

PROFESSIONAL TRAINING REPORT

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

by

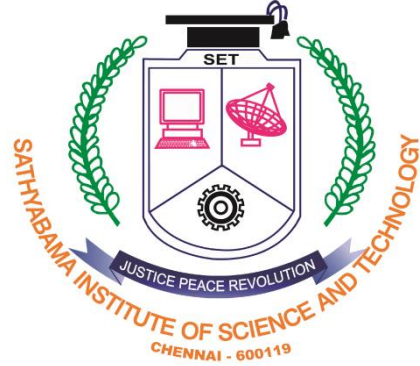
RAKESH KUMAR M.J / 39890013



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

DECEMBER 2020



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

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

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

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

E-mail: archhod@sathyabama.ac.in



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

**PROFESSIONAL TRAINING PORTFOLIO
DEC 2020**

Name of the Student : RAKESH KUMAR M.J

Semester : III

Batch : 2019-2021

Reg No. : 39890013



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SCHOOL OF BUILDING AND ENVIRONMENT

DEPARTMENT OF ARCHITECTURE

M. Arch (Sustainable Architecture)

BONAFIDE CERTIFICATE

This is to certify that the professional training is the work of **RAKESH KUMAR M.J.** Reg.No. **39890013** who had undergone training in **STUDIO CONCLAVE** and has been monitored by the continuous assessment during **Dec 2020 to Jan 2021.**

DR. DEVYANI GANGOPADHYAY

DEAN,

School of Building and

Environment

Department of Architecture

Submitted for Viva voce Examination held on 30-01-2021

Internal Examiner

External Examiner



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DECLARATION

I **RAKESH KUMAR.M. J** hereby declare that the Professional Training Report **7TH DEC 2020 to 22ND JAN 2021** done by me under the guidance of **Ar. Thirupurasundari sevvel** is submitted in partial fulfillment of the requirements for the completion of practical training session.

DATE : 22nd JAN 2021

PLACE : Chennai

SIGNATURE OF CANDIDATE

ACKNOWLEDGEMENT

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

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

I would like to express my sincere and deep sense of gratitude to **Ar. Thirupursundari sevvel / Chief Architect / Studio Conclave** for her valuable guidance, suggestions and constant encouragement paved way for the successful completion of my project work. My sincere thanks to **Ar. Sheetal Kalamkar**, Professional Training Coordinator for her motivation.

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

Also, thanks to Architect of the Firm Ar. Srishti / Architect / Studio Conclave, Aminjikarai, Chennai.



Ar.Thirupurasundari sevel AIA ; AIID

Architect planner; Chattered Environmentalist; Chattered valuer
Object Conservationist; Heritage consultant
Independent Researcher - Nam vedu Nam oor Nam kadhai

Date: 07.12.2020
Chennai

CONFIRMATION LETTER

Addressed to

The Head of the Department
Sathyabama Institute of Science and Technology
Rajiv Gandhi Salai, Jeppiaar Nagar,
Chennai-600 119
Tamil Nadu.

Subject: Trainee Confirmation For the Period of Dec 2020 to Jan 2021

Respected Madam,

I Ar.Thirupurasundari sevel accept Rakesh Kumar M. J, bearing reg no. 39890013 pursuing 3rd semester M.Arch – Sustainable Architecture, Department of Architecture, Sathyabama Institute of Science & Technology, has an intern and confirm his internship program with us for the period of 40 days between (7.12.2020-22.01.2021).

Regards,

Ar.Thirupurasundari sevel

Ph No. +91- 9444253532
E- mail: studioconclave@gmail.com
Website: www.urbanconclave.in



Ar.Thirupurasundari sevel AIA ; AIID

Architect planner; Chattered Environmentalist; Chattered valuer
Object Conservationist; Heritage consultant
Independent Researcher - Nam vedu Nam oor Nam kadhai

Date: 07.12.2020
Chennai

JOINING LETTER

Addressed to

The Head of the Department
Sathyabama Institute of Science and Technology
Rajiv Gandhi Salai, Jeppiaar Nagar,
Chennai-600 119
Tamil Nadu.

Subject: Joining letter for internship program

Respected Madam,

This is to inform Rakesh Kumar M. J, bearing reg no. 39890013 pursuing 3rd semester M.Arch – Sustainable Architecture, Department of Architecture, Sathyabama Institute of Science & Technology, has joined our team as an intern for his internship program for the academic year 2020-2021 (Dec 7th onwards).

Regards,

Ar.Thirupurasundari sevel

Ph No. +91- 9444253532
E- mail: studioconclave@gmail.com
Website: www.urbanconclave.in



Ar.Thirupurasundari sevel AIA ; AIID

Architect planner ; Chattered Environmentalist ; Chattered valuer
Object Conservationist ; Heritage consultant
Independent Researcher - Nam veedu Nam oor Nam kadhai

Date: 07.12.2020
Chennai

JOINING LETTER

Dear **Mr. Rakesh Kumar. M. J,**
2019 -2021
Master in Architecture in Sustainable Architecture
Sathyabama, Institute of Science and Technology

We are pleased to inform you that you have been selected to do Professional Training with Studio Conclave, Nam Veedu Nam Oor Nam Kadhai for the time period of 30 days. We will really look forward to working with you.

Thank you,

Regards,



Ar.Thirupurasundari sevel

Email : tsarchi2007@gmail.com

Ph No. +91- 9444253532



Ar.Thirupurasundari sevel AIA ; AIID

Architect planner; Chattered Environmentalist; Chattered valuer
Object Conservationist; Heritage consultant
Independent Researcher - Nam veedu Nam oor Nam kadhai

Date: 22.01.2020
Chennai

CONSOLIDATED CERTIFICATE (EXPERIENCE)

Dear Mr. Rakesh Kumar M.J,
M.Arch Sustainable architecture,
Sathyabama Institute of science and technology.

Respected Madam,

This is to certify that Rakesh Kumar M.J, bearing reg no. 39890013 pursuing 3rd semester M.Arch – Sustainable Architecture, Department of Architecture, Sathyabama Institute of Science & Technology, has successfully completed one month long professional training working in our firm. He was associated as an intern for the period of 40 days between (7.12.2020-22.01.2021).

He has excelled in his work as a trainee in our firm during his period of work.

Regards,



Ar.Thirupurasundari sevel

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Website: www.urbanconclave.in





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Phone: 044 - 2450 3150 / 3151 / 3152 / 3154 / 3155 Fax: 044 - 2450 2344

www.sathyabama.ac.in



DEPARTMENT OF ARCHITECTURE

M. Arch (Building management)

Continuous Assessment Report for Professional training

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

1. Name of the office / organization : STUDIO CONCAVE / Nam veedu Nam 003 Nbm kadhair
2. Address & Contact Number : Aminjakkai - 9444253532
3. Name of the student : Rakesh kumar . M . J .
4. Duration : From 07-12-2020 To 18-12-2020
5. Total No. of days : 11 days.

6. Evaluation of Performance criteria shall be on

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

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

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

7. Any other Remarks : _____

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

: Sripriya Sundar



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1. Name of the office / organization : STUDIO CONCAVE / Nam veedu Nam 003 Nbm kadhair
2. Address & Contact Number : Aminjakkai - 9444253532
3. Name of the student : Rakesh kumar . M . J .
4. Duration : From 19-12-2020 To 29-12-2020
5. Total No. of days : 9 days.

6. Evaluation of Performance criteria shall be on

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

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

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

7. Any other Remarks : _____

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

: Sripriya Sundar



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1. Name of the office / organization : STUDIO CONCLAVE / Nam veedu Nam ssa Nam kadhai.
2. Address & Contact Number : Arinjakkai - 9444253532
3. Name of the student : Rakesh Kumar. M. J.
4. Duration : From 30-12-2020 To 12-01-2021
5. Total No. of days : 11 days.

6. Evaluation of Performance criteria shall be on

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

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

(A - 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)

: S. N. S. S. S.



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1. Name of the office / organization : STUDIO CONCLAVE / Nam veedu Nam ssa Nam kadhai.
2. Address & Contact Number : Arinjakkai - 9444253532
3. Name of the student : Rakesh Kumar. M. J.
4. Duration : From 13-01-2021 To 22-01-2021
5. Total No. of days : 7 days.

6. Evaluation of Performance criteria shall be on

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

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

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

7. Any other Remarks : _____

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

: S. N. S. S. S.

WORK DIARY

Date	PROJECT NAME	WORK DONE
7 th – 14 th Dec	Residence.	Conceptual Layout Design.
14 th – 21 st Dec	Residence and Kalakshetra.	Detailed Certain Part and Plan
21 st - 28 th Dec	Site visit.	Visited Humayun Mahal / Chepauk Place for Understanding traditional construction process.
28 th – 31 st Dec	Report.	Done a report based on Visit to Chepauk palace.
1 st Jan - 8 th Jan	Roypettah Site.	Site Visit to royapettah with Junior Architect.
6 th Jan -10 th Jan	Report.	Done a report on Red oxide flooring and how its done.
11 th Jan – 15 th Jan	Santhome Site Visit.	Site visit to santhome Training center for Adult deaf.
16 th Jan – 20 th Jan	Training Center for Adult Deaf	Done Measured Drawing on site of the old Building located in site.
20 th Jan – 22 nd Jan	Residence flooring.	Visited Material Vendors In Maduravayol with Client For Flooring Materials.

Architect's Signature: 

GENERAL:

Firstly, I always wanted to have my job or Internship in a compact Firm which has quiet good number of projects and a small team. Because, I Believe that being in a small team helps to work in all fields and take up all responsibilities and learn a lot which will be very helpful when I need to start up my own firm. This certainly develops a lot of skills like understanding and convincing the client, finding out the building materials which is good and economical, Understanding the practical difficulties that needs to be addressed on site during the time of execution.

My opinion about architecture is more of experiencing spaces. One cannot design a space until he purely experiences it. I chose this firm to Experience artisans works on material and study on it. As a sustainable architect I should know about local materials and how well it can be used in designs hence these can reduce usage of foreign materials which wont even contribute to both environment and health.

Another reason for choosing this firm is I want to design in site, one cannot design sustainably in an airconditioned room.

Thereby, I found Ar. Thirupurasundari sevvel runs a Firm and Organization with a team and working on sustainable projects in more practical way. I had a look into her prior projects which were so simple and unique and had very less impact on the environment. She was aware in the ecological aspects of the site, which inspired me further.

ABOUT:

Studio conclave.

The firm started in the year 2012,

The basic design principle is working with the artisans and local materials, specialized in earth structures and oxide flooring.

ABOUT ARCHITECT:

Thirupurasundari Sevvel is an Architect and Urban Planner trained in India, UK and France. She runs 'Studio Conclave', an architectural consultancy and 'Nam Veedu Nam Oor Nam Kadhai', an initiative that stems from her passion for storytelling, Heritage, history and education. For her platform Thirupurasundari curates' stories, exhibitions, workshops on social issues, heritage, household heritage, personal/ social history etc. and uses her expertise as material restorer to document traditional techniques and practices of design. This feeds into her consultancy projects for NGO's, schools and colleges which frequently focus on the planning and building of inclusive, accessible and safe spaces in the city for all.

And predominantly work with artisans working on traditional materials and techniques, about works on the livelihood sustenance.

HUMAYAN MAHAL

Humayun Mahal, Chepauk, Chennai.

Currently the structure is under restoration by the team from PWD – BCCD, Chennai.

The orientation was given by the joint chief engineer and the superintendent engineer of TN pwd. The photographs of the old dilapidated condition of the structure were displayed on a panel to begin further discussion.

The discussion started with the description of the 251 years old heritage building, one of the first Indo Saracenic architecture to be constructed in India. The presentation taking place at one of the central space halls of the building along with the masons/craftsmen. The structure is one amongst the 6 gardens (from the name Chepauk) forming a Chepauk palace complex in the vicinity. Built by the Nawab Mohammad Ali khan of Wallajah at 1768.



Image 1- the scaffolding seen in the central hall of the Humayun mahal



Image 2- The JCE of TNPWD explaining the process and restoration techniques.

METHODOLOGY / PROCESS AND TECHNIQUES

Methodology / process and techniques.

The methodology used for the conservation efforts taken by the building conservation division of PWD which includes

- Documenting the historical resources, condition assessment.
- Material sourcing and hunt for masons or craftsman.
- Using traditional techniques with the help of craftsmen and masons who are well informed by these techniques through family lineage, also formed the main spine in identifying the raw materials and the authentic process involved sourcing the materials.



Image 3-Display of raw materials mixture.



Image 4-the space back side of the building used for preparing and storing lime

Further the process evolved for Mughal plastering and madras terrace roofing.

MUGHAL PLASTERING

Mughal plastering is known as “theervai” in local language and technique involves 7 steps / layers.

1. **Muti kalavai – sand +lime 1:1**

The lime is sourced from Kalugu malai, Tirunelveli and sand from the Kaveri River at the Trichy Kolidam point. The lime is mixed with water for slaking and mixed with sand. The mixture prepared is stored closed with tarpaulin sheet for 15 days.

This is then applied on the brick wall surface for 6mm thickness and let alone for 24 hours after until cracks are observed on the surface indicating its readiness for the next layer.

2. **Nice kalavai** – lime mixture is grinded to Maida consistency and applied for 2mm thickness on the previous layer.

3. **Thani velai**- lime water is sprinkled on the surface



Image 5-the grinder used for preparing lime mixture and the tarpaulin sheets covering the lime mixture ready to use for the restoration work.

4. **White kalavai** –Theervai (which is of sugar like consistency) is mixed with water and sprinkled.

5. **Sunambu** – mixture of lime with water and the mixture is drained and used

In this case Virundunagar sunambu is used, the lime prepared by slaking and the mixture is applied gently on the previous layer.



Image 6- the pits covered by tarpaulin and wooden planks are used for slaking of lime and storing gallnut water.

6. This has three sub steps

a. **Naatukozhi mutai** – the white and yolk is separated. The white when mixed becomes frothy which is used. (11 eggs per 100 sq.m).

b. **Pasummattu thayir (curd)** – the curd is tied in cloth at a height and the drops are collected below in a bucket which is used. (1 litre per 100 sq.m).

c. **Virundunagar sunambu** – melted in water and sprinkled or poured on the surface.

7. The subsequent day, **Pasumakodi powder** (soap stone from Rajasthan) is warped in a cloth and rubbed gently against the wall.

Note: In cases of temples where egg is avoided is replaced with use of aloe Vera.



Image 7- sample of finished Mughal plastering

MADRAS TERRACE ROOFING.

The second technique explained was on the madras terrace roofing with a glimpse of its making by the masons orienting to the terrace area of the structure.

The local materials used for the roof are tharai wood, Kandikal (brick stone from Rajapalayam), nice kalavai mixed with gallnut and palm jiggery water and sathara kallu (type of brick stone).

The reason for the use of palm jiggery water is also for heat absorption.

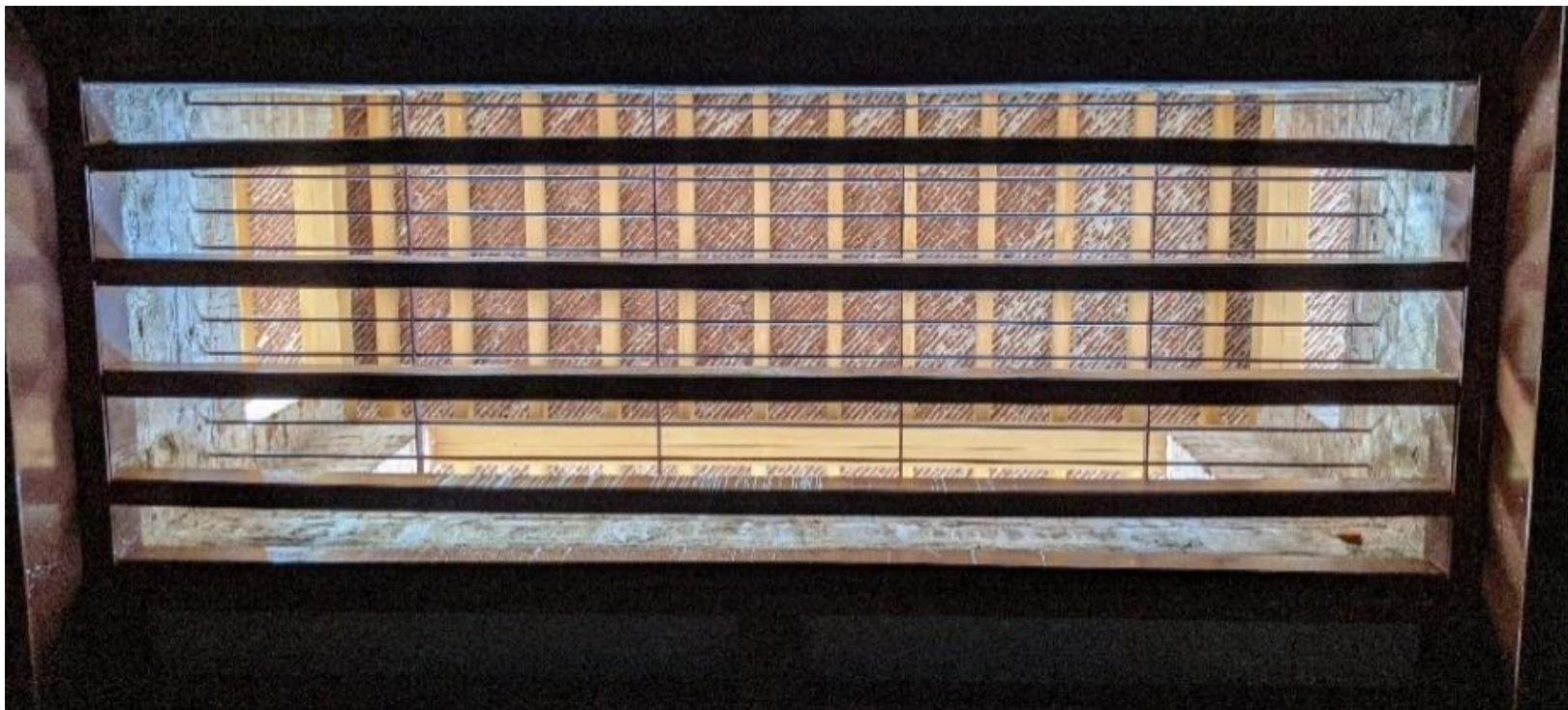


Image 8-Madras terrace roof viewed from the wind catcher.



Image 9-craftsmen demonstrating the construction of madras terrace roofing



Image 10-layers of tharai wood, brick and lime mortar.

BRICK ARCHES

Another unique feature of the building is the arches which doesn't have a keystone visible at its crown, the technique for the arch involves use of teak wood insert between the bricks at the 1/3rd distance from the crown of the arch which aids in arch action tightening the arch structure.



Figure 1- view from the terrace with arched colonnades and wind catcher.

MATERIAL MAP:

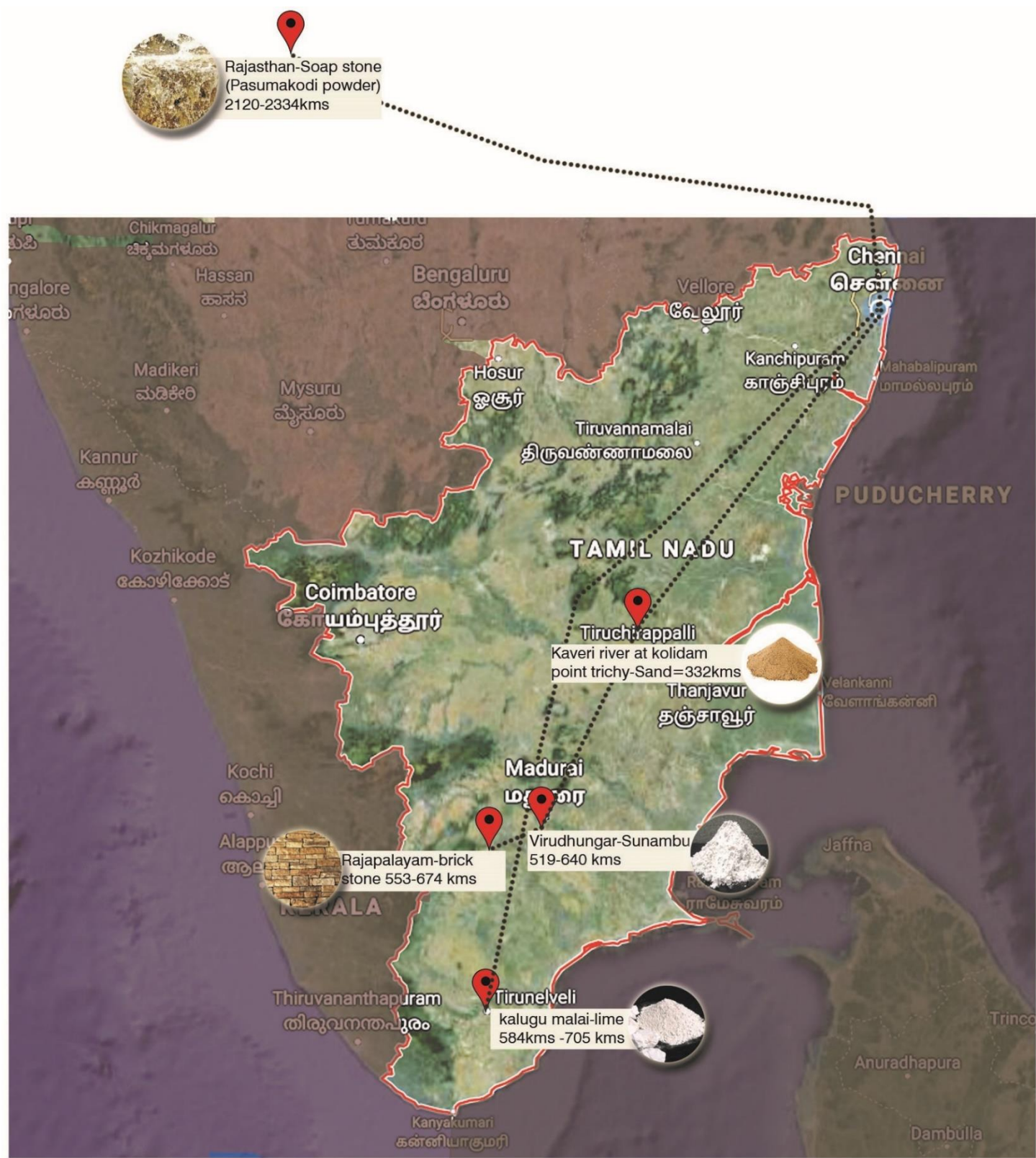
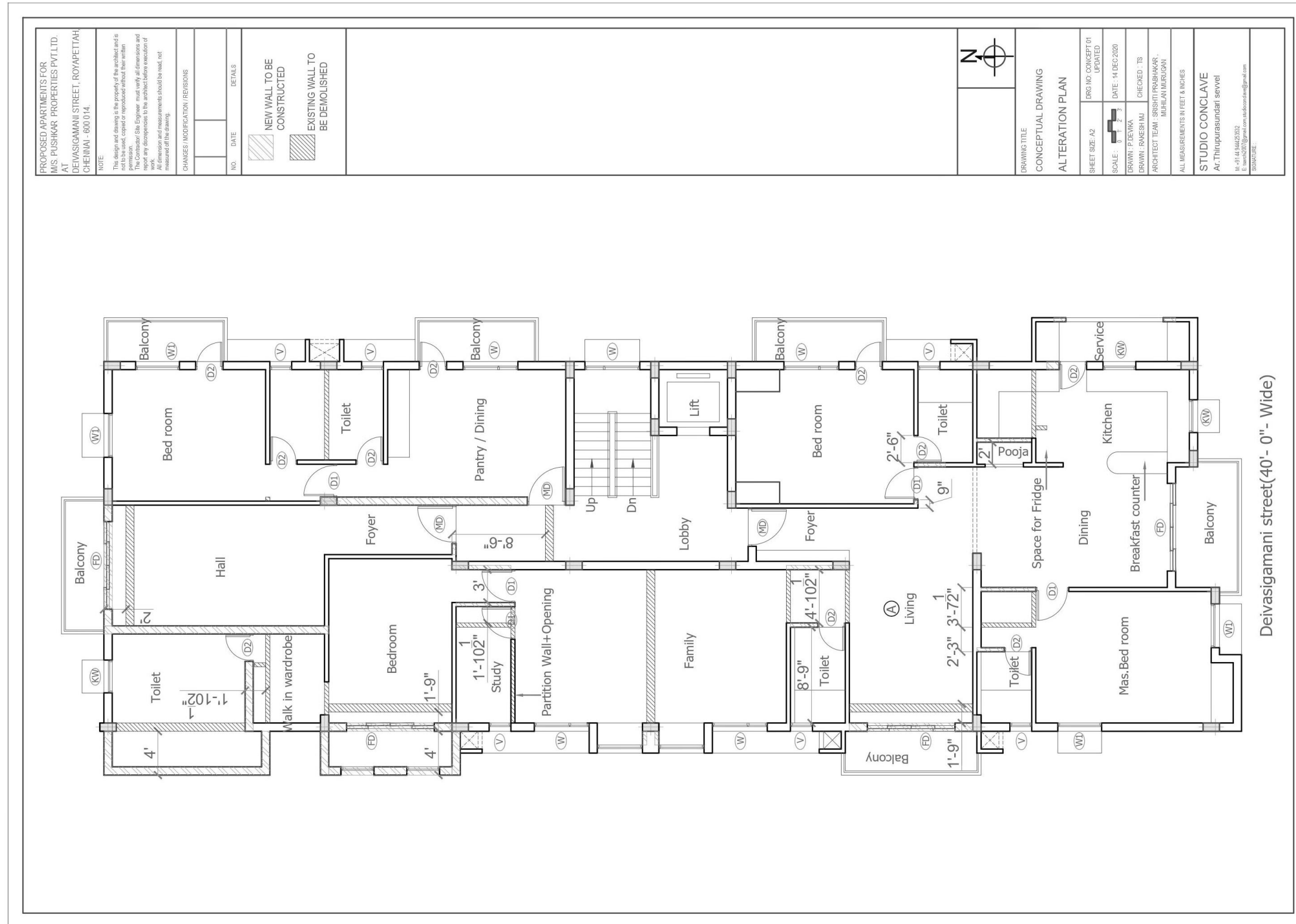
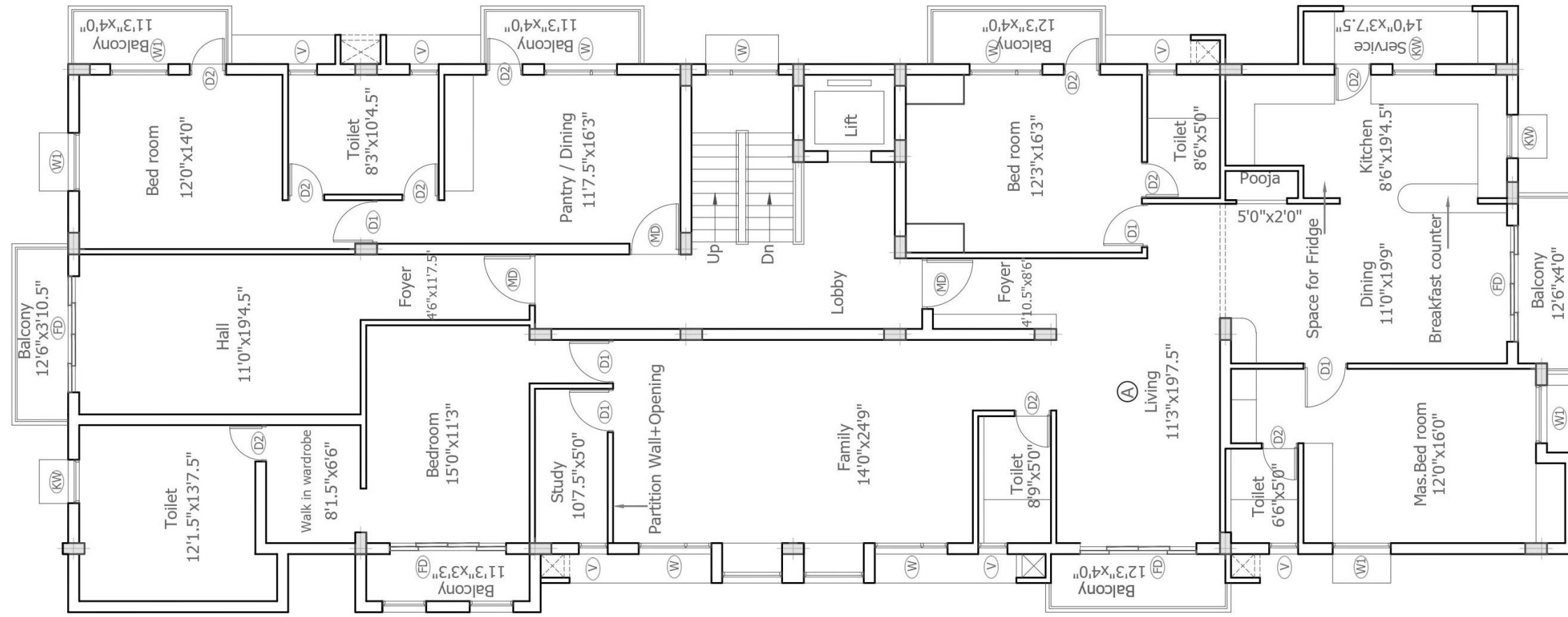


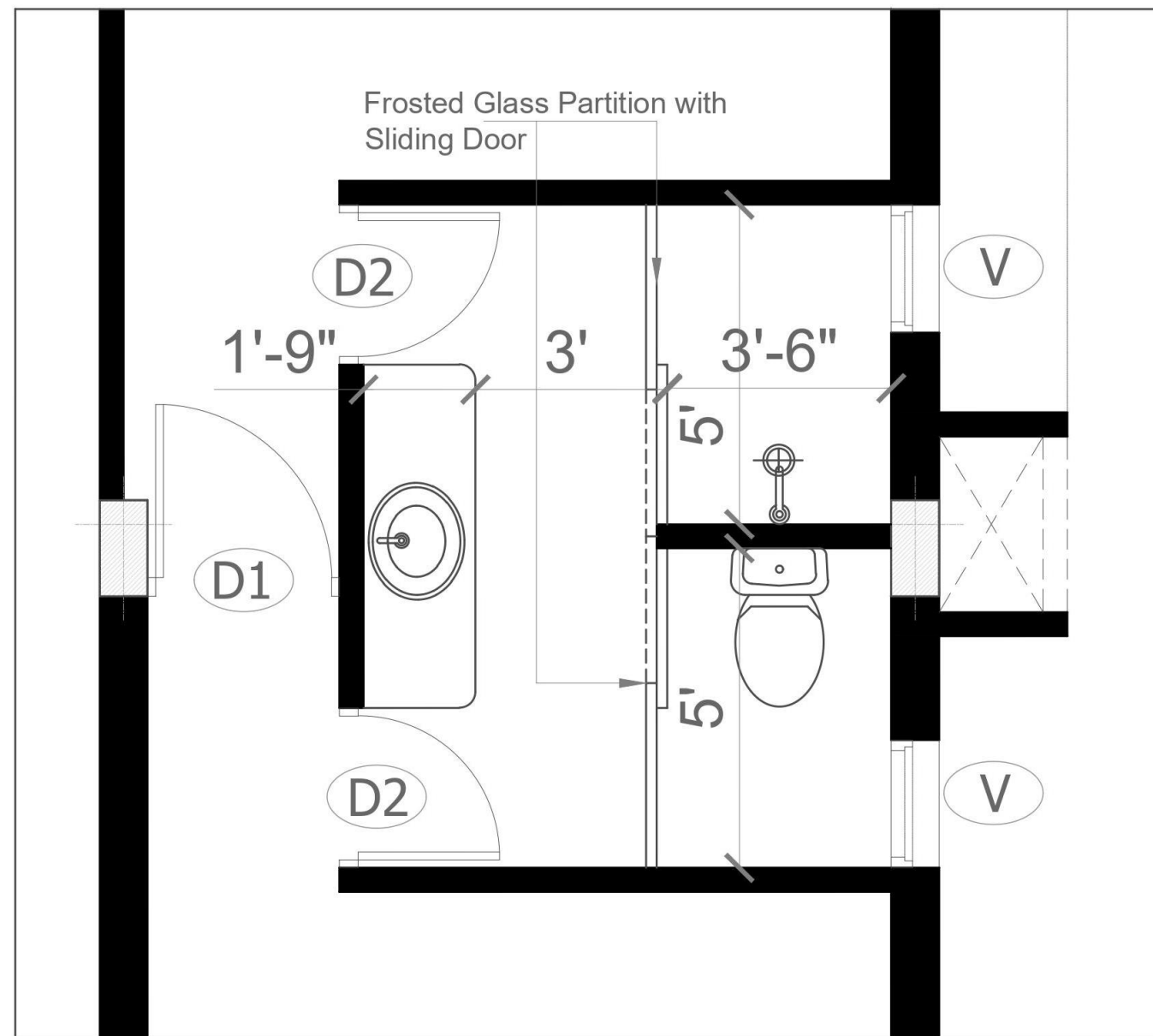
Figure 2- Shows map where materials come to site

WORKING DRAWING





PROPOSED APARTMENTS FOR M/S. PUSHKAR PROPERTIES PVT.LTD. AT DEIVASIGAMANI STREET, ROYAPETTAH, CHENNAI - 600 014.					
NOTE: This design and drawing is the property of the architect and is not to be copied, reproduced or imitated without their written permission. The Contractor/ Site Engineer must verify all dimensions and report any discrepancies to the architect before execution of work. All measurements and measurements should be read, not measured off the drawing.					
CHANGES / MODIFICATION / REVISIONS					
NO.		DATE		DETAILS	
					
DRAWING TITLE CONCEPTUAL DRAWING ALTERATION PLAN					
SHEET SIZE : A2		DRG NO: CONCEPT 01 UPDATED			
SCALE : 0 = 1' 2" 3"		DATE : 14 DEC 2020			
DRAWN : P DEVIKA		CHECKED : TS			
DRAWN : RAKESH MJ		ARCHITECT TEAM : SRISHTI PRABHAKAR , MUHLAN MURUGAN			
ALL MEASUREMENTS IN FEET & INCHES					
STUDIO CONCLAVE Ar.Thirupurasundari sewel					
We-91 44 94429532 E- tsewsh007@gmail.com studioconclave@gmail.com					
SIGNATURE :					



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M/S. PUSHKAR PROPERTIES PVT.LTD.
AT
DEIVASIGAMANI STREET, ROYAPETTAH,
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CHANGES / MODIFICATION / REVISIONS

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NO.	DATE	DETAILS
-----	------	---------



DRAWING TITLE

CONCEPTUAL DRAWING

Studio Apartment -
Toilet layout Plan

SHEET SIZE: A2

DRG NO: CONCEPT 01a

SCALE :

DATE : 08 Dec 2020

DRAWN : P.DEVIKA

--	--

DRAWN : RAKESH MJ

CHECKED : TS

ARCHITECT TEAM : SRISHTI PRABHAKAR,
MUHILAN MURUGAN

ALL MEASUREMENTS IN FEET & INCHES

STUDIO CONCLAVE

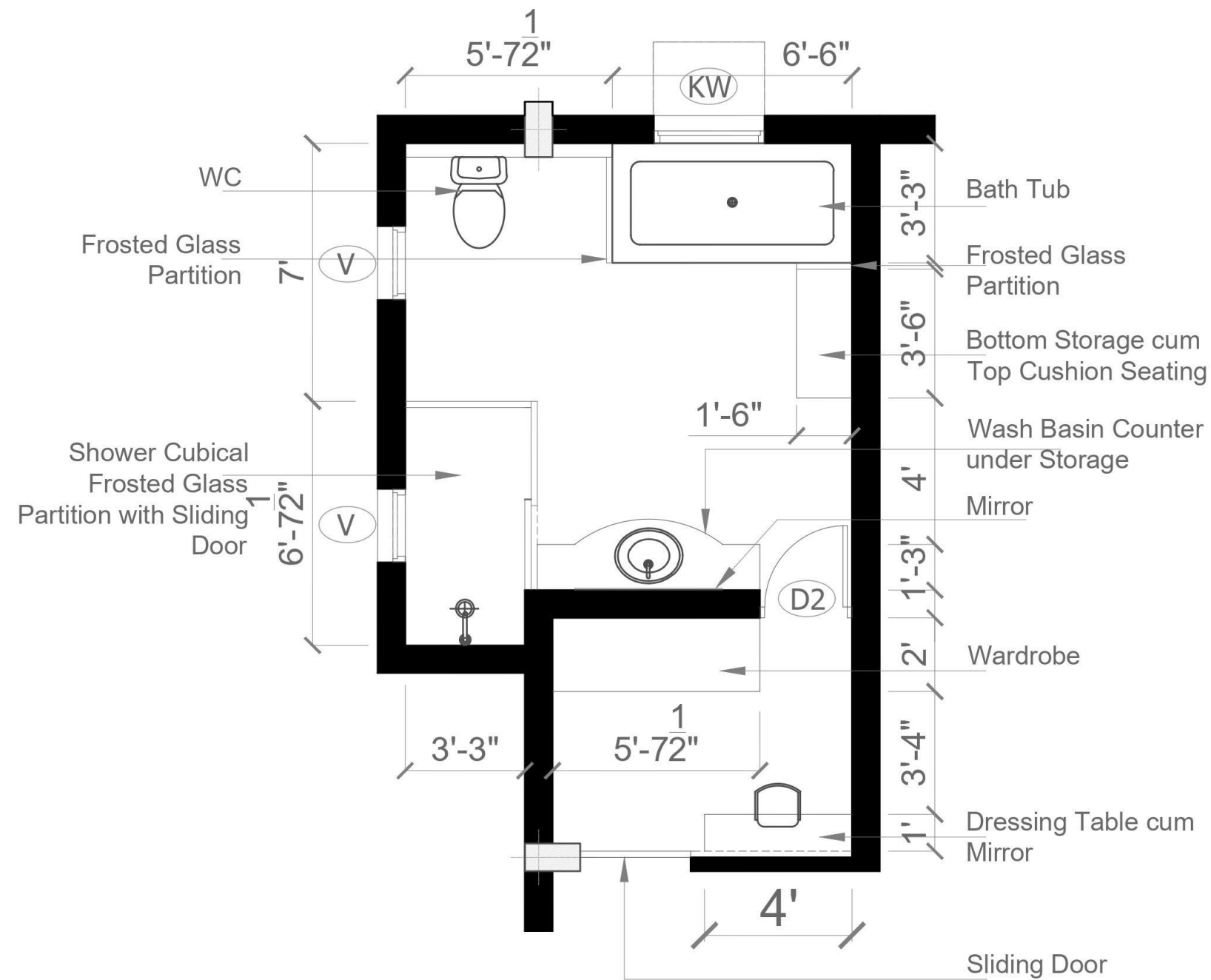
Ar.Thirupurasundari sevel

☎ +91 44 944253532

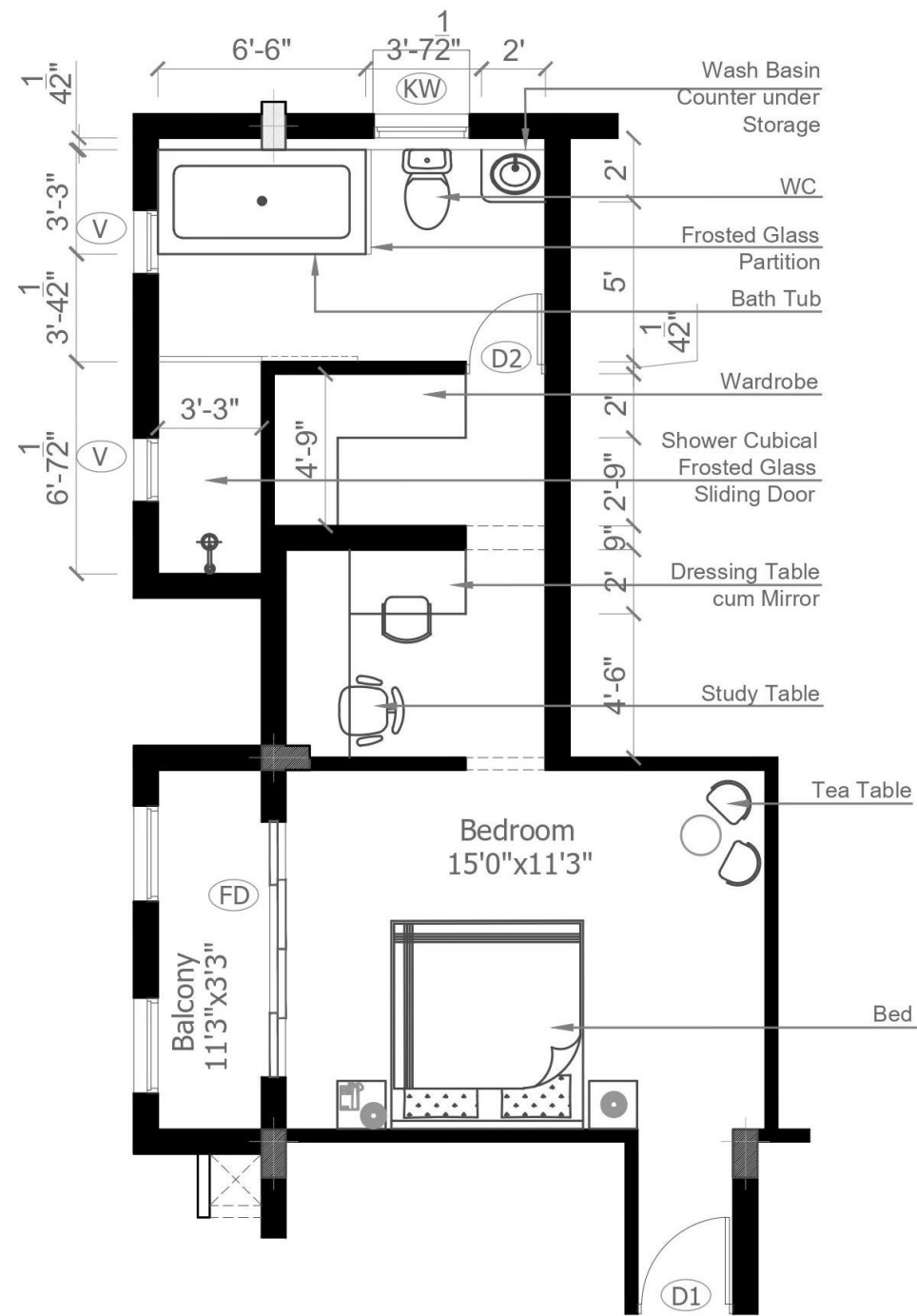
E: tsarch2007@gmail.com, studioconclave@gmail.com

SIGNATURE: _____

COA Reg No : CA/2012/56807



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CHANGES / MODIFICATION / REVISIONS		
NO.	DATE	DETAILS
		N 
DRAWING TITLE		
CONCEPTUAL DRAWING		
Combined Apartment - Bed 3 Walk in Wardrobe & Toilet		
SHEET SIZE: A2		DRG NO: CONCEPT 01b
SCALE : 		DATE : 08 Dec 2020
DRAWN : P.DEVIKA DRAWN : RAKESH MJ		CHECKED : TS
ARCHITECT TEAM : SRISHTI PRABHAKAR , MUHILAN MURUGAN		
ALL MEASUREMENTS IN FEET & INCHES		
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M: +91 44 944253532 E: tsarch2007@gmail.com,studioconclave@gmail.com		
SIGNATURE:		
COA Reg No : CA/2012/56807		



PROPOSED APARTMENTS FOR
M/S. PUSHKAR PROPERTIES PVT.LTD.
AT
DEIVASIGAMANI STREET, ROYAPETTAH,
CHENNAI - 600 014.

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The Contractor/ Site Engineer must verify all dimensions and report any discrepancies to the architect before execution of work.
All dimension and measurements should be read, not measured off the drawing.

CHANGES / MODIFICATION / REVISIONS

NO.	DATE	DETAILS

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DRAWING TITLE
CONCEPTUAL DRAWING

Combined Apartment - Bed 3
Walk in Wardrobe & Toilet

SHEET SIZE: A2 DRG NO: CONCEPT 01c

SCALE: 1/8" = 1'-0" DATE: 21 Dec 2020

DRAWN: P.DEVIKA

DRAWN: RAKESH MJ CHECKED: TS

ARCHITECT TEAM: SRISHTI PRABHAKAR,
MUHILAN MURUGAN

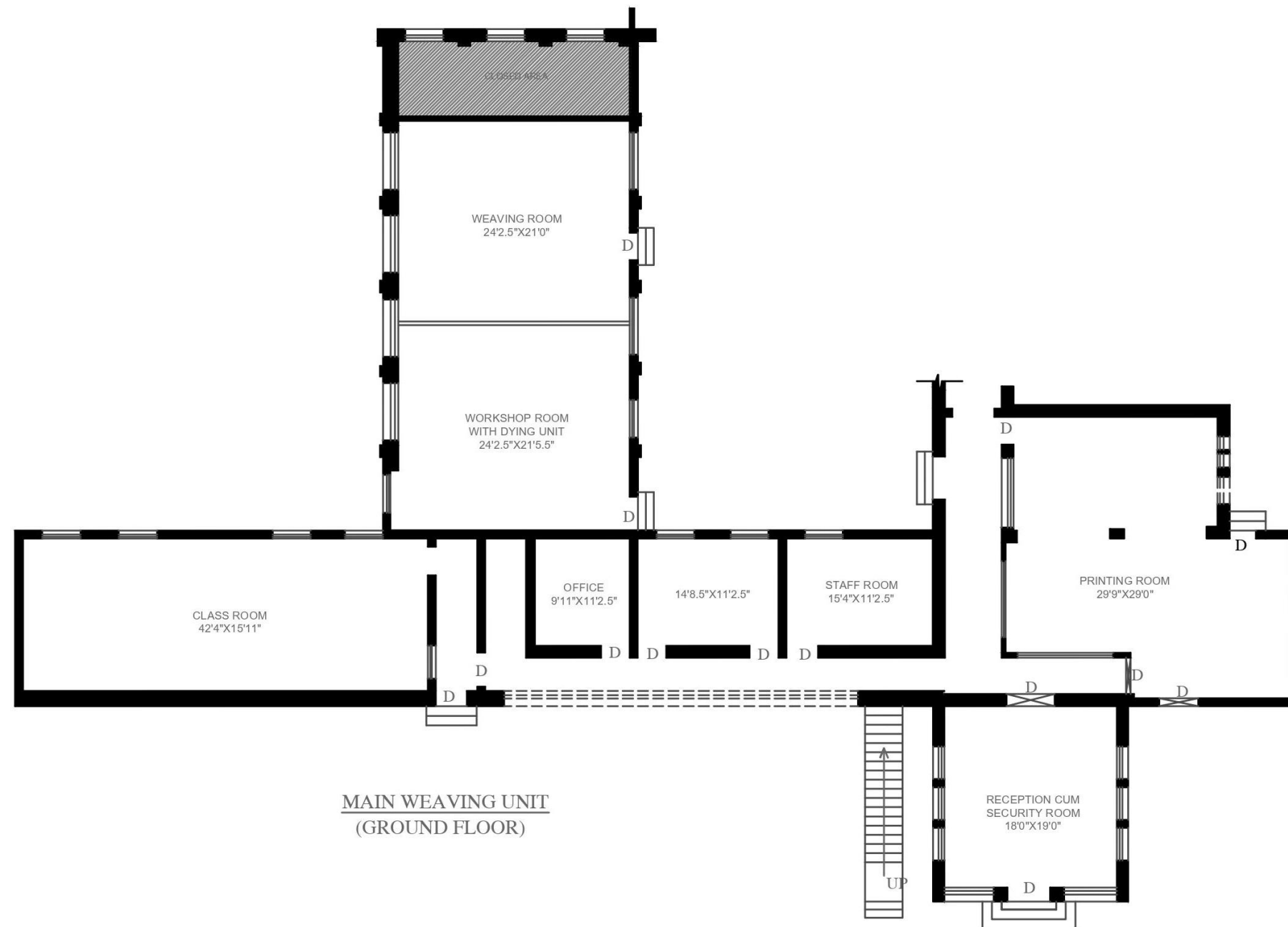
ALL MEASUREMENTS IN FEET & INCHES

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SIGNATURE:

COA Reg No: CA201256807



MAIN WEAVING UNIT
(GROUND FLOOR)

Main Weaving Unit
at
Kalakshetra Foundation,
Craft Education&Research Centre,
Thiruvanniyur,
Chennai - 600041

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CHANGES / MODIFICATION / REVISIONS

NO.	DATE	DETAILS



DRAWING TITLE
CONCEPTUAL DRAWING
GROUND FLOOR PLAN

SHEET SIZE: A2	DRG NO: CONCEPT 01
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SCALE:	DATE: 9 DEC 2020
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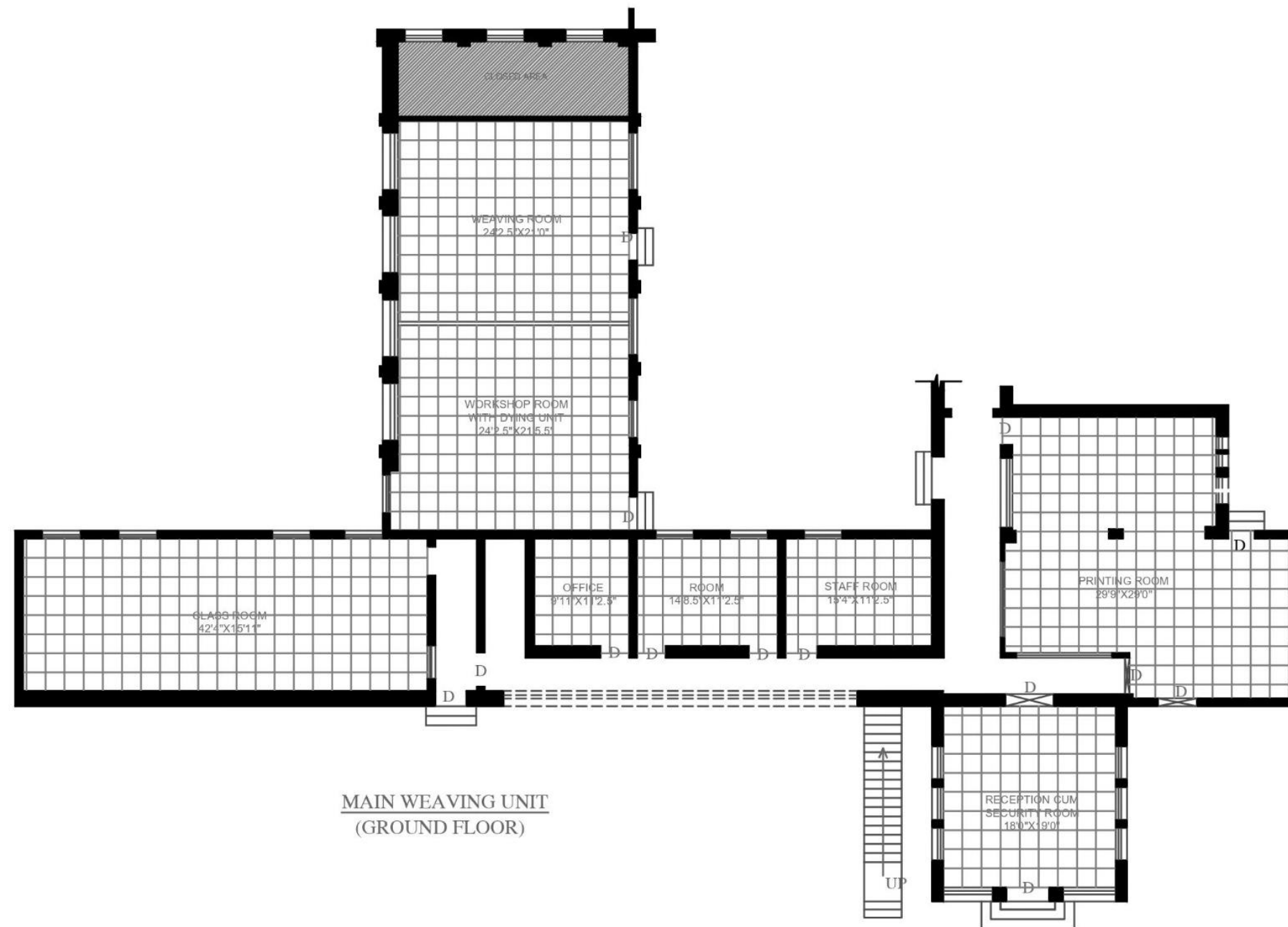
DRAWN: P.DEVIKA	CHECKED: TS
DRAWN: RAKESH MJ	

ALL MEASUREMENTS IN FEET & INCHES

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SIGNATURE: _____

COA Reg No : CA/2012/56807



MAIN WEAVING UNIT
(GROUND FLOOR)

Main Weaving Unit
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Thiruvanniyur,
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CHANGES / MODIFICATION / REVISIONS

NO.	DATE	DETAILS



DRAWING TITLE
CONCEPTUAL DRAWING
GROUND FLOOR PLAN

SHEET SIZE: A2	DRG NO: CONCEPT 01
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SCALE:	DATE: 10 DEC 2020
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DRAWN: P. DEVIKA	CHECKED: TS
DRAWN: RAKESH MJ	

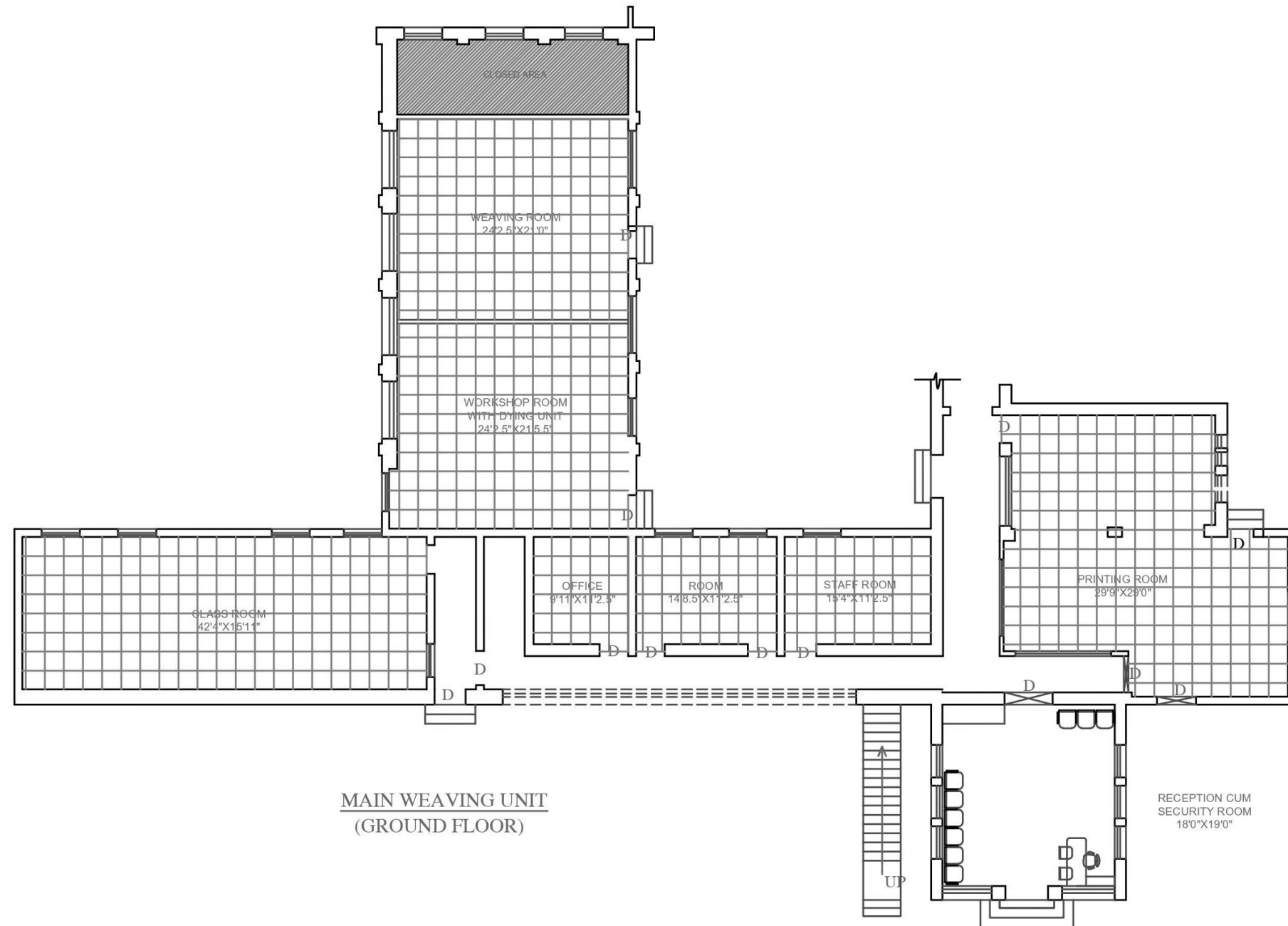
ALL MEASUREMENTS IN FEET & INCHES

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COA Reg No: CA/2012/56807



MAIN WEAVING UNIT
(GROUND FLOOR)

Main Weaving Unit
at
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Craft Education&Research Centre,
Thiruvanniyur,
Chennai - 600041

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All dimension and measurements should be read, not measured off the drawing.

CHANGES / MODIFICATION / REVISIONS

NO.	DATE	DETAILS



DRAWING TITLE
CONCEPTUAL DRAWING
GROUND FLOOR PLAN

SHEET SIZE: A2 DRG NO: CONCEPT 01

SCALE: 1:100 DATE: 11 DEC 2020

DRAWN: P.DEVIKA
DRAWN: RAKESH MJ CHECKED: TS

ALL MEASUREMENTS IN FEET & INCHES

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MATERIAL SELECTION SUSTAINABLE APPROACH

OXIDE FLOORING-ORIGIN

Oxide flooring that is ubiquitous to old, traditional houses in south India, is better known in Kerala since these structures have been well-preserved. It was also a common feature in Karaikudi and in the southern belt, goa and even in srilanka. In Tamil Nadu it can be found in abundance in Madurai, Thanjavur, Trichy and Tiruchengode. It was predominant in Kerala because it was preserved for a longer time. The cool and shiny red-oxide flooring, like the smooth surface of a plum, is known to have been part of many houses built a few decades ago across the south Indian states, especially Kerala.

WHAT? (Ingredients)

THE MIX:

Consists of **lime plaster or mud or cement, and colored oxide.**



Image 1- Shows mix of lime plaster cement with colored oxide.

<https://www.thenewsminute.com/sites/all/var/www/images/OxideFlooring>

Are shades possible?

- Many different shades are possible to bring out when we're trying the oxide flooring.
- People think that **red** is the only color but we can make **green, yellow, blue**, etc.
- We've got a color palette that people can choose from - 50 shades of green, yellow, etc.
- This is something a lot of them are not aware of. When we say oxide flooring, they immediately think of red.

HOW? (Process)

THE PROCESS:

The process of oxide flooring is one that consumes a lot of time and requires keen attention. White cement or high-grade grey cement tends to set fast and is not usually preferred. Cement and oxide is mixed in its dry form and then water is added to form a slurry.



Image 2- Shows how people interested in learning traditional techniques.

https://www.thenewsminute.com/sites/default/files/styles/news_detail/public/RedOxideFlooring.jpg?itok=0HWyv0ZQ <https://www.thenewsminute.com/sites/all/var/www/images/OxideFlooring>

NOTE:

- “Quality of water is most important, just like how the taste of food depends on the water used.
- It should not be salty or sewage mixed.
- This is crucial for the floor to come out well.
- The required color is attained by varying proportions of the oxide and cement.
- The laying itself is another skilled process and the final output depends on the artisan’s hands.
- A day after laying the floor, it has to be cured with water at regular intervals.
- On the second day, it has to be stocked up with water to see if white spots appear on it.
- It then has to be allowed to dry for a few days and only then polishing can be done.

For **polishing**, we only **use beeswax, rice husk and coconut pith** and it is done entirely by hand.

No machine is used at any point during the process.

Among red-oxide flooring’s unique aspects are its longevity and its property to keep the room cooler by a few degrees

THINGS TO KNOW ABOUT OXIDE FLOORING SUSTAINABLY.

- The water used must be untreated and free from any chemicals. Mineral-rich water from bore-wells is not good for this technique.
- To keep the quality and finish neat and even, one must use good quality red oxide.
- The artisans who are working on this must also be very experienced and good at their art. This is because the oxide floors need to be done in one continuous stretch without a break, often taking the whole day and night, depending upon the area that needs to be covered.

- While most building materials deteriorate with age, oxide floors are an exception. The more they are used, the more they shine.
- You can use non-chemical floor cleaning agents and this in turn gives you a lifestyle change as well.
- The polish should be done with beeswax and that too, manually. Only the manual polish will give the authentic feature.
- Vouching for oxide flooring, it is “climatically adaptable and very comfortable for walking barefoot on. It keeps the room temperature down by 3-5 degrees. And moreover, organic colors are used in the making of the flooring.



Image 3- Shows how red oxide flooring be manually done on the floor of residence.

<https://www.surfacesreporter.com/myuploads/square/20180813025318.jpg>

THE COST: *of laying this floor*

“**The more people use it, the more its cost will come down**” – it is ultimately all about the demand and supply. If one were to compare the price with other materials used, it is almost 30 per cent cheaper. Having said that, it all depends on the area that needs to be covered and the color. It is important to give the artisans working on this technique their due as it is a very demanding livelihood. “we can’t say that it is the cheapest flooring available in the market but is certainly an **economic, environmentally-friendly floor**, which also supports artisans and their livelihoods.”

CONCLUSION

Red oxide flooring is one of the traditional and climate-oriented material which contribute to both **ecological and cultural sustainability**. Since this oxide flooring is purely manual work and done without any machineries Hence by choosing this material **social sustainability** also takes place by engaging artisans and support their workmanship. This material helps maintain three main pillars of sustainability.

SITE VISIT

Training center for the Adult Deaf



*Image 1- Shows Site and its condition.
Place: Training center for the Adult Deaf, Santhome*

MEASURED DRAWINGS:

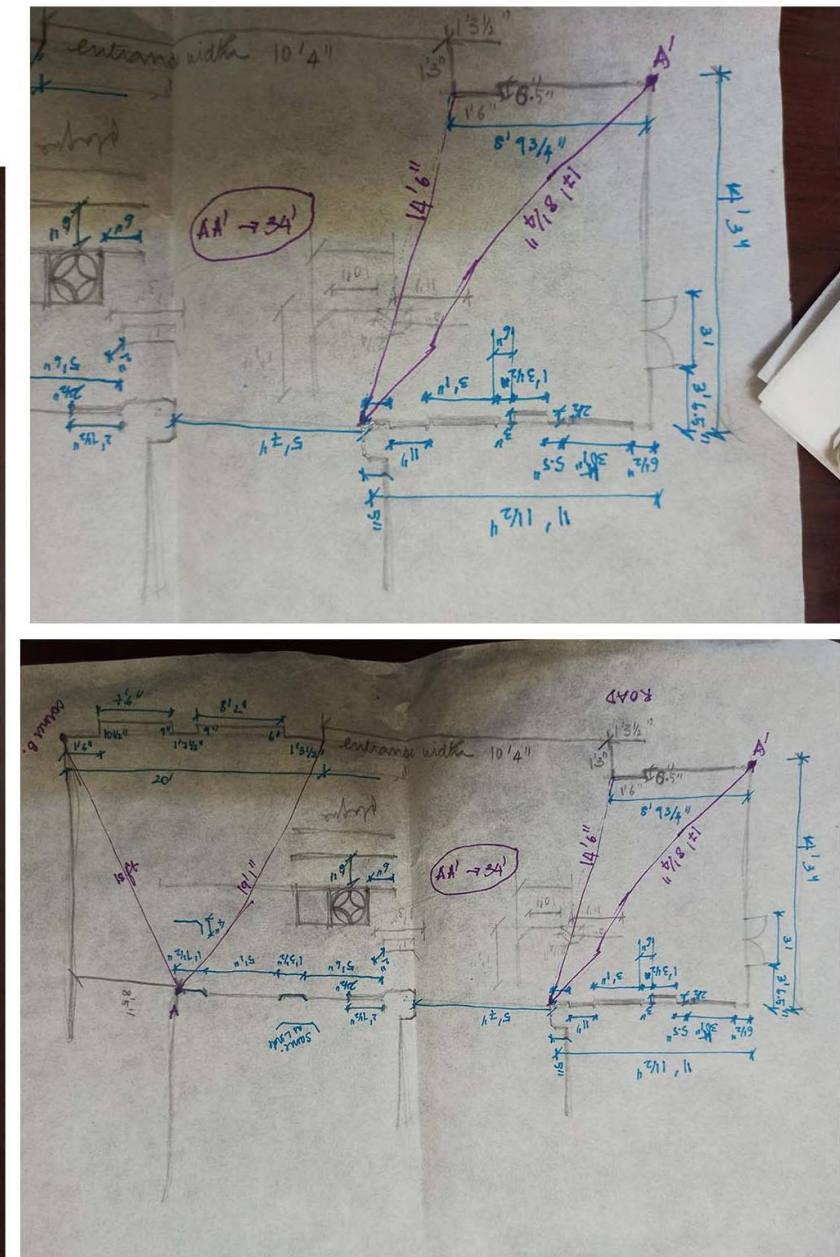
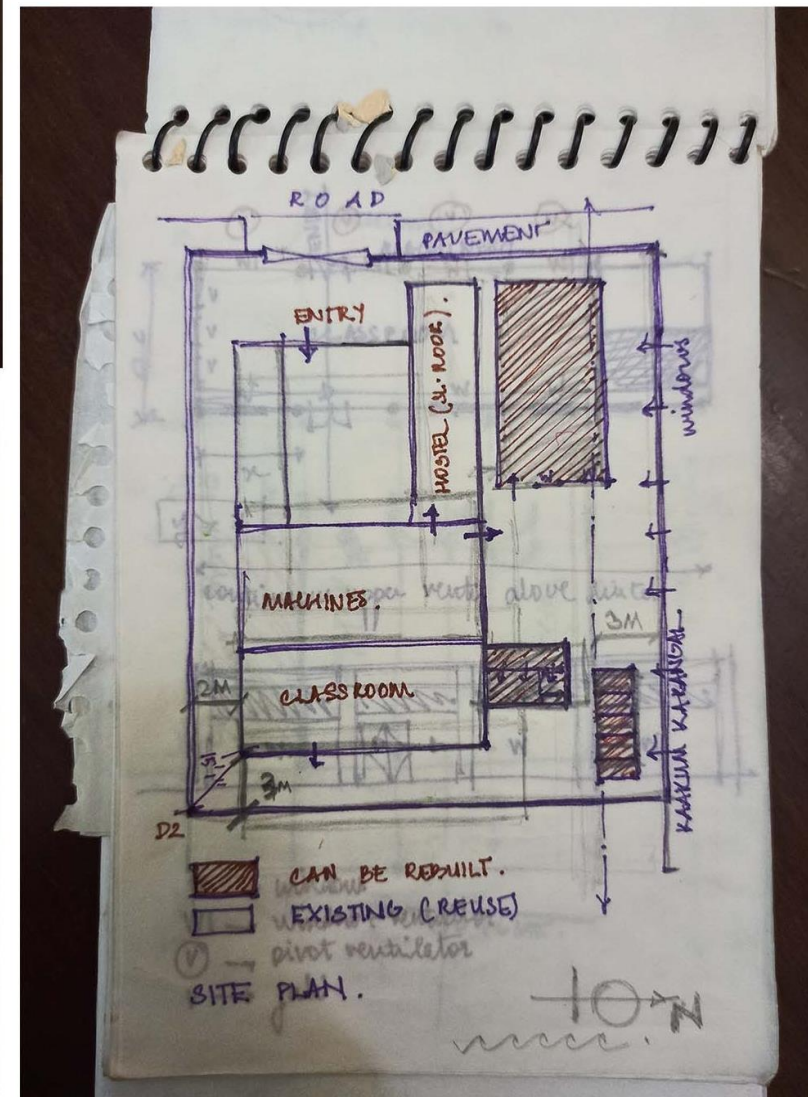
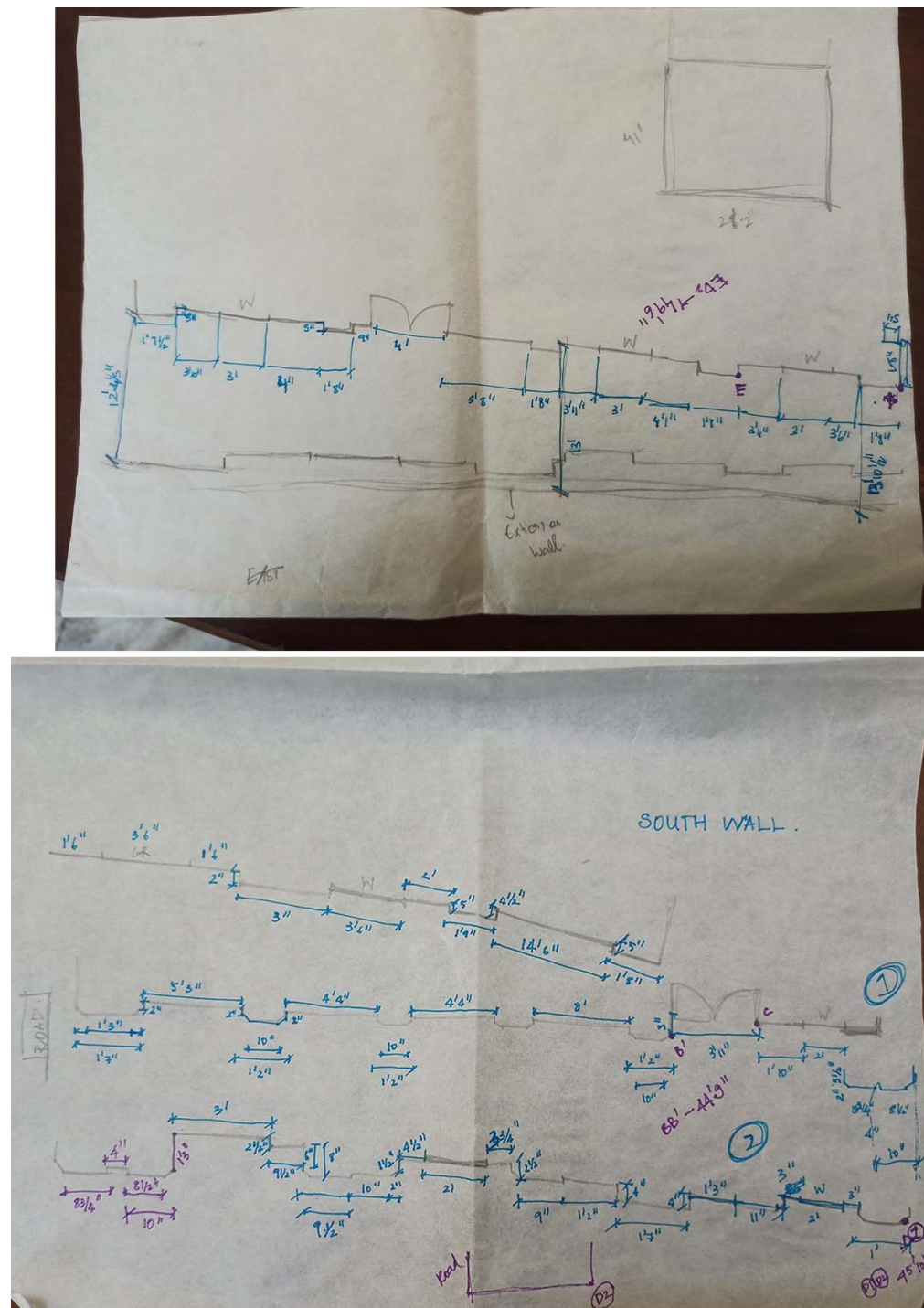


Image 2- Shows hand drawn measured drawings on site.
Place: Training center for the Adult Deaf, Santhome

SITE PICTURES: (DETAILS)



*Image 3- Shows Details in Site.
Place: Training center for the Adult Deaf, Santhome*

MEASURED DRAWINGS: (DETAILS)

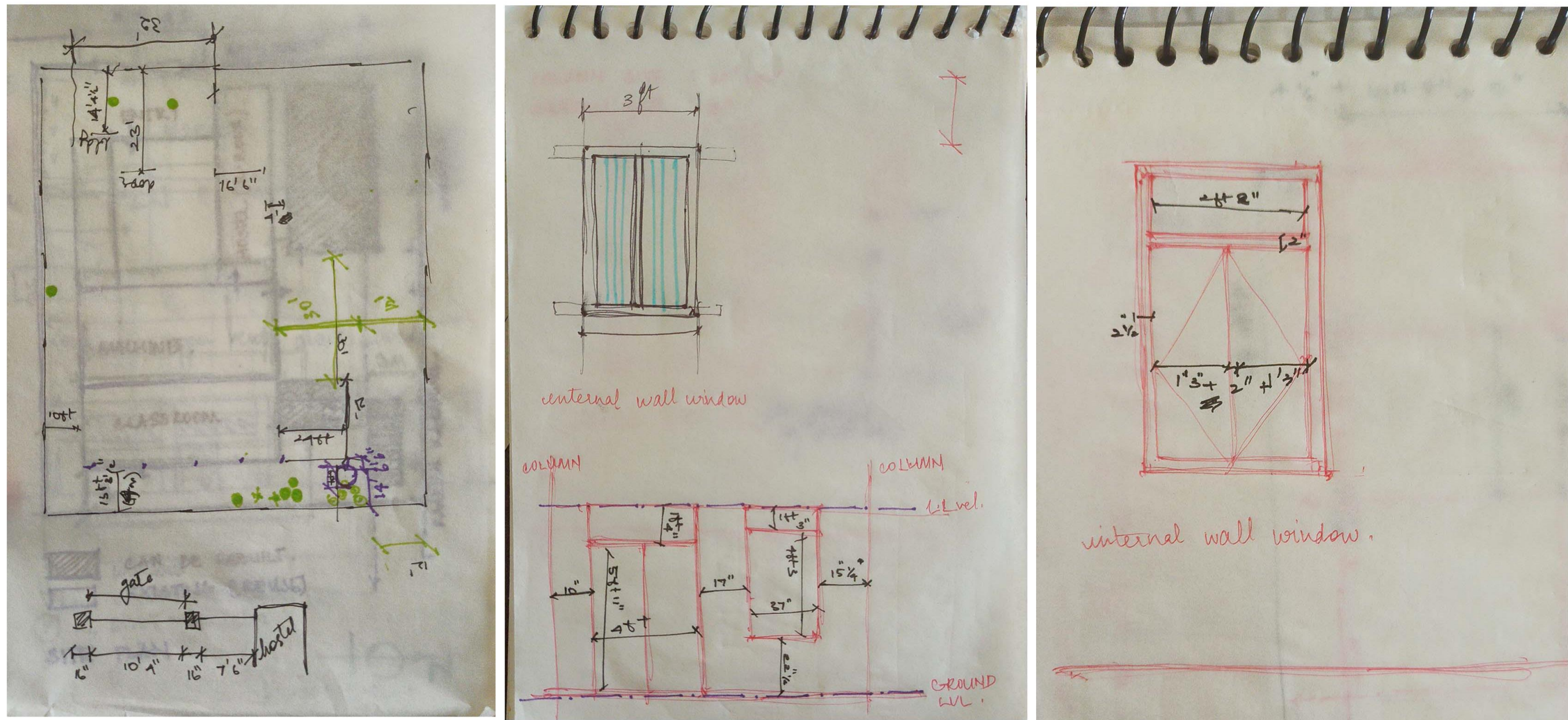


Image 4- Shows Detail Drawing from Site.
Place: Training center for the Adult Deaf, Santhome

SITE VISIT

KALKSHETRA.



*Image 5- Shows Site images of Kalakshetra.
Place: Kalakshetra*

ROYAPETTAH APARTMENT.



*Image 6- Shows Site images of Royapettah Apartment
Place: Royapettah*

ROYAPETTAH STUDIO APARTMENT.



*Image 6- Shows
Site images of
Royapettah
Studio
Apartment
Place:
Royapettah*

CRITICAL OVERVIEW

I had a wonderful time in learning many new things in this firm. The projects which I worked/Analyzed on was sustainable in many ways like use of old materials and old construction techniques by artisans, which has eliminated the use of Cement and modern machineries which is huge contribution towards sustainability as well as creates scope of work for artisans.

Another great thing I learnt from the Firm is How important heritage is and how to prevent those heritage construction techniques. If the project needs to be Sustainable, we need to develop Managing skills in dealing with client, contractors and labors which directly and indirectly affects the Project.

I also understood how a small act by a single human can cause big change in society. We all should continue spreading our heritage among us and preserve them for future thereby sustainability can also be achieved.