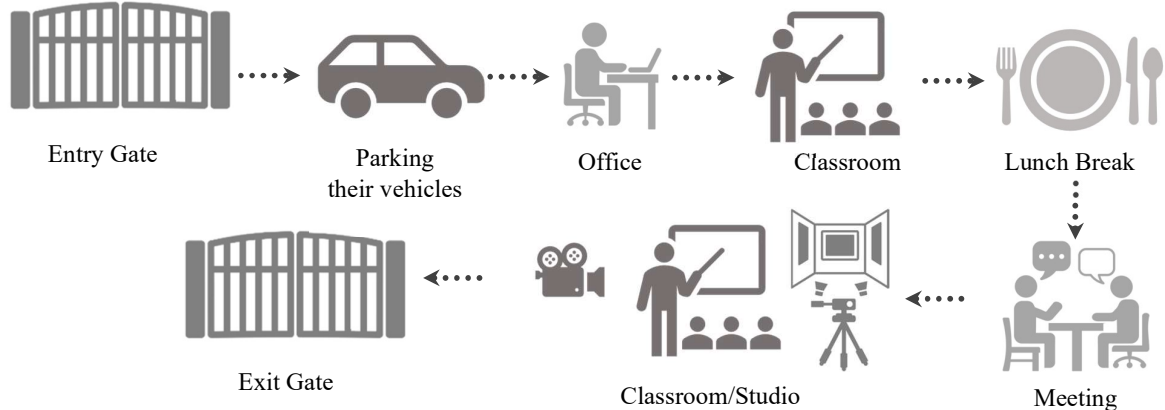


Fig 5.1. 2 Life Mapping of Teacher/Staffs

5.1.3 Visitors

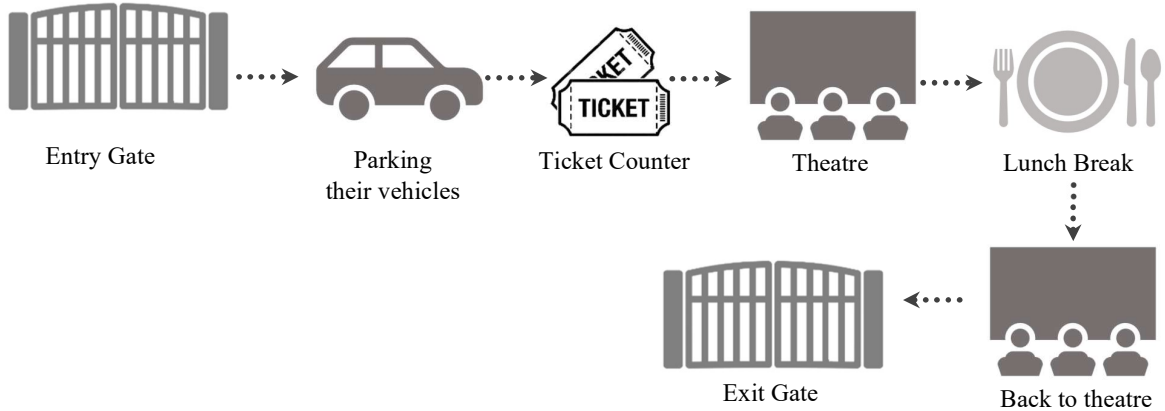


Fig 5.1. 3 Life Mapping of visitors

5.2 Programs Divisions

The space can be divided into 2 zones:

- Public Zones
- Institutional Zones

Public Zones	Institutional Zones
Movie Theatre	Classroom
Parking	Studio
Museum and Alumni Spaces	Hostel
	Library
	Cafeteria
	Indoor Academic Shooting

Table 5 Division According to Public Zones and Institutional Zones

Divided Into 3 Zones:

Public Zones	Semi Public Zones	Private Zones
Theatre	Studio	Hostel
Parking	Library	Classroom
Cafe	Admin Spaces	Canteen
	Office	
	Common Spaces	

Table 6 Division of Spaces according to Pubic zones, Semi public zones and private zones

Theatre and Gallery Block

S.No.	Parameter	Area(sq.m.)	Quantity	Capacity	Total Area (sq.m.)
1	Reception	47.5	1	1	47.5
2	Food Counter	32	1		32
	Store room	10	1		10
3	Waiting Area	42	1	30	42
4	Hall 1				
	Auditorium	91	1	80	91
	Projector room	5.7	1		5.7
	Control room	5	1		5
5	Hall 2				
	Auditorium	83	1	80	83
	Projector Room	5.2	1		5.2
	Control Room	4.8	1		4.8
6	Gallery	219.7	1		219.7
	Film Display	32.2	1		32.2
	Store Room	30.5	1		31
7	Toilet				
	For Women	30.6	1		31
	For Men	27.9	1		28
	Area				667
	Building Storey (2)	Area/2			334
	Area for Circulation and Walls				305
	Total Area				638

Table 7 Theatre and Gallery Block Programs

Academic Block

S.No.	Parameter	Area(sq.m.)	Quantity	Capacity	Total Area(sq.m.)
1	Classroom 1	29	2	16	58.0
	Classroom 2	32.7	2	16	65.3
2	Classroom 3	37.8	4	16	151.2

3	Staffroom 1	12	1	1	12.0
	Staffroom 2	19.2	2	1	38.4
4	Library	68.5	1	-	68.5
5	Hall	50.7	1	50	50.7
6	Toilet				
	For Boys	16.5	2	-	33.0
	For Girls	20.65	2	-	41.3
7	Utility Room	3	2	0	6.0
	Area				524.4
	Building Storey (2)	Area/2			262.2
	Area for circulation and Walls				215.8
	Total Area				478.0

Table 8 Academic Block Programs

Shooting Studio Block

S.No.	Parameter	Area (sq.m.)	Quantity	Capacity	Total Area(sq.m.)
1	Shooting Studio	125.24	1		125
	Store Room	12	1	-	12
	Green Room			-	
	For Boys	10	1		10
	For Girls	10	1	-	10
2	Sound Recording Studio			-	
	Live Room	18.7	1	-	19
	Control Room	12.3	1	-	12
	Sound Booth	4.1	1	-	4
	Store Room	2	1	-	2
3	Blue Screen and Motion Capture Room	31.7	1	-	32
	Changing Room	4.27	1	-	4

	Store Room	2.3	1	-	2
4	Photography Studio	22.8	1	-	23
	Changing Room	4.6	1	-	5
	Store Room	3.56	1	-	4
6	Acting Class	40.5	1	-	41
	Store room	3.2	1	-	3
	Changing Room	5.5	1	-	6
7	Control Room	9.3	1	-	9
8	Waiting Room	16	1	-	16
9	Office Room	15.2	1	-	15
10	Toilet			-	
	For Boys	9.9	1	-	10
	For Girls	12.5	1	-	13
10	Utility Room	3.05	1	-	3
	Area				379
	Building Storey (2)	Area/2			189
	Area of circulation and walls				216
	Total Area				406

Table 9 Shooting Studio Block Programs

Technical Studio Block

S.No.	Parameter	Area (sq.m.)	Quantity	Capacity	Total Area(sq.m.)
1	Sound Editing Classroom	28.9	2	10	57.8
2	Video Editing Room	32	2	13	64.0
3	Story Board Class	31.7	1	16	31.7
4	Animation Class	31.4	1	16	31.4
5	Visual Effects Class	33.5	1	16	33.5
6	Preview Theatre	20	1	20	20.0
7	Control Room	7	1	-	7.0
8	Office	17.3	2	1	34.6

	Toilet (Ground Floor)	4.2	1	-	4.2
	Toilet (First Floor)	3	1	-	3.0
	Store Room (Ground Floor)	3.8	1	-	3.8
	Store Room (First Floor)	5	1	-	5.0
9	Server Room	21	1	-	21.0
10	Toilet (Ground Floor)			-	
	Girls Toilet	6.2	1	-	6.2
	Boys Toilet	10.6	1	-	10.6
	Toilet (First Floor)			-	
	Girls Toilet	11.8	1	-	11.8
	Boys toilet)	13.4	1	-	13.4
	Area				359.0
	Building Storey (2)	Area/2			179.5
	Area of circulation and Walls				132.9
	Total Area				312.4

Table 10 Technical Studio Block Programs

Admin Block

S.No.	Parameter	Area (sq.m.)	Quantity	Capacity	Total Area(sq.m.)
1	Principal Room	28.1	1	1	28.1
2	Director Room	16.47	1	1	16.47
3	Vice Principal Room	13.6	1	-	13.6
4	Meeting Room	25.5	1	-	25.5
5	Reception	9.5	1	-	9.5
6	Kitchen	12	1	-	12
7	Account Room	18.33	1	2	18.3
8	Counsellor Room	14.5	1	-	14.5
9	Medical Room	21.1	1	-	21.1
10	Kitchen	17.5	1	-	17.5

11	Toilet	12	2	-	24
12	Reception	5.3	1	-	5.3
13	Waiting Area	39	1	12	39
14	HR's Room	14.4	1	-	14.4
15	Faculty Room	21.6	1	-	21.61
16	Coordinator Room	20.3	1	-	20.3
17	Exam Section	16.9	1	-	16.9
	Area				306
	Building Storey (3)	Area/3			102
	Area for circulation and walls				116
	Total Area				218

Table 11 Admin Block Programs

Canteen and Hostel Block

S.No.	Parameter	Area (sq.m.)	Quantity	Capacity	Total Area(sq.m.)
1	Reception	14	1	1	14
2	Waiting Area	9	1	3	9
3	Indoor Dining	76.8	1	50	76.8
4	Outdoor Dining	43.5	1	16	43.5
5	Wet Kitchen	14.1	1		14.1
6	Dry Kitchen	29.5	1		29.5
7	Store Room	6	1		6
8	Catering Service Area	8.3	1		8.3
9	Wash Area	1.8	1		1.8
10	Toilet				
	For Boys	10.7	1		10.7
	For Girls	11	1		11
	Hostel				
	For Boys				
1	Warden Room	10.2	1	3	10.2
2	Medical Room	18.3	1	5	18.3

3	Dormitories				
	For 2	12.1	1	2	12.1
	For 3	14.5	6	3	87
		17	4	3	68
	Living Room	12.07	1		12.07
3	Toilet	17.5	2		35
4	Laundry Room	8.5	1		8.5
	For Girls				
1	Warden Room	12	1		12
2	Medical Room	21	1		21
3	Dormitories				
	For 2	11.3	4	2	45.2
		14.3	2	2	28.6
		14.7	2		29.4
	For 3	19	2	3	38
		20	1	3	20
4	Living Room	16.3	1		16.3
5	Toilet	15.9	2		31.8
6	Laundry Room	11.2	1		11.2
	Area				729.37
	Building Storey (3.5)				213.4
	Area for circulation and Walls				287.3
	Total Area				500.7

Table 12 Canteen and Hostel Block Programs

Restaurant

S.No.	Parameter	Area (sq.m.)	Quantity	Capacity	Total Area (sq.m)
1	Reception	17.21	1	1	17.2
2	Dining (Ground floor)	29.49	-	32	29.5
	Dining (First Floor)	68.53	-	12	68.5
3	Kitchen	31.25	1	-	31.3
4	Wet Room	8.5	1	-	8.5
5	Store Room	5	1	-	5.0

	Area	160.0
	Building Storey	Area/2
	Area for circulation and Walls	84
	Total Area	164.0

Table 13 Restaurant Block Programs

Calculation of Block Built Up area And Ground Coverage Area

	Blocks	Built Up (sq.m)	Ground Coverage(sq.m)
1	Restaurant	311	164
2	Admin Block	578	218
3	Academic block	949.5	478
4	Shooting Studio Block	714	406
5	Technical Block	619.4	312.4
6	Theatre and Gallery Block	685.1	638
7	Canteen and Hostel block	1523.4	500.7
8	Guard House	16	16
	Total	5396.4	2733.1

Table 14 Calculation of Built Up area and Ground Coverage Area

Site Area: 11077.83 sq.m.

GCR=24.52%

FAR utilized= 0.5

Open Spaces Area	Area (sq.m.)
Front Parking	813
Back Parking	234
Front Plaza	579
ROW and Setback	438
Shooting Area	845
Amphitheatre	159
Central Courtyard	454
Cricket Court	200
Open gym	209
Academic Central Courtyard	113
Total Area	4044

Table 15 Open Spaces calculation

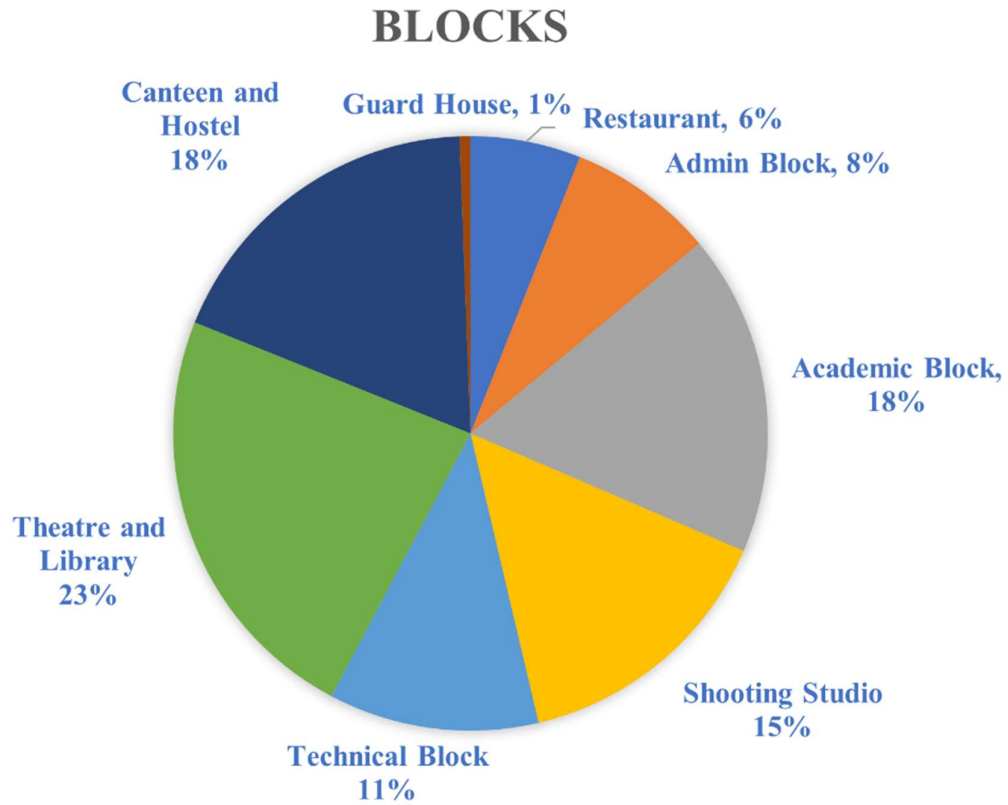


Fig 5.2 1 Different blocks division percentages

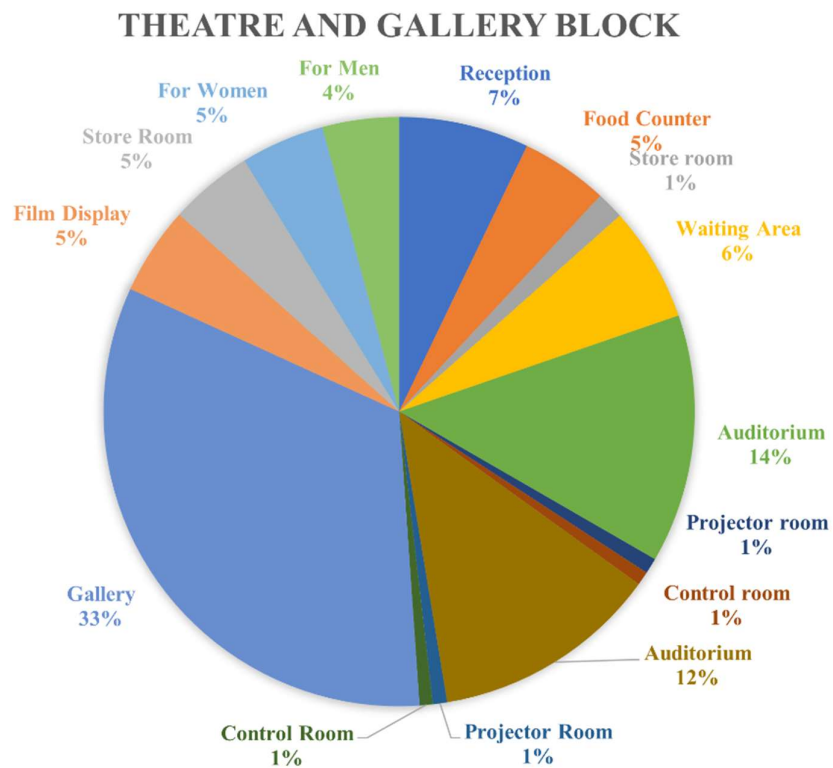


Fig 5.2 2 Different room division of theatre and gallery block shown through piechart

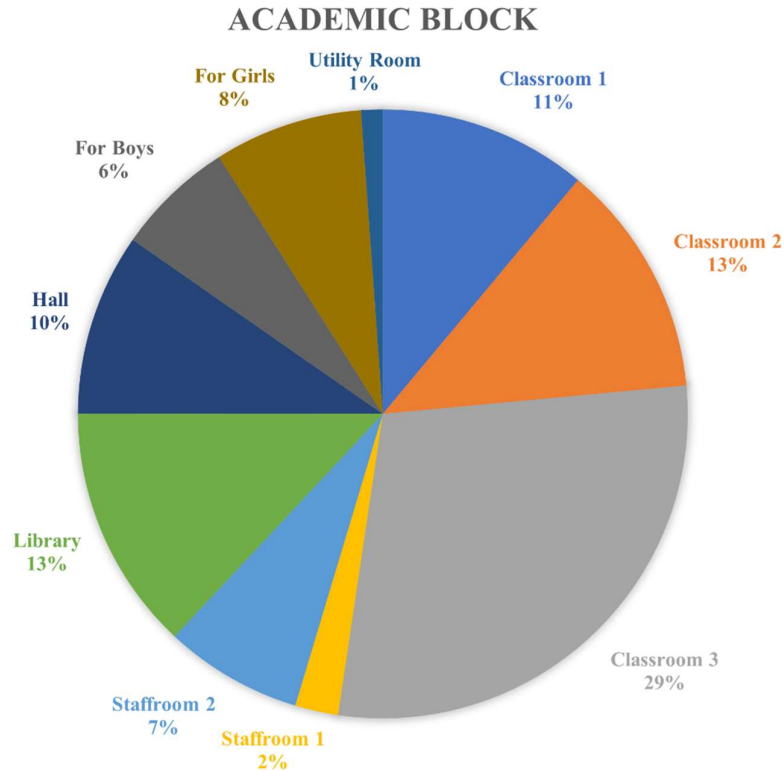


Fig 5.2 3 Different room of academic block shown in pie chart

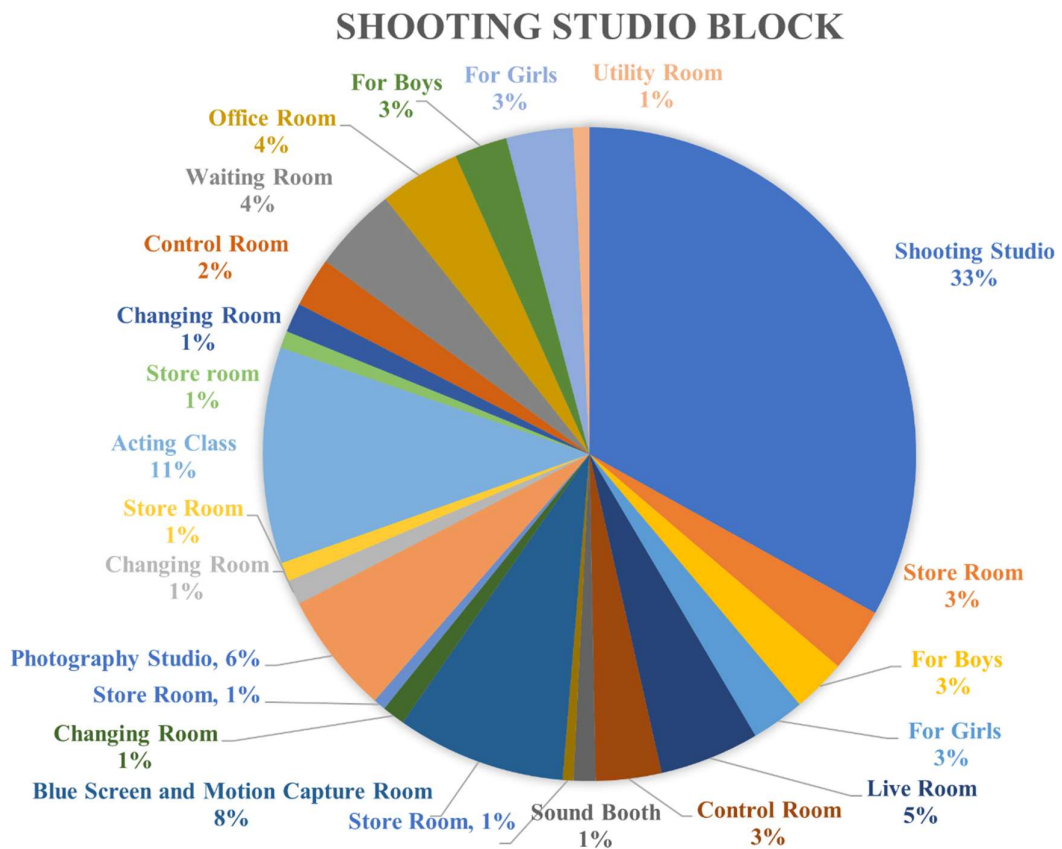


Fig 5.2 4 Different room of shooting studio block shown in pie chart

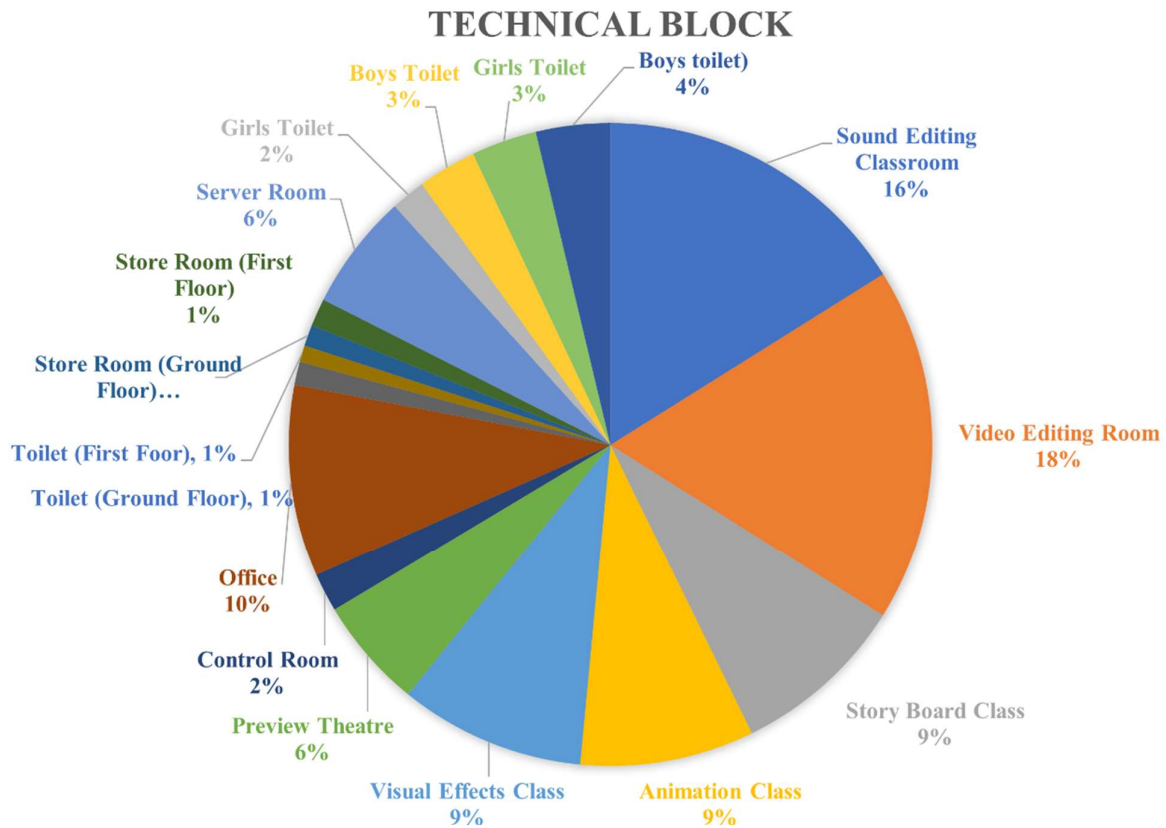


Fig 5.2 5 Different room division of technical block shown through piechart

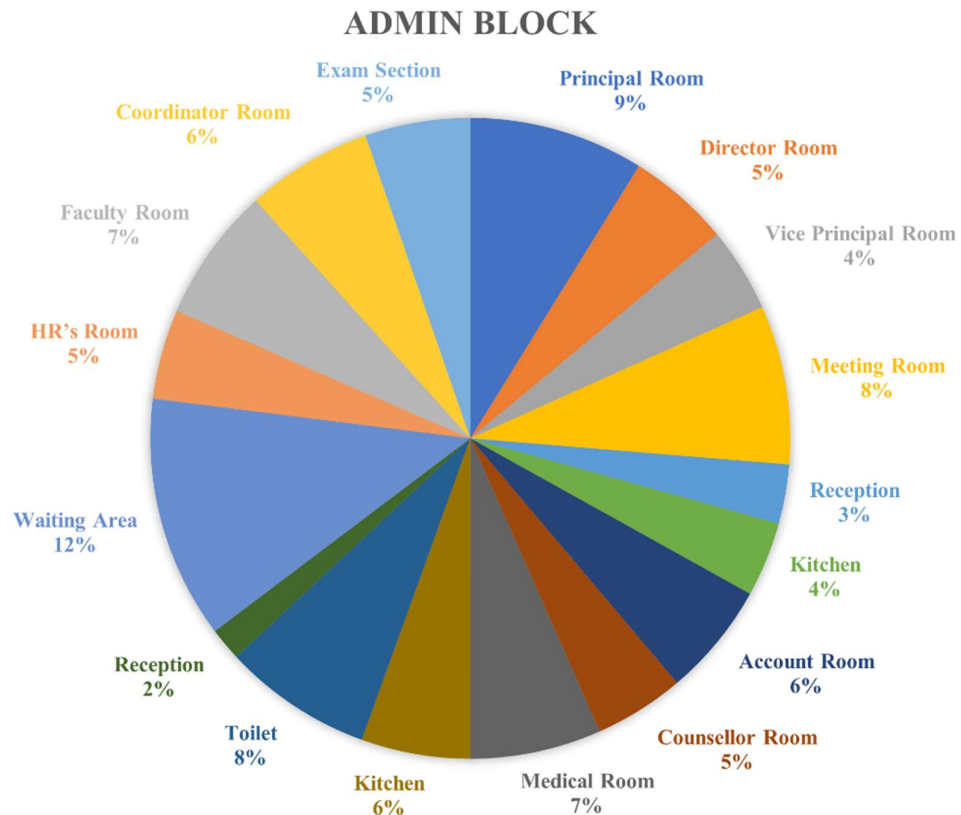


Fig 5.2 6 Different room division of Admin block shown through piechart

Chapter 6. Concept and Development

6.1 Film Making Process

Since, there are 5 stages of film making process which are Development, Pre-Production, Production, Post Production and Distribution, with the references of the process, the building is arranged in sequential manner.

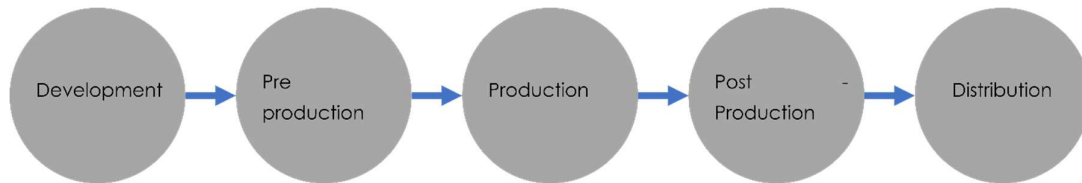


Fig 6. 1 Diagram showing stages of Film Making

Stages	Rooms
Development and Pre-production	Admin spaces, Classroom, Library
Production	Movie Shooting Studio, Sound Recording Studio, Photography Studio, Motion Capture Studio, Acting Class
Post Production	Editing Classroom, 3D Modelling Classroom, Animation Classroom, Story Board Classroom
Distribution	Movie theatre, Gallery

Table 16 Film making Stage divided into their respective room spaces

6.2 Interaction between visitors, teacher and student

The project's primary goal is to provide a common ground for the enthusiasts of the Cinematic art form. The students, the professionals and the general public can come together and experience what filmmaking is all about.

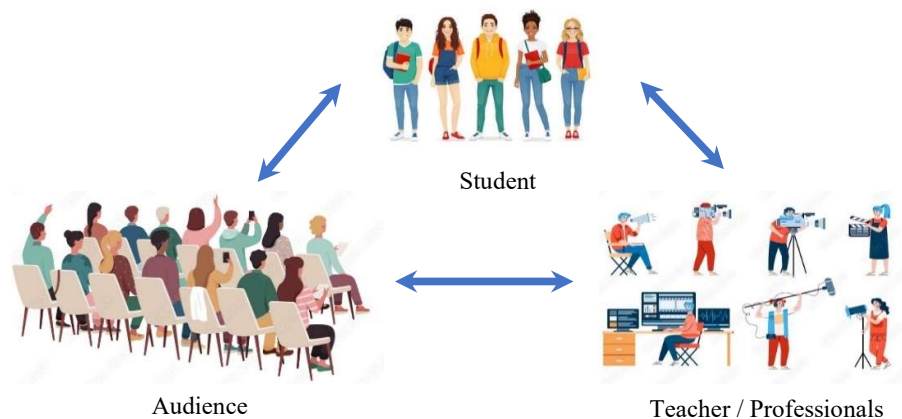


Fig 6. 2 Connection between Student, Visitors and Teacher

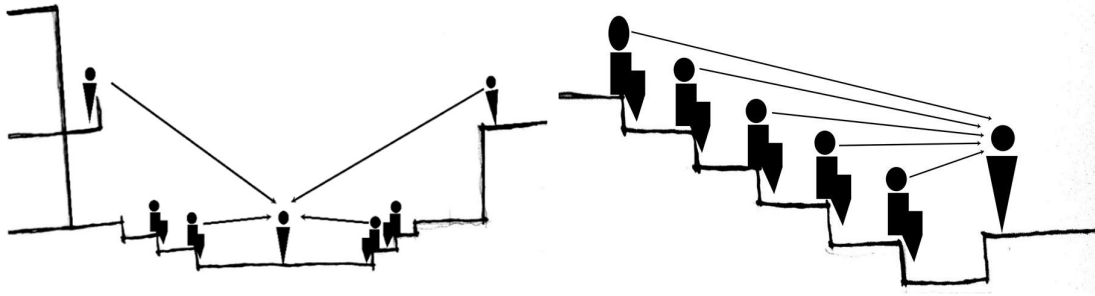
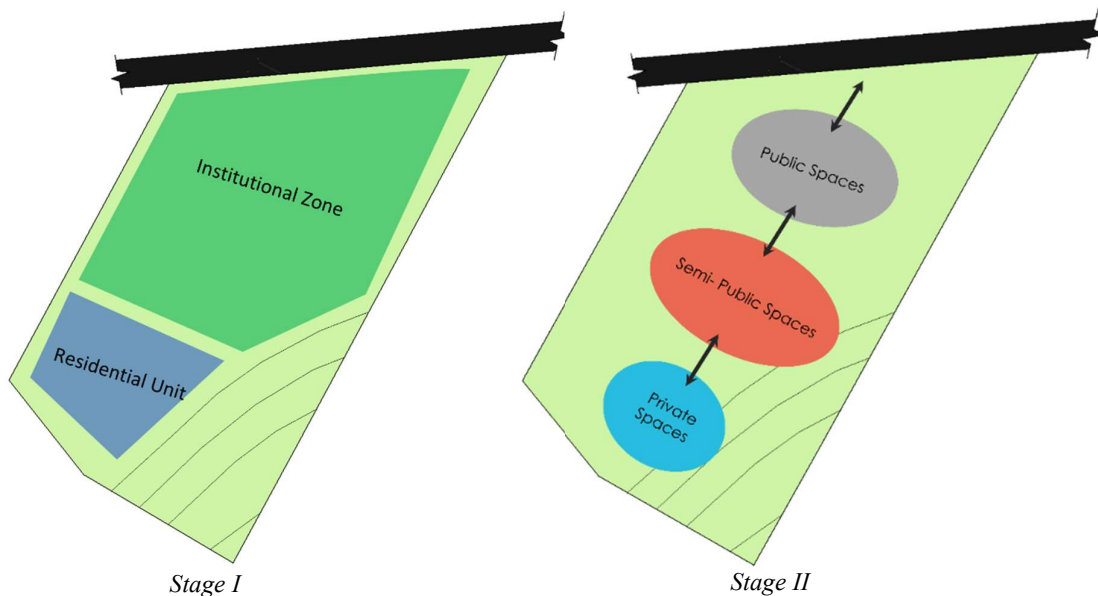


Fig 6. 3 Interaction through Courtyard, A student in corridor, steps can connect to the performers (Left),
Interaction through outdoor amphitheatre (Right)

Major programs including general academy, technical school, studio, and theater are housed within the project. By allowing students to connect with professionals, these programs enhance their theoretical and practical learning. The general audience has the opportunity to interact and learn about the creative process of filmmaking during big events, festivals, and premieres.

6.3 Zoning to Form Development

Stage I shown is the separation of Institutional Zone and Residential Units where resident units are placed at the back to create a private spaces. Stage II showing the location of public spaces, semi-public spaces and private spaces. Admin, Cafe and Theatre and parking spaces are located as public spaces, Technical block, Shooting Studio Block and Academic Block is located as semi-public spaces and Canteen and Hostel Block (Male and Female Hostel) is located as private spaces as shown in stage III and the final form plan is as shown in stage IV.



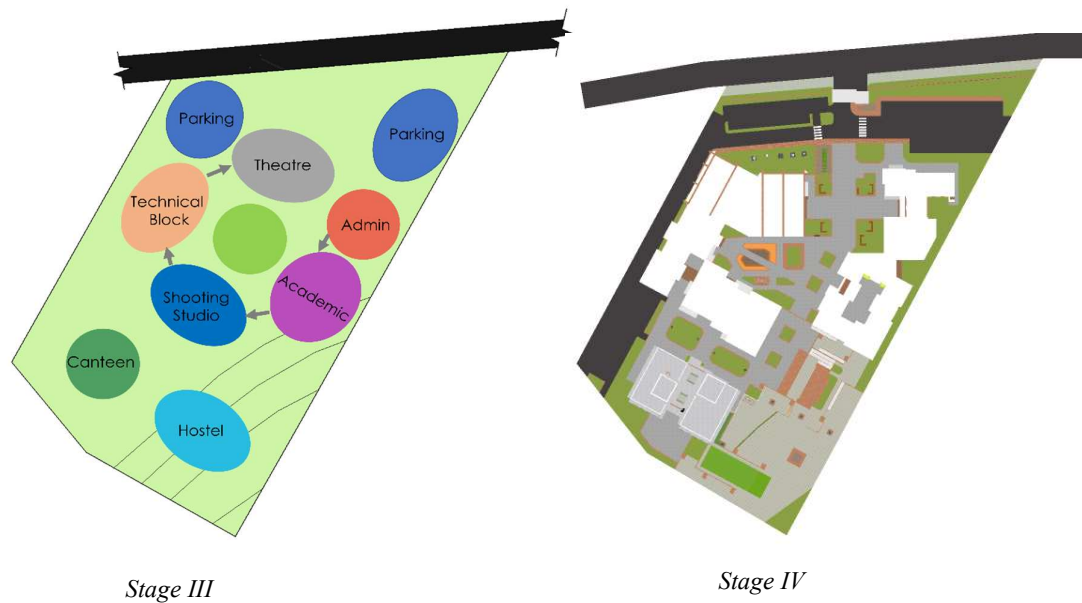


Fig 6. 4 Different Stages of Form Development

6.4 Concept Applied in the design

6.4.1 Creating an axis

From the main entrance, there are separate entry for vehicular as well as pedestrian. The front from the entrance is the bike and car parking and during the events, the front parking will be occupied by the public and staff and with the service road, there is a bike parking at the back which will be used by the students.

For the pedestrian path, with the zebra crossing, entry to the periphery of the building, a clear and straight axis to plazas which connects the admin, restaurant and movie theatre block. Frontal spaces which can be used both by public, staff and students. Moving to the central spaces, with the references to the site parameter, the building is inclined and the pathways are designed. The students and staff are allowed to enter inside the academic block and studio block which is semi-public spaces. Following

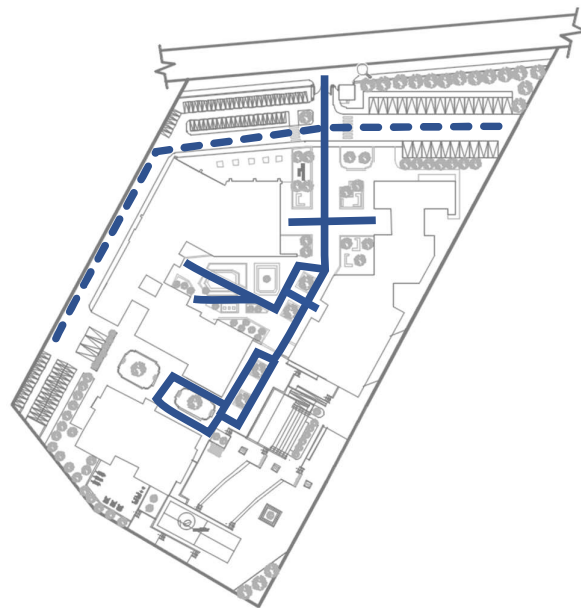


Fig 6. 5 Line showing vehicular and pedestrian flow in master plan

the path will lead to the outdoor amphitheatre, outdoor movie shooting areas, and Hostel and Canteen block (residential units). To separate the semi-public and residential spaces, a wall is designed with semicircular arches void so that the visitors are not allowed to enter inside the area.

6.4.2 Open Spaces Uses

A, a public plaza, will be seen directly from the entrance, has a seating area and sheltered by trees. It connects two important blocks.

B is the spaces for wall of expression. It is in front of the movie theatre block. 5 abstract statues are given spaces, will be related to film, human gestures, which will be designed by the collaboration with TU Fine Arts Departments.

C is the central plazas, that are used by students and staffs, can be used as inspiration. The spaces can be seen from all the buildings. The central spaces surrounded by building which includes seating spaces under the tree (the concept of seating under the tree in vedic period), the statue of materials related to film, the statue made will be collaborated with TU Fine arts located nearby and green spaces.

D is the outdoor amphitheatres, provide access for all, also for differently abled providing ramps. E can be used as outdoor movie shooting space, stone pavement is done and seating

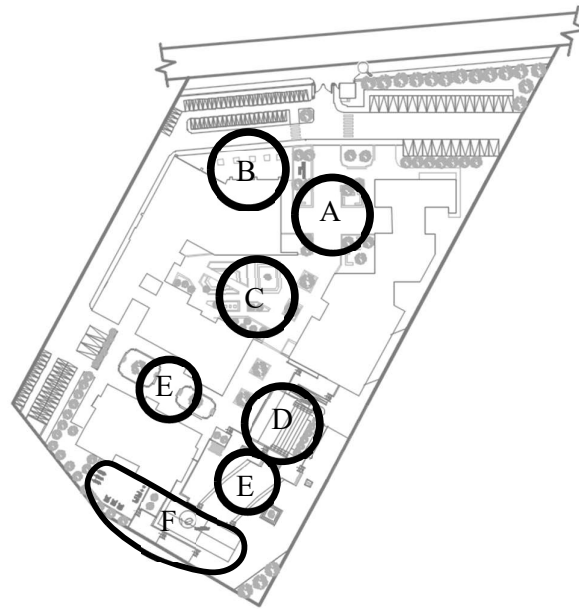


Fig 6. 6 Circle showing open spaces in master plan



Fig 6. 7 Central spaces for film making inspiration

bench and lighting are designed for shooting. F is the sports for ECA, a cricket court provided with net and open gym accessible from canteen block.

6.4.3 Use of Brick as building materials



Fig 6. 8 surrounding building façade

Source: Author

The existing site building includes different institute and department building affiliated to TU. While visiting site, the surrounding building façade were studied to take the references for the façade design. The exterior wall of the building seems to have exposed brick façade and some with exposed column, some have flat roof, some have mono-pitch slope and double pitch slope. Some of the façade have brick façade only, some façade shows exposed column, and some has plaster walls, projected walls used as shading devices to reduce glare. Taking references from the surrounding building, the proposed building wall façade will be design.

Below figure is of the proposed building façade where the brick has been exposed with different forms in elevation using different types of glass window, big window in restaurant, jail brick walls creating a welcoming environment.



Fig 6. 9 Brick concept used in Building of the thesis project

Source; Author

6.4.4 Façade treatment from the film making stage

A film making has 5 stages: Development, Pre-Production, Production, Post Production and Distribution. This concept is applied in the building, where Development and Pre production stages includes Admin and Academic Block, a space where script is written and

character is needed, which is student themselves. Since, the idea is simple and it's a beginning stages, the façade design is made simple with the brick facades and white plastered overhangs.

Later, the video is shot according to the script and the spaces provided are indoor and outdoor movie shooting spaces, recording room, photography studio and motion-graphic studio. After the video is shot, it is needed to be edited so the technical block is designed with different computer labs and editing rooms. The video edited will be seen for the final time in preview theatre and after finalizing will be shown to the public in cinema hall. It is a developing and final stage, the facade is created with vertical and angular fins from a half angular fins balcony from first floor in studio block to a completely developed from ground to roof angular fins in movie theatre block. The angular fin is taken from the site and building orientation.



Fig 6. 10 Admin and Academic Block has simple form, a concept of beginning stages (Left) and views of Movie theatre has vertical fins, a concept of last stages (Right)

6.4.5 Camera Lens to a circular void

A circle inside a rectangle which can be seen from front view of camera is taken as a concept for façade design, creating a circular void in wall of academic and admin block lobby in which the target group can view the landscape of the central spaces and public plazas respectively, creating a sense of seeing through the lens. The students can get inspired from the landscape for their script writing.

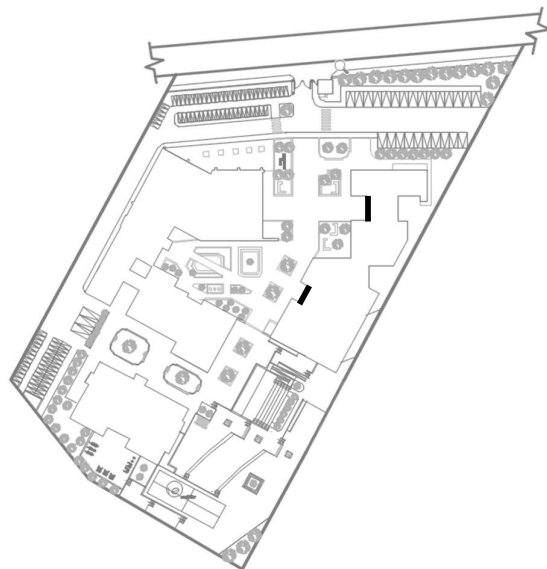
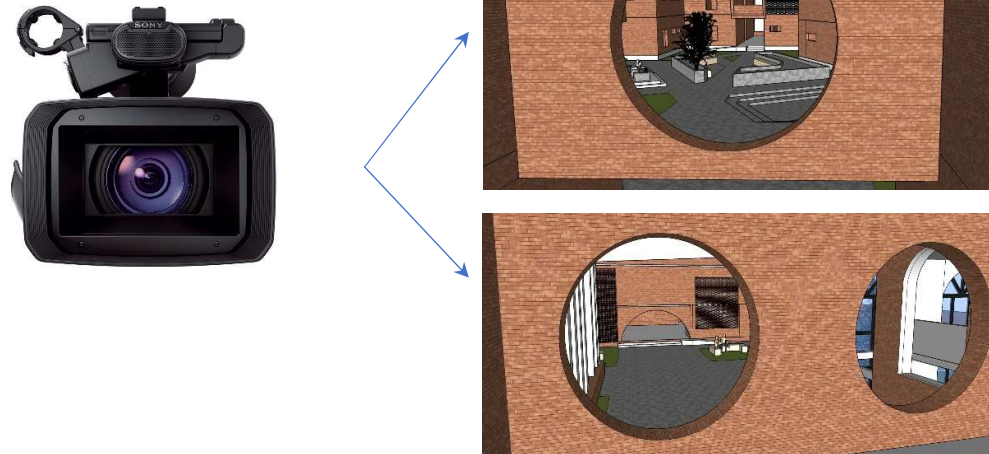


Fig 6. 11 A image showing the indication of location of circular voids in master plan with a line



*Fig 6. 12 The movie is shot from the lens of movie camera applying this concept in the building façade creating a circular void (lens form) where the target groups can see through the void getting an inspiration from the external environment
Source: Author*

6.4.6 Movie reels to design façade

A concept of using black and white colour film reels (a concept of mass and emptiness) in building façade which is brick and hollow void, facing South which cast a shadow in the floor creating an aesthetic corridor space.

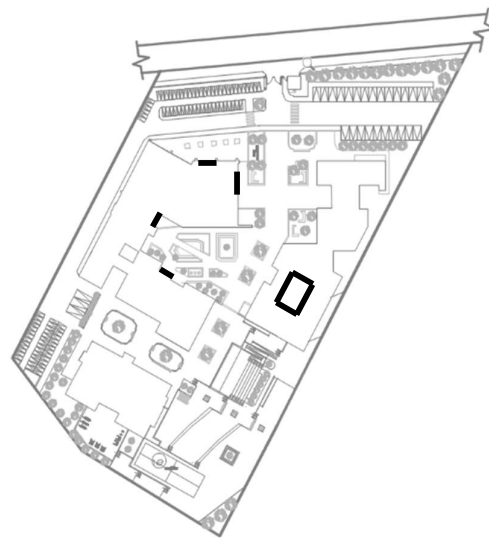


Fig 6. 13 A image showing location of jali walls in master plan with a line

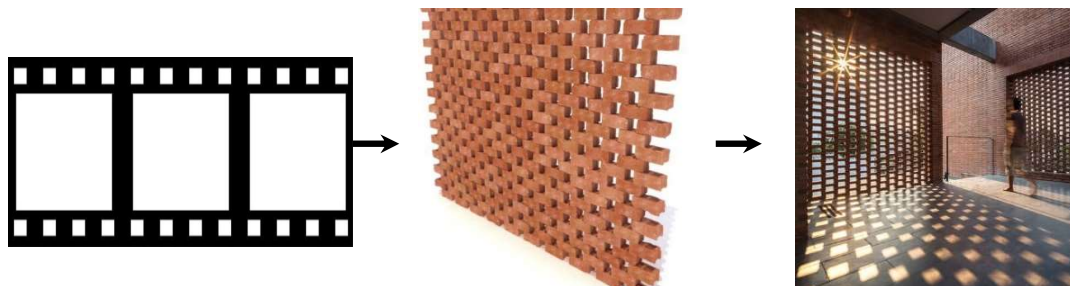


Fig 6. 14 A movie reels shape(black and white colour) concept of mass and emptiness applied in jail brick wall casting shadow in floor

6.5 Site References Concept into building

6.5.1 Shading Devices and balcony

The figure shows about the techniques that can be used to reduce glare from the South sun. The left image in fig 6.15 shows about the projection of slab used as horizontal shading devices to reduce the summer sun and let the winter sun enter into the room whereas right figure shows about the use of balcony to reduce the glare and use the spaces. The vertical shading devices (fins) used in east and west side of building.

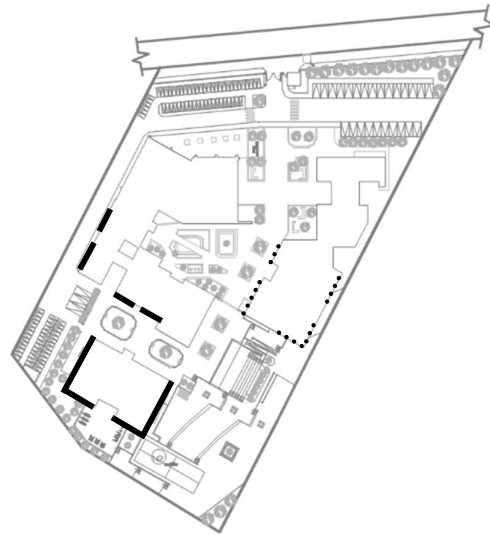


Fig 6. 15A images showing the location of shading devices and overhangs with a line

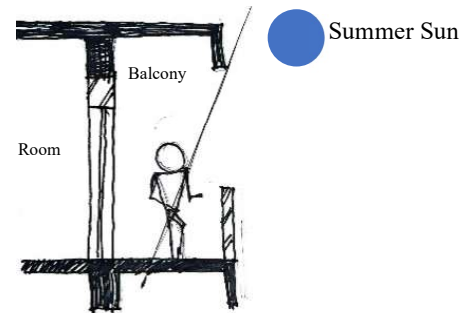
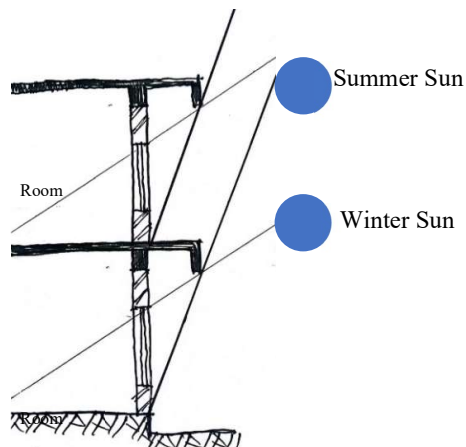


Fig 6. 16 Shading devices and balcony used for summer and winter sun
Source: Author

6.5.2 Cross- Ventilation

Both side of classroom of a wall includes window. When the wind flows from Southwest or Northeast, when both the windows are open, the wind passes from external surrounding to the courtyard which cools the indoor room.

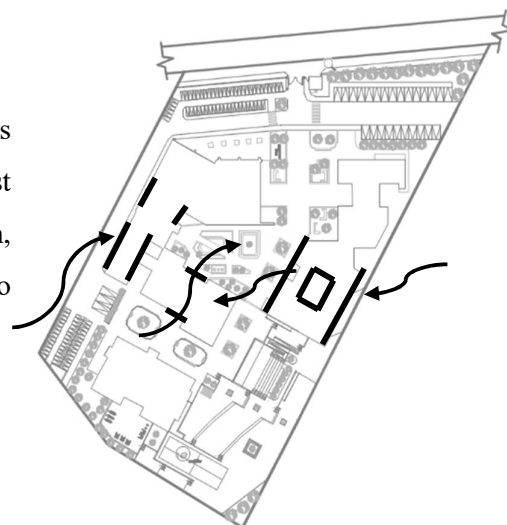


Fig 6. 17 A images showing the location for cross ventilation with an arrow showing wind direction
Source: Author

Chapter 7 Conclusion

Institute of Film Making is the educational institute where the students are taught how the film is made from development stages to the final stage. The main objectives is to understand about the spaces for study, recreation and collective activities, teach and promote film making skills, to design a common ground as a courtyard, amphitheatres for the student and professional for interaction, collaboration and a sense of community and to make art and film education open for all, introducing public gathering spaces. The literature and case studies were done to understand about the spaces, acoustic treatment, lightings. Kirtipur was selected as the thesis site, as the location is TU area, the course is affiliated to TU, Kathmandu is known for Nepali film movie “Kollywood”, a peaceful environment, suitable for outdoor movie shooting.

The concept is taken from the site parameters, site surrounding, site analysis and film related forms. In terms of planning, provided more open spaces, which can be used as outdoor movie shooting, another for amphitheatres, open sports ground, parking. Frontal spaces from the entrance are public spaces, and semi-public spaces and the back portion is residential spaces includes hostel and canteen. The building is designed with the site parameter, locating the rooms from the concept of film making process from developing stage to final stages. The use of concept of TU building exposed brick façade to the proposed building façade.

As a result, this place will house the outdoor movie shooting, a amphitheatres for organizing programs, room as theoretical classroom, studio room and technical computer classroom for learning, outdoor seating spaces, a film related abstract statues.

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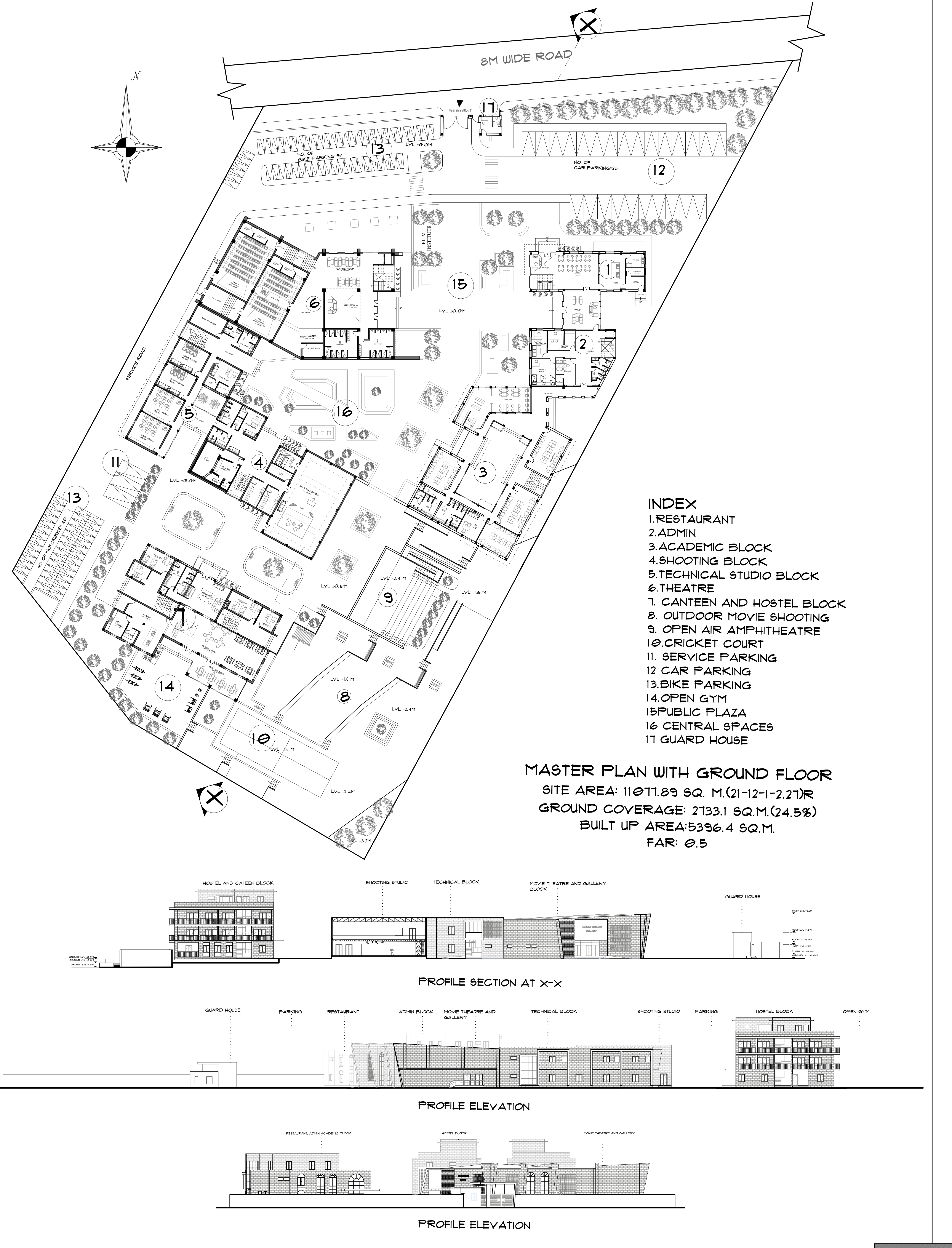
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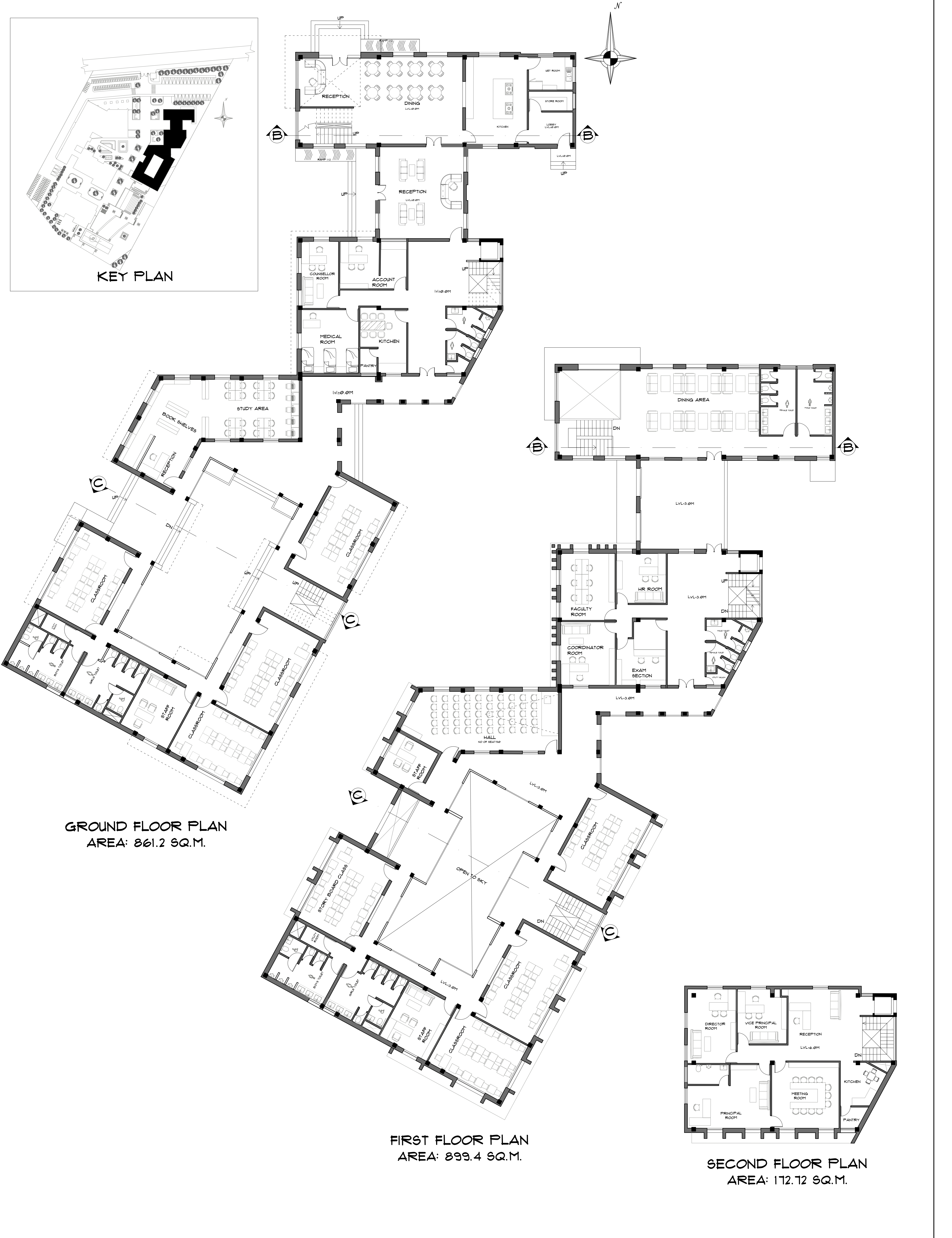
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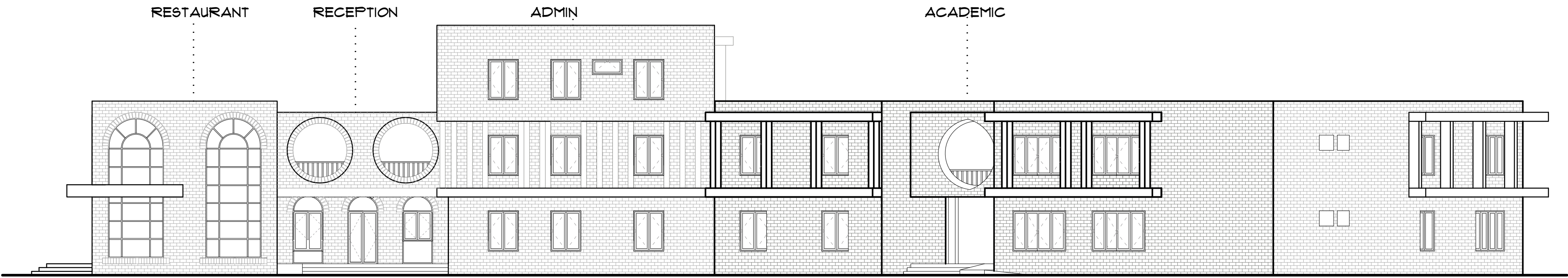
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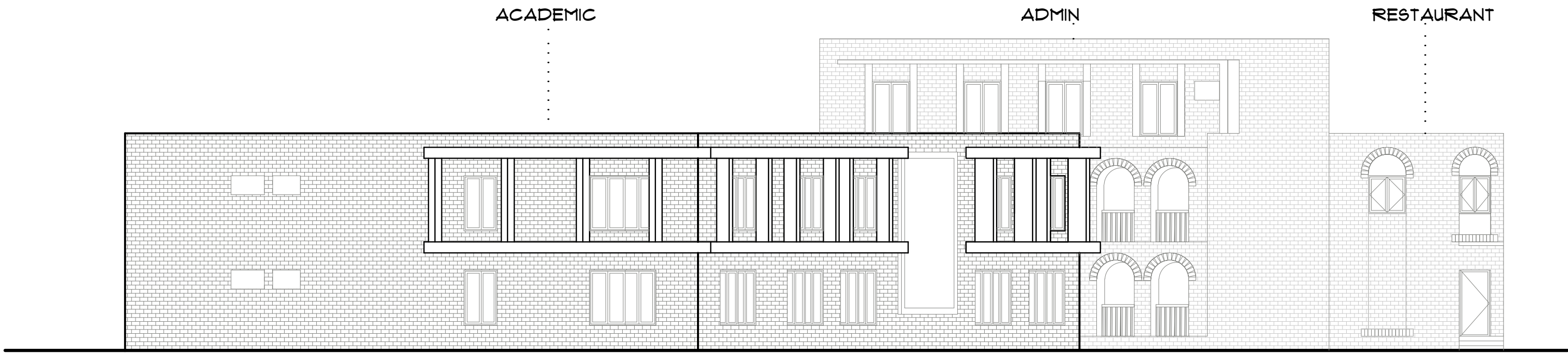
ANNEX



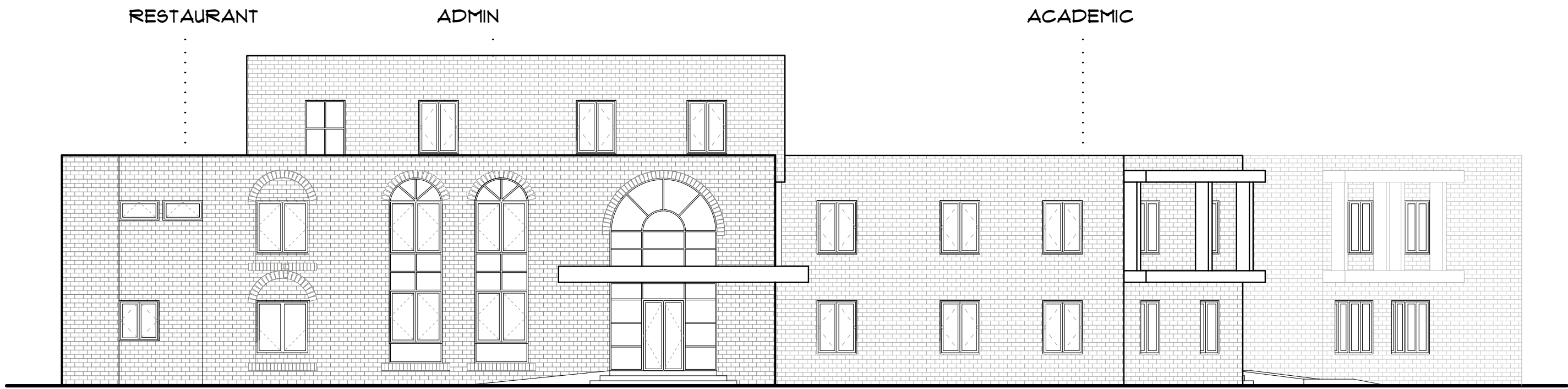




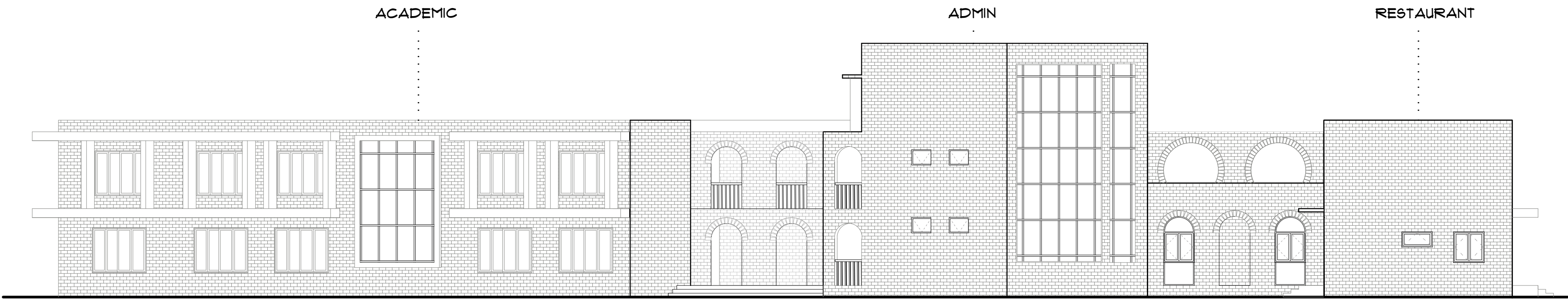
FRONT ELEVATION



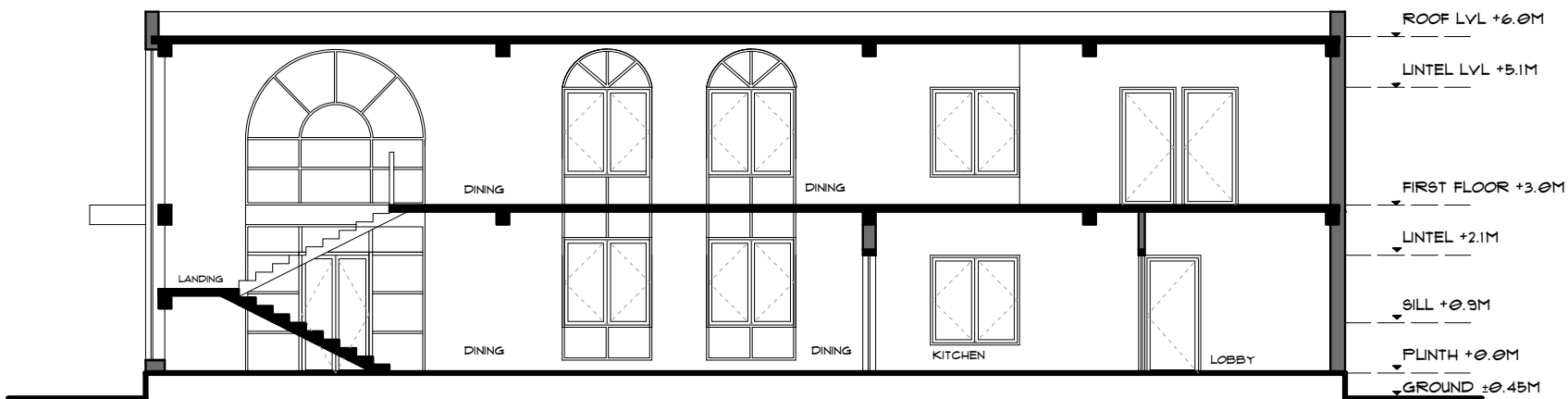
BACK ELEVATION



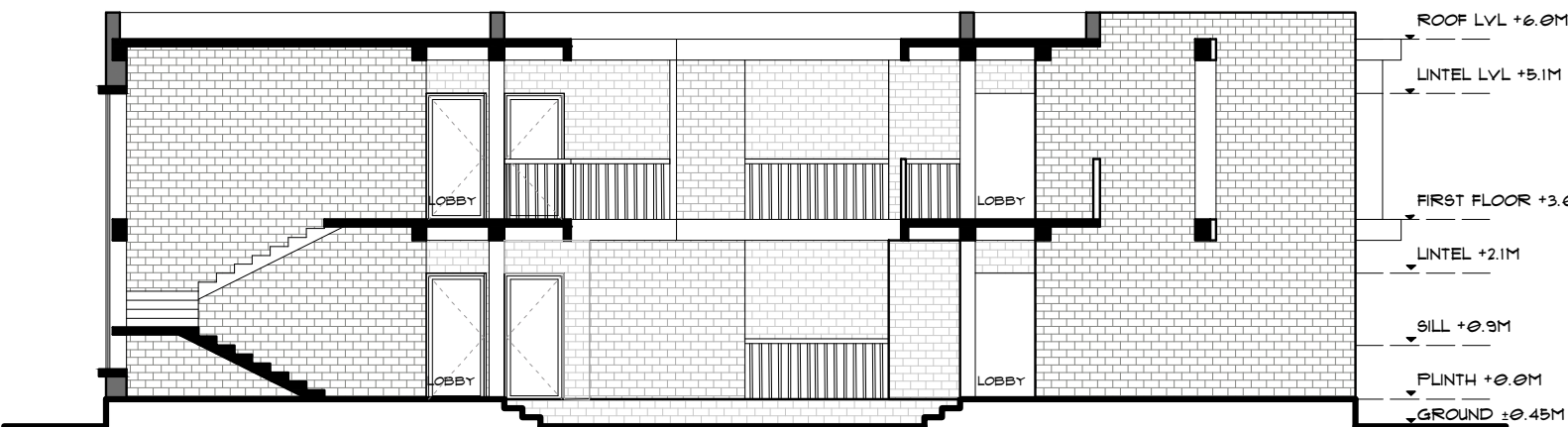
SIDE ELEVATION



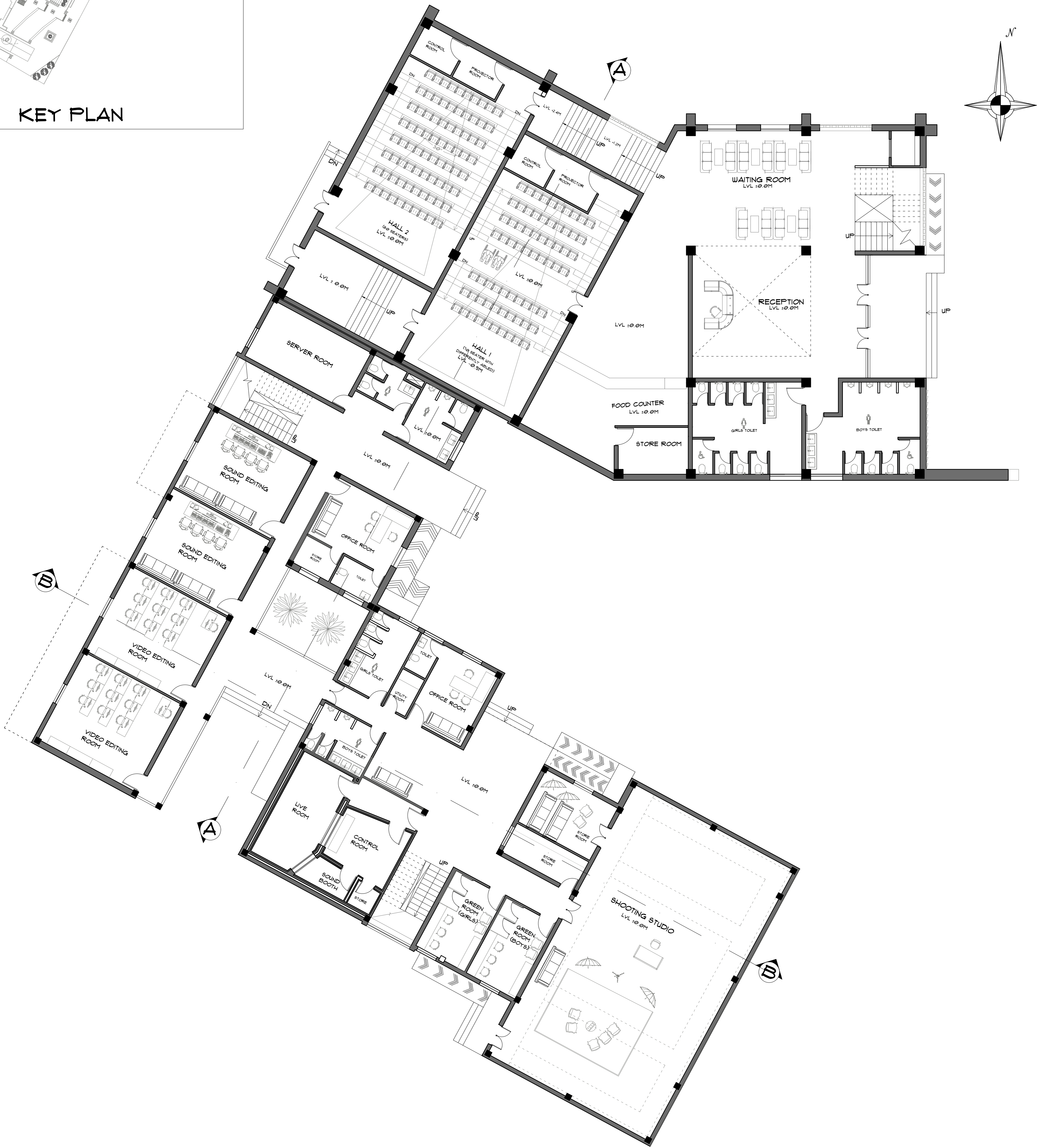
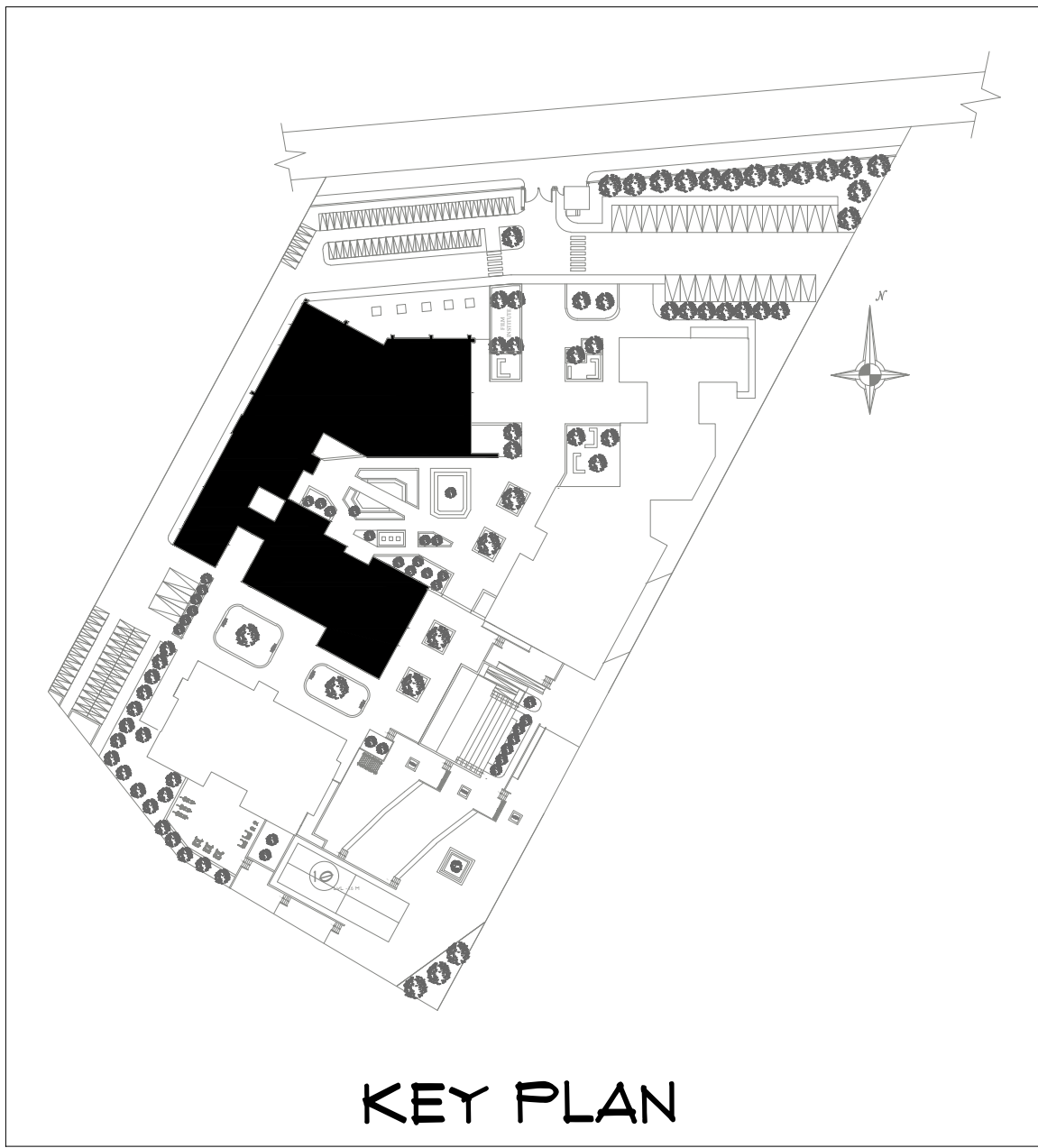
SIDE ELEVATION

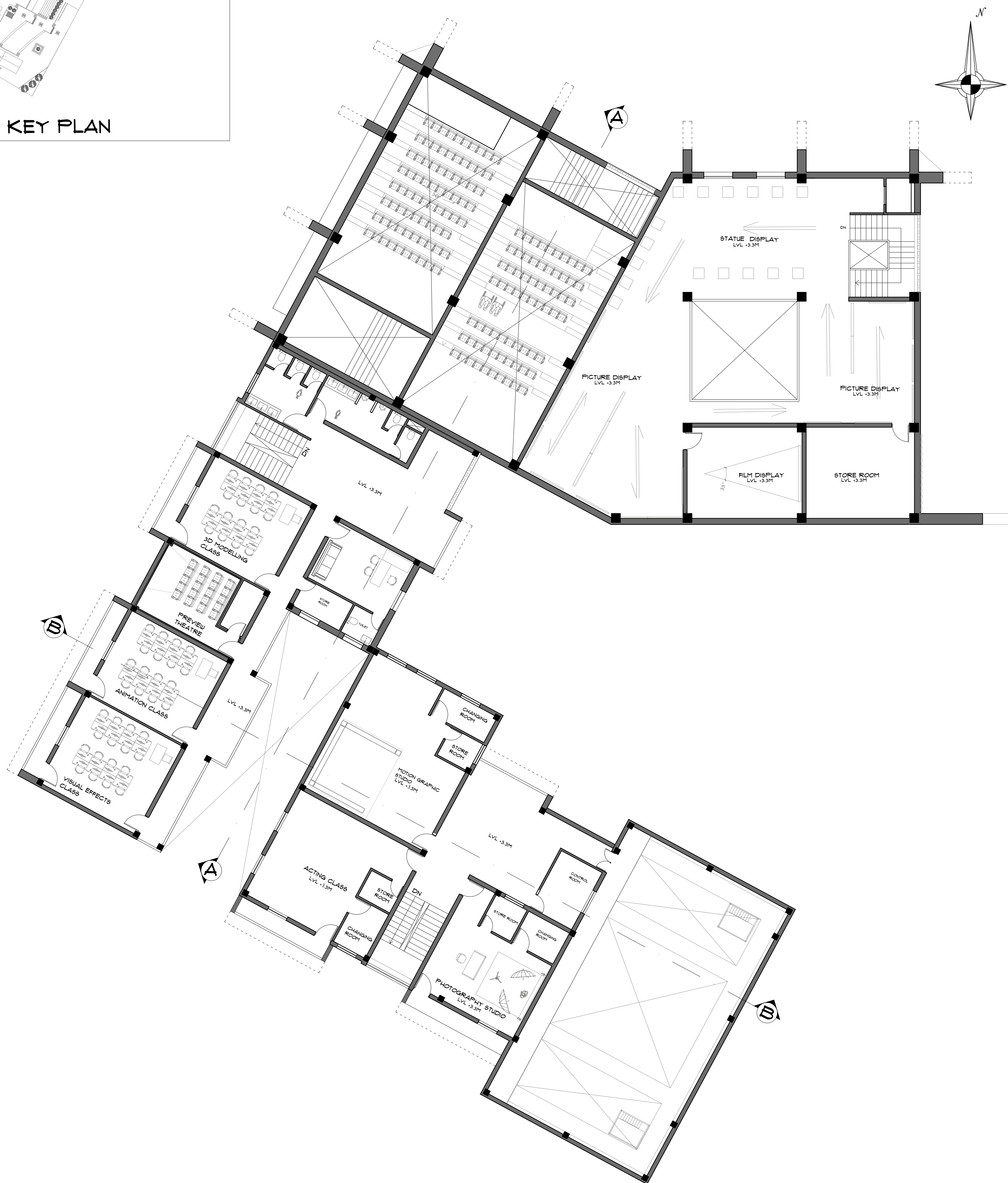
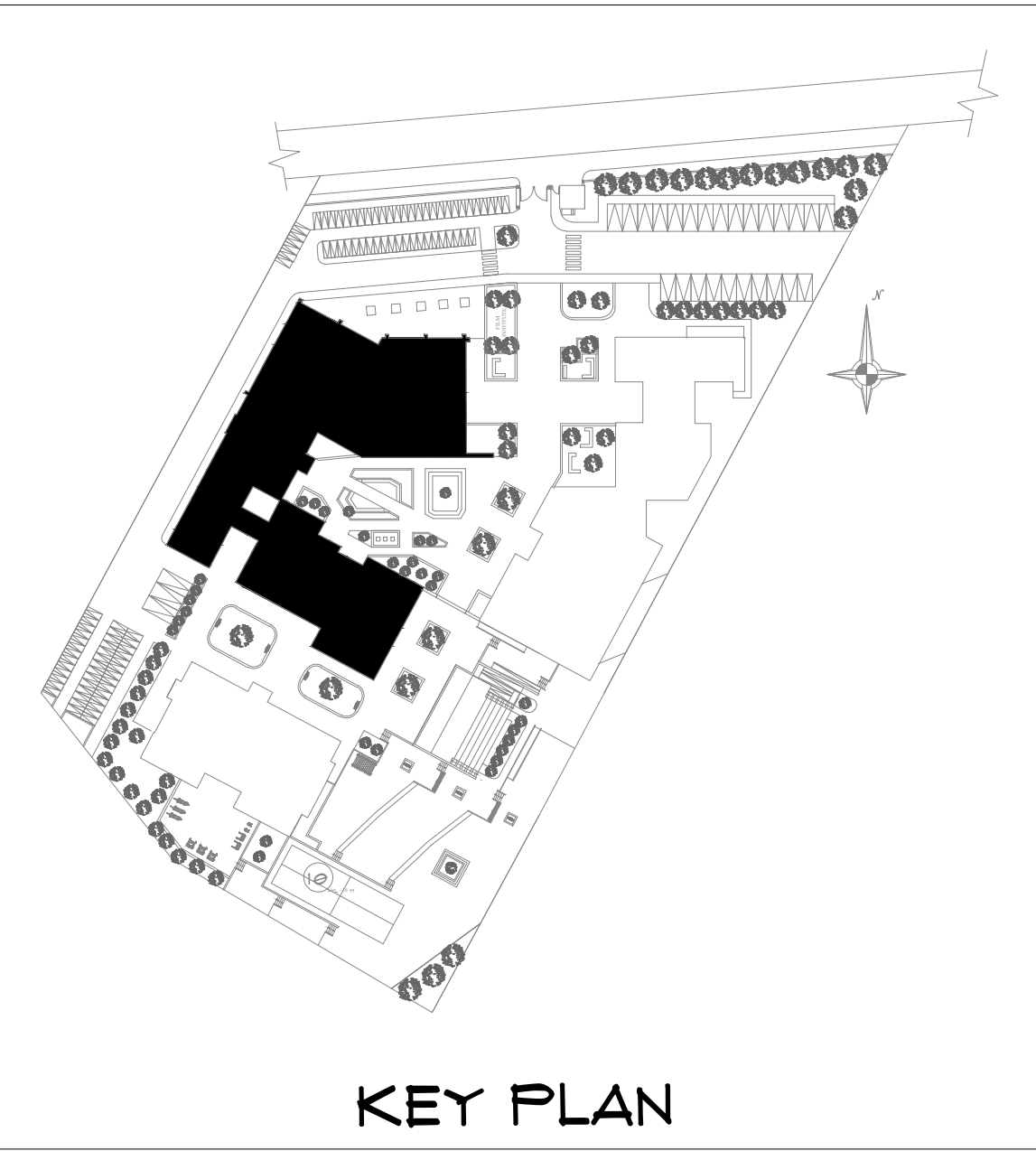


SECTION AT B-B

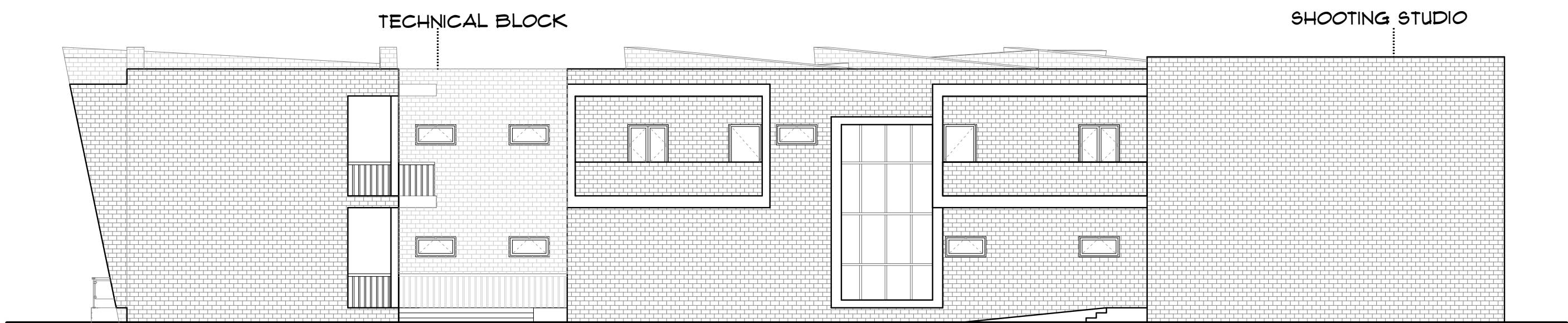


SECTION AT C-C

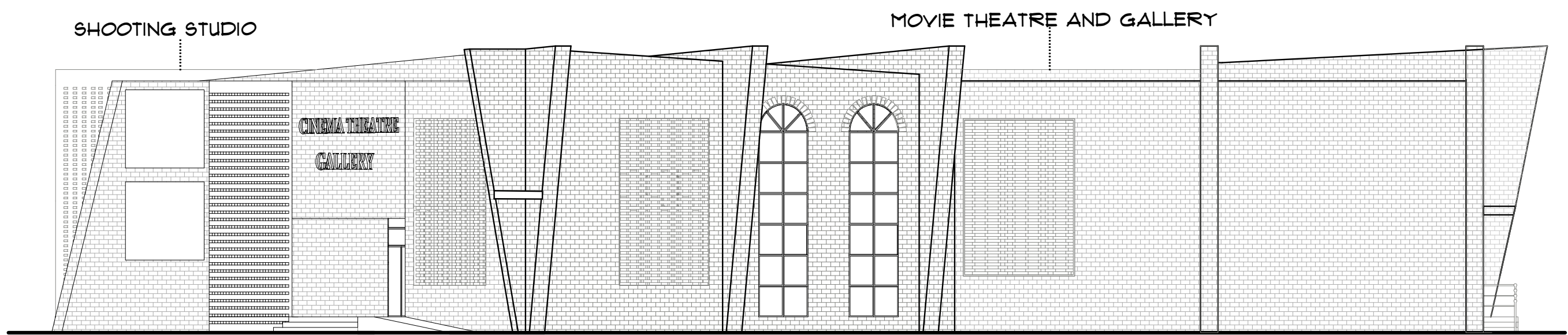




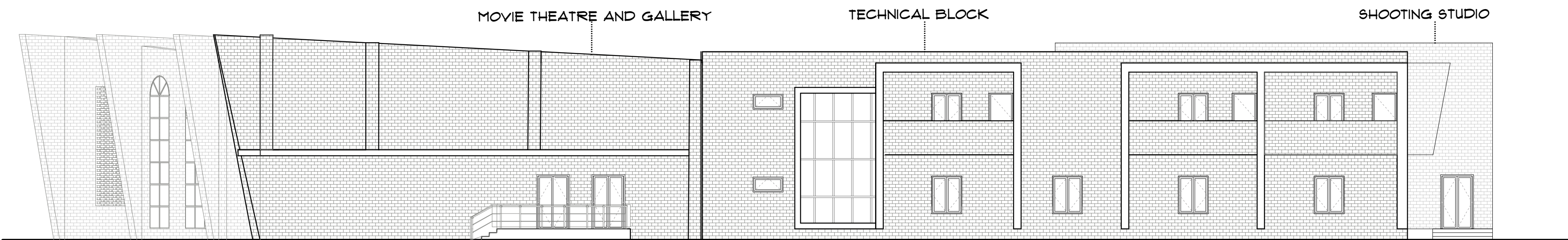
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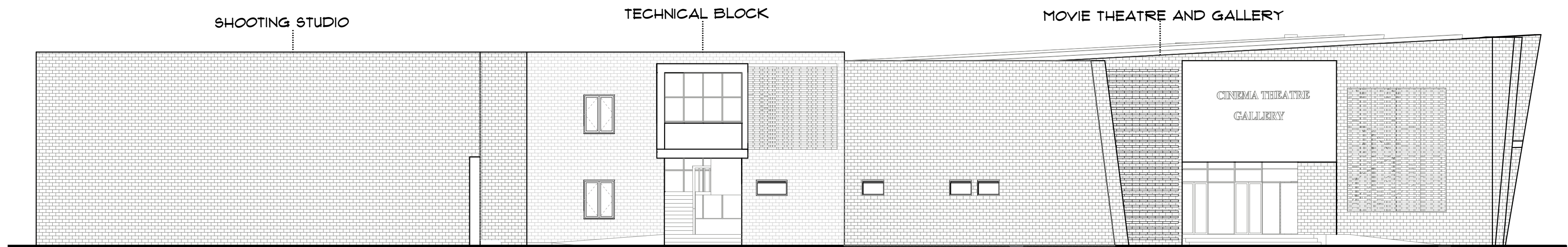
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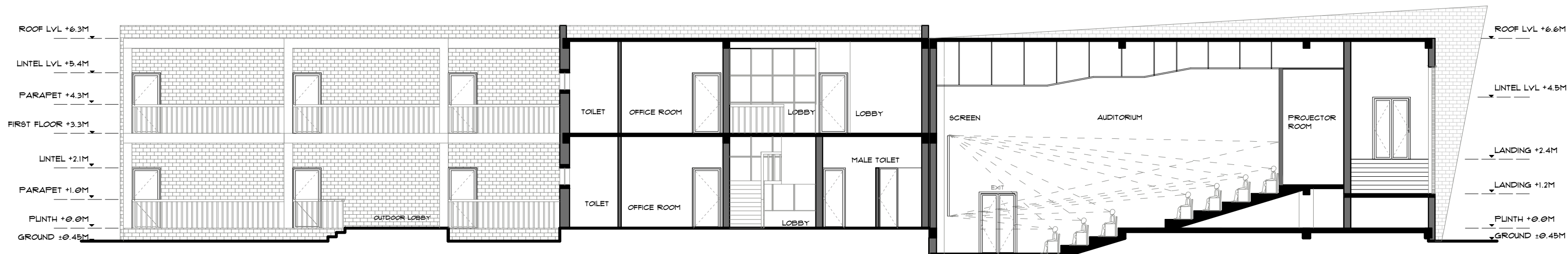
SIDE ELEVATION



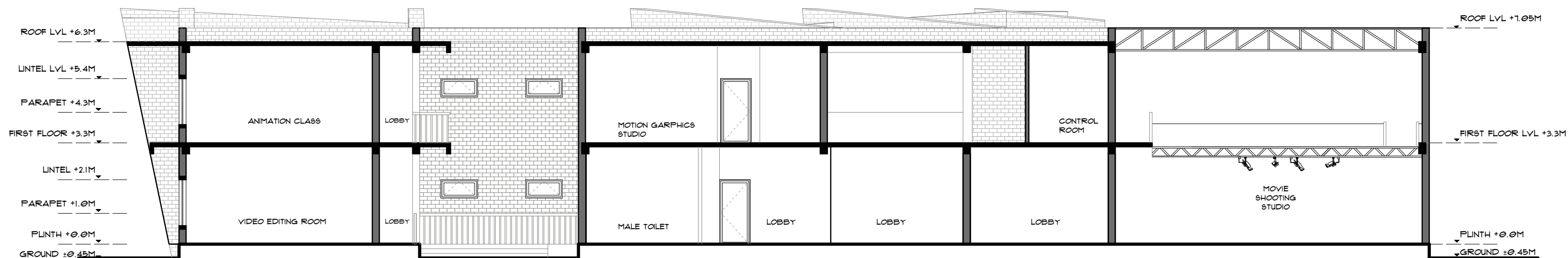
BACK ELEVATION



FRONT ELEVATION



SECTION AT A-A



SECTION AT B-B

ACOUSTIC MATERIALS INSTALLATION DETAILS

WALLS

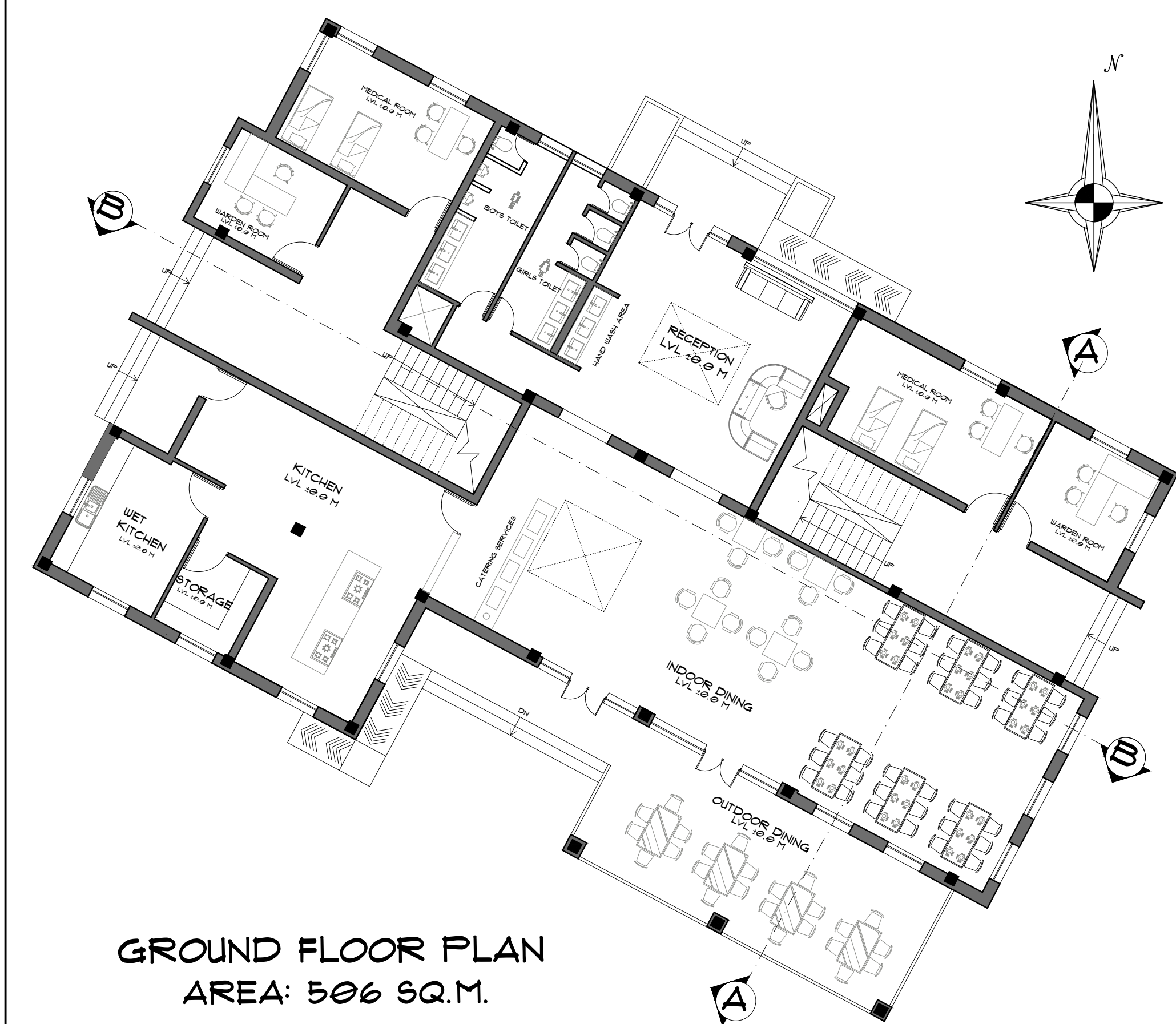
- 230 MM EXTERIOR WALL
- 100MM CAVITY
- 110 MM INTERIOR WALL
- 50 MM ATTACHED STEEL STUDS AND THEN GLASS WOOL
- 12.5 MM ACOUSTIC GYPSUM PANEL

FLOORING

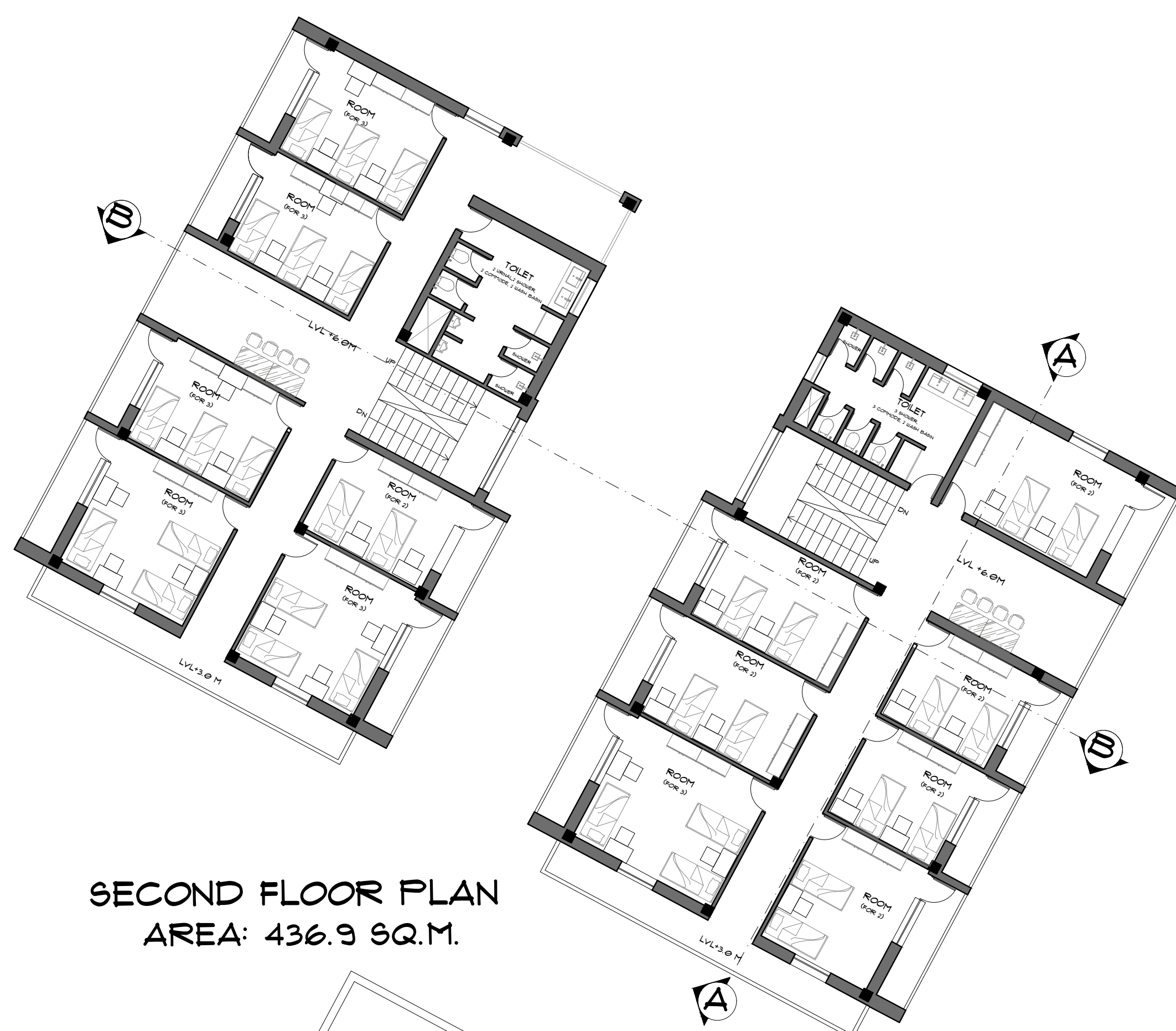
- 12.5 MM ACOUSTIC GYPSUM PANEL
- 50 MM ATTACHED STEEL STUDS AND THEN GLASS WOOL
- 110 MM INTERIOR WALL
- 100MM CAVITY
- 110 MM INTERIOR WALL
- 50 MM ATTACHED STEEL STUDS AND THEN GLASS WOOL
- 12.5 MM ACOUSTIC GYPSUM PANEL

CEILING

- CEILING
- HANGER WIRE ROD
- SUSPENSION WIRE
- CHANNEL BRACKET
- PRIMARY CHANNEL
- CEILING FURRING SECTION
- GYPSUM BOARD



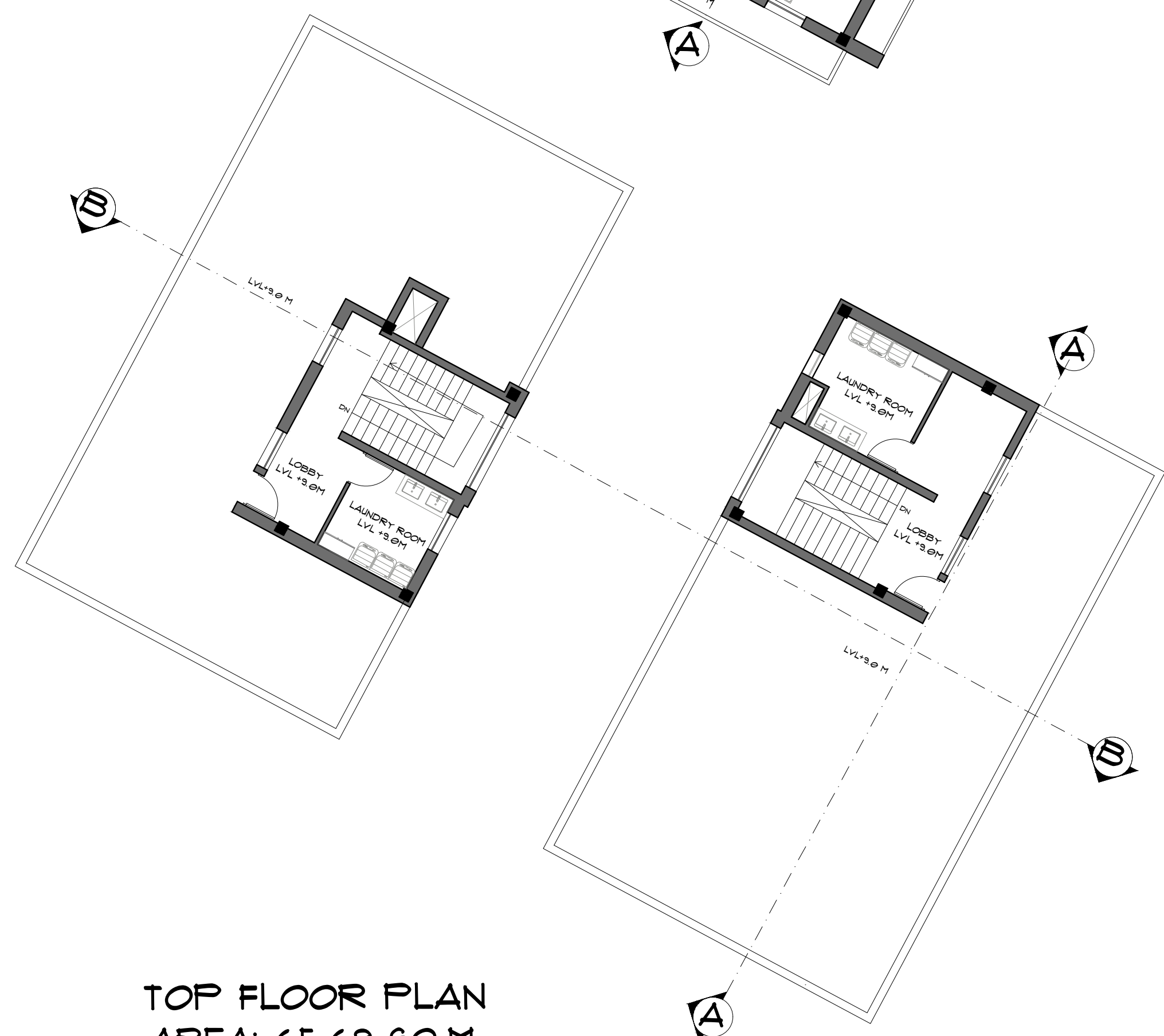
GROUND FLOOR PLAN
AREA: 506 SQ.M.



SECOND FLOOR PLAN
AREA: 436.9 SQ.M.



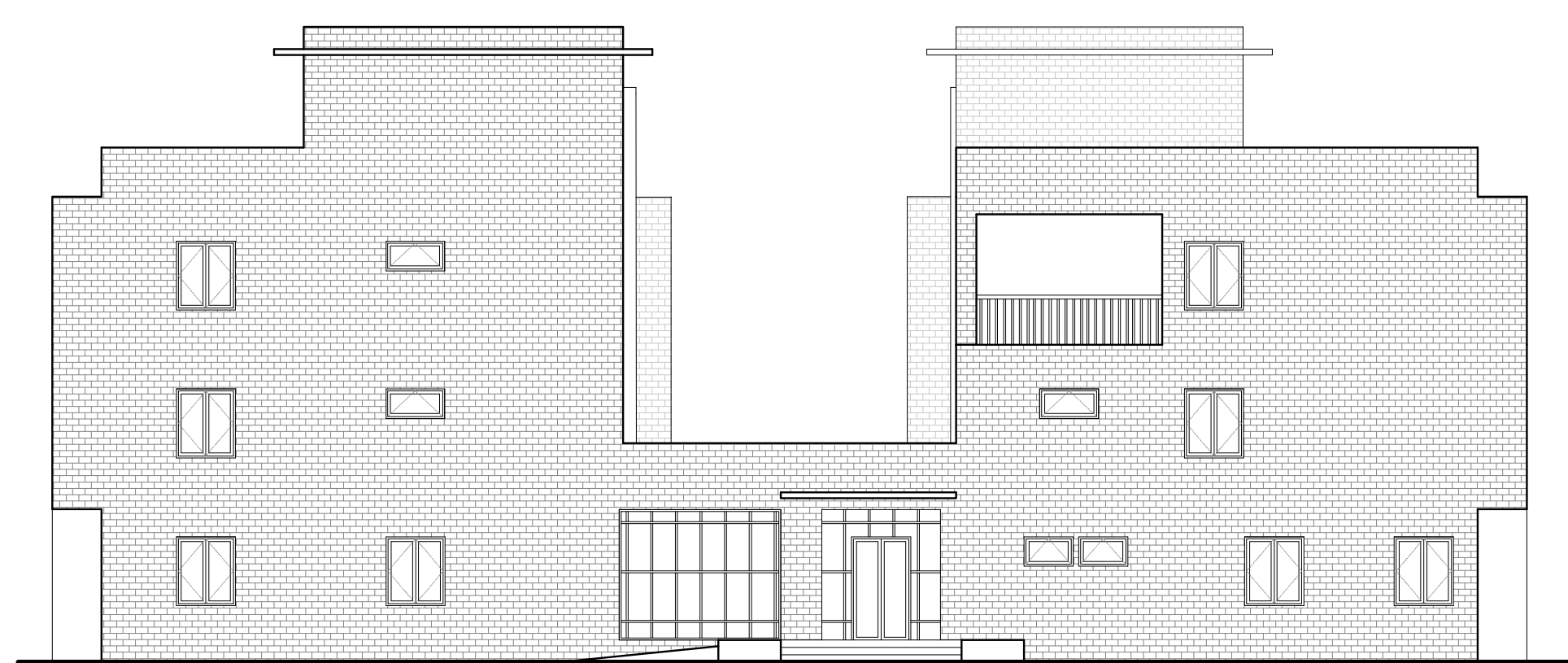
FIRST FLOOR PLAN
AREA: 508.44 SQ.M.



TOP FLOOR PLAN
AREA: 65.69 SQ.M.



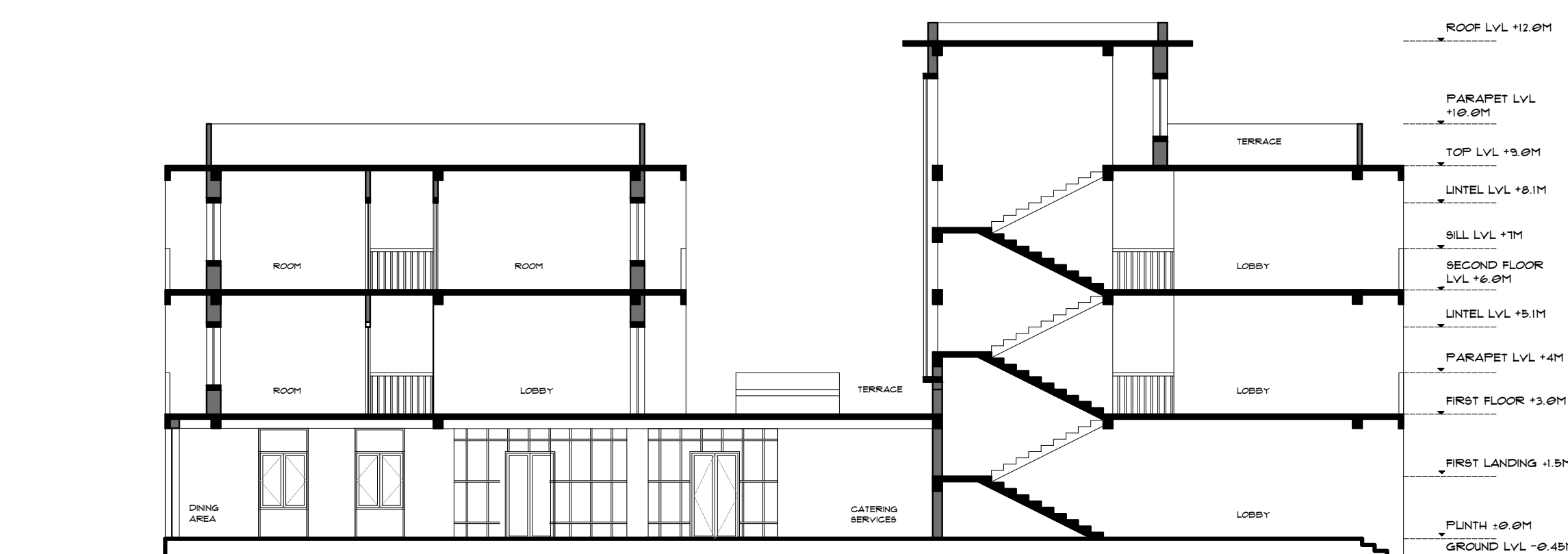
SIDE ELEVATION



FRONT ELEVATION



SECTION AT A-A



SECTION AT B-B



ARIEL VIEW OF PROJECT



MOVIE THEATRE FRONT FACADE



ADMIN, RESTAURANT AND ACADEMIC



HOSTEL BLOCK



OUTDOOR MOVIE SHOOTING



CRICKET COURT



CENTRAL SPACES



CIRCULAR VOID IN ADMIN AND ACADEMIC BLOCK

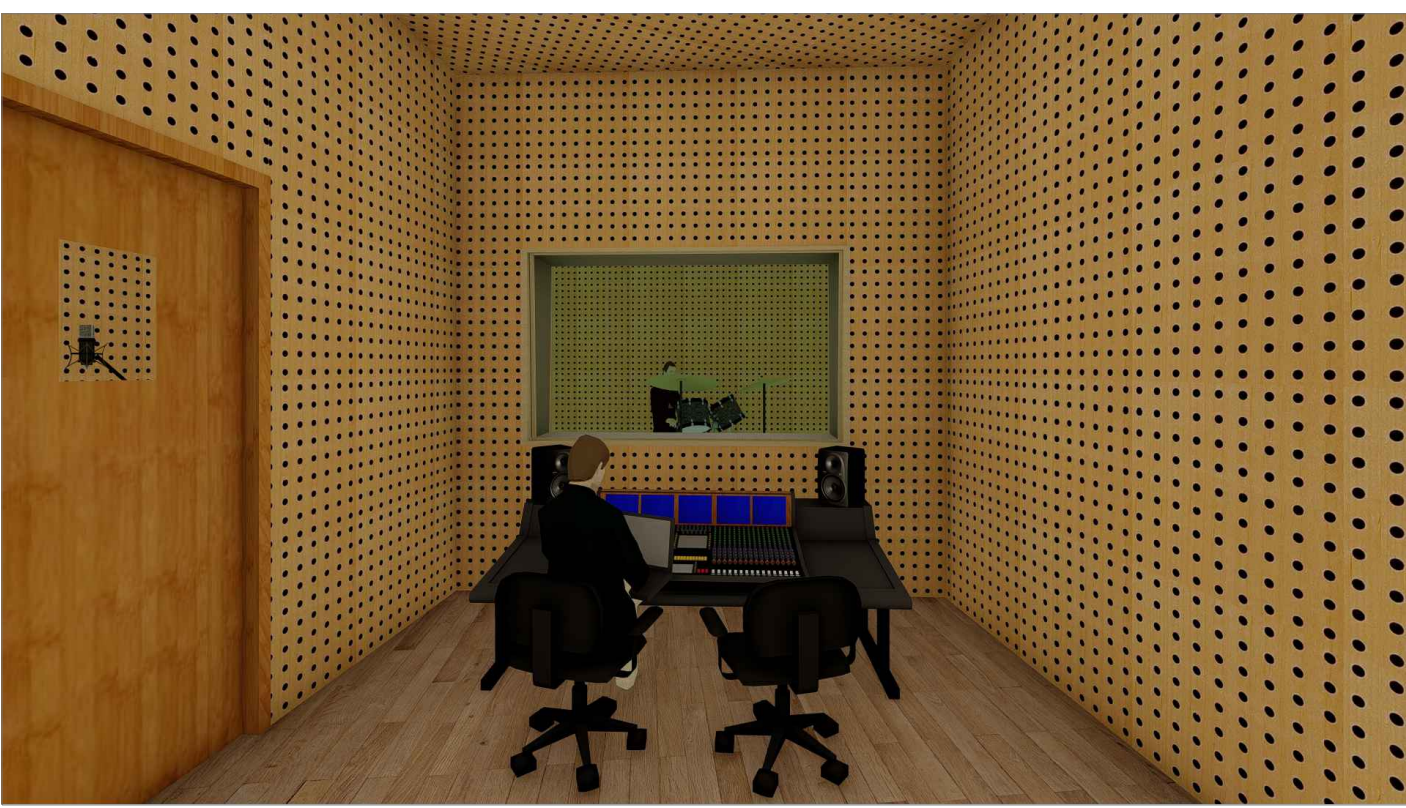


JALI WALL IN ACADEMIC COURTYARD

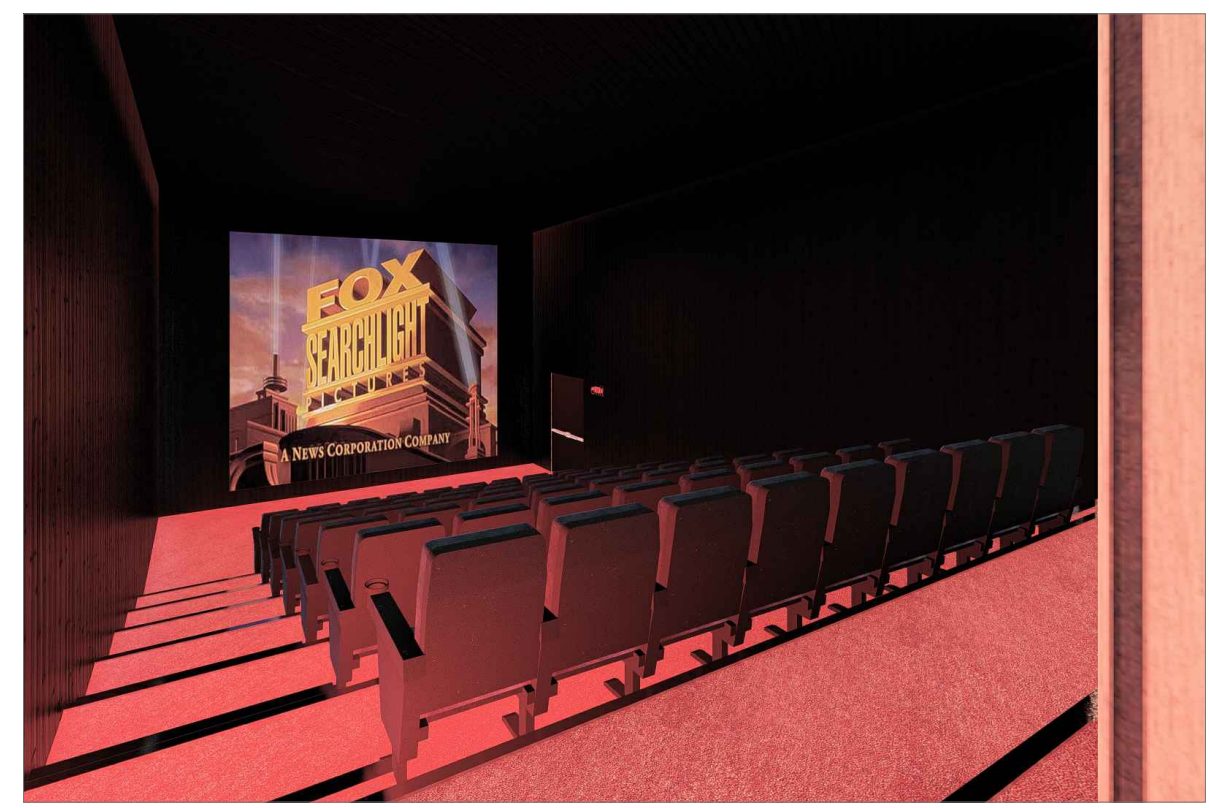
INTERIOR VIEWS



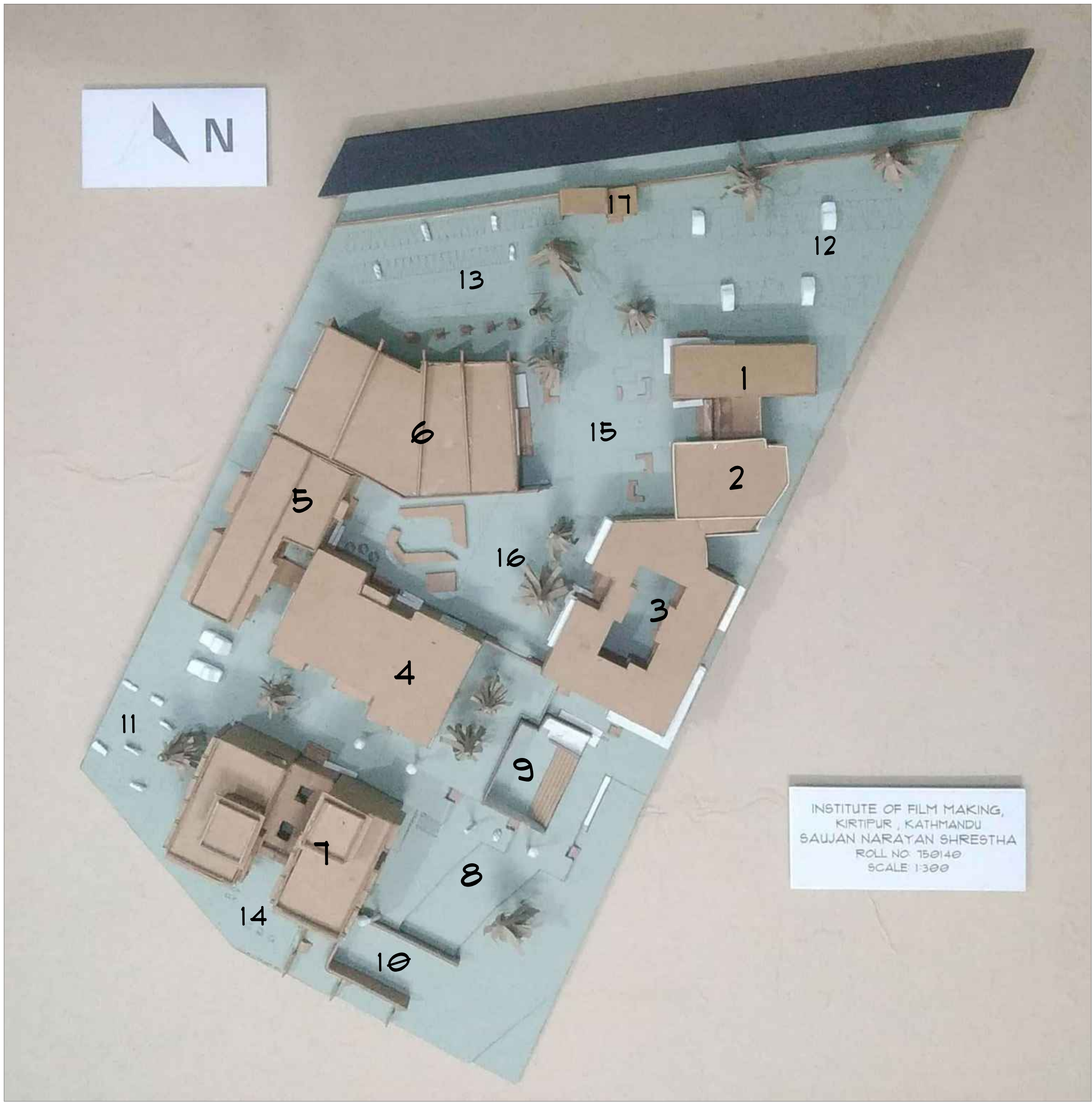
INDOOR MOVIE SHOOTING STUDIO ROOM



SOUND RECORDING STUDIO



CINEMA HALL



- INDEX
- 1. RESTAURANT
 - 2. ADMIN
 - 3. ACADEMIC BLOCK
 - 4. SHOOTING STUDIO BLOCK
 - 5. TECHNICAL STUDIO BLOCK
 - 6. MOVIE THEATRE AND CANTEEN BLOCK
 - 7. CANTEEN AND HOSTEL BLOCK
 - 8. OUTDOOR MOVIE SHOOTING
 - 9. OPEN AIR AMPHITHEATRE
 - 10. CRICKET COURT
 - 11. SERVICE PARKING
 - 12. CAR PARKING
 - 13. BIKE PARKING
 - 14. OPEN GYM
 - 15. PUBLIC PLAZA
 - 16. CENTRAL SPACES
 - 17. GUARD HOUSE

TOP VIEW (MASTER PLAN)



PERSPECTIVE VIEW SHOWING FRONT PORTION



FRONT VIEW FROM MAIN GATE TO BUILDING



PERSPECTIVE VIEWS