

# PROFESSIONAL TRAINING REPORT

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

By

**SELVAKUMAR / Reg.no: 41890017**



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

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

**Accredited with Grade "A" by NAAC**

**JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHENNAI - 600 119**



# **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](http://www.sathyabama.ac.in)**

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

**PROFESSIONAL TRAINING (S89APT)  
JUL 2022 - AUG 2022**

Name of the Student : SELVAKUMAR C

Semester : III

Reg No. : 41890017

Batch : 2021-2023





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SCHOOL OF BUILDING AND ENVIRONMENT

DEPARTMENT OF ARCHITECTURE

**M. Arch (Sustainable Architecture)**

## VIVA-VOCE EXAMINATION

This is to certify that the Professional Training Report (S89APT) is the work of **Selvakumar C (Reg.no: 41890017)** who had undergone training in **Amerani Architects** and has been monitored by the continuous assessment from Jul 2022 to Aug 2022.

**Dr. Devyani Gangopadhyay**  
HOD AND DEAN

Submitted for Viva voce Examination held on 20/12/2022

**Internal Examiner**

**External Examiner**



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## DECLARATION

I **Selvakumar.C** hereby declare that this Professional Training Report 11<sup>TH</sup> July 2022 to 18<sup>TH</sup> August 2022 was done by me under the guidance of Ar. **Amernath** is submitted in partial fulfillment of the requirements for the completion of the practical training session.

DATE : 20/12/2022

PLACE : CHENNAI



SIGNATURE OF CANDIDATE

## ACKNOWLEDGEMENT

I am pleased to acknowledge my sincere thanks to Board of Management of **SATHYABAMA INSTITUTE OF SCIENCE & TECHNOLOGY** 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, School of building and Environment** for providing me with 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 Ar **Amernath** for their valuable guidance, suggestions, and constant encouragement paved way for the successful completion of my Training.

I would also like to express my sincere thanks to **Ar. Catherine Selvaraj** (Internal Coordinator) for her valuable guidance, during the entire Professional Training period.

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.

A hearty thanks to all my friends & family who supported and guided me during the training period.



Ph: +91 9500042904  
Tel: 044 - 48528047  
info@ameraniarchitects.com  
www.ameraniarchitects.com

Date: 07.07.2022

To,  
The head of the department(Architecture)  
Department of Architecture,  
Sathyabama Institute of science & Technology,  
Chennai.

Sub:Architectural Internship Confirmation Letter.

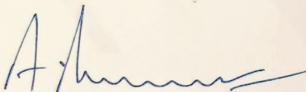
Respected Sir/ Ma'am,

This is to confirm that **Mr.SELVAKUMAR. C.** has start his training in our firm from 11<sup>th</sup> July 2022 and will be working here for minimum 1 month period.

During the training period, the student discipline and his adherence to the office rules are most important.

Thanking You

Regards,

  
ARCHITECT: AMERNATH. A  
REG. No: CA/2014/84905  
No: 14, Ground Floor,  
32nd Cross Street,  
Besant Nagar, Chennai - 600 090.  
Mob: +91 9500042904.

**Ar. Amernath. A**

Principal Architect

No:14, Ground Floor, 32nd Cross Street, Besant Nagar, Chennai - 600 090.



**SELVAKUMAR.C | REG.NO: 41890017 | M.ARCH SUSTAINABLE ARCHITECTURE | CONFIRMATION LETTER**



# MONTHLY REPORT



**SATHYABAMA**  
INSTITUTE OF SCIENCE AND TECHNOLOGY

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SCHOOL OF BUILDING & ENVIRONMENT, DEPARTMENT OF ARCHITECTURE  
M. Arch (Sustainable Architecture) Batch 2021-2023

Continuous Assessment Report for Professional training

(Continuous progress report of the trainee architect/Project Manager for the period of 15 working days in the office to be submitted to HOD)

|                                                   |                                                                                     |    |            |
|---------------------------------------------------|-------------------------------------------------------------------------------------|----|------------|
| 1. Name of the office / organization :            | AMERANI ARCHITECTS                                                                  |    |            |
| 2. Address & Contact Number :                     | No: 14, 32nd Cross St, Tiruvalluvar Nagar, Besant Nagar, Chennai, Tamil Nadu 600090 |    |            |
| 3. Name of the student :                          | SELVAKUMAR                                                                          |    |            |
| 4. Duration :                                     | From 11/07/2022                                                                     | To | 31/07/2022 |
| 5. Total No. of days :                            | 18 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;

| Description of works                       | Excellent | Good | Fair | Poor | NA |
|--------------------------------------------|-----------|------|------|------|----|
| Understanding of office culture            | ✓         |      |      |      |    |
| Skills related to project management       | ✓         |      |      |      |    |
| Design Management                          | ✓         | ✓    |      |      |    |
| Understanding the Triple Constraints       |           | ✓    |      |      |    |
| Observation during Site Visits             |           | ✓    |      |      |    |
| Understanding of construction details      |           | ✓    |      |      |    |
| Understanding of Construction sequences    | ✓         |      |      |      |    |
| Site Supervision / Discussion with clients | ✓         |      |      |      |    |
| Adherence to Time schedule                 | ✓         |      |      |      |    |
| Quantitative aptitude                      | ✓         |      |      |      |    |
| Documentation skills                       |           | ✓    |      |      |    |
| Coordination with other consultants        | ✓         |      |      |      |    |

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)

ARCHITECT: AMERNATH. A  
REG. No: CA/2014/64905  
No: 14, Ground Floor,  
32nd Cross Street,  
Besant Nagar, Chennai - 600 090.  
Mob: +91 9500042904.



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M. Arch (Sustainable Architecture) Batch 2021-2023

Continuous Assessment Report for Professional training

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|                                                   |                                                                                     |    |            |
|---------------------------------------------------|-------------------------------------------------------------------------------------|----|------------|
| 1. Name of the office / organization :            | AMERANI ARCHITECTS                                                                  |    |            |
| 2. Address & Contact Number :                     | No: 14, 32nd Cross St, Tiruvalluvar Nagar, Besant Nagar, Chennai, Tamil Nadu 600090 |    |            |
| 3. Name of the student :                          | SELVAKUMAR                                                                          |    |            |
| 4. Duration :                                     | From 01/08/2022                                                                     | To | 16/08/2022 |
| 5. Total No. of days :                            | 13 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;

| Description of works                       | Excellent | Good | Fair | Poor | NA |
|--------------------------------------------|-----------|------|------|------|----|
| Understanding of office culture            | ✓         |      |      |      |    |
| Skills related to project management       | ✓         |      |      |      |    |
| Design Management                          |           | ✓    |      |      |    |
| Understanding the Triple Constraints       |           | ✓    |      |      |    |
| Observation during Site Visits             | ✓         |      |      |      |    |
| Understanding of construction details      |           | ✓    |      |      |    |
| Understanding of Construction sequences    | ✓         |      |      |      |    |
| Site Supervision / Discussion with clients | ✓         |      |      |      |    |
| Adherence to Time schedule                 | ✓         | ✓    |      |      |    |
| Quantitative aptitude                      | ✓         |      |      |      |    |
| Documentation skills                       | ✓         |      |      |      |    |
| Coordination with other consultants        |           | ✓    |      |      |    |

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)

ARCHITECT: AMERNATH. A  
REG. No: CA/2014/64905  
No: 14, Ground Floor,  
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Mob: +91 9500042904.



## WORK DIARY

| Date      | project name     | works                                                                                   |
|-----------|------------------|-----------------------------------------------------------------------------------------|
| 7/11/2022 | Green Park       | Analysis From floor & Site plans,Sustainable fixtures on landscaping ,building fixtures |
| 7/12/2022 | Green Park       | 3D modeling for simulation                                                              |
| 7/13/2022 | Green Park       | Site Visit                                                                              |
| 7/14/2022 | Green Park       | Landscaping Analysis                                                                    |
| 7/15/2022 | Green Park       | Light analysis , solar radiation ,materials                                             |
| 7/16/2022 | Green Park       | Report & Documentation                                                                  |
| 7/17/2022 | holiday          | -                                                                                       |
| 7/18/2022 | Green Park       | Dialux                                                                                  |
| 7/19/2022 | Green Park       | Analysing Standards                                                                     |
| 7/20/2022 | Green Park       | Suggestion                                                                              |
| 7/21/2022 | OSR              | PHOTOSHOP the broucher                                                                  |
| 7/22/2022 | OSR              | ENTRANCE GATE                                                                           |
| 7/23/2022 | OSR              | ENTRANCE GATE                                                                           |
| 7/24/2022 | holiday          | -                                                                                       |
| 7/25/2022 | PUDUKOTTAI HOTEL | Analysis Wind and sun path and the requirements to meet in hotel design                 |
| 7/26/2022 | PUDUKOTTAI HOTEL | hotel affordable living standards & NBC                                                 |
| 7/27/2022 | PUDUKOTTAI HOTEL | SCHEME , Analysing Standards                                                            |
| 7/28/2022 | PUDUKOTTAI HOTEL | hotel room position and oreientation freezed                                            |
| 7/29/2022 | PUDUKOTTAI HOTEL | furniture layout for banquet hall , restaurent,Bar and corrections                      |
| 7/30/2022 | PUDUKOTTAI HOTEL | SCHEME Finalized                                                                        |
| 7/31/2022 | holiday          | -                                                                                       |
| 8/1/2022  | Green Park       | Sign board                                                                              |
| 8/2/2022  | Green Park       | Sign board                                                                              |
| 8/3/2022  | DAC Tambaram     | Analysis From floor & Site                                                              |
| 8/4/2022  | DAC Tambaram     | Base model ( With all sides of view)                                                    |
| 8/5/2022  | DAC Tambaram     | Base model ( With all sides of view)                                                    |
| 8/6/2022  | DAC Tambaram     | Solar analysis ( formIt)                                                                |
| 8/7/2022  | holiday          | -                                                                                       |
| 8/8/2022  | DAC Tambaram     | light analysis (velux, revit insight)                                                   |
| 8/9/2022  | DAC Tambaram     | Wind analysis for all sides of rooms ( With all sides of view)                          |
| 8/10/2022 | DAC Tambaram     | Standards and elevation theme                                                           |
| 8/11/2022 | DAC Tambaram     | Elevation for grant entry South (brick cladding , jaali analysis with brochers)         |
| 8/12/2022 | DAC Tambaram     | Elevation for grant entry South WING 2 , 3                                              |
| 8/13/2022 | DAC Tambaram     | Elevation for grant entry South Side Wing 1                                             |
| 8/14/2022 | holiday          | -                                                                                       |
| 8/15/2022 | holiday          | -                                                                                       |
| 8/16/2022 | DAC Tambaram     | Other side views and fininshing the last day                                            |

Chief Architect Signature:

Office seal:

  
 ARCHITECT AMERNATH. A.  
 REG. No: CA/2014/64965  
 No: 14, Ground Floor,  
 32nd Cross Street,  
 Besant Nagar, Chennai - 600 090.  
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Ph: +91 9500042904  
Tel: 044 - 48528047  
info@ameraniarchitects.com  
www.ameraniarchitects.com

Date: 16.08.2022

**TO WHOM IT MAY CONCERN**

**Subject: Completion Letter for Professional Training**

This is to certify that **Mr. SELVAKUMAR(Regno. 41890017)**, Student of 3<sup>rd</sup> Semester, M.Arch(Sustainable Architecture), Sathyabama Institute of Science and Technology, Chennai, has successfully completed internship training as a part of his curriculum from **11<sup>th</sup> July 2022 to 16<sup>th</sup> August 2022**.

The preliminary objectives of the internship were successfully met by the intern. We found him Sincere and result-oriented and wish him all the best for his future endeavours.

With Regards,

  
ARCHITECT: AMERNATH. A  
REG. No: CA/2014/64905  
No: 14, Ground Floor,  
32nd Cross Street,  
Besant Nagar, Chennai - 600 090.  
Mob: +91 9500042904.

Ar. Amernath  
Principle Architect  
Amer and Ani Architects,  
Chennai.

No 14, Ground Floor, 32nd Cross Street, Besant Nagar, Chennai - 600 090.



**SELVAKUMAR.C | REG.NO: 41890017 | M.ARCH SUSTAINABLE ARCHITECTURE | COMPLETION LETTER**





Amer & Ani Architects

**Firm:** The firm have undertaken a wide spectrum of work, ranging from High end Villas to Multistoried residential apartments and commercial to Hospitality spaces. Amerani's strategy is one of subtraction and control to preserve the necessary simplicity of spaces. Our vision is the outcome of the ability to balance budget and expectations. Every design reflects an architectural honesty that focuses on the spatial experience. Every area is carefully contemplated; all structures precisely regarded and reviewed.

### Work Scope:

- Conceptual Design
- Design Development
- Planning & programming
- Feasibility studies/condition assessments
- Code compliance
- Design/documentation
- Construction Drawings & Specifications
- Workplace evaluation
- Coordination of Consultant Services

### Sustainability Services:

- Climate study and planning
- High-performance buildings with low energy consumption
- Water management systems
- Renewable Energy Sitting
- Ecological Restoration
- Natural Resources Management
- Land Use Planning
- Sustainable Communities

### Project management

- Cost Control & Planning
- Pre/Post Contract
- Quantity Surveying
- BOQs
- Contract Documentation
- Value Engineering

### Clients:





# GREEN PARK

TAMILNADU STATE AGRICULTURAL MARKETING BOARD (TNSAMB)

## Location

Guindy Industrial Estate,  
SIDCO Industrial Estate,  
Guindy, Chennai

## Latitude & Longitude

13°00'46.0"N 80°12'17.5"E

## Total Site Area

6.90 Acres

## Landscaping Zone

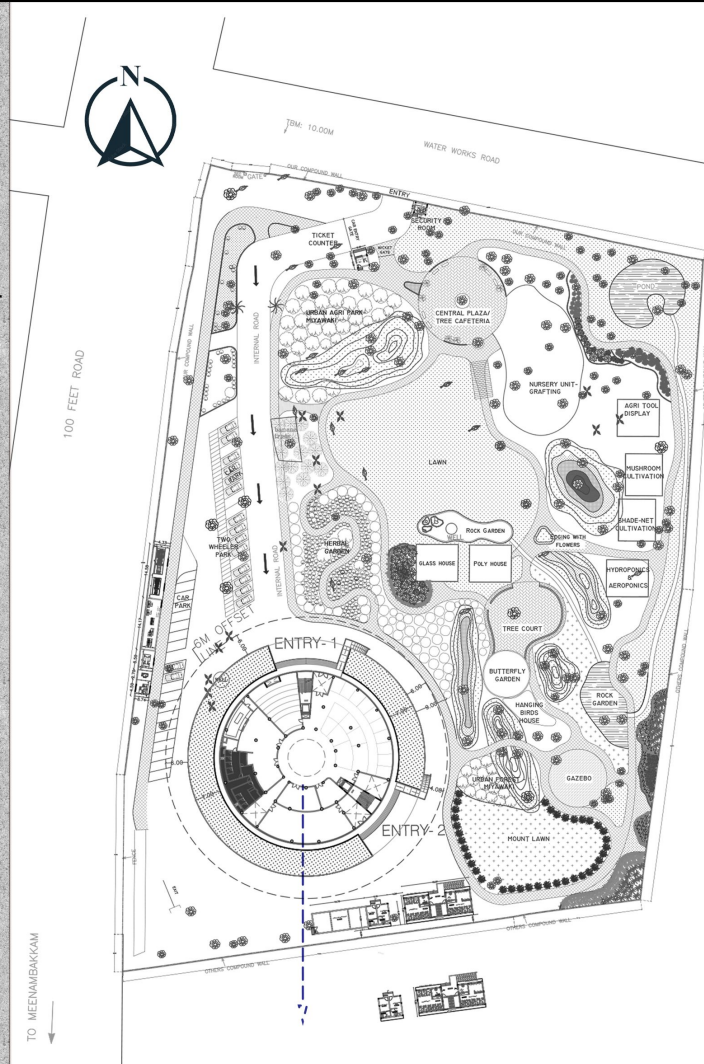
Around 5 Acres

## Building Ground Coverage

1893 Sq.m(0.46 Acres)

## Total Builtup Area

7578 Sq.m



## LANDSCAPE ZONE:

Urban Agri park -Miyawaki  
Water bodies -Pond (unlined)  
Natural Stream  
Rain water Harvesting  
Butterfly garden  
Tree cafeteria  
Bird house  
Bamboo grove  
Rock Garden  
Flower bed  
Seating  
Grand Multipurpose Lawn  
Pergola with special paving  
Herbal Garden  
Tree Court

## WISDOM ZONE:

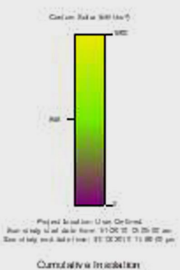
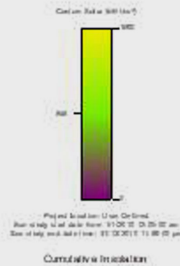
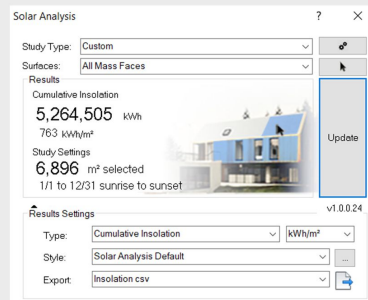
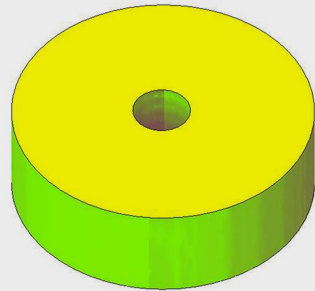
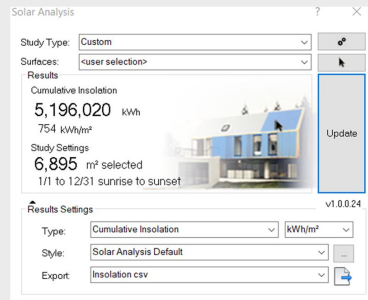
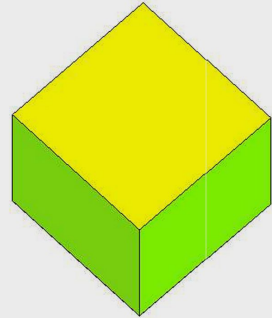
Glass house (Cactus Species)  
Hydroponics & Aeroponics  
Shade Net Cultivation  
Nursery unit - Crafting  
Display tools  
Roof Garden  
Organic Agriculture

## Building Energy Aspects:

Facade glazing (Natural Light-  
ing)  
Glass roofing (Insect Museum  
Box) / Glass Dome (Sky Light-  
ing)  
Vertical Garden / PVC panels /  
Vertical fins





[illegible]

# SOLAR ANALYSIS - ANNUAL

The figure displays four 3D renderings of a building facade, showing the annual solar radiation analysis for the North, South, East, and West elevations. Each rendering includes a color scale bar indicating the radiation intensity in kWh/sq m, ranging from 0 (dark purple) to 1820 (yellow). The analysis is based on cumulative data over a year.

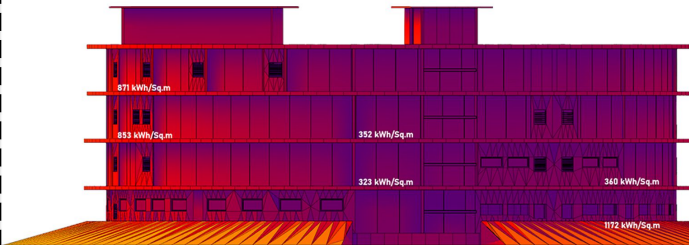
**North Elevation:** The radiation intensity is generally low, with values ranging from 323 kWh/sq m to 1172 kWh/sq m. The color scale bar shows a range from 0 to 1820 kWh/sq m.

**South Elevation:** The radiation intensity is generally high, with values ranging from 1660 kWh/sq m to 1820 kWh/sq m. The color scale bar shows a range from 0 to 1820 kWh/sq m.

**East Elevation:** The radiation intensity is generally low, with values ranging from 155 kWh/sq m to 1500 kWh/sq m. The color scale bar shows a range from 0 to 1820 kWh/sq m.

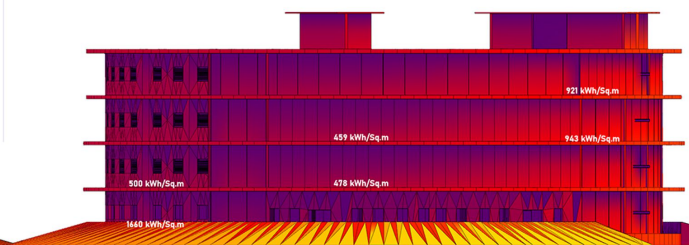
**West Elevation:** The radiation intensity is generally low, with values ranging from 316 kWh/sq m to 1348 kWh/sq m. The color scale bar shows a range from 0 to 1820 kWh/sq m.

Range: Year  
Method: Cumulative  
Guindy National Park, Guindy, Chennai, Tamil Nadu, India



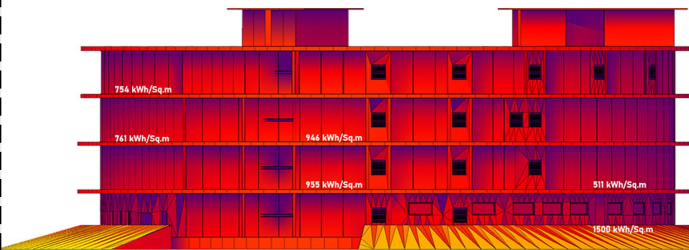
Range: Year                      Method: Cumulative  
Guindy National Park, Guindy, Chennai, Tamil Nadu, India

## North Elevation



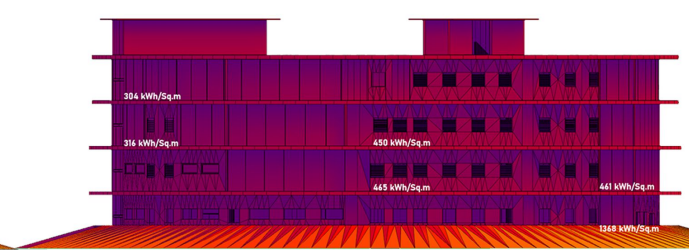
Range: Year                      Method: Cumulative  
Guindy National Park, Guindy, Chennai, Tamil Nadu, India

### South Elevation



Range: Year                      Method: Cumulative  
Guindy National Park, Guindy, Chennai, Tamil Nadu, India

## EAST Elevation



Range: Year                      Method: Cumulative  
Guindy National Park, Guindy, Chennai, Tamil Nadu, India

## WEST Elevation





( MAY 1/2020 - JUNE 30/2020 )  
SUMMER

## GROUND FLOOR - 1971 Sq.m (without grass slope area)



Photo timing - 14/07/2022 (2:30pm - 3:30pm)

**Noted Points :** All floors have projection of corridor space of 1.2m and act as horizontal shading device for all brick wall , glass walls , windows.  
50% percentage of corridor space is covered by vertical garden and aluminium panels (except ground floor) where detailed in Solar analysis.

### LOBBY AREA & EXHIBITION DISPLAY AREA :

As per NBC Standards (20.6.4.1 Display and exhibition areas) the Recommended lighting level for exhibition display areas are min 200 lux ,300 medium and max 500lux).

As per NBC Standards (23.1.1 lobby, waiting room )the Recommended lighting level for lobby areas are 150-200-300)

The fixed windows (2m x 1m) in the exhibition corner are placed from lintel beam below 400mm for lighting to take place the interior space.

But it doesn't enough to carry to natural light deep inside ,as a result the lobby areas remain Dark.The both side walls of exhibition area are remain closed even connected with lobby space.

( DEC 1/2020 - JAN 30/2021 )  
WINTER

## FIRST FLOOR - 1971 Sq.m (With 79 Sq.m glass covered sky-light)



Photo timing - 14/07/2022 (2:30pm - 3:30pm)

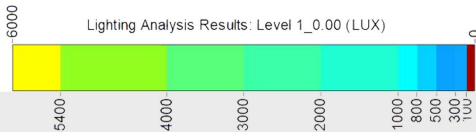
As per NBC Standards (21 Education) the Recommended lighting level for General teaching spaces are min 200-300-500lux)

### TRAINING SPACES:

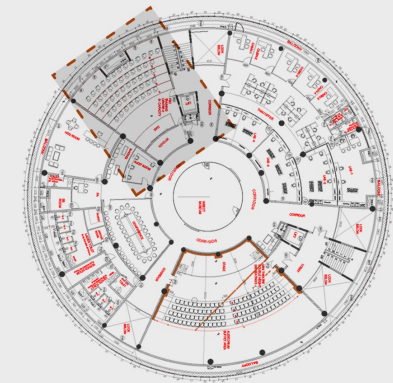
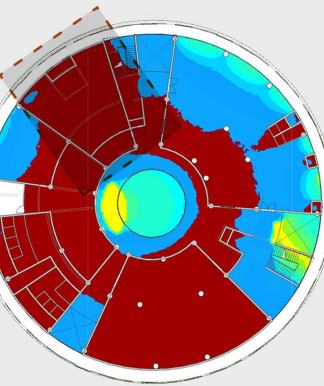
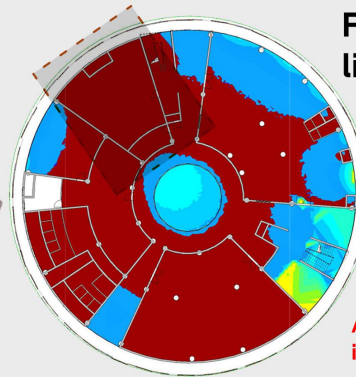
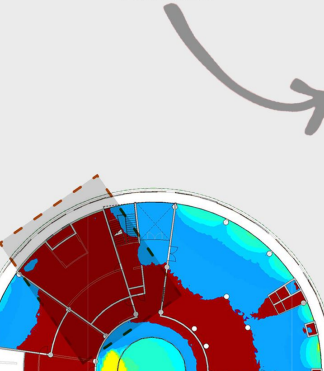
Following the North orientation (West tilted) the room doesn't meet the require daylighting on training rooms of both ground & first floor.

The possible lighting also will be closed after the vertical garden elements placed.

( DEC 1/2020 - JAN 30/2021 )  
WINTER



( MAY 1/2020 - JUNE 30/2020 )  
SUMMER

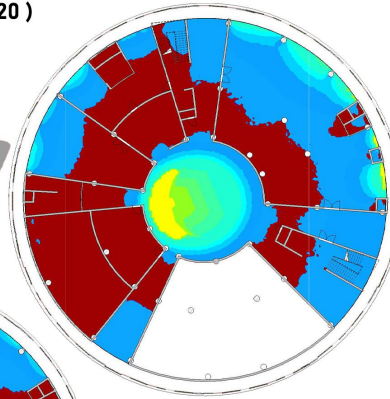




## SECOND FLOOR LIGHTING ANALYSIS CRITICAL AREA - LOBBY SPACE

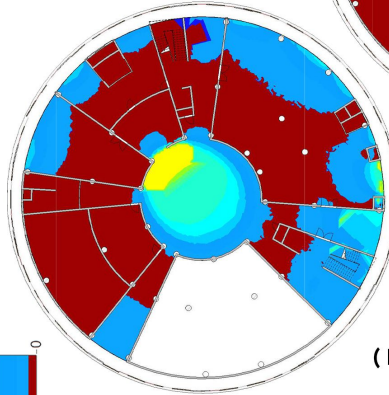
( MAY 1/2020 - JUNE 30/2020 )

SUMMER



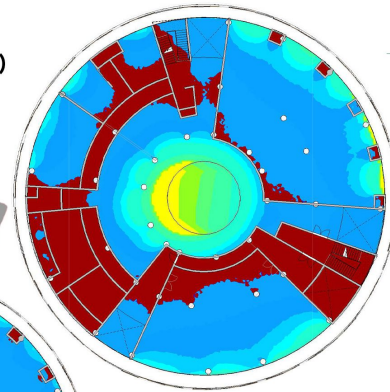
( DEC 1/2020 - JAN 30/2021 )

WINTER



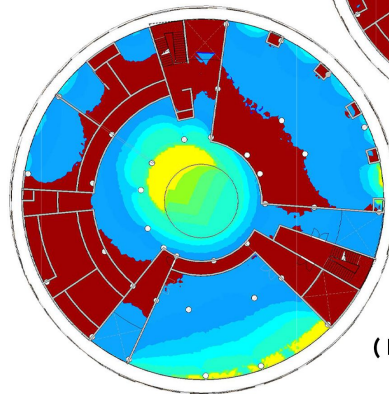
( MAY 1/2020 - JUNE 30/2020 )

SUMMER



( DEC 1/2020 - JAN 30/2021 )

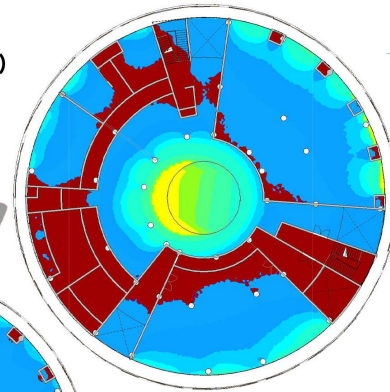
WINTER



## THIRD FLOOR LIGHTING ANALYSIS CRITICAL AREA - LOBBY SPACE

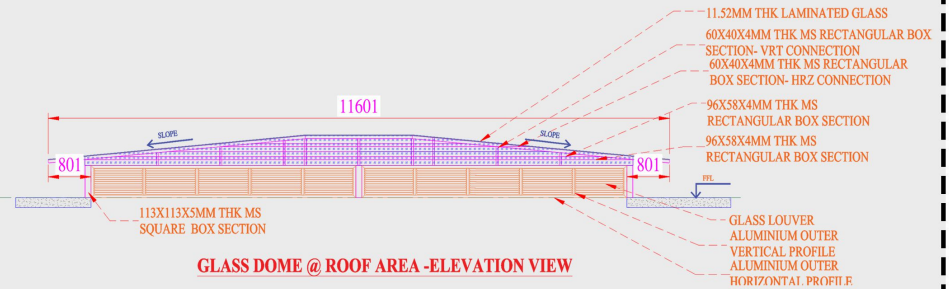
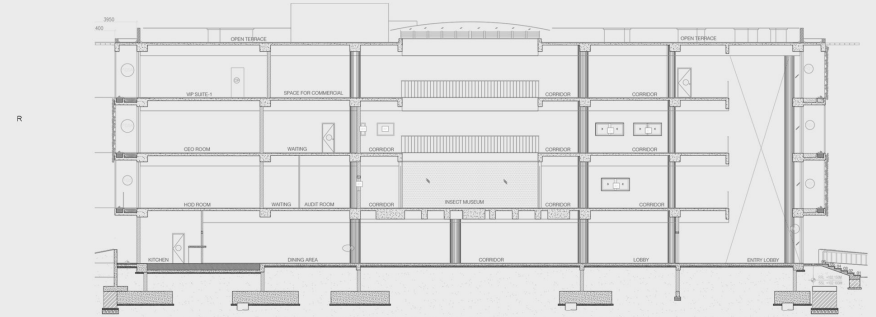
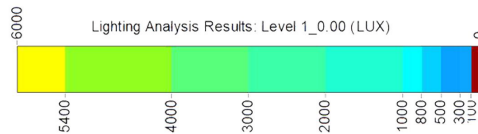
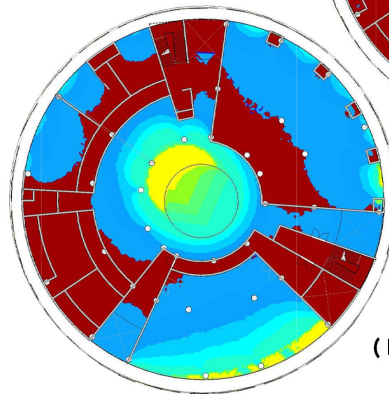
( MAY 1/2020 - JUNE 30/2020 )

SUMMER



( DEC 1/2020 - JAN 30/2021 )

WINTER



## SGG HORIZON CLEAR GLASS 12MM

SGG Horizon from the Infinity bouquet of glass products from Saint-Gobain, provides advanced solar control and is made using state-of-the-art nanotechnology, in a unique plasma environment. A unique glass, SGG Horizon series, comes with extremely low internal reflections enabling clear vision during the day as well as night.

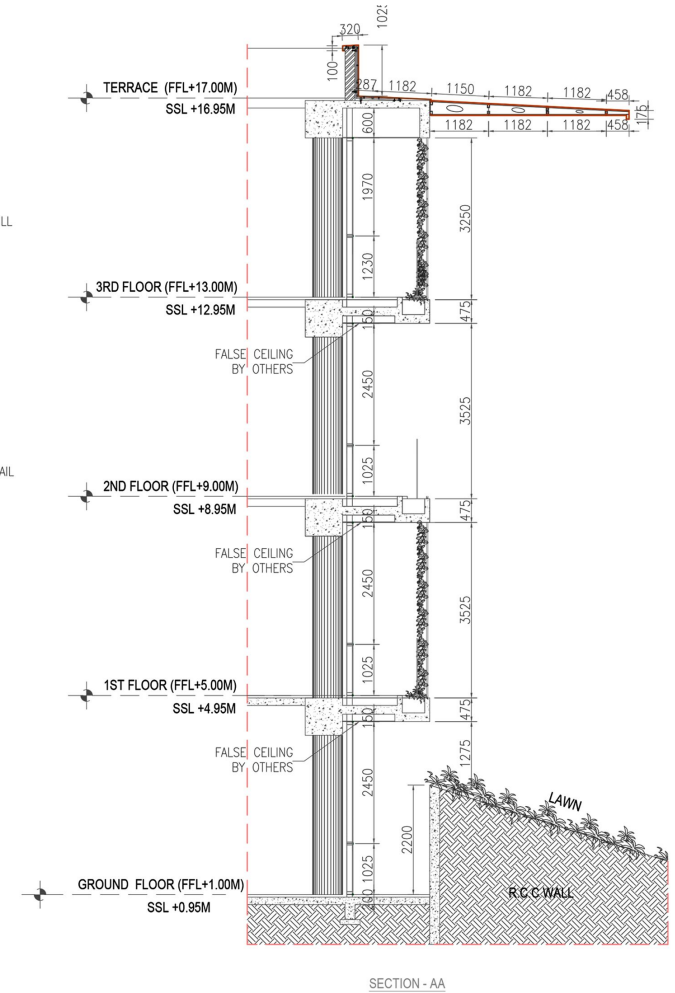
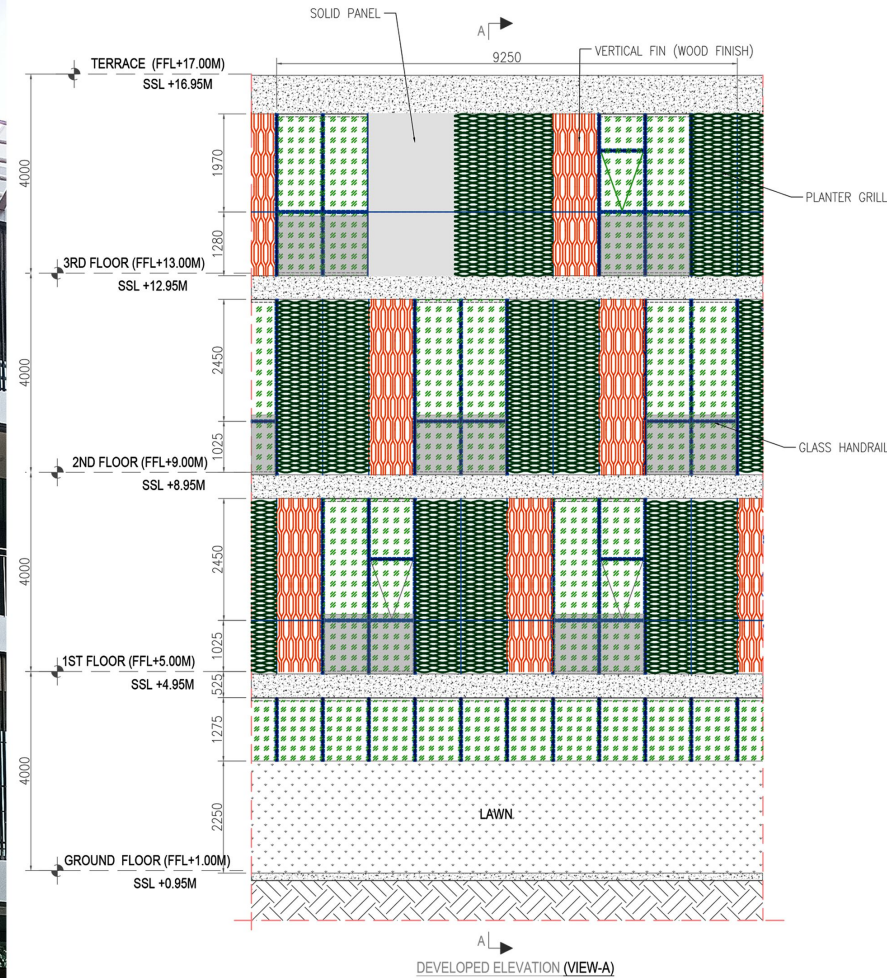
Internal reflections are usually inevitable during night times when the lux levels outside are much lower than that of the outside. This effect is usually enhanced with coated glasses but now with SGG Horizon, modern facades can now be gifted with the best of

| Product           | Visual Comfort               |                        |                        | Thermal Comfort       |                          | Thermal Comfort |             |        |                |
|-------------------|------------------------------|------------------------|------------------------|-----------------------|--------------------------|-----------------|-------------|--------|----------------|
| Product           | Visual light transmission(%) | External Reflection(%) | Internal Reflection(%) | Solar Factor(Sf/SHGC) | Shading co-efficient(SC) | U-value (W/m2K) | Selectivity | Tuv(%) | UV cut down(%) |
| SGG Horizon Clear | 45                           | 22                     | 4                      | 0.44                  | 0.51                     | 4.9             | 1.02        | 33     | 67             |





# VERTICAL GARDEN -Wire Fencing



## Vertical Plants Suggested by Horticulture department



- 1) Allamanda
- 2) Money plant
- 3) Vernonia
- 4) Poha plant
- 5) Thomsonia







## SGG FOREST GREEN

Product values given for 6mm

Luminous and Solar Characteristics are determined as per EN 410

Thermal transmittance is determined as per EN 673

Sun Ban from Saint-Gobain is a best-in-class range of Solar Control Glass for residences. It allows optimum daylight to pass through but cuts radiation and reflects away up to 70% of heat. This special pyrolytic coated glass provides superior UV protection while ensuring the indoor temperature remains unaffected or stays lower to outdoor temperature, compared to normal clear glass. Ideal for tropical regions especially Indian climatic conditions, Sun Ban range of glass solutions is aesthetically pleasing and comes in chic, contemporary colours and varied thicknesses. It can be widely used for windows, staircase glazing, facades, balconies among others.

| Visual Comfort               |                        |                        | Thermal Comfort       |                          |                 |
|------------------------------|------------------------|------------------------|-----------------------|--------------------------|-----------------|
| Visual Light Transmission(%) | External Reflection(%) | Internal Reflection(%) | Solar Factor(SF/SHGC) | Shading Co-efficient(SC) | U-Value (W/m2K) |
| 7                            | 31                     | 34                     | 0.15                  | 0.18                     | 3.6             |



| QUOTATION FOR FACADE AND ASSOCIATED WORKS                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                            |                                    | Date : 16.03.2020          |                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------------------------------|----------------------------|----------------------------------------------|
| Ref:                                                                                                                                                                                                                                                                                                                                                                                                                                     | SCG/QUOT/MP/MARCH/040/20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                            |                                    |                            |                                              |
| To,                                                                                                                                                                                                                                                                                                                                                                                                                                      | M/S AMER & ANI ARCHITECTS<br>A.AMERNATH<br>AMERANI ARCHITECTS<br>No: 14, 32nd Cross Street,<br>Besant Nagar , Chennai - 600090                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                            |                                    | Site: AMMA GREEN PARK      |                                              |
| Sub : - Quotation for Fabrication and erection of Structural Glazing, Planter Area Grill, Aluminium Solid Panel With Wood Finish, Vertical Fin Grill, Glass Handrail, M.S. Structure Canopy, ACP Covering at top and bottom with Aluminium Grill for Lighting Purpose on Canopy, Aluminium Louver, Museum area Glass Wall, Internal Partion and Doors with Patch Fittings, Museum Area Glass Roof and Handrail, Glass Dome at Head room. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                            |                                    |                            |                                              |
| We thank you for your enquiry through – DIRECT – and have great pleasure in giving below the details of our lowest offer for your kind perusal.                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                            |                                    |                            |                                              |
| S.NO.                                                                                                                                                                                                                                                                                                                                                                                                                                    | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | UNIT                       | QTY                                | RATE                       | AMOUNT                                       |
| 1.                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>STRUCTURAL GLAZING WITH STICK SYSTEM</b><br>Structural glazing is a system of curtain wall in a building where the window framework is provided from floor to floor. This framework will consist of suitable verticals and horizontals fixed to the structural beams and slabs with well-designed clamps through bolts and nuts to withstand the wind pressure of 200 kg/m. Glass is fixed to the aluminium through spacer and silicon sealant, so that no aluminium frame is seen from outside after fixing of glass. The individual specifications are:<br><b>a) PERIPHERY</b><br>The periphery shall be of size of 113.0mm x 58.0mm x 2.0mm thick Rectangular Box Section<br><b>b) TRANSOM</b><br>The transom shall be of size of 112.0mm x 57.0mm x 2.0mm thick Lip Section<br><b>c) MULLION</b><br>The mullion shall be of size of 112.0mm x 57.0mm x 2.0mm thick Lip Section<br><b>d) SILICON SEALANT</b><br>Silicon sealant of Weather & Structural should be of grade WACKER Germany or equivalent<br><b>e) HARDWARE</b><br>The clamping of Aluminium framework should be done through Galvanized Hot dipped M.S.<br><b>f) ANODIZING</b><br>All aluminium section should be Electro colour anodized with anoxic film of minimum 15-20 micronize thickness.<br><b>g) SPACER</b><br>6.0 mm x 15.0 mm spacer used for the purpose of expansion and contract and to withstand the wind pressure |                            |                                    |                            |                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Sqft                       | 15163.0                            | 327.00                     | 4,958,301.00                                 |
| 1a                                                                                                                                                                                                                                                                                                                                                                                                                                       | Cost of 8.0mm thick Glass Emerald Glaze ST 467 (Bigger Panels )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Sqft                       | 8666.0                             | 195.00                     | 1,689,870.00                                 |
| 1b                                                                                                                                                                                                                                                                                                                                                                                                                                       | Cost of 6.0mm thick Glass Emerald Glaze ST 467 ( Smaller Panels )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Sqft                       | 5713.0                             | 135.00                     | 771,255.00                                   |
| 1c                                                                                                                                                                                                                                                                                                                                                                                                                                       | Cost of 6.0mm thick Glass Emerald Glaze ST 467 - Top Hung Glazing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Sqft                       | 784.0                              | 135.00                     | 105,840.00                                   |
| 1d                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>TOP HUNG OPENING WITH TWO POINT LOCKING SYSTEM</b><br>Supply & Fixing of Top Hung Cum Opening using 32mm x 28mm x 1.6mm thick Specially made Profile for Outer frame. 33mm x 36mm x 1.6mm thick openable shutter profile , with necessary EPDM gasket, Stainless steel 304 grade friction stay of Storm resistant, Handle with two point lock arrangements where ever Opening required                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                            |                                    |                            |                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Nos                        | 64.0                               | 6464.00                    | 413,696.00                                   |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>EXTERIOR PLANTER AREA ALUMINIUM FRAMES</b><br>Providing and fixing of Aluminium Section Electro Coloured Profile of 63.0mm x 38.0mm x 2.0mm thick for Periphery area, 64.0mm x 57.0mm x 2.0mm thick lip section for Transom. complete with all necessary fittings including the cost of supply and fixing of Aluminium Lazer Cut Panels fixing to U Channel ,Aluminium frame is fixed through Sleeve Screws / anchor bolt as per the site condition.<br><div>Frame</div> <div>Aluminium Lazer Cut Treillis</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Sqft<br>Sqft               | 5864.0<br>5864.0                   | 285.00<br>298.00           | 1,671,240.00<br>1,747,472.00                 |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>SOLID PANEL WITH WOOD FINISH</b><br>Providing and fixing of Aluminium Section Electro Coloured Profile of 63.0mm x 38.0mm x 2.0mm thick for horizontal and vertically. complete with all necessary fittings including the cost of supply and fixing of Aluminium Solid Panel and complete as per site conditions<br><div>Frame</div> <div>Aluminium Solid Panels</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Sqft<br>Sqft               | 1778.0<br>1778.0                   | 285.00<br>695.00           | 506,730.00<br>1,235,710.00                   |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>VERTICAL FIN GRILL</b><br>-do-using materials same as above ( Serial # 4 refer) with Lazer cut Aluminium Panel<br><div>Frame</div> <div>Aluminium Lazer Cut Treillis</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Sqft<br>Sqft               | 4085.0<br>4085.0                   | 285.00<br>313.00           | 1,164,225.00<br>1,278,605.00                 |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>S.S HANDRAIL WITH LAMINATED GLASS</b><br>Supply and fixing of Stainless Steel Handrails Using 150.0mm x 40.0mm x 30mm Stainless Steel Spigot, connected with Laminated Glass of 11.52 mm thick (5.0mm TG +1.52mm PVB + 5.0mm Thick TG) and complete the entire System as per site condition.<br><div>Near Exterior Glazing</div> <div>Near Mini Theater, Staire case</div> <div>Second and Third Floor Above Museum</div> <div>Total</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Sqft<br>Sqt<br>Sqt<br>Sqft | 6085.0<br>352.0<br>816.0<br>7253.0 |                            |                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                            |                                    | 1278.00                    | 9,269,334.00                                 |
| 7                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>ACP CANOPY, ALUMINIUM LAZER CUT TRELLIS WITH M.S. STRUCTURE.</b><br>Supply and erection of M.S. Canopy with Aluminium Composite Panel & Aluminium Lazer Cut Panel at Roof Area, Using 300.0mm X 150.0mm X 8.0mm thick 'T' Section (ISMB300) divided diagonally into 2 pieces and anchored to the main beam 52 Numbers in a candivler position, Connecting the above 52 number through 96.0mm x 48.0mm x 3.0mm Rectangular box section connecting to the ACP and Lazer Cut joints , 300.0 mm X 150mm x 12mm thick M.S. plate Anchoring to the beam and the entire system Welding to the Pate, and complete with necessary hardwares as per site Conditions<br><div>M.S Structure</div> <div>Aluminium Composite Panel</div> <div>Aluminium Lazer Cut Treillis</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | kg<br>Sqft<br>Sqft         | 21494.0<br>11172.0<br>3629.0       | 145.00<br>295.00<br>298.00 | 3,116,630.00<br>3,295,740.00<br>1,081,442.00 |

|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                              |                            |                            |                                        |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------------------------|----------------------------|----------------------------------------|
| 8   | <b>ALUMINIUM LOUVER</b><br>Supply & Fixing of "Z" Type Louver, Using 110mm "Z" Type Louver section fixed with 57.0mm x 18.3mm section as cover plate and 63 x 38 x 1.5mm Rectangular box section as Outer Frame and intermediate vertical and horizontal , and complete with necessary hardwares as per site conditions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Sqft                         | 4408.0                     | 522.00                     | 2,300,976.00                           |
| 9   | <b>INTERNAL GLASS PARTITIONS</b><br>Providing Supply and Fixing of Internal Partition glass at First Floor and Second Floor, Using 25.0mm x 25.0mm x 3.0mm thick U channel at Bottom and Top Patch, Including the Cost and Supply of 12.0mm thick toughened Glass and complete with necessary Hardwares as per site conditions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Sqft                         | 1800.0                     | 549.00                     | 988,200.00                             |
| 10  | <b>FIXED GLAZING WITH 11.52 THICK LAMINATED GLASS AND SINGLE LEAF OPENABLE DOOR - MUSEUM</b><br>Providing Supply and fixing of Fixed glazing with Single door with 11.52mm thick Laminated Glass and necessary HONNEX GERMANY make patch fittings at the top holding the glass, Door set with top patch, bottom patch, lock, pivot , Floor Spring, Door Handle of 400mm, 25.0mm X 25mmmm X 3.0mm thick heavy duty Aluminium Channel fixing into the floor, Glass fixing with Clear Silicon Sealant at the bottom area & intermediate Glass to Glass joint, complete with all necessary fittings as per site condition.                                                                                                                                                                                                                                                                                                                                                                                      | Sqft                         | 1082.0                     | 989.00                     | 1,070,098.00                           |
| 10a | Aluminium Composite Panel At Wall Area                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Sqft                         | 205.0                      | 295.00                     | 60,475.00                              |
| 11  | <b>MUSEUM AREA GLASS ROOFING</b><br>Supply and erection of M.S. with Glass roof panel at museum area, Using 250.0mm X 150.0mm X 8.0mm thick 'T' Section (ISMB250) as Main Frame for every 3 Meter, 96.0mm x 48.0mm x 2.0mm thick MS Rectangular box section fixing to middle of 'T' Section and 78.0mm x 57.0mm x 2.0mm thick curtain wall section Fixing above MS for Glass Support. 28.0mm x 1.5mm thick Cover Cap as Vertically and Structural sealant as Horizontal, Including the cost of Supply and Fixing of 11.52mm Thick Laminated Glass and complete with necessary hardwares as per site conditions<br>M.S Structure                                                                                                                                                                                                                                                                                                                                                                             | kg<br>Sqft                   | 3867.0<br>4408.0           | 145.00<br>665.00           | 560,715.00<br>2,931,320.00             |
| 12  | <b>GLASS LOUVER AT BOTTOM OF THE DOME</b><br>Providing supply and erection of Glass Louver at Bootom of the dome, Using 113.5mm x 113.5mm x 4.5mm thick MS Square Box Section as Vertical and Horizontal, 200mm x 150mm x 12.0mm thick MS Base Plate, 63.0mm x 3.0mm x 2.0mm thick Aluminium Box Section as Vertical and Horizontal, 10 x 10 x 1.1mm thick Aluminium C Channel for fixing of Glass Louver. Including the supply and fixing of 4.0mm thick Glass as Louver and complete with necessary hardwares as per site Conditions.<br>M.S Structure                                                                                                                                                                                                                                                                                                                                                                                                                                                    | kg<br>Sqft                   | 3083.0<br>204.0            | 145.00<br>401.00           | 447,035.00<br>81,804.00                |
| 13  | <b>GLASS DOME</b><br>Supply and erection of M.S. Dome with Laminated Glass at the Top of the Building. Using 96.0mmx 48.0mmx 4.0mm thick MS Rectangular box section in Every 4 feet interval horizontally and vertically, 100mm x 100mm x 8mm thick Base Plate, 78 x 57 x 2.0mm thick Curtain wall section fixing at top of the MS Support. 11.52 mm laminated Glass fixing with Aluminium pressure Plate and Cover Cap assure the dome leak proof and complete with necessary fittings as per site Conditions.<br>M.S Structure<br>Cost of 11.52mm thick Laminated Glass                                                                                                                                                                                                                                                                                                                                                                                                                                   | Kg<br>Sqft<br>Sqft           | 2037.0<br>1162.0<br>1162.0 | 145.00<br>268.00<br>383.00 | 295,365.00<br>311,416.00<br>445,046.00 |
| 14. | <b>ALUMINIUM COMPOSITE PANEL - COPPING AND PARAPET</b><br>Top Copping, Bottom Copping, Termination area etc., using Aluminium Composite Panel creates an extra wall of protection on Building and avoids corrosion of steel construction and adds extra life to buildings.<br>The individual specifications are:-<br>FRAME WORK : ACP Copping Using Mill finished Aluminium of 25 x 50 x 1.5mm thick box section and 19 x 19 x 2mm thid L angle suitable according to the site condition fixed to the Wall.<br>A.C.P.<br>Aluminium Composite Panel with approved shade of 4.0 mm thick should be made of (50mm +3.0mm + 0.50mm) 100% virgin polyethylene core sandwiched between two skins of aluminum sheet of which one side is having three layers of Polyester coating with paint to ensure the superior corrosion resistance and weather-ability and the other side is service coated with Epoxy Paint (Gray Colour). The panel should have sandwiched with DuPont (US) adhesive.<br>Frame Work<br>ACP | Sqft<br>Sqft<br>Sqft<br>Sqft | 5063.0<br>5063.0           | 237.00<br>135.00           | 1,199,931.00<br>683,505.00             |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                              |                            |                            | 43,681,976.00                          |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                              |                            |                            | 7,862,755.68                           |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                              |                            |                            | 0.32                                   |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                              |                            |                            | 51,544,732.00                          |

| Terms of Payment:- We request the following terms of Payment |                                                                            |
|--------------------------------------------------------------|----------------------------------------------------------------------------|
| A.                                                           | 30% advance along with your Value Order.                                   |
| B.                                                           | 30% against supply of Aluminium Extrusions, Trellis, M.S. at Site.         |
| C.                                                           | 30% against supply of A.C.P Sheet, Glass, S.S. Handrail materials at Site. |
| D                                                            | 0.5% after completion of Entire Work.                                      |
| E                                                            | 0.5% After Handing over the Site.                                          |

| GENERAL TERMS & CONDITIONS:- |                                                                                                                                                          |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1                            | SCAFFOLDING: If required necessary Double Layer pipe Scaffoldings will be at your cost (Horizontal pipe in between 4'-0" to be maintained).              |
| 2                            | BOQ: This offer is based on unit rate price summary on BOQ. If any variations in the BOQ the price will change. And no way considered as lump sum price. |
| 3                            | TEST: The Third party Test is not included in our offer.                                                                                                 |
| 4                            | MEASUREMENT: Measurement can be taken jointly as per Actual site condition from point to point.                                                          |
| 5                            | STORAGE SPACE: Separate storage space with lock and key Provision should be provided at the site.                                                        |
| 6                            | SECURITY: If any Theft/Missing of Tools, Tackles & Materials at your Responsibility at your Premises.                                                    |
| 7                            | TOLERANCE: Tolerance +/- 10% as applicable in Thickness & sizes for all the materials used.                                                              |
| 8                            | VALIDITY: The above Quotation is valid for 30 days for the date of delivery.                                                                             |
| 9                            | FINAL QUANTITY: The above quantity will be tentative and based on the rate amount will vary.                                                             |
| 10                           | ELECTRICITY & WATER: The necessary power & water supply to be provided by you free of cost.                                                              |

We do hope you will find us up to your satisfaction, upon which you could offer us with more opportunities, which will have our best attention always and looking forward to hearing from you at the earliest.





# Scheme Drawing

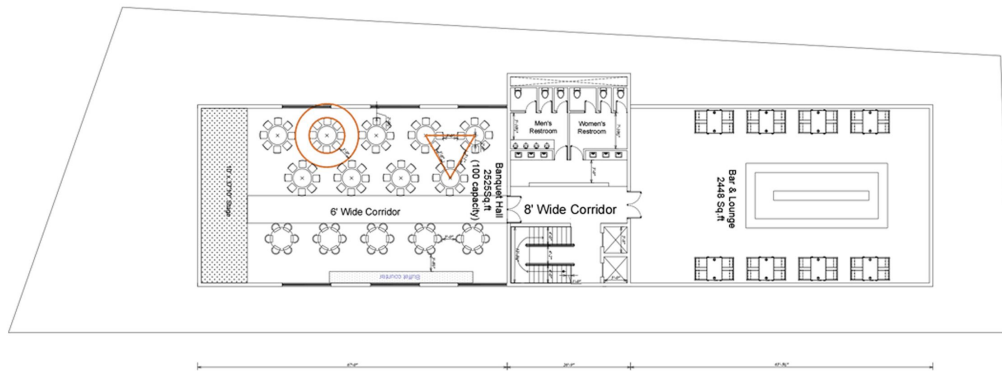
Site Location : 10.357595, 78.805774 (Pudukottai)

Type : Hotel + Restaurant

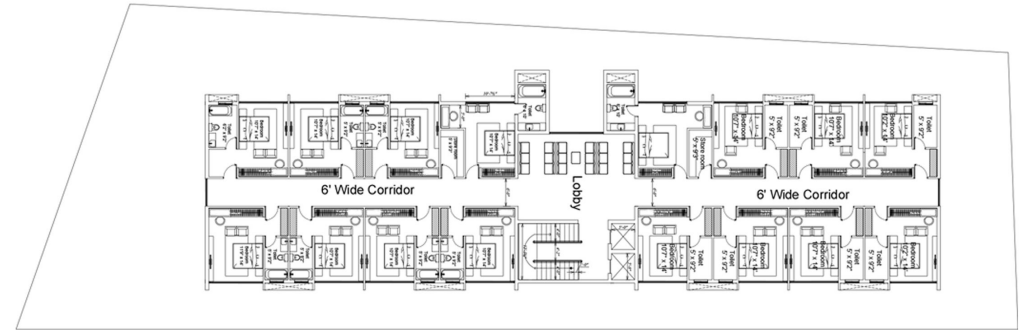
Floors: Ground + 3 floors



Ground floor



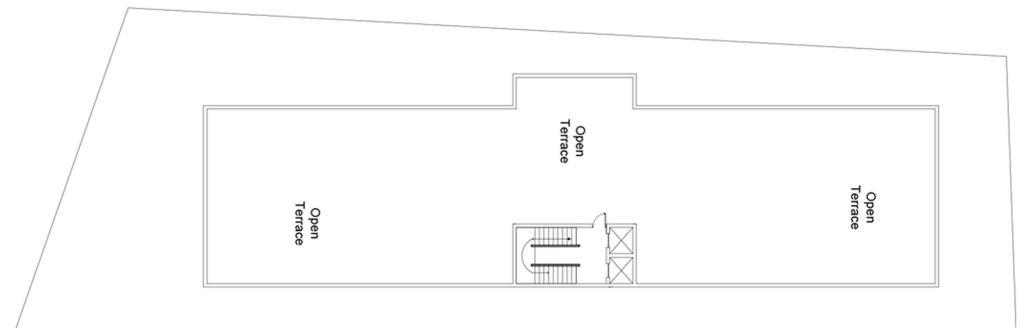
First floor



Second floor



Third floor



Terrace floor





# Multi-family Housing

DAC Developers

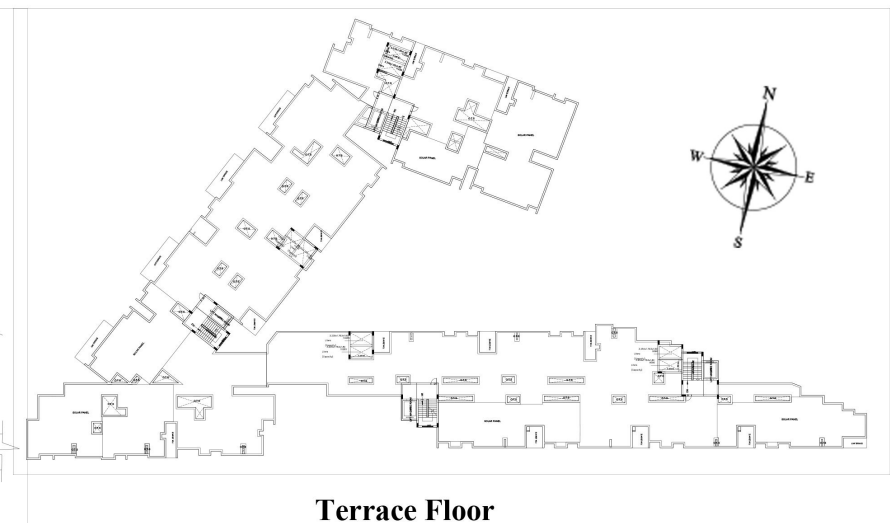
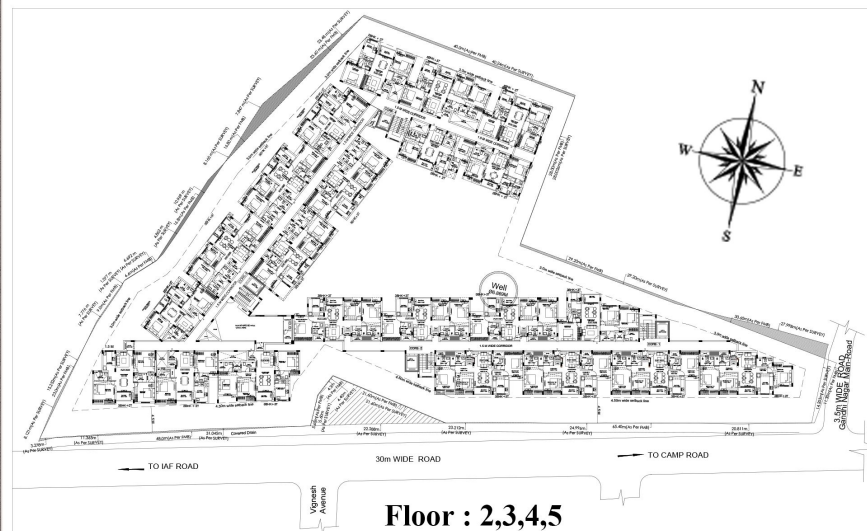
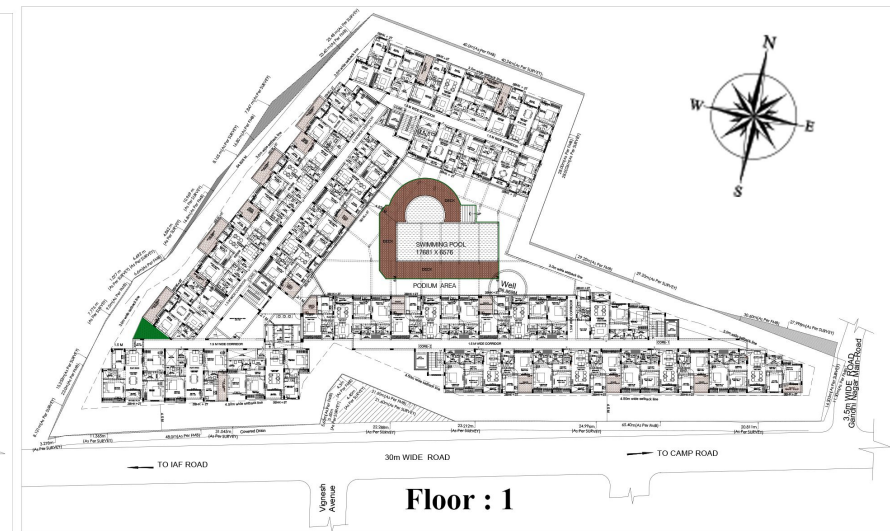
**Location**  
Vignesh Avenue, Tambaram

**Latitude & Longitude**  
12.9249° N, 80.1000° E

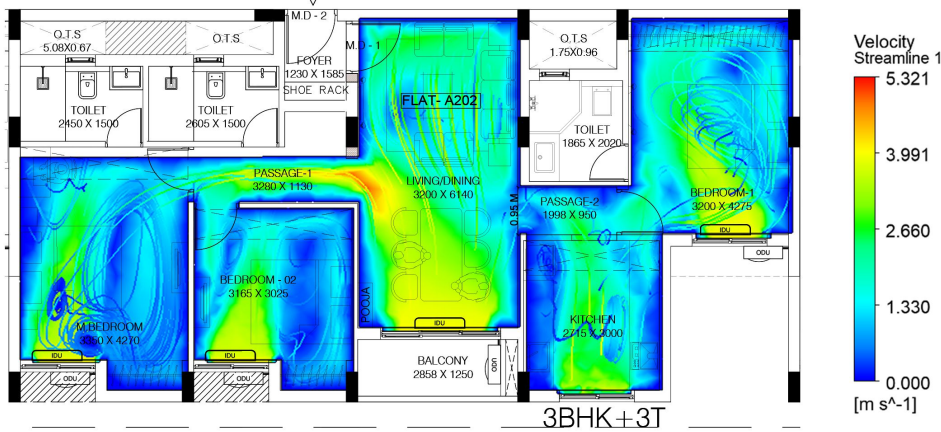
**Total Site Area**  
1.36 Acres

**Landscaping Zone**  
0.18 Acres(first floor)

**No. of Housing Units**  
113



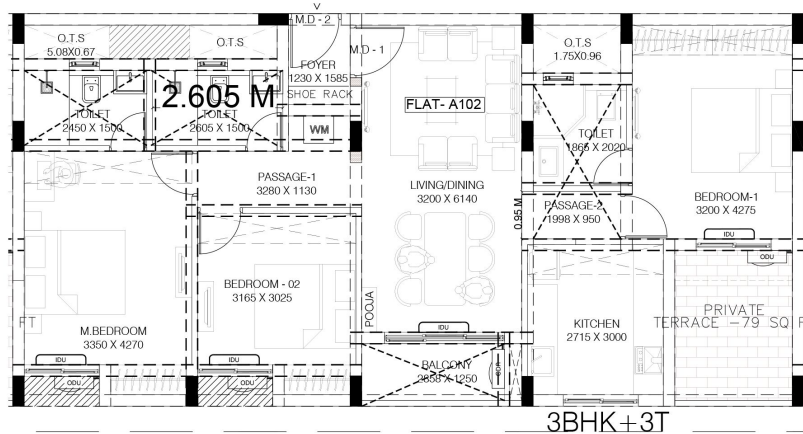
## WIND ANALYSIS (ANSYS TOOL)



4.50m wide setback line

Floor Plan 2,3,4(without Private terrace)

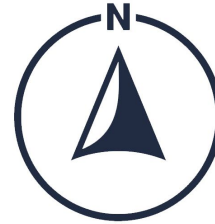
## BLOCK 1



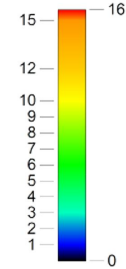
4.50m wide setback line

Floor plan -1 & 5(with Private terrace)

## LIGHTING ANALYSIS (REVIT INSIGHT)



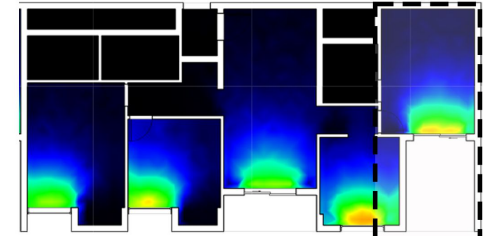
### Daylight Factor Results



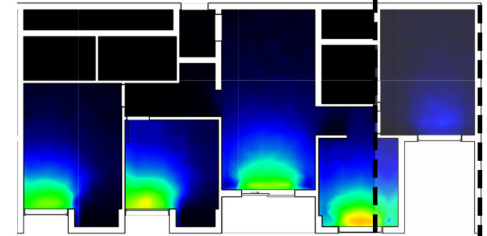
Results of Lighting Analysis

Lighting Daylight Factor

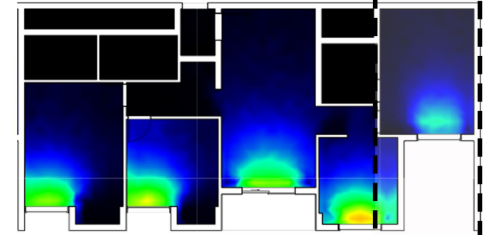
Floor 5



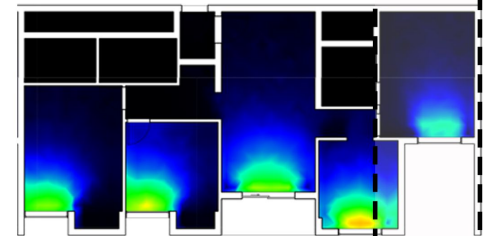
Floor 4



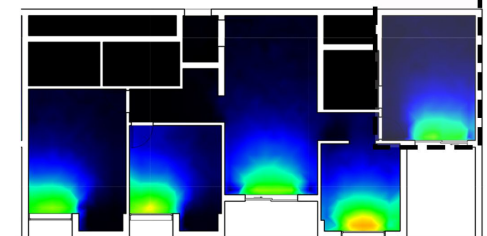
Floor 3



Floor 2

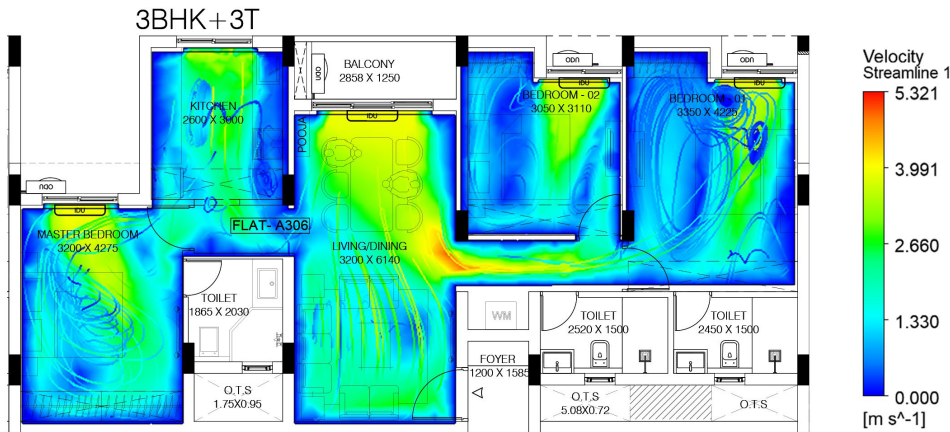


Floor 1





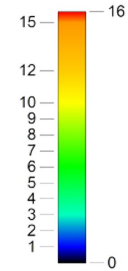
## WIND ANALYSIS (ANSYS TOOL)



Floor Plan 2,3,4(without Private terrace)

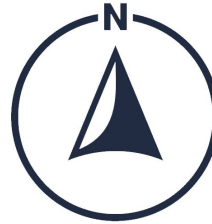
## LIGHTING ANALYSIS (REVIT INSIGHT)

### Daylight Factor Results

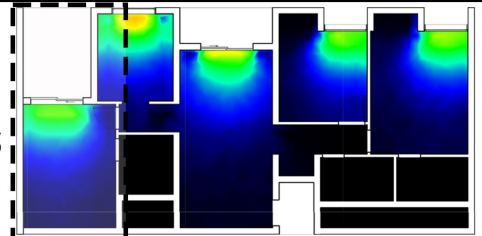


Results of Lighting Analysis

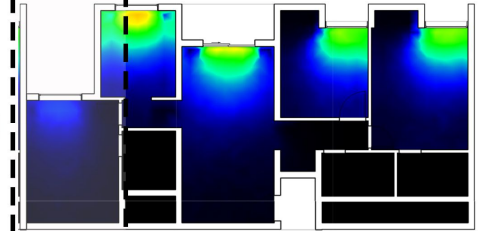
Lighting Daylight Factor



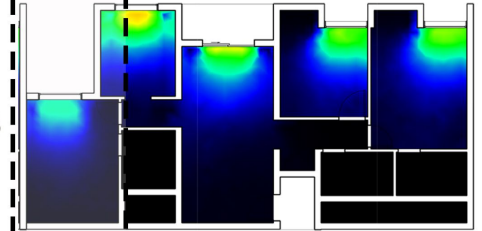
Floor 5



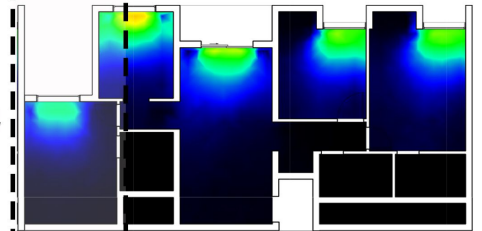
Floor 4



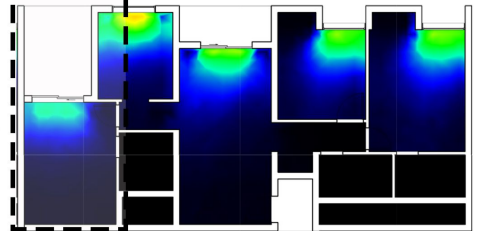
Floor 3



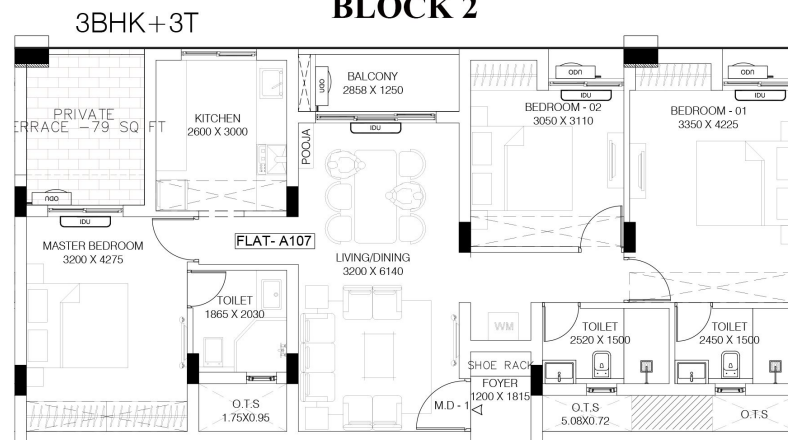
Floor 2



Floor 1



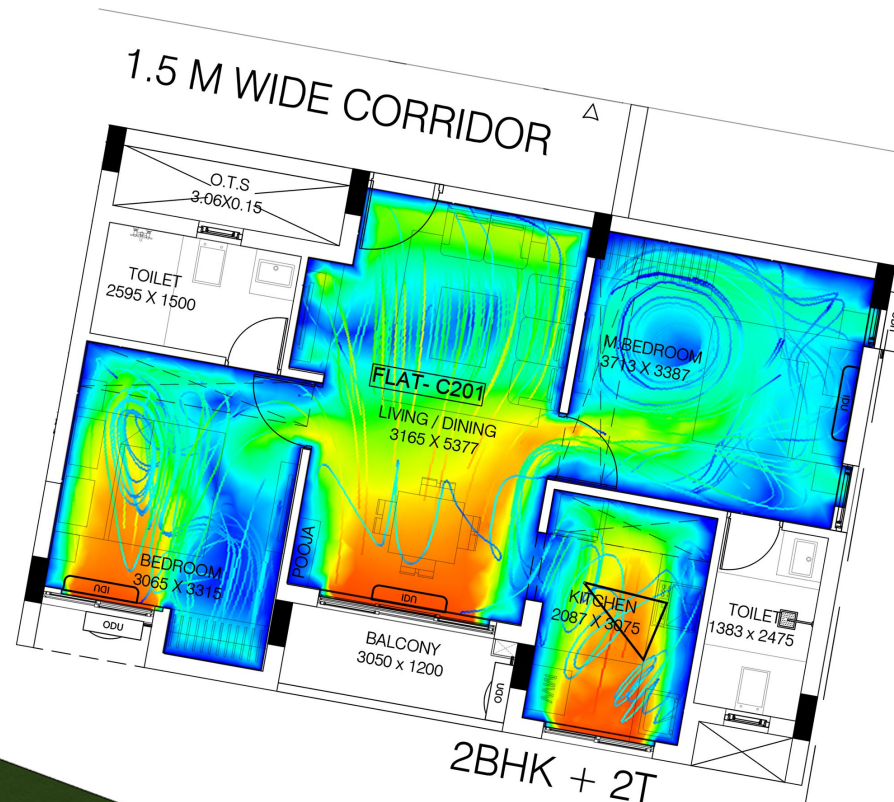
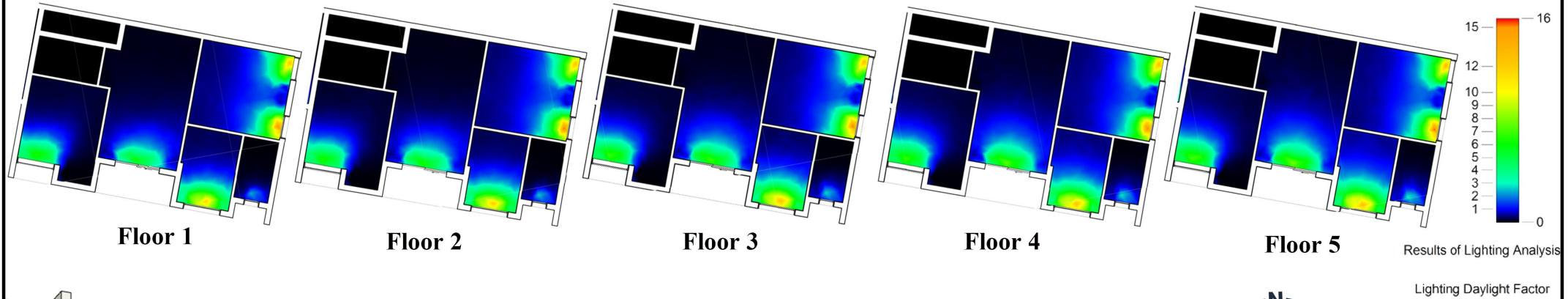
## BLOCK 2



Floor plan -1 & 5(with Private terrace)



## LIGHTING ANALYSIS (REVIT INSIGHT)



## WIND ANALYSIS (ANSYS TOOL)

BLOCK 3  
Floor plan -1 to 5

Velocity  
Streamline 1

5.321

3.991

2.660

1.330

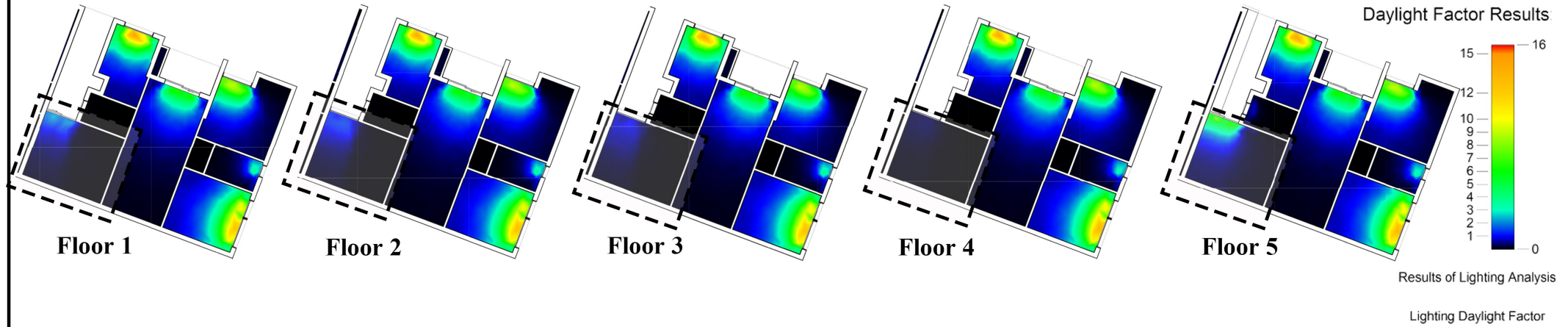
0.000

[m s<sup>-1</sup>]

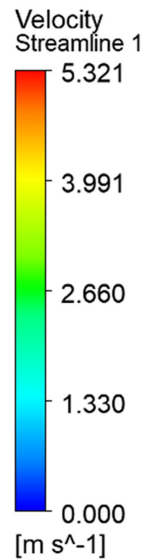




## LIGHTING ANALYSIS (REVIT INSIGHT)



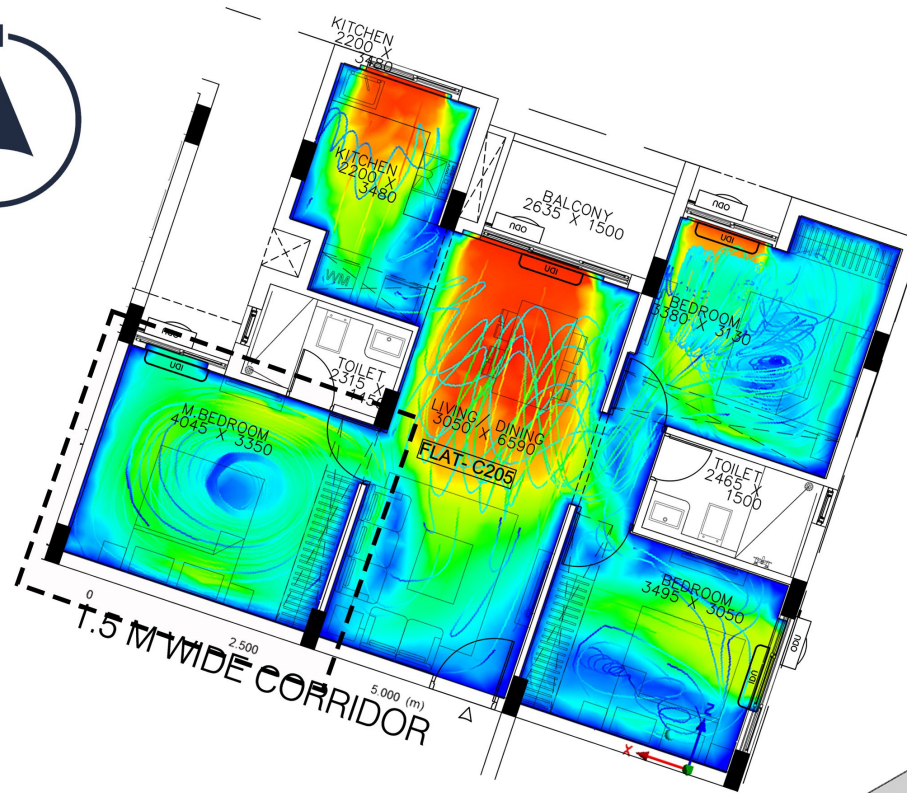
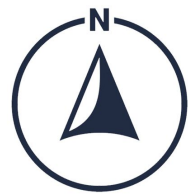
## WIND ANALYSIS (ANSYS TOOL)



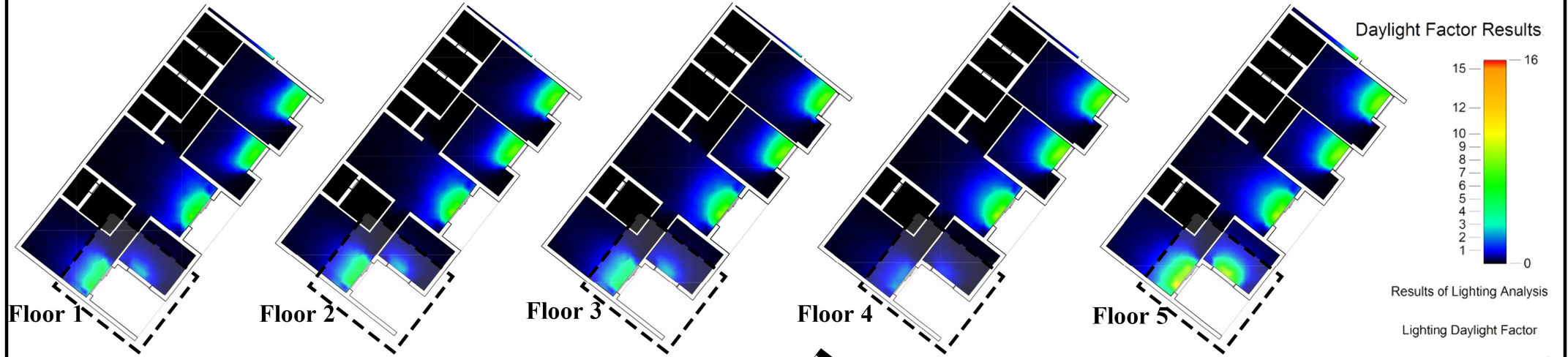
**BLOCK 4**

**Floor plan -1 & 5**  
(with private terrace)

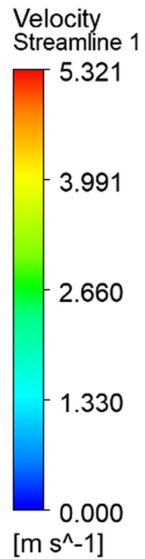
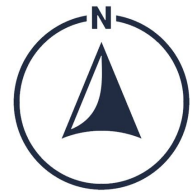
**Floor plan-2,3,4**  
(without private terrace)



## LIGHTING ANALYSIS (REVIT INSIGHT)



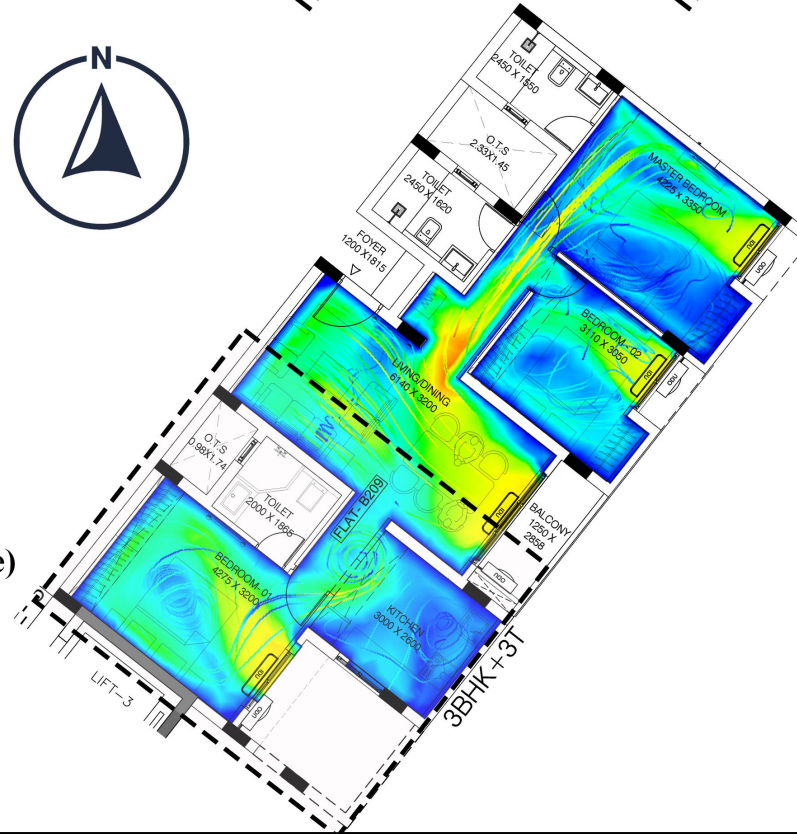
## WIND ANALYSIS (ANSYS TOOL)



**BLOCK 5**

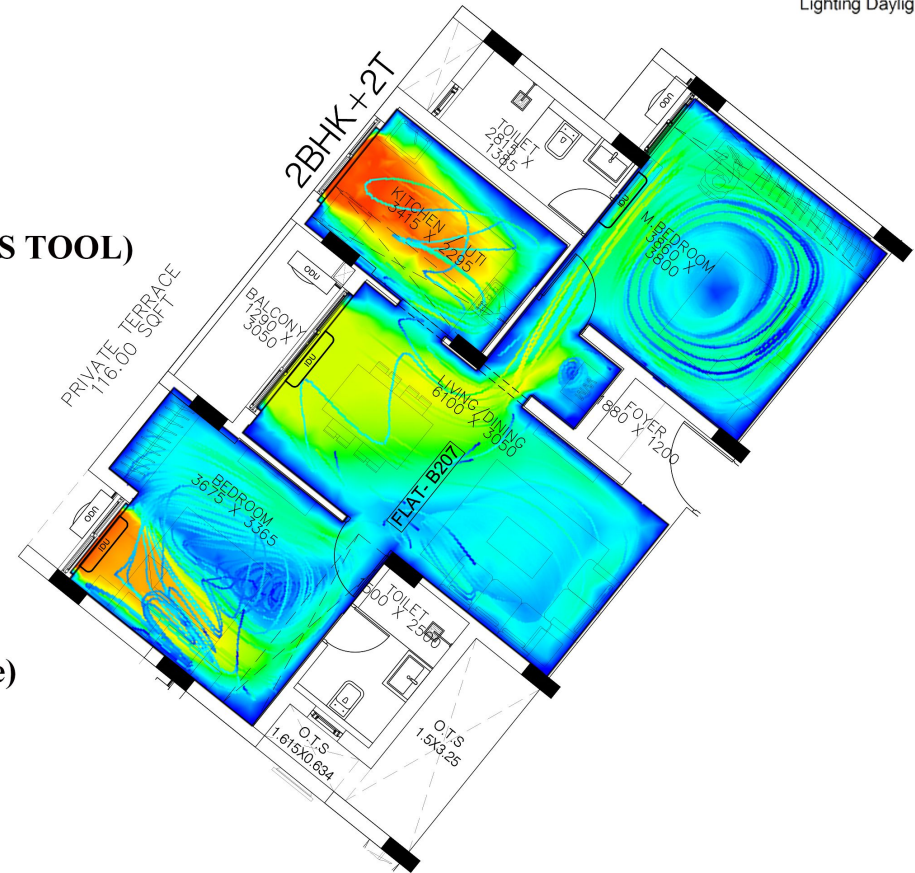
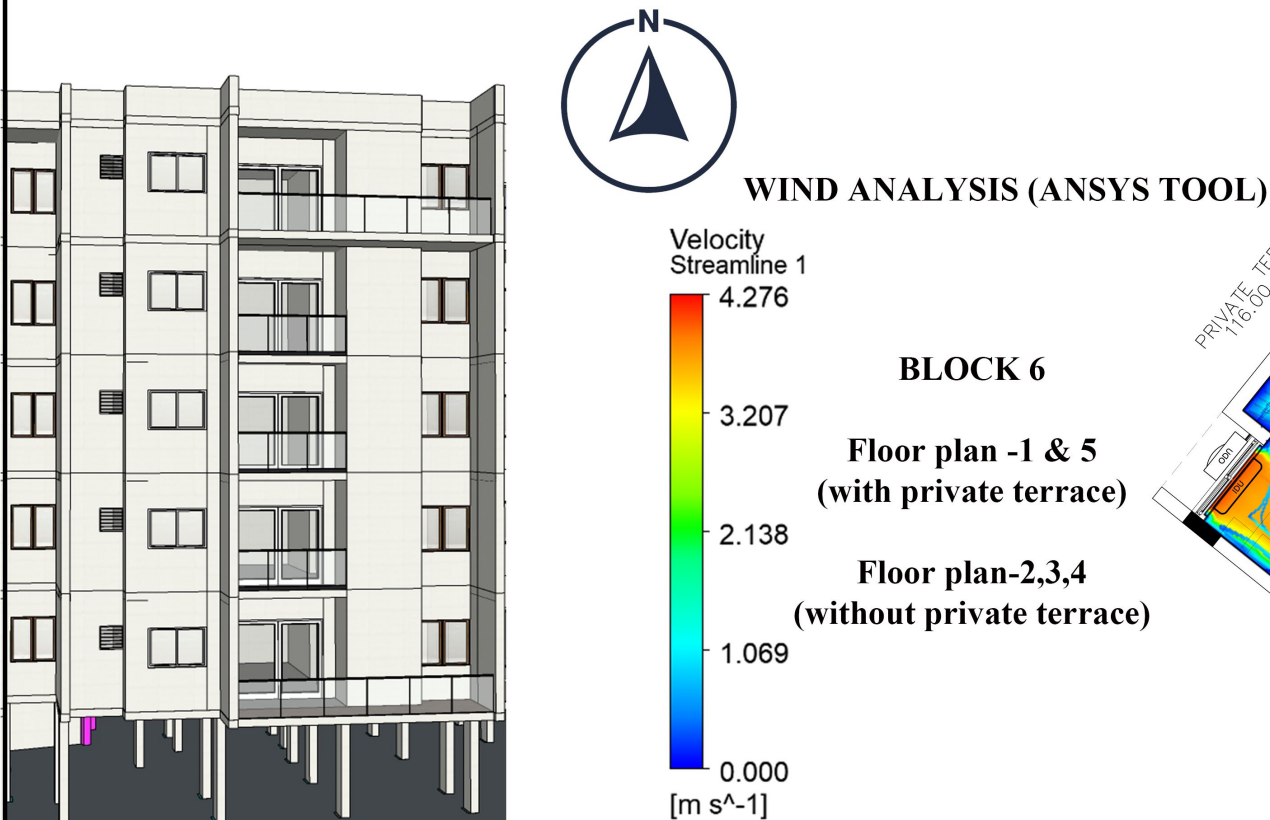
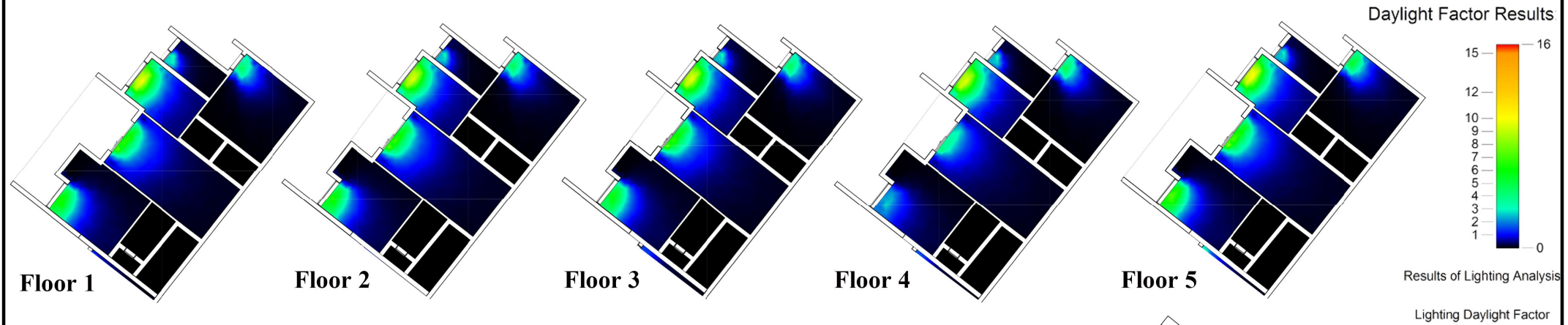
Floor plan -1 & 5  
(with private terrace)

Floor plan-2,3,4  
(without private terrace)

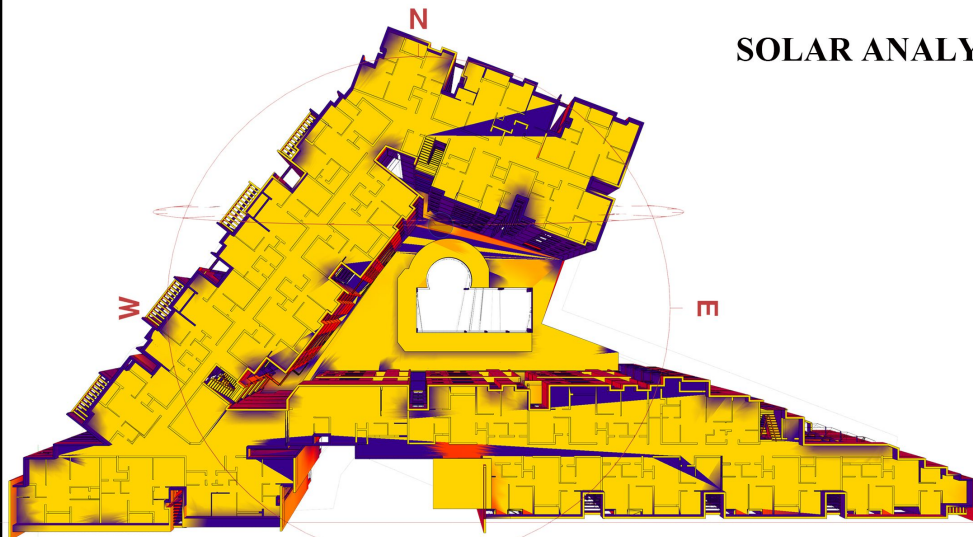




# LIGHTING ANALYSIS (REVIT INSIGHT)

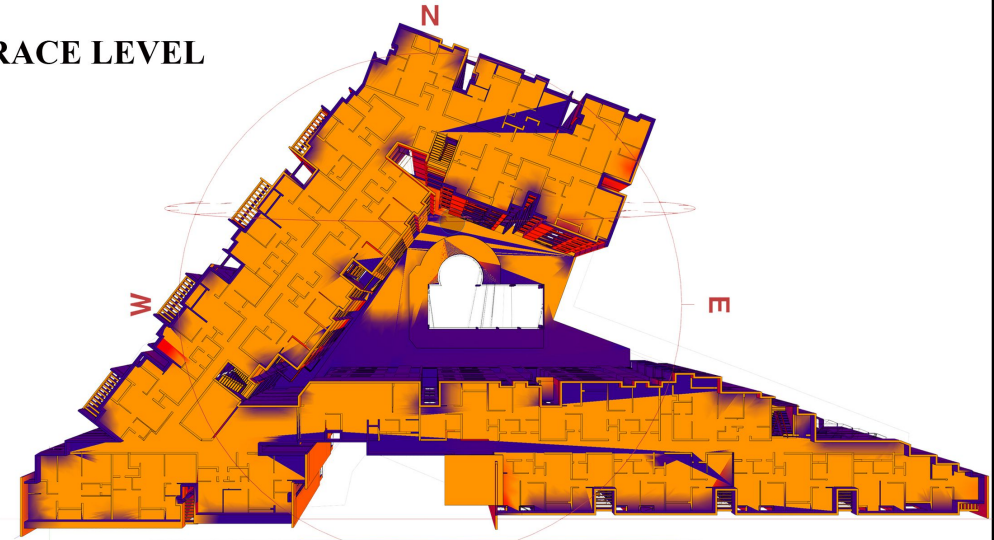


## SOLAR ANALYSIS -TERRACE LEVEL



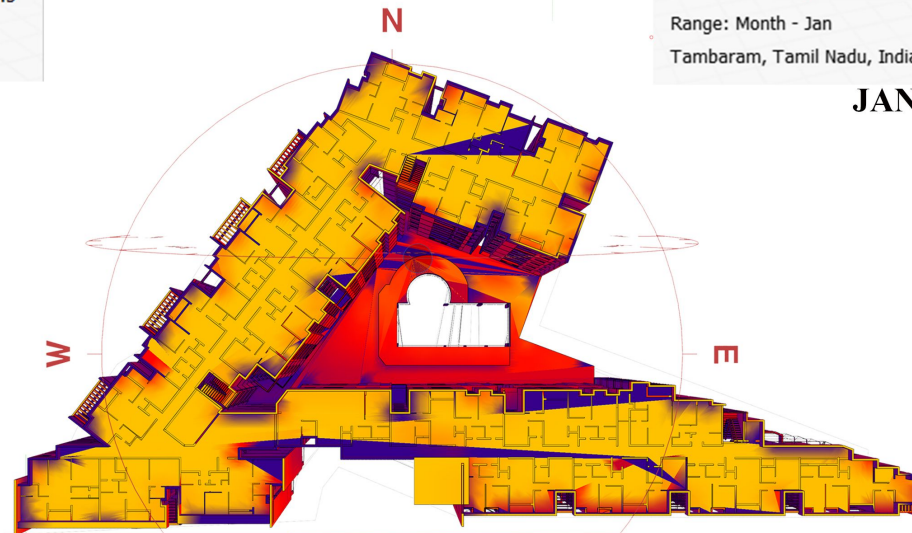
BTU/sq ft  
0 150.7 301.5  
Range: Month - Jun Method: Peak  
Tambaram, Tamil Nadu, India

**JUNE**



BTU/sq ft  
0 150.7 301.5  
Range: Month - Jan Method: Peak  
Tambaram, Tamil Nadu, India

**JANUARY**



kWh/sq m  
0 902.6 1805  
Range: Year Method: Cumulative  
Tambaram, Tamil Nadu, India

**ANNUAL**





# SOLAR ANALYSIS - SOUTH FACING

## Annual

kWh/sq m

0

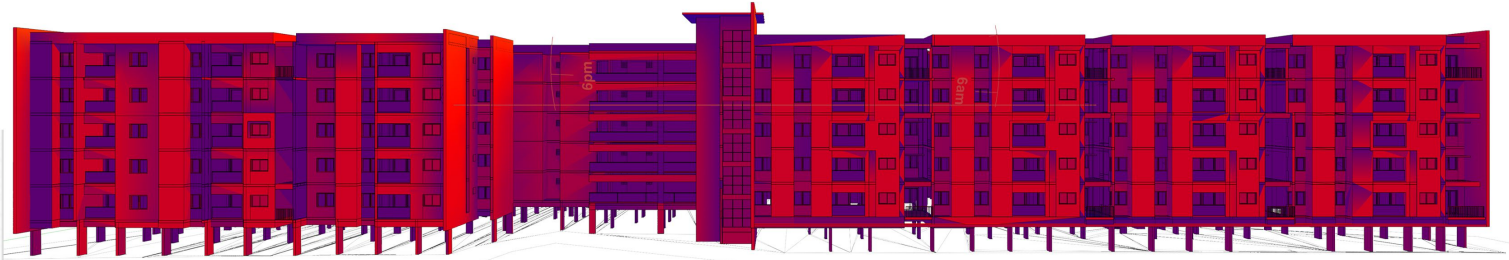
902.6

1805

Range: Year

Method: Cumulative

Tambaram, Tamil Nadu, India



## January

BTU/sq ft

0

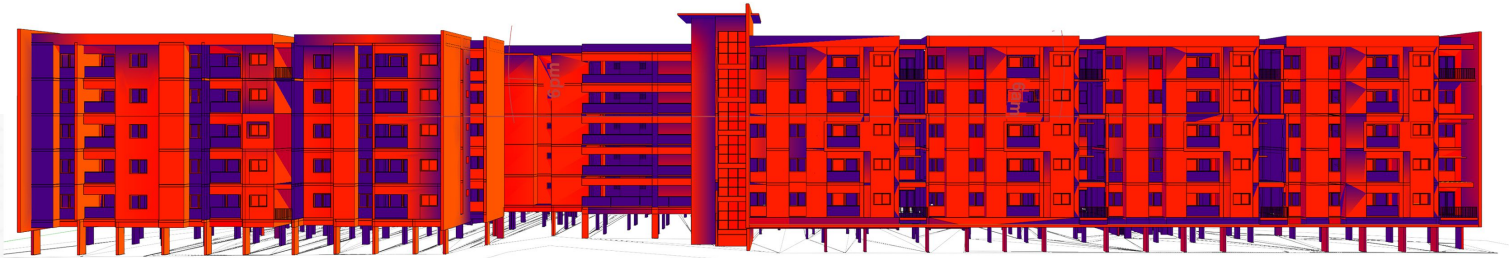
150.7

301.5

Range: Month - Jan

Method: Peak

Tambaram, Tamil Nadu, India



## June

BTU/sq ft

0

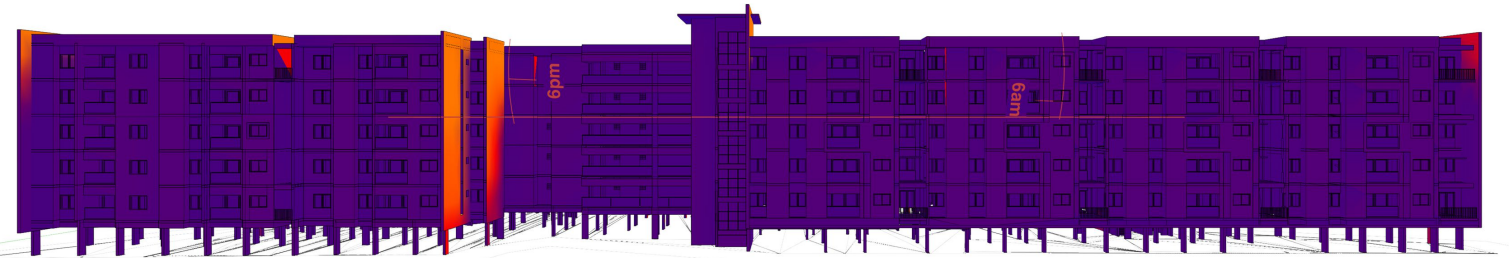
150.7

301.5

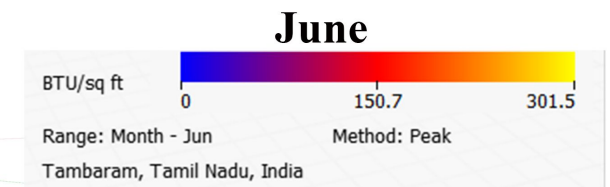
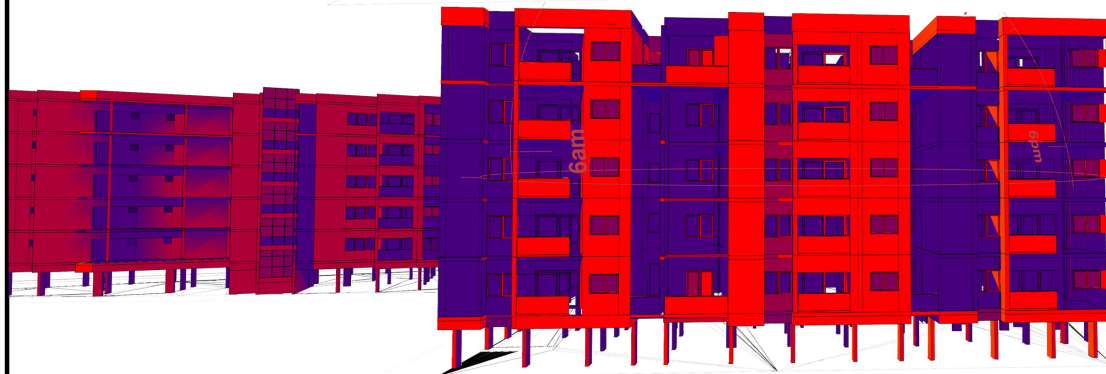
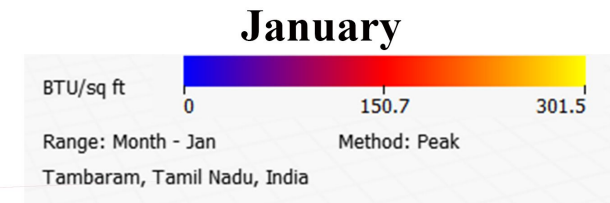
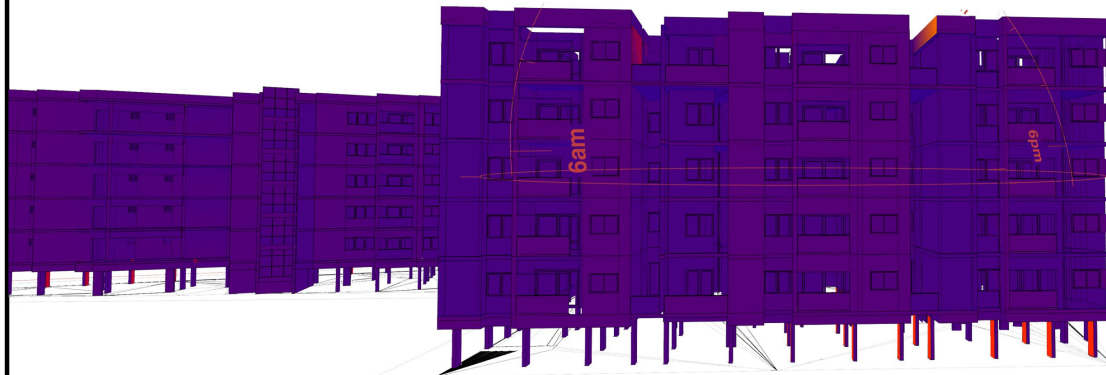
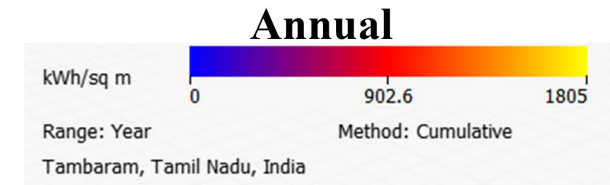
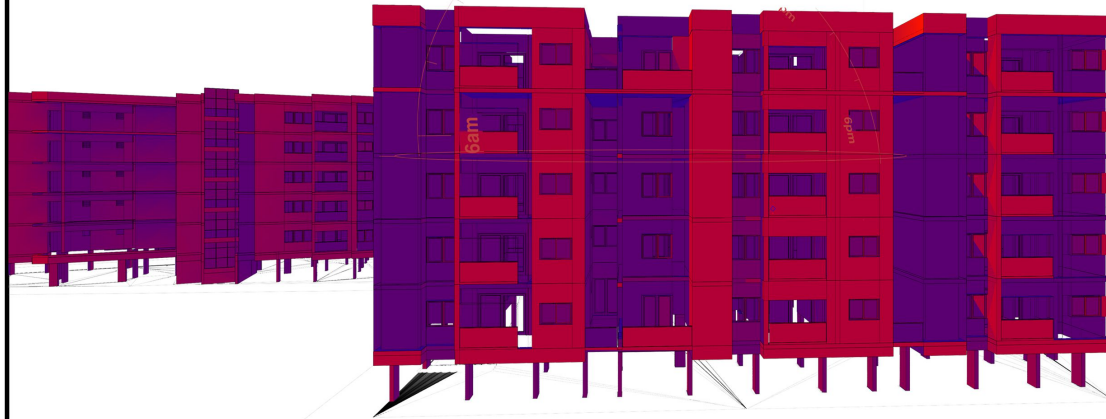
Range: Month - Jun

Method: Peak

Tambaram, Tamil Nadu, India

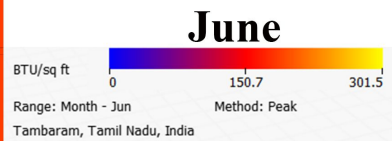
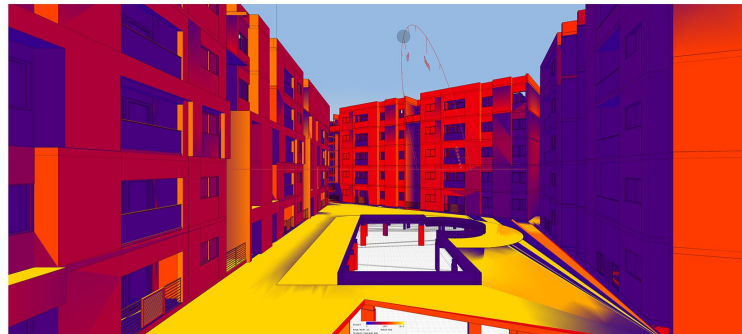
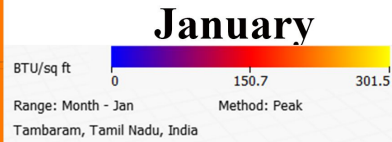
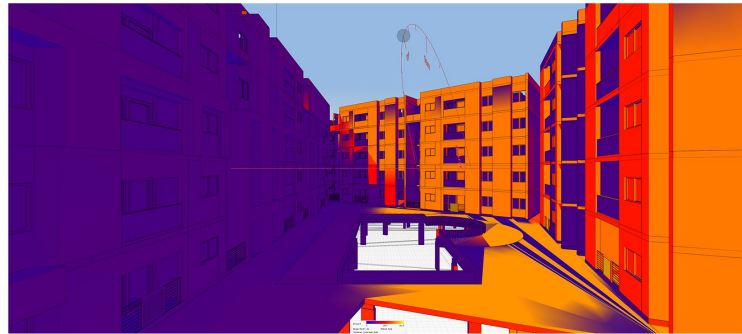
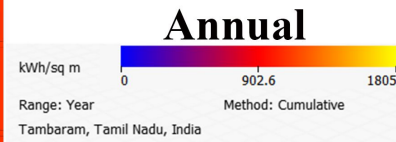
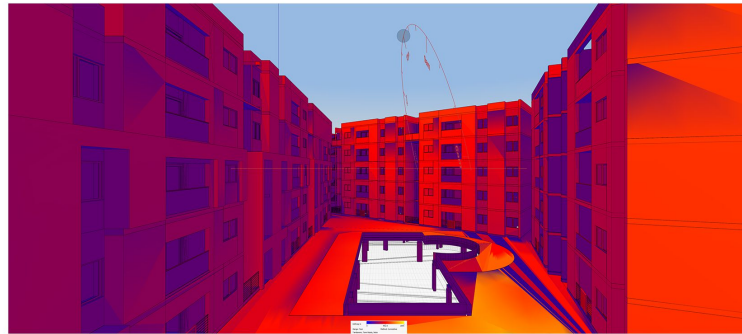


# SOLAR ANALYSIS - NORTH FACING

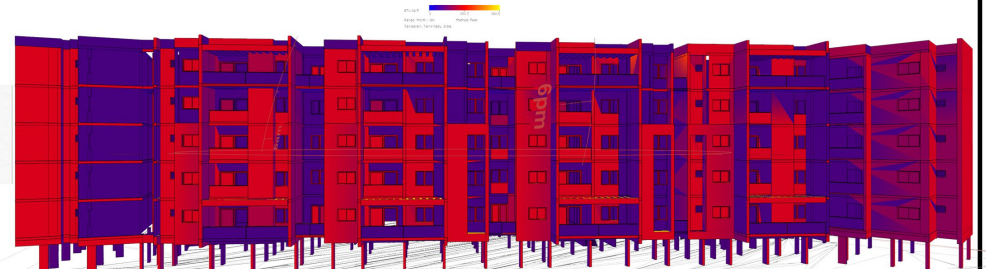




## SOLAR ANALYSIS - EAST FACING



## SOLAR ANALYSIS - WEST FACING



# Proposed Elevations

