

PROFESSIONAL TRAINING REPORT

Submitted in partial fulfillment of the requirements for the award of
Master of Architecture degree in Sustainable Architecture

by

Swagatika Panda (Reg.No- 40890019)



**SCHOOL OF BUILDING AND ENVIRONMENT
DEPARTMENT OF ARCHITECTURE**

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)
Accredited with Grade "A" by NAAC
JEPPIAARNAGAR, RAJIV GANDHI SALAI, CHENNAI - 600119

JAN 2022



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

(Est U/s(3) of UGC Act,1956) Accredited with Grade "A" by NAAC (A Christian Minority Institution)



JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHEMMENCHERY, CHENNAI – 600119. TAMILNADU.

PHONE: 2450 1443/9941912481 INTERNET: www.sathyabama.ac.in

E-mail: archhod@sathyabama.ac.in

**SCHOOL OF BUILDING AND ENVIRONMENT
DEPARTMENT OF ARCHITECTURE
M. Arch (Sustainable Architecture)**

**PROFESSIONAL TRAINING PORTFOLIO (S89A PT)
JAN 2022**

Name of the Student : Swagatika Panda

Semester :III

Reg No. : 40890019

Batch : 2020-2022



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

(Est U/s(3) of UGC Act, 1956) Accredited with Grade "A" by NAAC (A Christian Minority Institution)

JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHEMMENCHERY, CHENNAI – 600119. TAMILNADU.

PHONE: 2450 1443/9941912481 INTERNET: www.sathyabama.ac.in

E-mail: archhod@sathyabama.ac.in



SCHOOL OF BUILDING AND ENVIRONMENT

DEPARTMENT OF ARCHITECTURE

M. Arch (Sustainable Architecture)

BONAFIDE CERTIFICATE

This is to certify that the professional training (S89A PT) is the work of **Swगतिका Panda (Reg.No. – 40890019)** who had undergone training in **Skylim technica Private Limited.** and has been monitored by the continuous assessment during **Dec 2021 to Jan 2022.**

DR.DEVYANI GANGOPADHYAY

DEAN,

School of Building and
Environment

Department of Architecture

Submitted for Viva voce Examination held on _____

Internal Examiner

External Examiner



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

(Est U/s(3) of UGC Act, 1956) Accredited with Grade "A" by NAAC (A Christian Minority Institution)

JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHEMMENCHERY, CHENNAI – 600119. TAMILNADU.

PHONE: 2450 1443/9941912481 INTERNET: www.sathyabama.ac.in

E-mail: archhod@sathyabama.ac.in



DECLARATION

I, **Swagatika Panda** hereby declare that the Professional Training Report (**from 01.12.2021 to 13.01.2022**) done by me under the guidance of **Mr. Subhendu Bhattacharya (The Director)** is submitted in partial fulfillment of the requirements for the completion of practical training session.

DATE : 17-01-2022

PLACE : Bhubaneswar

SIGNATURE OF CANDIDATE

ACKNOWLEDGEMENT

I am pleased to acknowledge my sincere thanks to Board of Management of **SATHYABAMA** for their kind encouragement in doing this project and for completing it successfully. I am grateful to them.

I convey my thanks to **Dr. Devyani Gangopadhyay**, Dean and Head of Department , School of building and Environment, Dept. of architecture for providing me necessary support and details at the right time during the progressive training session.

I would like to express my sincere and deep sense of gratitude to **Mr. Subhendu Bhattacharya (The Director) of Skylim technica Pvt Ltd.** for his valuable guidance, suggestions and constant encouragement paved way for the successful completion of my project work. My sincere thanks to **Ar. Sheetal Amraotkar** Professional Training Coordinator for her motivation and guidance.

I wish to express my thanks to all Teaching and Non-teaching staff members of the Department of Architecture who were helpful in many ways for the completion of the project.

Also thanks to, Mr. Subhendu Bhattacharya, The director, Skylim technica Pvt.Ltd. Plot No. CP-116, 1st Floor near Budha Park, Niladri Vihar, Bhubaneswar, Pin- 751021



Dt:01-12-2021
Bhubaneswar

To,
The Head of the department,
Sathyabama Institute of Science and Technology,
Rajiv Gandhi Salai, Jeppiaar Nagar,
Chennai – 600119
Tamil Nadu.

Respected Sir/Madam,

Subject: Confirmation Letter

This is to confirm that Mrs. **SWAGATIKA PANDA (REGD. NO. 40890019)**, pursuing M.Arch. in Sustainable Architecture in Sathyabama Institute of Science and Technology, will be undergoing her internship in our organization from 01-12-2021 to 13-01-2022, for a period of 36 working days.

Yours sincerely,

For **Skylim Technica Pvt. Ltd.**



SKYLIM TECHNICA (P) LTD

Corporate Office : Plot No. CP-116, 1st Floor Near Budha Park, Niladri Vihar, Bhubaneswar-751021



Dt:01-12-2021
Bhubaneswar

To,
The Head of the department,
Sathyabama Institute of Science and Technology,
Rajiv Gandhi Salai, Jeppiaar Nagar,
Chennai – 600119
Tamil Nadu.

Respected Sir/Madam,

Subject: Joining Letter

This is to confirm that Mrs. **SWAGATIKA PANDA (REGD. NO. 40890019)**, pursuing M.Arch. in Sustainable Architecture in Sathyabama Institute of Science and Technology, is joining as a “**ARCHITECTURAL TRAINEE**” at our organization from 01-12-2021 to 13-01-2022, for a period of 36 working days.

Yours sincerely,

For **Skylim Technica Pvt. Ltd.**



SKYLIM TECHNICA (P) LTD

Corporate Office : Plot No. CP-116, 1st Floor Near Budha Park, Niladri Vihar, Bhubaneswar-751021





SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

Accredited with 'A' grade by NAAC
Joppliar Nagar, Rajiv Gandhi Salai, Chennai - 600 119.
Phone: 044 - 2450 3150 / 3151 / 3152 / 3154 / 3155 Fax: 044 - 2450 2344
www.sathyabama.ac.in



DEPARTMENT OF ARCHITECTURE M. Arch (Building management)

Continuous Assessment Report for Professional training

(Continuous progress report of the trainee architect/Project Manager for the period of 30 working days in the office to be submitted to HOD by the Trainee attending the training session)

1. Name of the office / organization : *Skylin Technica Pvt Ltd.*
2. Address & Contact Number : *Plot No. 116, 1st Floor near Buddha Park Niladri Vihar, Bhubaneswar, Odisha Ph. No - 9437014034*
3. Name of the student : *Swagatika Panda*
4. Duration : *From 1st December To 4th December 2021*
5. Total No. of days : *04 Days*
6. Evaluation of Performance criteria shall be on

* Note: Kindly grade the student as per his/her overall performance in the office during the assessment month, which will be converted to the allotted 200 marks by the department.

Description of works	Excellent	Good	Fair	Poor	NA
Understanding of office culture and methodology		✓			
Active Participation in the Project activities			✓		
Documentation and tracking of project		✓			
Presentation Skills developed		✓			
Understanding of construction details & techniques			✓		
Participation and contribution in project meetings			✓		
Understanding of codes and standards		✓			
Schedule preparation & tracking activities		✓			
Preparation / Management of drawings	✓				
Learning / Application of software in Projects		✓			
Preparation of concept for projects		✓			
Site Management / Discussion with clients	✓				
Overall Grading*	B				

(A - 80, B - 70, C - 60, D - 55, E - 50, F - <5)

7. Any other Remarks : _____

8. Signature of the
Head of the Office /
Organization (With Seal)



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

Accredited with 'A' grade by NAAC
Joppliar Nagar, Rajiv Gandhi Salai, Chennai - 600 119.
Phone: 044 - 2450 3150 / 3151 / 3152 / 3154 / 3155 Fax: 044 - 2450 2344
www.sathyabama.ac.in



DEPARTMENT OF ARCHITECTURE M. Arch (Building management)

Continuous Assessment Report for Professional training

(Continuous progress report of the trainee architect/Project Manager for the period of 30 working days in the office to be submitted to HOD by the Trainee attending the training session)

1. Name of the office / organization : *Skylin Technica Pvt. Ltd.*
2. Address & Contact Number : *Plot No. 116, 1st Floor near Buddha Park, Niladri Vihar, Bhubaneswar Odisha, Ph. No - 9437014034*
3. Name of the student : *Swagatika Panda*
4. Duration : *From 6th December To 11th December 2021*
5. Total No. of days : *06 Days*
6. Evaluation of Performance criteria shall be on

* Note: Kindly grade the student as per his/her overall performance in the office during the assessment month, which will be converted to the allotted 200 marks by the department.

Description of works	Excellent	Good	Fair	Poor	NA
Understanding of office culture and methodology		✓			
Active Participation in the Project activities		✓			
Documentation and tracking of project			✓		
Presentation Skills developed	✓				
Understanding of construction details & techniques		✓			
Participation and contribution in project meetings		✓			
Understanding of codes and standards	-	-	-	-	-
Schedule preparation & tracking activities		✓			
Preparation / Management of drawings		✓			
Learning / Application of software in Projects			✓		
Preparation of concept for projects	✓				
Site Management / Discussion with clients		✓			
Overall Grading*	B				

(A - 80, B - 70, C - 60, D - 55, E - 50, F - <5)

7. Any other Remarks : _____

8. Signature of the
Head of the Office /
Organization (With Seal)





SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

Accredited with 'A' grade by NAAC
Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119.

Phone: 044 - 2450 3150 / 3151 / 3152 / 3154 / 3155 Fax: 044 - 2450 2344
www.sathyabama.ac.in



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

Accredited with 'A' grade by NAAC
Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119.

Phone: 044 - 2450 3150 / 3151 / 3152 / 3154 / 3155 Fax: 044 - 2450 2344
www.sathyabama.ac.in



DEPARTMENT OF ARCHITECTURE

M. Arch (Building management)

Continuous Assessment Report for Professional training

(Continuous progress report of the trainee architect/Project Manager for the period of 30 working days in the office to be submitted to HOD by the Trainee attending the training session)

1. Name of the office / organization : Skylim Technica Pvt. Ltd.
2. Address & Contact Number : Plot No. 116, 1st floor near Buddha Park, Niladri Vihar, Bhubaneswar Odisha, Phone No - 9437014034
3. Name of the student : Swagatika Panda
4. Duration : From 13th December 2021 To 19th December 2021
5. Total No. of days : 06 Days
6. Evaluation of Performance criteria shall be on

* Note: Kindly grade the student as per his/her overall performance in the office during the assessment month, which will be converted to the allotted 200 marks by the department.

Description of works	Excellent	Good	Fair	Poor	NA
Understanding of office culture and methodology		✓			
Active Participation in the Project activities		✓			
Documentation and tracking of project	✓				
Presentation Skills developed		✓			
Understanding of construction details & techniques		✓			
Participation and contribution in project meetings		✓			
Understanding of codes and standards			✓		
Schedule preparation & tracking activities		✓			
Preparation / Management of drawings		✓			
Learning / Application of software in Projects			✓		
Preparation of concept for projects		✓			
Site Management / Discussion with clients		✓			
Overall Grading*	A				

(A - 80, B - 70, C - 60, D - 55, E - 50, F - <5)

7. Any other Remarks : _____

8. Signature of the
Head of the Office /
Organization (With Seal)

[Signature]



DEPARTMENT OF ARCHITECTURE

M. Arch (Building management)

Continuous Assessment Report for Professional training

(Continuous progress report of the trainee architect/Project Manager for the period of 30 working days in the office to be submitted to HOD by the Trainee attending the training session)

1. Name of the office / organization : Skylim Technica Pvt. Ltd.
2. Address & Contact Number : Plot no. 116, 1st floor near Buddha Park, Niladri Vihar, Bhubaneswar Odisha, Ph.no - 9437014034
3. Name of the student : Swagatika Panda
4. Duration : From 20th December 2021 To 24th December 2021
5. Total No. of days : 05 Days
6. Evaluation of Performance criteria shall be on

* Note: Kindly grade the student as per his/her overall performance in the office during the assessment month, which will be converted to the allotted 200 marks by the department.

Description of works	Excellent	Good	Fair	Poor	NA
Understanding of office culture and methodology		✓			
Active Participation in the Project activities		✓			
Documentation and tracking of project			✓		
Presentation Skills developed			✓		
Understanding of construction details & techniques		✓			
Participation and contribution in project meetings			✓		
Understanding of codes and standards		✓			
Schedule preparation & tracking activities		✓			
Preparation / Management of drawings		✓			
Learning / Application of software in Projects			✓		
Preparation of concept for projects		✓			
Site Management / Discussion with clients		✓			
Overall Grading*	B				

(A - 80, B - 70, C - 60, D - 55, E - 50, F - <5)

7. Any other Remarks : _____

8. Signature of the
Head of the Office /
Organization (With Seal)

[Signature]





SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

Accredited with 'A' grade by NAAC
Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119.

Phone: 044 - 2450 3150 / 3151 / 3152 / 3154 / 3155 Fax: 044 - 2450 2344
www.sathyabama.ac.in



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

Accredited with 'A' grade by NAAC
Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119.

Phone: 044 - 2450 3150 / 3151 / 3152 / 3154 / 3155 Fax: 044 - 2450 2344
www.sathyabama.ac.in



DEPARTMENT OF ARCHITECTURE M. Arch (Building management)

Continuous Assessment Report for Professional training

(Continuous progress report of the trainee architect/Project Manager for the period of 30 working days in the office to be submitted to HOD by the Trainee attending the training session)

- Name of the office / organization : Skylim technica Pvt. Ltd.
Plot no. 116, 1st floor, near Buddha Park
- Address & Contact Number : Niladri Vihar, Bhubaneswar, Odisha
Ph. no. - 9437014034
- Name of the student : Swagatika Panda
- Duration : From 27th December 2021 To 31st December 2021
- Total No. of days : 05 Days
- Evaluation of Performance criteria shall be on

* Note: Kindly grade the student as per his/her overall performance in the office during the assessment month; which will be converted to the allotted 200 marks by the department.

Description of works	Excellent	Good	Fair	Poor	NA
Understanding of office culture and methodology	✓				
Active Participation in the Project activities	✓				
Documentation and tracking of project	✓				
Presentation Skills developed	✓	✓			
Understanding of construction details & techniques		✓			
Participation and contribution in project meetings			✓		
Understanding of codes and standards			✓		
Schedule preparation & tracking activities	✓				
Preparation / Management of drawings	✓				
Learning / Application of software in Projects	✓				
Preparation of concept for projects		✓			
Site Management / Discussion with clients	✓				
Overall Grading*	A				

(A - 8.0, B - 7.0, C - 6.0, D - 5.5, E - 5.0, F - <5)

7. Any other Remarks :

8. Signature of the
Head of the Office /
Organization (With Seal)



DEPARTMENT OF ARCHITECTURE M. Arch (Building management)

Continuous Assessment Report for Professional training

(Continuous progress report of the trainee architect/Project Manager for the period of 30 working days in the office to be submitted to HOD by the Trainee attending the training session)

- Name of the office / organization : Skylim technica Pvt. Ltd.
Plot no. 116, 1st floor, near Buddha Park, Niladri Vihar, Bhubaneswar, Odisha
- Address & Contact Number : Niladri Vihar, Bhubaneswar, Odisha
Ph. no. - 9437014034
- Name of the student : Swagatika Panda
- Duration : From 3rd January 2022 To 8th January 2022
- Total No. of days : 06 Days
- Evaluation of Performance criteria shall be on

* Note: Kindly grade the student as per his/her overall performance in the office during the assessment month; which will be converted to the allotted 200 marks by the department.

Description of works	Excellent	Good	Fair	Poor	NA
Understanding of office culture and methodology	✓				
Active Participation in the Project activities	✓				
Documentation and tracking of project	✓				
Presentation Skills developed		✓			
Understanding of construction details & techniques	✓				
Participation and contribution in project meetings	✓				
Understanding of codes and standards		✓			
Schedule preparation & tracking activities		✓			
Preparation / Management of drawings	✓				
Learning / Application of software in Projects	✓				
Preparation of concept for projects	✓				
Site Management / Discussion with clients	✓				
Overall Grading*	A				

(A - 8.0, B - 7.0, C - 6.0, D - 5.5, E - 5.0, F - <5)

7. Any other Remarks :

8. Signature of the
Head of the Office /
Organization (With Seal)





SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

Accredited with 'A' grade by NAAC
Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119.

Phone: 044 - 2450 3150 / 3151 / 3152 / 3154 / 3155 Fax: 044 - 2450 2344
www.sathyabama.ac.in



DEPARTMENT OF ARCHITECTURE

M. Arch (Building management)

Continuous Assessment Report for Professional training

(Continuous progress report of the trainee architect/Project Manager for the period of 30 working days in the office to be submitted to HOD by the Trainee attending the training session)

- Name of the office / organization : *Skylem technica Pvt. Ltd.*
- Address & Contact Number : *Plot no.116, 1st Floor, Niladri Vihar, Bhubaneswar, Odisha, Ph.no. - 9437014034*
- Name of the student : *Swagatika Panda*
- Duration : *From 10th January To 13th January 2022*
- Total No. of days : *04 Days*
- Evaluation of Performance criteria shall be on

* Note: Kindly grade the student as per his/her overall performance in the office during the assessment month, which will be converted to the allotted 200 marks by the department.

Description of works	Excellent	Good	Fair	Poor	NA
Understanding of office culture and methodology	✓				
Active Participation in the Project activities	✓				
Documentation and tracking of project	✓				
Presentation Skills developed		✓			
Understanding of construction details & techniques	✓				
Participation and contribution in project meetings	✓				
Understanding of codes and standards	✓				
Schedule preparation & tracking activities		✓			
Preparation / Management of drawings	✓				
Learning / Application of software in Projects	✓				
Preparation of concept for projects	✓				
Site Management / Discussion with clients	✓				
Overall Grading*	A				

(A - 8.0, B - 7.0, C - 6.0, D - 5.5, E - 5.0, F - <5)

7. Any other Remarks

8. Signature of the
Head of the Office /
Organization (With Seal)

[Signature]



WORK DIARY

DATE	PROJECT NAME	WORK DONE
1st Dec 2021	Proposed residence design of Mr. Ashokananda Sahu.	Site visit and introduction to site
2nd to 4th December 2021	"	Preparation of proposed floor plans and 3D views of the project
6th to 11th December 2021	"	Solar Radiation, daylighting analysis and analysis of findings.
13th to 18th December 2021	Proposed Eco-resort at Mandira Dam, Rourkela, Odisha	Introduction to Project, Preparation of project brief, Analysis of site background
20th to 24th December, 2021	"	Preparation of proposed site plan and preparation of 3D modelling of site
27th Dec. to 31st Dec. 2021	Proposed working women's Hostel for Seafood Processing Park	Introduction to project background, Analysis of project brief and Area Statement

Chief Architect Signature:

[Signature]

Office seal:



WORK DIARY

DATE	PROJECT NAME	WORK DONE
3rd January to 8th January, 2022	Proposed Working Women's Hostel for Seafood Processing Park	Preparation of floor Plans, Analysis of Population density of the proposed site.
10th Jan. to 13th Jan. 2022	Proposed Working Women's Hostel for Seafood Processing Park	Preparation of 3D views and Preparation of presentation report.

Chief Architect Signature:

Office seal:



Spanda



Skylim Technica™ is a finest trans-disciplinary consultancy company, which has been working on Project Management Consultancy services across globe.

Skylim Technica (P) Ltd. has proved itself as the only company who has been appointed by M/s Tata Projects Ltd as Engineering Consultant for construction of Keonjhar Medical College, project worth of 316 cr.

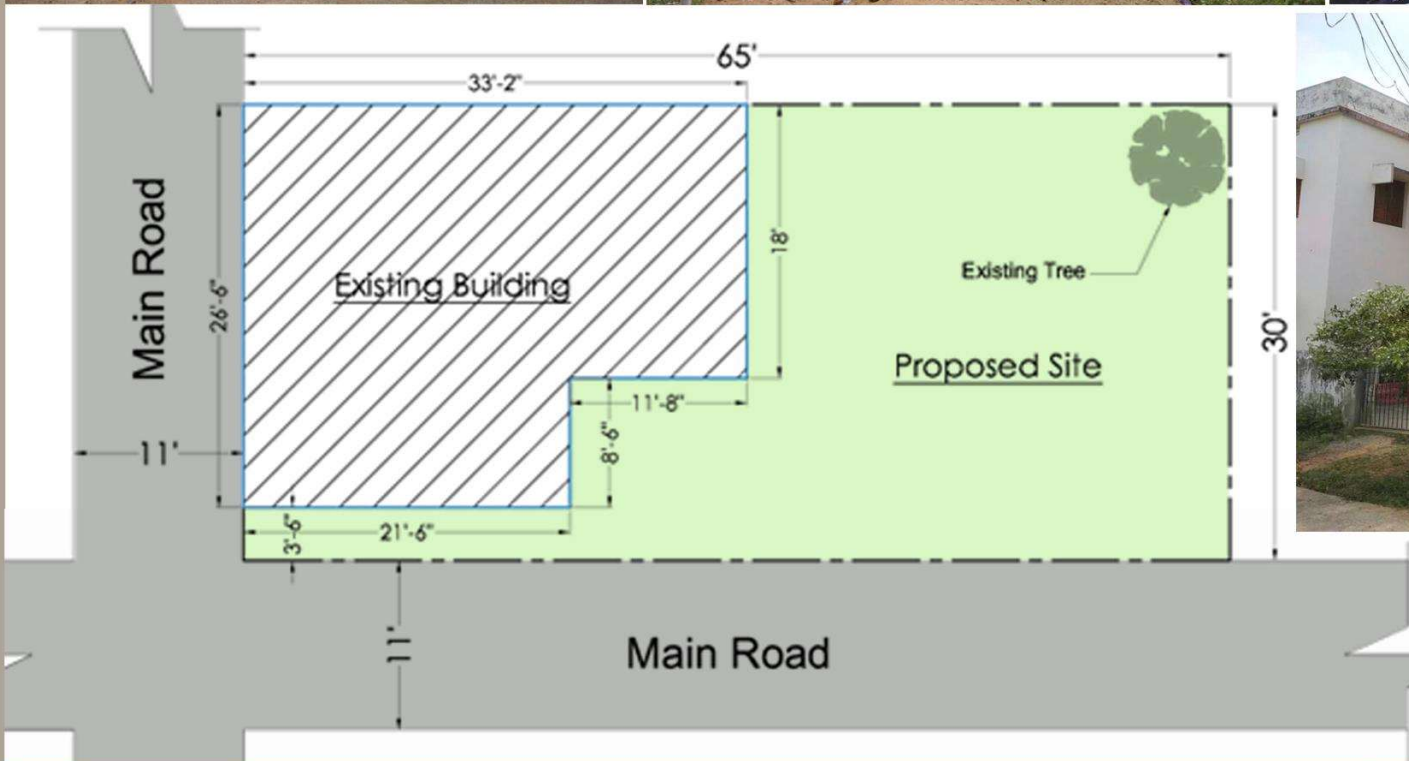


Green Building Benefits

Skylim Technica Private Limited is a Private incorporated on 18 July 2016. It is classified as Non-govt company and is registered at Registrar of Companies, Cuttack. Its authorized share capital is Rs. 1,000,000.

Skylim Technica Private Limited's Annual General Meeting (AGM) was last held on 31 December 2020 and as per records from Ministry of Corporate Affairs (MCA), its balance sheet was last filed on 31 March 2020.

Directors of Skylim Technica Private Limited are Piyush Goenka, Subhendu Bhattacharya, Nirmala Chakraverty.



01

Proposed residence design of
Mr. Ashokananda Sahu

Proposed Site
and Site Photographs

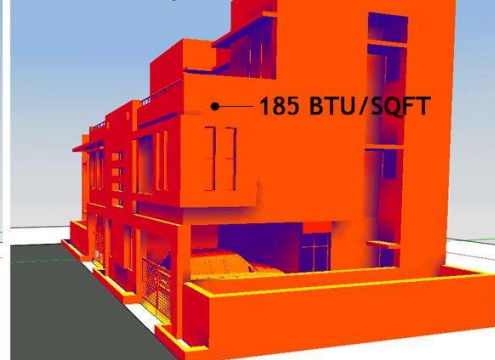
Name - Swगतिका Panda
Regd. No.- 40890019, Masters in Sustainable Architecture
Sathyabama Institute of Science and Technology

Month- May at 12 P.M.

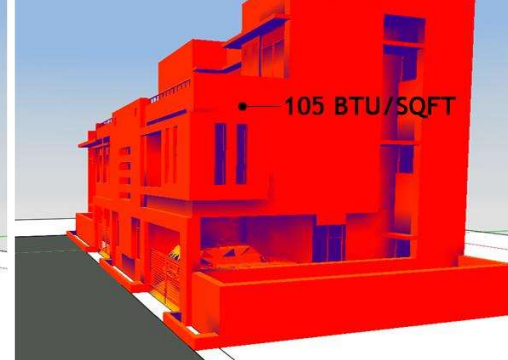


NORTHERN FACADE

Month- July at 12 P.M.



Month- December at 12 P.M.



The building is located under **WARM AND HUMID CLIMATE ZONE**.

For Warm and humid climate, Month of **DECEMBER** is critical as solar radiation is minimum. Month of **MAY** is critical as solar radiation is maximum.

Month of **JULY** is also critical as maximum cloud cover is visible.

FINDINGS OBTAINED -

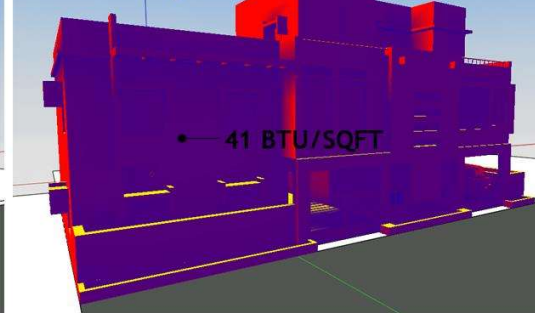
From the above simulation, we find that maximum solar radiation is hitting on **NORTHERN** facade of the building.

Month- May at 12 P.M.



EASTERN FACADE

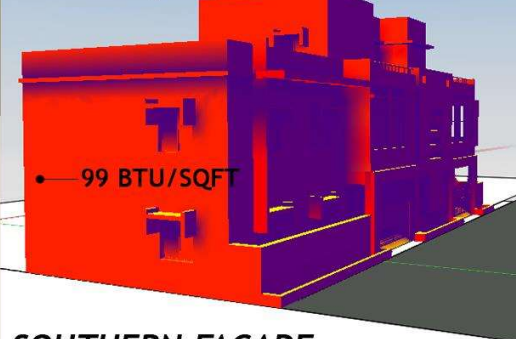
Month- July at 12 P.M.



Month- December at 12 P.M.

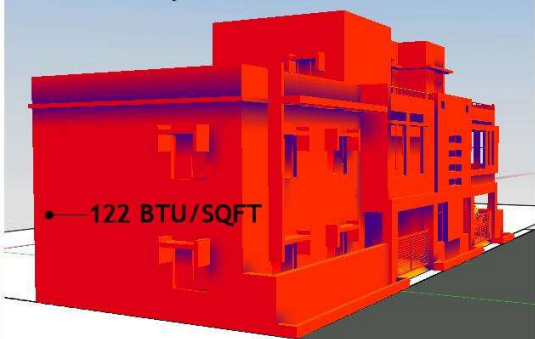


Month- May at 12 P.M.

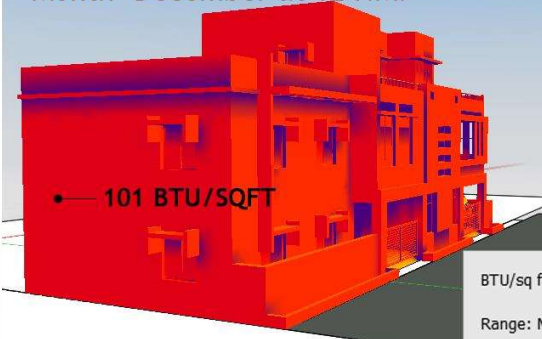


SOUTHERN FACADE

Month- July at 12 P.M.

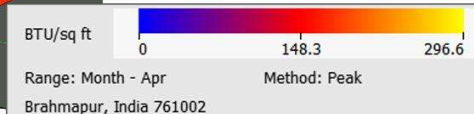


Month- December at 12 P.M.



Placement of bedroom is avoided in planning in this facade.

Toilets and kitchens are placed in northern facade to avoid excessive heat due to radiation.



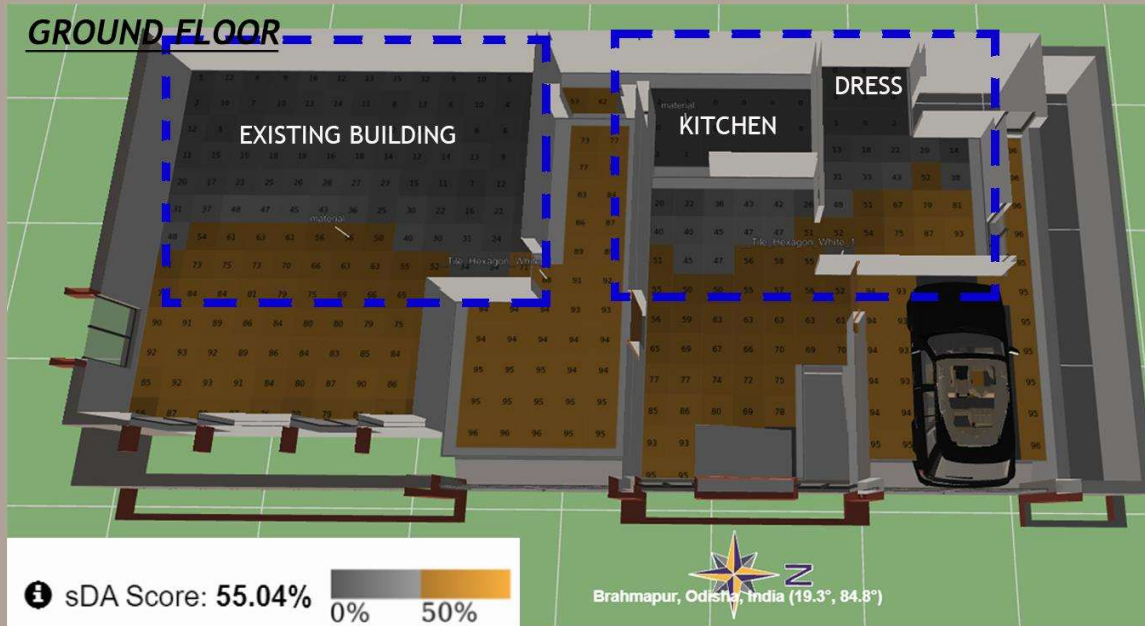
02

Proposed residence design of
Mr. Ashokananda Sahu

Solar radiation analysis
and findings obtained

Name - Swagatika Panda
Regd. No.- 40890019, Masters in Sustainable Architecture
Sathyabama Institute of Science and Technology

GROUND FLOOR



FIRST FLOOR



Software used: **LightStanza**

From the above daylighting simulation, it is clearly visible that :

SDA Score is **55.04%** & ASE Score is **6.05%** for ground floor
SDA Score is **74.86%** & ASE Score is **9.71%** for first floor

03

Proposed residence design of
Mr. Ashokananda Sahu

Daylighting analysis
and findings obtained

Name - Swagatika Panda
Regd. No.- 40890019, Masters in Sustainable Architecture
Sathyabama Institute of Science and Technology

SPATIAL DAYLIGHT AUTONOMY (SDA)

It is the percentage of floor area that meet minimum daylight illuminance level for a specified fraction of the working hours per year. Here, 300+ lux for atleast 50% of working hours per year. (8 am to 6 pm).

For **LEED Version 4.0**, 55% of regularly occupied floor area must meet SDA 300+lux for 2 points.

For **LEED Version 4.0**, 75% of regularly occupied floor area must meet SDA 300+lux for 3 points.

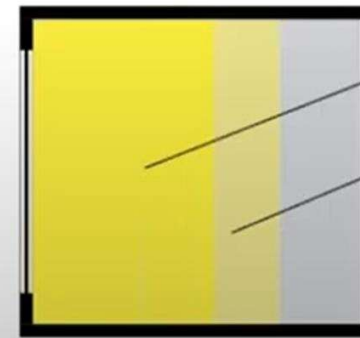
For **LEED Version 4.1**, it allows you to give an additional flexibility to get 1 LEED point if SDA is atleast 40%.

ANNUAL SOLAR EXPOSURE (ASE)

It identifies the potential for visual discomfort in interior work spaces as the percentage of floor area that receives 1000 or more lux of direct sunlight for 250 or more hours per year.

For **LEED Version 4.0** and **Version 4.1**, this value cannot exceed 10%.

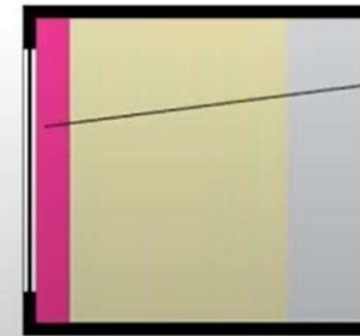
Although **LEED Version 4.1** gives you an additional flexibility to provide a reasonable explanation if ASE falls within a range of 10 to 20%.



55% OF FLOOR AREA = 2 POINTS

75% OF FLOOR AREA = 3 POINTS

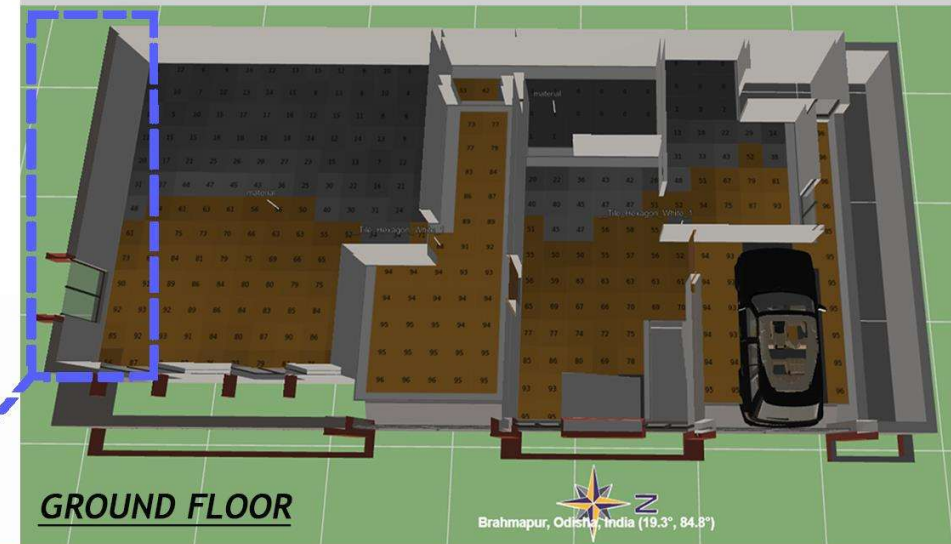
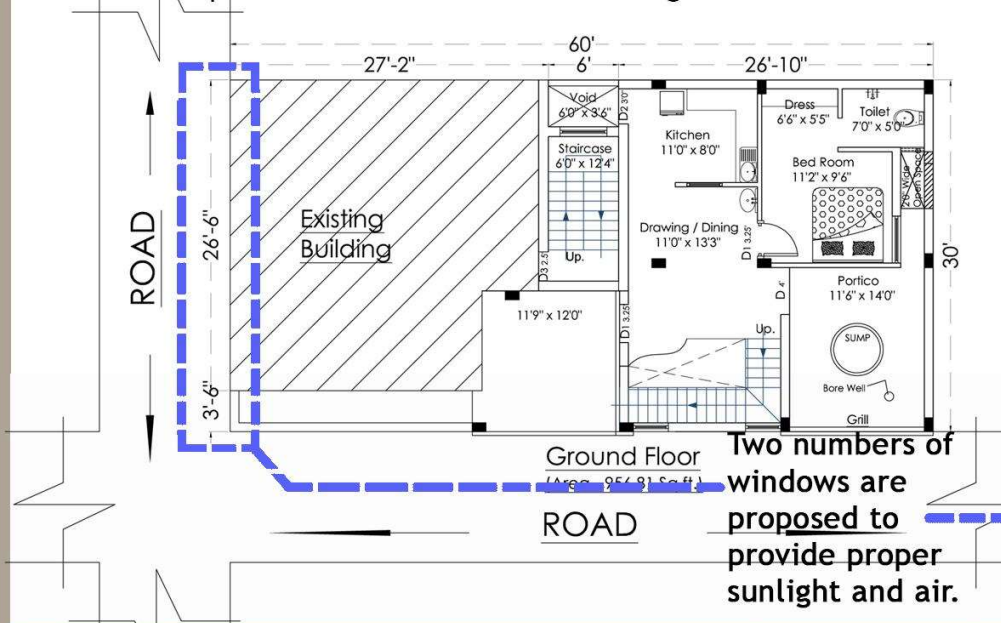
SPATIAL DAYLIGHT AUTONOMY



≤10% OF FLOOR AREA = REQUIRED

FOR POINTS AT LEFT

ANNUAL SOLAR EXPOSURE



GROUND FLOOR

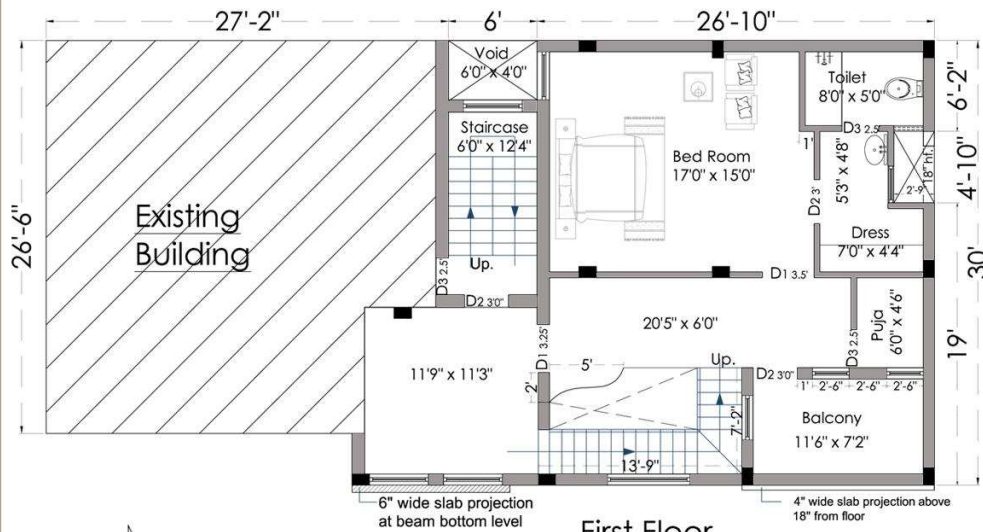
Brahmapur, Odisha, India (19.3°, 84.8°)

04

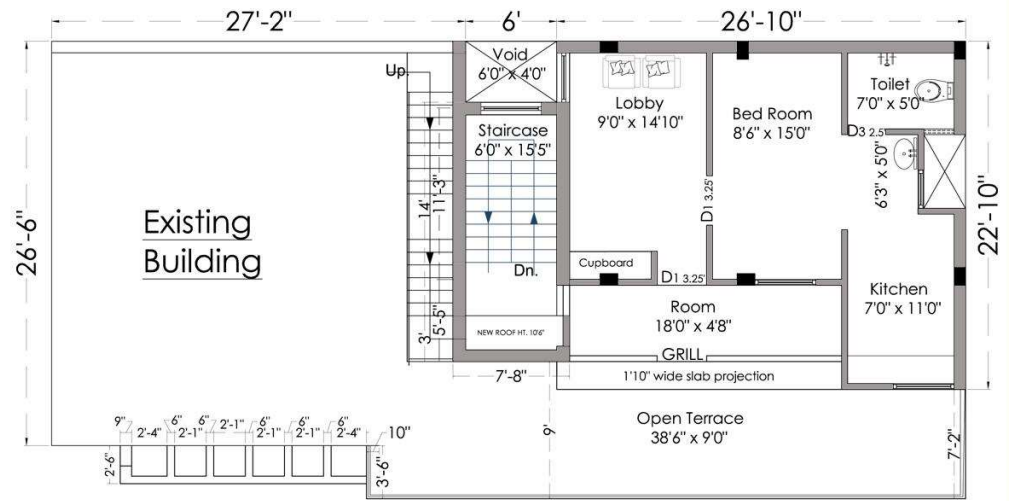
Proposed residence design of
Mr. Ashokananda Sahu

Proposed solution to
resolve insufficient
daylighting and ventilation

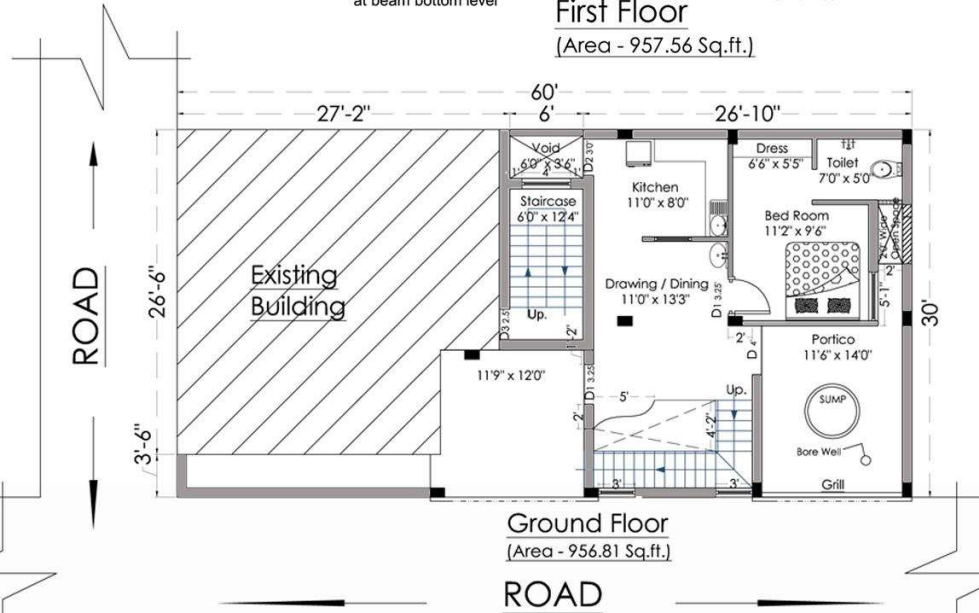
Name - Swagatika Panda
Regd. No.- 40890019, Masters in Sustainable Architecture
Sathyabama Institute of Science and Technology



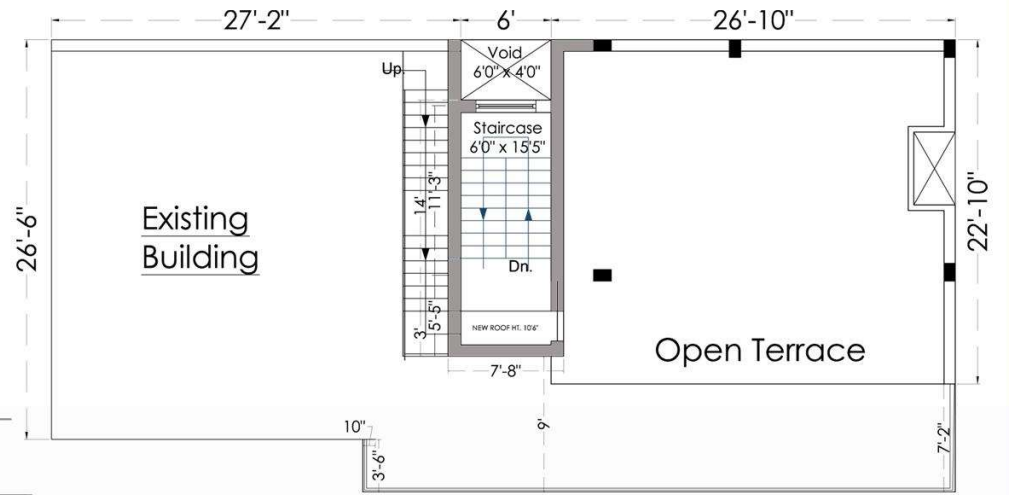
First Floor
(Area - 957.56 Sq.ft.)



Second Floor
(Area - 633.16 Sq.ft.)

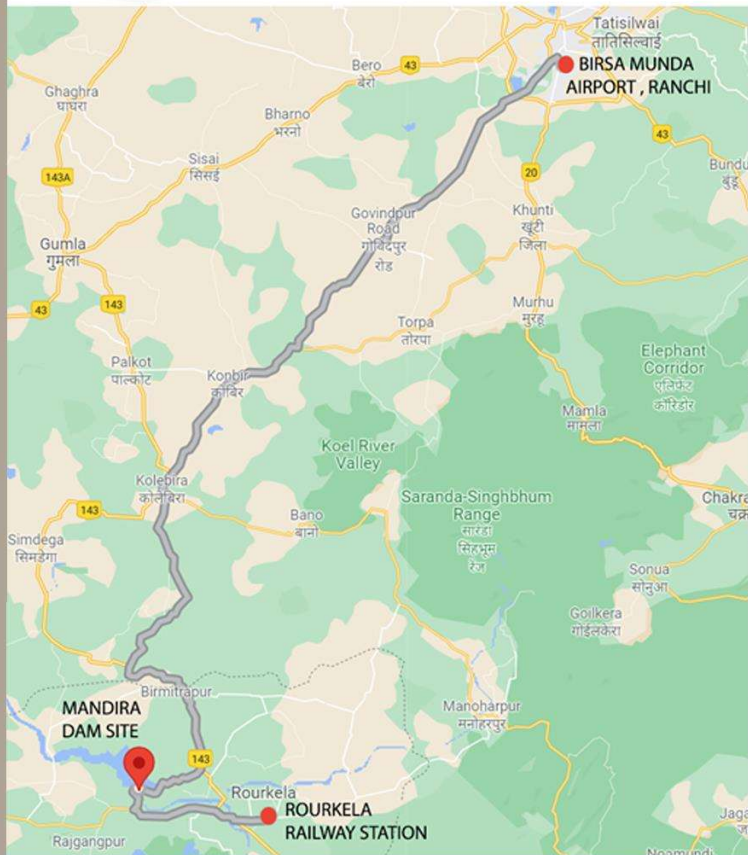
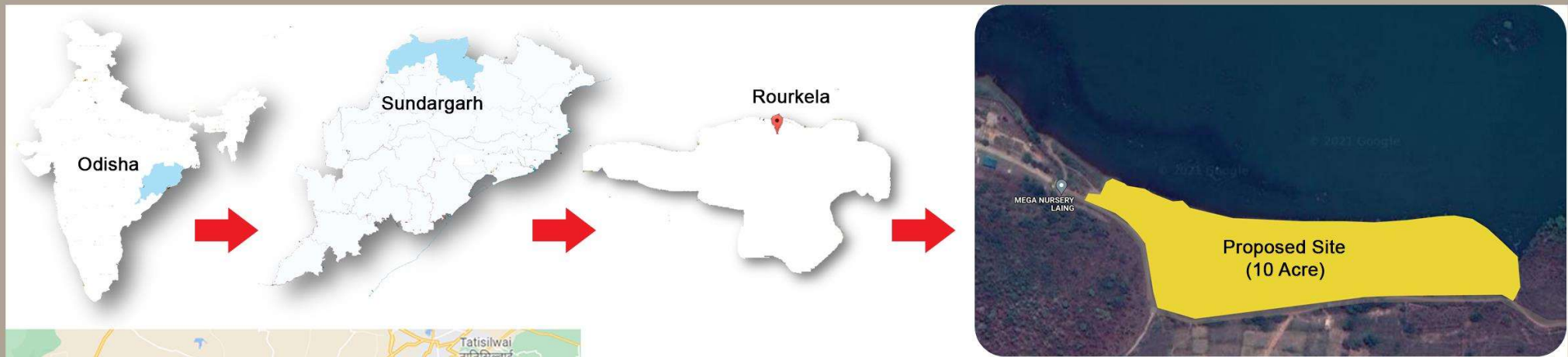


Ground Floor
(Area - 956.81 Sq.ft.)



Open Terrace





PROJECT BACKGROUND

The eco resort at Mandira Dam, Rourkela is a back water reservoir with pleasant environment and atmosphere conducive to comfort, healthful relaxation and rest, offering food, sleeping accommodation and recreational facilities to the public spread over a area of 10 acres.

Remoteness of the project has an appeal to the traveller who seeks an environment different from the urban & sub-urban environment of work and home. It is built across Sankh river, located 16 km upstream from Mandira. The total length of its spillway is 243.14m.

PROJECT BRIEF

1. This is a tourist resort whose facilities are intended to have a minimal impact on the local environment.
2. The land measuring 10 acers located adjacent to the Mandira Dam, constructed partially over the back water of the dam.
3. Consists of surface into the water up-to 50 meters.
4. Some of the spaces are used for public purpose and some for private use only.

PROJECT LOCATION

Mandira dam has been constructed by Hirakud Project Authority during 1957 – 1959 across river Sankh, a tributary of the Brahmani river. The earth dam is a zoned embankment of 426.72 m length with gate-controlled spillway on right saddle.



BY AIR-
Nearest Airport is at Ranchi. Its about 182 km from Mandira Dam.



BY Railways-
Nearest Railway station is Rourkela Junction. Its about 31 kms away from Mandira Dam.



BY Road-
One can reach Mandira Dam by road from Rourkela which is 26 kms. away from the city.

06

Proposed eco resort at Mandira Dam, Rourkela, Odisha

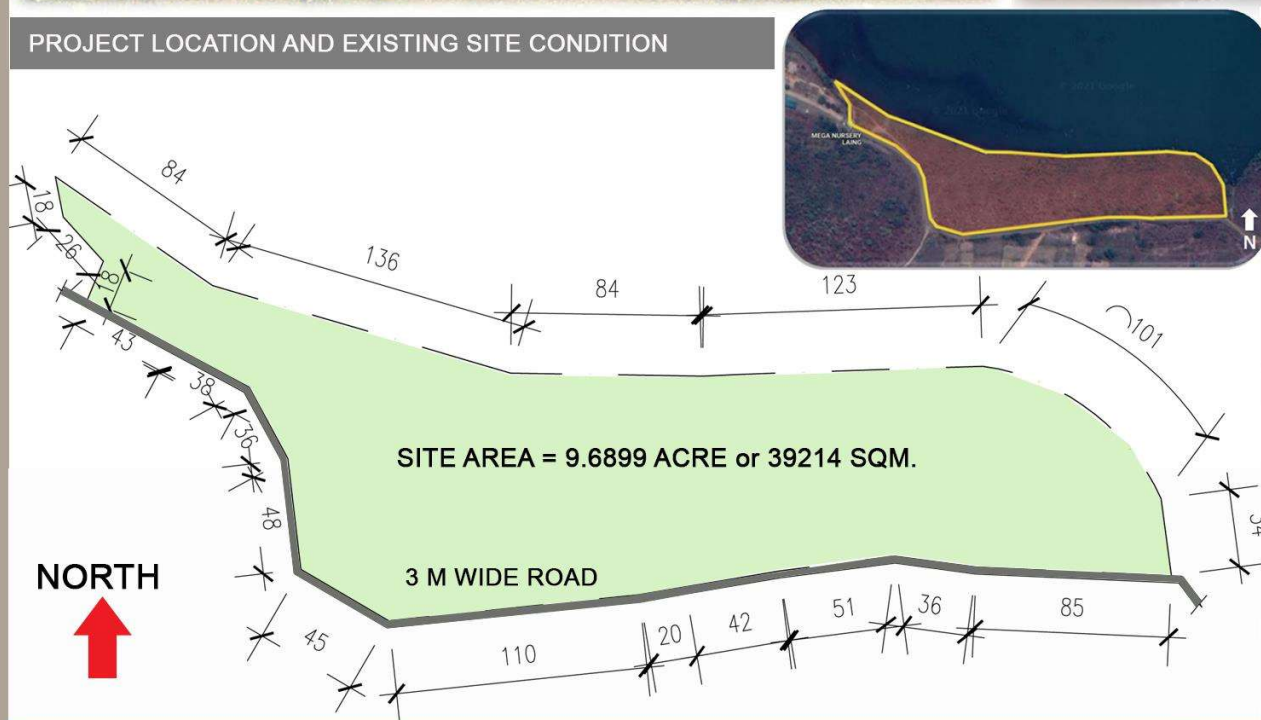
Introduction

Name - Swagatika Panda

Regd. No.- 40890019, Masters in sustainable Architecture
Sathyabama University of Science and Technology



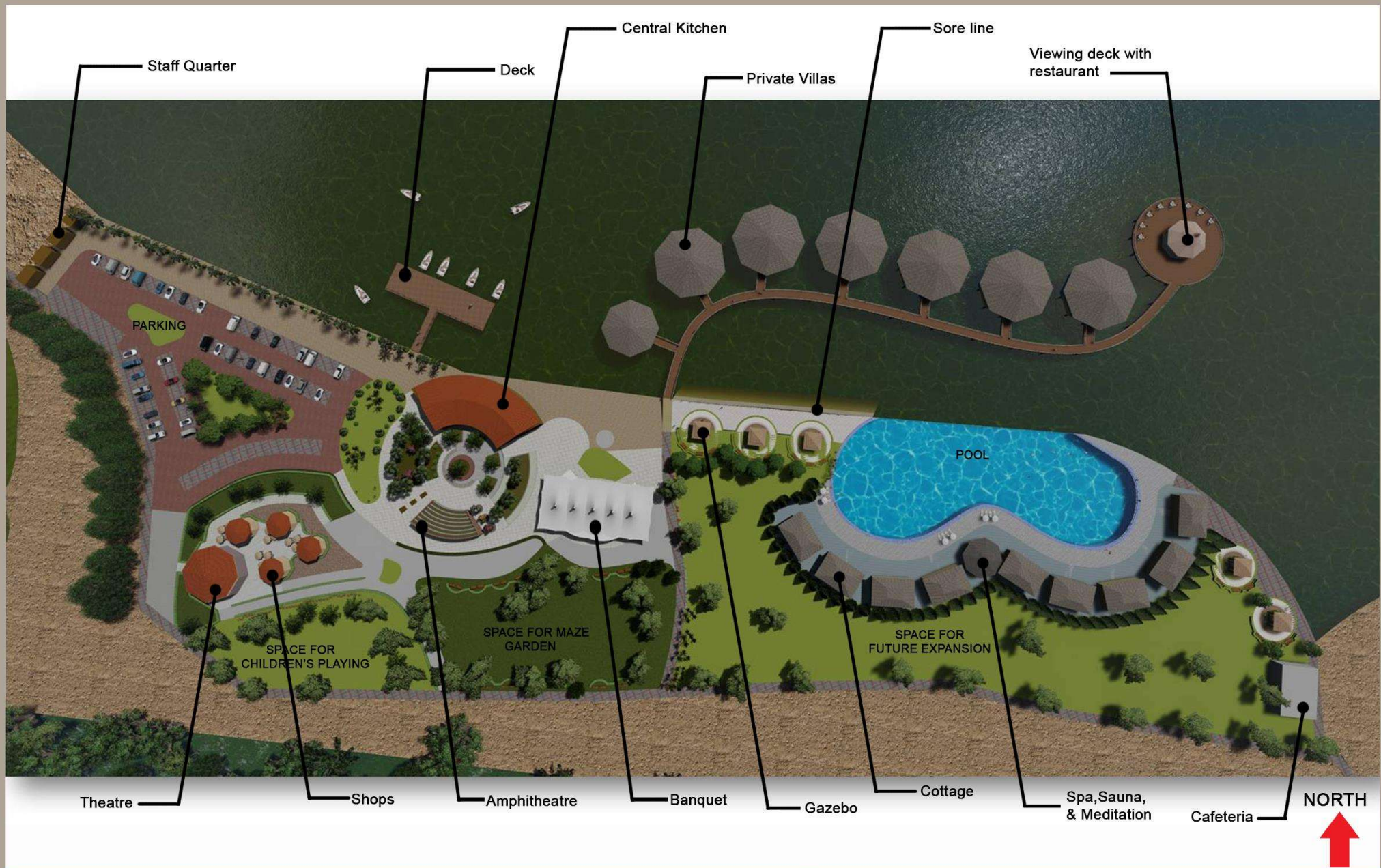
PROJECT LOCATION AND EXISTING SITE CONDITION



07 Proposed Eco-resort at Mandira Dam, Rourkela, Odisha

Existing Site Photographs

Name - Swagatika Panda
Regd. No.- 40890019, Masters in sustainable Architecture
Sathyabama University of Science and Technology



08

Proposed Eco resort at
Mandira Dam, Rourkela, Odisha

Proposed Site Plan

Name - Swagatika Panda
Regd. No.- 40890019, Masters in sustainable Architecture
Sathyabama University of Science and Technology



PROPOSED VILLAS

The facilities in the villas -

An adequately spacious living area

Elegantly furnished dining area

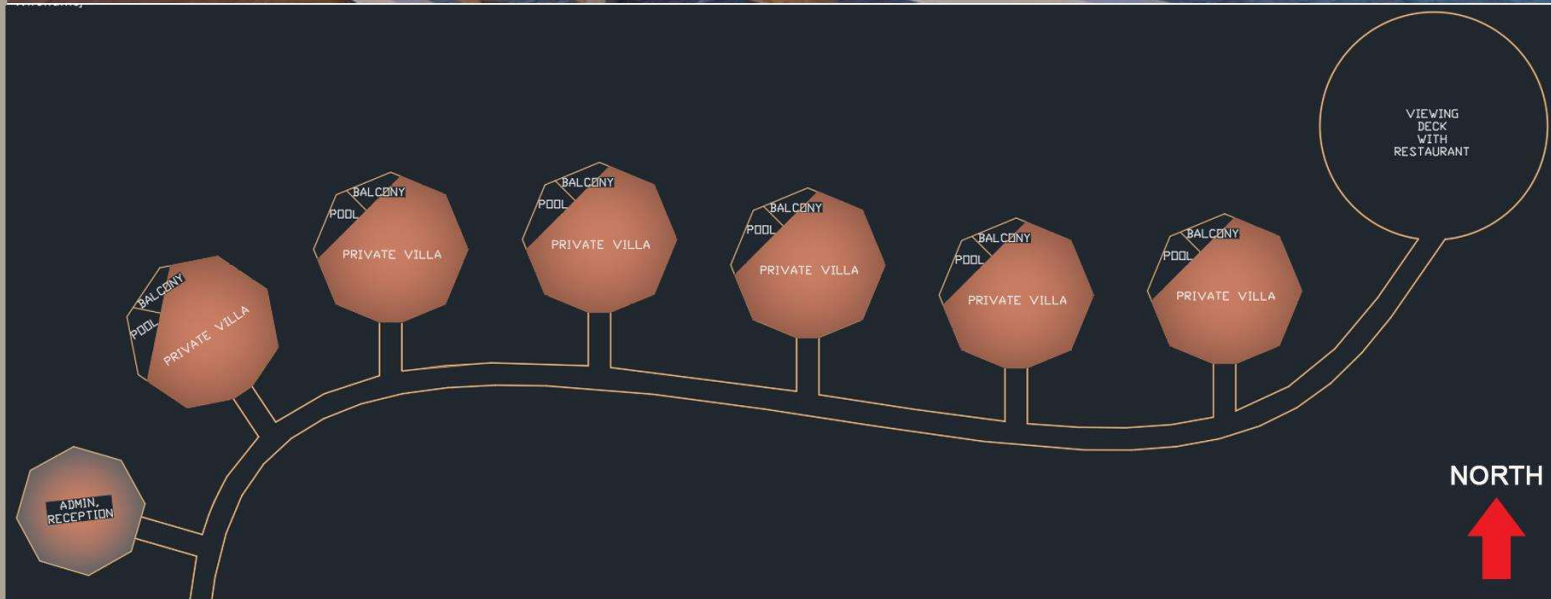
Infinite Pool

Outdoor lounge Area

Entertainment/Games room

Yoga and meditation area

A semi equipped kitchen



09

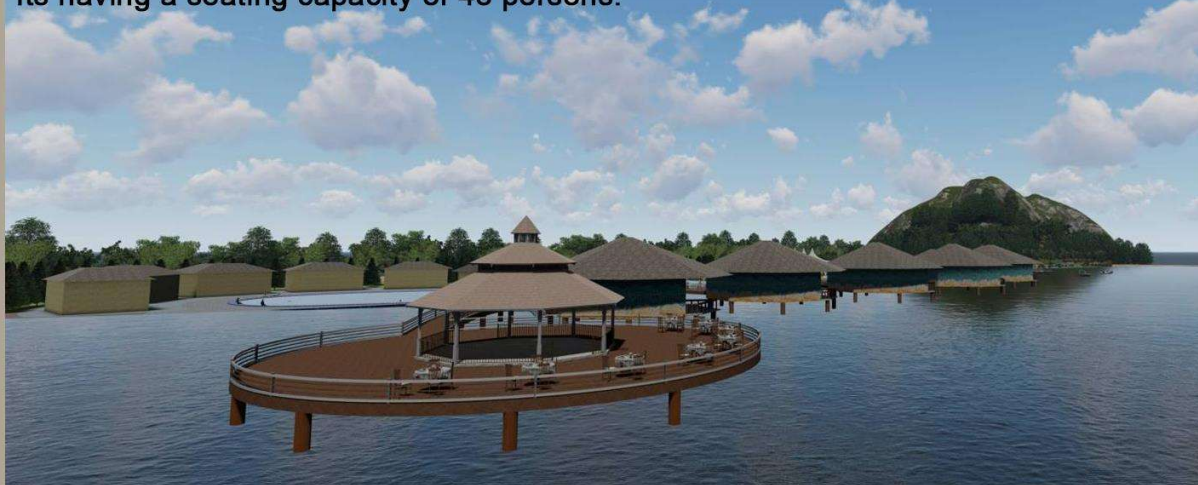
Proposed Eco resort at
Mandira Dam, Rourkela, Odisha

Proposed Villas

Name - Swagatika Panda
Regd. No.- 40890019, Masters in sustainable Architecture
Sathyabama University of Science and Technology

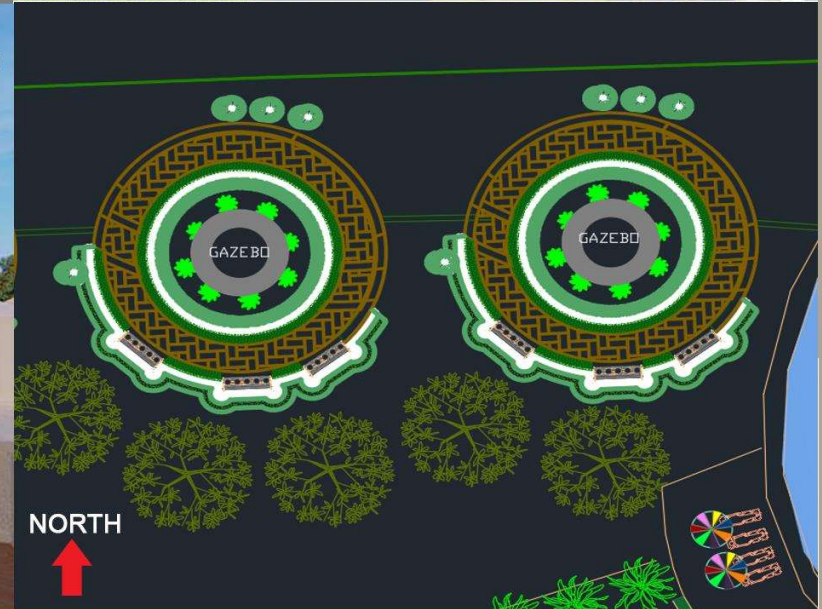
PROPOSED BAR CUM RESTAURANT

A Semi Open Air private Bar cum Restaurant is provided with water front view. Its having a seating capacity of 48 persons.



PROPOSED SEATING PROVISIONS

It is the “viewing pavilion” provided in front of the water bed used for amusement purpose. These Gazebos are provided to add beauty and fun to improve the value of the real estate. These Gazebos are 5m wide having a seating provision for 8 people.



10

Proposed Eco resort at
Mandira Dam, Rourkela, Odisha

Proposed Bar cum
Restaurant & Seating
Provisions

Name - Swagatika Panda
Regd. No.- 40890019, Masters in sustainable Architecture
Sathyabama University of Science and Technology

PROPOSED OPEN AIR THEATRE

Proposed Open air theatre for cultural events and amusement purpose with a capacity of 50 person.



PROPOSED WATER SPORTS PROVISIONS



✓ There are different type of water sports provided for amusement purpose. Such as-

- ✓ Boating
- ✓ Fishing
- ✓ Kayaking
- ✓ Canoeing

11 Proposed Eco resort at Mandira Dam, Rourkela, Odisha

Proposed Open Air theatre and Water Sports Provisions

Name - Swagatika Panda
Regd. No.- 40890019, Masters in sustainable Architecture
Sathyabama University of Science and Technology

PROPOSED SWIMMING POOL



PROPOSED SITE VIEW



12 Proposed Eco resort at
Mandira Dam, Rourkela, Odisha

Proposed Site
3D View and
Swimming Pool

Name - Swagatika Panda
Regd. No.- 40890019, Masters in sustainable Architecture
Sathyabama University of Science and Technology

PROJECT BACKGROUND

The Seafood Processing Park at Deras laced with all world class infrastructure from processing facilities, packaging and storage is spread over land measuring 152.78 Acres. The approval for funding the project is obtained from MoFPI, Govt of India in year 2016.

Due to high demand there is ongoing scheme for expansion of the Seafood Processing Park for another 80 Acres of adjacent land.

At present there is Workers Hostel of 500 beds inside the Park as well as its expansion, there is plan to set up Working Women's Hostel for 10,000 workers nearby the existing park.

The funding of the Project will be as under :

- 60% from Ministry of Women and Child Development Govt. of India
- 25% from the Govt. of Odisha.
- 15% from the implemeting agency.

PROJECT BRIEF

Wroking Women's Hostel/Dormitory for about 10,000 women including supportive social community infrastructure over a land measuring 9.14 Acre is of irregular sape is located near the entrace of te existing Seafoord Park at Deras.

The area of the land is too less for accomodating Hostel/Dormitory for 10000 workers. It will have separate blocks for incremental/ phased construction. Each lock shall be limited to G+6 , has ground floor has accomodate dormitory (each 7 nos.), ancilliary rooms as required and kitchen with dinning (300 capacity) and rest, all floor will accomodate dormitory facilities.



AREA STATEMENT

Plot Area : 35832.15 Acre
Hostel Block -
Ground floor area : 1452.33 Sqm.
First floor area : 1434.69 Sqm.
Second floor area : 1434.69 Sqm.
Third floor area : 1442.76 Sqm.
Forth floor area : 1442.76 Sqm.
Fifth floor area : 1454.25 Sqm.
Sixth floor area : 1454.25 Sqm.
Terrace Area : 158.41 Sqm.
Total Area: 10274.14 Sqm.
Total number of blocks : 7

Total Area =
 $10274.14 \times 7 = 71918.98$ Sqm.
Police Chowki/ATM/Shop/Mediine
Store etc.Area: 360.00 Sqm
Total built up Area = 72278.98 Sqm.
Required Parking = 7227.89 Sqm
(10% of 72278.98 Sqm.)
Achieved Parking = 7394.77 Sqm
Ground coverage area =
10526.31 Sqm (29.37% of Plot Area)
Landscape Area =
7343.91 Sqm (20.49% of plot area)

13 Proposed Working women's Hostel for Sea food Processing Park, Deras

Proposed Site
3D View and
Swimming Pool

Name - Swagatika Panda
Regd. No.- 40890019, Masters in sustainable Architecture
Sathyabama University of Science and Technology

POPULATION DENSITY ANALYSIS



Total land area : 35832.15 Sqm
Total Population : 6776 nos.
Area per head : 5.29 Sqm,

Area distribution in each block -
Total built up area : 10274.14 Sqm
Total Strength : 968 nos.
Living area per head : 10.61 Sqm.

Area distribution in each dormitory -
Total carpet area : 33.12 Sqm.
Total capacity ; 8 nos.
Living area per bed : 4.14 Sqm.

Area distribution in each block -
Total built up area : 10274.14 Sqm.
Total area of occupancy :
4007.50 Sqm
(4.14 Sqm/ Bed for 968 beds)
Total support services and circulation
area : 6266.64 Sqm
(61% of B.U.A)

LEGENDS:

- SITE
- SERVICES
- HOSTEL BLOCKS
- ROAD NETWORK
- OPEN PARKING
- LANDSCAPE
- PAVEMENT



SKYLIM
Changing the Building Experience

AREA NORMS FOR THE HOSTEL TO BE CONSTRUCTED AS WELL AS HOSTELS IN RENTED PREMISES			
SL.NO.	DESCRIPTION OF FACILITY / ITEM	AREA/ UNIT	ACHIEVED
1	Dormitory	6.0-6.5 Sq.mt. per resident	4.14 Sqmt.
2	Common Room	2 Sqmt. Per Resident at least 25% of the Hostel Strength.	33.12 Sqmt.
		Subject to maximum of 60 Sqmt.	
3	Dinning Room / Hall	1 Sqmt. Per Resident for 50% of the Hostel Strength	390.00 Sqmt.
		Subject to maximum of 40 Sqmt.	
4	Kitchen & Store	0.5 Sqmt. Per diner	130.22 Sqmt.
		Subject to maximum of 60 Sqmt.	

AREA NORMS FOR THE HOSTEL TO BE CONSTRUCTED AS WELL AS HOSTELS IN RENTED PREMISES			
SL.NO.	DESCRIPTION OF FACILITY / ITEM	AREA/ UNIT	ACHIEVED
5	Common Toilets & Bathrooms		
	Bathroom	1 for every 6-8 residents	1 per 6 Residents
	Toilet	1 for every 6-8 residents	
	Wash Basin	1 for every 8-10 residents	1 per 8 Residents
	Water Closet	1 for every 8 residents	1 per 6 Residents
6	Warden's Living Quarters	For warden not living with family, area of two single rooms	18.81 Sqmt.

AREA NORMS FOR THE HOSTEL TO BE CONSTRUCTED AS WELL AS HOSTELS IN RENTED PREMISES			
SL.NO.	DESCRIPTION OF FACILITY / ITEM	AREA/ UNIT	ACHIEVED
7	Sick Room	1 room of 9.60 sqmt.	18.81 Sqmt.
8	Floor Height	3.40 mtr.	3.45 Mtr.
9	Total Built up Area	2.5 times of the total living area (circulation space may be 25% of plinth area.)	72278.98 Sqmt.
10	Boundary Wall may be Provided	as per requirement	Considered
11	Daycare Centre	For 100 bedded hostel provision of 30 Children	

14 Proposed Working women's Hostel for Sea food Processing Park, Deras

Population density analysis

Name - Swagatika Panda
Regd. No.- 40890019, Masters in sustainable Architecture
Sathyabama University of Science and Technology



LEGEND:-

- DORMITORY
- DAY CARE, STORE, SICK ROOM, WARDEN ROOM, COMMON ROOM
- CORRIDOR
- TOILET
- KITCHEN & DINING
- SERVICES

GROUND FLOOR PLAN



LEGEND:-

- DORMITORY
- CORRIDOR
- TOILET
- SERVICES

FIRST & SECOND FLOOR PLAN



3RD & 4TH FLOOR PLAN

LEGEND:-

- DORMITORY
- CORRIDOR
- TOILET
- SERVICES

SKY LIM

Changing the Building Definition

17 Proposed Working women's Hostel
for Sea food Processing Park, Deras

3rd and 4th
floor Plan

Name - Swagatika Panda
Regd. No.- 40890019, Masters in sustainable Architecture
Sathyabama University of Science and Technology





LEGEND:-

SERVICES

TERRACE FLOOR PLAN



SITE VIEW FROM PARKING AREA

VIEWS



VIEWS

VIEW THROUGH INTERNAL ROAD



VIEWS

FRONT FACADE FROM INTERNAL ROAD



SIDE VIEW FROM GARDEN

VIEWS

Thank You