

MUSIC CONSERVATORY

A THESIS

Submitted in partial fulfillment of the requirements for the award of
Bachelor of Architecture degree

By

POORNIMA K
(39210059)



DEPARTMENT OF ARCHITECTURE
SCHOOL OF BUILDING AND ENVIRONMENT

SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY) Accredited

With Grade “A” by NAAC

JEPPIAAR NAGAR, RAJIV GANDHI SALAI,
CHENNAI - 600 119

MAY 2024



SATHYABAMA

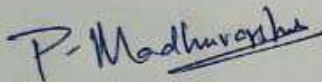
INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

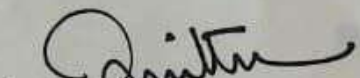
Accredited "A++" Grade by NAAC | 12B Status by UGC | Approved by AICTE
www.sathyabama.ac.in

DEPARTMENT OF ARCHITECTURE

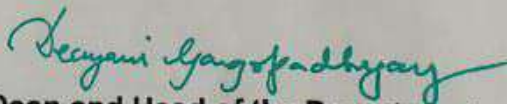
BONAFIDE CERTIFICATE

This is to certify that Thesis Report is the bonafide work of **K.POORNIMA (39210059)** who carried out the Thesis entitled "**MUSIC CONSERVATORY**" under our supervision from December 2023 to May 2024.


Internal Guide
Ar. Madhuvarshini

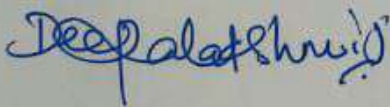

Internal Review Member
Ar. Anitha Murugan


External Guide
Ar. Stanley Clement Daniel


Dean and Head of the Department
Dr. DEVYANI GANGOPADHYAY

Submitted for Viva voce Examination held on

Internal Examiner



External Examiner

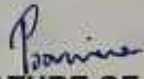



DECLARATION

I, **POORNIMA K** hereby declare that the Thesis Report entitled "Music Conservatory" done by me under the guidance of **Ar.Madhuvarshini** (Internal Guide), **Ar. Anitha Murugan** (Internal Review Member) and **Ar. Stanley Clement Daniel** (External Guide) Sathyabama Institute of Science and Technology is submitted in partial fulfillment of the requirements for the award of Bachelor of Architecture Degree.

DATE: 25/5/2024

PLACE: Chennai


SIGNATURE OF THE CANDIDATE

ACKNOWLEDGEMENT

I am pleased to acknowledge my sincere thanks to Board of Management of **Sathyabama Institute of Science and Technology** for their kind encouragement in doing this Thesis and for completing it successfully. I am grateful to them.

I convey my thanks to **Dr.Devyani Gangopadhay**, Dean and Head of the Department, School of Building and Environment, Our Design Chair **Ar.Sarath C.Kanth** , Thesis Coordinator **Ar.Mohana Gopiraj** for providing me necessary support and details at the right time during the progressive reviews.

I would like to express my sincere and deep sense of gratitude to my Thesis Internal guide **Ar.Madhuvarshini**, Internal Review member **Ar.Anitha Murugan** and External Guide **Ar.Stanley Clement Daniel** their guidance, suggestions and constant encouragement which paved the way for the successful completion of my Thesis work.

I wish to express my thanks to all Teaching and Non-teaching staff members of the **Department of Architecture**, all my family members and also juniors Dinesh and Anushree helpful in many ways for completion of the Thesis.

POORNIMA.K

THESIS SYNOPSIS

Music, a universal language, transcends borders and speaks to the soul. Nurturing musical talent requires a dedicated environment that fosters learning, collaboration, and artistic expression. Music conservatories serve this crucial purpose, acting as crucibles where aspiring musicians refine their skills and ignite their creative fire.

This thesis project delves into the design of a music conservatory for [Target Audience/Location]. Here, we explore the relationship between architecture and music education, investigating how the built environment can actively support the learning process.

The proposed conservatory aims to create a vibrant hub for music, catering to the specific needs of [Target Audience/Location]. Whether it's nurturing young prodigies, providing professional development for established musicians, or fostering a love for music within the community, the design will prioritize spaces that encourage:

- **Immersive Learning:** Practice rooms designed for individual practice and focused study, with exceptional acoustics and advanced technology integration.
- **Collaborative Spirit:** Studios and performance halls that facilitate ensemble rehearsals, fostering communication and teamwork among musicians.
- **Public Engagement:** Open spaces and inviting public areas that draw the community in, creating opportunities for dialogue and shared experiences with music.

By considering these elements, this thesis project aspires to design a music conservatory that transcends the traditional mold. It will be a space that not only nurtures musical talent but also serves as a cultural beacon, enriching the lives of both students and the wider community.

This revised introduction sets the stage for your project by highlighting the importance of music education and the role of the conservatory. It introduces your target audience and location, and outlines the key design considerations – immersive learning, collaborative spirit, and public engagement – which will be central to your thesis.

TABLE OF CONTENTS

CHAPTER No.	TITLE	PAGE No.
	THESIS SYNOPSIS	v
	LIST OF FIGURES	viii
1	INTRODUCTION	1
1.1	INTRODUCTION	1
1.2	NEED OF THE PROJECT	1
1.3	AIM AND OBJECTIVE	1
1.4	METHODOLOGY	2
2	LITERATURE CASE STUDIES	3
2.1	KALKSHETRA	3
2.2	SWAENABHOOMI ACADEMY	7
2.3	ROYAL COLLEGE OF MUSIC	12
3	DATA COLLECTION AND STANDARDS	12
4	SITE STUDY AND ANALYSIS	15
4.1	SITE SELECTION	15
4.2	SITE JUSTIFICATION	15
4.3	SITE ANALYSIS	16
5	ARCHITECTURAL DESIGN	19
5.1	DESIGN SHEETS & DRAWINGS	23

5.2	MODEL	25
6	REFERENCES	26

LIST OF FIGURES

FIGURE No.	TITLE	PAGE No.
2.1	<i>Classroom plan</i>	4
2.2	<i>Classroom</i>	4
2.3	<i>Auditorium</i>	4
2.4	<i>Plan</i>	5
2.5	<i>PLAN</i>	6
2.6	<i>VIEW</i>	6
2.7	<i>More building views</i>	9
2.8	<i>Main block section 1</i>	9
2.9	<i>Main block section 2</i>	12
2.10	<i>Block 1 & 2</i>	13
2.11	<i>Auditorium</i>	13
2.12	<i>Institute pictures (views)</i>	13
2.13	<i>Site Plan</i>	13
2.14	<i>Institute Floor plan</i>	13
2.15	<i>ISOMETRIC</i>	13
3.1	<i>TNCDRBR - 2019</i>	13
3.2	<i>Sanitary fittings for school</i>	13
4.1	<i>Tamil Nadu state map</i>	15
4.2	<i>Kancheepuram map</i>	16
4.3	<i>Site view</i>	16
4.4	<i>Site map</i>	18
4.5	<i>Site analysis</i>	18
4.6	<i>Site analysis plan and section</i>	19
5.1	<i>Site Plan</i>	20
5.1	<i>Ground Floor Plan</i>	21
5.2	<i>First Floor Plan</i>	24
5.3	<i>Second Floor Plan</i>	22

5.4	Auditorium	23
5.5	Site model	23
5.6	Renders	25

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

A music conservatory is an institution that specializes in the comprehensive study and practice of music at the highest level. It surpasses the definition of a traditional school; it serves as a dynamic and creative hub where aspiring musicians can immerse themselves in a world of rehearsals, performances and rigorous training under the guidance of acclaimed faculty. It is akin to a musical boot camp, where students refine their skills, explore diverse genres, and ultimately carve their path in the professional world.

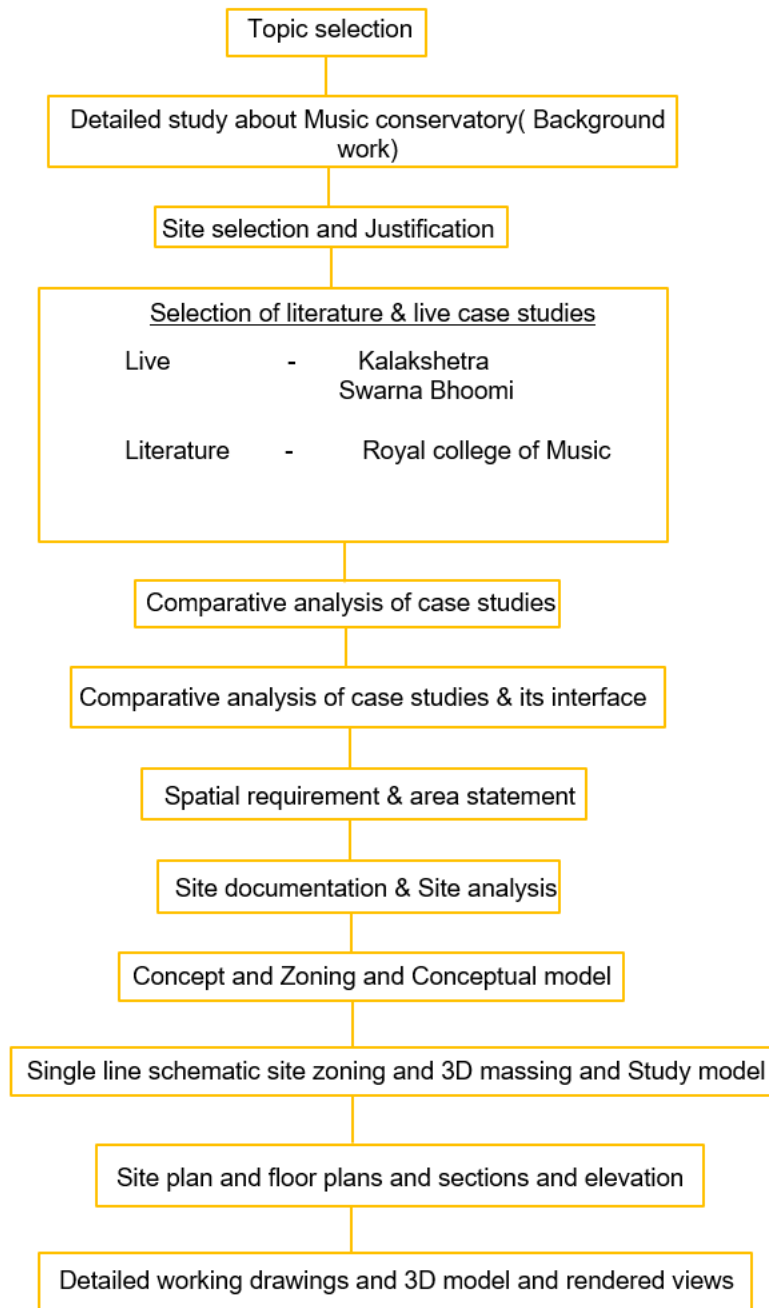
1.2 NEED OF THE PROJECT

Ancient India dating back to thousands of years has evidence of highly developed musical traditions. History suggests a sophisticated musical system in existence around 1000B CE making India a strong contender for being among the earliest cradles of music but in our fast moving world music is not being given its due credit nor the needed importance is being given for music enthusiasts and those that show interest to learn music, inspite it being well integrated with our tradition so the addition of a Music conservatory in preserving and promoting our country's rich tradition such as transmission of knowledge, Standardization and refinement, innovation and experimentation etc.

1.3 AIM AND OBJECTIVE

- (a) To design a music conservatory that fosters artistic excellence, collaboration, and learning within a vibrant and inspiring environment.
- (b) Promotes a unique setting with a wide range of music facilities to refine and enhance the talents of the future generation.
- (c) Offer new opportunities in music and a stage where all genres can merge.
- (d) Bring together musicians from different genres to interact and learn from each other.

1.4 METHODOLOGY



CHAPTER 2

LITERATURE CASE STUDIES

2.1 KALKSHETRA – THIRUVANMIYUR

Location - Thiruvananthapuram, India

Building type- Performance & Institution

2.1.1 DESIGN FEATURES:

Blocks are arranged radically according to the focal point of elements or sculptures etc. The small sculptures like horses, elephants zoned in various spaces inviting the personalized feeling of art. The campus is lined up of huge number of trees acts as a sound buffer which serves a quiet environment. The classrooms, Auditorium and the prayer hall are spread in central part, while administrative parts, dining hall and school covers the outer region. The Padma Pushkarini, a small water body of stones mandapas makes the ambience pleasant. The classrooms are all single-roomed individual cottage like structures with separate plinths and sloping roofs which shows the traditional Gurukulam space.

2.1.2 CLASSROOMS:

Whole All classrooms in the campus are single roomed open cottages with individual plinth, sloping roof and a small verandah like space for footwear. They are sprawled one after the other to create an organic atmosphere. They are all roughly of two sizes (8m x 4.5m and 10m x 7.5m) and each classroom is used for teaching like vocal, music and dance. It is simple concrete blocks with red oxide flooring and dance. It is simple concrete blocks with red oxide flooring and traditional tile roof.

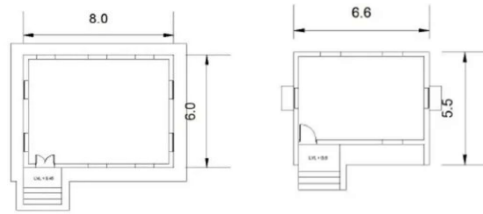


Fig 2.1: Classroom plan



Fig 2.2: Classroom

2.1.3 AUDITORIUM:

The Auditorium can seat 750 – 800 people. Situated centrally in the plot, it is also in direct access from the external road on the north. There are 428 chairs in the octagonal wall of the theatre, 168 chairs in the peripheral varanda and 104 in galleries in balcony. Dressing rooms are available for arts, on the ground floor. The Auditorium has five entrance in which three leads to seating area and two for performing arts. The stage is designed for dance performance and there is space near the stage for musicians to perform. The stage is 18 inches higher than the lower seating area. The stage area is 45% of the audience seating area. The auditorium has 10 levels of seating area, dimension of one is 0.75m x 0.75m x 0.1m. The height of proscenium arch is 3.5m. The height of proscenium arch is 3.5m. The auditorium is covered of traditional roof tile and built with materials and timber finished red oxide flooring. The auditorium has separate restroom and canteen, restroom has 2 washbasins, 6 urinals and 3 Closets which is of 1:120 ratios.



Fig 2.3: Auditorium

2.2 SWAENABHOOMI ACADEMY – CHEYYUR

Location – Chennai , India

Building type - Academy

Site Area – 4 acre

Built-Up Area: 31,500 sqft

2.2.1 Design:

The Court design is inspired by musical notations – with neural cleffs, piano keys, and equalizer bars. Neural clefs represent a note of uncertain pitch and are used for seating and planting areas to symbolize areas without a specific agenda. The compact institute primary required high acoustic training rooms, support spaces, and practice rooms, so we separated the practice rooms and treated the rest as one building.

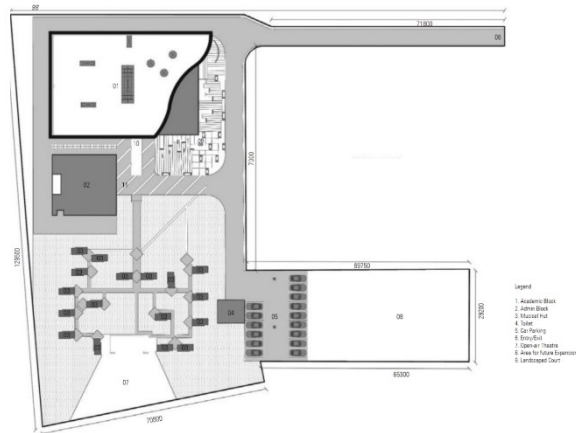


Fig 2.4: Plan

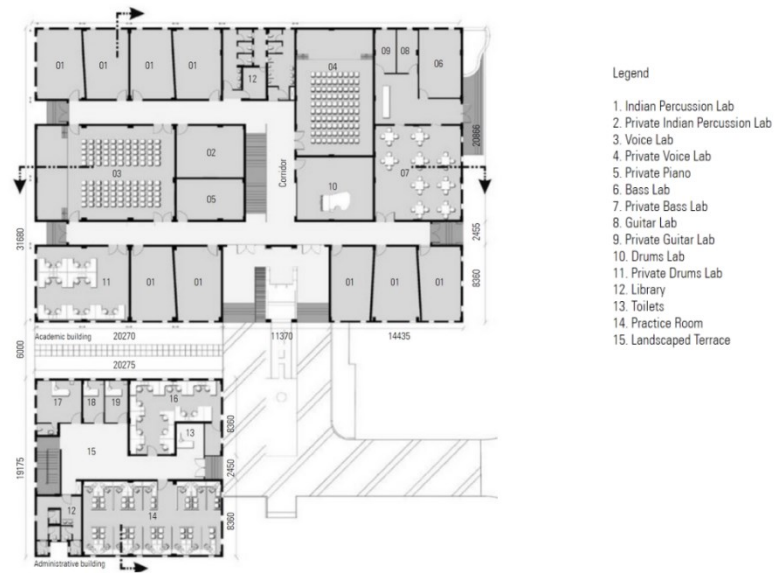


Fig 2.5: Plan

The campus design required three scales of built for the Training Hub, Administrative Hub, and Practice rooms cluster. The Administrative Hub, and practice room cluster. The Admin facility is beside the academic facility and includes faculty and support staff rooms. The piano inspired the building design, which includes a separate one story Admin block that separates the practice rooms cluster from the main building and Training hub.

CAR PARKING: Grass paver blocks for parking

ENTRY/EXIT : The Piano – shaped academic block is 100m from the entrance for a clear view of the building.

OPEN AIR THEATER: Open – air theater for students and faculty located with a lake view.



Fig 2.6: VIEW



Fig 2.7: More building views

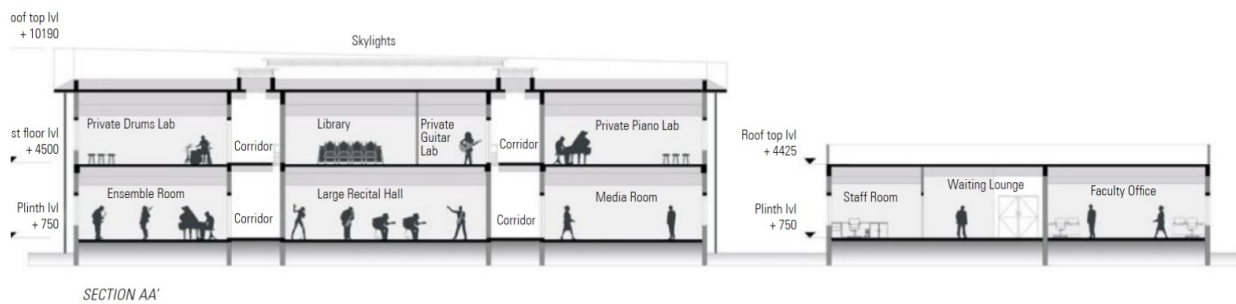


Fig 2.8: Main block section 1

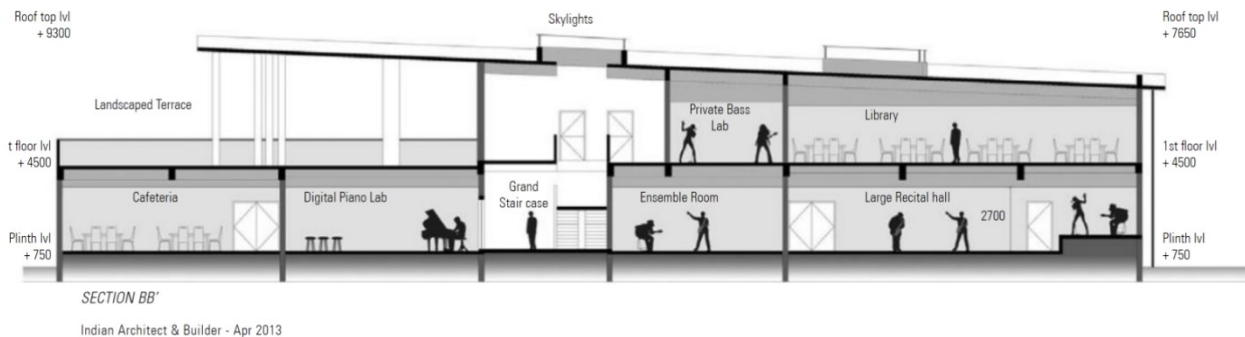


Fig 2.9: Main block section 2

2.2.1 MUSICAL HUT:

Over view : Musical Hit offers private practice rooms outdoors, with rooms measuring 2000mm x 2000mm and spaced 6000mm apart, with doors open, each room offers a full view on the North – South axis.

Grass patches and lawn angles were arranged. The building's color blends with coastal rustic brown and reflects Native culture with Ochre yellow.

Practice rooms, called Musical Huts, are stand – alone structures with open space around them to enhance the interactive learning experience for clients.

Musical huts on an open lawn form a large practice space. The huts are open on both sides, with soundproof doors and slit windows for an acoustically sound practice area for a small group of students.

The training hub was designed with a clear separation between the training area and the Kitchen – dining section. The two halves of the building were separated by a central stair core and reception area, with an open – air theater on the terrace. We used the building's form to create an open-air theatre resembling a grand piano by tilting the second floor roof to resemble the lid.

This project is located on a 2-acre piece of land surrounded by a 600-acre satellite township and a 75-acre institutional segment. The land was chosen for its proximity to the lake to provide neutral scenic value. Though, due to the ongoing construction, dust from the site is carried by coastal breeze into the campus. The lake provides a cool breeze. The Landscape design traps the dust and facilitates better ground water percolation.

2.3 ROYAL COLLEGE OF MUSIC – CAMPAL, PANAJI

2.3.1 PLANNING OF ROYAL COLLEGE OF MUSIC

A music workshop cloaked in shimmering gold glass that arouses curiosity and anticipation. The goal has been ambitious – to create the world's most modern college of music. Along the way, we faced several challenges. Aside from overall high demands on tone control and noise insulation, the educational environment also contains public spaces for performances and experiences. From the exterior, the composition of the new buildings for the college of music has been interwoven with the listed historic stable facility, creating an inviting whole that enriches both the activities within and the urban landscape. At the Royal College of Music, 21,600 square meters of musical experiences have taken shape and as of 2016 are part of the cultural scene in

Stockholm, Sweden and Europe.



Fig 2.10: Block 1 & 2

The main building new and cloaked in shimmering gold glass, is combined with a more restrained plastered wing, which serves as an entrance to the campus through a portico. Suspended in the portico a bespoke and permanent artwork is created by artist Ebba Matz. The sculpture's name is "Sch, tyst, lyssna" which means "hush, silent, listen". In the stone paving leading up to the entrance a sketch with the name "there is no such thing as silence" is engraved. The entrance is situated to the south and allows also for a generous and welcoming outdoor space with an ancient oak tree cautiously preserved on site and in company with new greenery and places to sit in the sun.



Fig 2.11: Auditorium

The college contains four public concert halls for teaching, education and performance.

Each hall is designed for different kinds of musical focus with different acoustical needs and this has resulted in four unique characters. The requirements of tone control have called for a great deal of collaboration with acoustic consultants.

Acoustic sound insulation is very ambitious from an international perspective for music colleges, and the insulation degree is very high even between rehearsal rooms and corridors, many rooms are constructed as floating constructions with no contact to the main structure of the building which has been a challenge for all consultants and contractors. All structural principles, materials, heating fixtures and lighting and are carefully chosen to meet the extremely high acoustical criteria.

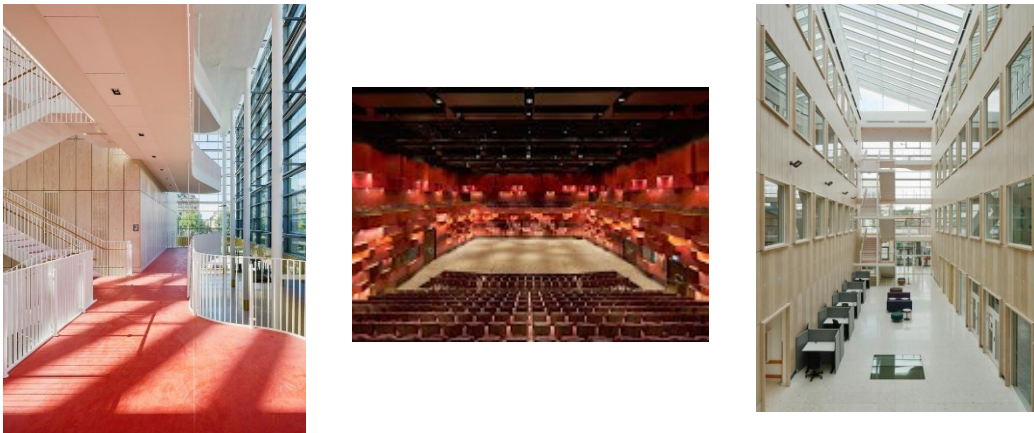


Fig 2.12: Institute pictures (views)



Teckenförklaring

KMH Arkitektur 2016-07-07

1. Stallplan
2. Entréyta mot Valthallavägen
3. Ång
4. Iristrädgård, nedsänkt
5. Gula villans trädgård
6. Lidingövägen
7. Valthallavägen
8. Formklippa lindar
9. Sparad ek

Fig 2.13: Site Plan

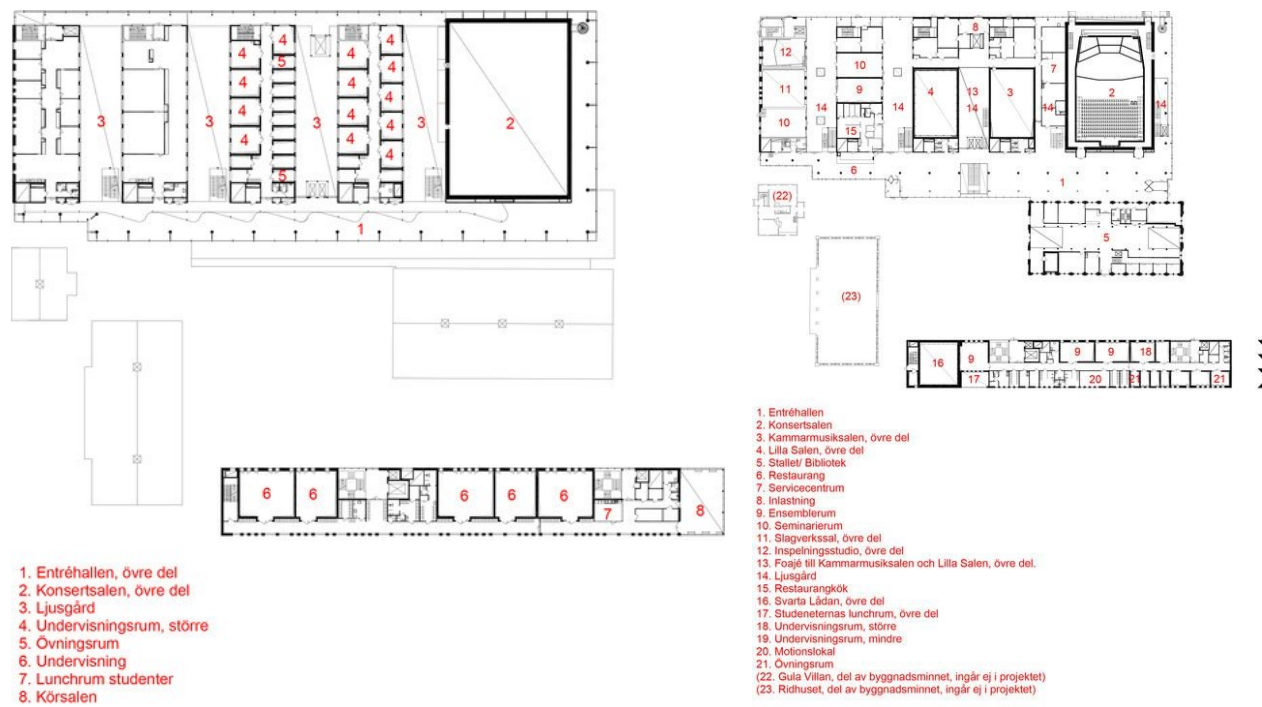


Fig 2.14: Institute Floor plan

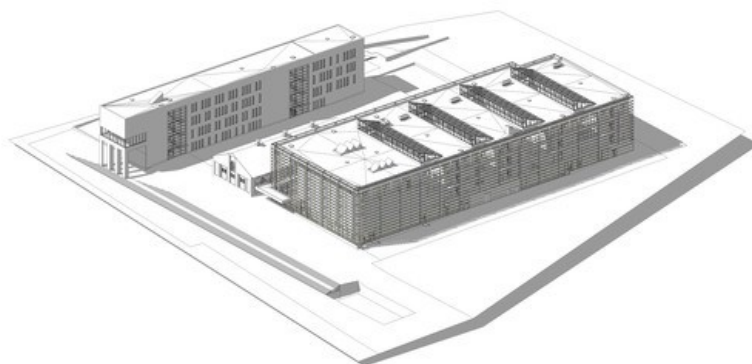


Fig 2.15: Isometric

CHAPTER 3

DATA COLLECTION AND STANDARDS

3.1 STANDARDS:

Planning parameters of Institutional Buildings:

Sl.No.	Description	Continuous Building Areas	Other areas
1	2	3	4
A.	Minimum road width	7.20m	Minimum 7.2m for schools upto higher secondary level and industrial training institutes. For others, min. 9 m
B.	Maximum Height	18.30m.	
C.	Maximum FSI	2.0	
D.	Minimum Setbacks	Where Street Alignment/new road is prescribed, it shall be from that street alignment/narrow line. In the case of others, it shall be from the property boundary.	
(i)	Front Setback	6m	6m
(ii)	Side Setback	Nil	6m
		For schools - 2m	
(iii)	Rear Setback	Nil	6m
		For schools - 2m	
E.	a) Structures permissible in the minimum prescribed Front set back, Side setback and Rear set back are given in the rule 28 b) In addition, Gate pillars, gopurams, and incidental structures (with height not exceeding 4m) such as servant room, cloak room, and watch man booth, cycle stand, Kitchen and toilets are permissible in these minimum prescribed setback spaces.		
F.	Parking spaces shall be provided within the site conforming to standards prescribed in the Annexure - IV.		
G.	Rainwater harvesting provisions as prescribed in the Annexure - XXII.		
H.	The minimum width of corridor shall be as given in rule 42		
I.	Special regulations for physically disabled stated in the rule 43 shall be adhered to.		

Fig 3.1: TNCDRBR - 2019

3.2 Ramps:

- (a) Ramps shall not be allowed in the mandatory setbacks including building line, however ramps may be permitted in the side and rear setbacks after leaving minimum 7m of setback for movement of the fire-fighting vehicles.
- (b) The ramps to basement and parking floors shall be with at least two ramps each with a minimum of 3.6m wide or one ramp with a minimum of 5.4m wide, provided with gradient of 1:8 for cars and 1:15 for heavy vehicles. At curved portions of the ramp the slope should not be more than 1:12.

3.4 Corridors:

- (a) Exit corridors and passageways shall be of width not less than the aggregate required width of exit doorways leading from them in the direction of travel to the exterior.
- (b) The minimum width of a corridor in a residential building shall be 1.2m for single loaded and 2.0m for double loaded and in all other buildings shall be 1.5m.
- (c) Where stairways discharge through corridors and passageways, the height of corridors and passageways shall be not less than 2.4m.

3.5 Pathways:

- (a) Public walks should be at least 1200mm wide and should have a gradient not greater than 1 in 20
- (b) A walk shall have a level platform at the top which is at least 1500mm long, if a door swings out onto the platform or towards the walk. This platform shall extend at least 300mm beyond each side of the doorway.
- (c) A walk shall have a level platform at least 900 mm deep, if the door does not swing onto the platform or towards the walk. This platform shall extend at least 300 mm beyond each side of the doorway.

3. Sanitary fittings:

TABLE 9 SANITARY FITTINGS FOR SCHOOLS				
(Clause 16.2)				
Sl. No.	FITMENTS	PRE-SCHOOLS	SCHOOLS OTHER THAN PRE-SCHOOLS	
			For Boys	For Girls
(1)	(2)	(3)	(4)	(5)
1.	Water-closets	1 per 15 pupils or part thereof	1 per 40 pupils or part thereof	1 per 40 pupils or part thereof
			← 1 per 30 members of staff or part thereof →	
2.	Ablution taps	1 in each water-closet	1 in each water-closet	1 in each water-closet
		1 water tap with draining arrangements shall be provided for every 50 pupils or part thereof in the vicinity of water-closets and urinals		
3.	Urinals	—	1 per 20 pupils or part thereof	Squatting plate urinals 1 per 20 pupils or part thereof
			← 1 per 30 members of staff or part thereof →	
4.	Wash basins	1 per 15 pupils or part thereof	1 per 40 pupils or part thereof	1 per 40 pupils or part thereof
			← 1 per 30 members of staff or part thereof →	
5.	Baths	1 bath-sink per 40 pupils or part thereof	—	—
6.	Drinking water fountains	← 1 for every 50 pupils or part thereof →		
7.	Cleaner's sink	← 1 per floor, Min →		

Fig 3.6: Sanitary fittings for school

CHAPTER 4

SITE STUDY AND ANALYSIS

4.1 SITE JUSTIFICATION:

Site is in Thiruporur which is located on the Old Mahabalipuram Road. Total site is 41,344sq.m



Fig 4.1(a): Tamil Nadu state map

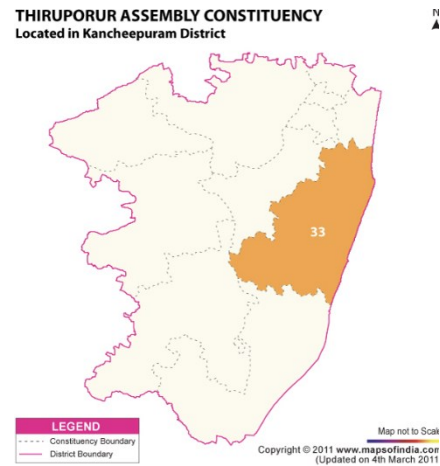


Fig 4.1(b): Kancheepuram District map

4.2 SITE JUSTIFICATION :

Site is located in the center of the village on the main road so it will be easy for other village students to come to school. The surroundings of the site is residential area. There is a bus stop opposite to the site.



Fig 4.2(a),(b): Site view

4.3 SITE ANALYSIS:

4.3.1 Neighborhood Context:

The OMR is an important route that connects multiple suburban area, towns, and tourist destination. It links various residential neighborhoods, educational institutions, and commercial hubs, thereby improving overall regional connectivity. However the OMR suffers from heavy traffic, particularly during weekends and peak tourist seasons, which often leads to congestion and delays.



Fig 4.3: Site map

4.3.2 Site and Zoning:

Setbacks – South (Front) - 6m
East - 6m
West - 6m
North - 6m

Height restriction - 15m

FSI Allowed – 1.5

Parking - 10% of the site
- 4,873sq.m

4.3.3 Circulation:

Site has two sides road access. Nearby Bus stop: SSN bus stop and Komman nagar bus stop which is a 5 minute walk to the site. The nearest railway station is Vandalur railway station is located 8 kilometers away. The Chennai International Airport is located around 45 Kilometers from Kalavakkam.

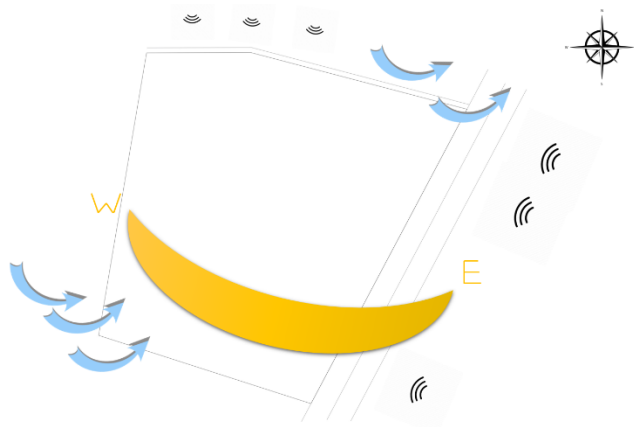


Fig 4.5(a): Site analysis

4.3.6 Climate of Thiruporur:

The climate is tropical in Thiruporur. When compared with winter, the summers have much more rainfall.

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature °C (°F)	24.6 °C (76.2) °F	25.5 °C (77.8) °F	27.4 °C (81.3) °F	29.4 °C (84.9) °F	30.8 °C (87.5) °F	30.5 °C (86.9) °F	29.9 °C (85.7) °F	29.2 °C (84.5) °F	28.7 °C (83.7) °F	27.4 °C (81.3) °F	25.9 °C (78.6) °F	24.9 °C (76.8) °F
Min. Temperature °C (°F)	21.7 °C (71) °F	22 °C (71.6) °F	23.9 °C (75) °F	26.7 °C (80.1) °F	28.1 °C (82.6) °F	27.9 °C (82.2) °F	27.2 °C (81) °F	26.7 °C (80.1) °F	26.3 °C (79.3) °F	25.1 °C (77.2) °F	23.8 °C (74.8) °F	22.6 °C (72.7) °F
Max. Temperature °C (°F)	27.7 °C (81.8) °F	29.2 °C (84.6) °F	31.3 °C (88.4) °F	33.1 °C (91.5) °F	35 °C (95) °F	34.5 °C (94.1) °F	33.7 °C (92.6) °F	32.8 °C (91) °F	32 °C (89.7) °F	30.2 °C (86.3) °F	28.4 °C (83.1) °F	27.4 °C (81.2) °F
Precipitation / Rainfall mm (in)	16 (0)	8 (0)	12 (0)	20 (0)	45 (1)	64 (2)	65 (2)	96 (3)	113 (4)	225 (8)	230 (9)	113 (4)
Humidity(%)	74%	74%	74%	75%	70%	65%	65%	69%	75%	80%	80%	77%
Rainy days (d)	3	2	2	3	4	7	9	11	12	15	13	7
avg. Sun hours (hours)	7.3	8.1	8.9	9.5	10.9	11.2	10.9	10.6	10.2	8.5	7.3	6.8

Fig 4.5(b): Site analysis plan and section

May is the warmest month at 24.6 deg c|76.2 deg c on Average.

January is the coldest month of the year.

The wettest month is October (19.83 days).

The driest month is February (2.10 days).

The month with the most relative humidity is October (80.33%).

The month with the least relative humidity is June (64.83%).

CHAPTER 5

ARCHITECTURAL DESIGN

5.1 DESIGN SHEETS AND DRAWINGS



FIG 5.1: SITE PLAN

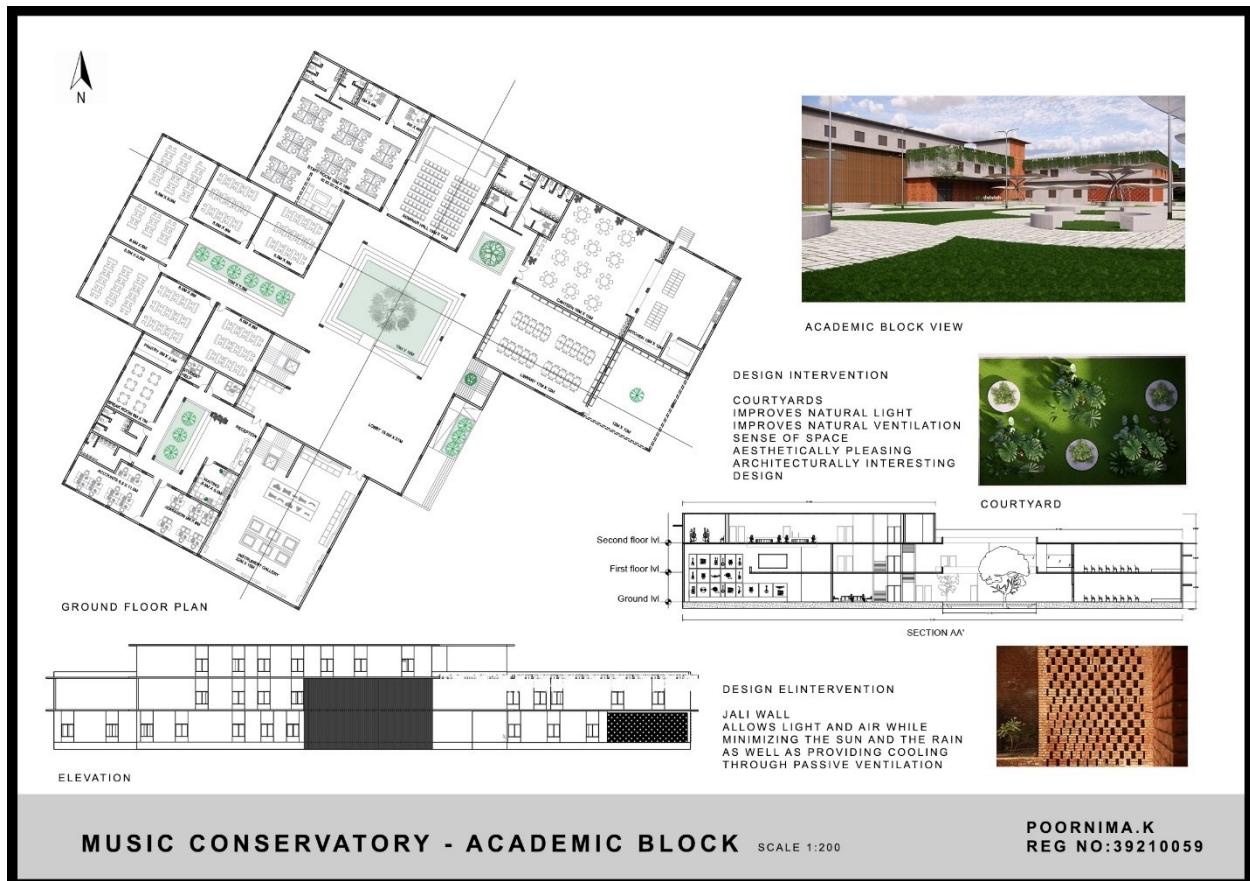


FIG 5.2: GROUND FLOOR PLAN

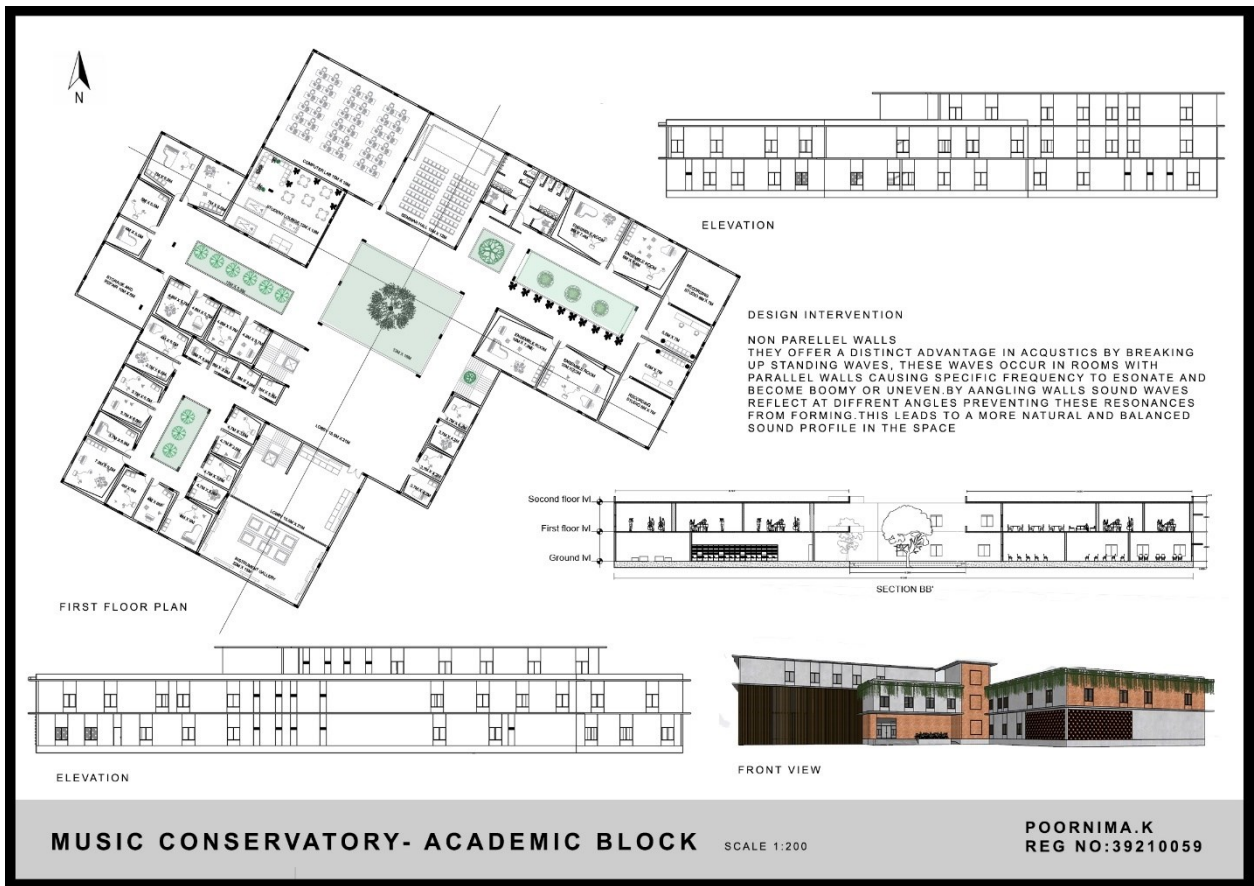


FIG 5.3: FIRST FLOOR PLAN

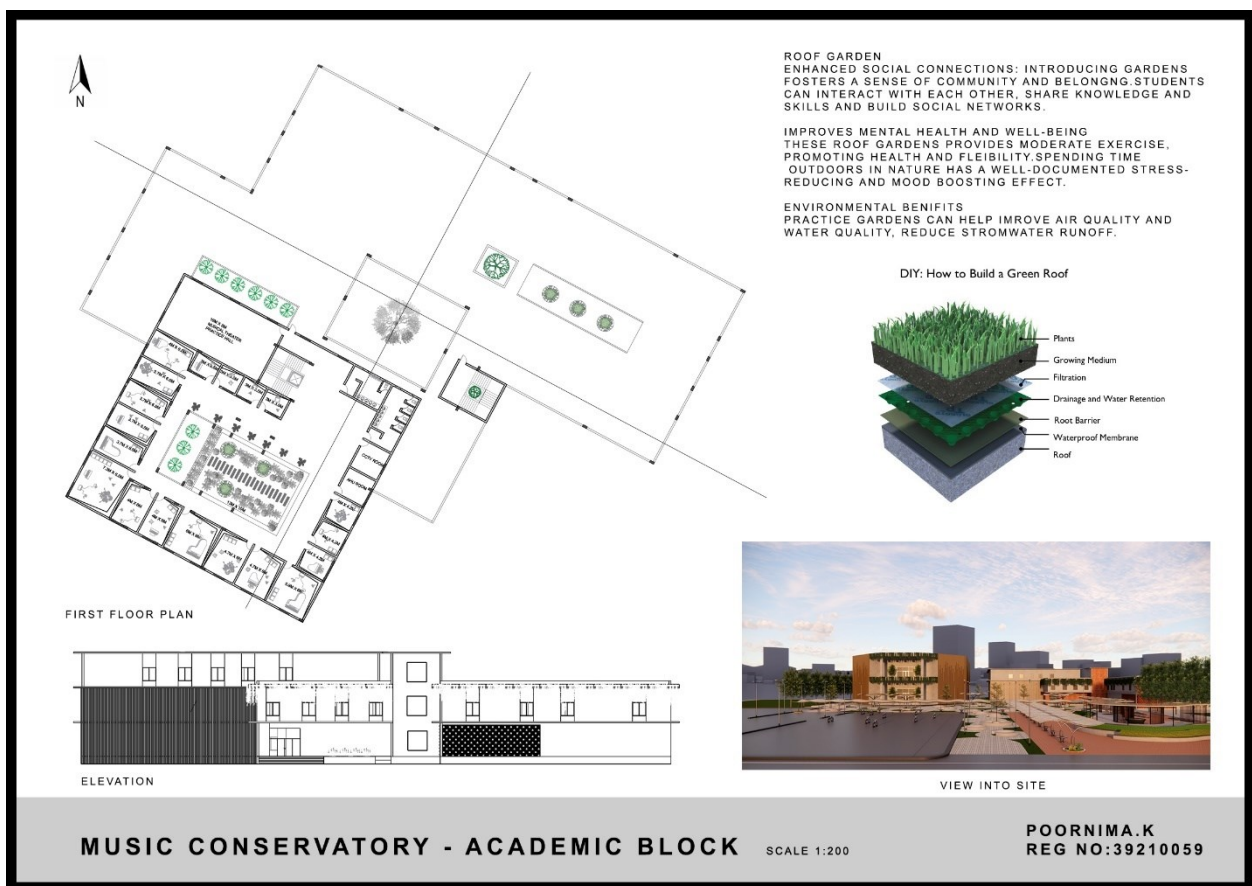


FIG 5.4: SECOND FLOOR PLAN

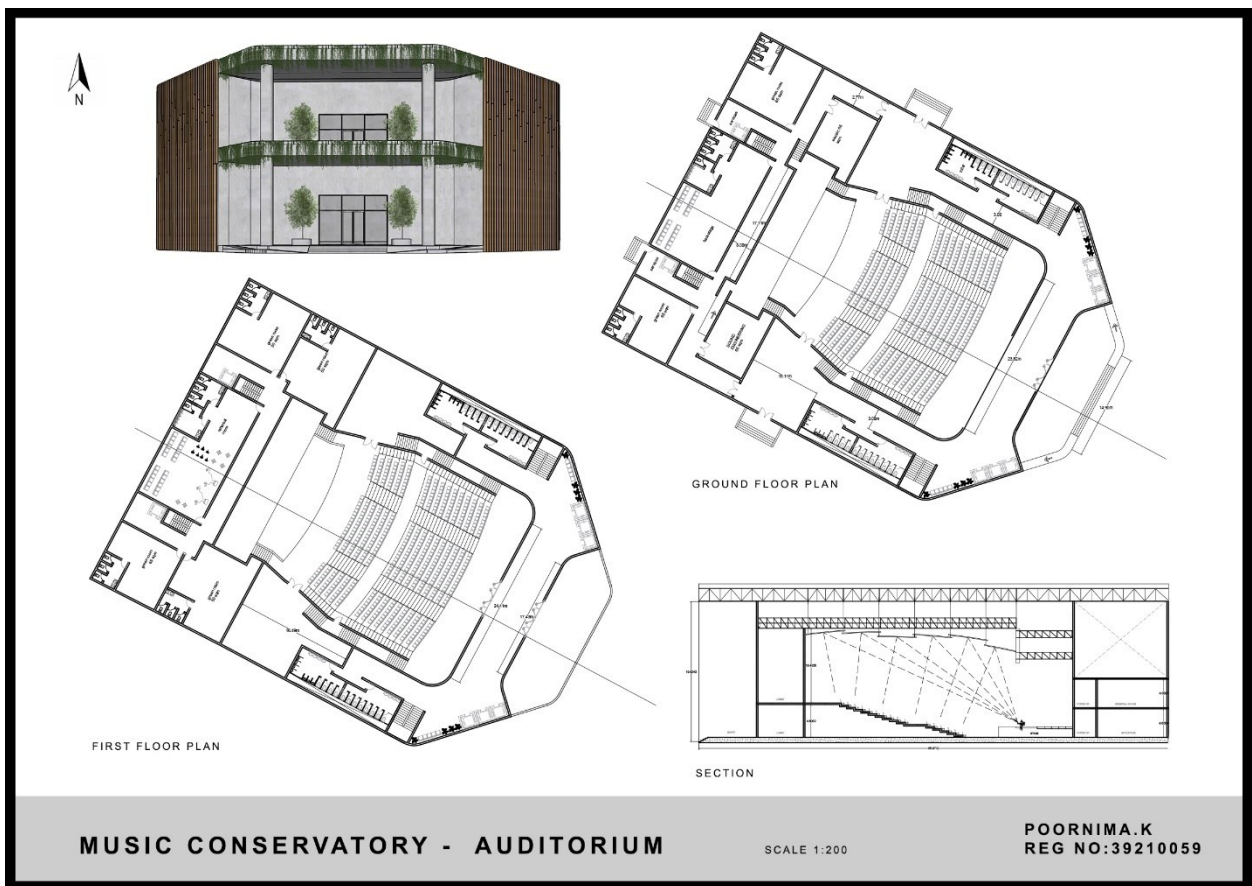


FIG 5.4: AUDITORIUM PLAN

5.2 MODEL:



FIG 5.5: SITE MODEL



FIG 5.6: RENDERS

CHAPTER 6

REFERENCES

6.1 References:

1. <https://sam.org.in/>
2. <https://www.scribd.com/presentation/464580018/444243849-Kalakshetra-case-study-pptx-pptx>
3. <https://www.archdaily.com/896582/royal-college-of-music-aix-arkitekter>