



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

**SCHOOL OF BUILDING AND ENVIRONMENT
DEPARTMENT OF ARCHITECTURE
M. Arch (Building management)**

**PROFESSIONAL TRAINING (S84APT)
JUL 2022 - AUG 2022**

Name of the Student : SHEEFA SIDHIKA M

Semester : III

Reg No. : 41840014

Batch : 2021-2023



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SCHOOL OF BUILDING AND ENVIRONMENT

DEPARTMENT OF ARCHITECTURE

M. Arch (Building management)

VIVA-VOCE EXAMINATION

This is to certify that the Professional Training Report (S84APT) is the work of **Sheefa Sidhika M** who had undergone training in **Savills Property Services (India) Private Limited** and has been monitored by the continuous assessment during 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 **Sheefa Sidhika M** hereby declare that this Professional Training Report for **Thirty working days (Jul 2022-Aug 2022)** done by me under the guidance of **Mr.Madhu Rahul** is submitted in partial fulfillment of the requirements for the completion of practical training session.

DATE : 20.12.2022
PLACE : Chennai



M. *Sheefa*
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 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 **Mr. Madhu Rahul** for his 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 **ESR** (Client Site Team) for their co-operation and guidance, throughout my entire Training.

I would also like to express my sincere thanks to **Ar. Surya Rajkumar** our 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.

I would like to thank **Ar. Vel Prakash, Executive Director – Industrial & Logistics, Savills Property Services (India) Private Limited, SKCL Harmony Square, 5th Floor (North Wing), No. 48&50 Prakasam Road, T Nagar - 600017** for the opportunity and guidance to learn and gain knowledge through this training.

Bonafide Certificate

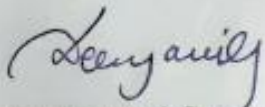

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Date: 11.05.2022

TO WHOMSOEVER IT MAY CONCERN

SHEEFA SIDHIKA M (Reg No- 41840014) is a bonafide student of our institution pursuing Masters in Architecture in Building Management (Batch 2021-2023). As part of the curriculum the students are required to undergo Professional Training for a minimum period of 30 working days. Kindly grant permission for the same in your esteemed organization. We also assure that information collected about any project will be used for academic purpose only.

Thanking You,


Dr. Devyani Gangopadhyay
Dean, School of Building & Environment



Joining Letter



SAVILLS PROPERTY SERVICES (INDIA) PRIVATE LIMITED
(Formerly known as FPD Property Services (India) Pvt Ltd)
Registered Address: 15th Floor, SKAV SEETHALAKSHMI,
Corporation No.21, Kasturba Road,
Bangalore-560001, Karnataka, India
T: (+91) 080 61380040
CIN: U70102KA2016FTC085389
savills.in

Date: July 04, 2022

Dear Ms. Sheefa Sidhika M
No.4, Thangamuthamman kovil street,
Bodinayakanur Theni dist.
PAN: EHLPA0848G

Sub: Letter of Internship

We, **SAVILLS PROPERTY SERVICES (INDIA) PRIVATE LIMITED** (Formerly known as FPD Property Services (India) Pvt Ltd), are pleased to inform you that you have been accorded permission to carry out internship in the Company. Your internship shall be for a period of one month from July 11, 2022 to August 11, 2022. and will be based at the Company's office at Chennai.

Accordingly, you may start your internship on July 11, 2022. Your study schedule will be as decided by the Company after discussion with you. During your internship with us you will have to strictly adhere the rules and regulations including but not limited to the Code of Conduct of the Company (as annexed below) with respect to conduct, discipline, confidentiality etc including but not limited to the instructions of the officials of the Company.

You should not disclose any material facts relating to the operations of the Company to anybody and should observe absolute confidentiality of all the operations of the departments.

You are entitled to a stipend of INR 5,000/- (Rs. only) per month. Applicable taxes may be deducted on the said stipend.

You agree and acknowledge that you are not eligible for any statutory benefits that may be given to the employees during your tenure in the Company and neither will you claim any benefits from the Company including but not limited to employment in the Company.

Signed and Delivered by
SAVILLS PROPERTY SERVICES (INDIA) PRIVATE LIMITED
(Formerly known as FPD Property Services (India) Pvt Ltd)
through its authorised signatory
Mr. Kaushik Chakraborty


Signed and Delivered by
Ms. Sheefa Sidhika M


Registered Address: 15th Floor, SKAV SEETHALAKSHMI, Corporation No.21, Kasturba Road, Bangalore-560001, Karnataka, India
CIN: U70102KA2016FTC085389

Savills has a network of over 600 offices and associates throughout the Americas, Europe, Asia Pacific, Africa and the Middle East.

MONTHLY REPORT



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SCHOOL OF BUILDING & ENVIRONMENT, DEPARTMENT OF ARCHITECTURE M. Arch (Building management) 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 :	Savills Property Services (India) Private Limited
2. Address & Contact Number	: SKCL Harmony square, 5 th floor, No. 48&50 Prakasam Road, T nagar – 600017 Contact - 9487449693
3. Name of the student	: Sheefa Sidhika M
4. Duration	: From 11-07-2022 To 27-07-2022
5. Total No. of days	: 15 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		✓			
Skillssets 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 : Good observer. Dedicated.

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



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SCHOOL OF BUILDING & ENVIRONMENT, DEPARTMENT OF ARCHITECTURE M. Arch (Building management) Batch 2021-2023 Continuous Assessment Report for Professional training

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2. Address & Contact Number	: SKCL Harmony square, 5 th floor, No. 48&50 Prakasam Road, T nagar – 600017 Contact - 9487449693
3. Name of the student	: Sheefa Sidhika M
4. Duration	: From 28-07-2022 To 13-08-2022
5. Total No. of days	: 15 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		✓			
Skillssets 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 : Good observer. Dedicated.

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

Consolidated Certificate (Experience)



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T: (+91) 080 61380040
CIN: U70102KA2016FTC085389
savills.in

August 30th, 2022

TO WHOM IT MAY CONCERN

This is to certify that Sheefa Sidhika M has successfully completed her Internship at Savills India.

She was working with the Industrial Project Management Services team from July 11, 2022 to August 13, 2022. She was exposed to a plethora of activities of this division.

She has also successfully met the expectations of the project undertaken and has been a great addition to the team. Furthermore, from the time she joined us we found her getting along well into Savills culture and values.

We wish her all the very best for a successful career ahead.

Best Regards,

A handwritten signature in blue ink, appearing to read "Kaushik", written over a light blue circular stamp.

Kaushik Chakraborty
Head of Human Resources
Savills India

WORK DIARY

DAY	PROJECT NAME	WORK DONE	DAY	PROJECT NAME	WORK DONE
11.07.2022	ESR Oragadam II	- Gone through ESR Standard Specifications - Prepared MOM for Discussion by IGBC Consultants	18.07.2022	ESR Oragadam II	- Gone through SOP of the project - Prepared MOM for design orientation meeting - Site visit
12.07.2022	ESR Oragadam II	- Gone through ESR Standard Specifications - Revised MOM based on corrections	19.07.2022	ESR Oragadam II	- Gone through TDD Report - Prepared MOM for Storm water drain combined meeting
13.07.2022	ESR Oragadam II	- Gone through SOP of the project - Scheduling for compound wall construction - Site visit	20.07.2022	ESR Oragadam II	- Updated the weekly meeting deck - Revised the MOM on IGBC addendums
14.07.2022	ESR Oragadam II	- Manpower allocation for compound wall construction as per DAR - Checked the park level infra drawings revised as per IGBC discussions	21.07.2022	ESR Oragadam II	- Prepared MOM for Statutory approval - Site visit
15.07.2022	ESR Oragadam II	Gone through DBR from various consultants	22.07.2022	ESR Oragadam II	Mitigation Schedule Preparation
16.07.2022	ESR Oragadam II	- Read all the Architectural and MEP Drawings - Updated the weekly progress report	23.07.2022	ESR Oragadam II	Mitigation Schedule Preparation

TBRahul

Chief Architect Signature:

MADHU RAHUL - SAVILLS

WORK DIARY

DAY	PROJECT NAME	WORK DONE	DAY	PROJECT NAME	WORK DONE
25.07.2022	ESR Oragadam II	- Safety Observations on site - Site visit	04.08.2022	ESR Oragadam II	Compound wall mitigation plan
26.07.2022	ESR Oragadam II	- Gone through scope documents of the project - Prepared MOM for IGBC Addendums	05.08.2022	ESR Oragadam II	Prepared comparisons for PEB vendor selection
27.07.2022	ESR Oragadam II	Mitigation plan preparation	06.08.2022	ESR Oragadam II	Attended Safety and Quality Audit
28.07.2022	ESR Oragadam II	- Updated mitigation plan - Prepared MOM for Design Orientation meeting	08.08.2022	ESR Oragadam II	Gone through SOP of Savills
29.07.2022	ESR Oragadam II	Preparation on IGBC checklist	09.08.2022	ESR Oragadam II	- Prepared MOM for Design Orientation meeting - Site visit
30.07.2022	ESR Oragadam II	Manpower allocation for Mitigation schedule as per DAR	10.08.2022	ESR Oragadam II	Compound wall bay wise mitigation plan
01.08.2022	ESR Oragadam II	Manpower allocation for Mitigation schedule as per DAR	11.08.2022	ESR Oragadam II	Prepared MOM for IGBC Addendums
02.08.2022	ESR Oragadam II	- Updated presentation on IGBC checklist - Compound wall drawing	12.08.2022	ESR Oragadam II	Prepared comparison for D&B vendor selection
03.08.2022	ESR Oragadam II	- Compound wall mitigation plan - Site visit	13.08.2022	ESR Oragadam II	- Updated the schedule and manpower required - Site visit

TBRahul

Chief Architect Signature:

MADHU RAHUL - SAVILLS

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Savills Property Services (India) Private Limited

Founded in the UK in 1855, Savills is one of the world's leading property agents. For over 160 years, they've offered outstanding property, specialist services and expert advice to clients, helping them with their property decisions and ambitions.

WHY ????

Savills provide in-depth knowledge and expert advice across all property sectors, from asset management to cost Management.

They are known for their in-depth research across the industry, giving insights into current market trends and predictions for the future.

SERVICES

- Industrial and Logistics Services
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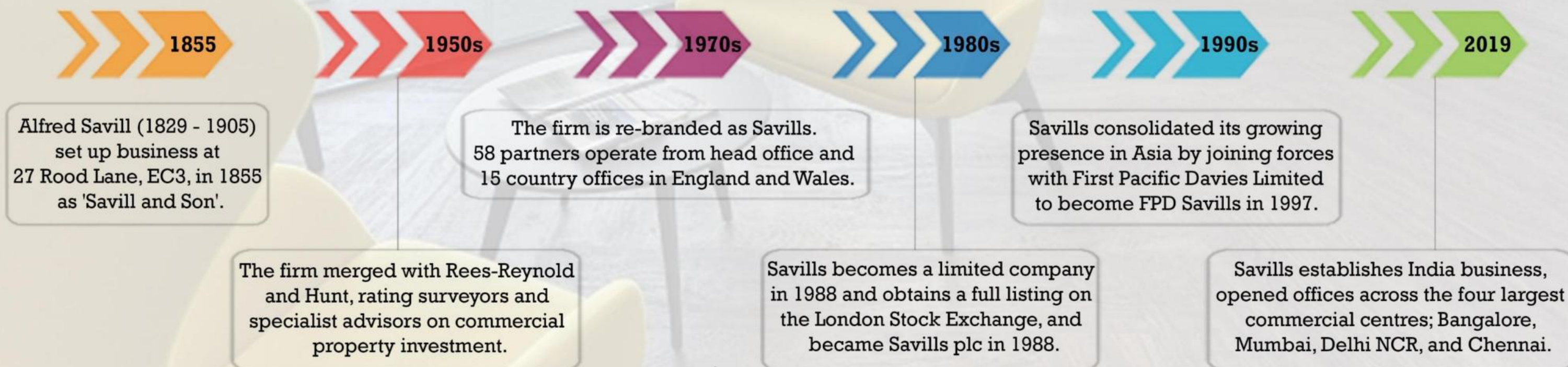
VISION

Our vision is to be the real estate adviser of choice in the markets we serve.

We do not wish to be the biggest, just the best

- We help our people fulfil their true potential
- We take pride in everything we do
- We take an entrepreneurial approach to business
- We always act with integrity

FIRM HISTORY



AWARDS



Savills India - Great Place to Work in Top 75 Mid Size

Savills India gets recognised by Great Place to Work as one among India's Best Workplaces in top 75 – mid-size companies for the third year in a row.



Savills India - Great Place to Work For Women

Savills India gets recognised by Great Place to Work as one among India's Best Workplaces for Women 2021.



Best BREEAM (In-Use) Office 2017

Savills property management team was triumphant at the BREEAM Awards winning best BREEAM In-Use Office for management of Kings Place, London.



No.1 Real Estate Superbrand 2018

Savills spends more than a decade at the top of Superbrands Real Estate list.

PROJECT LOCATION



ADDRESS : Survey No: 33, Oragadam Walajahbad Road, Varanavasi Village, Walajabad Taluk, Oragadam, Tamil Nadu 631604

- Varanavasi is located on the **State Highway** from Chennai to Kancheepuram and is about **8 Km from Oragadam**, a major Industrial and Warehousing hub.
- The proposed site is adjacent to the existing ESR Industrial and Logistics Park.

PROJECT STAKEHOLDERS

CLIENT	: ESR Industrial and Logistic Park
JOINT VENTURE SPVs	: AAB and Catabel
PROJECT MANAGEMENT	: Savills Property Services Pvt Ltd.
DESIGN CONSULTANTS	: ARCH Project Consultants Pvt Ltd.
LIASIONING CONSULTANTS	: Indoassist
IGBC CONSULTANTS	: Ecofirst

PROJECT BRIEF

PROJECT NAME - ESR ORAGADAM - II INDUSTRIAL AND LOGISTIC PARK

BUILDING TYPOLOGY - Greenfield Industrial and Warehousing

TOTAL AREA OF THE SITE - 40.01 Acres - 1,62,034.82 Sq.m

OPEN SPACE RESERVATION - 10% - 4 Acres - 16,203.48 Sq.m

TOTAL BUILT UP AREA - 8.35 lakh Sq.ft

- The project includes **8 buildings** and is split into **3 phases**, **Phase 1** to be constructed first.
PHASE 1 - Building 4 and 5 **PHASE 2** - Building 1, 2 and 3 **PHASE 3** - Building 6, 7 and 8
- BUILT UP AREA OF PHASE 1** - 2,76,507 Sq.ft + Utility Area
BUILDING 04 - 64,215.48 Sq.ft **BUILDING 05** - 2,12,291.48 Sq.ft **UTILITY** - 9,790 Sq.ft
- The project is proposed to achieve **IGBC Platinum Rating** under Industrial Park category.



ESR – STANDARD SPECIFICATION

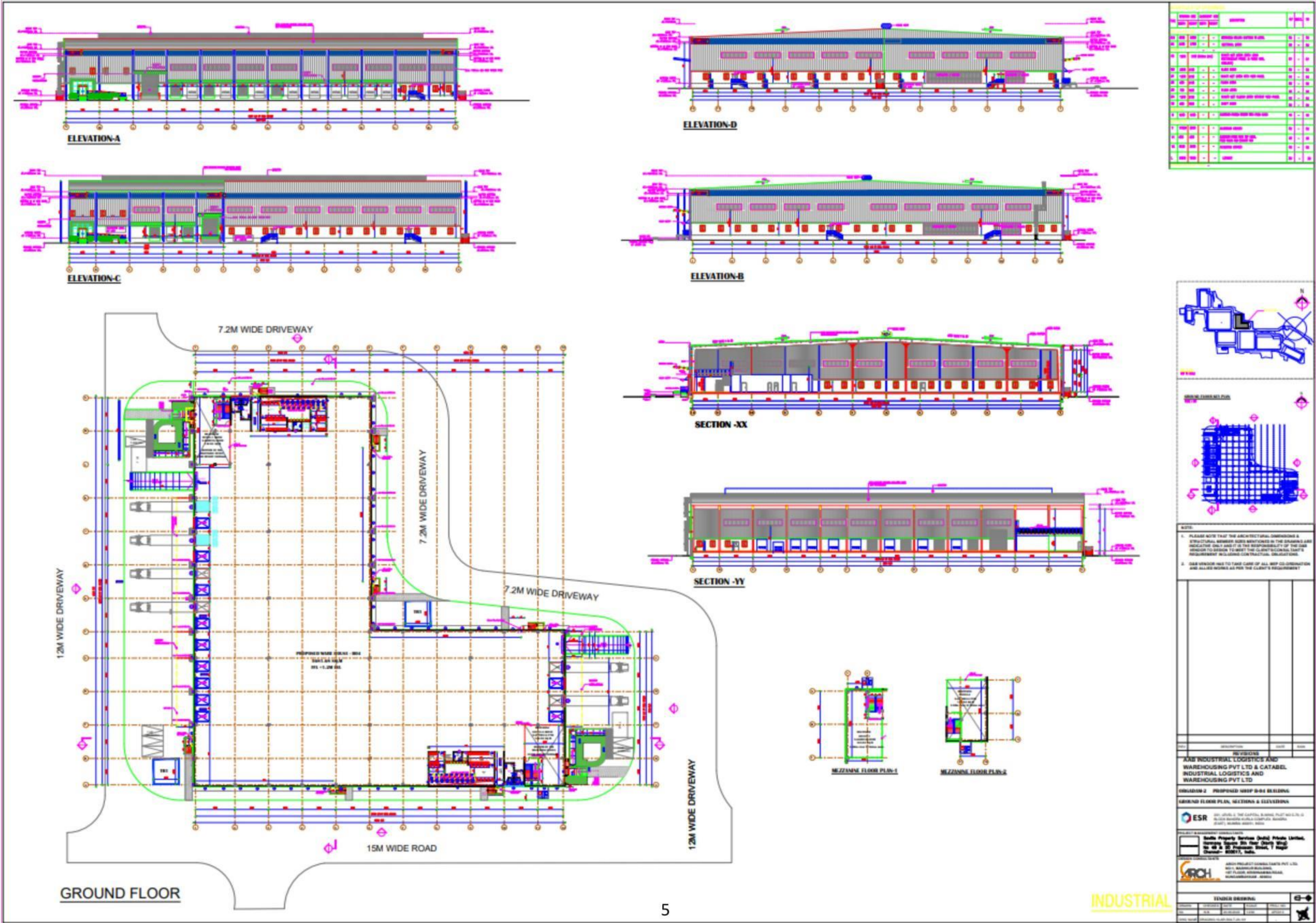
PEB STRUCTURE	
PEB BUILDING DETAILS	
Building Aspect Ratio	Building length to width ratio to be 2:1
Building height at eave	Standard building clear height of 10m/12m at the building eave, as per location
Building height at center	As per width of building and roof slope of 1:20
Office mezzanine	7% of overall building area shall be provided as mezzanine for office area
PEB Building frame	Multi span, Single gable
Internal column lateral span	22m/25m internal column
Pre punched purlins	Purlins to be pre-punched for fixing of fire protection & Electrical system components
PEB ROOF DETAILS	
Roofing type	Standing seam roof system (Screw less roof system)
Roof sheeting material	Roof sheeting shall be of TCT 0.55mm thick Bare Galvalume sheet
Skylight	3%-4% roof area shall be provided with skylight of polycarbonate sheet for natural daylight.
Roof Insulation	8mm bubble wrap with Aluminium foil to be provided
PEB WALL CLADDING DETAILS	
Cladding wall length	Sheet cladding shall be above the 3.6m high precast/Masonry wall till roof in a seamless manner
Cladding & Masonry wall overlap	Wall cladding sheet to overlap by 150mm on masonry wall
STORM WATER DRAINAGE SYSTEM	
Storm water down spout	Down spouts to be fixed with end spouts up to finished ground level
Storm water down Gutter	Color coated galvalume gutters

PEB STRUCTURE	
BUILDING VENTILATION SYSTEM	
Ridge monitor/Ridge vent	Required air changes shall be achieved through continuous ridge vent
Louvers/ Ventilators	Z-type ventilators shall be provided at 6m ht from building finish floor
Air changes	3-6 ACPH for warehouses / 8 ACPH for Industrial building with windows
CONTINUOUS CANOPY DETAILS	
Canopy width	4m from the PEB wall cladding
Canopy height	Canopy at 5.2m height from the corresponding road level
Canopy roof slope	Canopy roof slope to be 1:10
BUILDING SAFETY & MAINTENANCE FEATURES	
Cage Ladder	One lockable cage ladder shall be provided to access the roof for maintenance
Lightening arrestor arrangement	Lightening arrestor at the roof ridge to be installed
Roof fall protection system	Safety harness lines to be provided on the roof along the edge
DOCKING DETAILS	
Docking type	Perpendicular docking
Docking apron size	16.5m wide docking apron provided for 40ft vehicular movement
Dock door size	2.4m (w) X 3m (ht), numbers shall be one rolling shutter per 12,000 sq.ft/one in each bay.
Dock protection system	Each dock shall be provided with dock fenders/bumpers
Dock pit size	Dock pit size suitable to install 2.0m x 3.5m dock levelers
Ramp for emergency dock	Emergency dock door shall be provided with access ramp of adequate slope, width of the ramp shall be 4m wide

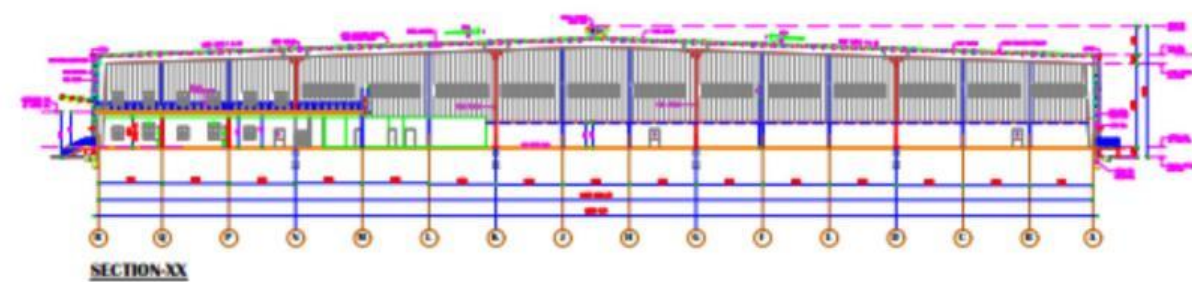
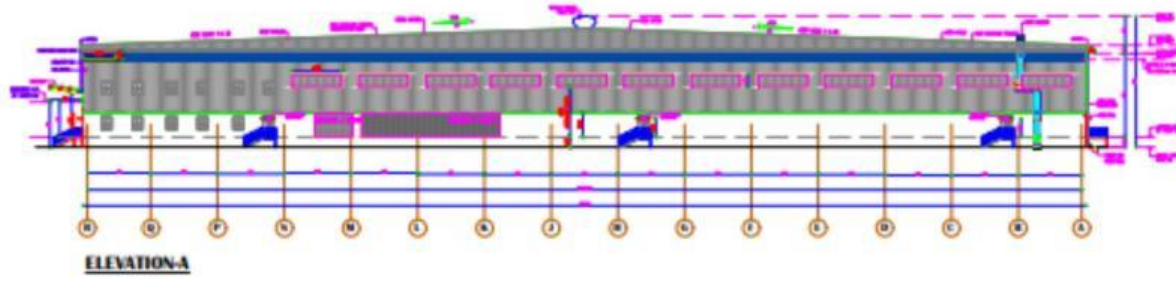
ESR – STANDARD SPECIFICATION

RCC & CIVIL STRUCTURE	
Building plinth height	1.2m plinth height from the finish docking road level
External wall height	3.6m from finish floor level
External wall detail	RCC waffle panel/masonry wall
Flooring type	Industrial FM-2 compliant floor, racking compliant, floor thickness as per design load, M30 grade concrete floor
Window type and size	Aluminium sliding windows shall be provided at the office area
BUILDING UTILITIES	
FIRE PROTECTION SYSTEM	
Fire hydrant system	Fire hydrant and fire hose along the building periphery shall be provided to comply with NBC and local CFO fire norms
Fire exit staircase	Metal steel staircases with handrail shall be provided from finish floor level to external finish road level
Material storage category	Medium & low hazard
Fire alarm	MCP type alarm system
Fire detection	Beam detectors/Smoke detectors to be provided
PLUMBING WORK	
Toilet block	Provision of wet block at both end of building. Tap off in the Mezzanine / Office area for toilets
Water supply	One water tap-off point shall be provided; flushing water shall be supplied from the STP recycle water.
ELECTRICAL WORK	
Electrical design code	Electrical system design and installation as per applicable IS and NBC norms
Power connection	Incoming power connection at the receiving station

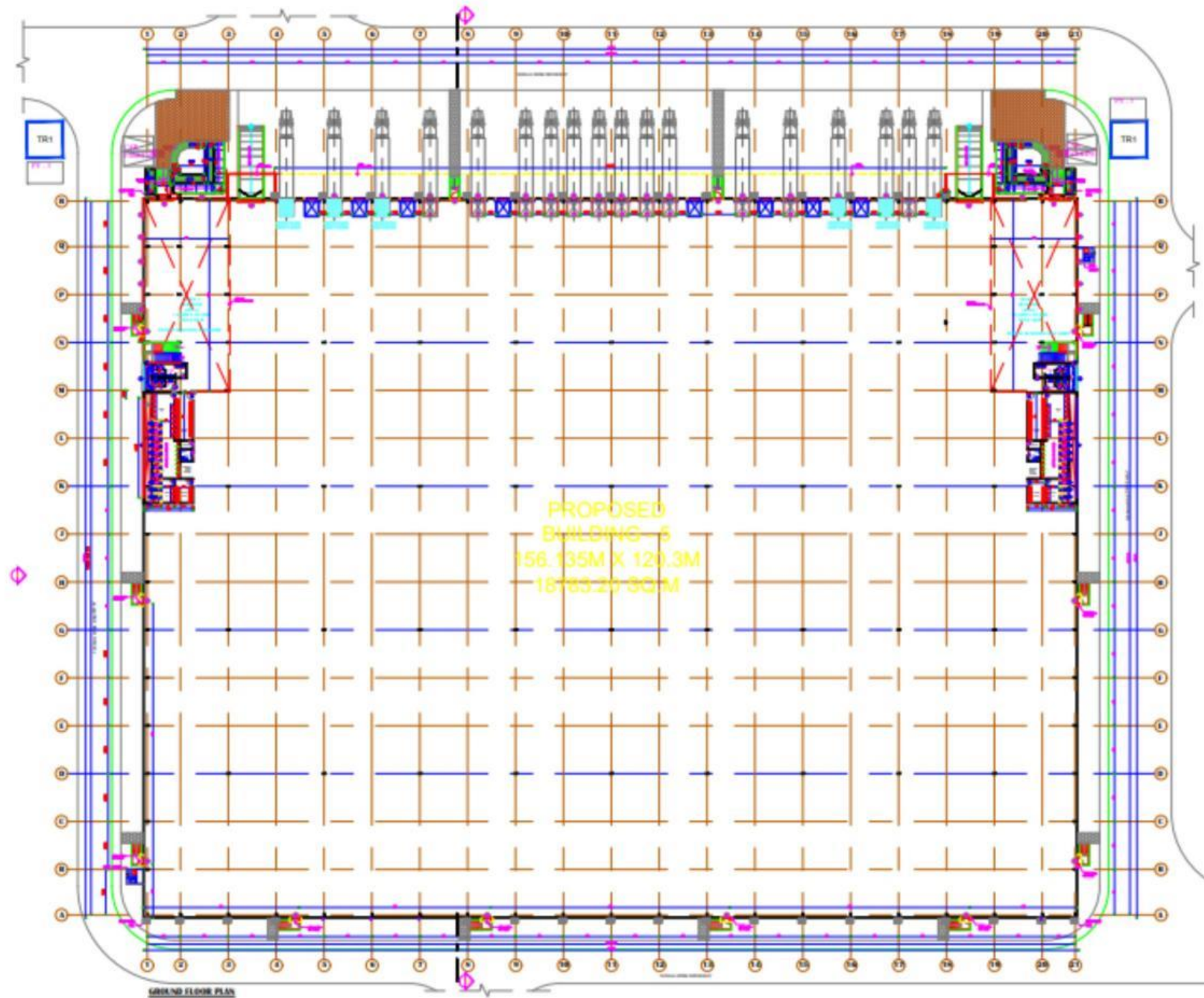
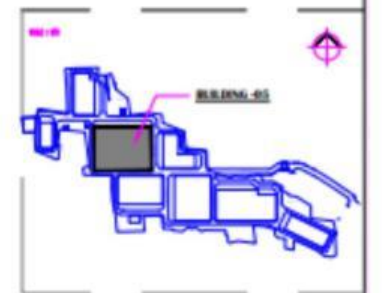
Power load	1 KVA per 1000 sq.ft
Lightening arrestor	Lightening arrestor on the roof structure as per NBC
Parking	Provision of 5 numbers car parking spaces & 10 numbers two wheeler parking spaces will be provided for 1.0 lac sq.ft built up area. No dedicated space for Truck parking except dock area
Parking surface finish	Heavy duty paver blocks / Bitumen finish
EXTERNAL INFRA AT PARK LEVEL	
STP	MBBR – moving bed biofilm reactor to be provide at park level
Sewer line	Sewerage network with inspection chambers shall be connected to central STP
Water supply	Local source for domestic water, for flushing treated water from STP
DG and Data cables	Park level DG equipment for emergency lighting and Park level Infra services
Road network	Road shall be of bitumen finish. Fire tender road should be levelled earth, with GSB
Boundary wall	8' height boundary to be provided. Wall shall be Masonry/Precast wall up to 6' height from ground and 2' height concertina wire
External lighting	15 lux illumination level for external road and 5 lux for compound wall
Gate house / Security cabin	Gate house shall be provided with sliding gate for entry and exit. Width of the sliding gate to be of 4.5m/6m wide
Signages	Park level signages like emergency, directional etc.
PARK LEVEL AMENITIES	
Drivers rest area Truck parking Area	Truck holding area and driver's toilet shall be provided at the park level



BUILDING - 05



NO.	REVISION	DATE	BY	CHECKED BY
1	ISSUED FOR PERMIT	2023/05/10	ARCH	ARCH
2	FOR CONSTRUCTION	2023/05/10	ARCH	ARCH
3	FOR CONSTRUCTION	2023/05/10	ARCH	ARCH
4	FOR CONSTRUCTION	2023/05/10	ARCH	ARCH
5	FOR CONSTRUCTION	2023/05/10	ARCH	ARCH
6	FOR CONSTRUCTION	2023/05/10	ARCH	ARCH
7	FOR CONSTRUCTION	2023/05/10	ARCH	ARCH
8	FOR CONSTRUCTION	2023/05/10	ARCH	ARCH
9	FOR CONSTRUCTION	2023/05/10	ARCH	ARCH
10	FOR CONSTRUCTION	2023/05/10	ARCH	ARCH



NO.	REVISION	DATE	BY	CHECKED BY
1	ISSUED FOR PERMIT	2023/05/10	ARCH	ARCH
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4	FOR CONSTRUCTION	2023/05/10	ARCH	ARCH
5	FOR CONSTRUCTION	2023/05/10	ARCH	ARCH
6	FOR CONSTRUCTION	2023/05/10	ARCH	ARCH
7	FOR CONSTRUCTION	2023/05/10	ARCH	ARCH
8	FOR CONSTRUCTION	2023/05/10	ARCH	ARCH
9	FOR CONSTRUCTION	2023/05/10	ARCH	ARCH
10	FOR CONSTRUCTION	2023/05/10	ARCH	ARCH

COSTING – LINE ITEMS CONSIDERED

LAND DEVELOPMENT

Bush Clearance
Excavation
Malaimann Filling
Compaction
Disposal of Waste

BUILDING WORKS – CIVIL

Piling

- Pile bored cast-in situ, pile load test, mobilizing, arranging & carrying out pile integrity test, mobilization charges for rig, reinforcement steel work.

Excavation

Plinth Filling

Anti-termite Treatment

Cement Concrete 1:4:8

Concrete M30

Concrete M20

Reinforcement Steel

Masonry Work

Flooring Works

Doors and Rolling Shutter

Aluminium & Glazing Works

Plastering Works

Painting Works

Miscellaneous Works

- Plinth protection, kerb stone, grouting, pipe, construction chamber, ACP & foundation bolt.

Apron

BUILDING WORKS – ELECTRICAL

Lightning Protection System
Equipment Earthing Grid System

BUILDING WORKS – FIRE DETECTION AND FIRE FIGHTING

Internal hydrant system
Automatic sprinkler system
Portable fire extinguishers
Fire alarm system

TENANT IMPROVEMENT

Building Civil
Fire Detection and Fire alarm
Infra Works - civil

INFRA WORKS – CIVIL

Road Work
Apron
Pathway and Parking
Pipe rack
RCC Drain
Culvert
Landscaping and External Signage

PEB WORKS

PEB Supply, Installation with roofing

ADDITIONAL COST FOR INDUSTRIAL BUILDING INSTEAD OF WAREHOUSE GOVERNMENT FEE / LICENSES / DEVELOPMENT COST

INFRA WORKS – ELECTRICAL

High side Electrical system
Transformer
Utility Building

INFRA WORKS – FIRE DETECTION & FIRE FIGHTING

Fire pump room
External hydrant system
Portable Fire extinguisher
Utility Building

INFRA WORKS – PLUMBING

External Water Supply
External Drainage
Utility Building

CONSULTANTS FEES

Project Management Consultants
Architect – Engineers
Liasoning Consultants
EC Consultants
Third Party Inspection (TPI) at PEB
Factory
Admin Cost

BUILDING PLUMBING - NA HVAC & IT SERVICES - NA

PRE OPERATIVE & SITE READINESS PROJECT ADMIN COST CONTINGENCIES @ 2.5 %

IGBC CHECKLIST AND OBSERVATIONS

CREDITS		CREDIT REQUIREMENTS	POINTS TO TARGET	AVAILABLE POINTS
ESR – ORAGADAM II LOGISTIC PARK			66	90
PARK PLANNING & DESIGN			6	13
Mandatory Requirement 1	Regulatory Compliance	The project shall comply with following statutory approvals from competent government authority, as applicable. The relevant documents have been attached for your reference.	MR	MR
Mandatory Requirement 2	Erosion and Sedimentation Control	Comply with NBC 2016 requirements ESC measures: 1a. Before Construction: Top soil preservation, preservation of existing vegetation/ trees b. During Construction: Barrication of site, wheel washing, sedimentation pit/ basin, swales/ temporary storm water drains, mulching, temporary vegetation c. Post Construction: Storm water channels, sediment pit/ basin, rainwater harvesting, vegetation,	MR	MR
Credit 1	Green Cover	a) Natural Topography and Green Cover (12.5% ; 15% of site area) - 2 points c) Turf Design < 50% of the landscape area -1 point b) Trees	2	4
Credit 2	Heat Island Effect	a) Case A: Roof Areas : 50%, 75% (2 points) b) Uncovered Parking areas (Grass paver, Light Grey coloured paver, shade from trees)- 1 point c) Roads and Pathways (25%)	1	4
Credit 3	Access to Public Transport	Comply with either of the following options a) Public Transport/Local Transport < 1 km walking distance b) Shuttle Service > 50% of the occupants including warehouse occupants	1	1
Credit 4	Pedestrian Network	Provide dedicated Pedestrian Network connecting the warehouses and the facilities: ensure these networks are shaded and properly lit	0	2
Credit 5	Docking Facilities at Warehouses	Comply with the standard design for the following Case A: Number of Docking Bays Minimum 1 docking bay for every 12,000 sq.ft. of the warehousing space (storage) - 1 point Minimum 1 docking bay for every 10,000 sq.ft. of the warehousing space (storage) - 2points	2	2
PARK FACILITIES & OPERATIONS			5	7
Credit 1	Security Facilities	Case A: Security Facilities (1 Point) (and / or) Case B: Automated Access control (1 Point)	2	2
Credit 2	Electrical Vehicles and E-charging Stations	Case B: Electric Vehicles / E-charging Stations - 1 Point E-charging stations for at least 20% of the combined parking capacity of four and two wheelers (excluding visitor parking)	1	1
Credit 3	Green Education	Green Education Activities - Formation of Committee and outreach activities Green Education Guidelines - Owner / Tenant and Renovation guidelines	2	2

TRANSPORT EFFICIENCY			4	4
Credit 1	Access to Multi-modal Transport	(Maximum 2 Points; 1 Point for two measures, 2 points for 3 measures) Option 1: Access to National / State Highway < 25 km Option 2: Access to Railway Siding < 50 km Option 3: Access to Sea Port/ Container Freight Station (CFS) / In-land Container Depot (ICD) / Airport / Sector-specific Manufacturing Hub < 100 km	2	2
Credit 2	Parking for Service Vehicles	Case A: Parking for Service Vehicles Option 1: Parking Area Requirement (or) Option 2: Parking Spaces (2 Points) Case B: Vehicle Service Zone	2	2
ENERGY EFFICIENCY			20	21
Mandatory Requirement 1	Minimum Energy Performance	Option 1: Prescriptive Approach 1) Building Envelope 2) Lighting 3) Air-conditioning Systems: Option 2: Simulation Approach Option 3: Energy Performance Index (Measurement Approach)	MR	MR
Credit 1	Enhanced Energy Performance	Option 1: Prescriptive Approach Option 2: Simulation Approach Option 3: Energy Performance Index (Measurement Approach)	13	13
Credit 2	Renewable Energy	25% 40%,55% 70%,85%,100% of park Energy Consumption of infrastructural equipment and exterior lighting (excluding warehouse loads like HVAC, interior lighting, process, conveyors, forklifts etc) (1 point each) a) On-site - 6 points (1 point for each threshold) (And/Or) b) Off-site - 2 points (150% & 200% of park energy Consumption of infrastructural equipment and exterior lighting (excluding warehouse loads like HVAC, interior lighting, process, conveyors, forklifts etc, - No RECs can be shown for compliance	6	6
Credit 3	Energy Metering and Management	Case A: Energy Metering (1 Point) Case B: Energy Management System (1 Point)	1	2
WATER CONSERVATION			14	16
Credit 1	Rainwater Harvesting	Case A: Rainwater Harvesting a) 15% of Roof Area or b) 20% Non Roof Area Case B: High Ground Water Table	4	5
Credit 2	Water Efficient Plumbing Fixtures	Use water efficient plumbing fixtures (as applicable) whose flow rates meet the baseline criteria in aggregate.	4	4
Credit 3	Water Efficient Irrigation Systems	Minimum 4 efficient irrigation systems	1	1

Credit 4	Waste Water Treatment and Reuse	a)Waste Water Treatment (100%): (2 Points) b) Waste Water Reuse (25%, 50%): (2 Points)	4	4
Credit 5	Water Metering	Logistics Parks and Warehouses: (2 Points) a)Park-level Metering: (1 Point) b)Warehouse-level Metering: (1 Point) Interior Fit-out Warehouses: (1 point)	1	2
RESOURCE MANAGEMENT			5	8
Mandatory Requirement	Segregation of waste, Post Occupancy	Ensure the segregation dry and wet waste at park level and Warehouse level	MR	MR
Credit 1	Green Procurement Policy	Have a policy and procurement guidelines in place to purchase building products & materials which have lower impact on the environment. Guidelines to include materials with recycled content, local materials, low VOC materials, Green Housekeeping chemicals etc.,	1	1
Credit 2	Eco-labelled materials, products & Equipment	Ensure that the project sources GreenPro eco-labelled (or) any other Eco-labelled products, materials & equipment for warehouse construction/ operations. New Logistics Parks / Warehouses: The eco-labelled products shall be atleast 5% of the total cost of products, materials & equipment and minimum of 3 applications.(1 point for each threshold) 5% - 3 Applications 10% - 4 Applications 15% - 5 Applications	0	3
Credit 3	Organic Waste Management, Post Occupancy	Logistics Parks and Warehouses: a) Food Waste 50%, 95% - 2 points b) Garden Waste 25% 1 point	3	3
Credit 4	Handling of Waste Materials, during Construction	Divert at least 75% of the construction waste from being sent to landfills	1	1
HEALTH & WELL-BEING			4	8
Mandatory Requirement 1	No Smoking Premises	Outdoor Smoking Areas 7.6 meters away from all outdoor air intakes (such as entrance doors, docking bays, window openings etc).	MR	MR
Mandatory Requirement 2	Minimum Fresh Air Ventilation	Case A: Naturally Ventilated Spaces Option 1: Opening to Floor Area Ratio (Or) Option 2: Air Changes per Hour Case B: Mechanically Ventilated Spaces Option 1: Ventilation Rates (Or) Option 2: Air Changes per Hour	MR	MR
Credit 1	Enhanced Fresh Air Ventilation	Case A: Naturally Ventilated Spaces (2 Points) Option 1: Opening to Floor Area Ratio (Or) Option 2: Air Changes per Hour Case B: Mechanically Ventilated Spaces (2 Points) Option 1: Ventilation Rates (Or) Option 2: Air Changes per Hour	2	2

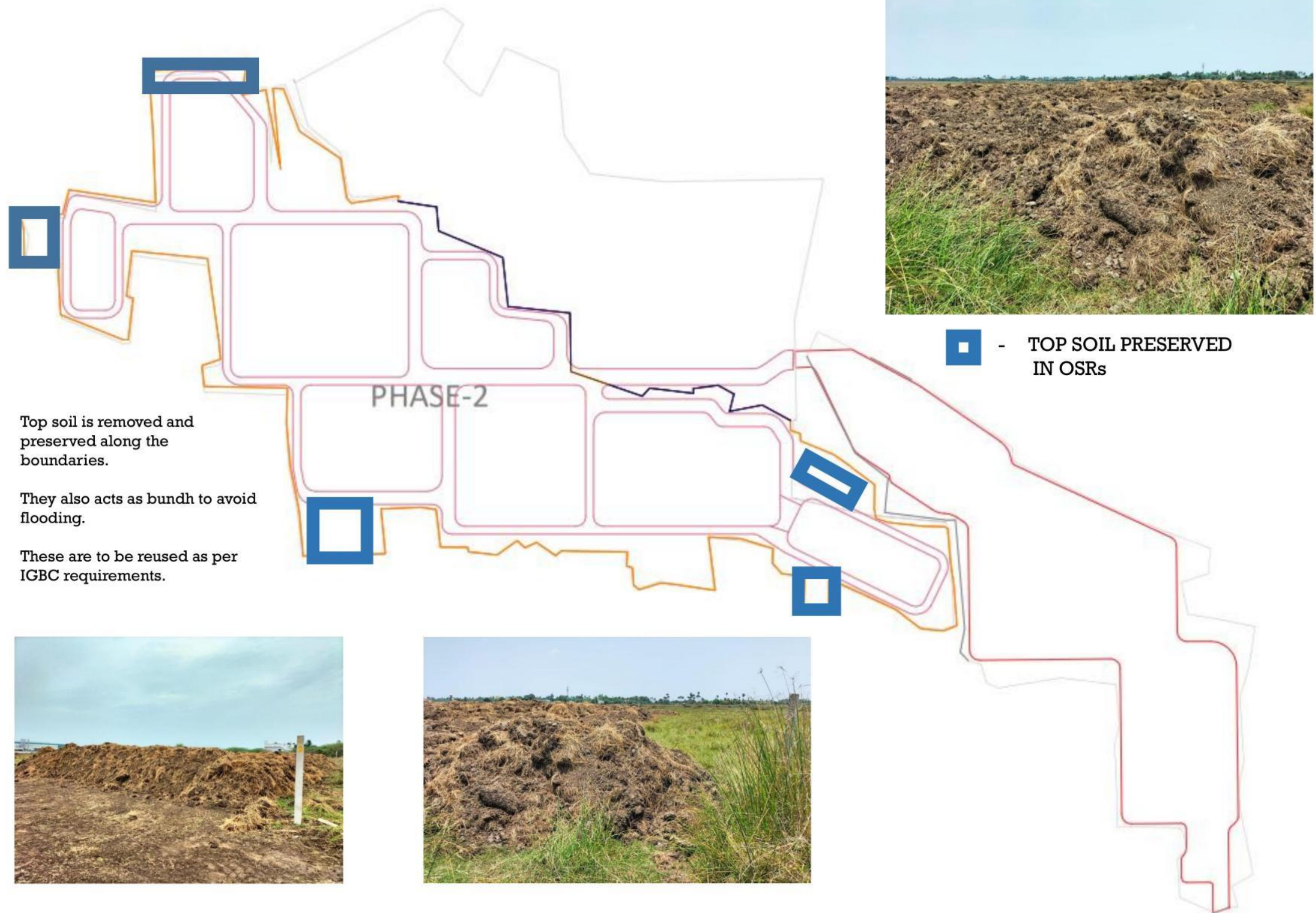
Credit 2	Daylighting	50%, & 75% of Logistics Parks/ Warehouses area to achieve 110-2200 lux from daylighting (1 point each) 50% of Interior Fit out Warehouses area to achieve 110-2200 lux from daylighting (1 point) Compliance through Simulation Approach or Measurement Approach	0	2
Credit 3	Basic Amenities for Staff & Drivers	max 3 points for Logistics parks warehouses & interior fit-out a)Health Care / Medical Room with first-aid - 1 point b)Clean Drinking Water facilities & Canteen- 1 point c)Clean Toilets & bathrooms - 2 points d)Dormitories/ Rest rooms for drivers - 2 points	1	3
Credit 4	Basic Facilities for Construction Workforce	Provide basic facilities for construction workforce as outlined in the Workers Act of 1986	1	1
INNOVATION IN DESIGN & OPERATION			8	13
Credit 1	Innovation in Design Process	Case A: Innovation (1 Point for each measure; maximum 2 points) E.g. Vertical warehousing, Reverse Logistics, CO2 monitoring etc., Case B: Exemplary Performance (1 Point for each measure; maximum 2 points) E.g. vegetation, Rainwater harvesting, heat island effect etc.,	2	4
Credit 2	Green Measures Beyond the Fence	Demonstrate that the project/ organization has implemented at least one of the following green measures beyond the fence within 50 km radial distance from the project site. (2 points for each) Adoption of School/village/water bodies/parks	4	4
Credit 3	Water and Energy Performance	Existing Logistics Parks/ Warehouses: (2 Points) Energy & Water Audit Plan: (1 Point) Performance Based Energy & Water Reduction: (1 Point) New Logistics Parks/ Warehouses: (1 Point) Develop a comprehensive plan to enhance the performance of energy and water consuming systems in the project, in the next 3 to 5 years. Commit to provide the annual total water and energy consumption data of the project to IGBC for a period of 3 to 5 years.	1	1
Credit 4	Green Measures Cost Analysis	Develop a matrix to compute incremental/ decremental cost of the project for the green features implemented.	0	2
Credit 5	Accredited Professionals	At least one participant of the project team shall be IGBC Accredited Professional and Warehousing Management Professional. (1 point for each accreditation)	1	2

Credit List	Credit Score - ESR	Total Available Score
Park Planning & Design	6	13
Park facilities & operation	5	7
Transport Efficiency	4	4
Energy efficiency	20	21

Water Conservation	14	16
Resource Management	5	8
Health & Well-being	4	8
Innovation in Design & Operation	8	13
Total	66	90

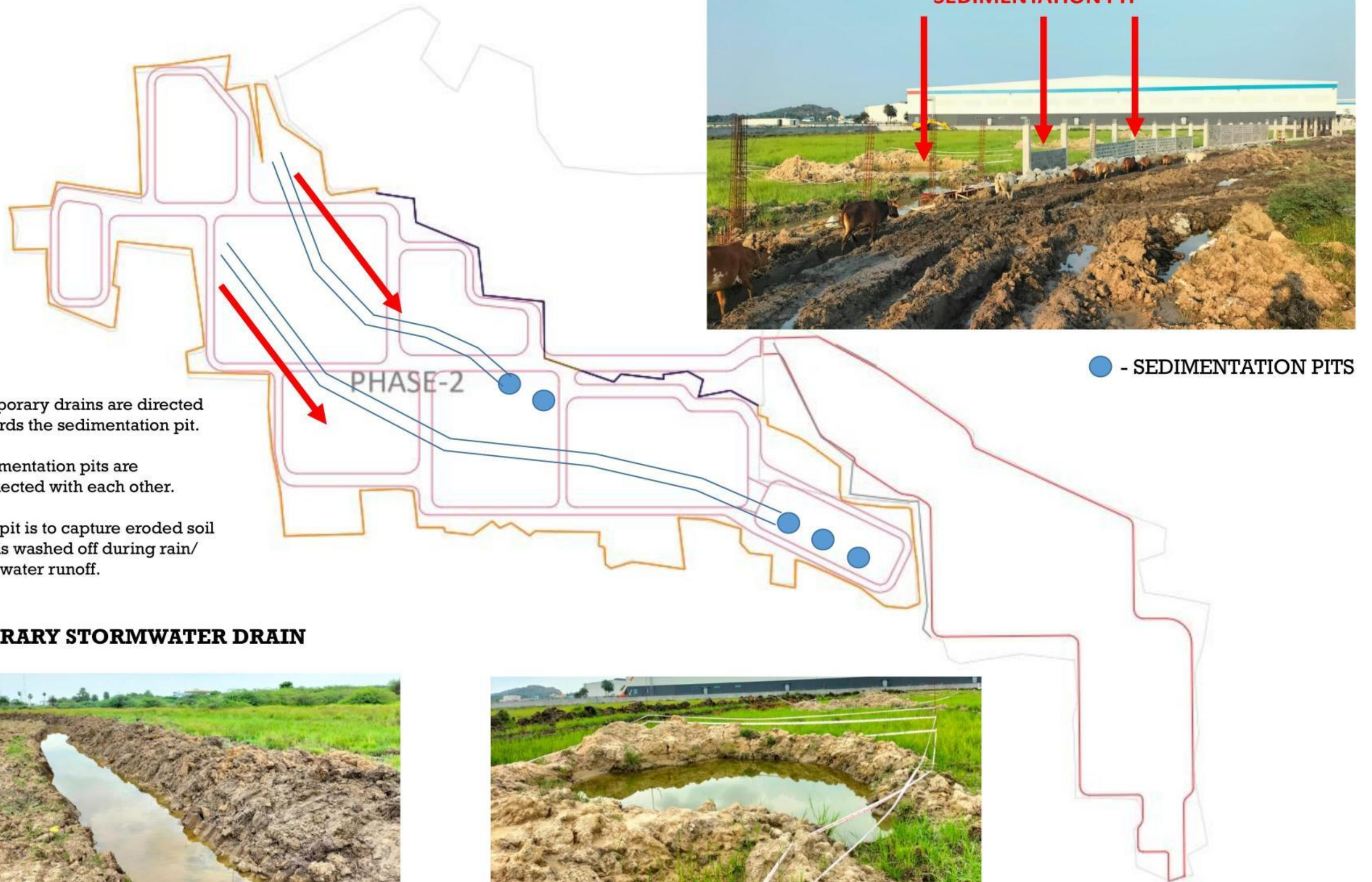
Rating Level	Credit Score
Certified	36-44
Silver	45-53
Gold	54-62
Platinum	63-90

TOP SOIL PRESERVATION



Mandatory Requirement 2 - EROSION AND SEDIMENTATION CONTROL

SEDIMENTATION PIT

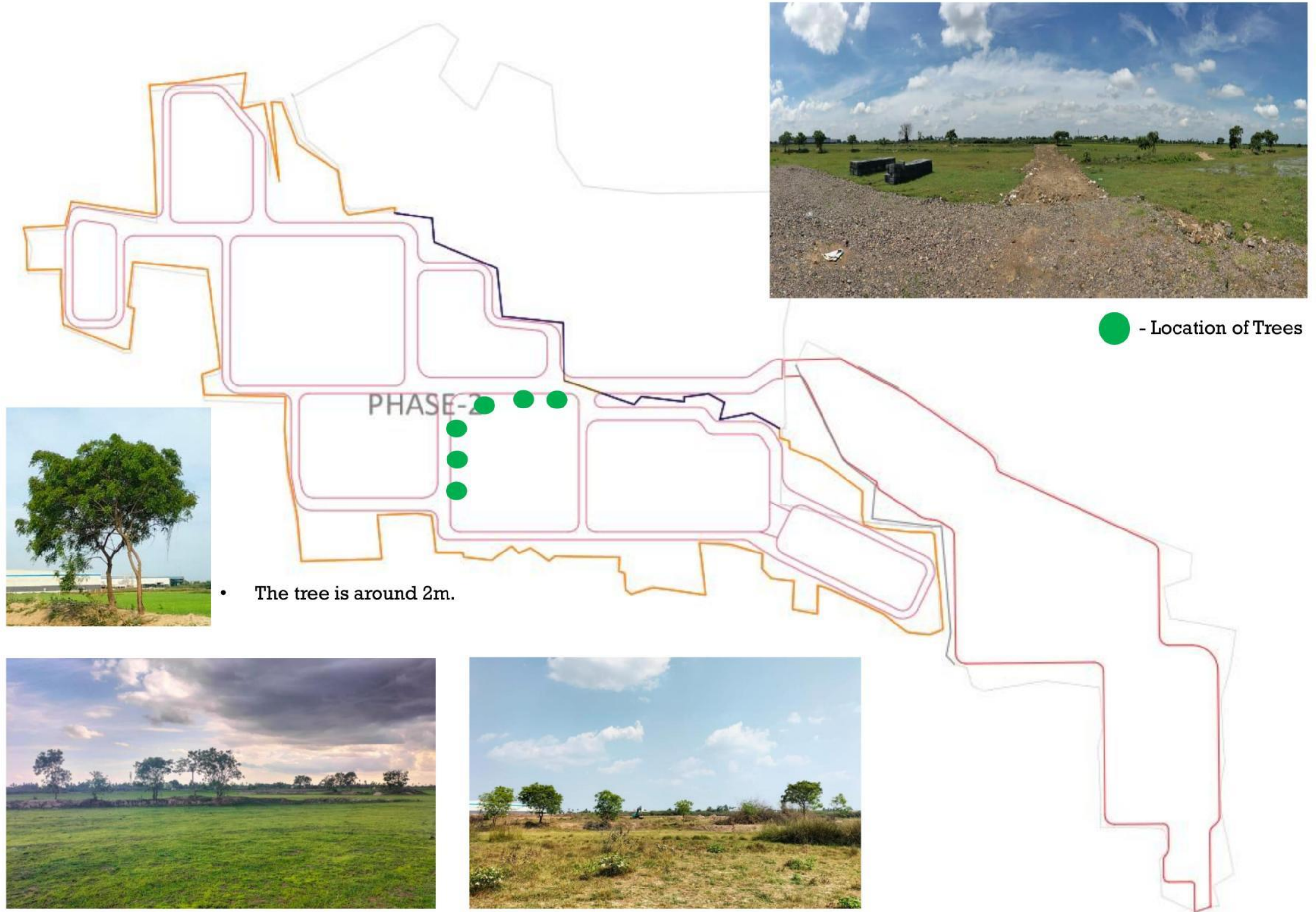


TEMPORARY STORMWATER DRAIN



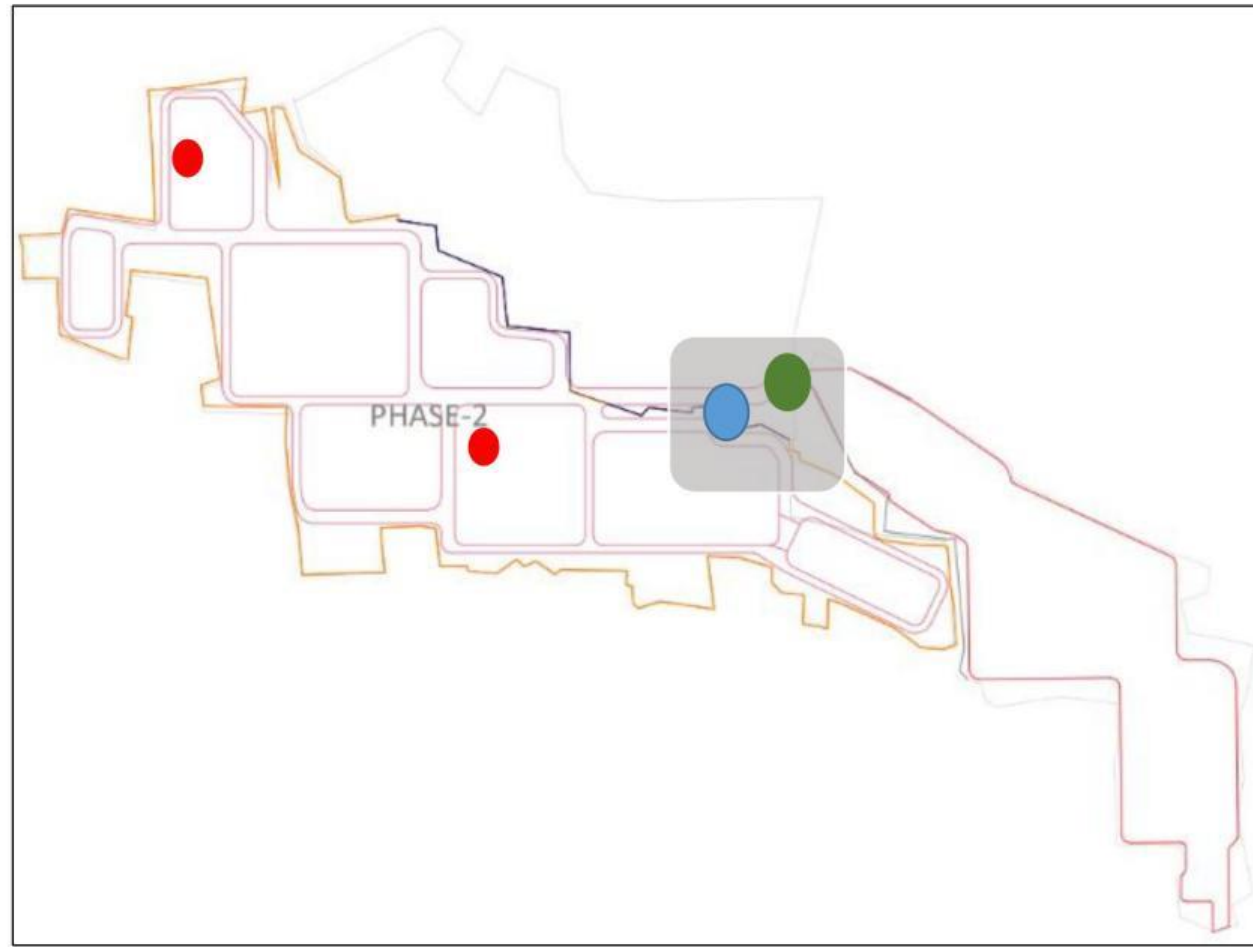
Mandatory Requirement 2 - EROSION AND SEDIMENTATION CONTROL

PRESERVATION OF EXISTING VEGETATION / TREES

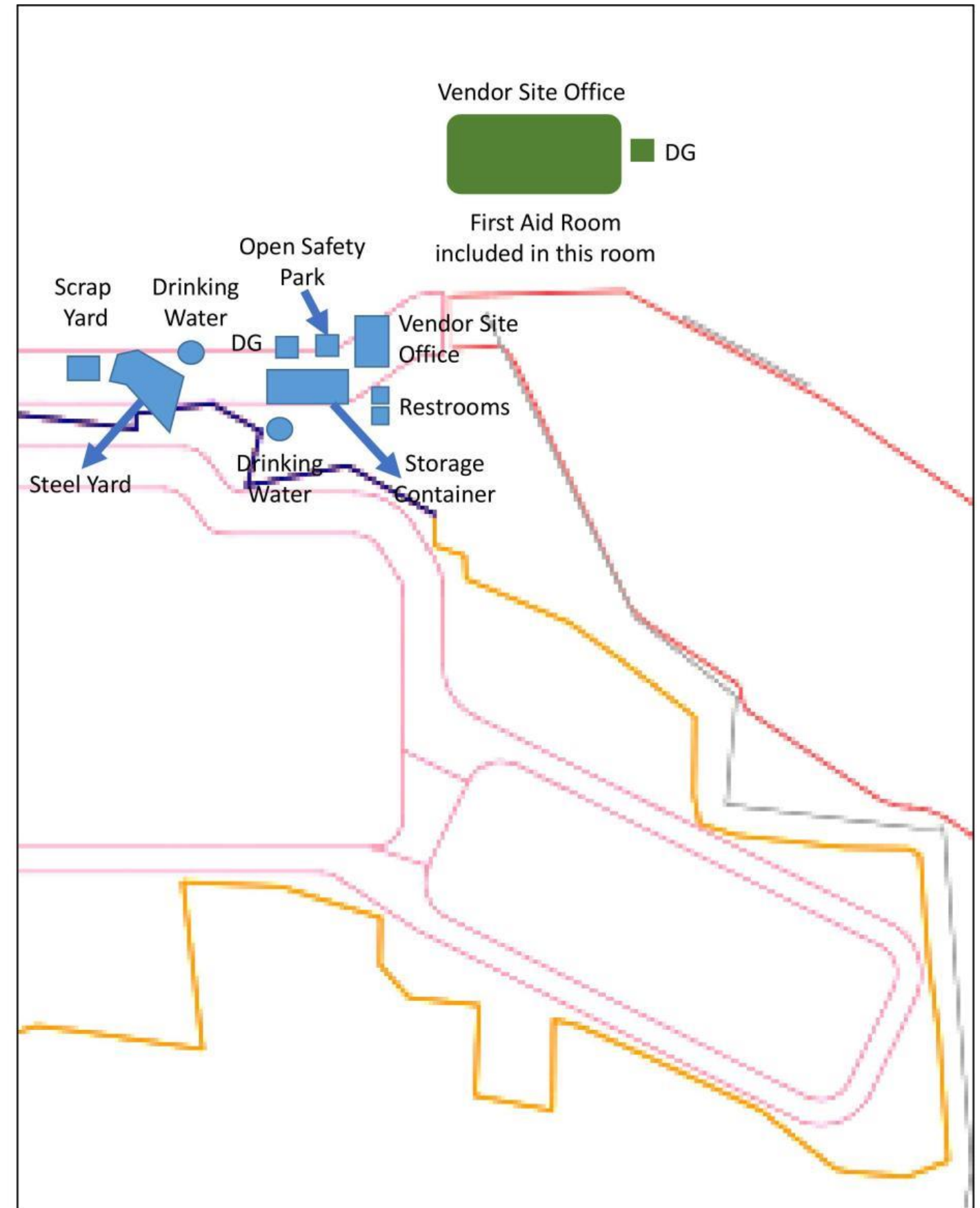


Mandatory Requirement 2 - EROSION AND SEDIMENTATION CONTROL

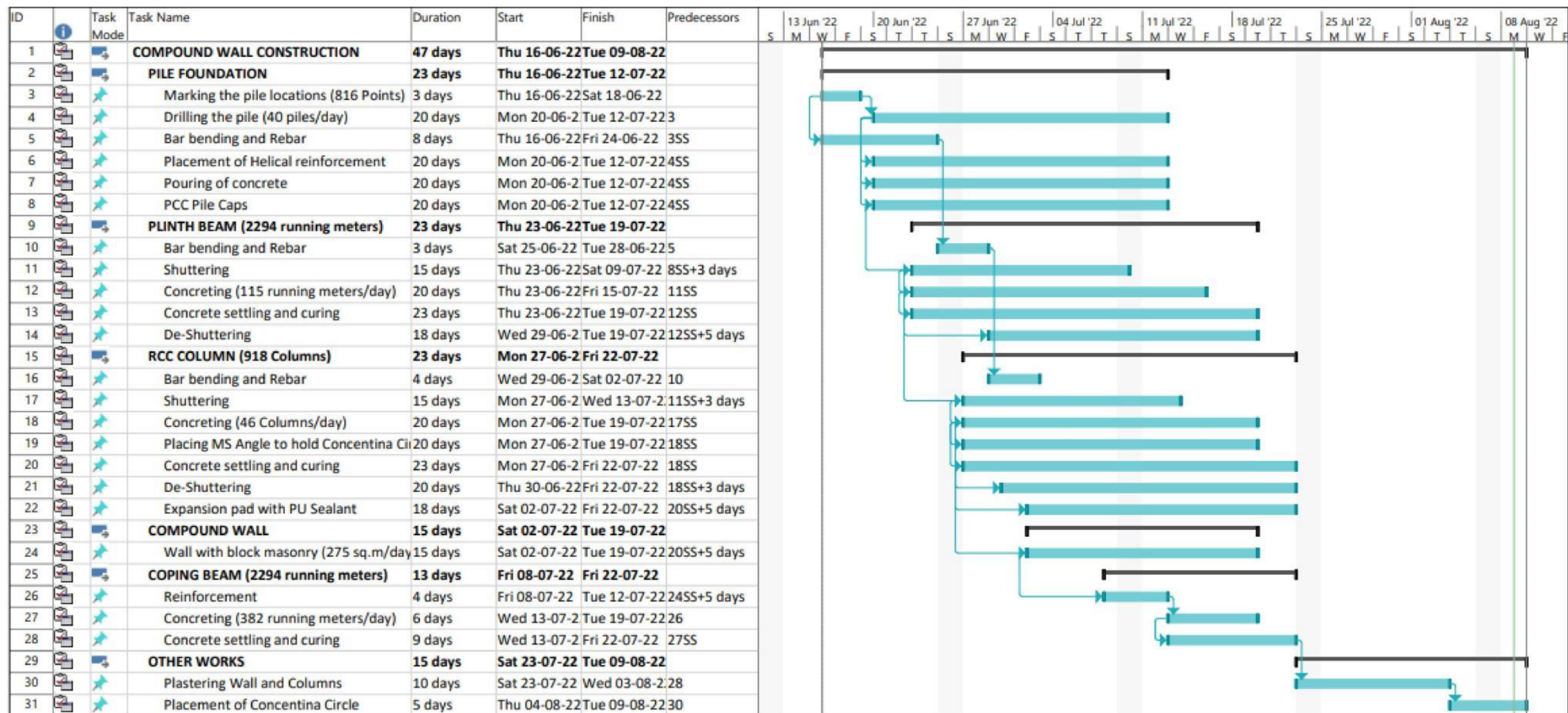
SITE AMENITIES



- Labour Shed – Separate Labour Camp set up opposite to Project Site
- No Night works planned as of now – Illumination not applicable
- First Aid Room - Room inside office is dedicated for First Aid
- Temporary rest area provided at 2 locations – Varies as per work area. 
- Canteen facilities provided at Labour Camp

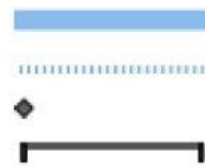


Credit 4- Basic Facilities for Construction Workforce



Project: Compound Wall Sched
Date: Wed 13-07-2022

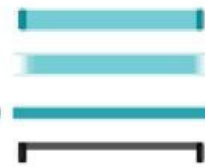
Task
Split
Milestone
Summary



Project Summary
Inactive Task
Inactive Milestone
Inactive Summary



Manual Task
Duration-only
Manual Summary Rollup
Manual Summary



Start-only
Finish-only
External Tasks
External Milestone



Deadline
Progress
Manual Progress



MANPOWER REQUIRED

S.No	PLINTH	Quantity / Cum	Required	VOLUME (Cu.m)
2294 running meters of width .6m and height .3m				413
1	Mason	0.1	41.3	Totally 36 labours/day
2	Helper	1.63	673.19	
3	Mason/day		2.065	
4	Helper/day		33.6595	

S.No	COLUMN	Quantity / Cum	Required	VOLUME (Cu.m)
918 columns (each column of volume .11 cu.m)				100.98
1	Mason	0.92	92.9016	Totally 43 labours/day
2	Helper	7.53	760.3794	
3	Mason/day		4.64508	
4	Helper/day		38.01897	

S.No	COPING BEAM	Quantity / Cum	Required	VOLUME (Cu.m)
2294 running meters of width .37m and height .1m				85
1	Mason	0.06	5.1	Totally 12 labours/day
2	Helper	0.78	66.3	
3	Mason/day		0.85	
4	Helper/day		11.05	

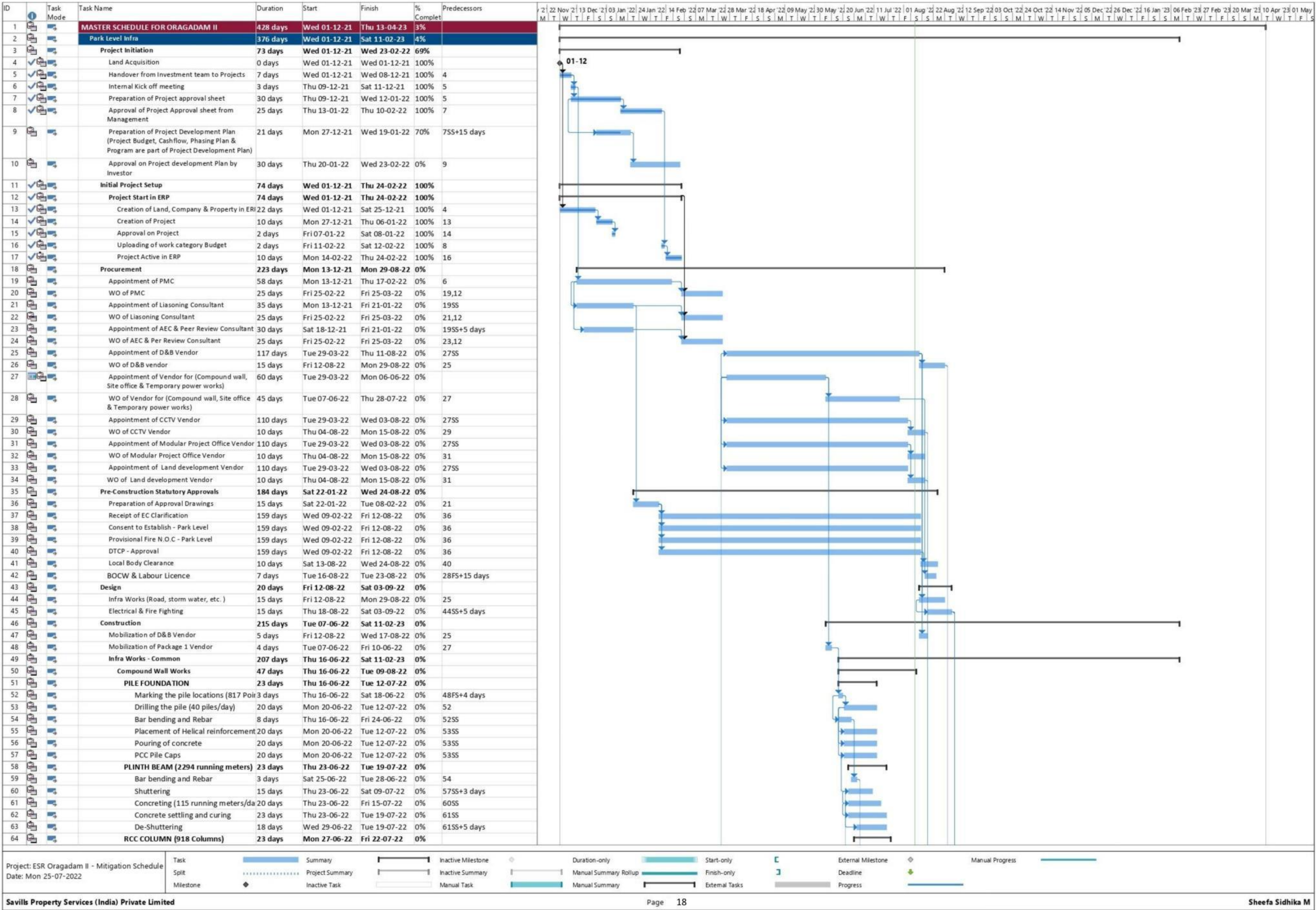
S.No	BLOCK WALL	Quantity / Cum	Required	VOLUME (Cu.m)
2294 running meters of width .15m and height 1.8m				619
1	Mason	0.36	222.84	Totally 70 labours/day
2	Helper	1.37	848.03	
3	Mason/day		14.856	
4	Helper/day		56.53533333	

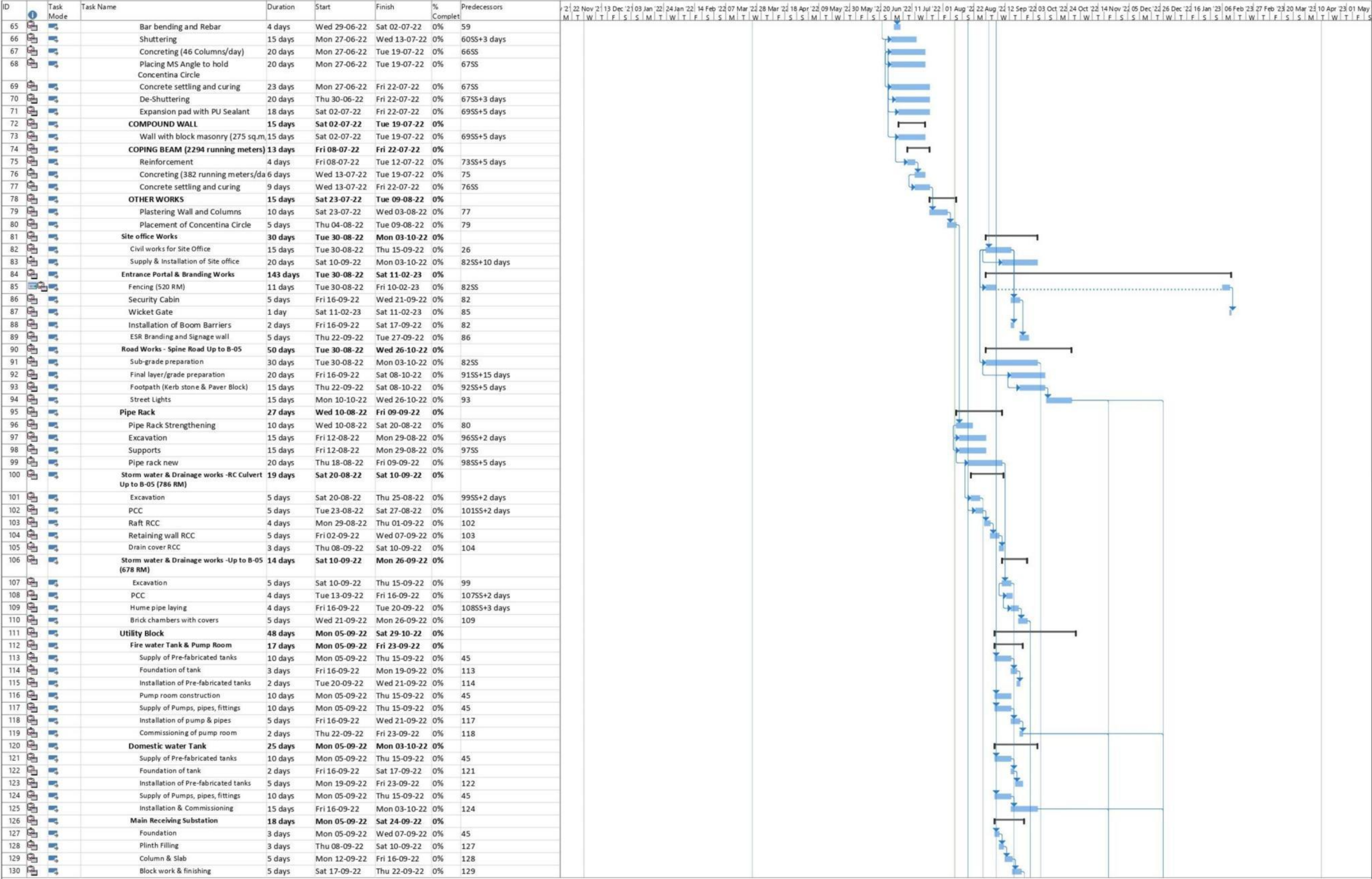
COST	COST/DAY	TOTAL/DAY	TOTAL
800	1600	26080	521600
720	24480		

COST	COST/DAY	TOTAL/DAY	TOTAL
800	4000	31360	627200
720	27360		

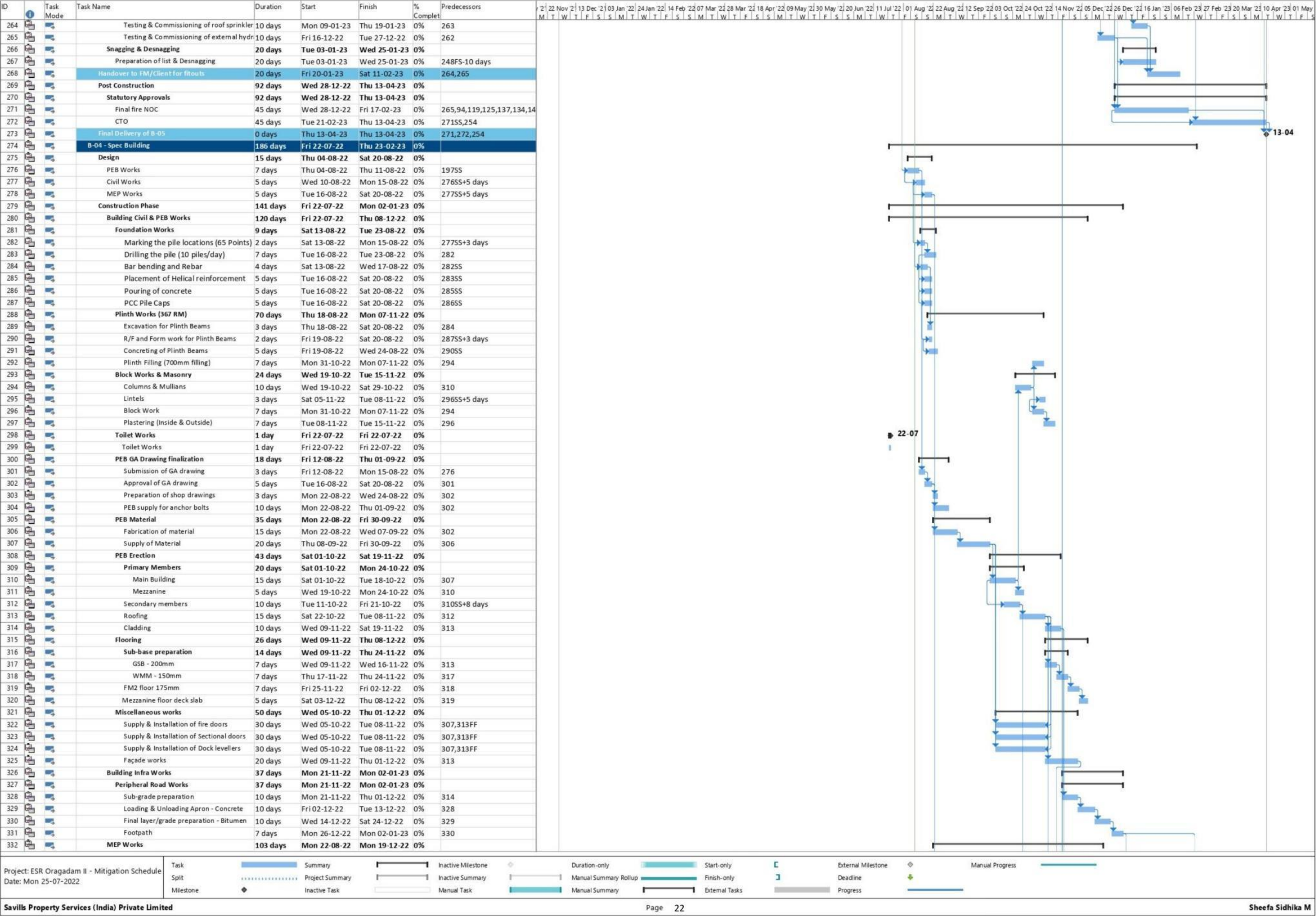
COST	COST/DAY	TOTAL/DAY	TOTAL
800	800	8720	52320
720	7920		

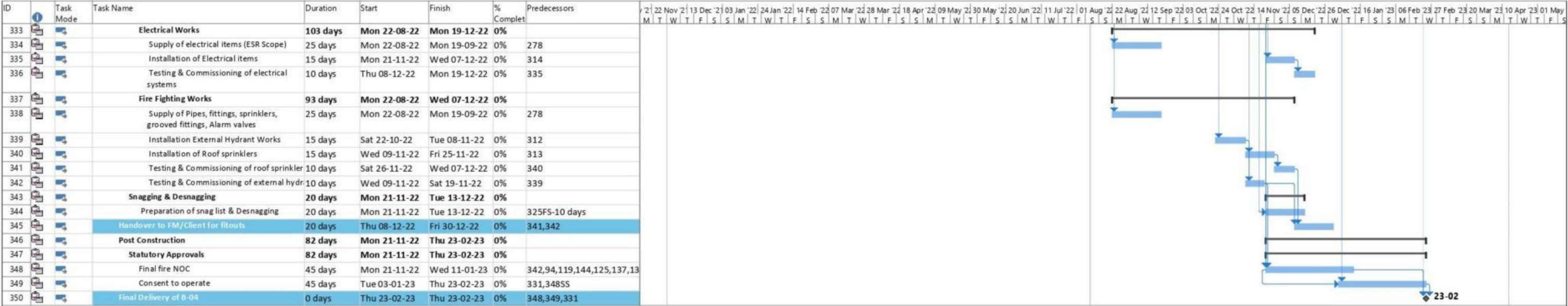
COST	COST/DAY	TOTAL/DAY	TOTAL
800	12000	52320	784800
720	40320		





ID	Task Mode	Task Name	Duration	Start	Finish	% Complet	Predecessors	21 Nov '21	22 Nov '21	13 Dec '21	03 Jan '22	24 Jan '22	14 Feb '22	07 Mar '22	28 Mar '22	18 Apr '22	09 May '21	30 May '21	20 Jun '22	11 Jul '22	01 Aug '21	22 Aug '21	12 Sep '22	03 Oct '22	24 Oct '22	14 Nov '22	05 Dec '22	26 Dec '22	16 Jan '23	06 Feb '23	27 Feb '23	20 Mar '23	10 Apr '23	01 May
131		Receipt of permanent power	2 days	Fri 23-09-22	Sat 24-09-22	0%	130																											
132		RMG Yard	20 days	Tue 20-09-22	Wed 12-10-22	0%																												
133		Foundation	5 days	Tue 20-09-22	Sat 24-09-22	0%	140																											
134		Installation & Commissioning	15 days	Mon 26-09-22	Wed 12-10-22	0%	133																											
135		DG Yard	35 days	Tue 20-09-22	Sat 29-10-22	0%																												
136		Foundation & Walls	15 days	Tue 20-09-22	Thu 06-10-22	0%	133SS																											
137		Installation & Commissioning	20 days	Fri 07-10-22	Sat 29-10-22	0%	136																											
138		Infra Works - Phase I (B-05 & B-04)	66 days	Tue 16-08-22	Mon 31-10-22	0%																												
139		Site Grading	30 days	Tue 16-08-22	Mon 19-09-22	0%																												
140		Filling of Soil	30 days	Tue 16-08-22	Mon 19-09-22	0%	34																											
141		STP Works (10 KLD)	25 days	Mon 05-09-22	Mon 03-10-22	0%																												
142		Civil Works for STP	15 days	Mon 05-09-22	Wed 21-09-22	0%	45																											
143		Supply of STP Equipment's	15 days	Mon 05-09-22	Wed 21-09-22	0%	45																											
144		Installation & Commissioning	10 days	Thu 22-09-22	Mon 03-10-22	0%	142																											
145		CCTV Works	20 days	Tue 16-08-22	Wed 07-09-22	0%																												
146		Supply of Cameras	10 days	Tue 16-08-22	Fri 26-08-22	0%	30																											
147		Installation & T&C of the cameras	10 days	Sat 27-08-22	Wed 07-09-22	0%	146																											
148		Landscaping (B-04 & B-05)	30 days	Tue 27-09-22	Mon 31-10-22	0%																												
149		Hardscape	15 days	Tue 27-09-22	Thu 13-10-22	0%	110																											
150		Softscape	15 days	Fri 14-10-22	Mon 31-10-22	0%	149																											
151		Signage Works	20 days	Tue 27-09-22	Wed 19-10-22	0%																												
152		Supply of Signages	10 days	Tue 27-09-22	Fri 07-10-22	0%	110																											
153		Installation of Signages	10 days	Sat 08-10-22	Wed 19-10-22	0%	152																											
154		Infra Works - Phase II (B-01, B-02 & B-03)	66 days	Fri 26-08-22	Thu 10-11-22	0%																												
155		Site Grading	30 days	Tue 20-09-22	Mon 24-10-22	0%																												
156		Filling of Soil	30 days	Tue 20-09-22	Mon 24-10-22	0%	140																											
157		Road Works - B-02 Up to B-05	33 days	Tue 04-10-22	Thu 10-11-22	0%																												
158		Sub-grade preparation	25 days	Tue 04-10-22	Tue 01-11-22	0%	91																											
159		Final layer/grade preparation	15 days	Sat 15-10-22	Tue 01-11-22	0%	158SS+10 days																											
160		Footpath (Kerb stone & Paver Block)	10 days	Wed 19-10-22	Sat 29-10-22	0%	159SS+3 days																											
161		Street Lights	10 days	Mon 31-10-22	Thu 10-11-22	0%	160																											
162		Storm water & Drainage works -RC Culvert Up to B-05 (329 RM)	15 days	Fri 26-08-22	Mon 12-09-22	0%																												
163		Excavation	4 days	Fri 26-08-22	Tue 30-08-22	0%	101																											
164		PCC	3 days	Mon 29-08-22	Wed 31-08-22	0%	163SS+2 days																											
165		Raft RCC	3 days	Thu 01-09-22	Sat 03-09-22	0%	164																											
166		Retaining wall RCC	4 days	Mon 05-09-22	Thu 08-09-22	0%	165																											
167		Drain cover RCC	3 days	Fri 09-09-22	Mon 12-09-22	0%	166																											
168		Storm water & drainage works - from B-02 Up to B-05 (678 RM)	14 days	Fri 16-09-22	Sat 01-10-22	0%																												
169		Excavation	5 days	Fri 16-09-22	Wed 21-09-22	0%	107																											
170		PCC	4 days	Mon 19-09-22	Thu 22-09-22	0%	169SS+2 days																											
171		Hume pipe laying	4 days	Thu 22-09-22	Mon 26-09-22	0%	170SS+3 days																											
172		Brick chambers with covers	5 days	Tue 27-09-22	Sat 01-10-22	0%	171																											
173		Signage Works	20 days	Tue 27-09-22	Wed 19-10-22	0%																												
174		Supply of Signages	10 days	Tue 27-09-22	Fri 07-10-22	0%	152SS																											
175		Installation of Signages	10 days	Sat 08-10-22	Wed 19-10-22	0%	174																											
176		Infra Works - Phase III (B-06, B-07 & B-08)	70 days	Tue 20-09-22	Fri 09-12-22	0%																												
177		Site Grading	30 days	Tue 20-09-22	Mon 24-10-22	0%																												
178		Filling of Soil	30 days	Tue 20-09-22	Mon 24-10-22	0%	140																											
179		Road Works - Spine Road from B-05 Up to B-08	33 days	Wed 02-11-22	Fri 09-12-22	0%																												
180		Sub-grade preparation	25 days	Wed 02-11-22	Wed 30-11-22	0%	158																											
181		Final layer/grade preparation	15 days	Mon 14-11-22	Wed 30-11-22	0%	180SS+10 days																											
182		Footpath (Kerb stone & Paver Block)	10 days	Thu 17-11-22	Mon 28-11-22	0%	181SS+3 days																											
183		Street Lights	10 days	Tue 29-11-22	Fri 09-12-22	0%	182																											
184		Storm water & drainage works - from B-05 Up to B-08 (678 RM)	14 days	Thu 22-09-22	Fri 07-10-22	0%																												
185		Excavation	5 days	Thu 22-09-22	Tue 27-09-22	0%	169																											
186		PCC	4 days	Sat 24-09-22	Wed 28-09-22	0%	185SS+2 days																											
187		Hume pipe laying	4 days	Wed 28-09-22	Sat 01-10-22	0%	186SS+3 days																											
188		Brick chambers with covers	5 days	Mon 03-10-22	Fri 07-10-22	0%	187																											
189		Signage Works	20 days	Tue 27-09-22	Wed 19-10-22	0%																												
190		Supply of Signages	10 days	Tue 27-09-22	Fri 07-10-22	0%	152SS																											
191		Installation of Signages	10 days	Sat 08-10-22	Wed 19-10-22	0%	190																											
192		Post Construction	20 days	Thu 13-10-22	Fri 04-11-22	0%																												
193		Permanent Power connection - CEIG	20 days	Thu 13-10-22	Fri 04-11-22	0%	134																											
194		B-05 - Spec Building	327 days	Tue 29-03-22	Thu 13-04-23	0%																												
195		Procurement	120 days	Tue 29-03-22	Mon 15-08-22	0%																												





MITIGATION PLAN

MILESTONE	M1 Schedule		Mitigation Schedule		End Date Difference	REMARKS	
	Start Date	End Date	Start Date	End Date			
Park Level Infra	01-Dec-21	23-Apr-24	01-Dec-21	23-Apr-24			
Project Initiation	01-Dec-21	11-Mar-22	01-Dec-21	23-Feb-22	16	Completed	
Project start in ERP	01-Dec-21	14-Mar-22	01-Dec-21	24-Feb-22	18	Completed	
Procurement	15-Dec-21	10-Jun-22	13-Dec-21	29-Aug-22	-80	PMC - Completed Liasoning Consultant - Completed AEC - Completed	Compound Wall CCTV Vendor D&B (including Site office work) Land development Vendor PEB??
Pre-Construction Statutory Approvals	02-Feb-22	31-May-22	22-Jan-22	24-Aug-22	-85	EC CTE Fire NOC	DTCP Local body clearance Labour License
Design	18-Apr-22	01-May-22	12-Aug-22	03-Sep-22	-125	Conceptual design completed	
Construction	01-Mar-22	01-Apr-23	21-Apr-22	09-Dec-22	113	AS considered only for	
Compound wall Construction	01-Apr-22	20-Oct-22	16-Jun-22	09-Aug-22	72	Delayed due to procurement of compound Wall Vendor	
Site Office establishment	08-Apr-22	11-Nov-22	30-Aug-22	03-Oct-22	39	Delayed due to procurement of compound Wall Vendor	
Other Infra (Road, Drains, Piperack)	27-Jun-22	19-Aug-22	30-Aug-22	26-Oct-22	-68	Delayed due to procurement of D&B Vendor	
Utility block	30-May-22	14-Oct-22	21-Apr-22	29-Oct-22	-15	Delayed due to procurement of D&B Vendor	
B-04 & B-05 Infra works	25-Apr-22	28-Mar-23	21-Apr-22	31-Oct-22	148	Since only considered infra works for B-04&B-05	
Post Construction	17-Oct-22	25-Nov-22	13-Oct-22	04-Nov-22	21	As the entire process is mitigated it can get closed earlier than expected	
B-05 Spec Building	15-Apr-22	06-Mar-23	29-Mar-22	13-Apr-23	-38	Delayed due to the Liasoning delay in approvals like DTCP, CTE to proceed. Procurement to be completed by 20th May'22 but to be completed in 15th Aug'22. Mitigating these delay by increasing the manpower and the resources to reduce the delay in the expected delivery. The building handover is delayed by a month from 6th Mar'23 to 4th Apr'23.	
Procurement	15-Apr-22	20-May-22	29-Mar-22	15-Aug-22	-87		
Design	18-Apr-22	17-Jun-22	16-Aug-22	13-Sep-22	-88		
Construction Phase	09-May-22	07-Feb-23	22-Aug-22	20-Feb-23	-13		
Building & PEB Works	09-May-22	07-Feb-22	22-Aug-22	02-Feb-23	-360		
Flooring	28-Sep-22	27-Jan-22	22-Dec-22	02-Feb-23	-371		
Building Infra Works	05-Oct-22	07-Feb-23	09-Jan-23	20-Feb-23	-13		
MEP Works	20-Jun-22	17-Jan-23	14-Sep-22	31-Jan-23	-14		
Snagging & Desnagging	20-Dec-22	16-Jan-23	03-Jan-23	25-Jan-23	-9		
Handover to Client for fitouts	03-Jan-23	30-Jan-23	20-Jan-23	11-Feb-23	-12		
Post Construction	03-Jan-23	06-Mar-23	28-Dec-22	13-Apr-23	-38		
Final Delivery	06-Mar-23	06-Mar-23	13-Apr-23	13-Apr-23	-38		
B-04 Spec Building	15-Apr-22	20-Apr-23	29-Mar-22	10-Feb-23	69	Delayed due to the Liasoning delay in approvals like DTCP, CTE by 85 days from 31st May'22 to 24th Aug'22. Procurement to be completed by 20th May'22 but to be completed in 15th Aug'22. There is delay in procurement and design phase by almost 3 months. Hence, mitigating these delay by scheduling the work simultaneously with B-05 so as to meet the deadline for the delivery of the project. The building handover is scheduled to 10th Feb'23 from 20th Apr'23.	
Procurement	15-May-22	20-May-22	29-Mar-22	15-Aug-22	-87		
Design	23-May-22	22-Jul-22	04-Aug-22	20-Aug-22	-29		
Construction Phase	23-May-22	24-Feb-23	22-Aug-22	02-Jan-23	53		
Building & PEB Works	06-Jun-22	17-Feb-23	22-Aug-22	08-Dec-22	71		
Flooring	10-Oct-22	13-Jan-23	09-Nov-22	08-Dec-22	36		
Building Infra Works	10-Oct-22	24-Feb-23	21-Nov-22	02-Jan-23	53		
MEP Works	23-May-22	24-Feb-23	22-Aug-22	19-Dec-22	67		
Snagging & Desnagging	27-Jan-23	23-Feb-23	21-Nov-22	13-Dec-22	72		
Handover to Client for fitouts	24-Feb-23	23-Mar-23	08-Dec-22	30-Dec-22	83		
Post Construction	17-Feb-23	20-Apr-23	21-Nov-22	23-Feb-23	56		
Final Delivery	20-Apr-23	20-Apr-23	23-Feb-23	23-Feb-23	56		

MANPOWER REQUIRED

COMPOUND WALL CONSTRUCTION

S.No	PLINTH	Quantity / Cum	Required	VOLUME (Cu.m)
2294	running meters of width .6m and height .3m			413
1	Mason	0.1	41.3	
2	Helper	1.63	673.19	
3	Mason/day		2.065	
4	Helper/day		33.6595	Totally 36 labours/day

S.No	COLUMN	Quantity / Cum	Required	VOLUME (Cu.m)
918	columns (each column of volume .11 cu.m)			100.98
1	Mason	0.92	92.9016	
2	Helper	7.53	760.3794	
3	Mason/day		4.64508	
4	Helper/day		38.01897	Totally 43 labours/day

S.No	COPING BEAM	Quantity / Cum	Required	VOLUME (Cu.m)
2294	running meters of width .37m and height .1m			85
1	Mason	0.06	5.1	
2	Helper	0.78	66.3	
3	Mason/day		0.85	
4	Helper/day		11.05	Totally 12 labours/day

S.No	BLOCK WALL	Quantity / Cum	Required	VOLUME (Cu.m)
2294	running meters of width .15m and height 1.8m			619
1	Mason	0.36	222.84	
2	Helper	1.37	848.03	
3	Mason/day		14.856	
4	Helper/day		56.53533333	Totally 70 labours/day

S.No	RC Culvert	Quantity / Cum	Required	VOLUME (Cu.m)
1115	running meters of width 1.07m and height 1.1m			1313
1	Mason	0.5	656.5	
2	Helper	1.3	1706.9	
3	Mason/day		19.30882353	
4	Helper/day		50.20294118	Totally 69 labours/day

S.No	DRAIN	Quantity / Cum	Required	VOLUME (Cu.m)
2034	running meters of width 1.07m and height 1.1m			2395
1	Mason	0.5	1197.5	
2	Helper	1.3	3113.5	
3	Mason/day		28.51190476	
4	Helper/day		74.13095238	Totally 102 labours/day

B-04 CONSTRUCTION

S.No	PLINTH	Quantity / Cum	Required	VOLUME (Cu.m)
367	running meters of width .6m and height .23m			51
1	Mason	0.1	5.1	
2	Helper	1.63	83.13	
3	Mason/day		0.51	
4	Helper/day		8.313	Totally 9 labours/day

S.No	LINTEL	Quantity / Cum	Required	VOLUME (Cu.m)
367	running meters of width .23m and height .15m			13
1	Mason	0.1	1.3	
2	Helper	1.63	21.19	
3	Mason/day		0.4333333333	
4	Helper/day		7.0633333333	Totally 8 labours/day

S.No	BLOCK WALL	Quantity / Cum	Required	VOLUME (Cu.m)
367	running meters of width .23m and height 3m			253
1	Mason	0.36	91.08	
2	Helper	1.37	346.61	
3	Mason/day		6.505714286	
4	Helper/day		24.75785714	Totally 30 labours/day

S.No	PEB WORKS	Required Quantity / bay	Total
3	bays with 26,17 and 19 columns		65
1	Fitter	2	Totally 19 labours/bay A bay takes 3 days initially and later gets completed by 2 days
2	Helper	2	
3	Assembling	12	
4	Hydra Operator	2	
5	Boom Operator	1	

COMMON INFRA CONSTRUCTION

S.No	ROAD WORKS	Quantity / Cum	Required	VOLUME (Cu.m)
2877	running meters of 7.2-15m wide road			34,524
1	Mason	0.12	4142.88	
2	Helper	0.07	2416.68	
3	Mason/day		35.71448276	
4	Helper/day		20.83344828	Totally 55 labours/day

S.No	UTILITY BLOCK	Quantity / Cum	Required	VOLUME (Cu.m)
30 x 22 x 3	utility block			1,980
1	Mason	0.1	198	
2	Helper	1.63	3227.4	
3	Mason/day		4.125	
4	Helper/day		67.2375	Totally 70 labours/day

B-05 CONSTRUCTION

S.No	PLINTH	Quantity / Cum	Required	VOLUME (Cu.m)
552	running meters of width .6m and height .23m			77
1	Mason	0.1	7.7	
2	Helper	1.63	125.51	
3	Mason/day		0.5133333333	
4	Helper/day		8.3673333333	Totally 9 labours/day

S.No	LINTEL	Quantity / Cum	Required	VOLUME (Cu.m)
552	running meters of width .23m and height .15m			19
1	Mason	0.1	1.9	
2	Helper	1.63	30.97	
3	Mason/day		0.19	
4	Helper/day		3.097	Totally 4 labours/day

S.No	BLOCK WALL	Quantity / Cum	Required	VOLUME (Cu.m)
552	running meters of width .23m and height 3m			381
1	Mason	0.36	137.16	
2	Helper	1.37	521.97	
3	Mason/day		5.4864	
4	Helper/day		20.8788	Totally 26 labours/day

S.No	PEB WORKS	Required Quantity / bay	Total
6	bays with 24,16 and 18 columns		106
1	Fitter	2	Totally 19 labours/bay A bay takes 3 days initially and later gets completed by 2 days
2	Helper	2	
3	Assembling	12	
4	Hydra Operator	2	
5	Boom Operator	1	

S.No	FENCING	Quantity / Cum	Required	VOLUME (Cu.m)
520	running meters of height 1.4m			520
1	Carpenter	0.25	130	
2	Mason	0.25	130	
3	Carpenter/day		11.818181818	
4	Mason/day		11.818181818	Totally 24 labours/day

VENDOR PRE-QUALIFICATION

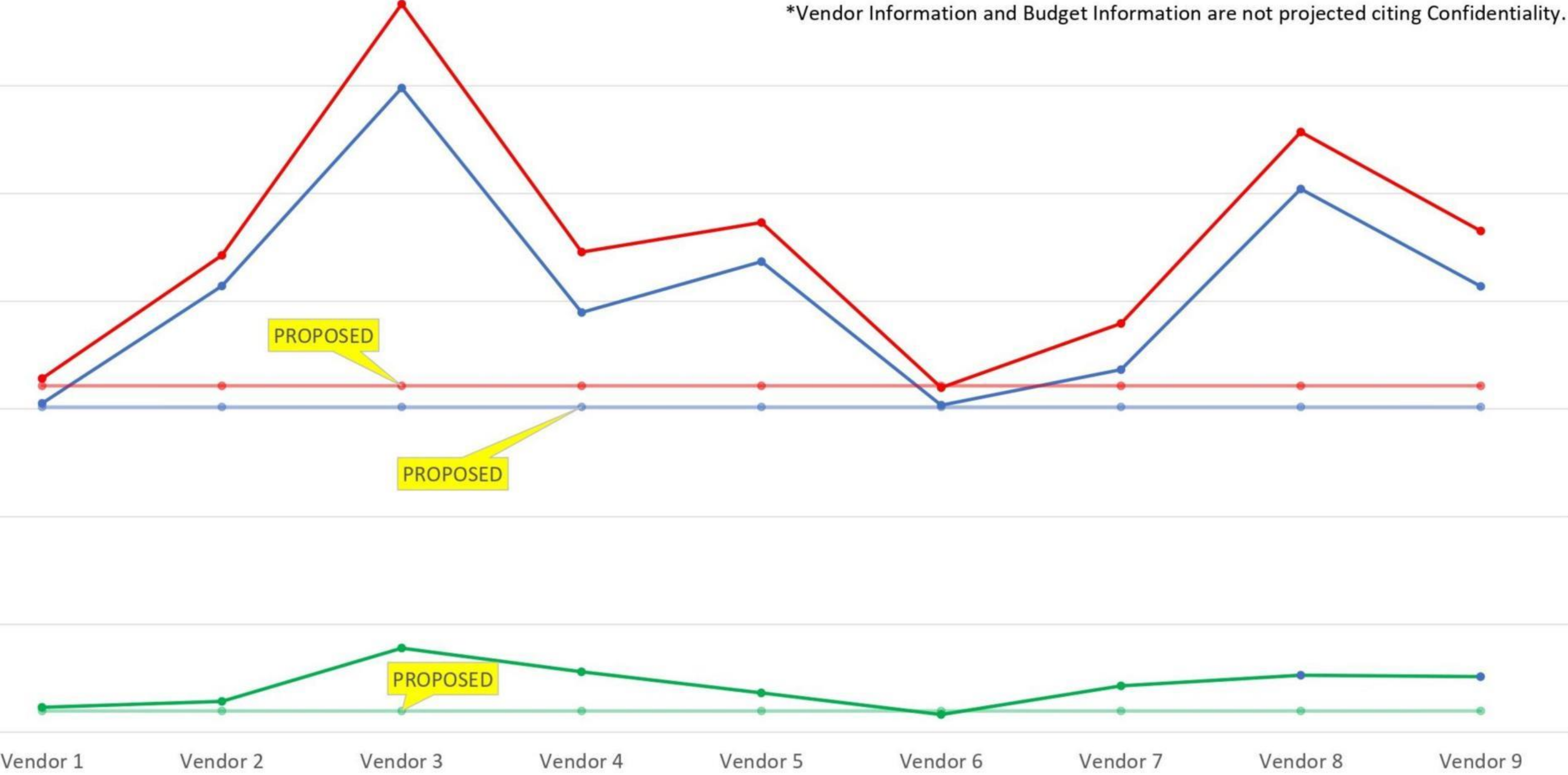
PEB PACKAGE
QUANTITIES PROPOSED VS VENDOR DESIGN
FOR B-04



PEB PACKAGE
TOTAL AMOUNT FOR PRIMARY MEMBERS OF B-04

Supply Rate by Vendor Proposed Supply Rate Erection Rate by Vendor Proposed Erection Rate Total Amount Proposed Budget

*Vendor Information and Budget Information are not projected citing Confidentiality.

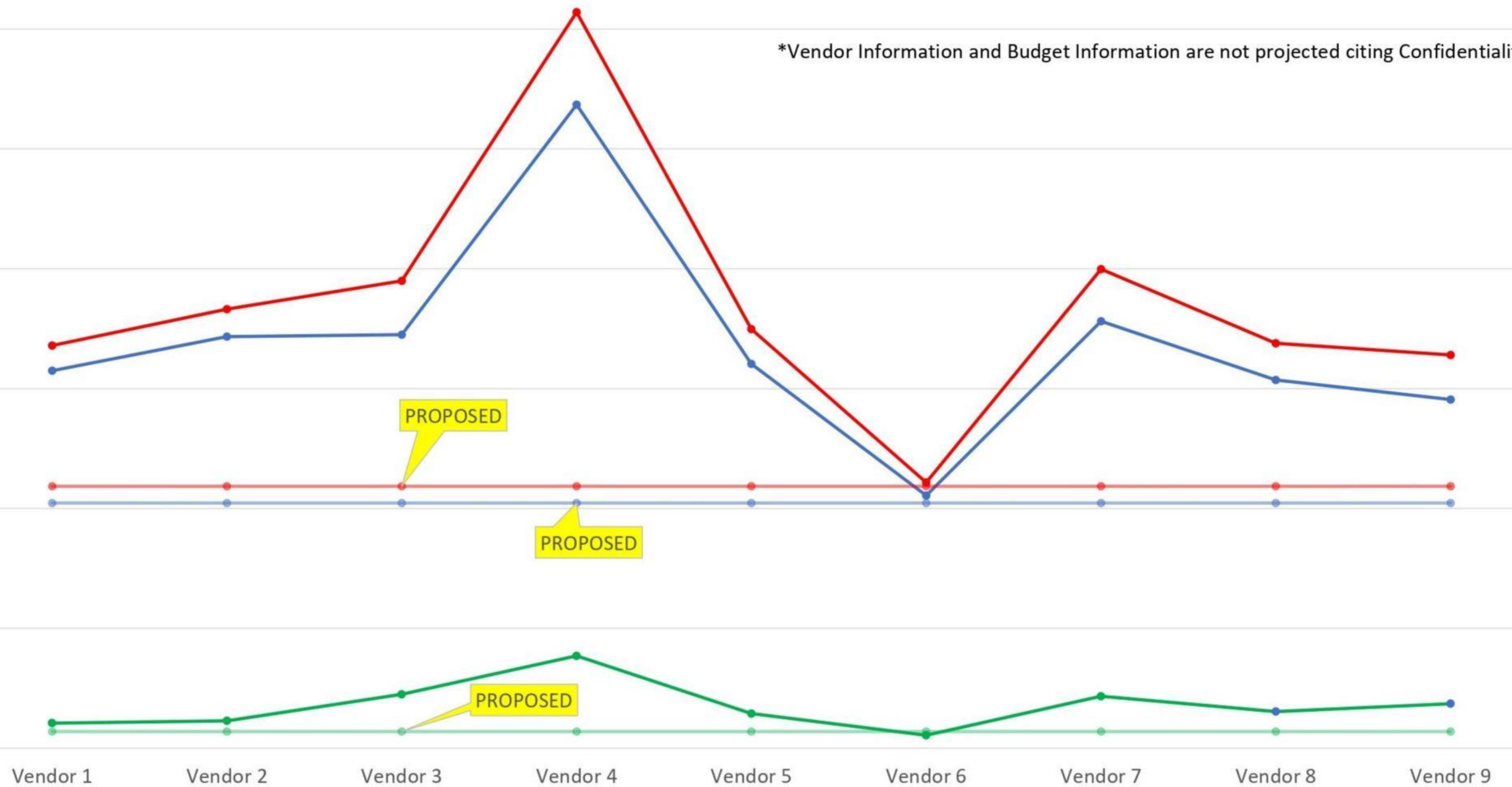


PEB PACKAGE

TOTAL AMOUNT FOR SECONDARY MEMBERS OF B-04

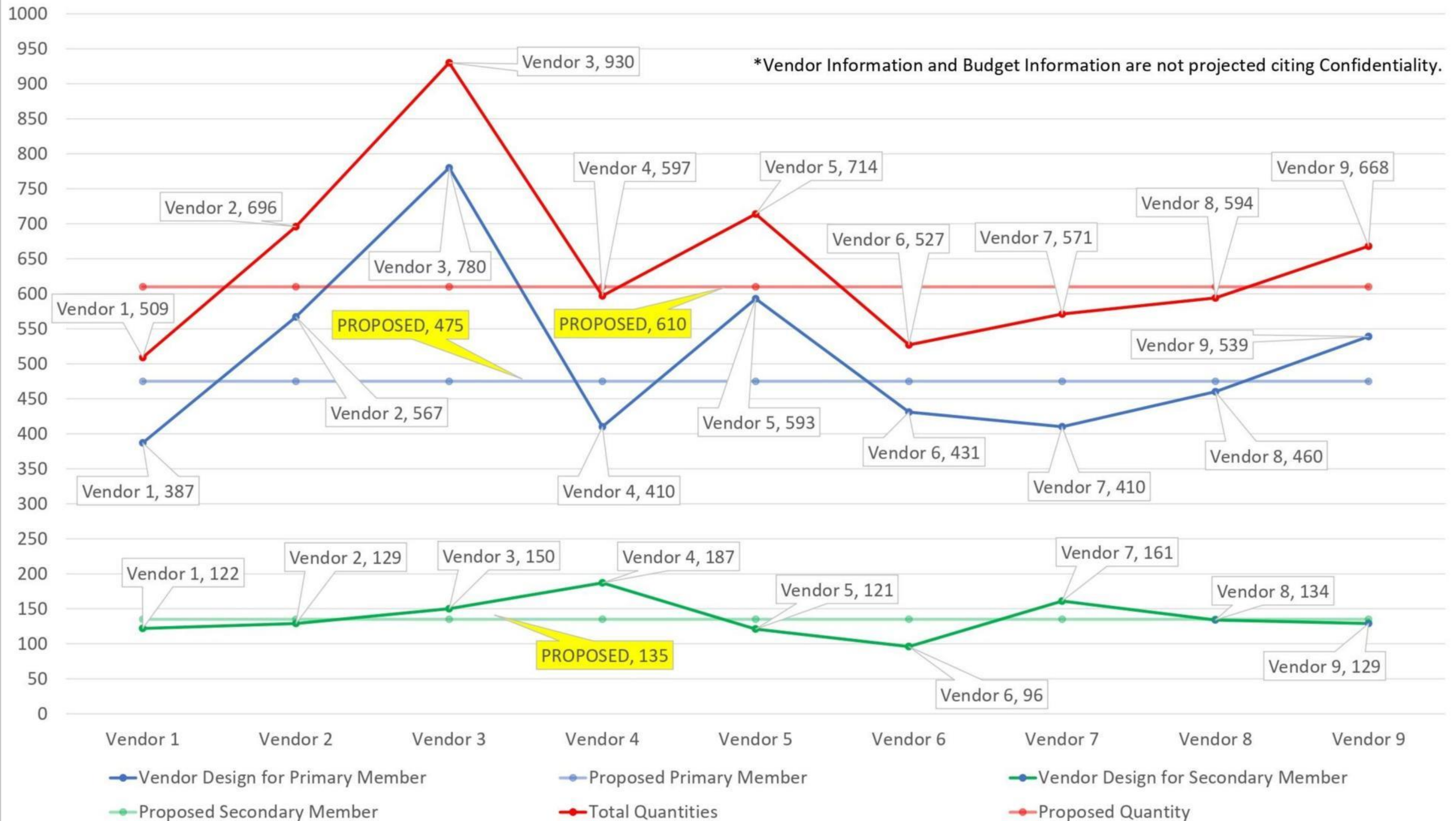
Supply Rate by Vendor
Proposed Supply Rate
Erection Rate by Vendor
Proposed Erection Rate
Total Amount
Proposed Budget

*Vendor Information and Budget Information are not projected citing Confidentiality.



PEB PACKAGE QUANTITIES PROPOSED VS VENDOR DESIGN FOR B-05

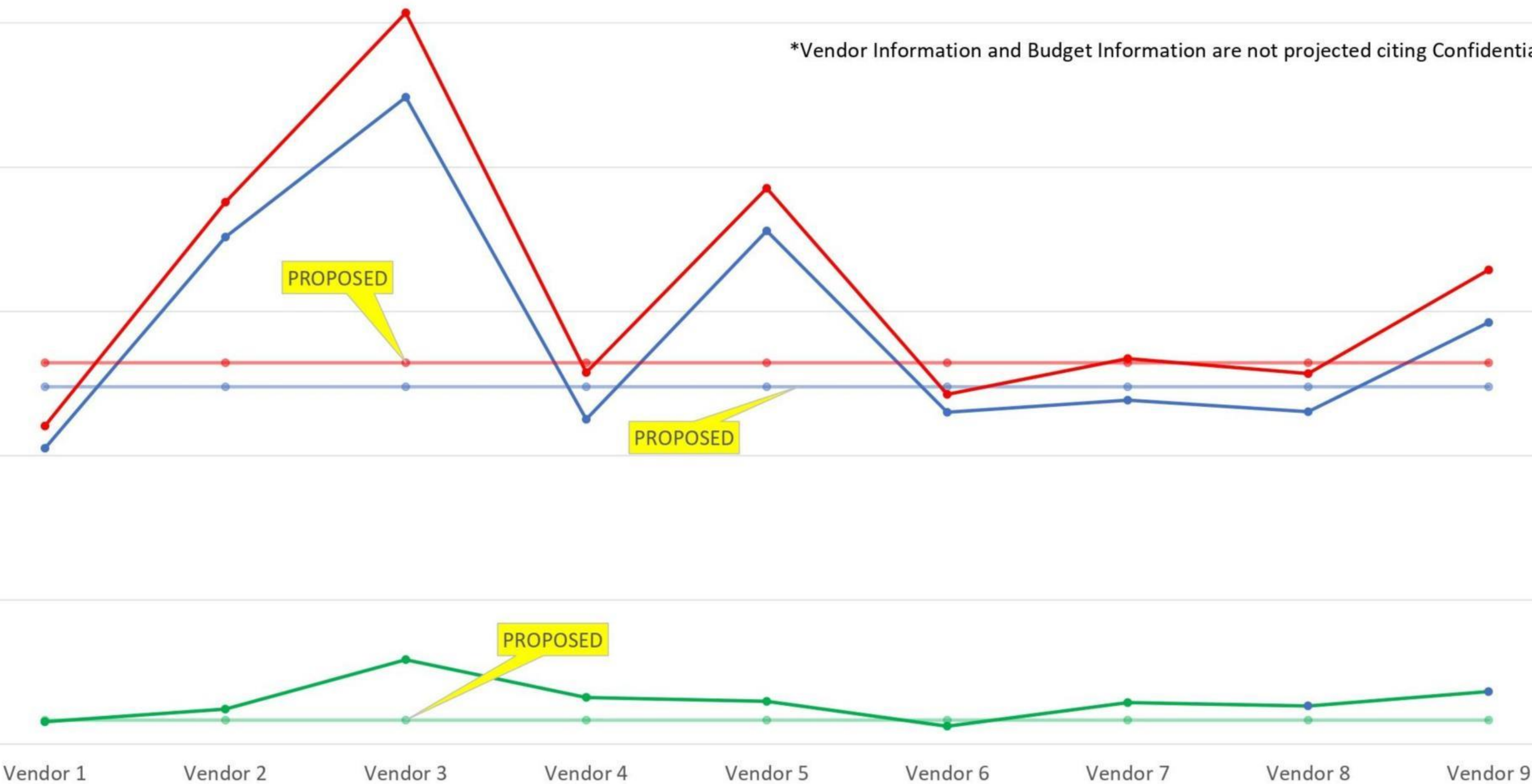
*Vendor Information and Budget Information are not projected citing Confidentiality.



PEB PACKAGE
TOTAL AMOUNT FOR PRIMARY MEMBERS OF B-05

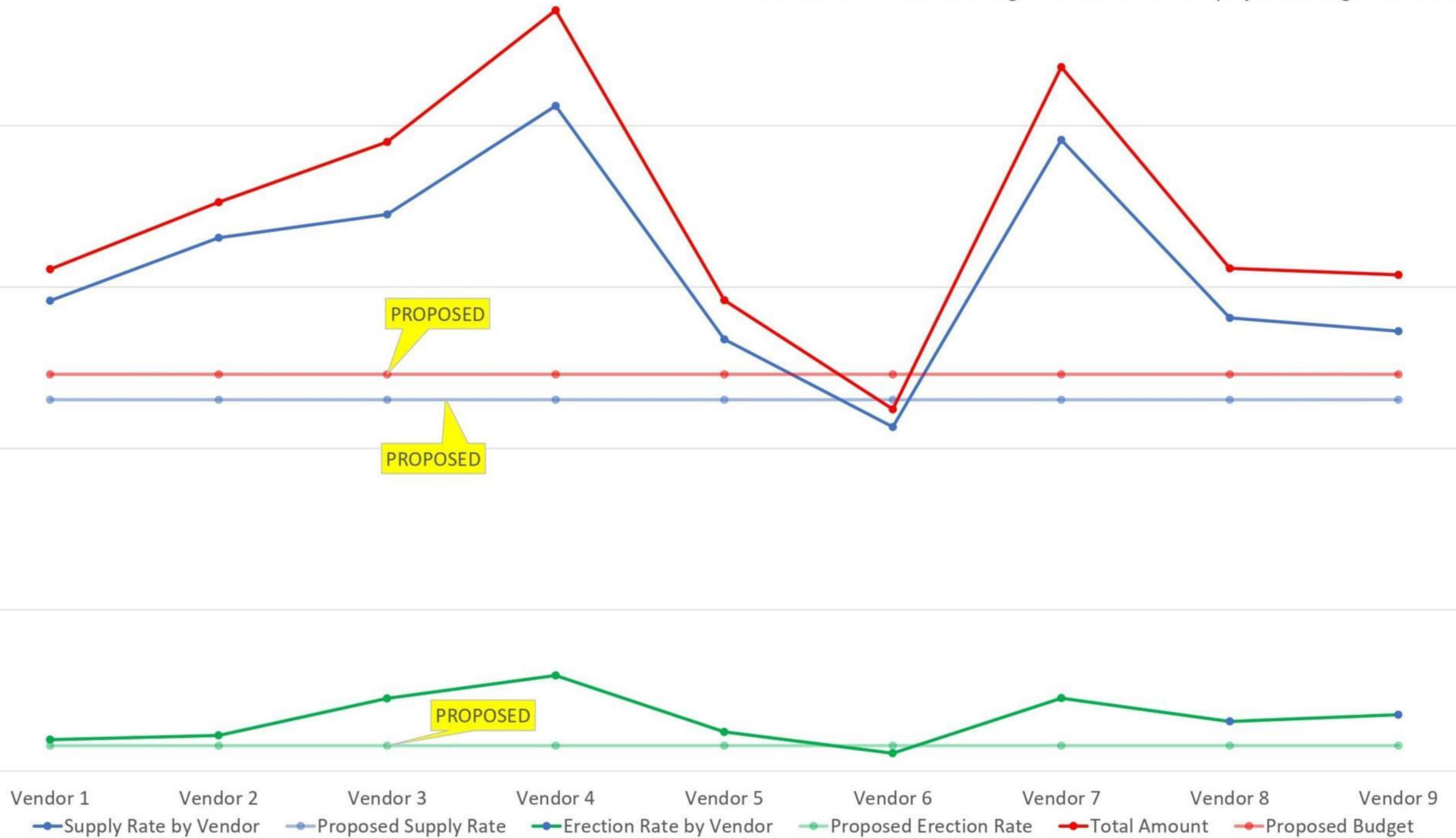
Supply Rate by Vendor Proposed Supply Rate Erection Rate by Vendor Proposed Erection Rate Total Amount Proposed Budget

*Vendor Information and Budget Information are not projected citing Confidentiality.



PEB PACKAGE TOTAL AMOUNT FOR SECONDARY MEMBERS OF B-05

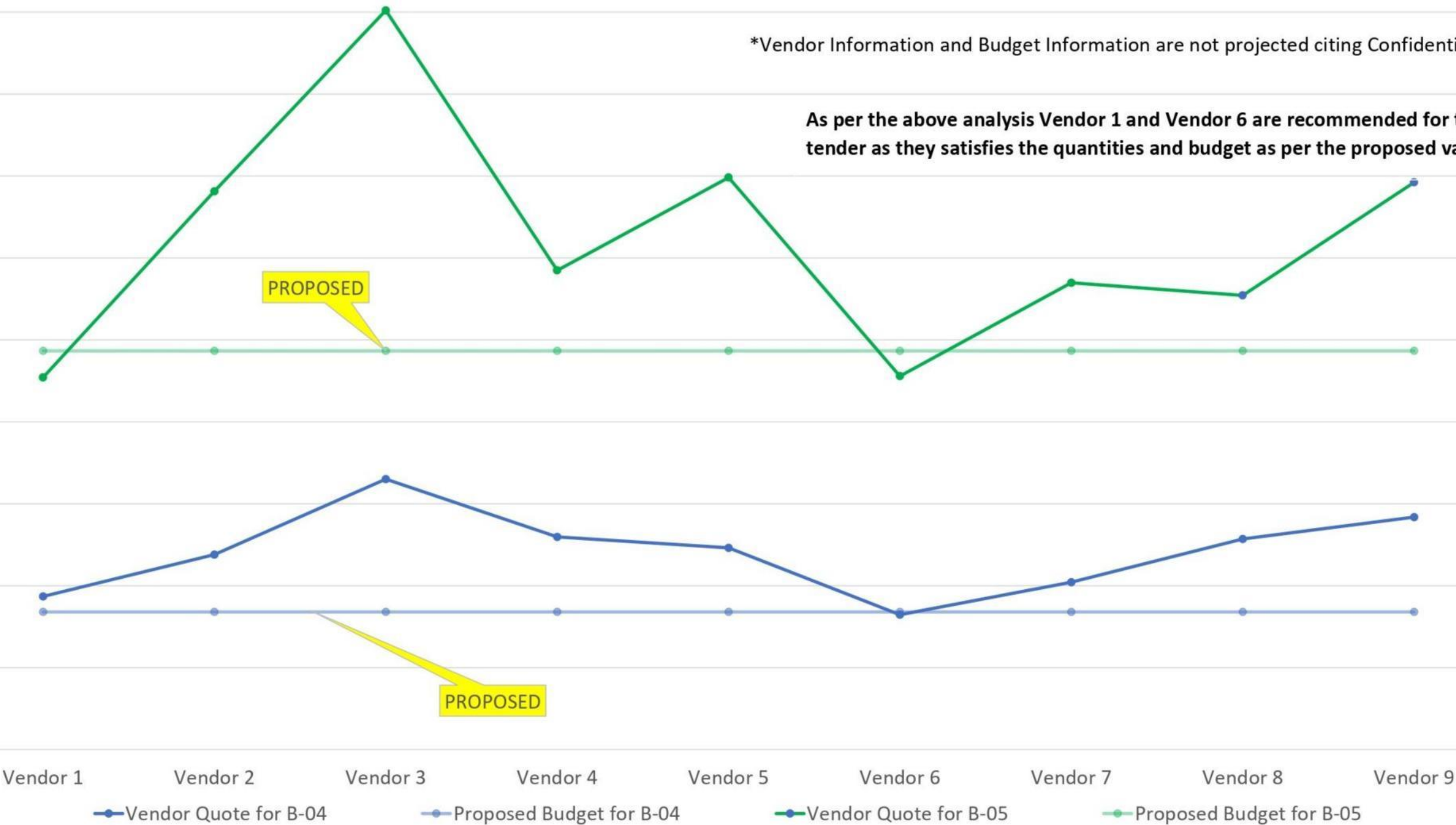
*Vendor Information and Budget Information are not projected citing Confidentiality.



PEB PACKAGE
PROPOSED BUDGET VS VENDOR QUOTES FOR B-04 & B-05

*Vendor Information and Budget Information are not projected citing Confidentiality.

As per the above analysis Vendor 1 and Vendor 6 are recommended for the tender as they satisfies the quantities and budget as per the proposed value.



VENDOR PRE-QUALIFICATION

**D&B PACKAGE
TOTAL PROJECT COST VS PROPOSED**

*Vendor Information and Budget Information are not projected citing Confidentiality.

PROPOSED

PROPOSED

As per the above analysis Vendor 1 and Vendor 3 are recommended for the tender as they nearly satisfies the quantities and budget as per the proposed value.

PROPOSED

PROPOSED



ESR-ORG II-Safety Observations

Sl.No	Observations	Reference Image	Corrective action	Remarks
1	Culvert of depth nearly 3 mts at the back side of the site office establishment in open condition. Workers' movements were observed near the culvert.		The area has to be hard barricaded and signages to be placed	
2	No first aider or first aid box has been kept at the site office.	No reference image	First aid kit with all the 26 required items to be kept at the site at various locations.	
3	No proper drainage system has been made for the flow of excess water from the drinking water tank.			
4	Without submitting the water test report, drinking water tanks has been established.	No reference image	Water test report to be submitted on monthly basis.	
5	No hospital tie-up with the nearest hospital for emergency purposes.	No reference image	Hospital tie-up to be made for emergency purpose.	
6	Toilets are not fixed and are kept on idle without a plumbing connection, making them unfit to use. It has been observed workers were urinating on the open premises.		Fix up the toilets on an immediate basis and ensure they are fit to use.	
7	The pile rigger's insurance is expired, and a 3rd party test certificate and operator license are unavailable.		The insurance must be renewed; the remaining documents must be shared immediately.	

8	No equipment inside the site has been inspected and tagged on regular		Each piece of equipment needs to be checked, inspected, and tagged regularly.	
9	Vehicle access inside the site has to be restricted only to the construction vehicle, apart from that no vehicles are allowed.		People should park their vehicles in a designated parking area.	
10	Fuel to the machinery at the site has been carried in an unsafe manner. MSDS to be submitted for all the diesel.	No reference image	Adhere to the MSDS and follow the SOP mentioned in that.	
11	Electrical cables with multiple joints were identified.		Use industrial sockets for any joints, wrapping them on tape is prohibited.	
12	DG without CEIG approval, no calibration certificate, no fire point, no double earthing, no emergency contact display, no electrician details display with photo, etc.,		Rectify all the concerns and submit the required documents for further review.	
13	A distribution box is covered with wooden frame, which is not acceptable. No fire precautions, rubber mat, earthing, etc.		Rectify all the highlighted concerns.	

14	Oil leakage and unwanted waste materials are littered around the DG.		The DG yard area has to be proper and proper packing is to be made. And keep a tray underneath during maintenance.	
15	ID cards are not issued to laborers.	• No reference image	Issue ID cards to all the workers within the 12hrs of induction.	
16	No Statutory documents (workmen compensation policy, CAR with 3 rd party liability) are available.	• No reference image	Please provide the documents ASAP.	
17	No fire point available at the site	• No reference image	Multiple fire points are to be ensured at various locations of the site.	
18	De-watering is not being carried out at regular intervals leading to the flooding of the site, due to the unavailability of required pumps at the site		Arrange sufficient quantum of pumps for dewatering.	
19	Housekeeping is not regularly carried out. Materials are scattered on several locations.		Deploy a team for housekeeping and carry out proper stacking and storing on regular intervals.	
20	Sharp edges of the marking rods may lead to any untoward injuries to the person walking near to them.	• No reference image	Provide re-bar caps or wrap them with caution tape for identification and alert.	

Adding to the above points, rectify the following

- No dedicated electrician at site, unskilled and inexperienced workers were operating the DBs, DG, cabling works, etc.,
- No first aid room, no induction room, no safety park, etc.,
- No signages
- Disinfection/sanitization of the site at regular intervals
- Sufficient fire extinguishers availability
- Training Calendar, PPE test certificate, water test report, etc.,
- Need adequate handwash/sanitizer at the site.
- Regular disinfection on hand tools, power tools, machinery, etc.,
- Display emergency contact, and project details along with HSE statistics, logistics plan, etc.,

DISCREPANCIES ON COMPLIANCE STATUS- ESR-ORAGADAM

<u>SLNO</u>	<u>Observation</u>	<u>Policy no., & Validity Date</u>	<u>Remarks</u>
1	BOCW & Labor license	Work under progress	
2	Workmen compensation policy	Available (L0211416 – AAB & L0211422 – Catabel)	
3	Contractors All Risk Policy	N/A	
4	Contract Labor Regulation Act policy	N/A	
5	ESIC Code, PF Code	N/A	

HSE Documents:

<u>SLNO</u>	<u>List of documents</u>		<u>July”2022</u>	<u>Remarks</u>
1	Authorized Electrician License		N/A	Dedicated electrician with a license to be deployed.
2	Water Test Report		N/A	To be submitted on monthly basis.
3	Hospital Tie Up letter		Available	
4	Authority letter for debris/Waste removal (Hazardous Waste included)		N/A	
5	Waste Removal tracker		N/A	
6	First Aider Certificate		N/A	
7	Calibration/3 rd Party test certificate for all lifting and machinery equipment		Available	
8	Test certificate for PPEs and all type of height work equipment		N/A	
9	SWMS		Available	
10	MSDS		N/A	
11	Project Team & Medical report		N/A	Submitted for June inducted. Awaiting for the persons inducted on July
12	Covid-19 Self declaration		N/A	
13	NCR		2 issue (2 closed)	
14	Vehicle Documents		Available	
15	TBT		Available	
16	Induction		Available	
17	CEIG/CEA Approval for DG		N/A	Total of 3 No's were being used at site.
18.1	All checklist	Fire extinguisher	N/A	
18.2		Electrical Equipment's	N/A	
18.3		Vehicle Inspection	Available	
18.4		Power Tools	Available	
18.5		PPE Inspection	N/A	
18.6		DG Inspection	Available	
18.7		Welding, Rebar & cutting M/C	Available	
19	PPE Issue record		Available	
20	Firefighting equipment status		Available	
21	Ambulance/Emergency Vehicle		N/A	
22	First Aid center		N/A	
23	Work Permits		Available	
24	Risk Assessment & HIRA		N/A	
25	License & Vehicle documents		Available	

26	Safety Plan, Emergency response plan, Evacuation plan, Illumination plan.		N/A	
27	Stretcher, oxygen tank stock, etc.,		N/A	
28	Induction room, safety park, rest area.		N/A	
29	Training Records		Available	
30	Training Calendar		N/A	
31	Signages		Available	
32	Observation Closure Sign-off		Available	

Registers:

Note: The registers are to be maintained and provided on monthly basis.

SL.NO.	Details	July"2022	Remarks
1	Plant and equipment register	Available	
2	Site Induction Register	Available	
3	Chemical Register	Not required	No chemicals being used.
4	Electrical register	N/A	
5	First Aid register	Available	No cases are registered.
6	Vehicle Register	Available	
7	Chemical register	N/A	No such goods are used at site

INTERNAL QUALITY AUDIT STATUS - ESR-ORAGADAM

SI.NO	List of documents	June"22	July"22	Remarks
1	Pile			
	• Pile Bore Log	Available	Available	
	• Pile Concrete Checklist	Available	Available	
	• Pile Reinforcement Checklist	Available	Not available	
	• BBS	Available	Available	
2	Pile Cap			
	• Formwork Checklist	Available	Available	
	• BBS Signed	Available	Available	
	• Reinforcement Checklist	Available	Available	
	• Pour Card	Available	Available	
	• Register for cubes marked	Available	Available	Not signed for the month of July
3	Plinth Beam			
	• PCC Checklist	Available	Available	
	• Section base – Compaction test	Not available	Not available	
	• Formwork Checklist	Available	Available	
	• BBS Signed	Available	Available	

	• Reinforcement Checklist	Available	Available	
	• Pour Card	Available	Available	
	• Register for cubes marked	Available	Available	
4	Columns			
	• Formwork Checklist	Available	Available	
	• BBS Signed	Not available	Not available	
	• Reinforcement Checklist	Not available	Not available	
	• Pour Card	Available	Available	
5	Block work			
	• Block work Checklist	Available	Available	
6	Sieve Analysis Report	Available	Not available	
7	Cube Register	Available	Available	
8	Slump Cone register	Not available		A separate register to be maintained

Test Reports:

SI.NO	Description	IMIR	June'22		July'22		Remarks
			3 rd party test	Inhouse Test	3 rd party test	Inhouse Test	
1	Steel	Available	Available	Not available	Available	Not available	
2	Block	Available	Available	Not available	Available	Not available	
3	M Sand	Available	Available	Not available	Available	Not available	
4	Cement	Available	Available	Not available	Available	Not available	

Quality Status:

SI.NO.	Description	Issued	Closed	Open	Remarks
1	Quality Observation	11	7	4	
2	Quality NCR	0	0	0	

Audit Score:

SI.NO.	Description	Excellent	Very Good	Good	Satisfactory	Unacceptable	Score	Remarks
		4	3	2	1	0		Weightage - 20
1	Materials							
	Cement	4						

	Steel	4						
	Block		3					
	M Sand			2				
	P sand		3					16
		3	2	1	0.5	0		Weightage - 12
2	Word Procedure							
	Document		2					
	Drawing		2					
	Site procedure		2					
	Quality Personal		2					8
		4	3	2	1	0		Weightage - 16
3	Workmanship							
	As per methodology	4						
	As Per specs.,		3					
	Material availability			2				
	Workmanship		3					
								12
		4	3	2	1	0		Weightage - 16
4	Execution							
	Piling		3					
	Concreting		3					
	Block work		3					
	Plastering							9
		4	3	2	1	0		Weightage - 16
5	Test Report			2				
	Inward material		3					
	3 rd party test							
	Calibration Test				1			
	On-site test					0		6
		2.5	2	1.5	1	0		Weightage - 20
6	Observation							
	Sub-Base section			1.5				
	Compaction					0		
	Shuttering		2					
	Bar-bending	2.5						
	Concrete work		2					
	Block work		2					
	Plastering					0		
	Housekeeping					0		
								10
7	TOTAL							
	Score of Audit							61

EHS STATUS OF 18-07-2022 TO 23-07-2022

Project Name	ESR-Logistics Park Pvt Ltd - Oragadam II, Chennai	Project Start Date	03-05-2022	Total Safe Manhours	11,709
S no	Parameters	PMC	Everest	To Project Cumulative	
1	No. of Safe Man-days worked	6	6	133	
2	Safe Man-hours worked till date	2,910	8,919	11,829	
3	No. of Reportable Accidents on project	Nil	Nil	Nil	
4	No. of Near Misses	N/A	Nil	Nil	
5	No. of Lost Work Day (LWD) cases	N/A	Nil	Nil	
6	No. of Safety Pep talks conducted	N/A	1	8	
7	Number of Safety Inductions	5	0	57	
8	Tool Box Meeting	N/A	3	31	
9	Audits completed	N/A	0	1	
10	Infraction Notice issued	N/A	N/A	N/A	
11	Job Safety Analysis / detail activity plan completed	Yes	Yes	Yes	
12	No. of Fire extinguishers available at site (all types) Total	N/A	1	1	
13	No. of Training sessions conducted	N/A	0	4	
14	Safety Permits Issued	N/A	3	41	
15	No. of Safety sign boards displayed at site	N/A	0	0	
16	Housekeeping practices (Excellent/ V Good/ Good/ Average/ Poor)	Excellent	V Good	V Good	
17	No. of times Equipment, Machinery and Tools inspected	N/A	1	31	
18	Physical condition of the PPE in usage (Good/ Average/ Poor)	Good	Good	Good	
19	License and vehicle documents available (if applicable)	N/A	Yes	Yes	
20	Percentage compliance on the usage of PPE by workers	100%	100%	100%	
21	Safety Engineer	Yes	Yes	Yes	
22	Unsafe Act Identified & Closed	N/A	Nil	51 (43 closed, 08 open)	
23	First Aid Kit	Yes	Yes	Yes	
24	JSA & Safety Plan	Yes	Yes	Yes	
25	Labour licence & related documents	N/A	N/A	N/A	
26	WCP & CAR policy	N/A	Not Available	Not Available	

EHS STATUS OF 25-07-2022 TO 30-07-2022

Project Name	ESR-Logistics Park Pvt Ltd - Oragadam II, Chennai	Project Start Date	03-05-2022	Total Safe Manhours	12,519
S no	Parameters	PMC	Everest	To Project Cumulative	
1	No. of Safe Man-days worked	6	6	140	
2	Safe Man-hours worked till date	3,150	9,369	12,519	
3	No. of Reportable Accidents on project	Nil	Nil	Nil	
4	No. of Near Misses	N/A	Nil	Nil	
5	No. of Lost Work Day (LWD) cases	N/A	Nil	Nil	
6	No. of Safety Pep talks conducted	N/A	1	8	
7	Number of Safety Inductions	5	13	70	
8	Tool Box Meeting	N/A	3	34	
9	Audits completed	N/A	0	1	
10	Infraction Notice issued	N/A	N/A	N/A	
11	Job Safety Analysis / detail activity plan completed	Yes	Yes	Yes	
12	No. of Fire extinguishers available at site (all types) Total	N/A	1	1	
13	No. of Training sessions conducted	N/A	1	4	
14	Safety Permits Issued	N/A	3	41	
15	No. of Safety sign boards displayed at site	N/A	0	0	
16	Housekeeping practices (Excellent/ V Good/ Good/ Average/ Poor)	Excellent	V Good	V Good	
17	No. of times Equipment, Machinery and Tools inspected	N/A	1	31	
18	Physical condition of the PPE in usage (Good/ Average/ Poor)	Good	Good	Good	
19	License and vehicle documents available (if applicable)	N/A	Yes	Yes	
20	Percentage compliance on the usage of PPE by workers	100%	100%	100%	
21	Safety Engineer	Yes	Yes	Yes	
22	Unsafe Act Identified & Closed	N/A	Nil	51 (47 closed, 04 open)	
23	First Aid Kit	Yes	Yes	Yes	
24	JSA & Safety Plan	Yes	Yes	Yes	
25	Labour licence & related documents	N/A	N/A	N/A	
26	WCP & CAR policy	N/A	Not Available	Not Available	

8 CRITICAL OVERVIEW

- Savills expertise in handling projects from asset to cost management and helped in in-depth research on the same. During this training period I gained knowledge on management of the project from the pre execution phase.
- The project was in procurement phase, and it helped me gain knowledge in vendor pre-qualification, vendor selection, scheduling and mitigation plan.
- Also learned the techniques to handle or mitigate the delay and worked on tracking of the progress in a project.
- Understood the standard operating procedure of the firm which helped me in learning the processes in a project from pre-execution to the handover of the project.
- Analysed the tender quotes, BoQs, DBR and understood each line of item elaborately.
- This one month training helped me get an overall outline of project management role in a project from procurement to handover of the project.