

# I1704 – Oh My God, Noida

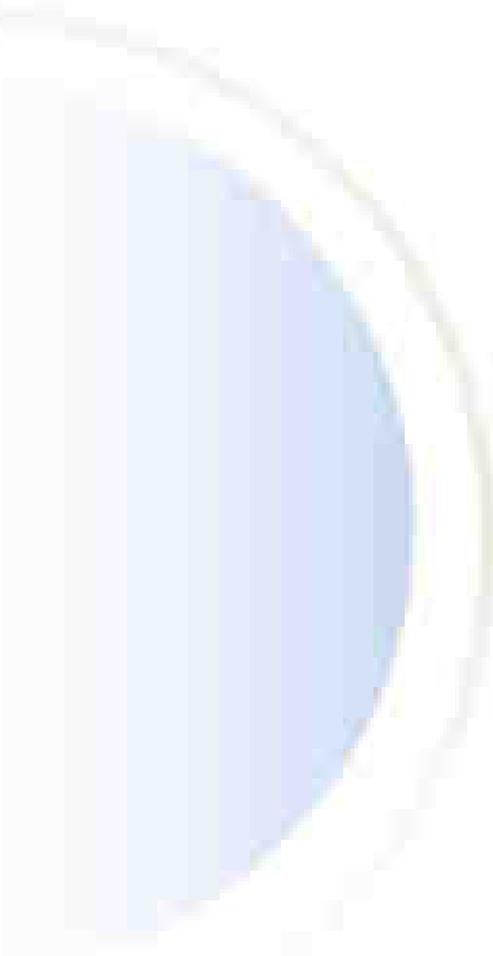
Draft Internal Technical Review Presentation

19 May 2018

LEIDITRON



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# 1. Introduction - Purpose of Presentation

- Seeking approval to submit a non-binding Target Outturn Cost (TOC) proposal, under a Standard LI Alliance Contract, for the construction of the Main Contract Works on the Oh My God mixed use project in Noida, UP, consisting of Two No. Towers
  - ✓ Tower A: 170 m high tower comprising 28+G+38 storeys including 2 Service Floors, with a total BUA of 174,520 Sqm consisting of Car Parks, Retail, 736 No. Studio Apartments & Hotel areas
  - ✓ Tower B: 28+G+3 retail building with a total BUA of 1,793 sqm
  - ✓ 2 Common Basements for both Towers with a total BUA of 30,824 sqm (NB: Basement for Tower 2 in Early Works Contract)
- 42 month overall delivery programme to include early handover of retail areas for fit out at month 24

# 1. Introduction – Owner's Requirements

- Owner has previously instructed Early Works to cover:
  - Shore piling to two sides of plot
  - Management of excavation contractor
  - Construction of Tower B Basements and Ground floor slab
  - Drainage covers to existing perimeter drains
  - Offsite Labour Camp, Batching plant, Rebar & Formwork yards
  - On & Offsite Temporary Services
  - On & Offsite compound barricading

- Main Contract Works to cover:

- A. Construction of Tower A (28+G+38 storeys, including 2 Service Floors)

Scope to include:

- Structure, External Facades, Full MEP & Finishes to basements, podium parking and studios
    - Vertical transport
    - Base MEP to Retail & Hotel
    - External Works
    - Early handover of Retail area to allow fit out by others

- B. Construction of Tower B (G+3 storeys)

Scope to include:

- Structure and Facades
    - Full MEP & Finishes to basements
    - Base MEP to superstructure
    - External Works

# 1. Introduction – Sequence of Events

- MoU signed with Owner July 2017 to develop Alliance Contract with LI
- Gate 2 for execution of Early Works under an Interim Alliance Agreement, reviewed with LAIO 03 November 2017 and approved by 24 January 2018
- Early Works commenced mid February 2018; under a 7 month delivery programme
- Owner has key Consultants on board for Geotech, Architecture, Structure, MEP, Vertical Transport etc;
- Preconstruction Services exercise undertaken by LI
  - Architectural Design currently in DD Stage (50% expected by 21 May 2018)
  - Structural Design - 50 completed, moving into DD stage
  - MEP Design - 50 completed, moving into DD stage

## 2. Project Overview - Site Location



Location in India

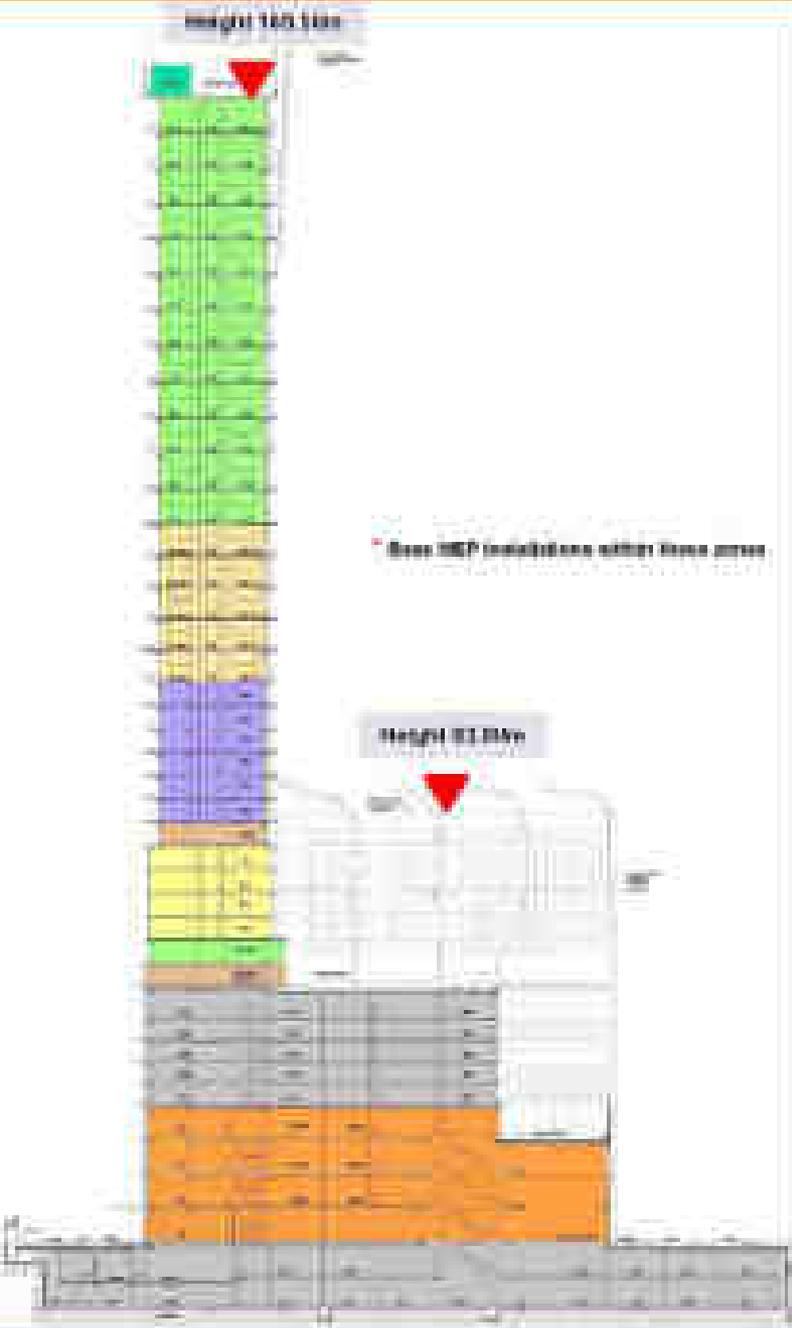


Location of Noida



Site Location

## 2. Project Overview - Tower A Breakdown & Project Scope



| Building Item                                 | BIM Total (\$/PL) | Floor to Floor Height | No. of Floors | BIM Floor Area (sqm)  | Scope to be Installed in TDC   |
|---|-------------------|-----------------------|---------------|-----------------------|--|
| Site Prep (0.00 - 0.05)                       | 100.00            | 0.000                 | 1             | 1,004                 | BCC / Material Hoisting / External Development   |
| Duplex Apartments 104 No. (0.27 - 1.00)       | 18,234.04         | 0.730                 | 17            | 1,281 (22,413 sqm)    | BCC Structure<br>Blockwork<br>Plaster<br>Waterproofing                                   |
| Super Studio Apartments 100 No. (0.22 - 1.00) | 8,818.00          | 0.780                 | 8             | 1,204 (22,778 sqm)    | Facade<br>MEP<br>External Development  |
| Triplex Apartments 107 No. (0.18 - 1.00)      | 8,818.00          | 0.780                 | 8             |                       | Facade   |
| Service Floor (0.10)                          | 3,879.38          | 0.400                 | 1             |                       | BCC / MEP / Facade / External Development  |
| Hotel Floors 328 No. (0.11 - 1.04)            | 14,870.00         | 0.400                 | 4             | 3,718.00 (40,033 sqm) | BCC Structure<br>Facade / MEP<br>External Development                                    |
| Hotel Floor                                   | 2171.34           | 0.000                 | 1             | 2171                  |  |
| Service Floor / Hotel Lobby (0.0)             | 8,281.28          | 0.400                 | 1             | 8,281 (88,747 sqm)    | BCC / MEP / Facade / External Development  |
| Parking Car Parking (0.4 - 0.8)               | 21,817.00         | 0.400 (0.4 - 0.7)     | 8             | 8,787 (75,884 sqm)    | BCC Structure<br>Blockwork & Plaster<br>Facade<br>MEP / Finishes<br>External Development |
| Retail / Food Shop (0.0)                      | 14,216.00         | 0.400                 | 1             | 1,482 (60,091 sqm)    | BCC Structure<br>Facade<br>MEP<br>Common Area Finishes (15%)<br>External Development     |
| Basements                                     | 28,224.28         | B1 - 5,700            | 2             | 64,817 (111,222 sqm)  | BCC Structure / MEP / Finishes   |
|   |                   | B2 - 4,500            |               | 18,287 (111,222 sqm)  |  |
| Plantations                                   |                   |                       | -             |                       | Finis & Land   |

## 2. Project Overview – Architect's Images



## 2. Project Overview – Owner’s Consultants & Design Status

| Discipline                            | Consultant  | Current Design Status  |
|---------------------------------------|---|--|
| Project Management                    | Hulk & Hercules   | NA   |
| Lead Architect                        | Design Plus Architecture Pvt. Ltd.                                | 50% Detailed Design  |
| Interior Design                       | Design Plus Architecture Pvt. Ltd.                                | 50% Schematic Design Stage   |
| Geotech Consultant                    | Ground Engineering Limited / CENGRS (TBC)                         | Final Soil Analysis & Foundation recommendations awaited by 21-05-18 |
| Structural Design Consultants         | Tower A - Balridge & Associates Structural Engineering, Inc.      | 100% Schematic Design Stage  |
| Structural Design Consultants         | Tower B - Perceptive Ideas  | 100% Detailed Design Stage   |
| Wind Tunnel Analysis                  | Wintech   | Revised Design to be checked   |
| MEP                                   | AEON Consulting Engineers   | 100% Schematic Design Stage  |
| Environmental / Sustainability Design | AEON Consulting Engineers   | 100% Concept Design Stage  |
| Vertical Transportation               | Matrix Management Consultants                                     | 50% Detailed Design Stage  |
| Fire Life Safety Consultants          | Fyrprotek Gulshan Khuranna  | Schematic Design Stage   |
| Facility Planning Hotel / SOH         | HFG Consulting  | Schematic Design Stage   |
| Facade                                | Aes Façade Consultants  | Concept Design Stage   |
| Landscape                             | ABI Bangkok / Integral Design International Studio Pvt. Ltd (TBC) | Concept Design Stage   |
| Building Information Modelling        | (TBC)   | BIM Consultant to be appointed for DD Stage                          |

NB: In parallel with the Early Works phase being delivered under an Interim Alliance Contract, the design for the main contract is being progressed, such that the overall programme and TOC can be agreed for the Project Alliance Agreement



## 2. Project Overview - Indicative Design Deliverable Requirements (3 Months)

| Project Deliverable Requirements (3 Months) |                              |                   | Project Phases |     |          |     |           |     |          |     |          |     |          |     | Overall Status |      |      |
|---|------------------------------|-------------------|----------------|-----|----------|-----|-----------|-----|----------|-----|----------|-----|----------|-----|----------------|------|------|
| Phase                                       | Deliverable                  | Responsible Party | Phase I        |     | Phase II |     | Phase III |     | Phase IV |     | Phase V  |     | Phase VI |     | Q1             | Q2   | Q3   |
|   |                              |                   | Start          | End | Start    | End | Start     | End | Start    | End | Start    | End | Start    | End |                |      |      |
| Phase I                                     | Initial Requirements         | Architecture Dept | Complete       |     |          |     |           |     |          |     |          |     |          |     | 100%           | 100% | 100% |
|   | Final Requirements           | Architecture Dept | Complete       |     | Complete |     | Complete  |     | Complete |     | Complete |     | Complete |     | 100%           | 100% | 100% |
| Phase II                                    | Concept Design & Preliminary | Architecture Dept | Complete       |     |          |     |           |     |          |     |          |     |          |     | 100%           | 100% | 100% |
|   | Final Design & Approval      | Architecture Dept | Complete       |     |          |     |           |     | Complete |     | Complete |     | Complete |     | 100%           | 100% | 100% |
| Phase III                                   | Final Design                 | Architecture Dept | Complete       |     |          |     |           |     |          |     |          |     |          |     | 100%           | 100% | 100% |
|   | Final Design                 | Architecture Dept | Complete       |     |          |     |           |     |          |     |          |     |          |     | 100%           | 100% | 100% |
| Phase IV                                    | Final Design                 | Architecture Dept | Complete       |     |          |     |           |     |          |     |          |     |          |     | 100%           | 100% | 100% |
|   | Final Design                 | Architecture Dept | Complete       |     |          |     |           |     |          |     |          |     |          |     | 100%           | 100% | 100% |
| Phase V                                     | Final Design                 | Architecture Dept | Complete       |     |          |     |           |     |          |     |          |     |          |     | 100%           | 100% | 100% |
|   | Final Design                 | Architecture Dept | Complete       |     |          |     |           |     |          |     |          |     |          |     | 100%           | 100% | 100% |
| Phase VI                                    | Final Design                 | Architecture Dept | Complete       |     |          |     |           |     |          |     |          |     |          |     | 100%           | 100% | 100% |
|   | Final Design                 | Architecture Dept | Complete       |     |          |     |           |     |          |     |          |     |          |     | 100%           | 100% | 100% |



## 2. Project Overview – Key Major Quantities (Both Towers)

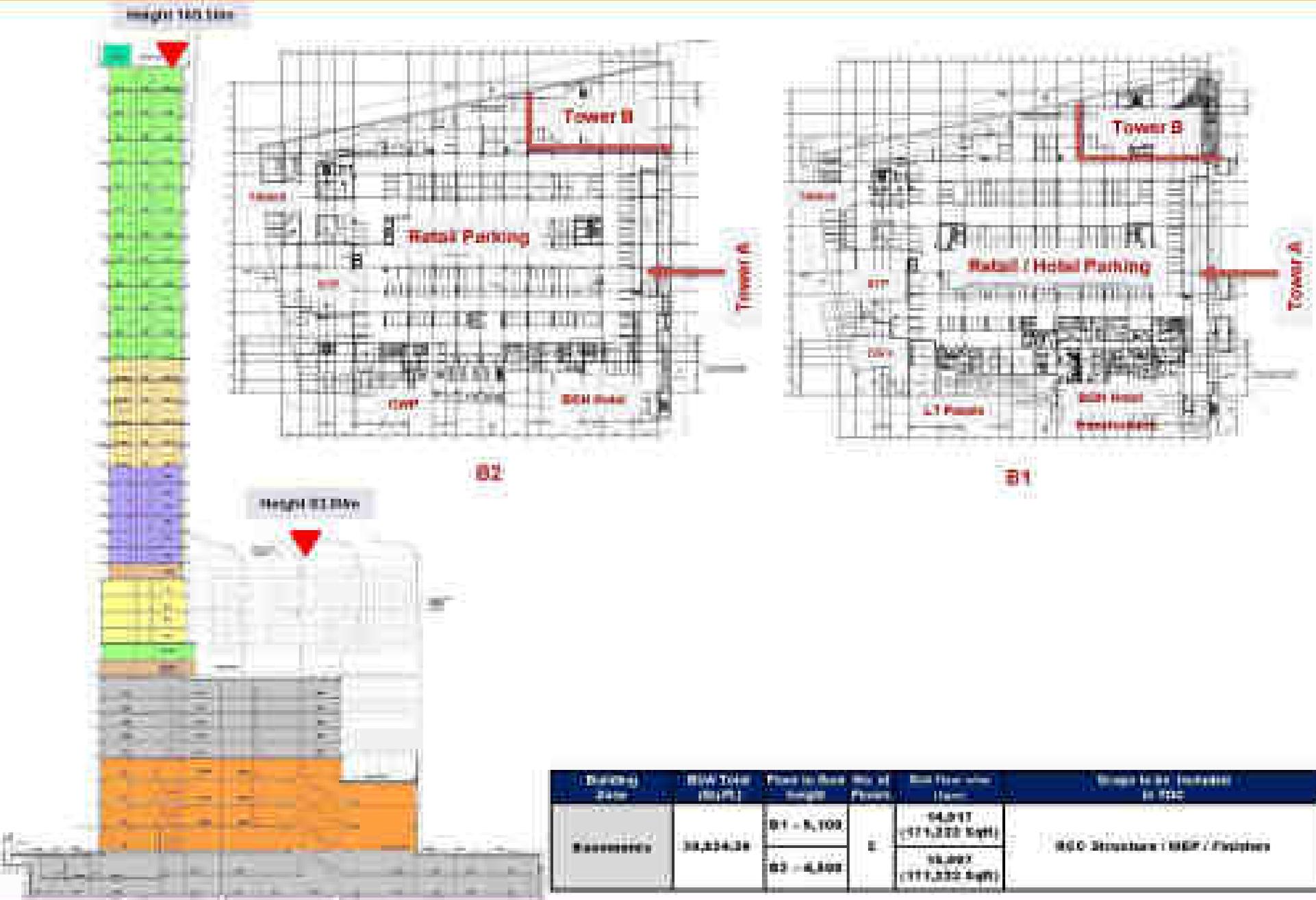
Total BUA Towers A & B - 176,311 sqm

|  | Resident | Retail | Parking | Hotel  | Studios | Total   |
|--|----------|--------|---------|--------|---------|---------|
| Foundation Piles (by strand) (MCS)                         | 571      |        |         |        |         | 571     |
| Structing (SQM)  | 32,770   | 31,952 | 62,921  | 46,303 | 128,104 | 340,652 |
| Reinforcement (MT)   | 2,704    | 1,701  | 1,483   | 1,146  | 3,829   | 10,932  |
| Post Tensioning (MT)                                       | 78       | 54     | 183     | 125    | 272     | 671     |
| Concrete (including PCC & vacuum deaerating screeds) (CUW) | 25,734   | 12,783 | 13,540  | 9,800  | 24,976  | 68,244  |
| Waterproofing (SQM)  | 20,348   | 9,579  | 1114    | 1,691  | 12,000  | 49,254  |
| Backovers (CUW)  | 1,184    | 371    | 381     | 4,403  | 13,679  | 21,668  |

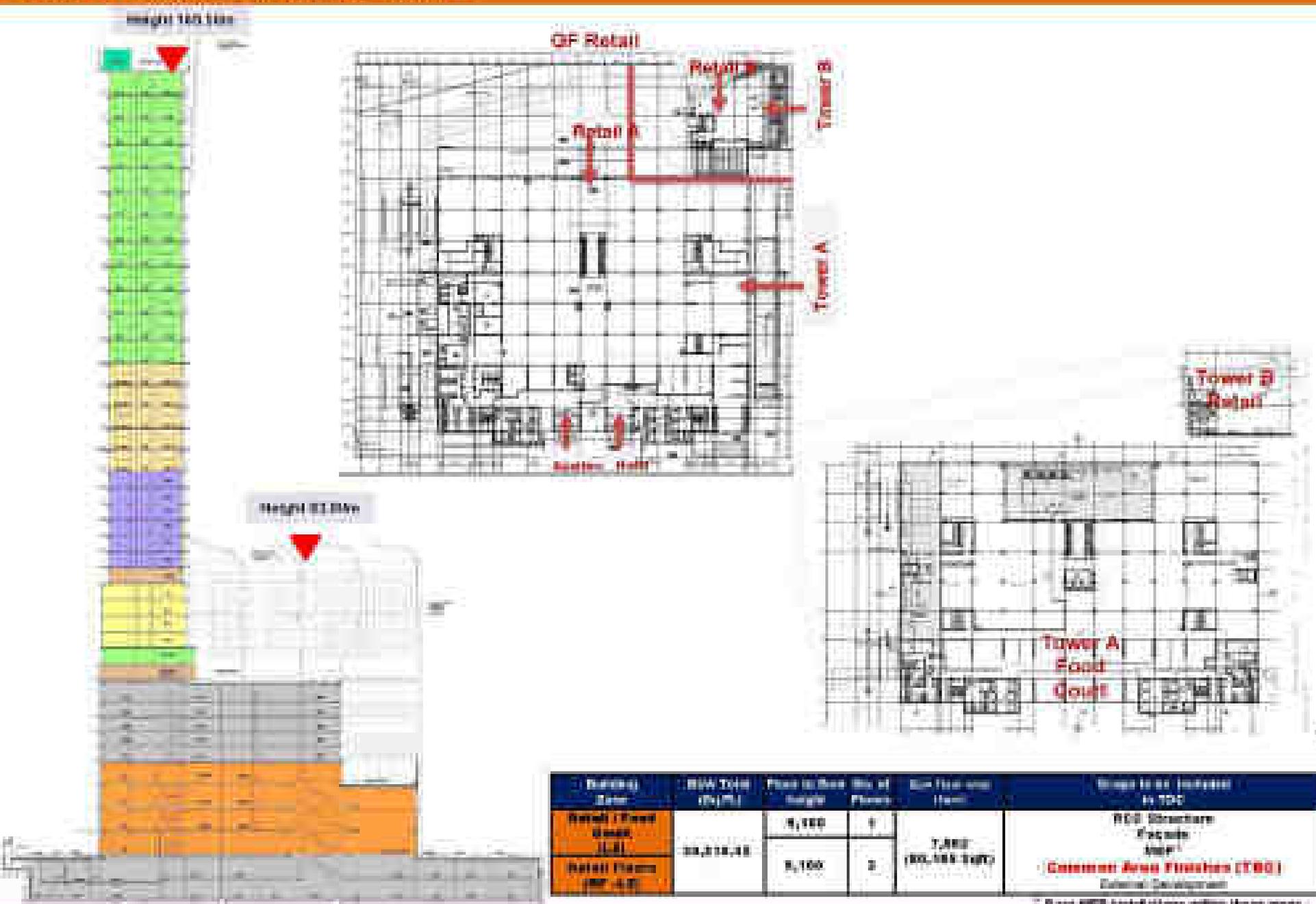
## 2. Project Overview – Area Statement (by Owner @ Feb 2018)

| PROJECT     | OWNER      | ESTIMATED COST |        | BID   | NO. OF UNITS | REVENUE   |        |
|-------------|------------|----------------|--------|-------|--------------|-----------|--------|
|             |            | ESTIMATED      | ACTUAL |       |              | ESTIMATED | ACTUAL |
| PROJECT 001 | UNIVERSITY | 1000           | 1000   | 1000  |              |           |        |
| PROJECT 002 | UNIVERSITY | 1100           | 1100   | 1100  |              |           |        |
| PROJECT 003 | UNIVERSITY | 1200           | 1200   | 1200  |              |           |        |
| PROJECT 004 | UNIVERSITY | 1300           | 1300   | 1300  |              |           |        |
| PROJECT 005 | UNIVERSITY | 1400           | 1400   | 1400  |              |           |        |
| PROJECT 006 | UNIVERSITY | 1500           | 1500   | 1500  |              |           |        |
| PROJECT 007 | UNIVERSITY | 1600           | 1600   | 1600  |              |           |        |
| PROJECT 008 | UNIVERSITY | 1700           | 1700   | 1700  |              |           |        |
| PROJECT 009 | UNIVERSITY | 1800           | 1800   | 1800  |              |           |        |
| PROJECT 010 | UNIVERSITY | 1900           | 1900   | 1900  |              |           |        |
| PROJECT 011 | UNIVERSITY | 2000           | 2000   | 2000  |              |           |        |
| PROJECT 012 | UNIVERSITY | 2100           | 2100   | 2100  |              |           |        |
| PROJECT 013 | UNIVERSITY | 2200           | 2200   | 2200  |              |           |        |
| PROJECT 014 | UNIVERSITY | 2300           | 2300   | 2300  |              |           |        |
| PROJECT 015 | UNIVERSITY | 2400           | 2400   | 2400  |              |           |        |
| PROJECT 016 | UNIVERSITY | 2500           | 2500   | 2500  |              |           |        |
| PROJECT 017 | UNIVERSITY | 2600           | 2600   | 2600  |              |           |        |
| PROJECT 018 | UNIVERSITY | 2700           | 2700   | 2700  |              |           |        |
| PROJECT 019 | UNIVERSITY | 2800           | 2800   | 2800  |              |           |        |
| PROJECT 020 | UNIVERSITY | 2900           | 2900   | 2900  |              |           |        |
| PROJECT 021 | UNIVERSITY | 3000           | 3000   | 3000  |              |           |        |
| PROJECT 022 | UNIVERSITY | 3100           | 3100   | 3100  |              |           |        |
| PROJECT 023 | UNIVERSITY | 3200           | 3200   | 3200  |              |           |        |
| PROJECT 024 | UNIVERSITY | 3300           | 3300   | 3300  |              |           |        |
| PROJECT 025 | UNIVERSITY | 3400           | 3400   | 3400  |              |           |        |
| PROJECT 026 | UNIVERSITY | 3500           | 3500   | 3500  |              |           |        |
| PROJECT 027 | UNIVERSITY | 3600           | 3600   | 3600  |              |           |        |
| PROJECT 028 | UNIVERSITY | 3700           | 3700   | 3700  |              |           |        |
| PROJECT 029 | UNIVERSITY | 3800           | 3800   | 3800  |              |           |        |
| PROJECT 030 | UNIVERSITY | 3900           | 3900   | 3900  |              |           |        |
| PROJECT 031 | UNIVERSITY | 4000           | 4000   | 4000  |              |           |        |
| PROJECT 032 | UNIVERSITY | 4100           | 4100   | 4100  |              |           |        |
| PROJECT 033 | UNIVERSITY | 4200           | 4200   | 4200  |              |           |        |
| PROJECT 034 | UNIVERSITY | 4300           | 4300   | 4300  |              |           |        |
| PROJECT 035 | UNIVERSITY | 4400           | 4400   | 4400  |              |           |        |
| PROJECT 036 | UNIVERSITY | 4500           | 4500   | 4500  |              |           |        |
| PROJECT 037 | UNIVERSITY | 4600           | 4600   | 4600  |              |           |        |
| PROJECT 038 | UNIVERSITY | 4700           | 4700   | 4700  |              |           |        |
| PROJECT 039 | UNIVERSITY | 4800           | 4800   | 4800  |              |           |        |
| PROJECT 040 | UNIVERSITY | 4900           | 4900   | 4900  |              |           |        |
| PROJECT 041 | UNIVERSITY | 5000           | 5000   | 5000  |              |           |        |
| PROJECT 042 | UNIVERSITY | 5100           | 5100   | 5100  |              |           |        |
| PROJECT 043 | UNIVERSITY | 5200           | 5200   | 5200  |              |           |        |
| PROJECT 044 | UNIVERSITY | 5300           | 5300   | 5300  |              |           |        |
| PROJECT 045 | UNIVERSITY | 5400           | 5400   | 5400  |              |           |        |
| PROJECT 046 | UNIVERSITY | 5500           | 5500   | 5500  |              |           |        |
| PROJECT 047 | UNIVERSITY | 5600           | 5600   | 5600  |              |           |        |
| PROJECT 048 | UNIVERSITY | 5700           | 5700   | 5700  |              |           |        |
| PROJECT 049 | UNIVERSITY | 5800           | 5800   | 5800  |              |           |        |
| PROJECT 050 | UNIVERSITY | 5900           | 5900   | 5900  |              |           |        |
| PROJECT 051 | UNIVERSITY | 6000           | 6000   | 6000  |              |           |        |
| PROJECT 052 | UNIVERSITY | 6100           | 6100   | 6100  |              |           |        |
| PROJECT 053 | UNIVERSITY | 6200           | 6200   | 6200  |              |           |        |
| PROJECT 054 | UNIVERSITY | 6300           | 6300   | 6300  |              |           |        |
| PROJECT 055 | UNIVERSITY | 6400           | 6400   | 6400  |              |           |        |
| PROJECT 056 | UNIVERSITY | 6500           | 6500   | 6500  |              |           |        |
| PROJECT 057 | UNIVERSITY | 6600           | 6600   | 6600  |              |           |        |
| PROJECT 058 | UNIVERSITY | 6700           | 6700   | 6700  |              |           |        |
| PROJECT 059 | UNIVERSITY | 6800           | 6800   | 6800  |              |           |        |
| PROJECT 060 | UNIVERSITY | 6900           | 6900   | 6900  |              |           |        |
| PROJECT 061 | UNIVERSITY | 7000           | 7000   | 7000  |              |           |        |
| PROJECT 062 | UNIVERSITY | 7100           | 7100   | 7100  |              |           |        |
| PROJECT 063 | UNIVERSITY | 7200           | 7200   | 7200  |              |           |        |
| PROJECT 064 | UNIVERSITY | 7300           | 7300   | 7300  |              |           |        |
| PROJECT 065 | UNIVERSITY | 7400           | 7400   | 7400  |              |           |        |
| PROJECT 066 | UNIVERSITY | 7500           | 7500   | 7500  |              |           |        |
| PROJECT 067 | UNIVERSITY | 7600           | 7600   | 7600  |              |           |        |
| PROJECT 068 | UNIVERSITY | 7700           | 7700   | 7700  |              |           |        |
| PROJECT 069 | UNIVERSITY | 7800           | 7800   | 7800  |              |           |        |
| PROJECT 070 | UNIVERSITY | 7900           | 7900   | 7900  |              |           |        |
| PROJECT 071 | UNIVERSITY | 8000           | 8000   | 8000  |              |           |        |
| PROJECT 072 | UNIVERSITY | 8100           | 8100   | 8100  |              |           |        |
| PROJECT 073 | UNIVERSITY | 8200           | 8200   | 8200  |              |           |        |
| PROJECT 074 | UNIVERSITY | 8300           | 8300   | 8300  |              |           |        |
| PROJECT 075 | UNIVERSITY | 8400           | 8400   | 8400  |              |           |        |
| PROJECT 076 | UNIVERSITY | 8500           | 8500   | 8500  |              |           |        |
| PROJECT 077 | UNIVERSITY | 8600           | 8600   | 8600  |              |           |        |
| PROJECT 078 | UNIVERSITY | 8700           | 8700   | 8700  |              |           |        |
| PROJECT 079 | UNIVERSITY | 8800           | 8800   | 8800  |              |           |        |
| PROJECT 080 | UNIVERSITY | 8900           | 8900   | 8900  |              |           |        |
| PROJECT 081 | UNIVERSITY | 9000           | 9000   | 9000  |              |           |        |
| PROJECT 082 | UNIVERSITY | 9100           | 9100   | 9100  |              |           |        |
| PROJECT 083 | UNIVERSITY | 9200           | 9200   | 9200  |              |           |        |
| PROJECT 084 | UNIVERSITY | 9300           | 9300   | 9300  |              |           |        |
| PROJECT 085 | UNIVERSITY | 9400           | 9400   | 9400  |              |           |        |
| PROJECT 086 | UNIVERSITY | 9500           | 9500   | 9500  |              |           |        |
| PROJECT 087 | UNIVERSITY | 9600           | 9600   | 9600  |              |           |        |
| PROJECT 088 | UNIVERSITY | 9700           | 9700   | 9700  |              |           |        |
| PROJECT 089 | UNIVERSITY | 9800           | 9800   | 9800  |              |           |        |
| PROJECT 090 | UNIVERSITY | 9900           | 9900   | 9900  |              |           |        |
| PROJECT 091 | UNIVERSITY | 10000          | 10000  | 10000 |              |           |        |
| PROJECT 092 | UNIVERSITY | 10100          | 10100  | 10100 |              |           |        |
| PROJECT 093 | UNIVERSITY | 10200          | 10200  | 10200 |              |           |        |
| PROJECT 094 | UNIVERSITY | 10300          | 10300  | 10300 |              |           |        |
| PROJECT 095 | UNIVERSITY | 10400          | 10400  | 10400 |              |           |        |
| PROJECT 096 | UNIVERSITY | 10500          | 10500  | 10500 |              |           |        |
| PROJECT 097 | UNIVERSITY | 10600          | 10600  | 10600 |              |           |        |
| PROJECT 098 | UNIVERSITY | 10700          | 10700  | 10700 |              |           |        |
| PROJECT 099 | UNIVERSITY | 10800          | 10800  | 10800 |              |           |        |
| PROJECT 100 | UNIVERSITY | 10900          | 10900  | 10900 |              |           |        |
| PROJECT 101 | UNIVERSITY | 11000          | 11000  | 11000 |              |           |        |
| PROJECT 102 | UNIVERSITY | 11100          | 11100  | 11100 |              |           |        |
| PROJECT 103 | UNIVERSITY | 11200          | 11200  | 11200 |              |           |        |
| PROJECT 104 | UNIVERSITY | 11300          | 11300  | 11300 |              |           |        |
| PROJECT 105 | UNIVERSITY | 11400          | 11400  | 11400 |              |           |        |
| PROJECT 106 | UNIVERSITY | 11500          | 11500  | 11500 |              |           |        |
| PROJECT 107 | UNIVERSITY | 11600          | 11600  | 11600 |              |           |        |
| PROJECT 108 | UNIVERSITY | 11700          | 11700  | 11700 |              |           |        |
| PROJECT 109 | UNIVERSITY | 11800          | 11800  | 11800 |              |           |        |
| PROJECT 110 | UNIVERSITY | 11900          | 11900  | 11900 |              |           |        |
| PROJECT 111 | UNIVERSITY | 12000          | 12000  | 12000 |              |           |        |
| PROJECT 112 | UNIVERSITY | 12100          | 12100  | 12100 |              |           |        |
| PROJECT 113 | UNIVERSITY | 12200          | 12200  | 12200 |              |           |        |
| PROJECT 114 | UNIVERSITY | 12300          | 12300  | 12300 |              |           |        |
| PROJECT 115 | UNIVERSITY | 12400          | 12400  | 12400 |              |           |        |
| PROJECT 116 | UNIVERSITY | 12500          | 12500  | 12500 |              |           |        |
| PROJECT 117 | UNIVERSITY | 12600          | 12600  | 12600 |              |           |        |
| PROJECT 118 | UNIVERSITY | 12700          | 12700  | 12700 |              |           |        |
| PROJECT 119 | UNIVERSITY | 12800          | 12800  | 12800 |              |           |        |
| PROJECT 120 | UNIVERSITY | 12900          | 12900  | 12900 |              |           |        |
| PROJECT 121 | UNIVERSITY | 13000          | 13000  | 13000 |              |           |        |
| PROJECT 122 | UNIVERSITY | 13100          | 13100  | 13100 |              |           |        |
| PROJECT 123 | UNIVERSITY | 13200          | 13200  | 13200 |              |           |        |
| PROJECT 124 | UNIVERSITY | 13300          | 13300  | 13300 |              |           |        |
| PROJECT 125 | UNIVERSITY | 13400          | 13400  | 13400 |              |           |        |
| PROJECT 126 | UNIVERSITY | 13500          | 13500  | 13500 |              |           |        |
| PROJECT 127 | UNIVERSITY | 13600          | 13600  | 13600 |              |           |        |
| PROJECT 128 | UNIVERSITY | 13700          | 13700  | 13700 |              |           |        |
| PROJECT 129 | UNIVERSITY | 13800          | 13800  | 13800 |              |           |        |
| PROJECT 130 | UNIVERSITY | 13900          | 13900  | 13900 |              |           |        |
| PROJECT 131 | UNIVERSITY | 14000          | 14000  | 14000 |              |           |        |
| PROJECT 132 | UNIVERSITY | 14100          | 14100  | 14100 |              |           |        |
| PROJECT 133 | UNIVERSITY | 14200          | 14200  | 14200 |              |           |        |
| PROJECT 134 | UNIVERSITY | 14300          | 14300  | 14300 |              |           |        |
| PROJECT 135 | UNIVERSITY | 14400          | 14400  | 14400 |              |           |        |
| PROJECT 136 | UNIVERSITY | 14500          | 14500  | 14500 |              |           |        |
| PROJECT 137 | UNIVERSITY | 14600          | 14600  | 14600 |              |           |        |
| PROJECT 138 | UNIVERSITY | 14700          | 14700  | 14700 |              |           |        |
| PROJECT 139 | UNIVERSITY | 14800          | 14800  | 14800 |              |           |        |
| PROJECT 140 | UNIVERSITY | 14900          | 14900  | 14900 |              |           |        |
| PROJECT 141 | UNIVERSITY | 15000          | 15000  | 15000 |              |           |        |
| PROJECT 142 | UNIVERSITY | 15100          | 15100  | 15100 |              |           |        |
| PROJECT 143 | UNIVERSITY | 15200          | 15200  | 15200 |              |           |        |
| PROJECT 144 | UNIVERSITY | 15300          | 15300  | 15300 |              |           |        |
| PROJECT 145 | UNIVERSITY | 15400          | 15400  | 15400 |              |           |        |
| PROJECT 146 | UNIVERSITY | 15500          | 15500  | 15500 |              |           |        |
| PROJECT 147 | UNIVERSITY | 15600          | 15600  | 15600 |              |           |        |
| PROJECT 148 | UNIVERSITY | 15700          | 15700  | 15700 |              |           |        |
| PROJECT 149 | UNIVERSITY | 15800          | 15800  | 15800 |              |           |        |
| PROJECT 150 | UNIVERSITY | 15900          | 15900  | 15900 |              |           |        |
| PROJECT 151 | UNIVERSITY | 16000          | 16000  | 16000 |              |           |        |
| PROJECT 152 | UNIVERSITY | 16100          | 16100  | 16100 |              |           |        |
| PROJECT 153 | UNIVERSITY | 16200          | 16200  | 16200 |              |           |        |
| PROJECT 154 | UNIVERSITY | 16300          | 16300  | 16300 |              |           |        |
| PROJECT 155 | UNIVERSITY | 16400          | 16400  | 16400 |              |           |        |
| PROJECT 156 | UNIVERSITY | 16500          | 16500  | 16500 |              |           |        |
| PROJECT 157 | UNIVERSITY | 16600          | 16600  | 16600 |              |           |        |
| PROJECT 158 | UNIVERSITY | 16700          | 16700  | 16700 |              |           |        |
| PROJECT 159 | UNIVERSITY | 16800          | 16800  | 16800 |              |           |        |
| PROJECT 160 | UNIVERSITY | 16900          | 16900  | 16900 |              |           |        |
| PROJECT 161 | UNIVERSITY | 17000          | 17000  | 17000 |              |           |        |
| PROJECT 162 | UNIVERSITY | 17100          | 17100  | 17100 |              |           |        |
| PROJECT 163 | UNIVERSITY | 17200          | 17200  | 17200 |              |           |        |
| PROJECT 164 | UNIVERSITY | 17300          | 17300  | 17300 |              |           |        |
| PROJECT 165 | UNIVERSITY | 17400          | 17400  | 17400 |              |           |        |
| PROJECT 166 | UNIVERSITY | 17500          | 17500  | 17500 |              |           |        |

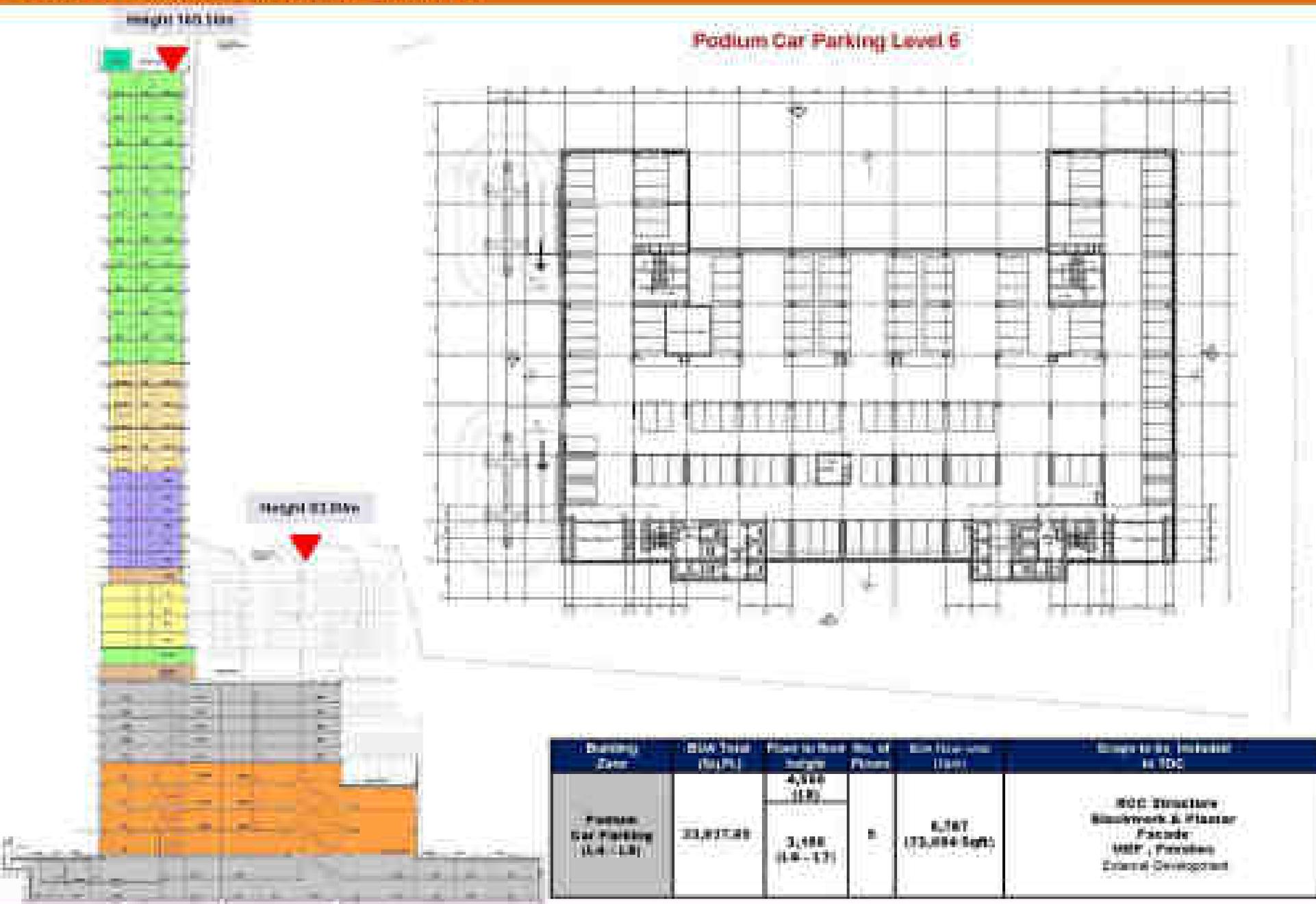
## 2. Project Overview – Floor Plans – Tower A



## 2. Project Overview – Floor Plans – Tower A

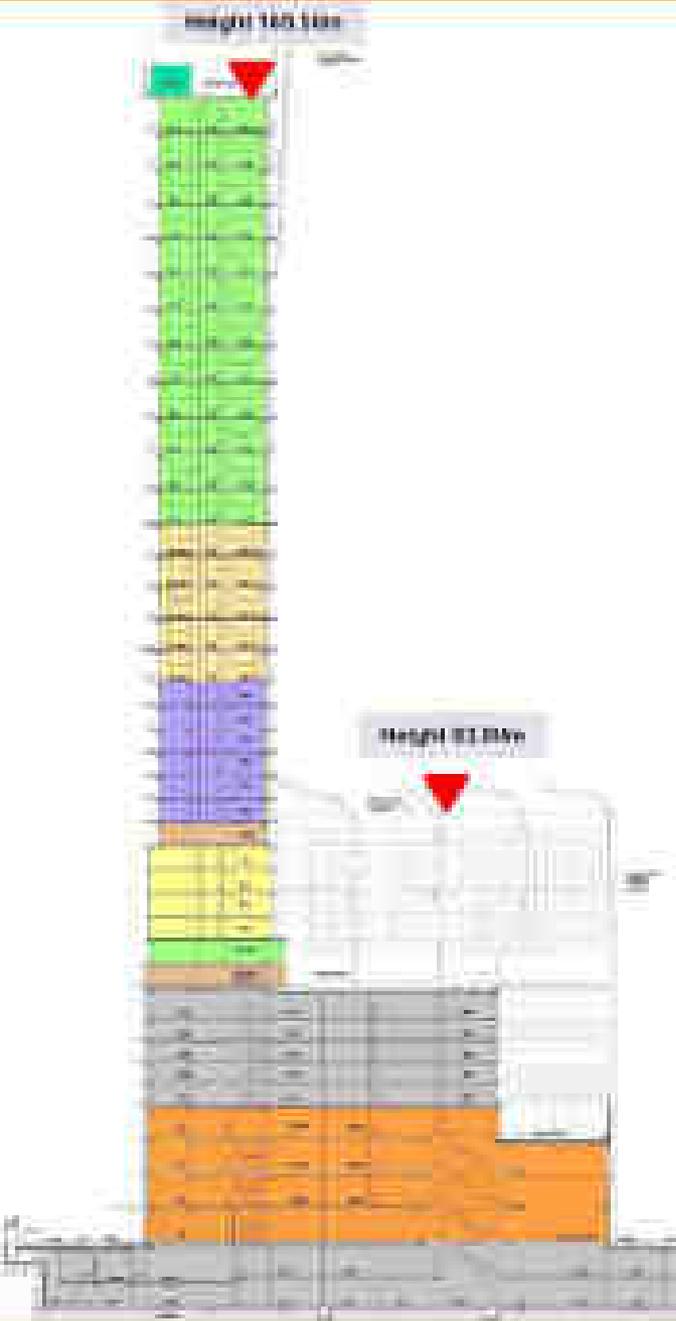


\* Base RCP installation within floor area

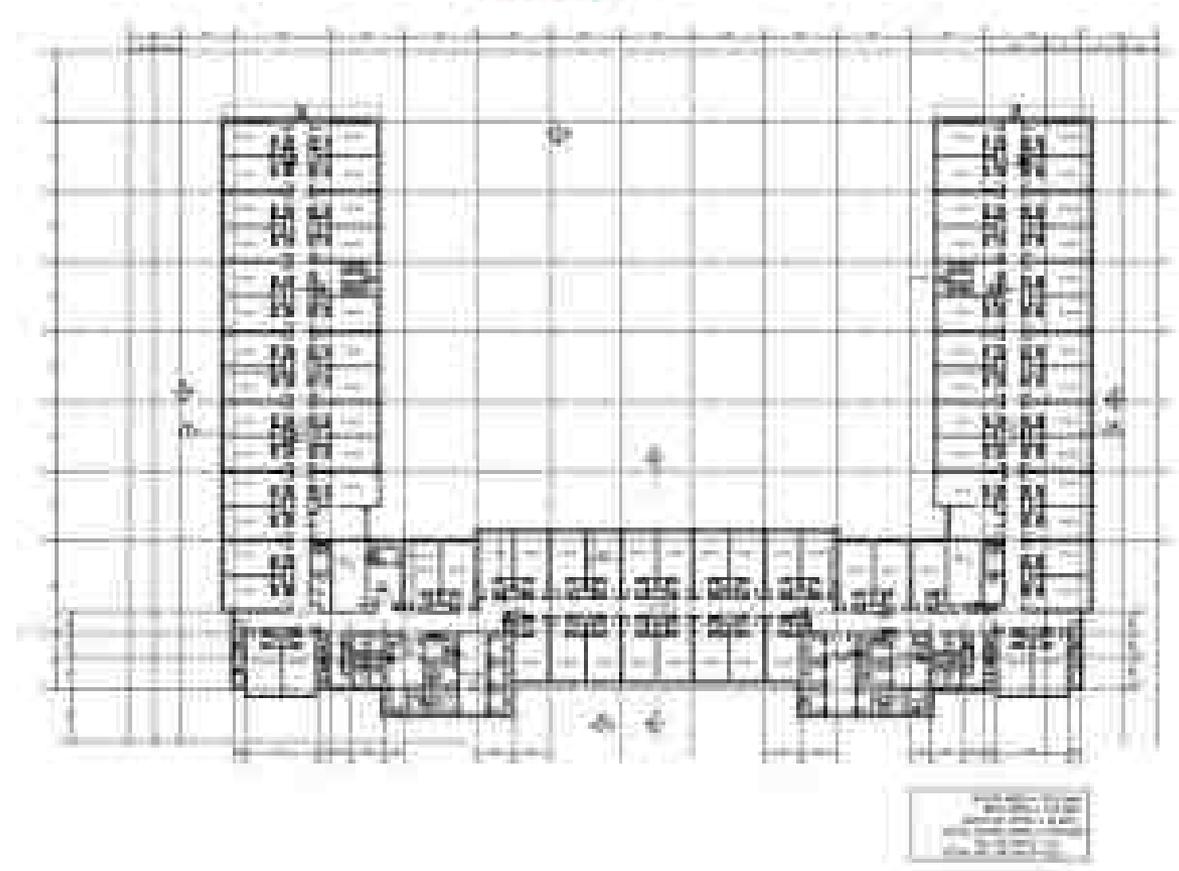




## 2. Project Overview – Floor Plans – Tower A



Typical Hotel Floor Plan Level 10-14



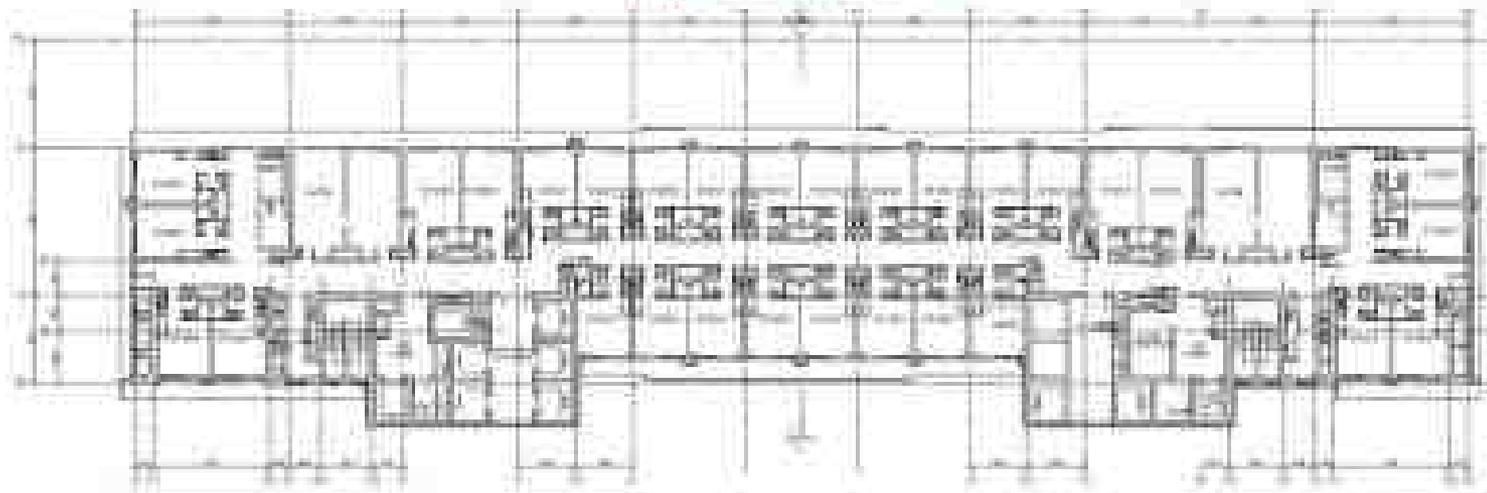
| Building Zone                      | BSA Total (sqm) | Floor to Floor Height | No. of Floors | Net Floor Area (sqm)   | Scope to be Included in ITC                      |
|------------------------------------|-----------------|-----------------------|---------------|------------------------|--|
| Hotel Floors (22 Flns) (L11 - L34) | 64,870.6        | 3,400                 | 4             | 2,318.25 (40,029 sqft) | ICC Structure Package, MEP (General Development) |
| Hotel Room (L10)                   | 2,171.74        | 3,400                 | 1             | 2,171                  |  |

\* Base MEP installations within floor area

## 2. Project Overview – Floor Plans – Tower A

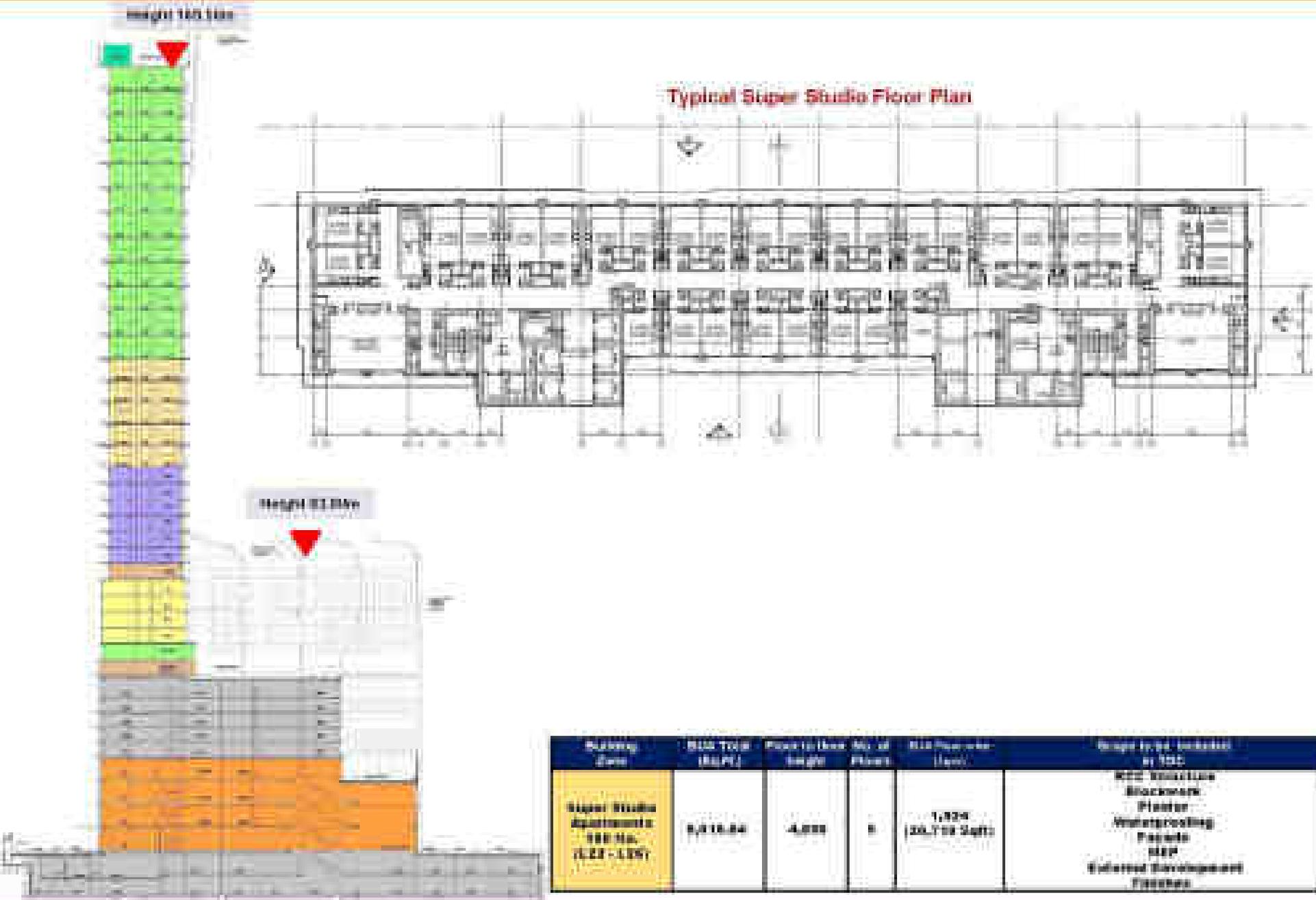


Typical Studio Floor Plan



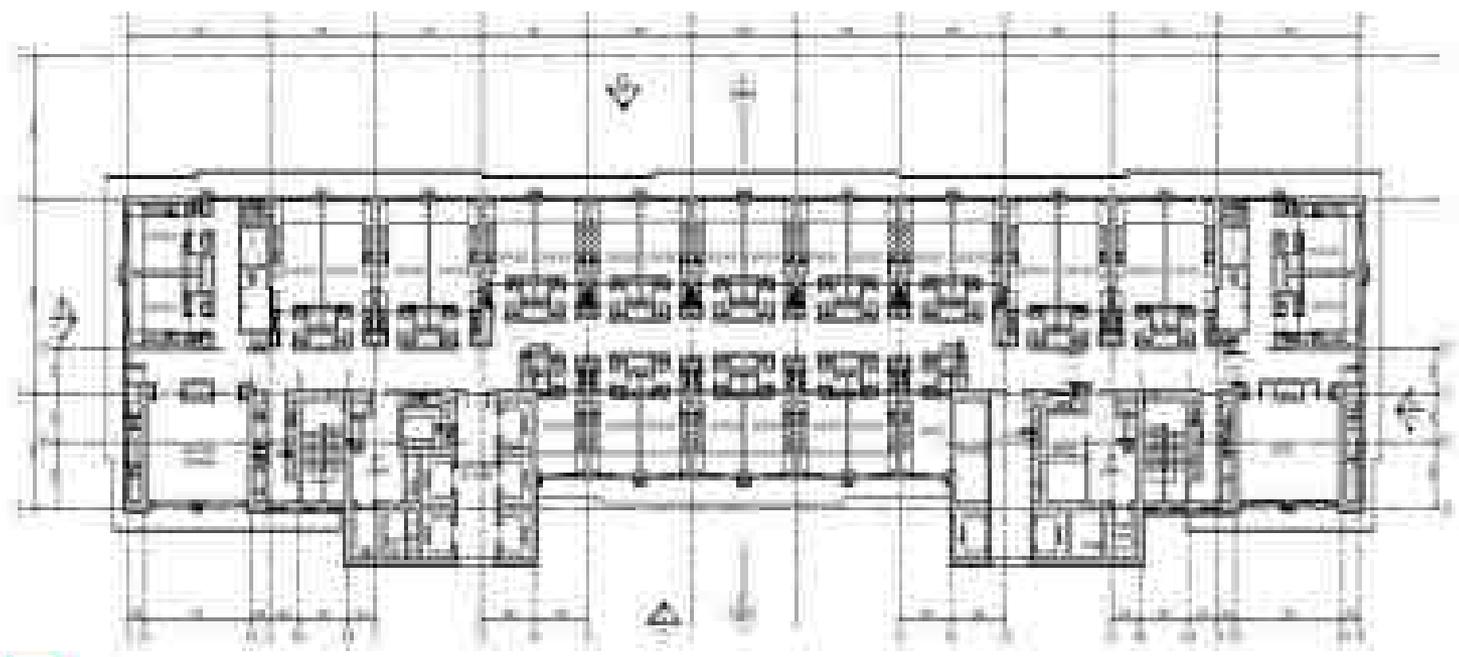
| Building Zone                         | BIM Total (SqM) | Floor to floor height | No. of Floors | BIM Floor area (SqM) | Scope to be included in TOC   |
|---------------------------------------|-----------------|-----------------------|---------------|----------------------|---|
| Studio Apartments: 482 No. (L7 - L14) | 5,838.4         | 2,400                 | 8             | 1,829 (20,719-2400)  | RCC Structure<br>Blockwork<br>Floor<br>Waterproofing<br>Partitions<br>MEP<br>External Enclosure<br>Finishes |

## 2. Project Overview – Floor Plans – Tower A





Typical Duplex Unit Floor Plan



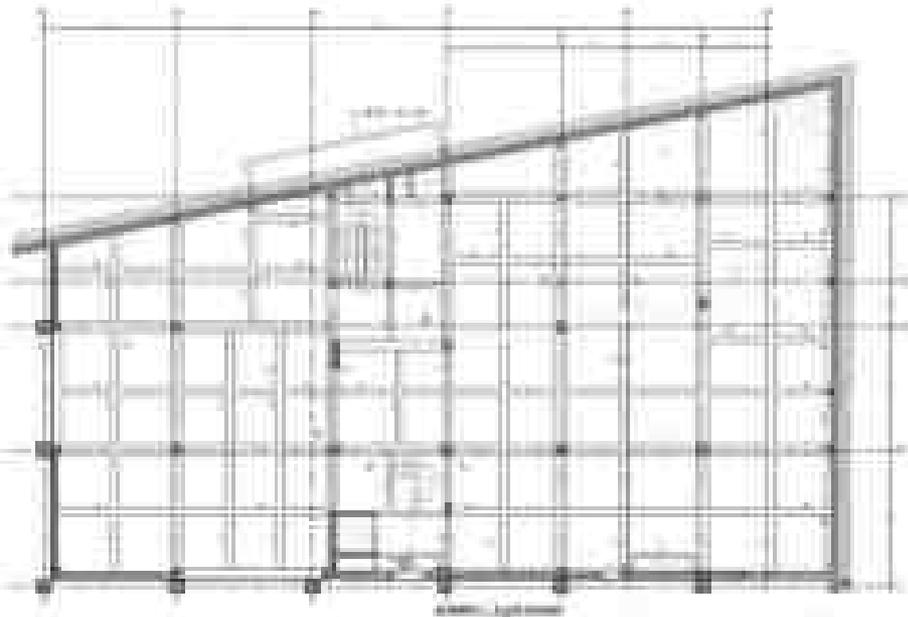
| Building Zone                          | BIM Take (Sq Ft) | Price to Build (\$/Sq Ft) | No. of Floors | BIM Floor Area (Sq Ft) | Scope to be included in BDC  |
|--|------------------|---------------------------|---------------|------------------------|--|
| Duplex Apartments: 884 Mo. (287 - 138) | 28,254.04        | 1,150                     | 12            | 1,381 (28,412 sqft)    | 100% Interior Blockwork<br>Floor<br>Waterproofing<br>Panels<br>MEP<br>Exterior Enclosure<br>Finishes |

## 2. Project Overview – Floor Plans – Tower A



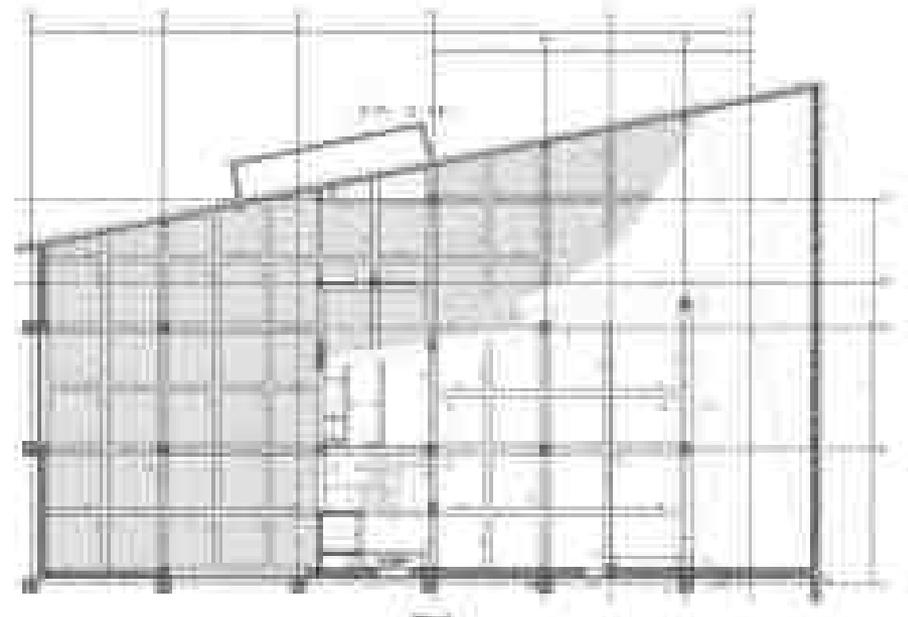
| Building Zone         | RMS Total (BEP) | Floor to Floor height | No. of Floors | Max Floor area (sqm) | Scope to be Included in TDC                |
|-----------------------|-----------------|-----------------------|---------------|----------------------|--|
| High Rise Core (1-10) | 550.00          | 3.000                 | 1             | 1,000                | BCC / Waterproofing / External Development |

## 2. Project Overview - Floor Plans - Tower B

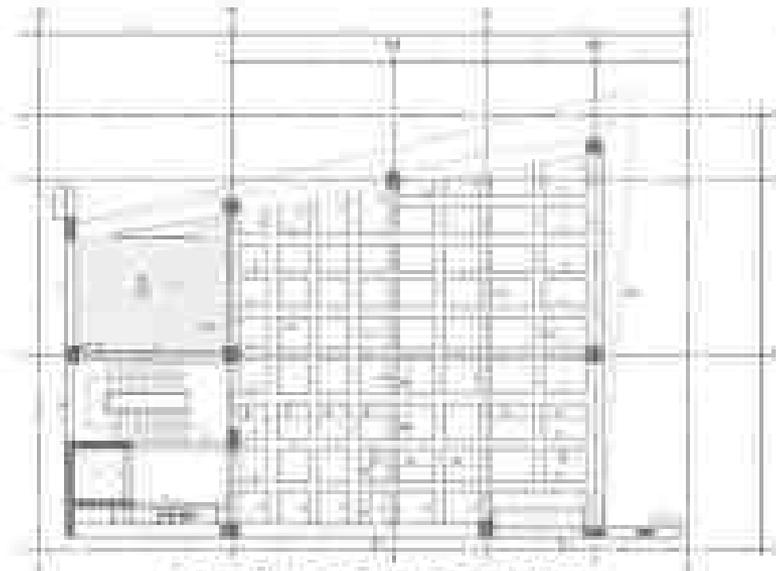


Tower B - Basement Floor (Framing Plan)

**BUA 1,832m<sup>2</sup>**



Tower B - Ground Floor (Framing Plan)



**EUA 468 m<sup>2</sup>**

Tower B - First Floor (Framing Plan)

## 2. Project Overview - Site Progress Photos May 2018



Site Entrance



Adjoining Land



Ramp for Vehicular Movement



Pedestrian Access



Platform for Secant Pile Work



Ramp for Vehicular Movement



Capping Beam Works



Main Tower



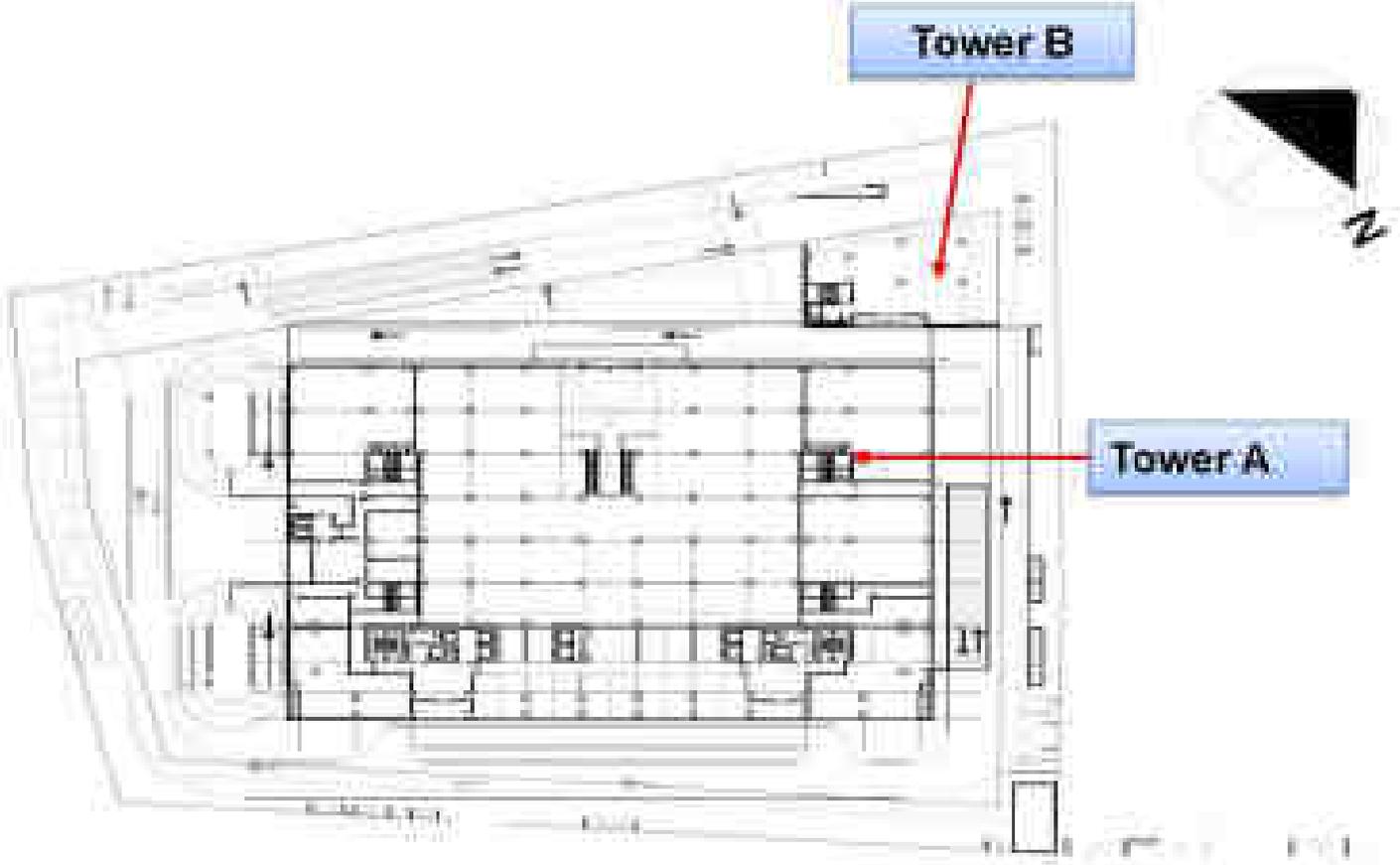
Capping Beam Works

### 3. Construction Methodology

- Onsite Schematic Plans
- Sub Structure
- Super Structure
- MEP
- Façade
- Finishes
- External Works



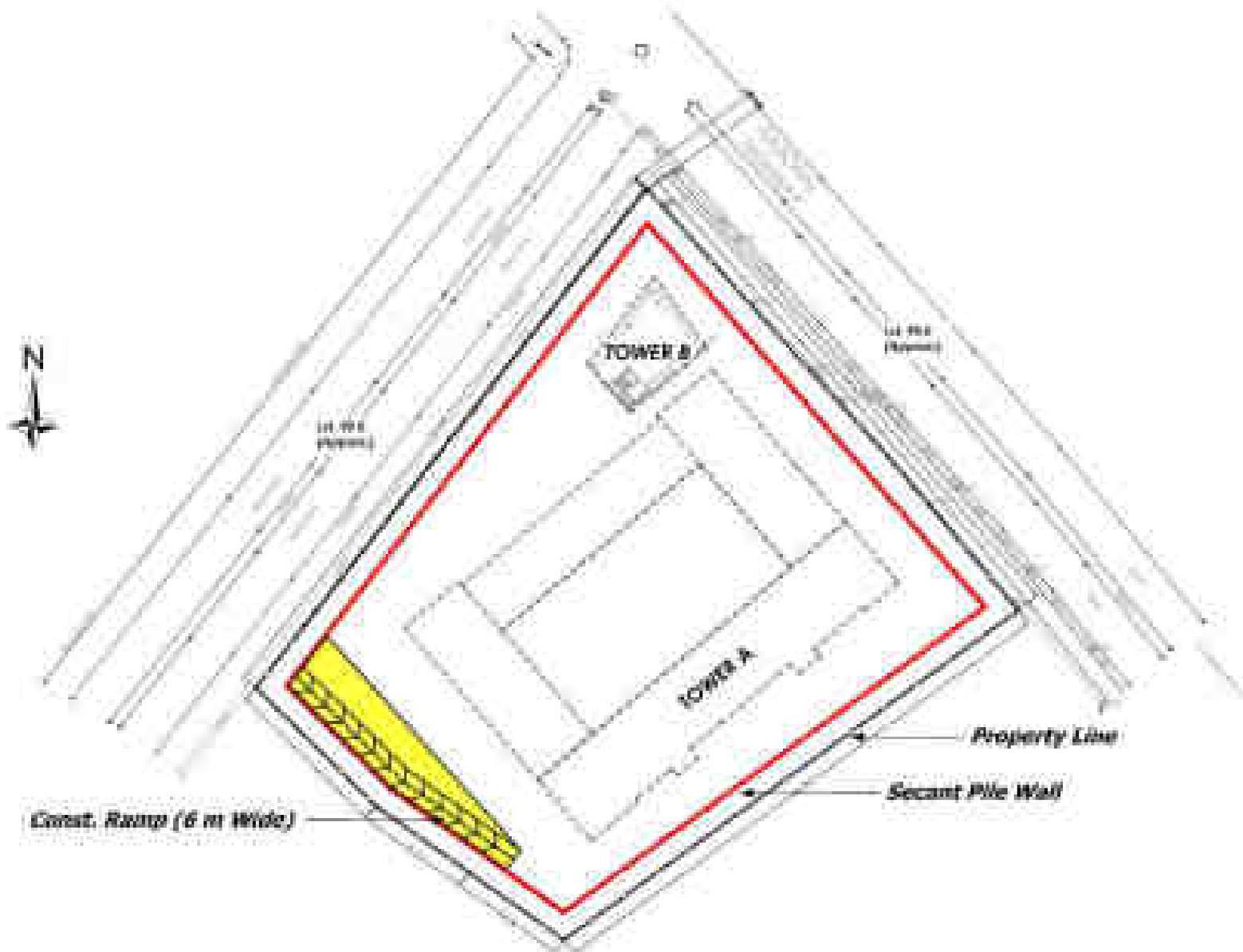
# 3. Site Plan



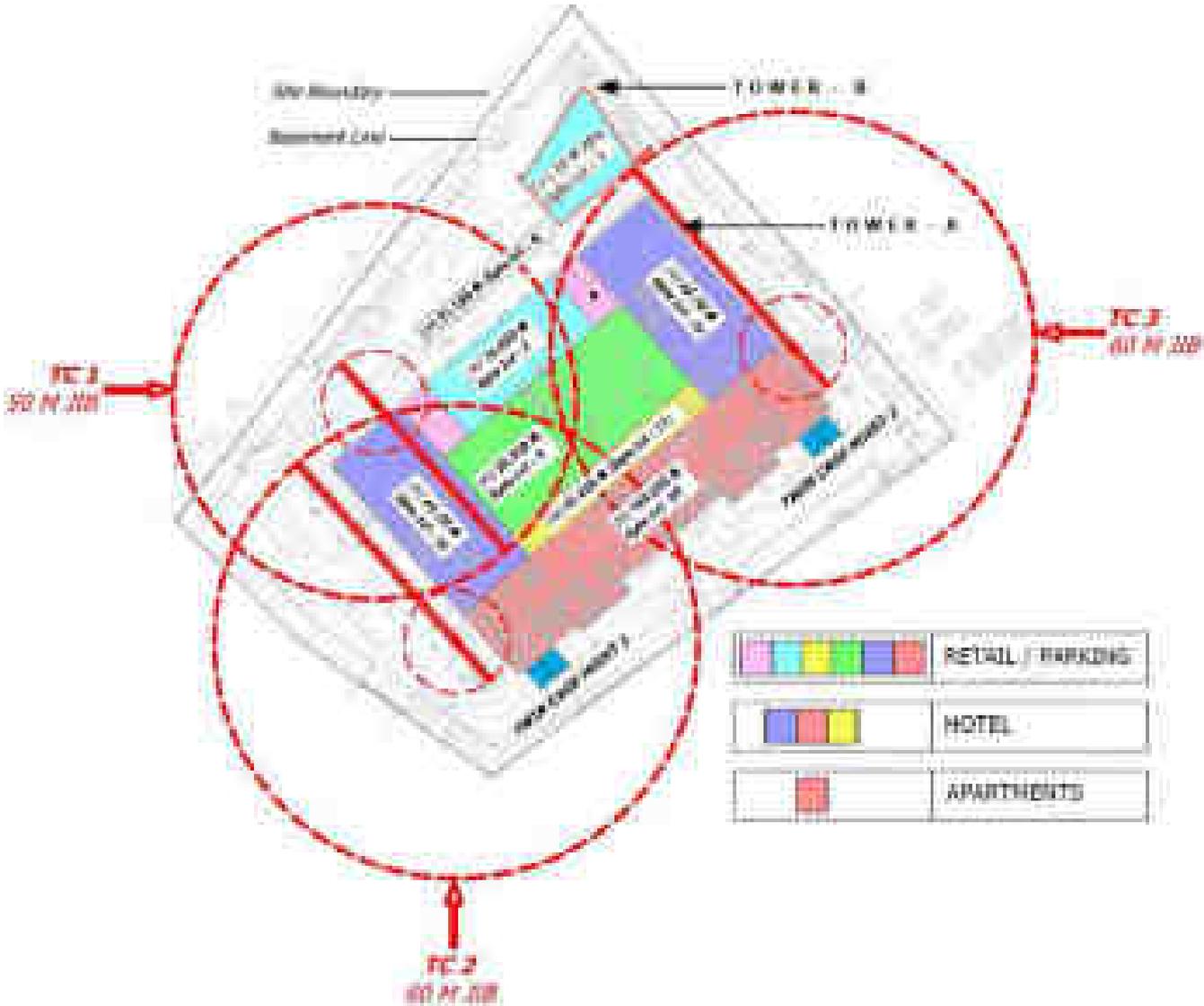




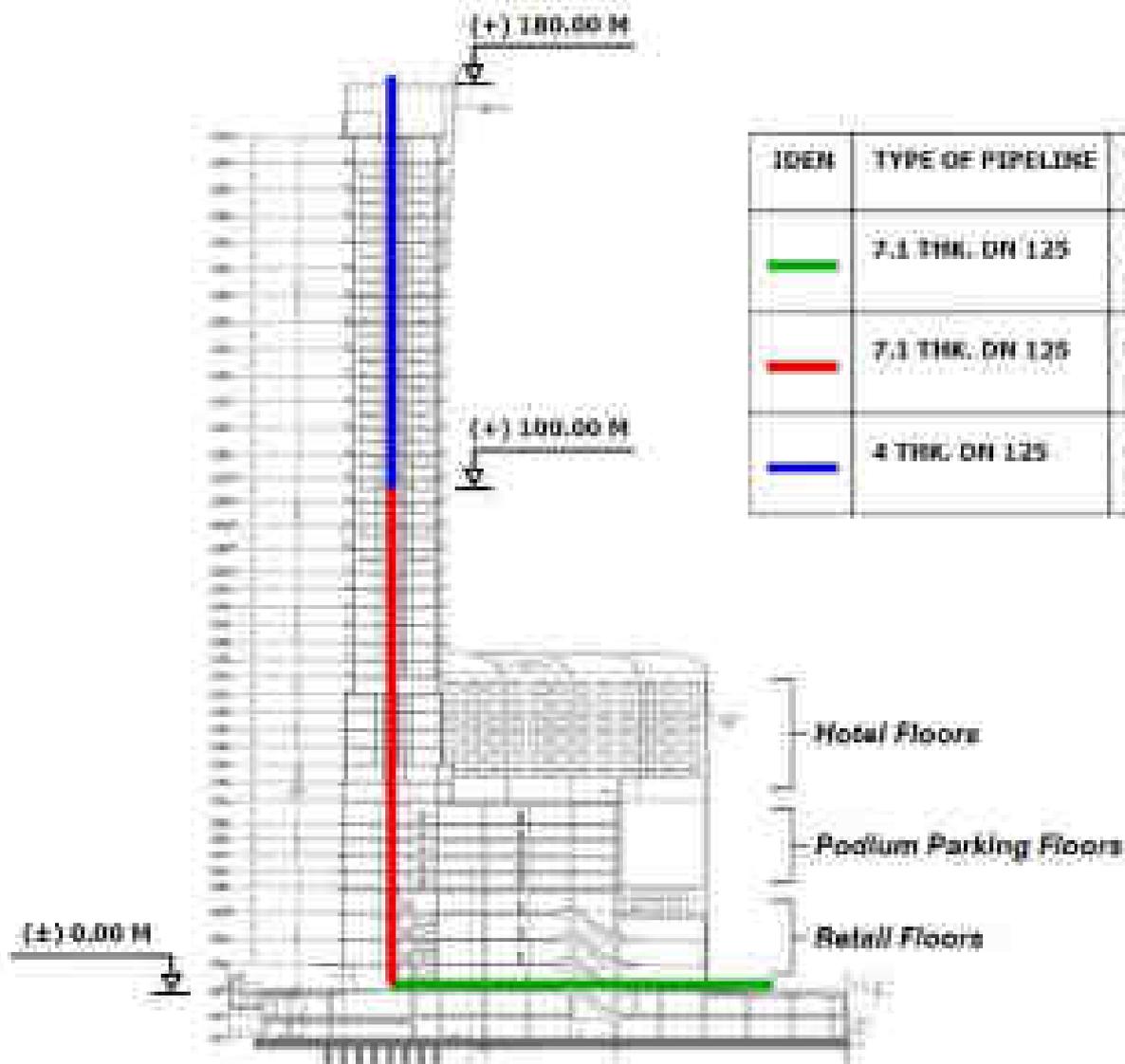
### 3. Proposed Ramp Location Plan



# 3. Proposed Tower Crane & Hoist Layout Plan



### 3. Proposed Concrete Pipeline Layout Plan



| IDEN  | TYPE OF PIPELINE | WHERE TO USE      | PIPELINE LENGTH REQUIRED |
|---|------------------|-------------------|--------------------------|
|  | 7.1 THK. DN 125  | GROUND LINE       | 75 M                     |
|  | 7.1 THK. DN 125  | FROM 0 TO 100 M   | 100 M                    |
|  | 4 THK. DN 125    | FROM 100 TO 180 M | 80 M                     |

# 3. Indicative Temporary Electricity arrangement during Construction

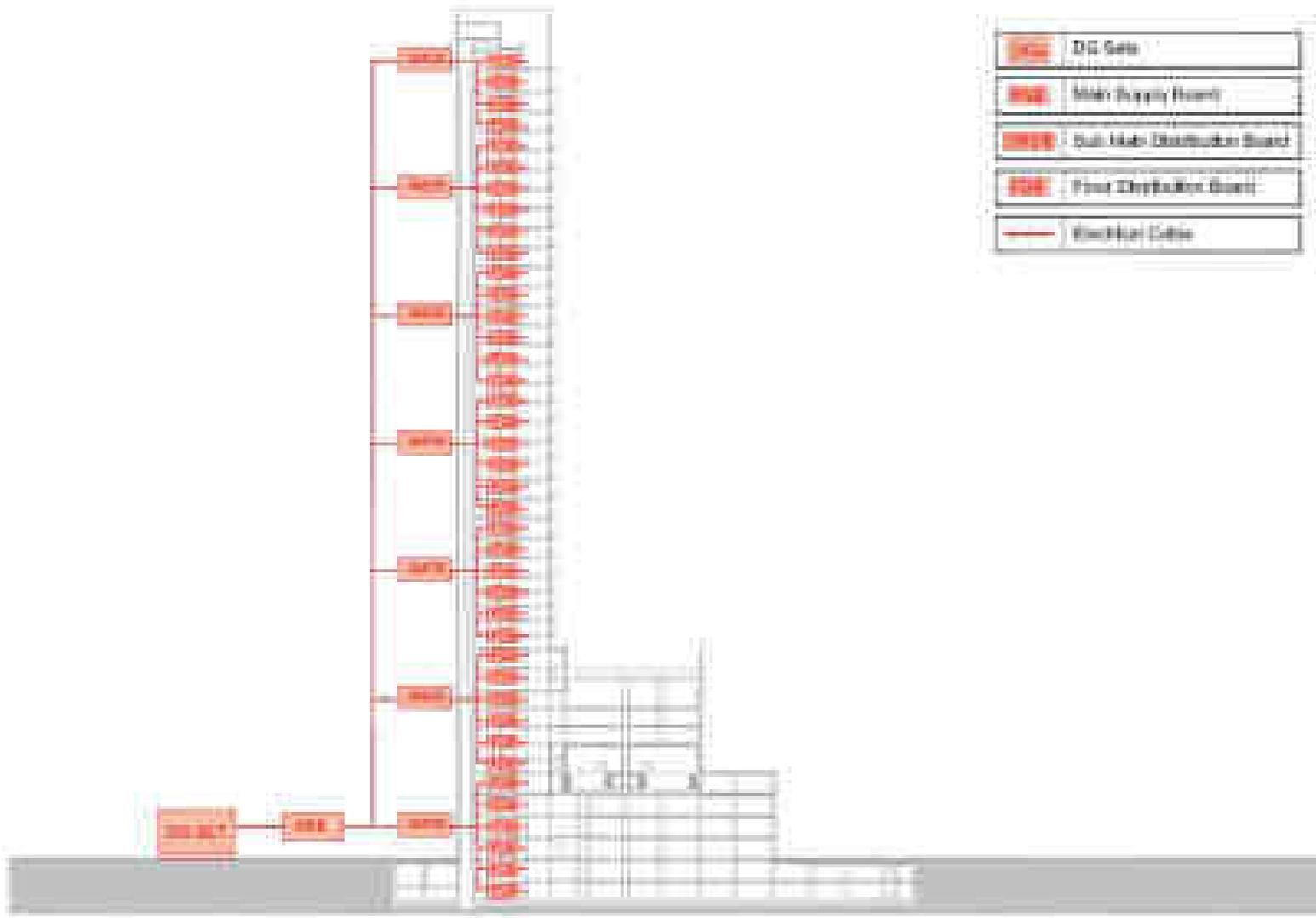


|  |                   |  |                        |  |                       |  |              |
|--|-------------------|--|------------------------|--|-----------------------|--|--------------|
|  | MAIN DISTRIBUTION |  | SECONDARY DISTRIBUTION |  | TERTIARY DISTRIBUTION |  | FLOOD LIGHTS |
|  | POWER CABLES      |  | FENCE                  |  | SAFETY BARRIERS       |  | OPEN AREA    |

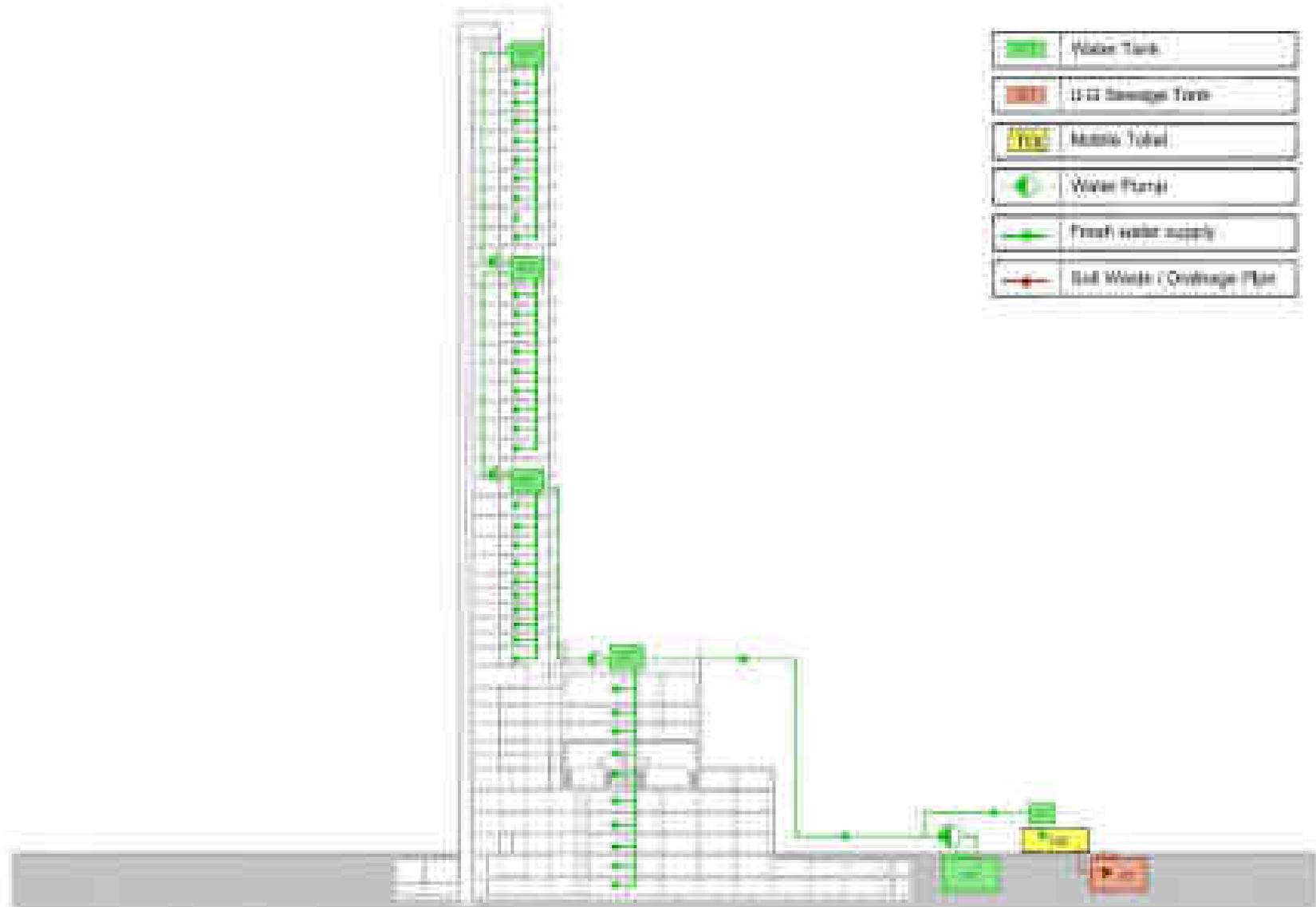




# 3. Indicative Temporary Electrical Services Section Layout



### 3. Indicative Temporary Water Services Section Layout



### 3. Proposed Traffic Management Plan



INDEX

|                         |           |
|-------------------------|-----------|
| Perimeter Access        | - - - - - |
| Vehicle Perimeter       |           |
| Water Run               | 🚒 🚒 🚒     |
| Emergency Exit          | ➡         |
| Emergency Zone          | ⊙         |
| Assembly Point          | 🟩         |
| Fire Point              | 🚒         |
| Drinking water point/BO | 🟩         |
| Fence Line              | ⚡         |
| Security Camera         | 📷         |
| Flagpole                | 🚩         |
| Mobile Toilet           | 🚻         |
| First Aid               | +         |
| Hand Wash               | 🚰         |

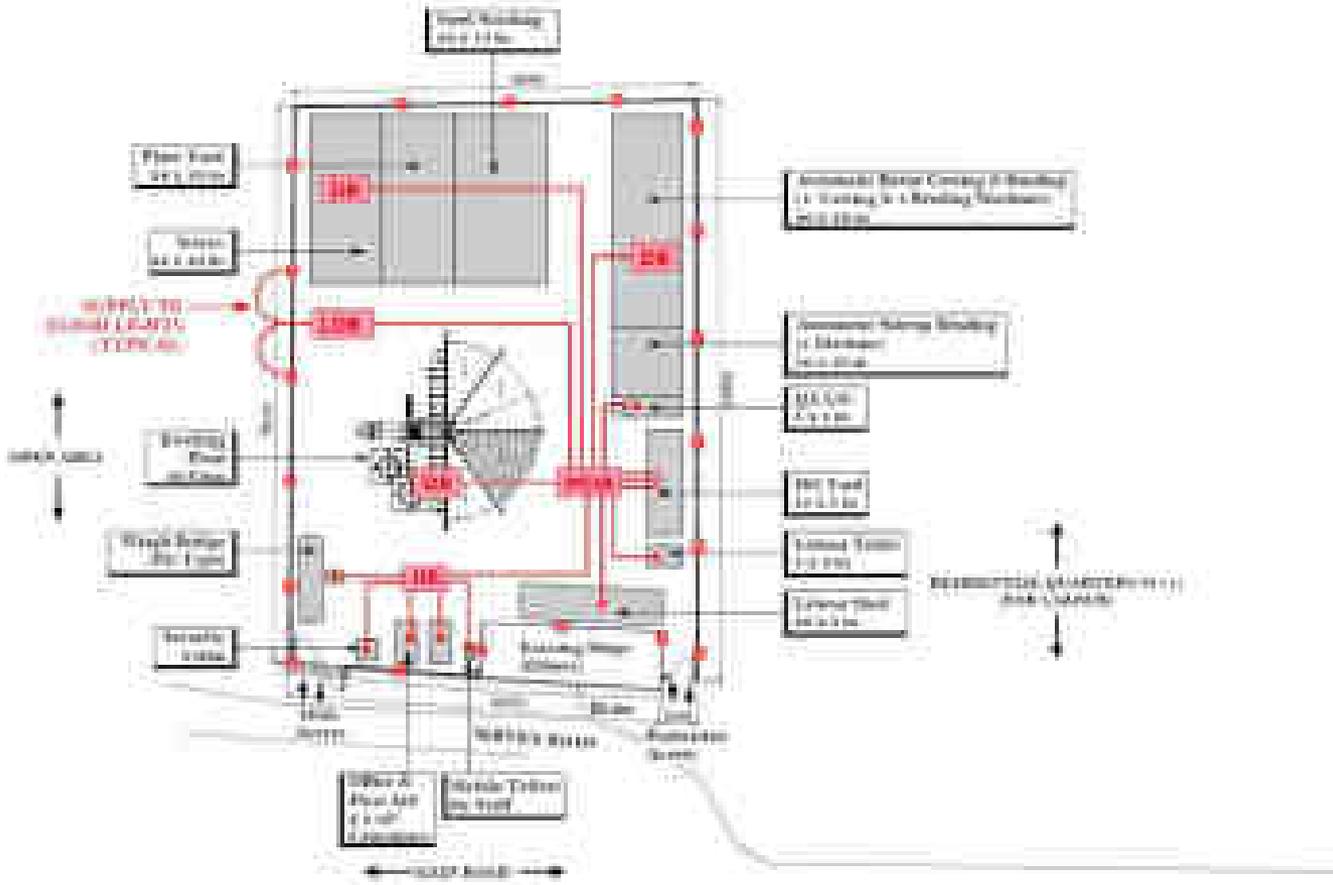
Traffic Control Plan







### 3. Indicative Offsite Batch Plant & Rebar Yard Temporary Electrical Services Section Layout (included in Early Works)



- MAIN DISTRIBUTION BOARD
- DISTRIBUTION BOARD
- LIGHTING DISTRIBUTION BOARD
- FLOOD LIGHTS





### 3. Indicative List of Plant & Equipment

| Description  | Model / Make       | Annual Life Consumed | Recycled or Reusable | Replacement Qty | Total Months |
|--|--------------------|----------------------|----------------------|-----------------|--------------|
| <b>Office Equipment</b>  |                    |                      |                      |                 |              |
| 20 L Co. Computer/Condenser unit   |                    |                      | Internal Transfer    | 1               | 7.0          |
| 20 L Printer/Condenser   |                    |                      | Internal Transfer    | 1               | 41.0         |
| 40 Staff office equipment  |                    |                      | Internal Transfer    | 40              | 7.0          |
| 200 Staff Mobile Tablet  |                    |                      | Internal Transfer    | 1               | 7.0          |
| 200 Industrial Condenser   |                    |                      | Internal Transfer    | 1               | 25.0         |
| 20 L Printer/Condenser   |                    |                      | Internal Transfer    | 1               | 25.0         |
| <b>Power Cables</b>  |                    |                      |                      |                 |              |
| Power Cable 1 - 30 Mts MC 125  |                    |                      | Recycle              | 1               | 12.0         |
| Power Cable 2 - 100 Mts MC 125   |                    |                      | Recycle              | 1               | 21.0         |
| Power Cable 3 - 100 Mts MC 125   |                    |                      | Recycle              | 1               | 21.0         |
| IC 1 Cable box   |                    | 1                    | Purchase             | 1               | 15.0         |
| IC 2 Cable box   |                    | 1                    | Purchase             | 1               | 21.0         |
| IC 3 Cable Box   |                    | 1                    | Purchase             | 1               | 21.0         |
| Storage Boxes  |                    | 3                    | Internal Transfer    | 3               | 25.0         |
| Chain & Sprock   |                    | 3                    | Purchase             | 4               | 25.7         |
| Anti-Collision Device  |                    | 3                    | Internal Transfer    | 3               | 25.0         |
| <b>IT</b>  |                    |                      |                      |                 |              |
| Web page host - 100 Mts  | Altek              |                      | Recycle              | 3               | 25.0         |
| <b>CONCRETE, BRICKS, REINFORCING, CONCRETE PIPES, FORMS &amp; PILING</b> |                    |                      |                      |                 |              |
| Concrete Scaffolding Pile - 30 mt  |                    |                      | Internal Transfer    | 1               | 25.0         |
| Form Work  |                    |                      | Purchase             | 4               | 25.0         |
| Wheel Loader   | JCB                |                      | Purchase             | 1               | 25.0         |
| Mobile Beam Piler  |                    |                      | Recycle              | 1               | 17.0         |
| Concrete Bore  |                    | 3                    | Internal Transfer    | 3               | 22.0         |
| Mobile Concrete Pump - 30000L  | Strong Tower       | 1                    | Purchase             | 3               | 25.0         |
| Concrete Pipe Line   |                    | 3                    | Purchase             | 1500            | 25.0         |
| Power Trencher   | Walker             | 4                    | Internal Transfer    | 4               | 27.0         |
| Pumpjack Concrete Walker   | Atlas Copco Walker | 4                    | Purchase             | 20              | 27.0         |
| <b>Hand tools</b>  |                    |                      |                      |                 |              |
| Ball Bearing Machine - 30M 40  | Spartan            | 3                    | Internal Transfer    | 3               | 25.0         |
| Ball Bearing Machine - 30M 40  | Spartan            | 3                    | Internal Transfer    | 3               | 25.0         |
| Other Bearing Machine  | Spartan            | 1                    | Internal Transfer    | 1               | 25.0         |
| <b>CONCRETE, BRICKS, REINFORCING &amp; MATERIAL HANDLING</b>             |                    |                      |                      |                 |              |
| Mobile Automatic Surface Tension Rolling                                 |                    | 3                    | Purchase             | 4               | 22.0         |



### 3. Indicative List of Plant & Equipment

| Description   | Model / Make         | Asset Life Considered | Method of Purchase | Requirement Qty | Total Months |
|---|----------------------|-----------------------|--------------------|-----------------|--------------|
| <b>Steels Plant &amp; Equipment</b>                 |                      |                       |                    |                 |              |
| Standard Telescope Hoister                          | ZB                   | 7                     | Internal Transfer  | 1               | 28.0         |
| Drill steel hoists                                  | Domex                | 7                     | Purchase           | 1               | 28.0         |
| Tank Mounted Crane                                  | Inter /Hyos          |                       | Partial            | 1               | 27.0         |
| 30 T Mobile Crane                                   |                      |                       | Partial            | 1               | 28.0         |
| 40 T Mobile Crane                                   |                      |                       | Internal Transfer  | 1               | 28.0         |
| 40 T Tractor with Pallet Mixer                      |                      |                       | Partial            | 1               | 24.0         |
| 12000 lbs welder bracket                            |                      |                       | Partial            | 1               | 28.0         |
| Mobile Lighting Tower                               | IR                   |                       | Internal Transfer  | 4               | 11.0         |
| Air Compressor                                      | Atlas Copco          | 7                     | Internal Transfer  | 2               | 28.0         |
| 1 HP Electrical Submersible Pump                    |                      | 5                     | Purchase           | 4               | 14.0         |
| Table Crane, single end                             | DATA                 | 5                     | Internal Transfer  | 2               | 14.0         |
| <b>Waste Plant &amp; Equipment</b>                  |                      |                       |                    |                 |              |
| <b>Markwork related minor plant &amp; equipment</b> |                      |                       |                    |                 |              |
| Pink Compressor                                     | Atlas Copco          | 4                     | Internal Transfer  | 1               | 28.0         |
| Web Helmer Roller                                   | Atlas Copco          | 4                     | Internal Transfer  | 1               | 28.0         |
| <b>Concrete related minor plant &amp; equipment</b> |                      |                       |                    |                 |              |
| Concrete Curing Machine No. 1                       | IRB                  |                       | Purchase           | 1               | 24.0         |
| <b>Mechanical Skidding Plant</b>                    |                      |                       |                    |                 |              |
| 7 ton Disc. Bulding                                 | Fabricated           | 7                     | Internal Transfer  | 20              | 28.0         |
| 1 ton Disc. Bulding                                 | Fabricated           | 7                     | Internal Transfer  | 20              | 28.0         |
| <b>Other Equipment</b>                              |                      |                       |                    |                 |              |
| Total Cranes  | Lotus                | 7                     | Purchase           | 2               | 28.0         |
| Web Crane   | Dubois               | 7                     | Internal Transfer  | 6               | 28.0         |
| Lower Level No. 3 Building                          | Steel                | 7                     | Purchase           | 6               | 28.0         |
| Vertical Laser plumb                                | Topcon               | 7                     | Purchase           | 2               | 28.0         |
| <b>Mobile Pallets</b>                               |                      |                       |                    |                 |              |
| 14 Custom Mobile Tables                             |                      | 7                     | Purchase           | 1               | 27.0         |
| <b>Mechanicals (Hand)</b>                           |                      |                       |                    |                 |              |
| Roller Tynes  | Harwood              | 7                     | Purchase           | 20              | 28.0         |
| Rolling Machine                                     | East Duffly Art. Mfg | 7                     | Internal Transfer  | 4               | 24.0         |
| Pallets with Mesh                                   |                      |                       | Purchase           | 20              | 28.0         |
| Pallets without Mesh                                |                      |                       | Purchase           | 20              | 28.0         |
| Pallets Trays                                       |                      |                       | Purchase           | 20              | 28.0         |
| Drum Storage Tank                                   | Genco                | 5                     | Purchase           | 1               | 27.0         |
| Ring crane  |                      | 7                     | Purchase           | 1               | 28.0         |



### 3. Indicative List of Plant & Equipment

| Description                                   | Model / Make        | Assets Life Considered | Rental or Purchase | Requirement Qty | Total Months |
|---|---------------------|------------------------|--------------------|-----------------|--------------|
| <b>Generators</b>                             |                     |                        |                    |                 |              |
| Diesel Generator 500 Kva No 1 - working       | Cummins             |                        | Internal Transfer  | 1               | 30.0         |
| Diesel Generator 500 Kva No 2 - STANCO Dr     | Cummins             |                        | Buy                | 0               | 30.0         |
| Diesel Generator 250 Kva No 1 - working       | Cummins             |                        | Internal Transfer  | 1               | 30.0         |
| Diesel Generator 250 Kva No 1 - standby       | Cummins             |                        | Internal Transfer  | 1               | 30.0         |
| Diesel Generator 125 Kva No 1 - standby       | Hydram              |                        | Internal Transfer  | 1               | 30.0         |
| Diesel Generator 125 KVA No 1 - standby       | Hydram              |                        | Internal Transfer  | 1               | 40.0         |
| Diesel Generator 125 Kva below camp - working | Hydram              |                        | Internal Transfer  | 1               | 40.0         |
| Diesel Generator 125 Kva below camp - standby | Hydram              |                        | Internal Transfer  | 1               | 40.0         |
| <b>Structures</b>                             |                     |                        |                    |                 |              |
| Footwalk                                      | IMD                 |                        | Purchase           | 03              |              |
| Footwalk - Curbside + Hydraulic Jump Form     |                     |                        | Purchase           | 03              |              |
| Curbed Scaffold                               | Curbed System       |                        | Purchase           | 03              |              |
| Cure Walls                                    | Jump Form           |                        | Purchase           |                 |              |
| Hydraulic Safety Screens                      | PETRI / DCSKA / IMD |                        | Purchase           | 03              |              |
| Edge Protection                               |                     |                        | Purchase           |                 |              |

### 3. Indicative Civil & Structural Scope

| Item  | Quantity | Year 2022                           | LI/BLP<br>EXCLUDED &<br>SUPERSEDED<br>WORK | BLP CONTRACTOR<br>EXCLUDED & LI<br>SUPERSEDED<br>WORK | REMARKS                       |           |                   |   |   |                               |
|---|----------|-------------------------------------|--|---|-------------------------------|-----------|-------------------|---|---|-------------------------------|
| <b>Substructure</b><br>(Not including walls, pile caps, columns, slabs) |          | <b>NOT A Pricing Element</b>        |  |   |                               |           |                   |   |   |                               |
| Working Wells   | 1200     | ✓                                   |  |   |                               |           |                   |   |   |                               |
| Earth Retain  | 1200     | ✓                                   |  |   |                               |           |                   |   |   |                               |
| Excavating  | 1200     | ✓                                   |  |   | By Utility Agreement Contract |           |                   |   |   |                               |
| Site Specific Foundation Works  | 1200     | ✓                                   |  |   | By Utility Agreement Contract |           |                   |   |   |                               |
| Structure Fill Works  |          | ✓                                   |  |   | By Utility Agreement Contract |           |                   |   |   |                               |
| Additional Ground Connected Work  | 1200     | ✓                                   | ✓  |   |                               |           |                   |   |   |                               |
| Foundation  | 1200     | ✓                                   | ✓  |   |                               |           |                   |   |   |                               |
| Steel Reinforced Concrete Slabs   |          | ✓                                   | ✓  |   |                               |           |                   |   |   |                               |
| Post Tensioning Works   | 1200     | ✓                                   |  | ✓   | By Utility Agreement Contract |           |                   |   |   |                               |
| Water Proofing Works  | 1200     | ✓                                   |  | ✓   | By Utility Agreement Contract |           |                   |   |   |                               |
| Masonry Works   | 1200     | ✓                                   | ✓  |   |                               |           |                   |   |   |                               |
| Superstructure  |          | Steel Deck & Deck                   |  | Public<br>Parking                                     | Lifts & Escalator Truss       |           |                   |   |   |                               |
|   |          | Public Areas<br>(Add Area<br>Notes) | Special Areas<br>(Add Area<br>Notes)       | Parking   | Mezz                          | Stairways | Transfer<br>Floor |   |   |                               |
| Foundation  | 1200     | ✓                                   | ✓  | ✓   | ✓                             | ✓         | ✓                 | ✓ |   |                               |
| Steel Reinforced Concrete Slabs   |          | ✓                                   | ✓  | ✓   | ✓                             | ✓         | ✓                 | ✓ | ✓ |                               |
| Post Tensioning Works   | 1200     | ✓                                   | ✓  | ✓   | ✓                             | ✓         | ✓                 | ✓ | ✓ | By Utility Agreement Contract |
| Additional Ground Connected Works                                       | 1200     | ✓                                   | ✓  | ✓   | ✓                             | ✓         | ✓                 | ✓ | ✓ |                               |
| Water Proofing Works  | 1200     | ✓                                   | ✓  | ✓   | ✓                             | ✓         | ✓                 | ✓ | ✓ | By Utility Agreement Contract |
| Reinforced Steel Deck   | 1200     | ✓                                   | ✓  | ✓   | ✓                             | ✓         | ✓                 | ✓ | ✓ | By Utility Agreement Contract |
| Masonry Works   | 1200     | ✓                                   | ✓  | ✓   | ✓                             | ✓         | ✓                 | ✓ | ✓ |                               |

|   |   |
|---|---|
| ✓ | Included                                |
| ✗ | Not applicable / Not included           |
| ⊖ | Currently considered as Provisional sum |



### 3. Indicative Civil & Structural Scope

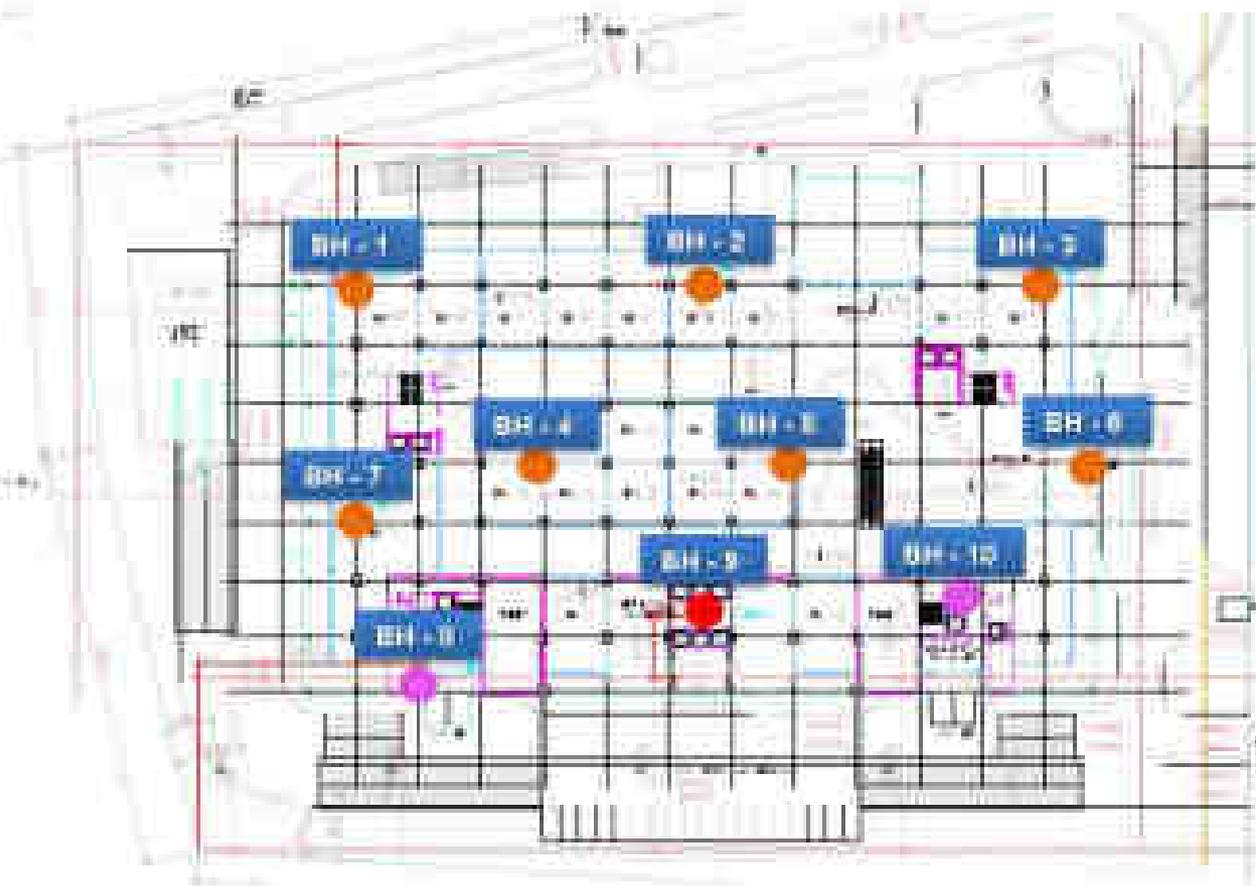
| Item   | Est. Costs  | Team 4 & 5                      |                     |                |                               |             |          |                                   | LIBBY ENGINEER SUPERVISOR WORK | MAY CONTAIN THE ARCHITECT AS SUPERVISOR WORK | REMARKS  |
|--|-------------|---------------------------------|---------------------|----------------|-------------------------------|-------------|----------|-----------------------------------|--------------------------------|--|--|
|  |             | Road Core & Staff               |                     | Public Parking | Road & Remaining Team         |             |          |                                   |                                |  |  |
| Contracted (Included)  |             | Public Space (only when Public) | Trench Area         | Public Parking | Road                          | Asphaltwork | Curbwork | Remaining Area (only when Public) |                                |  |  |
| Planning / Approval / Permits / Fees / Work  | 1000        | ✓                               | •                   | ✓              | ✓                             | ✓           | ✓        | ✓                                 | ✓                              | ✓  |  |
| General Civil & Foundation   | 1000        | ✓                               | •                   | ✓              | ✓                             | ✓           | ✓        | ✓                                 | ✓                              | ✓  | Paving only  |
| Water Features   | 1000        | ✓                               | •                   | ✓              | ✓                             | ✓           | ✓        | ✓                                 | ✓                              | ✓  |  |
| Soft Furnishings   |             | •                               | •                   | •              | •                             | •           | •        | •                                 | •                              | •  |  |
| Wood Finishing Work  | 1000        | ✓                               | •                   | ✓              | •                             | ✓           | ✓        | ✓                                 | ✓                              | ✓  |  |
| Phase 4  |             | Road Core & Staff               |                     | Public Parking | Commercial & Residential Core |             |          |                                   |                                |  |  |
| Contracted (Included)  |             | Public Space (only when Public) | Trench Area / Paved | Paving         | Road                          | Asphaltwork | Curbwork | Remaining Area (only when Public) |                                |  |  |
| Clearing / Soil / Grading / Retaining / Stormwater / Sewer / Gas / Electric / Cable / Fire Alarm / Security / Data / Fiber / Other (Specify) | 1000        | ✓                               | ✓                   | ✓              | ✓                             | ✓           | ✓        | ✓                                 | ✓                              | ✓  | Asymptotically approved / Contracted               |
| Signs & Monitors   | 1000        | ✓                               | ✓                   | ✓              | ✓                             | ✓           | ✓        | ✓                                 | ✓                              | ✓  | Asymptotically approved / Contracted               |
| General Contract   |             | ✓                               | •                   | ✓              | ✓                             | ✓           | ✓        | ✓                                 | ✓                              | ✓  | Asymptotically approved / Contracted               |
| Misc Work 4  |             | Public Space                    | Trench Area         | Paving         | Road                          | Asphaltwork | Curbwork | Remaining Area (only when Public) |                                |  |  |
| Asphalt  |             | ✓                               |                     |                |                               |             | ✓        |                                   |                                | ✓  | Asymptotically approved / Contracted               |
| Signs  |             | ✓                               |                     |                |                               |             |          |                                   |                                | ✓  | Asymptotically approved / Contracted               |
| Wood Deck Area   | 1000        | •                               |                     |                |                               |             |          | ✓                                 |                                | ✓  | Asymptotically approved / Contracted               |
| Structural Steel / Steel Deck  | 1000 / 1000 | •                               |                     |                |                               |             |          | ✓                                 |                                | ✓  | Asymptotically approved / Contracted               |
| Structural / Precast / Form / Castings   |             | •                               |                     |                |                               |             |          | ✓                                 |                                | ✓  | Asymptotically approved / Contracted               |
| General Work 4   |             | All Paving Work                 |                     |                |                               |             |          |                                   |                                |  |  |
| Handrails & Ramps  | 1000        |                                 |                     |                | ✓                             |             |          |                                   | ✓                              | ✓  |  |
| Soft & Lawn Landscaping Work   |             |                                 |                     |                | ✓                             |             |          |                                   | ✓                              | ✓  | All Landscaping is currently approved / Contracted |

- ✓ Included
- Not applicable / Not Included
- Currently considered as Provisional work



# 3. Geotechnical Profile

## Bore Hole Location Plan

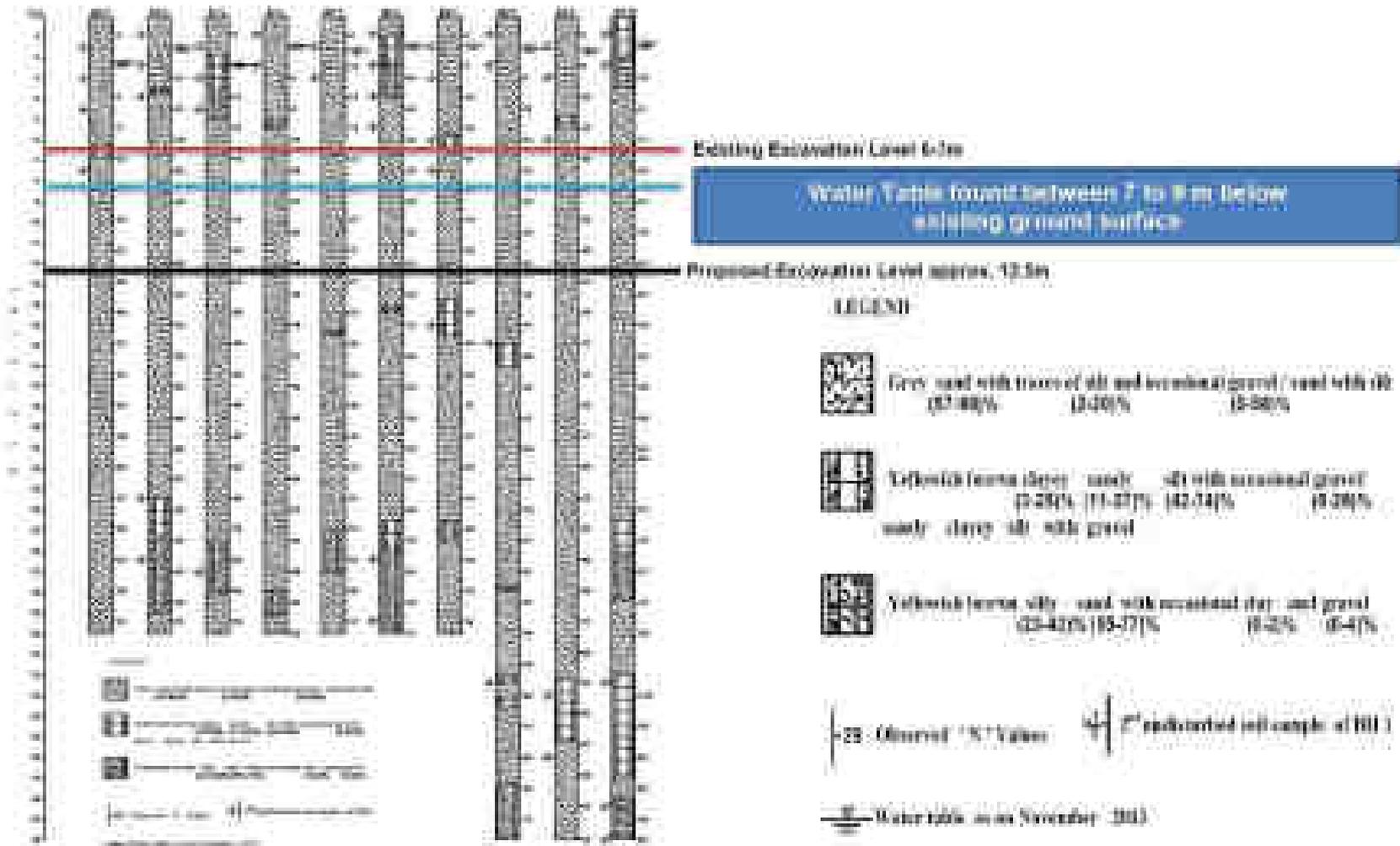


| SL | LEVELO OF BORE HOLE | NO | DEPTH OF BORE | SYMBOL |
|----|---------------------|----|---------------|--------|
| 01 | BH-1 TO BH-7        | 1  | 30 m          | ●      |
| 02 | BH-8 & 12           | 2  | 10 m          | ●      |
| 03 | BH-9                | 1  | 30 m          | ●      |

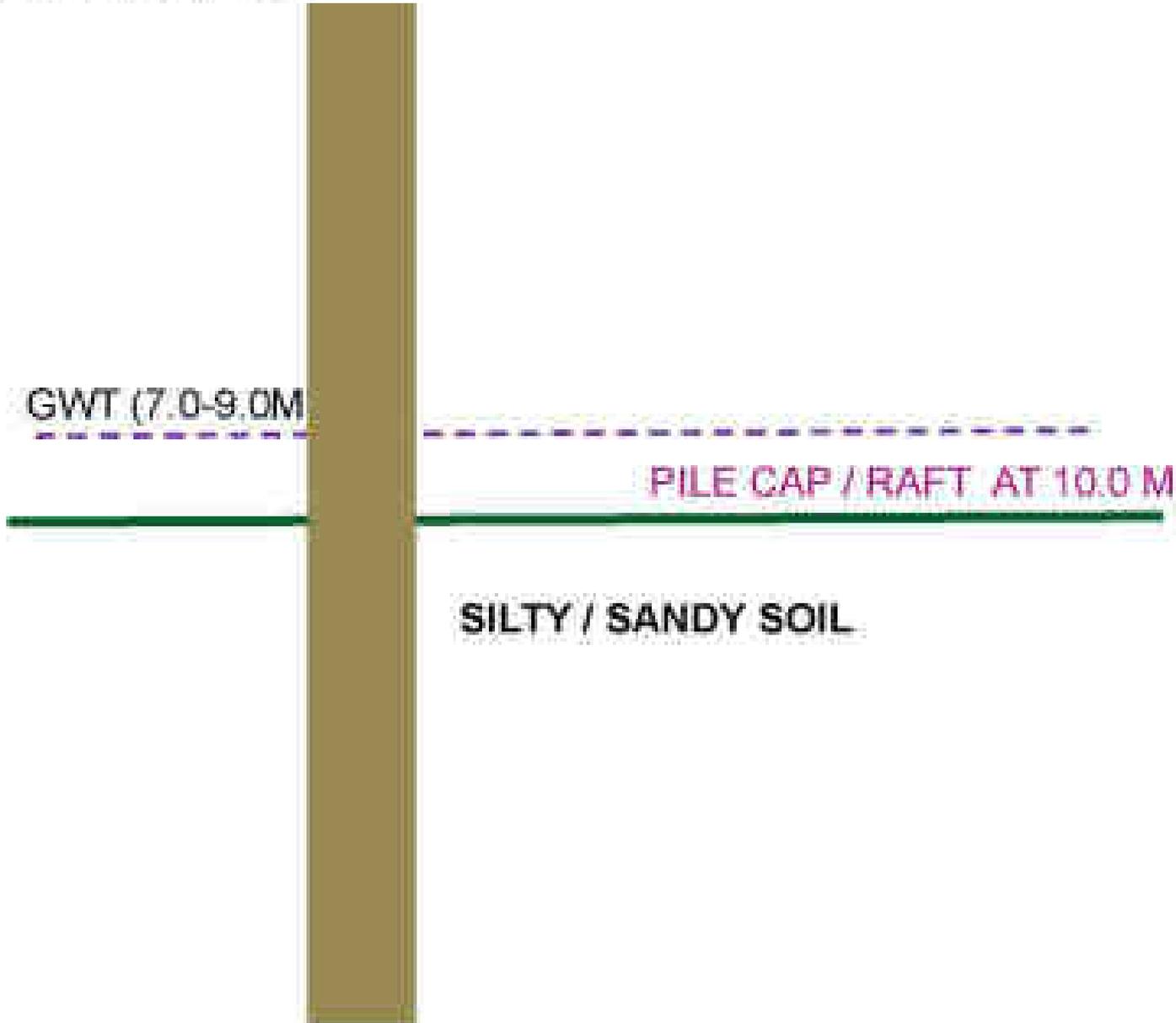
Information provided by Owner



### 3. Soil Analysis / Geotechnical Information provided by Owner



### 3. Soil Strata



# 3. Substructure - Foundation Works

## Scope of Work

### Foundations

#### High Rise Tower A

Based on the soil investigation and the Geotechnical Engineer's recommendations, the high rise tower will be supported on a raft foundation with settlement reducing piles (nos. and diameters to be finalized)

#### Podium and Low Rise areas

Individual piles or piles in groups of two could support the loads of the low-rise structure. Alternatively, a mat foundation could be used in the low-rise and mid-rise portion.

The lowest basement level is founded within the water table and will likely be subject to hydrostatic uplift pressures. A 300 mm thick slab, supported by spread footings or by a continuous strip footing will be designed for net hydrostatic pressures. The building's weight at the footings is utilized to resist the uplift pressures.

### Basement Construction

- Basement Construction requires a 10 m deep excavation. A perimeter shoring system consisting of secant piles and a capping beam has been provided all around the building perimeter. A dewatering system will be utilized during construction of the raft slab and lower basement.
- The floor slabs are designed to be supported vertically by the secant pile wall and the capping beam. Four strips will be provided along the perimeter to minimize the shrinkage cracks.
- Basement slabs consist of a post tensioned concrete slab with post tensioned band beams supported by concrete columns.

## Procurement Strategy

- The excavation works will be carried out by a subcontractor, closely supervised by LI.
- LI intend to self-deliver the substructure works using its own trained & experienced workforce to the maximum extent possible.
- Dewatering, Piling works, Waterproofing and Anti termite treatment will be undertaken by specialist sub-contractors known to LI and will be closely managed and supervised by LI.



# 3. Superstructure (Concrete, Blockwork & Structural Steel work)

## Scope of Work

### Tower A (G+38)

- ✓ 3 Levels of Retail floors & 1 Food court level
  - ✓ 5 Levels of Car Park (L4-B) and 1 Service floor level
  - ✓ 5 Mid Rise Hotel levels & 1 Services level
  - ✓ High Rise Tower with 23 Levels and Sky bar at Roof Terrace
- RCC Concrete works, Structural Steel, Waterproofing, Masonry and related works
  - Rendered blockwork masonry for vertical partitions



### Tower B (G + 3)

- RCC Concrete works, Waterproofing, Masonry and related works

## Structural Framing system

- Project is designed as a concrete frame with load bearing walls, serving as shear walls to resist wind and earthquake loads.
- Tower slabs are one way post tensioned slabs spanning between bearing walls with link beams across the corridor and perimeter beams
- Majority of podium and basement slabs are one-way post-tensioned bonded slabs
- Slabs in B1 floor to Level 3 designed as conventional reinforced slabs with post tensioned band beams to provide flexibility for future usage

## Procurement Strategy

- LI intend to self deliver the Superstructure works using its own trained & experienced workforce to the maximum extent possible
- Waterproofing, Post Tensioning works and any structural steelwork elements will be undertaken by specialist sub-contractors and closely managed and supervised by LI

### 3. Proposed Formwork Solutions

| Destination                     | Formwork System   | Quantity (SqM) |
|---------------------------------|---|----------------|
| Slab                            | Cuplok with Aluminium beam  | 33,500         |
| Core walls                      | Jump Formwork system (Crane handled)  | 3,000          |
| Column Ring Tower (Residential) | Adjustable panel system   | 1,000          |
| Column Residential Tower        | Mobile Formwork (MO) (Residential)  | 375            |
| External Scaffolding            | Full height up to the Hotel Top, 3 Floors independently at each level for Residential Tower | 22,000         |
| Safety Screen (Safe Pro Type)   | For 3 Floors on Residential Tower   | 4,000          |
| Tower B (Waffle slab)           | Cuplok System with waffle deck  | 2,000          |



Cuplok Formwork Proposed



Cuplok-Slab Formwork Proposed

#### Cuplok system with Aluminium beam

- This system comprises Primary and Secondary light weight Aluminium beams
- Primary beams rest on Adjustable Slingup Head which are supported by Cup lock Standards
- They form modular sized grids of size 1.2 m x 0.9 m. for beams and 1.8m x 1.2m for slabs
- The elements are light in weight and can be manually handled

#### Core walls Formwork system

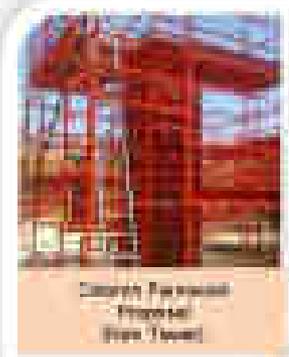
- The system consists of steel walters / soldier and aluminum primary beams.
- They are crane handled, resulting in faster turn around time and uniform high quality finish

#### Column Formwork system (Non Tower)

- The system consists of adjustable panels
- These panels are made outside for the various sizes of walls
- They are crane handled, resulting in faster turn around time and uniform high quality



Core Wall (Crane Assisted Jump Formwork)



Column Formwork Proposed (Non Tower)

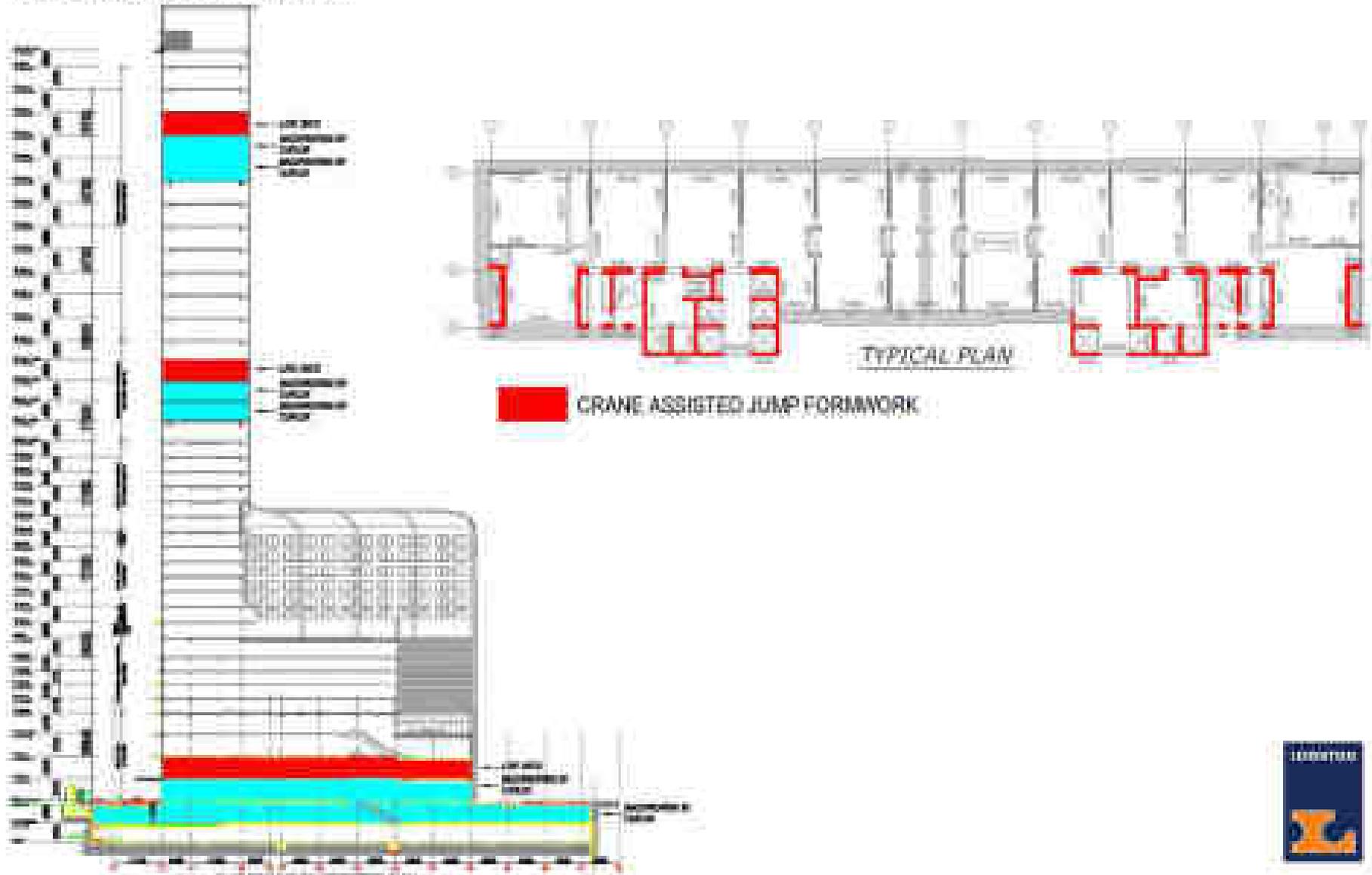


Waffle Deck Formwork

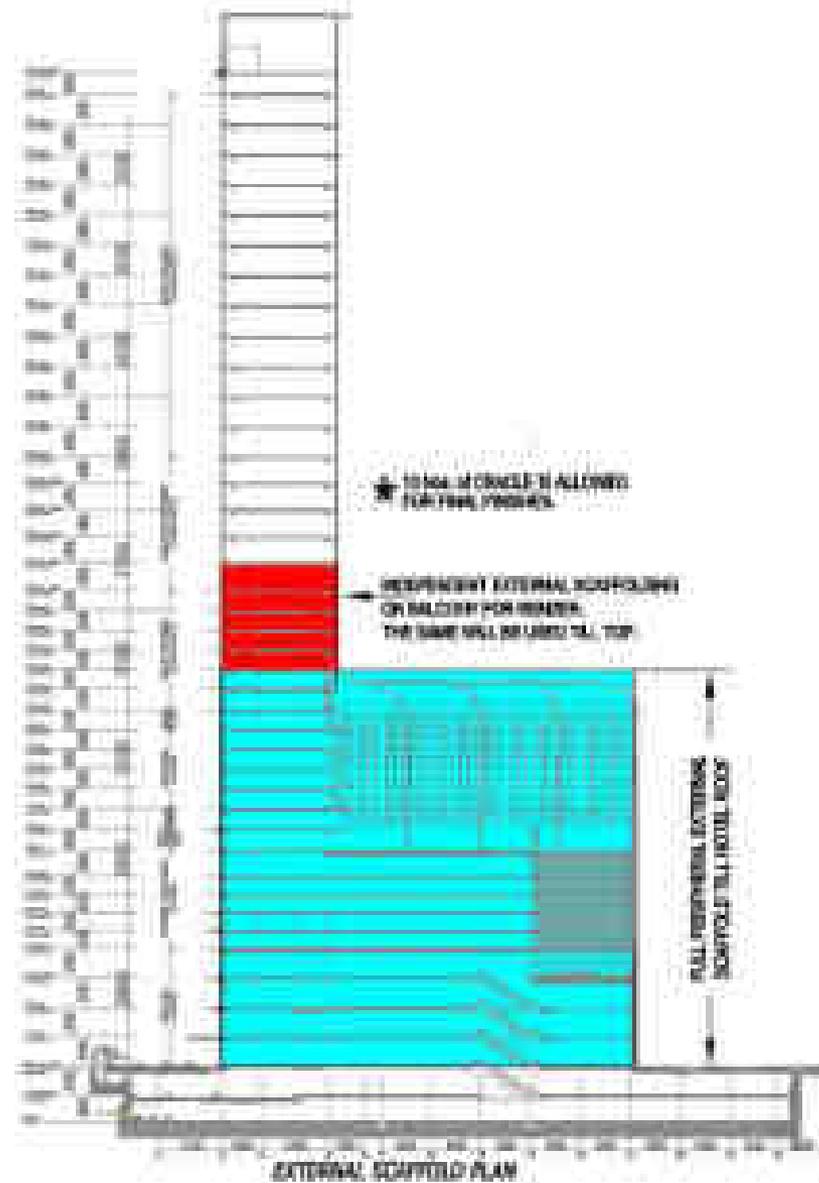


# 3. Proposed Slab Formwork Solutions

Slab Formwork Execution Plan



### 3. Proposed External Scaffold Plan





### 3. Indicative MEP Works Scope Matrix (Provisional Sum)

| MEP System Package  | Structural | Elect | CL/Fuel | Plumbing | HVAC           | Fire/Fire | Specialty/Other (Security, IT, Safety, etc.) | Estimated %             |
|---|------------|-------|---------|----------|----------------|-----------|--|-------------------------|
| <b>HAZARDOUS SYSTEMS</b>  |            |       |         |          |                |           |  |                         |
| Control Room, Control Room, IT & Safety Rooms, Control Rooms, and other related rooms           |            |       |         |          | ✓              |           |  | 11                      |
| MEP work in areas of hazardous materials (if other areas)                                       | ✓          | ✓     | ✓       | ✓        | ✓              | ✓         | ✓  | 11                      |
| Control Room (Control Room) for all fire & safety   |            |       |         |          | ✓              |           |  | 11                      |
| Work in areas of hazardous materials (Control Room, Control Rooms, and other related rooms)     | ✓          | ✓     | ✓       | ✓        | By Trade/Owner | ✓         | ✓  | 11                      |
| Control Room (Control Room) for all fire & safety   | ✓          | ✓     |         | ✓        | By Trade/Owner | ✓         | ✓  | 11                      |
| MEP work in areas of hazardous materials (Control Room, Control Rooms, and other related rooms) | ✓          | ✓     | ✓       | ✓        | ✓              | ✓         | ✓  | 11                      |
| <b>ARCHITECTURAL SYSTEMS</b>  |            |       |         |          |                |           |  |                         |
| Structural System   | ✓          | ✓     | ✓       | ✓        | ✓              | ✓         | ✓  | 11                      |
| Structural System (Control Room, Control Rooms, and other related rooms)                        |            |       |         |          | ✓              |           |  | 11                      |
| The main Control Room (Control Room, Control Rooms, and other related rooms)                    |            |       |         |          | ✓              |           |  | 11                      |
| MEP work in areas of hazardous materials  | ✓          | ✓     | ✓       | ✓        | ✓              | ✓         | ✓  | 11                      |
| MEP work in areas of hazardous materials (Control Room, Control Rooms, and other related rooms) |            |       |         |          | ✓              |           |  | 11                      |
| <b>PLUMBING &amp; SANITARY</b>  |            |       |         |          |                |           |  |                         |
| MEP work in areas of hazardous materials  | ✓          | ✓     | ✓       | ✓        | By Trade/Owner | ✓         | ✓  | 11                      |
| MEP work in areas of hazardous materials  |            |       |         |          | ✓              |           |  | 11                      |
| MEP work in areas of hazardous materials  | ✓          | ✓     | ✓       | ✓        | By Trade/Owner | ✓         | ✓  | 11                      |
| MEP work in areas of hazardous materials  | ✓          | ✓     | ✓       | ✓        | By Trade/Owner | ✓         | ✓  | 11                      |
| MEP work in areas of hazardous materials (Control Room, Control Rooms, and other related rooms) |            |       |         |          | ✓              |           |  | MEP approved contractor |
| MEP work in areas of hazardous materials (Control Room, Control Rooms, and other related rooms) |            |       |         |          | ✓              |           |  | 11                      |
| MEP work in areas of hazardous materials (Control Room, Control Rooms, and other related rooms) |            |       |         |          | ✓              |           |  | 11                      |
| MEP work in areas of hazardous materials (Control Room, Control Rooms, and other related rooms) |            |       |         |          | ✓              |           |  | MEP approved contractor |
| MEP work in areas of hazardous materials (Control Room, Control Rooms, and other related rooms) |            |       |         |          | ✓              |           |  | 11                      |



### 3. MEP Works Scope Matrix (Provisional Sum)

| MEP Work Package  | Standard   | ASME               | CEC PSE | Health | Fire          | Security | Current 2024 (Comms, LIT, Data, Telecom) | Approved By               |
|---|--|--------------------|---------|--------|---------------|----------|--|---------------------------|
| <b>ELECTRICAL</b>   |  |                    |         |        |               |          |  |                           |
| MEP 01: Mainroom Cables, Cable tray, PT, lighting, mounting, PT Panels, Distribution and control (Mains)      | By Local Supply Authority / Bylaws only  |                    |         |        |               |          |  |                           |
| PT (Mains) Cables, Distribution PT, Interlocking Air Switch and CT, T rating, Selection equipment and setting |  |                    |         |        |               |          |  | LI                        |
| LT Panels, Air distribution panels, Heat Panels, Fan Coil   | ✓  | ✓                  | ✓       | ✓      | By Heat Panel | ✓        | ✓  | LI                        |
| LT systems (Panel & cable tray, ring, interlocking, extra energy, safety, cabinet rating & setting)           | ✓  | ✓                  | ✓       | ✓      | By Heat Panel | ✓        | ✓  | LI                        |
| DB and sub-installation, Power supply, PSE ratings, CE, PSE   |  |                    |         |        |               |          |  | LI                        |
| Lighting control system, LED Board, lighting fixtures, Control, Switch and Switch gear                        |  |                    |         |        |               |          |  | LI                        |
| Lighting  | ✓  | •                  | ✓       | •      | By Heat Panel | ✓        | ✓  | LI                        |
| Emergency Lighting with 90m PS Panels or LED Unit   | •  | •                  | •       | •      | •             | •        | ✓  | LI                        |
| <b>COMMUNICATIONS, SECURITY &amp; OTHERS</b>  |  |                    |         |        |               |          |  |                           |
| Network Transmission System (Data center and Server (DB))   |  |                    |         |        |               |          |  | Approved Customer         |
| Network Transmission System (Customer)  | ✓  | ✓                  | •       | •      | •             | •        | •  | Approved Customer         |
| Accessories for Protection and Health system  |  |                    |         |        |               |          |  | Jointly approved Customer |
| PA system with 2-way talk back, SIPS  |  |                    |         |        |               |          |  | Jointly approved Customer |
| LAN/WAN using MPLS and Ethernet switches  | •  | No PSE rating only | •       | ✓      | ✓             | ✓        | •  | Approved Customer         |
| ETH system (DB, DB to Data)   | •  | ✓                  | ✓       | ✓      | ✓             | ✓        | •  | Approved Customer         |
| Security system: CCTV, Access control, Alarm System   | CCTV available in all common areas (Lobby, Corridor, entrance, Basement, Terrace, Plant Room), Access control in HR, HRM, Entrance, Elevator Lobby at Building entrance and exit |                    |         |        |               |          |  | Jointly approved Customer |
| Building Management system  |  |                    |         |        |               |          |  | Jointly approved Customer |
| Fire Alarm Management system  | ✓  | •                  | ✓       | •      | •             | •        | •  | Approved Customer         |
| Backup power system   |  |                    |         |        |               |          |  | Approved Customer         |



### 3. External Envelope / Façade (Provisional Sum)

#### Indicative Scope of Works:

Retail & Foodcourt: A mixture of glazed façades with stone cladding

Hotel and Tower Residential Studios: Glazed fixed and sliding windows with glass railings in balconies

Parking Floors: Louver Screen walls

Terrace: Screen Wall

#### Procurement Strategy

- Early appointment of Façade Consultants and any specialist subcontractor for buildability input
- Consider undertaking simpler façade element erection by LI's skilled workforce, under the supervision of specialist façade subcontractor
- Running workshops with Specialists / Sub-contractor senior management, dealing with issues such as safety, quality, innovation etc.
- Consider setting up onsite façade assembly line in basement areas



### 3. Internal Finishes (Provisional Sum)

#### Scope of Work

Provisional Sum included for finishes to the shell and core public fit out areas. Currently LI has included common areas facilities finishes including entrance foyers, lobbies, common & service corridors, public toilets, refuge & service areas, plant rooms & car park. Finishes to the studios are also considered as a provisional sum as per indicative finishes schedule

#### Procurement Strategy

LI would consider the self delivery of:

- Plastering
- Flooring
- False ceilings
- Door sets
- Painting works
- Sanitaryware & fittings



### 3. Indicative Finishes Schedule for Studios

| SIMPLEX STUDIOS = 192 nos                       |
|---|
| <b>ITEM</b>                                     |
| <b>LIVING AREA</b>                              |
| Flooring - Imported marble                      |
| Skirting - 100 mm. high marble skirting         |
| Walling - Acrylic Emulsion paint on pop putting |
| Ceiling - Acrylic Emulsion paint                |
| Flush doors (Main Door)                         |
| <b>KITCHEN</b>                                  |
| Dado - Lacquered glass                          |
| <b>TOILETS</b>                                  |
| Flooring - Antiskid Ceramic Tiles               |
| Dado - 600x300mm. Vitrified tiles               |
| Ceiling - Moisture Resistant False Ceiling      |
| Sliding door (Toilet)                           |
| <b>BALCONY</b>                                  |
| Flooring - Ceramic tiles Size 300x300mm         |
| Skirting - Ceramic tiles Size                   |
| Coping - Ceramic tiles Size                     |
| Sliding Doors (Balcony)                         |

| SUPER STUDIOS / DUPLEX = 544 nos                |
|---|
| <b>ITEM</b>                                     |
| <b>LIVING AREA</b>                              |
| Flooring - Imported marble                      |
| Skirting - 100 mm. high marble skirting         |
| Walling - Acrylic Emulsion paint on pop putting |
| Ceiling - Acrylic Emulsion paint                |
| Flush doors (Main Door)                         |
| Wooden Treads on Metal Frame work               |
| <b>KITCHEN</b>                                  |
| Dado - Lacquered glass                          |
| <b>TOILETS</b>                                  |
| Flooring - Antiskid Ceramic Tiles               |
| Dado - 600x300mm. Vitrified tiles               |
| Ceiling - Moisture Resistant False Ceiling      |
| Sliding door (Toilet)                           |
| <b>BALCONY</b>                                  |
| Flooring - Ceramic tiles Size 300x300mm         |
| Skirting - Ceramic tiles Size                   |
| Coping - Ceramic tiles Size                     |
| Sliding Doors (Balcony)                         |



### 3. External Works / Landscaping

#### Scope of Work

- This will potentially include perimeter roads, pavements, landscaped retail podium, water features, horticultural operations and services including labour, equipment, services and transport for plant materials, good earth, top soil, manures, pesticides etc.

#### Procurement Strategy

- LI intend to self deliver any hard landscaping and sub-contract specialist soft landscaping areas etc.
- Secure supplies of suitable trees and plants from a reliable nursery at an early stage of the programme



## 4. Programme Overview



## 4. Local Climate Conditions

| Month:                              | Jan          | Feb          | Mar          | Apr         | May         | Jun          | Jul           | Aug           | Sep           | Oct          | Nov         | Dec        | Year           |
|-------------------------------------|--------------|--------------|--------------|-------------|-------------|--------------|---------------|---------------|---------------|--------------|-------------|------------|----------------|
| Average High °C<br>(°F)             | 21<br>(70)   | 24<br>(75)   | 30<br>(86)   | 36<br>(87)  | 41<br>(105) | 40<br>(104)  | 38<br>(100)   | 32<br>(90)    | 24<br>(75)    | 18<br>(64)   | 13<br>(55)  | 7<br>(45)  | 21.8<br>(81.2) |
| Average low °C<br>(°F)              | 7<br>(45)    | 10<br>(50)   | 15<br>(59)   | 21<br>(70)  | 27<br>(81)  | 29<br>(84)   | 27<br>(81)    | 25<br>(77)    | 25<br>(77)    | 19<br>(66)   | 12<br>(54)  | 8<br>(46)  | 18.0<br>(64)   |
| <u>Precipitation</u><br>mm (inches) | 25<br>(0.98) | 22<br>(0.87) | 17<br>(0.67) | 7<br>(0.28) | 5<br>(0.20) | 85<br>(3.35) | 211<br>(8.31) | 173<br>(6.81) | 150<br>(5.91) | 31<br>(1.22) | 1<br>(0.04) | 5<br>(0.2) | 715<br>(28.15) |

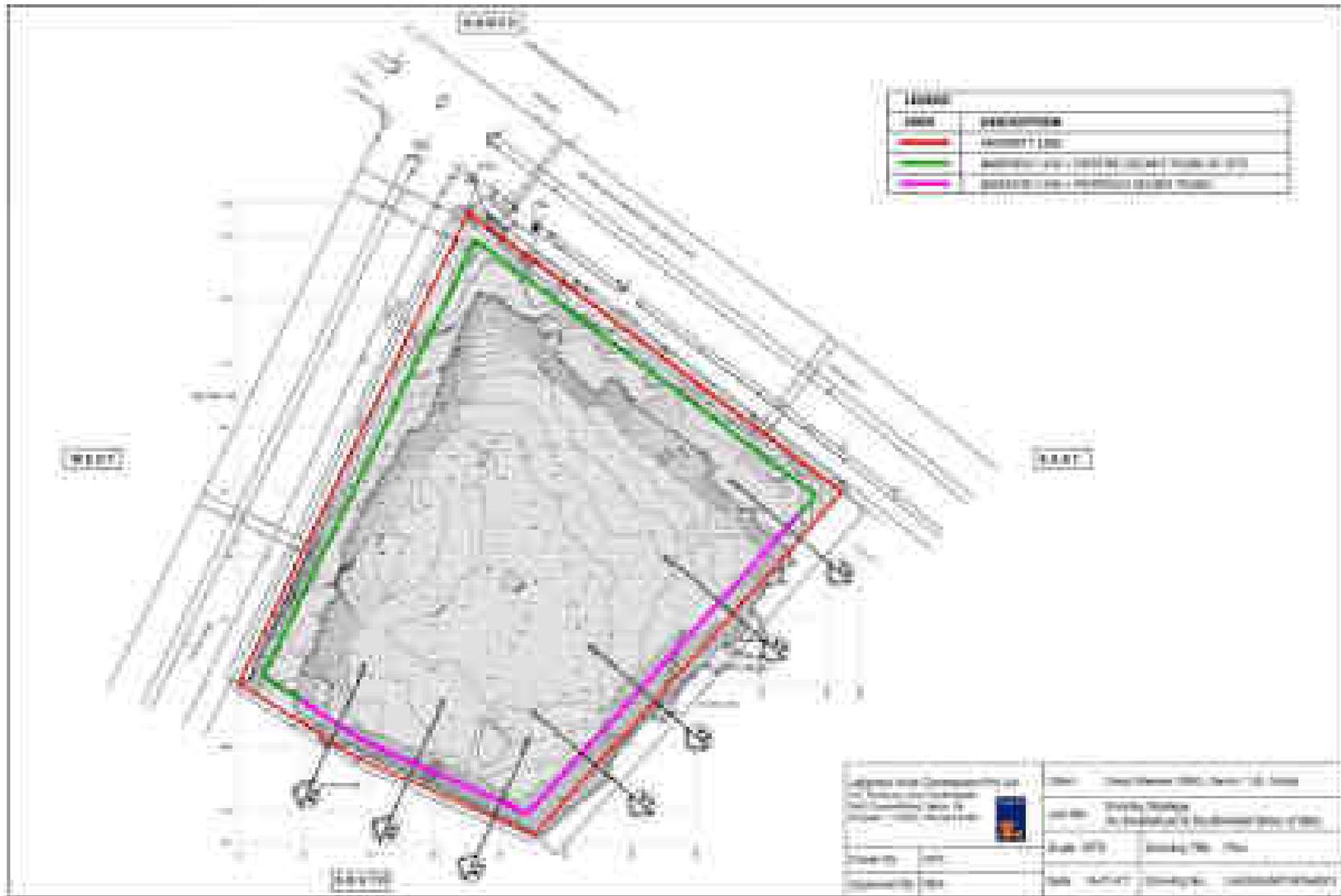
Source: [Florida Weather](#)



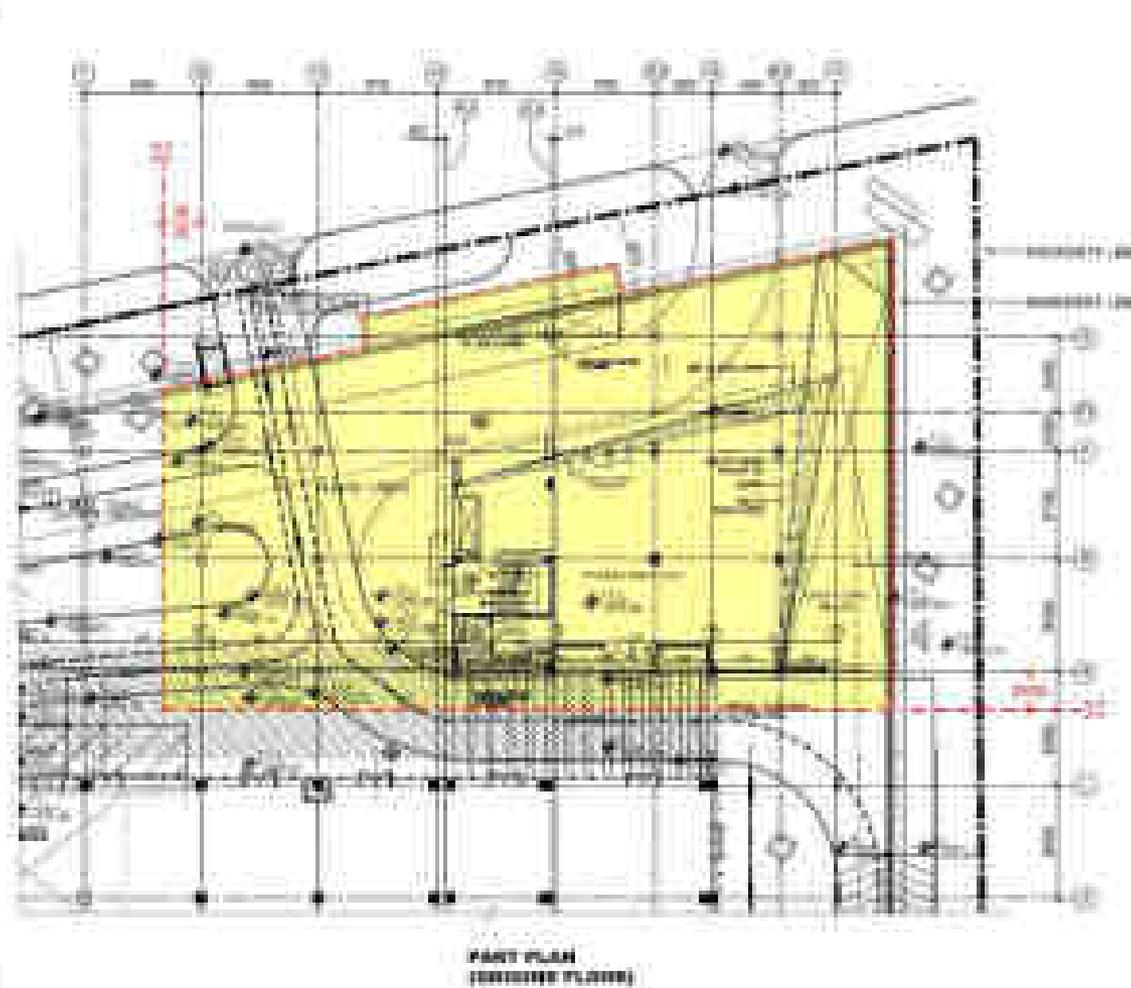
## 4. Early Works Onsite

- Site Dewatering & Disposal
- Shore piling installation to remaining two sides of plot
- Management of Owner's excavation works contractor
- Management of Owner's Piling Contractor for Tower A
- Construction of Tower B Basements and Ground Floor Slab
- Drainage covers to existing perimeter drains
- External landscaping adjacent to Tower B corner
- All temporary services set up for all on-site facilities
- Site barricading

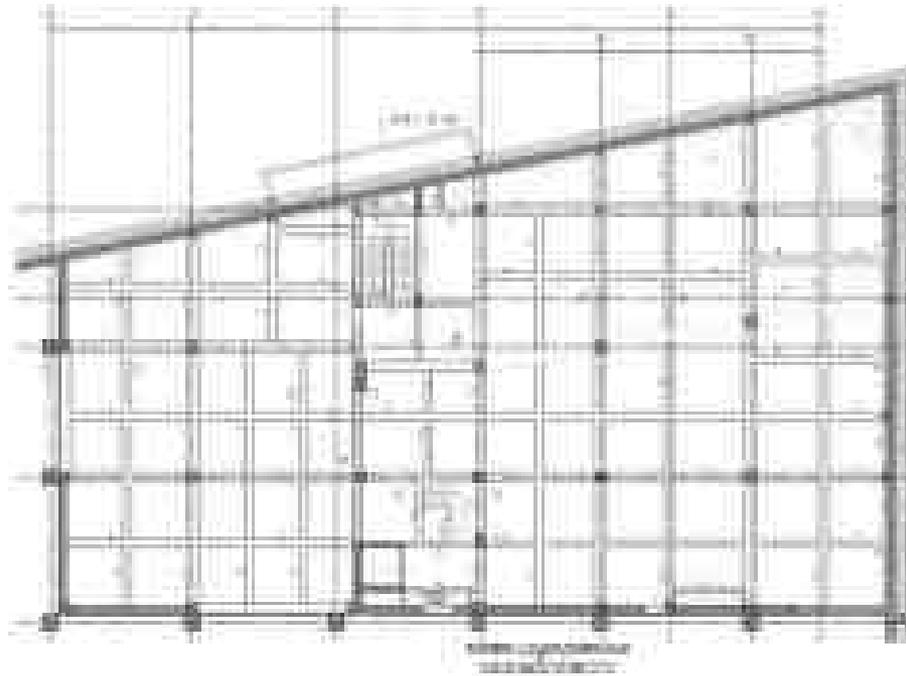
# 4. Current & Proposed Site Shoring (Early Works)



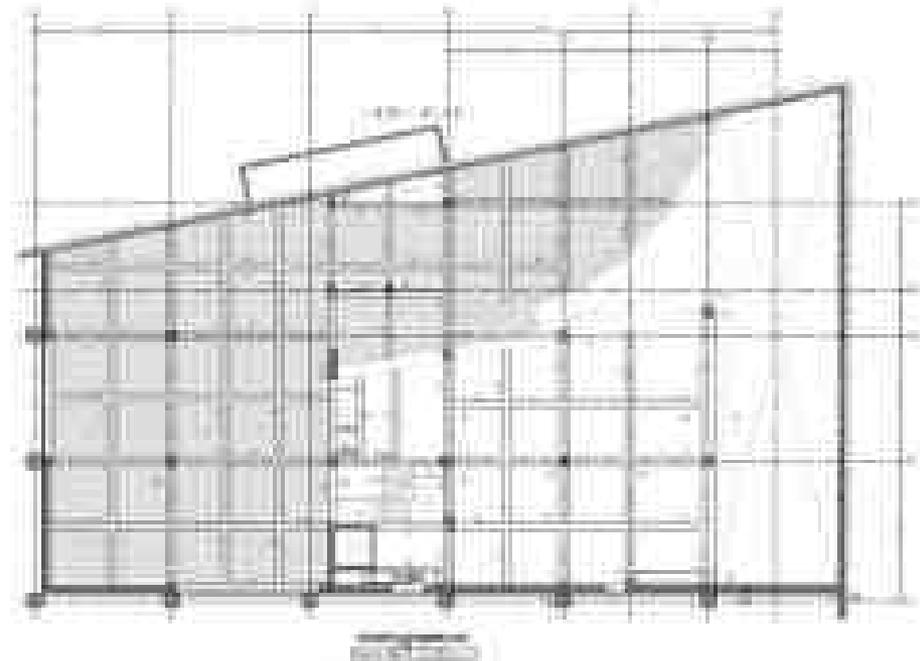
# 4. Tower B Structure Demarcation Plan



## 4. Tower B Basement Structure Plans (Early Works)



**Basements 1 & 2**  
**Structural Slab Area – 1,632m<sup>2</sup>**



**Ground Floor**

## Programme Overview – Key Planning Considerations – Tower B

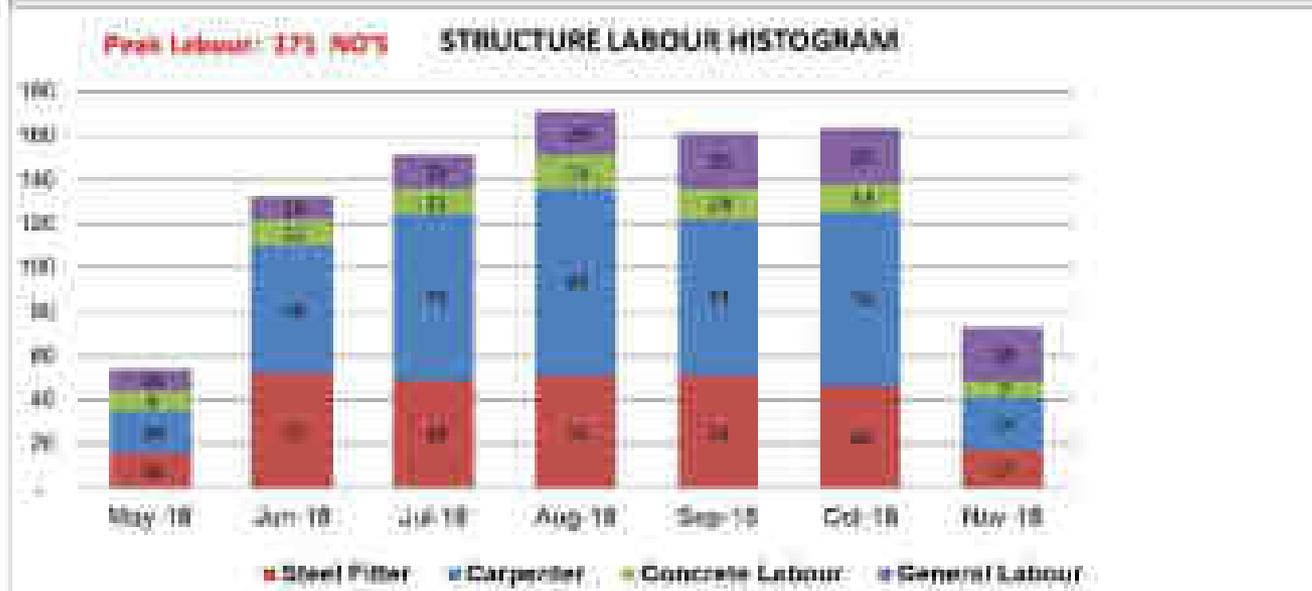
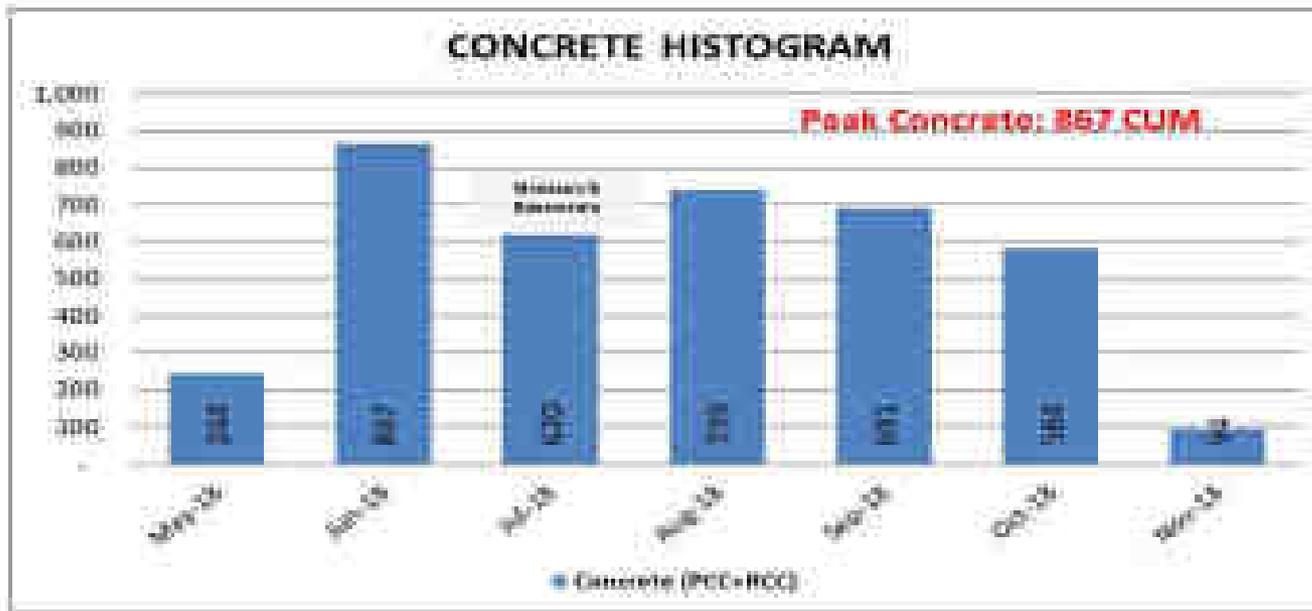
| FLOOR             | No. Cores for Tower (Dues) | Floor to Floor Height (m) |
|-------------------|----------------------------|---------------------------|
| LMR/OHT           | 12                         | 4.2                       |
| Terrace Slab      | 13                         | 5.1                       |
| 3rd Floor Slab    | 13                         |                           |
| 2nd Floor Slab    | 13                         |                           |
| 1st Floor Slab    | 14                         |                           |
| Ground Floor Slab | 21                         | 5.1                       |
| Basement 1 Slab   | 18                         | 4.5                       |
| Foundation        | 42                         | -                         |

| Other Information                               |    |
|---|----|
| No. of Cores Up to GF                           | 2  |
| No. of Cores for Tower B                        | 2  |
| No. of Lift Shafts Up to GF                     | 1  |
| No. of Lift Shafts for Tower                    | 1  |
| No. of Columns / walls (Total / floor) up to GF | 38 |
| No. of Columns / walls (Total / Typical floor)  | 11 |
| Stairwells                                      | 1  |

|                                |                |
|--------------------------------|----------------|
| TYPICAL FLOOR PLATE UP TO GF   | 1890 SQMT      |
| TYPICAL FOUR AREA UP TO GF     | 848 SQMT       |
| NO. OF FOURS UP TO GF          | 2              |
| TYPICAL FLOOR PLATE TOWER      | 400 - 480 SQMT |
| NO. OF FOURS FOR TYPICAL FLOOR | 1              |
| POST TENSIONING                | NO             |
| TYPICAL SLAB THICKNESS         | 125 - 200 MM   |
| WAFLE SLAB AREA PER FLOOR      | 398 SQMT       |



# 4. Histograms Tower B



# 4. Early Handover of Retail Area

## Scope of Work

- Structure Works above retail will continue during retail finishes & handover
- All Finishes of Basements, Retail floors
- Façade works up to Retail floor level
- All MEP works in Basement and Retail floors
- All MEP Services and Commissioning & Fire NOC
- External development including all MEP works and landscaping

## 4. Current Indicative Floor Plate Areas

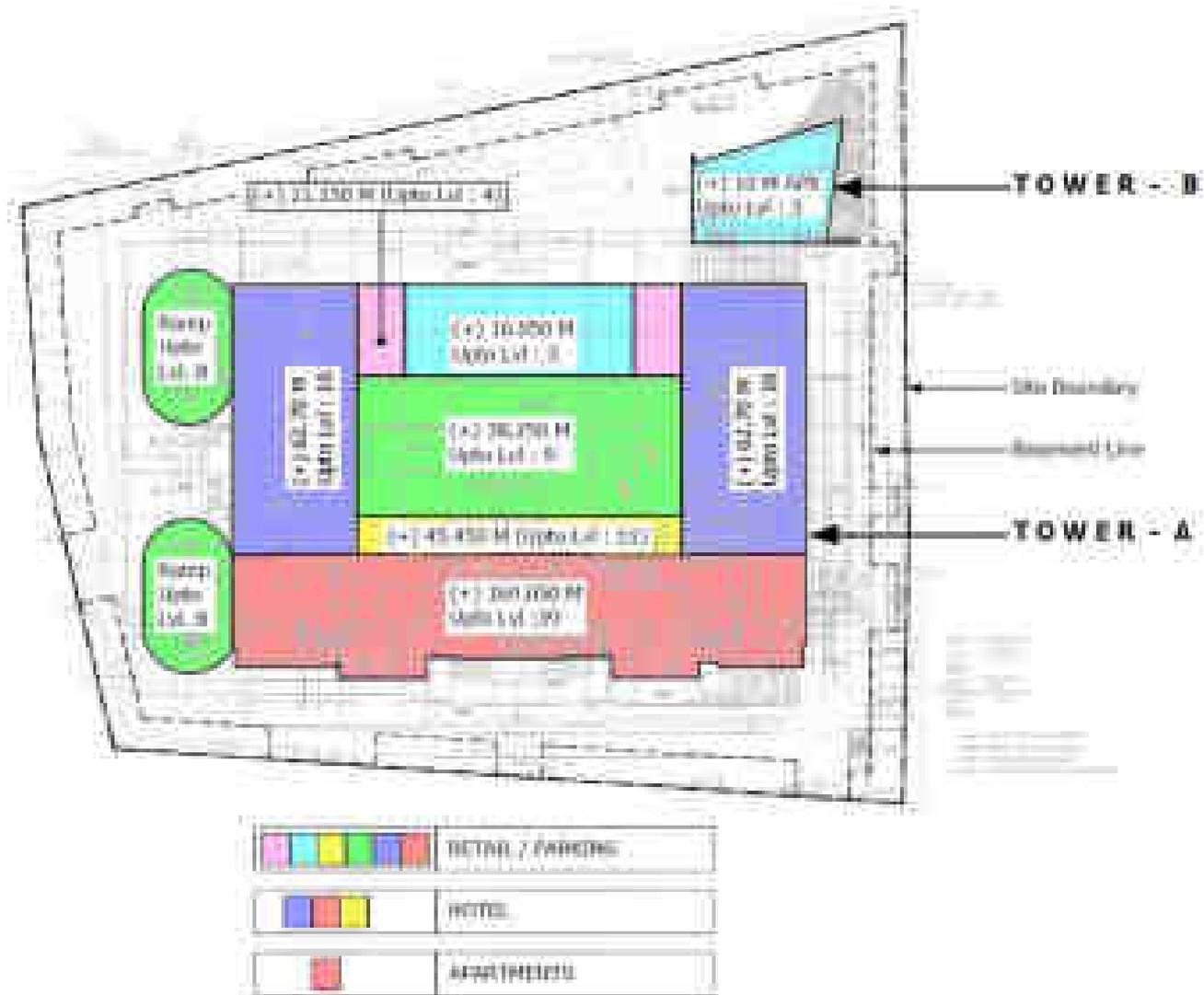
| Floor                | Floor Plate Area (Sqm) |
|----------------------|------------------------|
| Basement             | 15,907                 |
| Retail               | 7,442                  |
| Podium Parking       | 6,729                  |
| Hotel                | 3,719                  |
| Studios (Main Tower) | 1,924                  |

## 4. Basement Zoning Plan



|   |         |          |
|---|---------|----------|
|  | ZONE A  | 2825 SQM |
|  | ZONE B  | 6135 SQM |
|  | ZONE C  | 5200 SQM |
|  | TOWER B | 1690 SQM |

## 4. Current Building Demarcation Plan



## 4. Fire NOC & OC Requirements for Early Handover of Retail Area

**Structure:** One Parking floor is to be completed above the Retail floor, so that all shafts & cut outs can be closed with a dummy slab at the parking floor level. The structure above the first parking level can continue along with Retail finishes works.

**Façade:** The Building must be wind and water tight with façades for Retail floors completed.

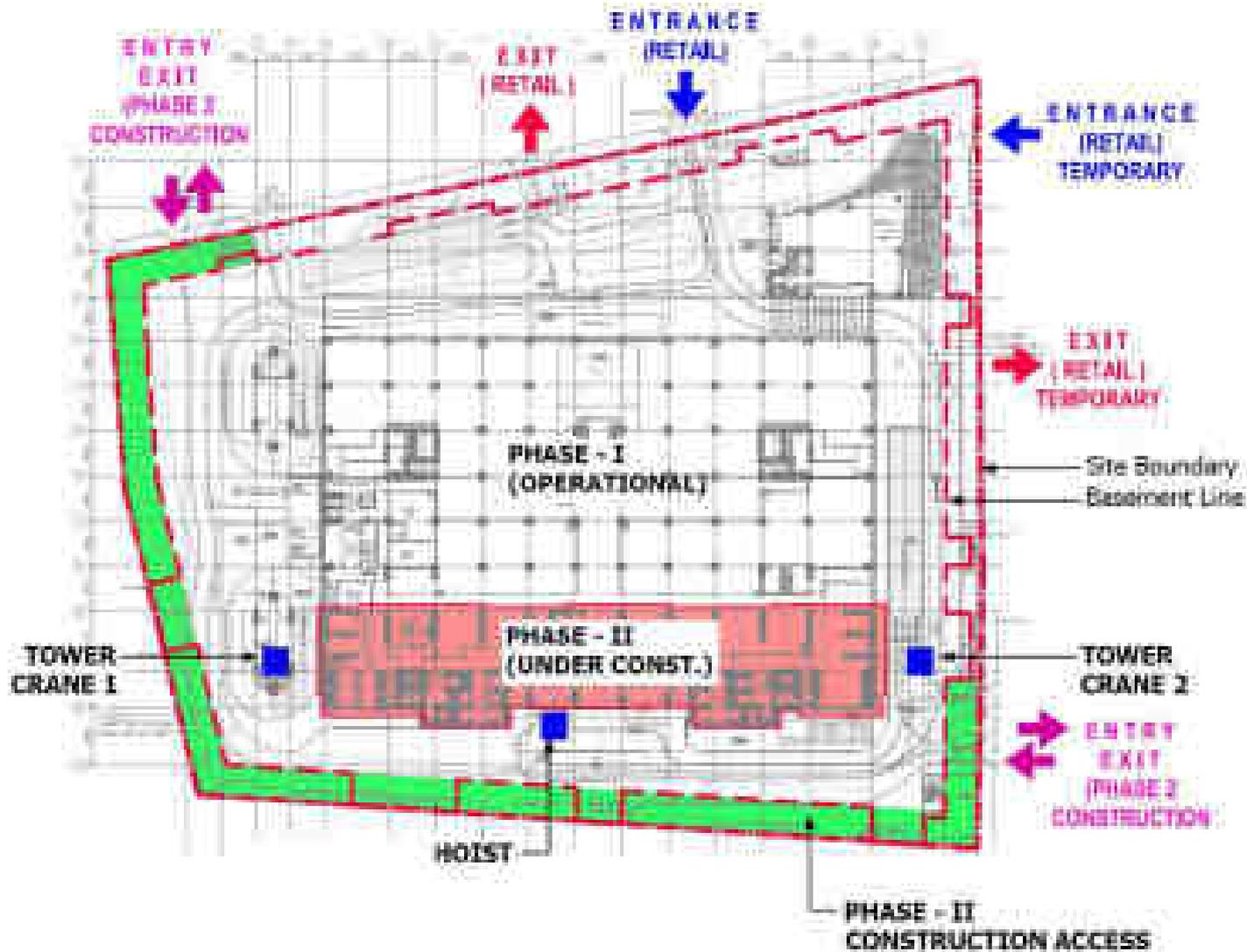
**MEP Services:** All MEP Services (for Retail floors) should be operational, including Lifts, Ventilation, Smoke Extraction, Fire Fighting Services, Pump room, STP etc. including all services routing in the basements for the full scope of the project. The procurement, installation and commissioning of capital equipment can be completed phase wise, as required. Overhead fire & water tanks for the Retail section are also to be completed.

**External Development:** All MEP works to be completed considering the full project scope. A 6m clear route, all around the project, without any hindrances is required for fire tender movement. Scaffolding / tower cranes or any other blockades may be permissible as per NBC Guidelines.

**Others:** Provision for 600 car parks for the Retail section, Gas bank, HSD tanks are to be completed and approvals to be obtained from the relevant authorities. For the Fire NOC, requirements of Table 23 of NBC part 4, is to be complied with.

**O.C.:** Permanent Power, Sewage & Water connections must be applied for. The approach road should be ready. 50% open area is to be landscaped.

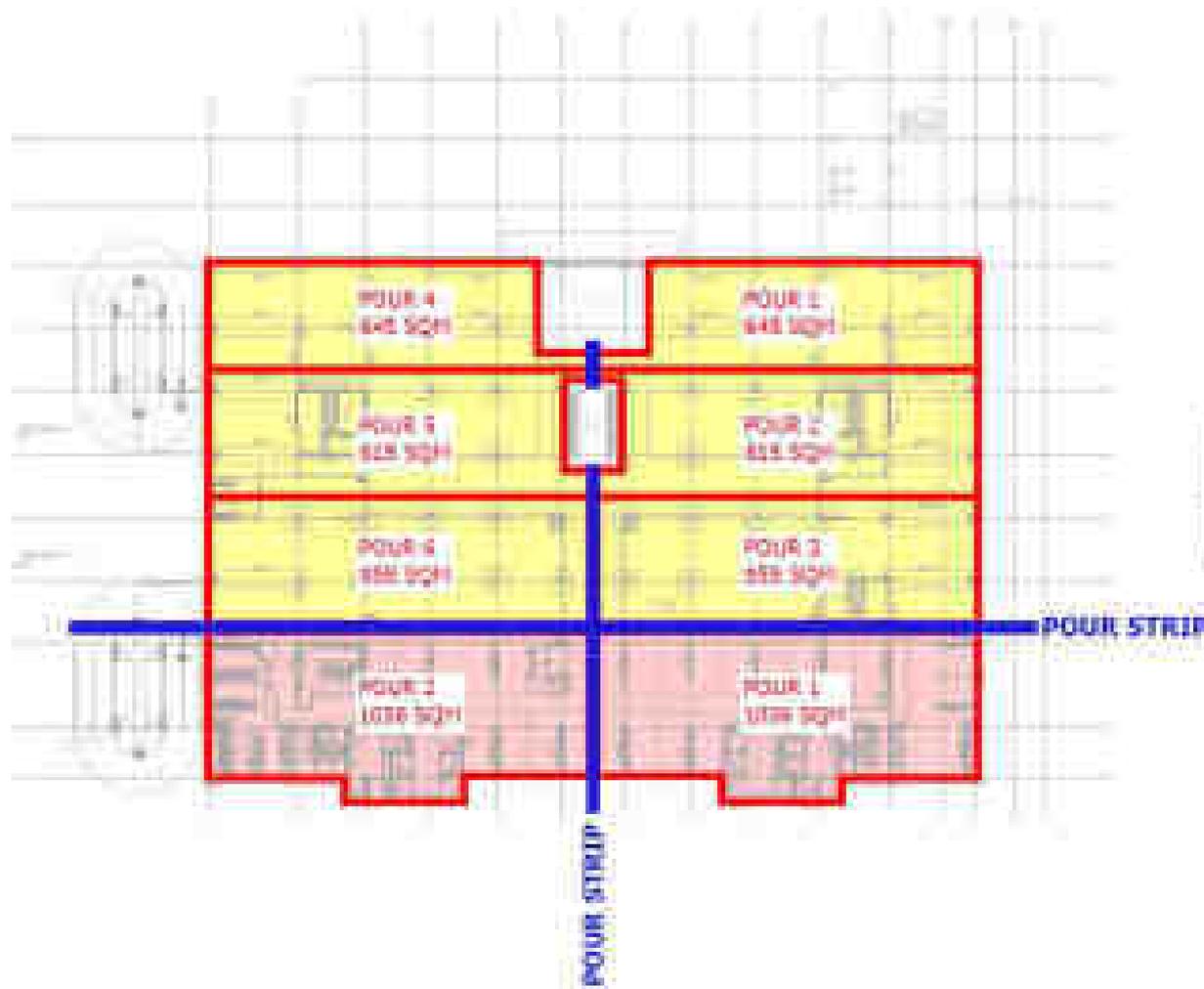
## 4. Site Logistic Plan post handover of Retail Areas



# 4. Basement Area Pour Plan



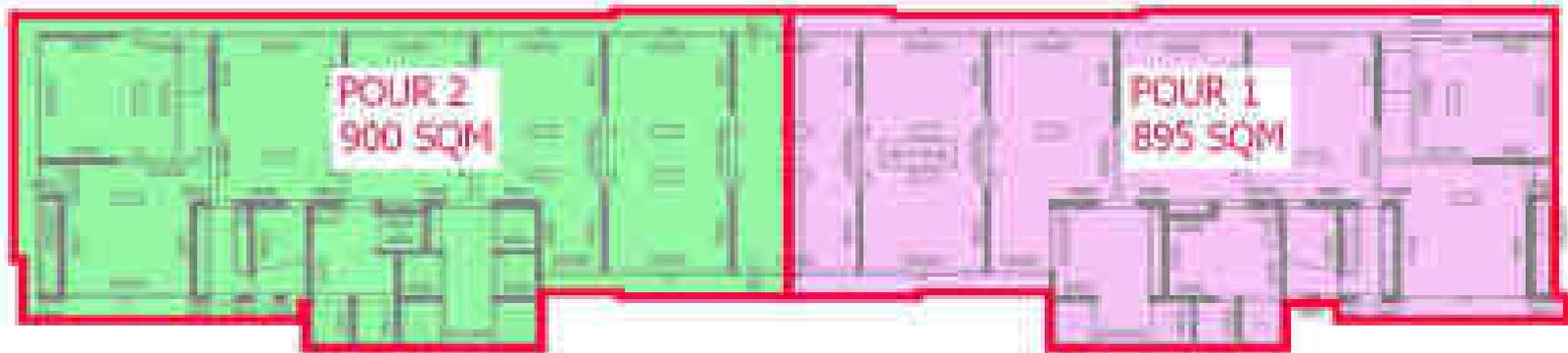
# 4. Retail Area Pour Plan



| LEGEND |        |          |
|--------|--------|----------|
|        | ZONE A | 2073 SQM |
|        | ZONE B | 4830 SQM |



## 4. Residential Tower Floors Pour Plan



# 4. Typical Tower A Studio Slab Cycle

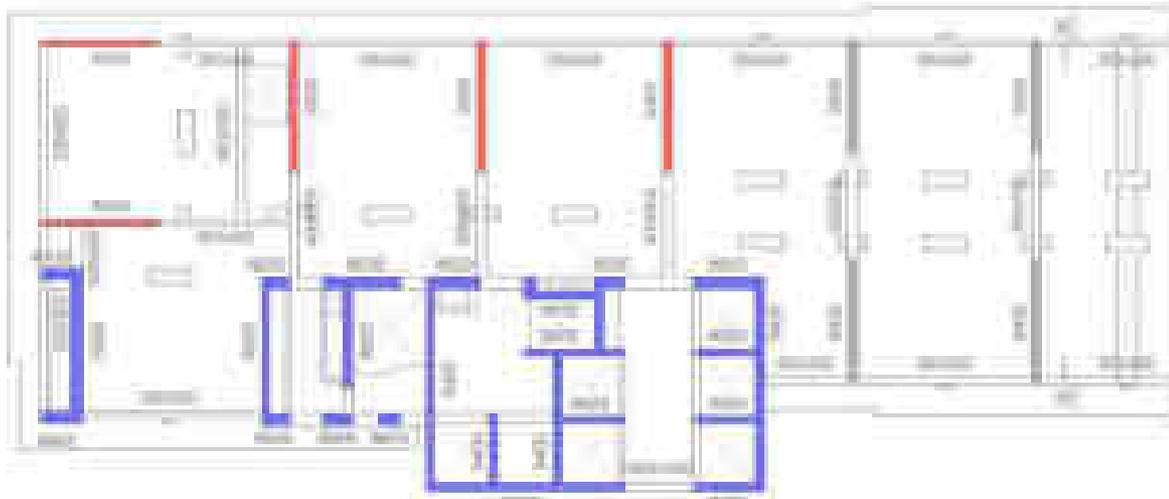
Room 1 RESIDENTIAL ROOM - Slab Cycle - 21 days cycle (Slab Area 900sqm)

|  | Day1 | Day2 | Day3 | Day4 | Day5 | Day6 | Day7 | Day8 | Day9 | Day10 | Day11 | Day12 | Day13 | Day14 | Day15 | Day16 | Day17 | Qty  | Unit |     |
|--|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-----|
| Kicker & Scaffolding for Columns / Walls | 1    | 4    |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       | 18   | No.  |     |
| Rebar for Columns / Walls                |      | 1    | 4    | 3    | 3    |      |      |      |      |       |       |       |       |       |       |       |       | 10   | MT   |     |
| Shuttering Columns / Walls               |      |      | 11   | 11   | 11   | 11   |      |      |      |       |       |       |       |       |       |       |       | 570  | sqm  |     |
| Concreting Columns / Walls               |      |      | 17   | 17   | 17   | 17   |      |      |      |       |       |       |       |       |       |       |       | 58   | Cum  |     |
| Deshuttering for columns / Walls         |      |      |      | 11   | 11   | 11   | 11   |      |      |       |       |       |       |       |       |       |       | 570  | sqm  |     |
| Beam Decking                             |      |      |      | 11   | 11   | 11   | 11   |      |      |       |       |       |       |       |       |       |       | 245  | sqm  |     |
| Slab Decking                             |      |      |      |      |      | 11   | 11   | 11   | 11   |       |       |       |       |       |       |       |       | 1088 | sqm  |     |
| Rebar for Beams & Slab                   |      |      |      |      |      |      | 1    | 1    | 1    | 1     |       |       |       |       |       |       |       | 29   | MT   |     |
| Slab Services & Checking                 |      |      |      |      |      |      |      |      |      |       | 1     |       |       |       |       |       |       | 1    | LS   |     |
| Slab Concreting                          |      |      |      |      |      |      |      |      |      |       | 11    |       |       |       |       |       |       | 218  | Cum  |     |
| Post Tensioning                          |      |      |      |      |      |      |      |      |      |       |       |       |       |       | 1     |       |       | 1    | LS   |     |
| Deshuttering                             |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       | 111   | 1155 | 1332 | Sam |

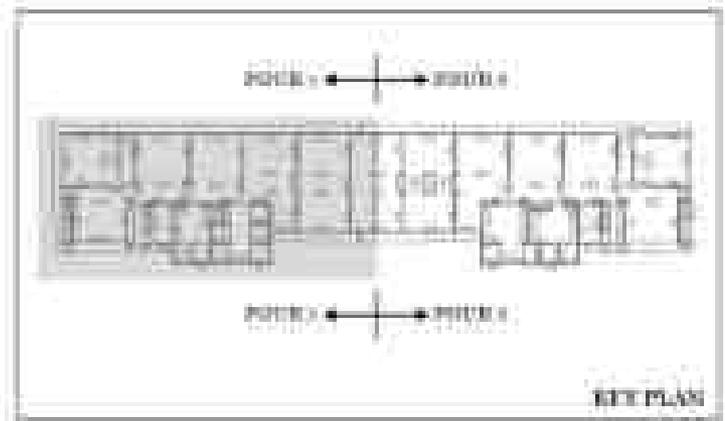
NOTE: ALL QUANTITIES ARE APPROXIMATE



# 4. Typical Tower A Studio Slab Cycle Work Sequence



FORM 4  
DAY - 1



SITE PLAN

|   |   |
|---|---|
|    | Crane Removal<br>Frag Framework               |
|    | Steel Wall & Column<br>Erection & Scaffolding |
|    | Steel Wall & Column<br>Form                   |
|    | Steel Wall & Column<br>Bracing & Concreting   |
|    | Deck Support &<br>Decking                     |
|    | Slab Support & Decking                        |
|    | Formwork Slab Form                            |
|  | Slab Finishing, Cleaning<br>& Curing          |
|  | PT Stressing                                  |
|  | Debracing of<br>Formwork & Deck               |



# 4. Typical Tower A Studio Slab Cycle Work Sequence

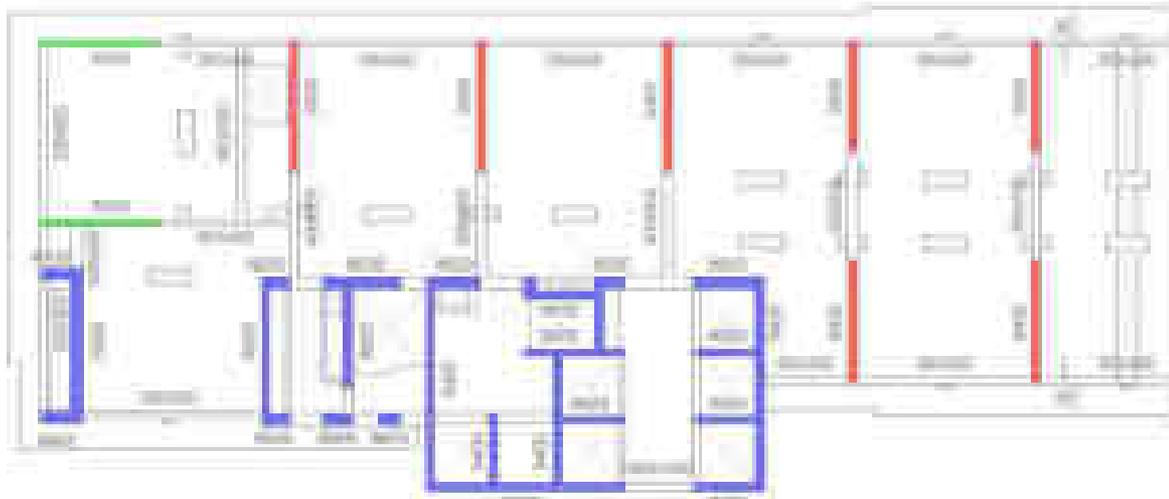
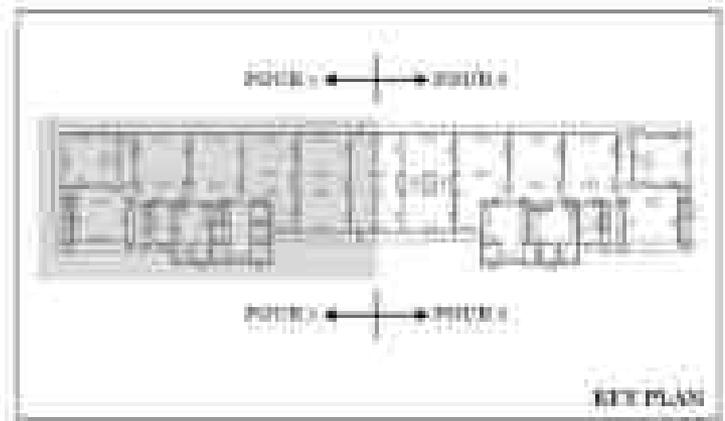


FIGURE 4  
DAY - 8



SITE PLAN

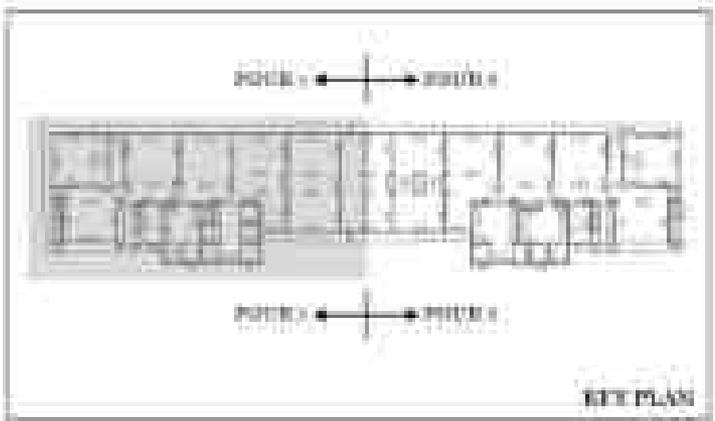
|   |   |
|---|---|
|    | Crane System<br>Temp Framework              |
|    | Steel Wall & Column<br>Erection & Shoring   |
|    | Steel Wall & Column<br>Form                 |
|    | Steel Wall & Column<br>Shoring & Concreting |
|    | Beam Support &<br>Decking                   |
|    | Slab Support & Decking                      |
|    | Formwork Slab<br>Form                       |
|  | Slab Finish, Ceiling<br>& Concreting        |
|  | PT Stressing                                |
|  | Debracing of<br>Beam & Slab Decking         |



# 4. Typical Tower A Studio Slab Cycle Work Sequence



FIGURE 4  
DAY - 3



SITE PLAN

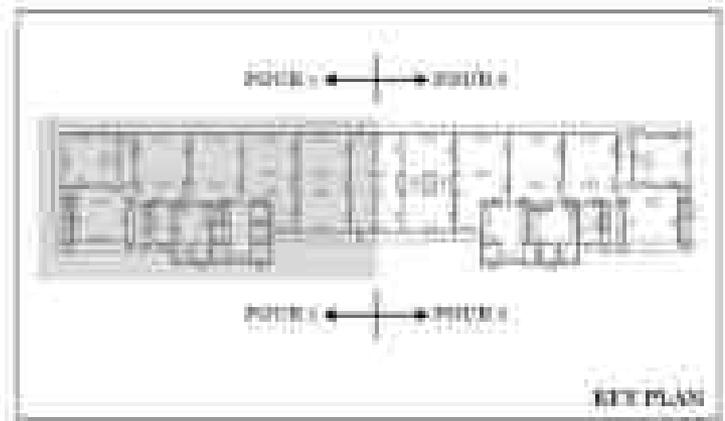
|   |   |
|---|---|
|    | Crane Tracked<br>Tray Framework               |
|    | Steel Wall & Column<br>Erection & Scaffolding |
|    | Steel Wall & Column<br>Form                   |
|    | Steel Wall & Column<br>Bracing & Concreting   |
|    | Beam Support Deck                             |
|    | Slab Support Deck                             |
|    | Formwork Deck                                 |
|  | Slab Formwork, Cladding<br>& Concreting       |
|  | PT Topping                                    |
|  | Debracing of<br>Beam Support Deck             |



# 4. Typical Tower A Studio Slab Cycle Work Sequence



FIGURE 4  
DAY - 4



SITE PLAN

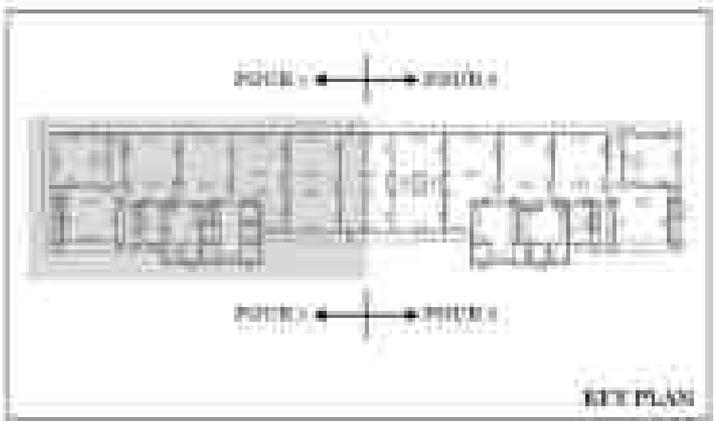
|   |   |
|---|---|
|    | Crane Removal<br>Truss Framework              |
|    | Steel Wall & Column<br>Erection & Scaffolding |
|    | Steel Wall & Column<br>Form                   |
|    | Steel Wall & Column<br>Bracing & Concreting   |
|    | Beam Support &<br>Decking                     |
|    | Slab Support & Decking                        |
|    | Beam Deck Form                                |
|  | Slab Formwork, Cladding<br>& Concreting       |
|  | PT Topping                                    |
|  | Stripping of<br>Beam & Slab Decking           |



# 4. Typical Tower A Studio Slab Cycle Work Sequence



FLOOR PLAN  
DAY - 0



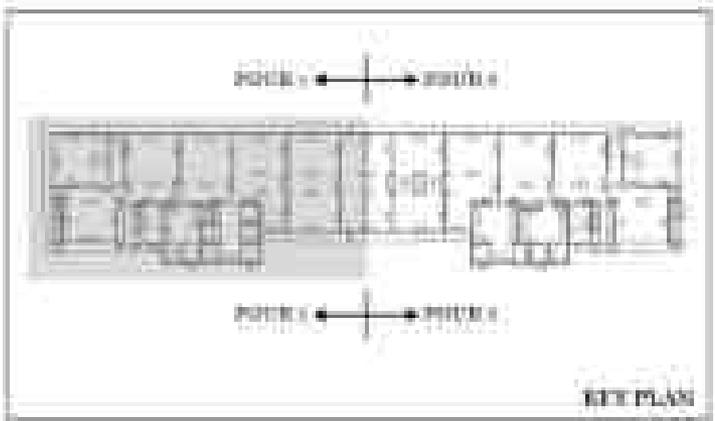
- Crane Removal / Day Framework
- Steel Wall & Column Erection & Scaffolding
- Steel Wall & Column Form
- Steel Wall & Column Bracing & Concreting
- Beam Support & Decking
- Slab Support & Decking
- Form & Slab Form
- Slab Formwork, Cladding & Concreting
- PT Stressing
- Debracing of Beam & Slab Decking



# 4. Typical Tower A Studio Slab Cycle Work Sequence



FLOOR 4  
DAY - 6



SITE PLAN

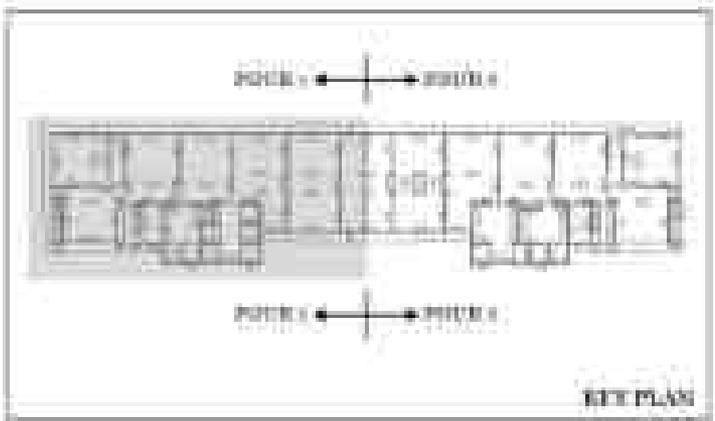
|   |   |
|---|---|
|    | Crane System<br>Tray Framework                |
|    | Steel Wall & Column<br>Steel & Scaffolding    |
|    | Steel Wall & Column<br>Rebar                  |
|    | Steel Wall & Column<br>Scaffolding & Concrete |
|    | Beam Support &<br>Decking                     |
|    | Slab Support & Decking                        |
|    | Beam & Slab Rebar                             |
|  | Slab Finishes, Ceiling<br>& Concreting        |
|  | PT Topping                                    |
|  | Dechlorinating of<br>Beam & Slab Decking      |



# 4. Typical Tower A Studio Slab Cycle Work Sequence



FLOOR PLAN  
DAY - 7



SITE PLAN

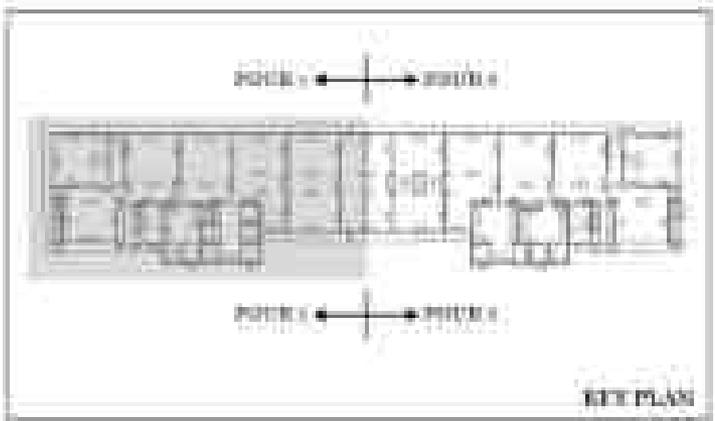
|   |   |
|---|---|
|    | Crane Tracked<br>Jacking Framework            |
|    | Steel Wall & Column<br>Erection & Scaffolding |
|    | Steel Wall & Column<br>Rebar                  |
|    | Steel Wall & Column<br>Scaffolding & Concrete |
|    | Beam Support &<br>Decking                     |
|    | Slab Support & Decking                        |
|    | Floor in Place, Rebar                         |
|  | Slab Formwork, Cladding<br>& Concreting       |
|  | ME Installation                               |
|  | Dislodging of<br>Beam & Slab Decking          |



# 4. Typical Tower A Studio Slab Cycle Work Sequence



FLOOR PLAN  
DAY - 8

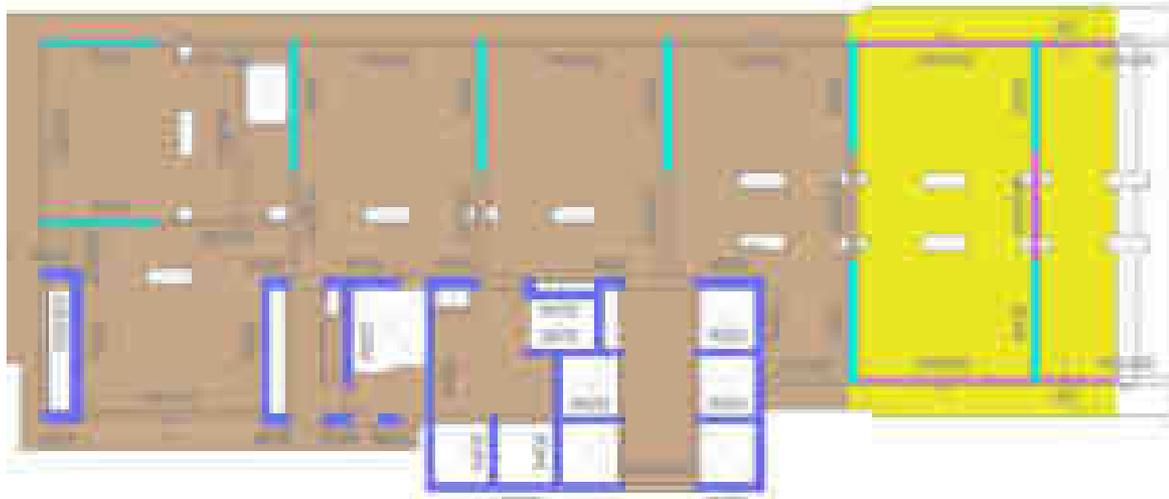


ELEVATED VIEW PLAN

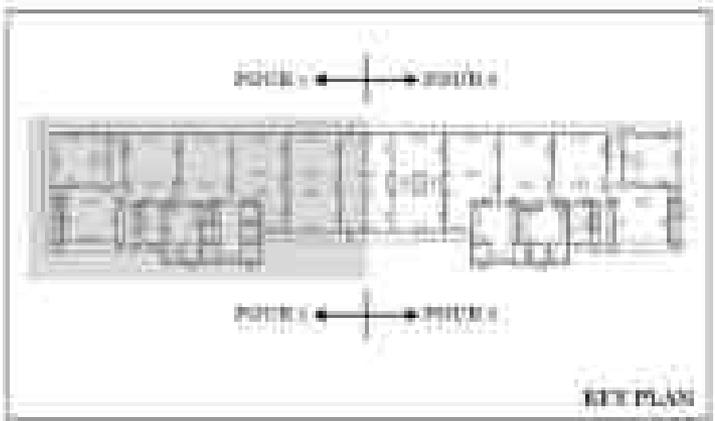
|   |  |
|---|--|
|    | Crane Tracked<br>Jacking Framework           |
|    | Steel Wall & Column<br>Jacking & Scaffolding |
|    | Steel Wall & Column<br>Rebar                 |
|    | Steel Wall & Column<br>Brazing & Concrete    |
|    | Beam Support &<br>Decking                    |
|    | Slab Support & Decking                       |
|    | Floor in Place, Rebar                        |
|  | Slab Formwork, Cladding<br>& Concreting      |
|  | ME Installation                              |
|  | Disabling of<br>Beam in Deck Decking         |



# 4. Typical Tower A Studio Slab Cycle Work Sequence



FLOOR PLAN  
DAY - 10

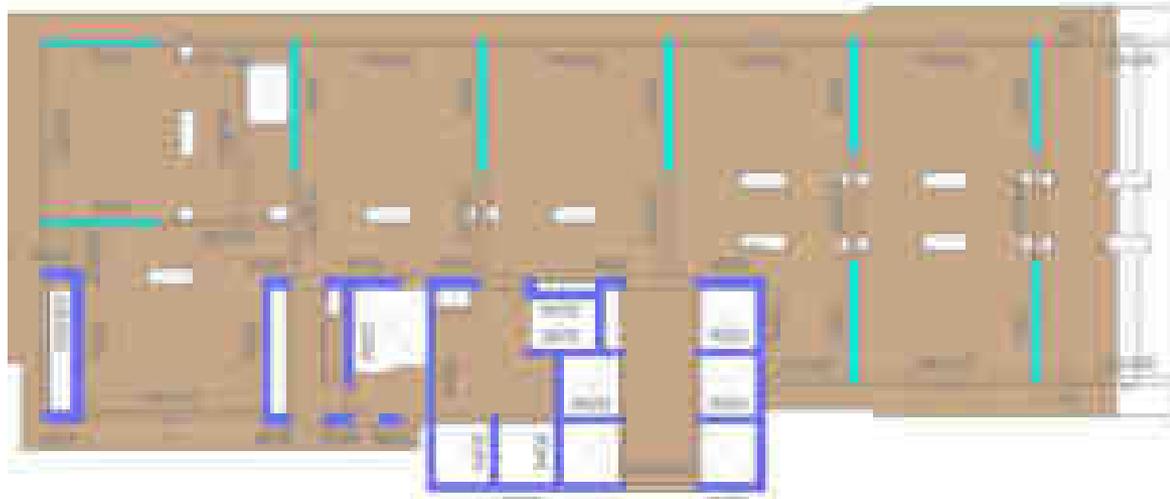


SITE PLAN

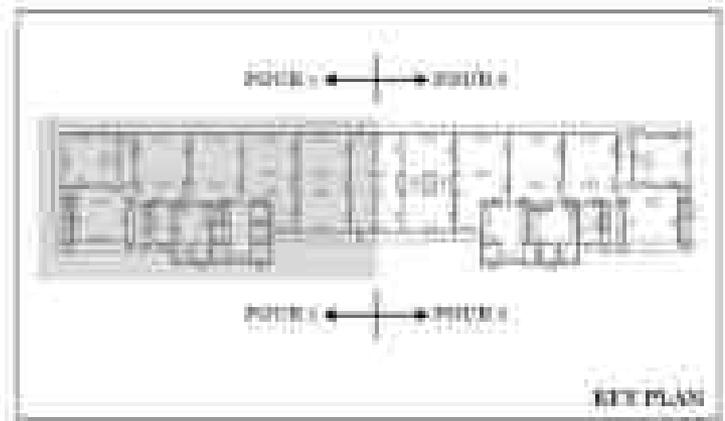
|   |  |
|---|--|
|    | Crane Tracks / Hoop Framework              |
|    | Steel Wall & Column Erection & Scaffolding |
|    | Steel Wall & Column Form                   |
|    | Steel Wall & Column Bracing & Concreting   |
|    | Beam Support & Decking                     |
|    | Slab Support & Decking                     |
|    | Formwork Deck, Rebar                       |
|  | Slab Finishes, Cladding & Concreting       |
|  | PT Topping                                 |
|  | Debracing of Beams in Deck Decking         |



# 4. Typical Tower A Studio Slab Cycle Work Sequence



FLOOR PLAN  
DAY - 10



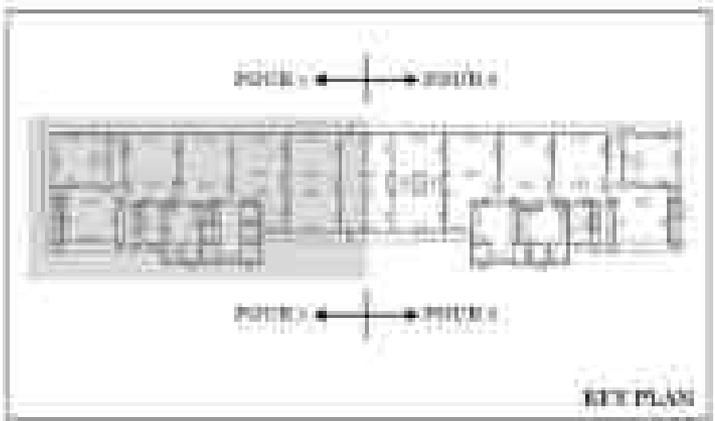
|  |  |
|--|--|
|  | Crane Hoisted Stay Framework             |
|  | Steel Wall & Column Erection & Shoring   |
|  | Steel Wall & Column Bracing              |
|  | Steel Wall & Column Bracing & Concreting |
|  | Beam Support & Decking                   |
|  | Slab Support & Decking                   |
|  | Floor Slab Formwork                      |
|  | Slab Finishing, Cleaning & Concreting    |
|  | PT Stressing                             |
|  | Dewatering of Beam & Slab Decking        |



# 4. Typical Tower A Studio Slab Cycle Work Sequence



FIGURE 4  
DAY - 11



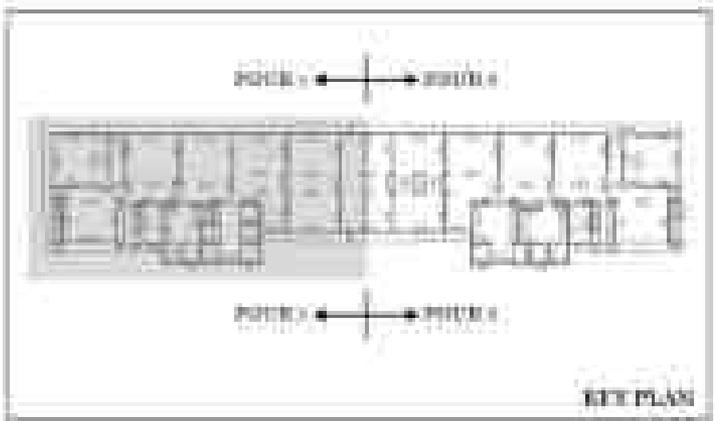
|   |   |
|---|---|
|    | Crane Installed<br>Truss Framework            |
|    | Steel Wall & Column<br>Erection & Scaffolding |
|    | Steel Wall & Column<br>Rebar                  |
|    | Steel Wall & Column<br>Scaffolding & Formwork |
|    | Beam Support &<br>Decking                     |
|    | Slab Support & Decking                        |
|    | Form in Place Rebar                           |
|  | Slab Formwork, Chalking<br>& Concreting       |
|  | PT Striking                                   |
|  | Dislodging of<br>Formwork & Decking           |



# 4. Typical Tower A Studio Slab Cycle Work Sequence



FIGURE 4  
DAY - 13



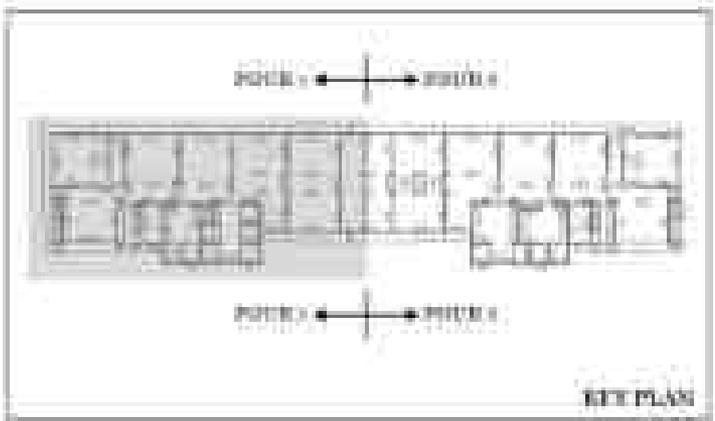
|  |  |
|--|--|
|  | Crane Booms / Stay Formwork                  |
|  | Steel Wall & Column / Steel & Formwork       |
|  | Steel Wall & Column / Rebar                  |
|  | Steel Wall & Column / Slabforming & Concrete |
|  | Beam Support & Decking                       |
|  | Slab Support & Decking                       |
|  | Floor in Work / Rebar                        |
|  | Slab System / Ceiling & Concrete             |
|  | PT Slabing                                   |
|  | Dechlorinating of Beam & Slab Decking        |



# 4. Typical Tower A Studio Slab Cycle Work Sequence



FIGURE 4  
DAY - 10



SITE PLAN

|   |   |
|---|---|
|    | Steel Wall & Column: Rebar                  |
|    | Steel Wall & Column: Scaffolding & Formwork |
|    | Steel Wall & Column: Rebar                  |
|    | Steel Wall & Column: Scaffolding & Formwork |
|    | Demolition of Existing Decking              |
|    | Slab Support & Decking                      |
|    | Form & Deck: Rebar                          |
|  | Slab Scaffolding, Cladding & Covering       |
|  | PT Slabbing                                 |
|  | Demolition of Existing Decking              |



# 4. Typical Tower A Studio Slab Cycle Work Sequence

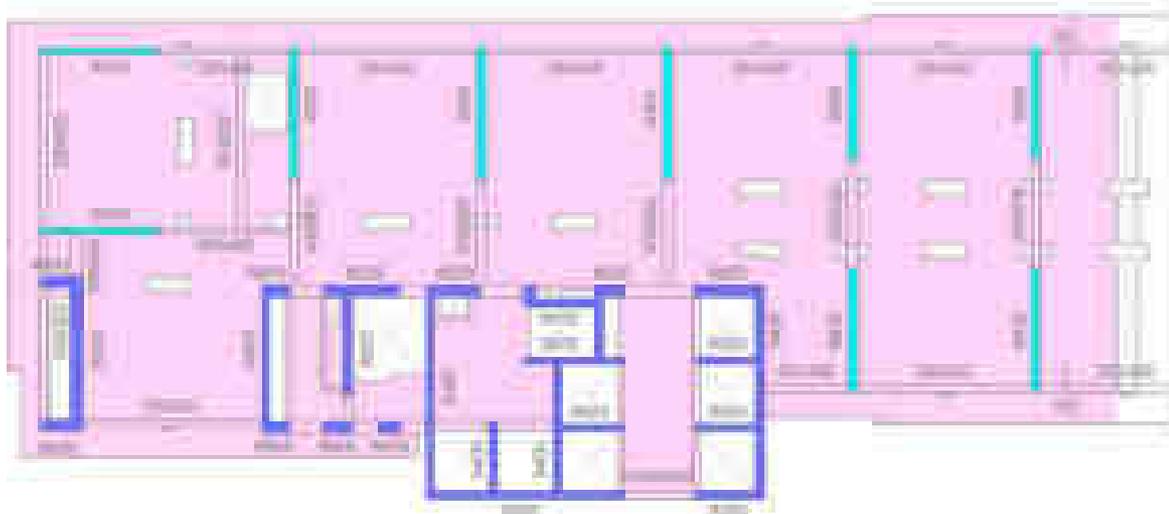
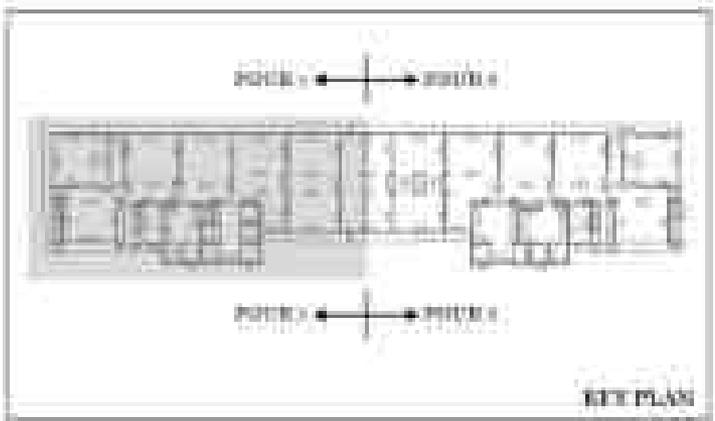


FIGURE 4  
DAY - 17



|  |   |
|--|---|
|  | Crane Tracked<br>Tray Framework               |
|  | Steel Wall & Column<br>Erection & Scaffolding |
|  | Steel Wall & Column<br>Form                   |
|  | Steel Wall & Column<br>Bracing & Concreting   |
|  | Beam Support in<br>Decking                    |
|  | Slab Support in<br>Decking                    |
|  | Form in Slab<br>Form                          |
|  | Slab Formwork, Chalking<br>& Concreting       |
|  | PT Stressing                                  |
|  | Debriding of<br>Beam in Slab Decking          |



# 4. Indicative Construction Sequence

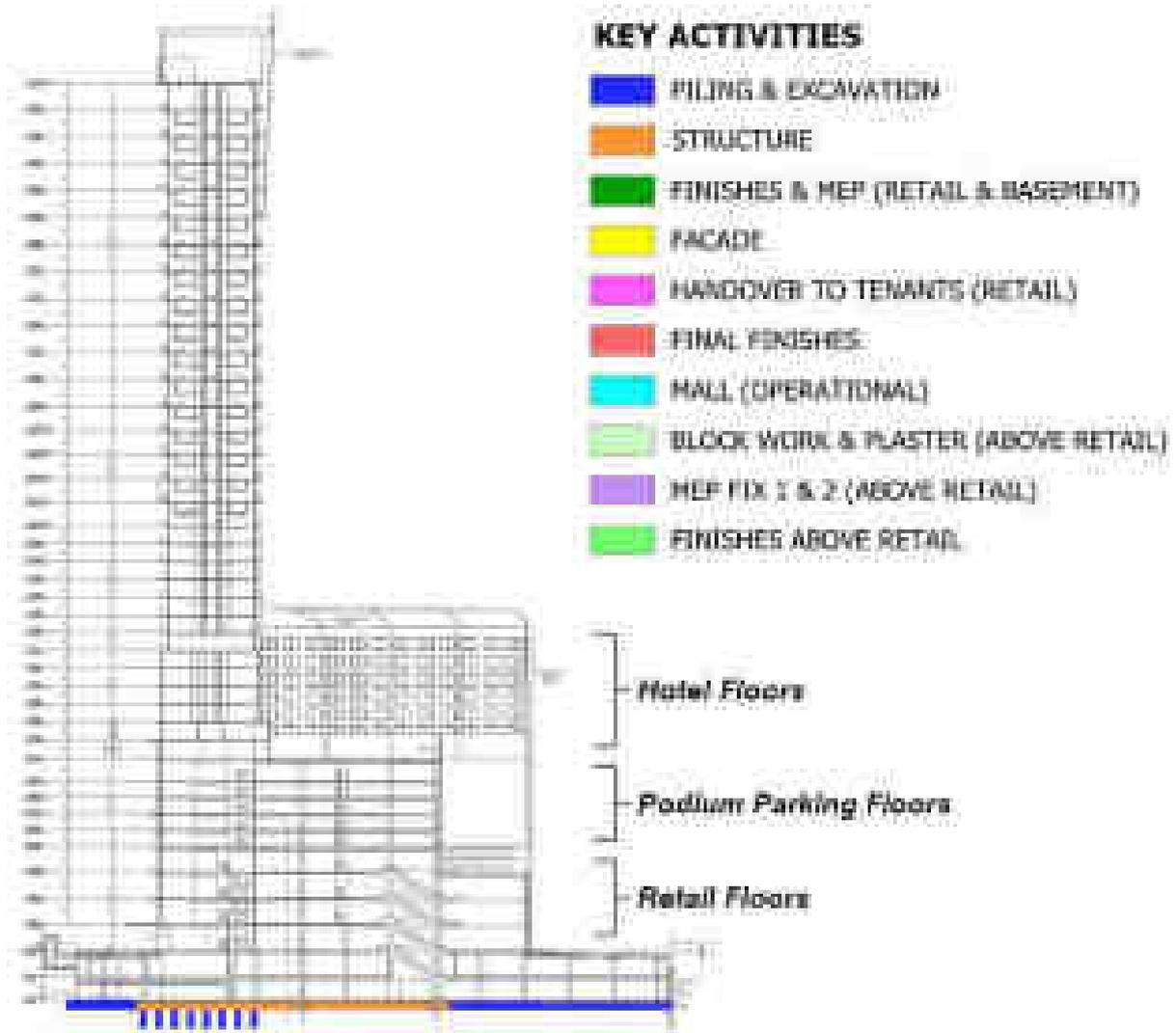
## KEY MILESTONE :

- START OF PROJECT



MONTH 1

# 4. Indicative Construction Sequence



MONTH 4

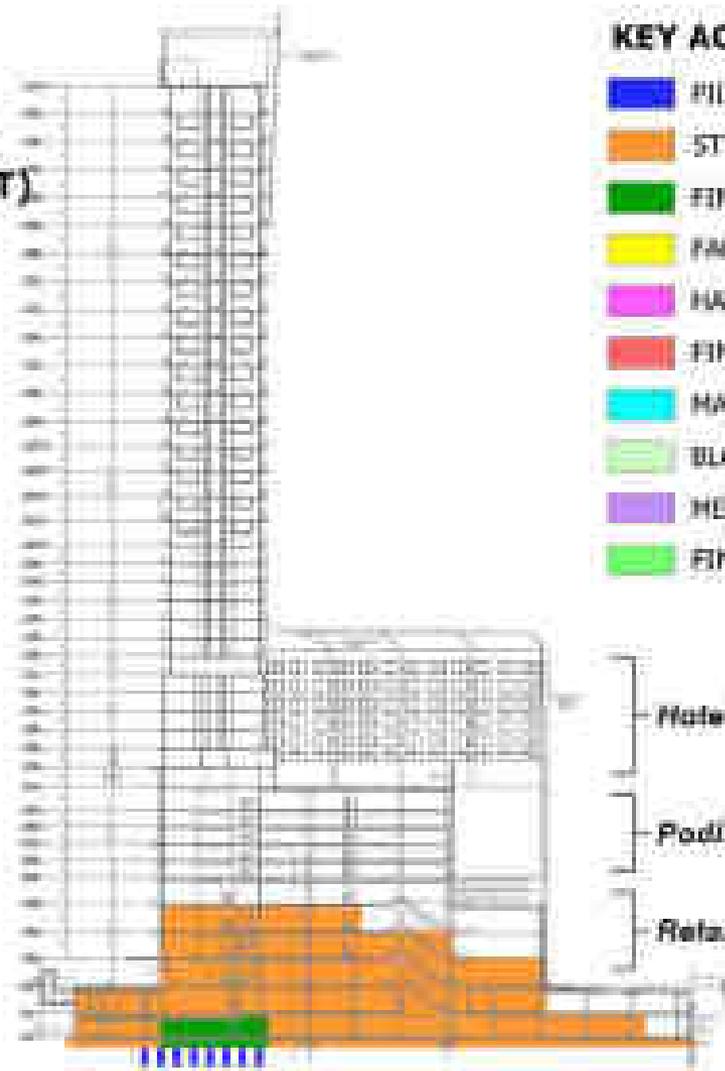
## 4. Indicative Construction Sequence



# 4. Indicative Construction Sequence

## KEY MILESTONE :

- START OF FINISHES & MEP (IN BASEMENT)



## KEY ACTIVITIES

- PILING & EXCAVATION
- STRUCTURE
- FINISHES & MEP (RETAIL & BASEMENT)
- FACADE
- HANDOVER TO TENANTS (RETAIL)
- FINAL FINISHES
- HALL (OPERATIONAL)
- BLOCK WORK & PLASTER (ABOVE RETAIL)
- MEP FIX 1 & 2 (ABOVE RETAIL)
- FINISHES ABOVE RETAIL

MONTH 10



# 4. Indicative Construction Sequence

**KEY MILESTONE :**  
• **COMPLETION OF RETAIL AND NON TOWER STRUCTURE**



**MONTH 13**



# 4. Indicative Construction Sequence

## KEY MILESTONE :

- START OF FACADE IN MONTH 14

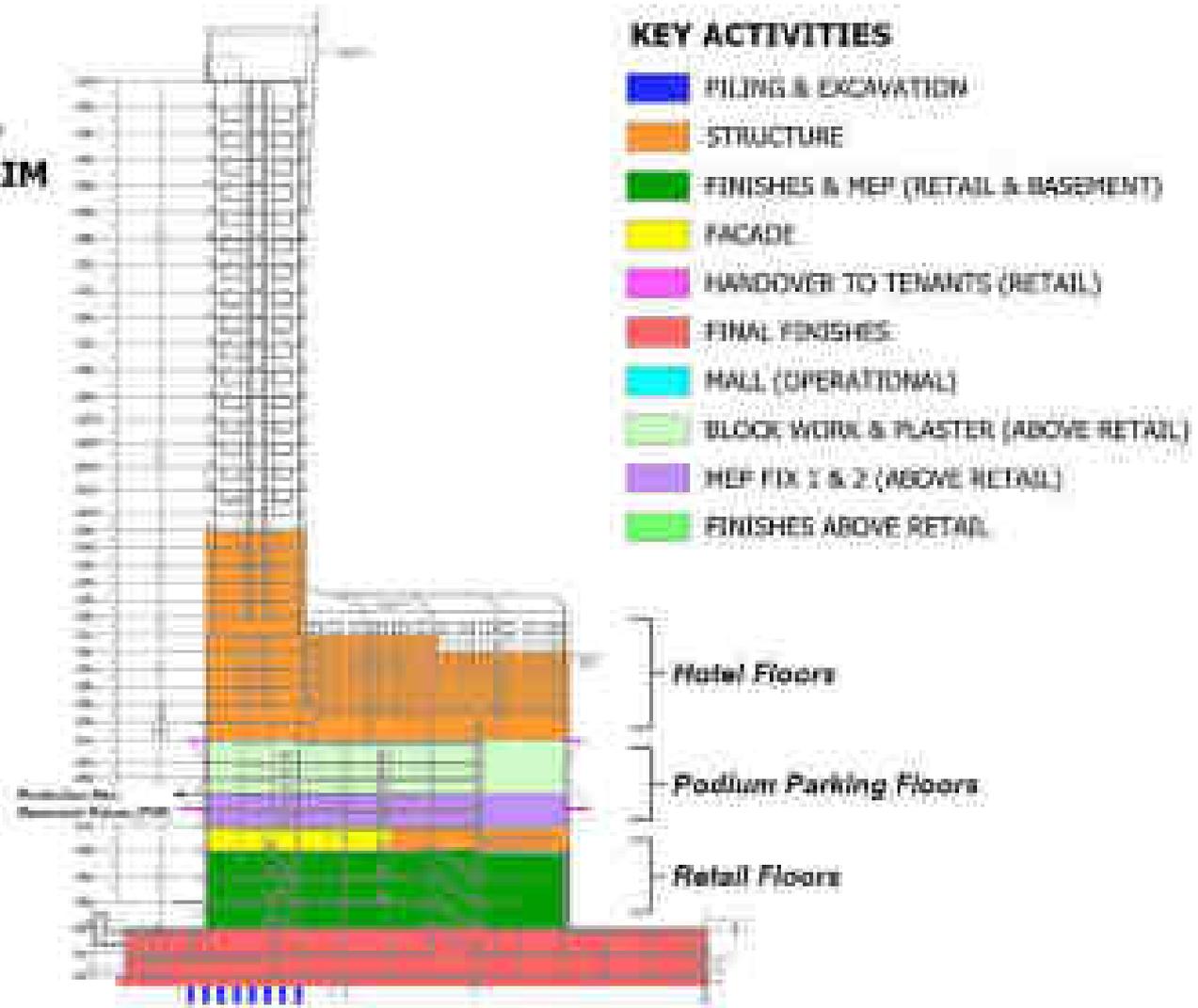


MONTH 16

# 4. Indicative Construction Sequence

## KEY MILESTONE :

- OPPORTUNITY TO APPLY FOR INTERIM FIRE NOC

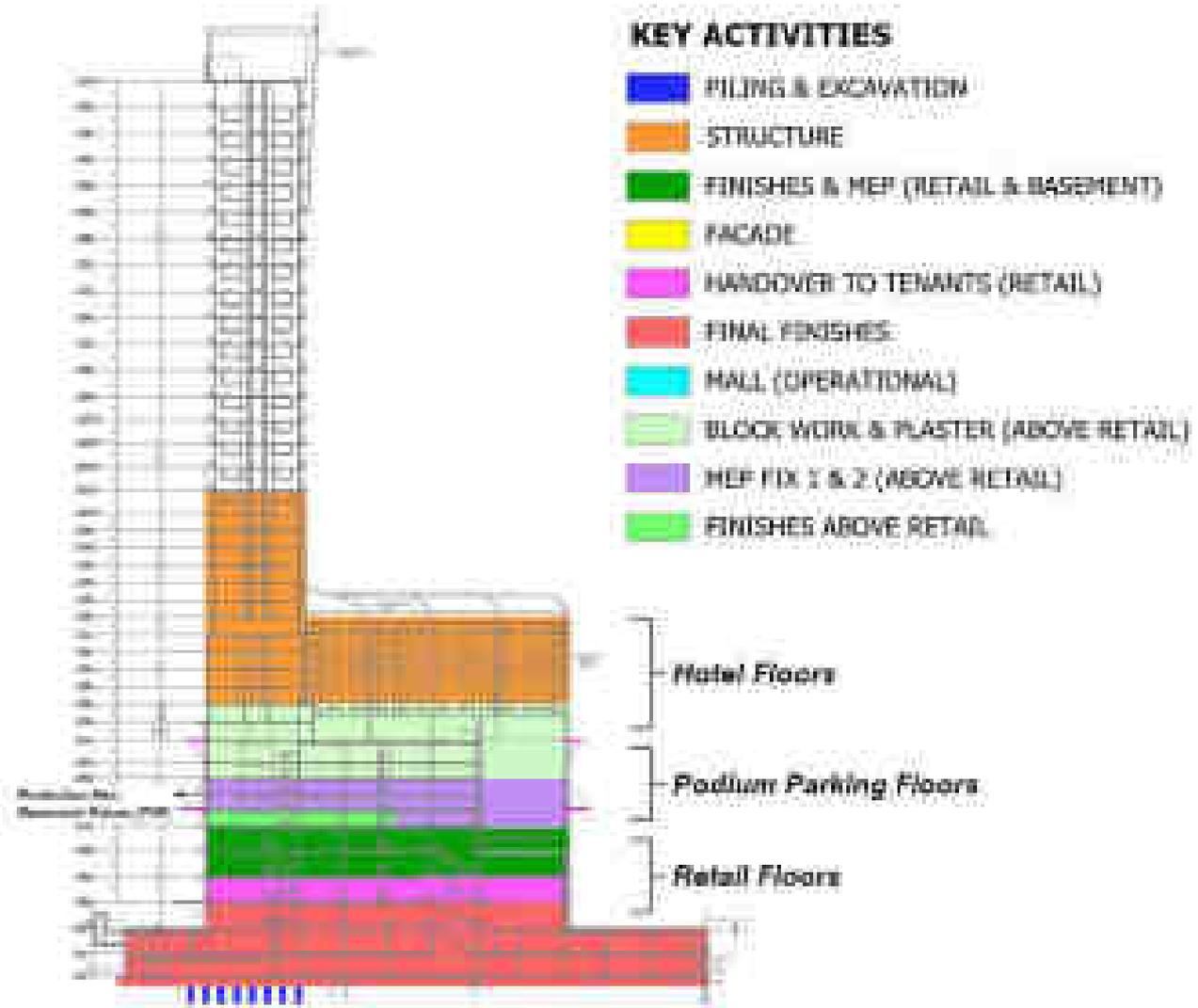


MONTH 19

# 4. Indicative Construction Sequence

## KEY MILESTONE :

- PROGRESSIVE HANDOVER FOR TENANT FITOUT
- RETAIL FACADE COMPLETED

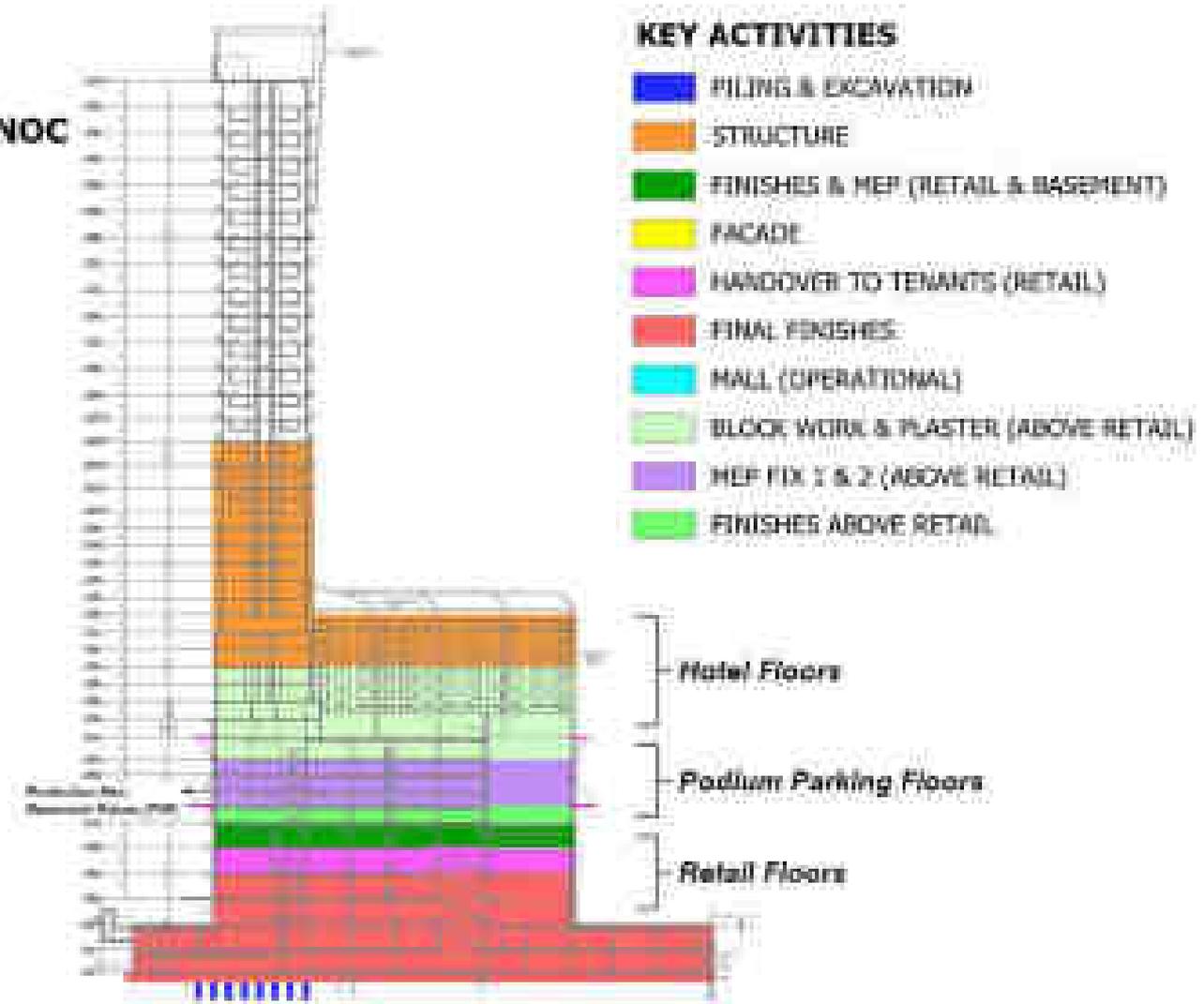


MONTH 20

# 4. Indicative Construction Sequence

## KEY MILESTONE :

- APPLY FOR FIRE NOC



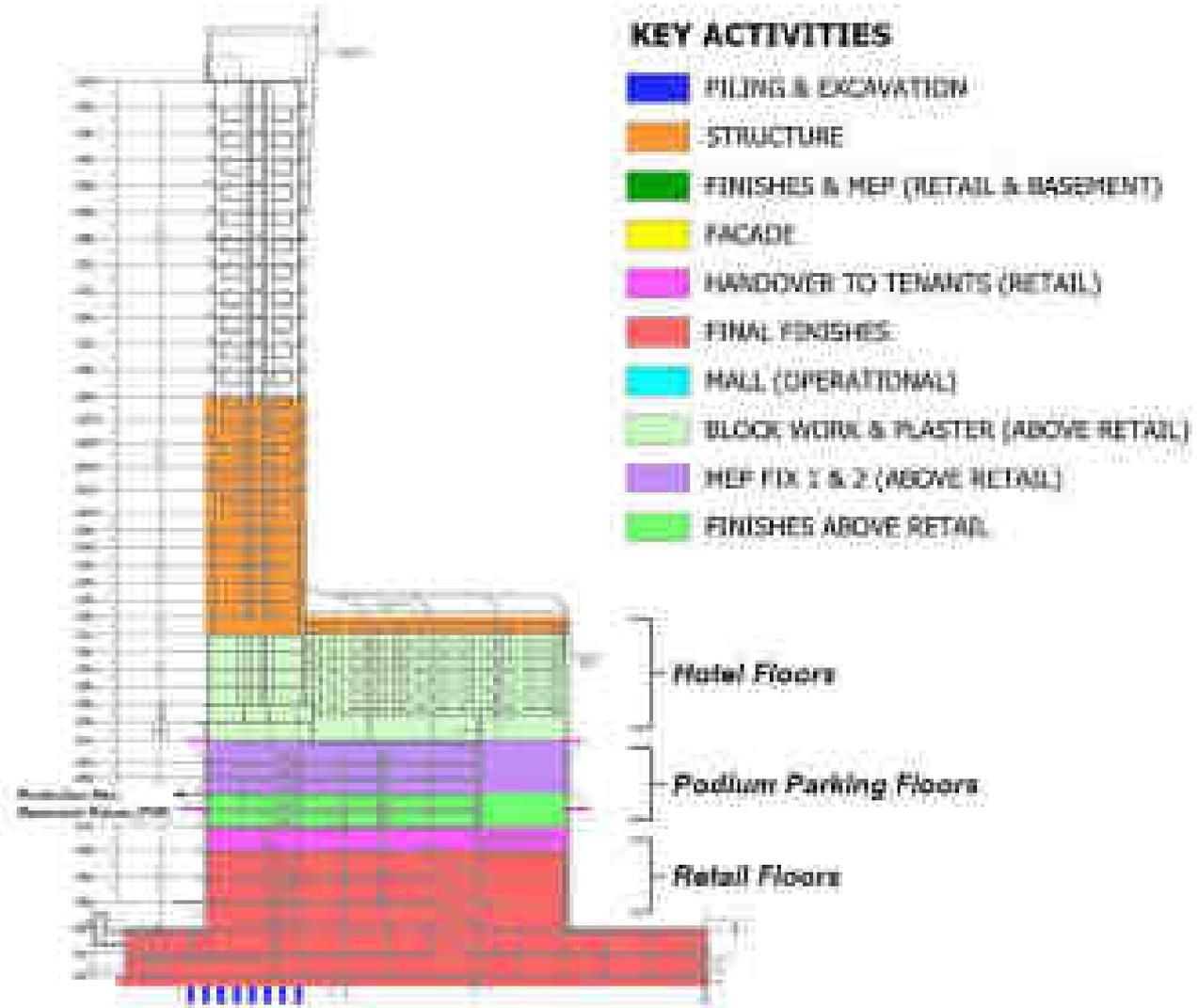
MONTH 21



# 4. Indicative Construction Sequence

## KEY MILESTONE :

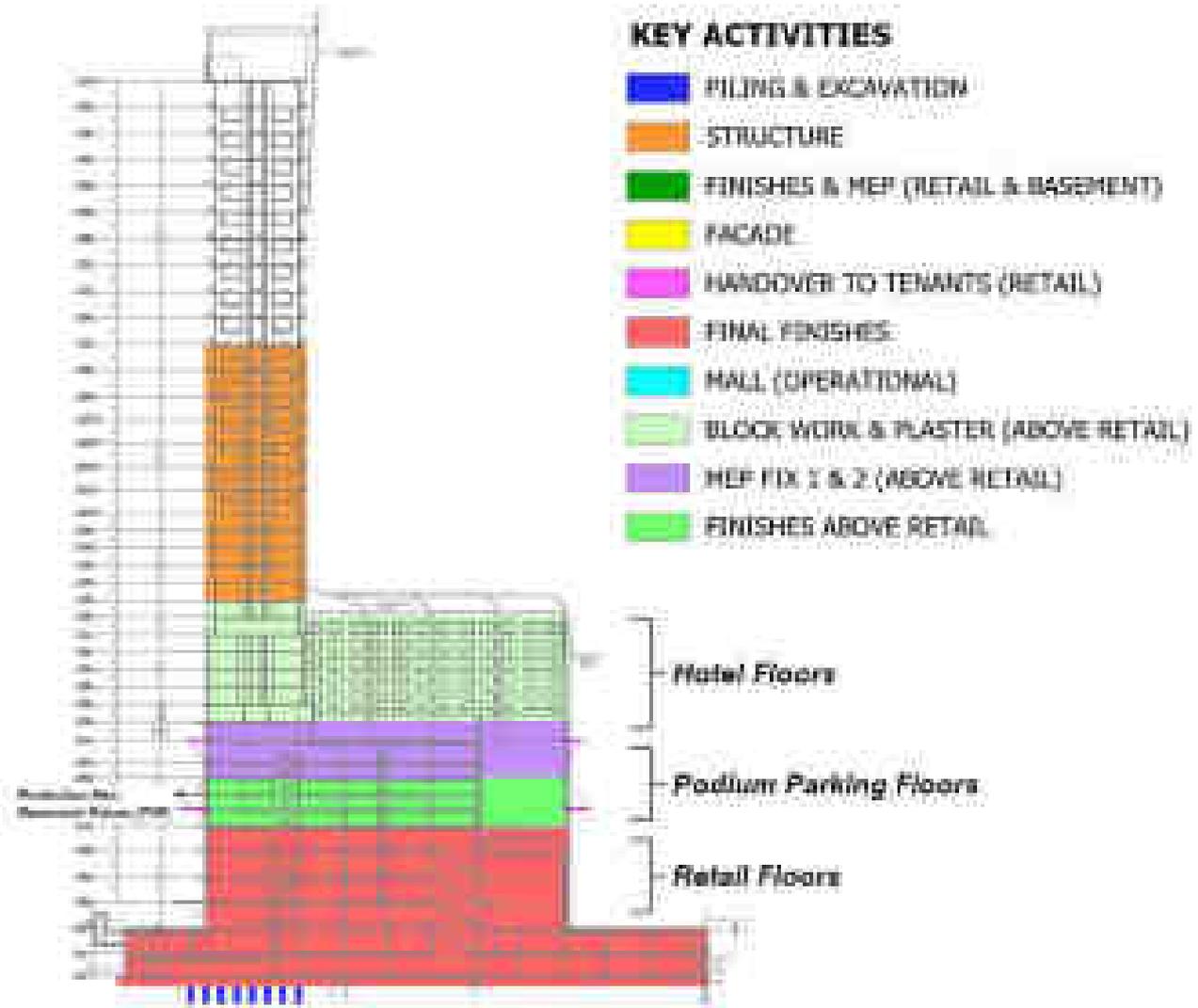
- APPLY FOR OC



# 4. Indicative Construction Sequence

## KEY MILESTONE :

- APPROVAL OF FIRE NOC

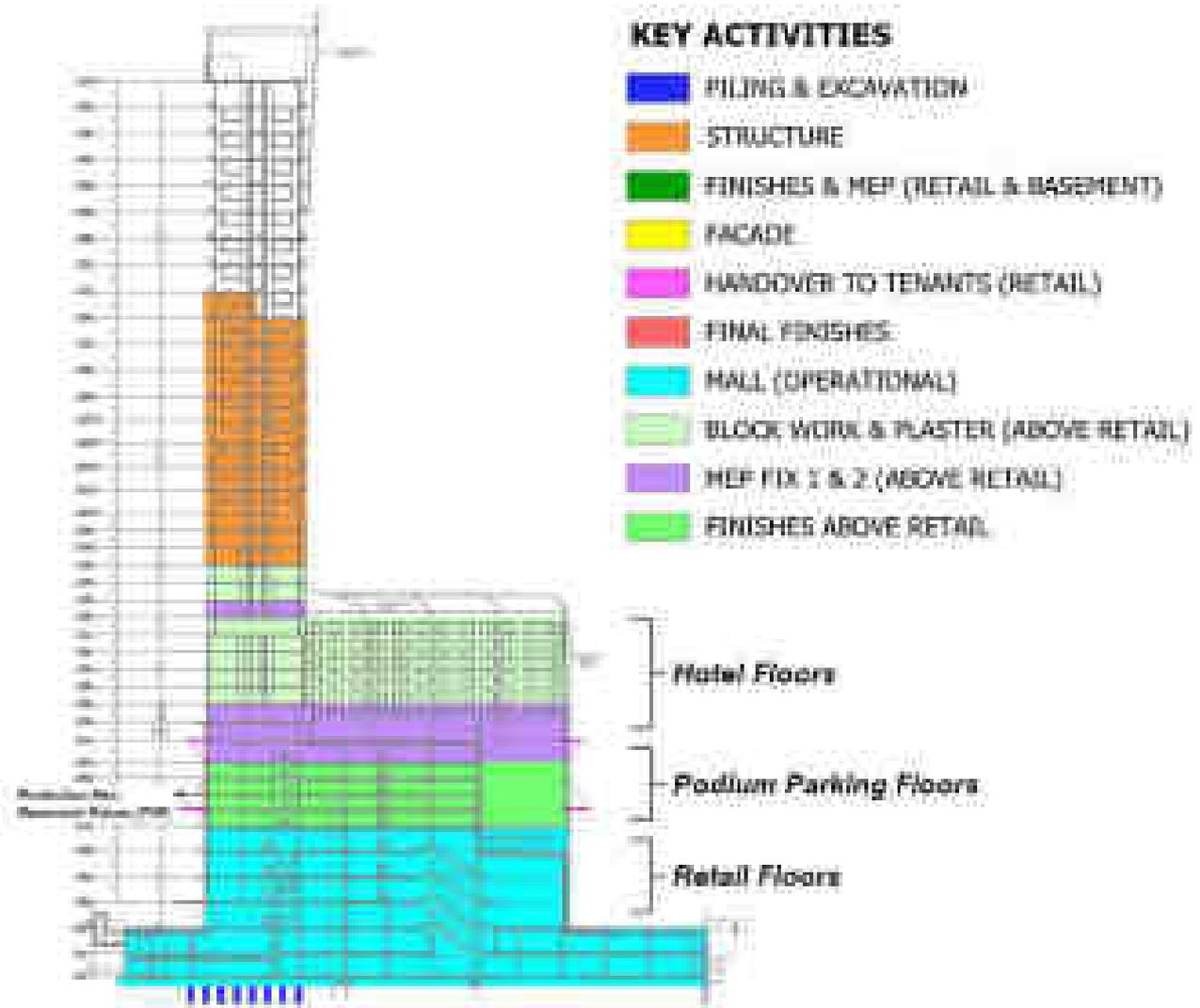


MONTH 23

# 4. Indicative Construction Sequence

## KEY MILESTONE :

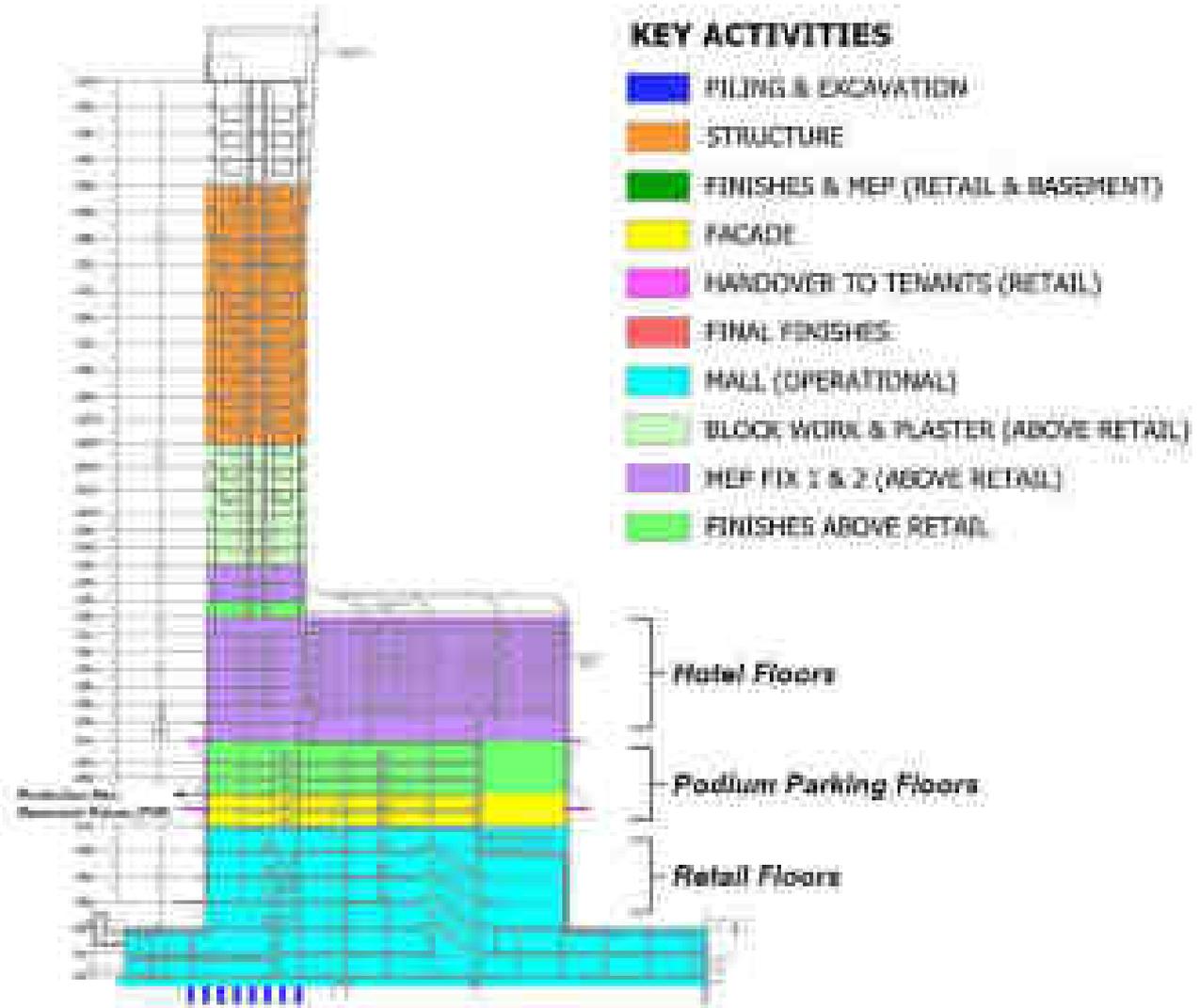
- APPROVAL OF OC
- MALL OPENING



MONTH 24



# 4. Indicative Construction Sequence



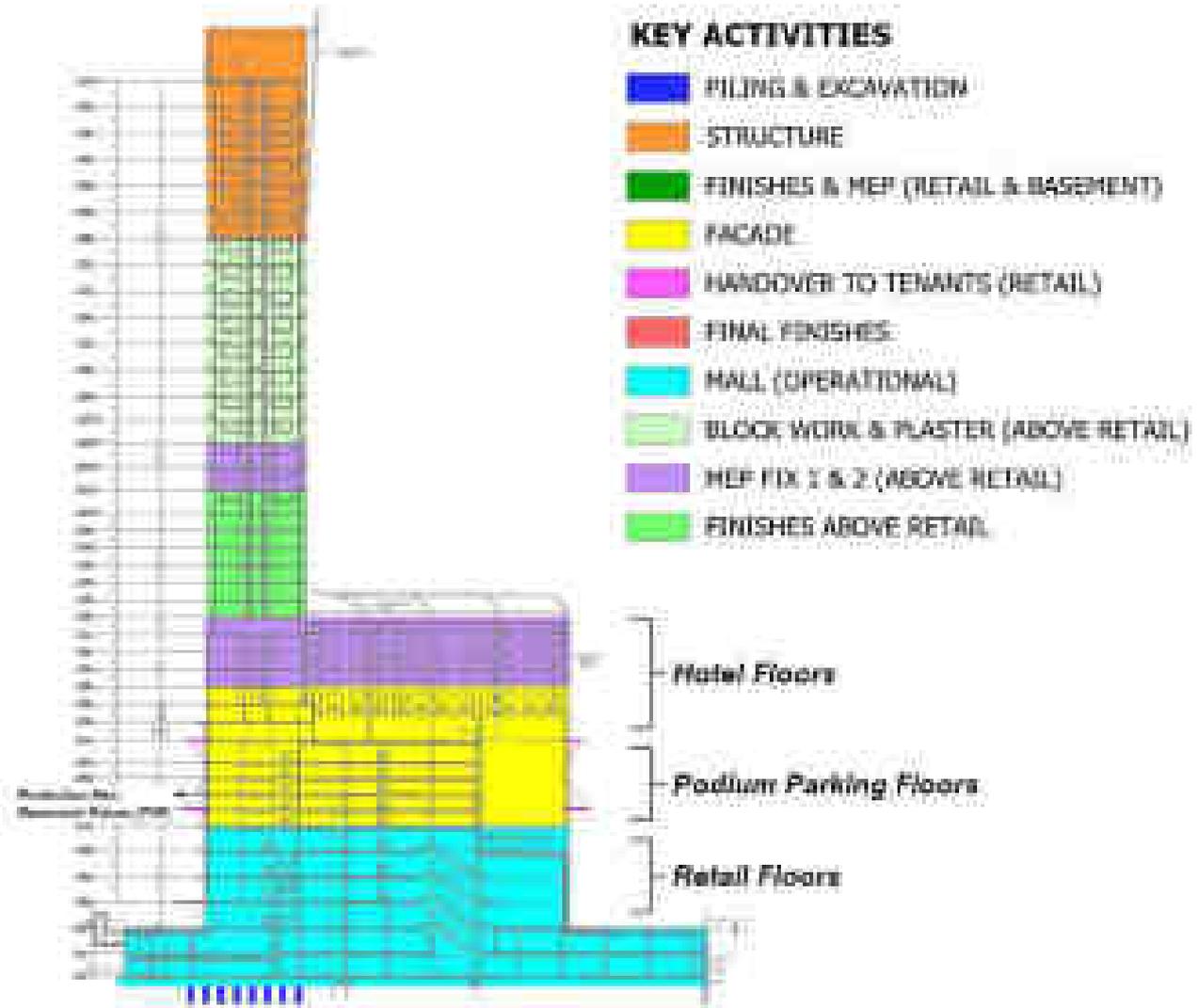
MONTH 27



# 4. Indicative Construction Sequence

## KEY MILESTONE :

- COMPLETION OF STRUCTURE

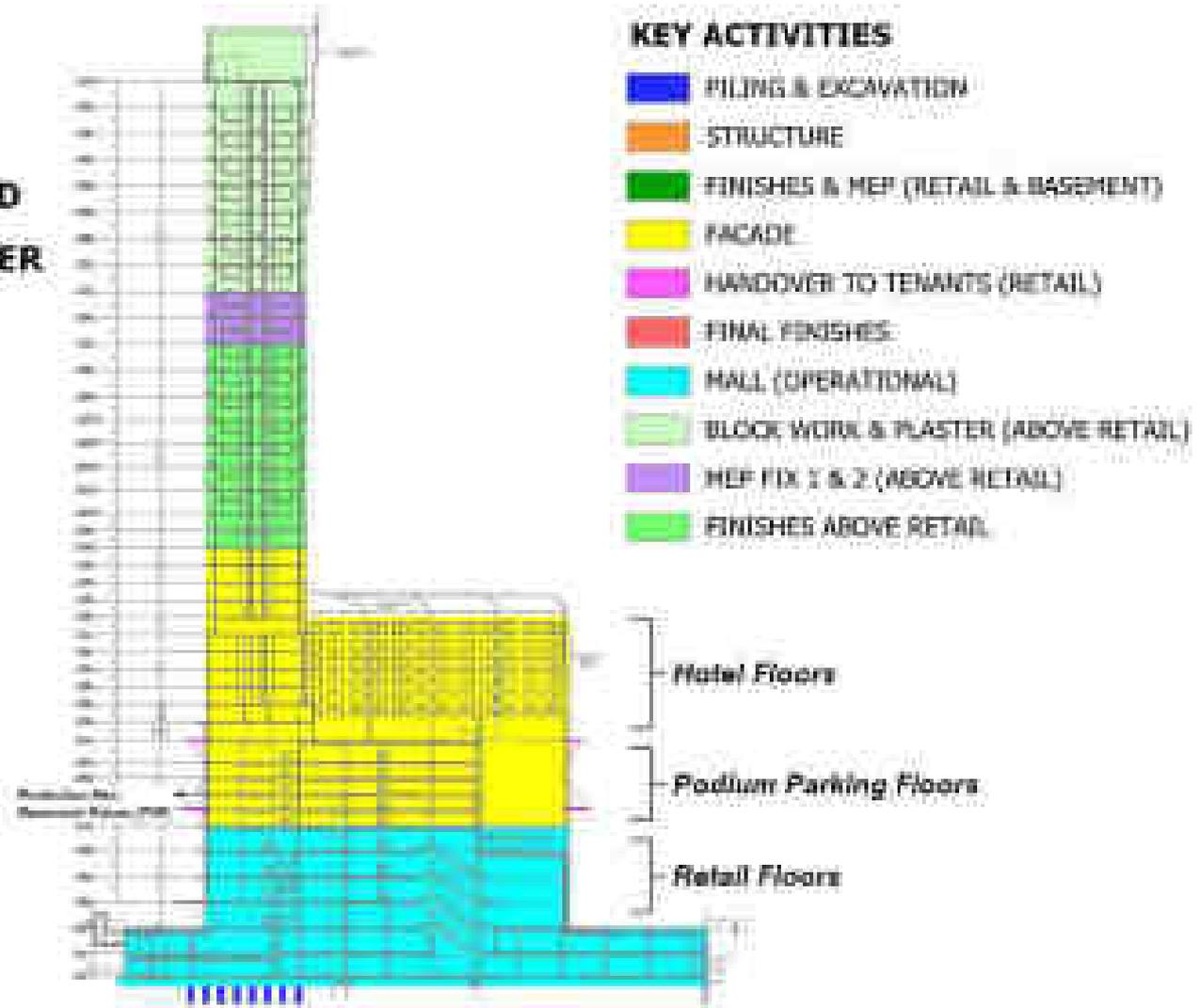


MONTH 30

# 4. Indicative Construction Sequence

## KEY MILESTONE :

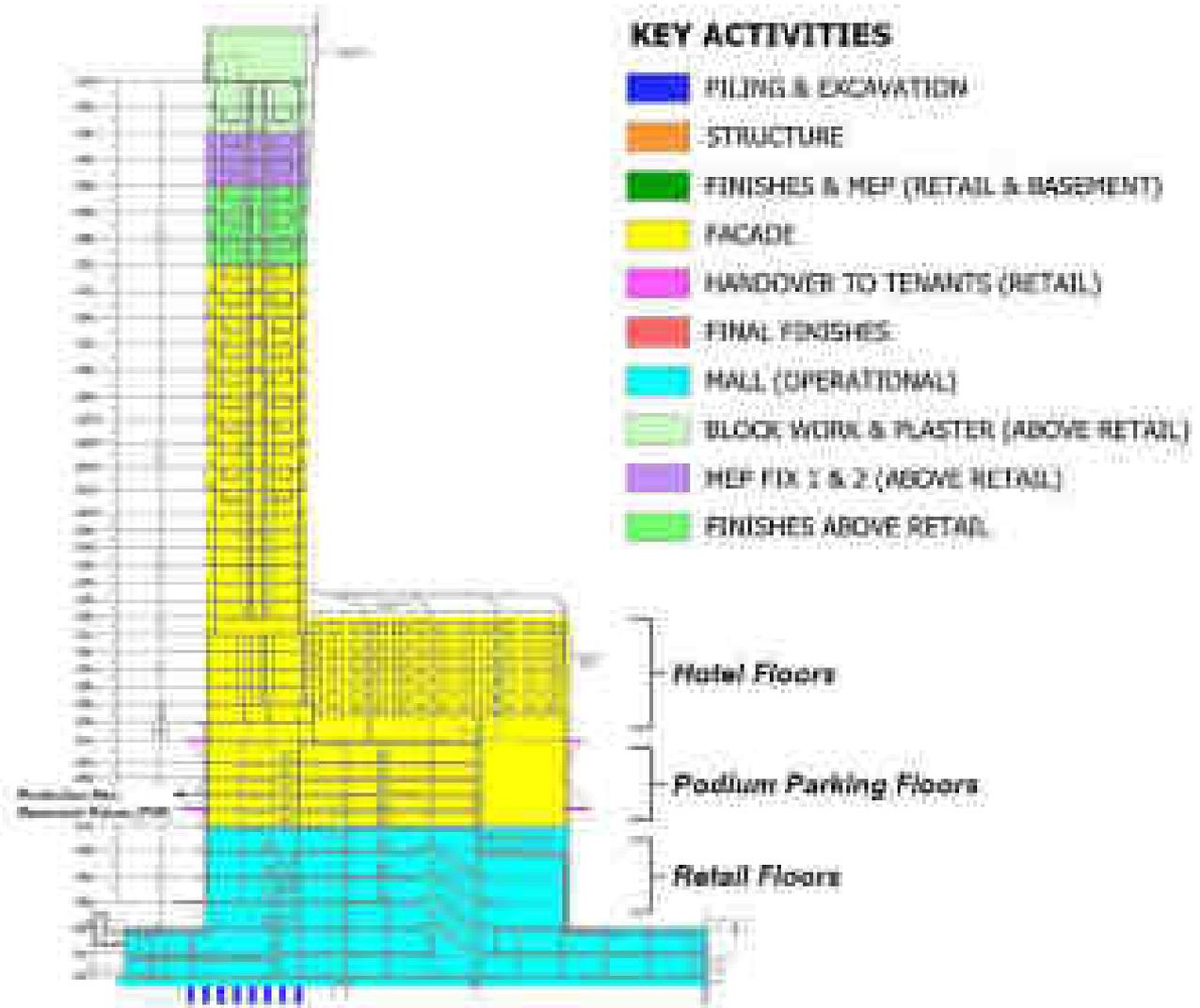
- COMPLETION OF BLOCK WORK AND INTERNAL PLASTER



MONTH 33



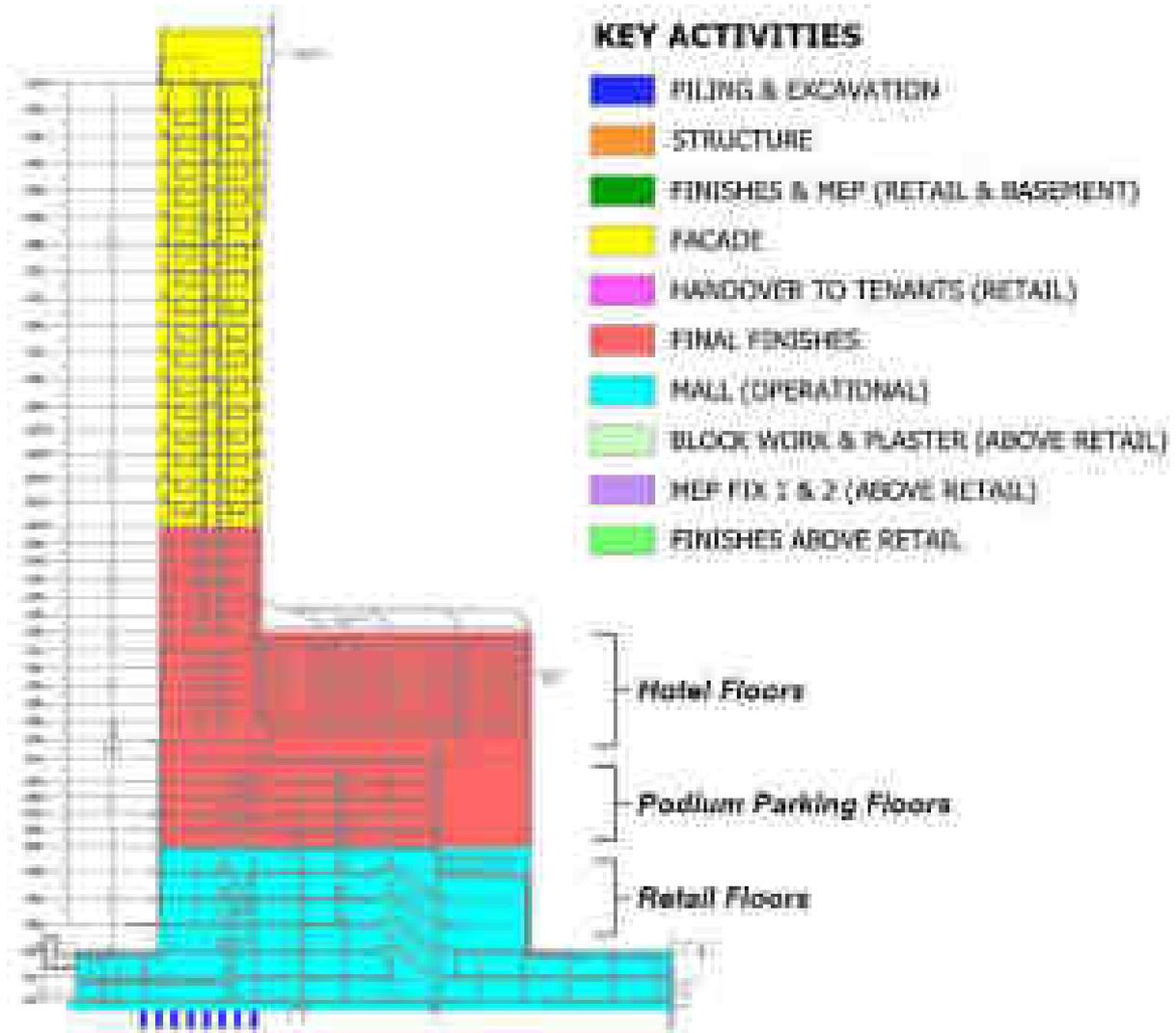
# 4. Indicative Construction Sequence



**MONTH 36**



# 4. Indicative Construction Sequence

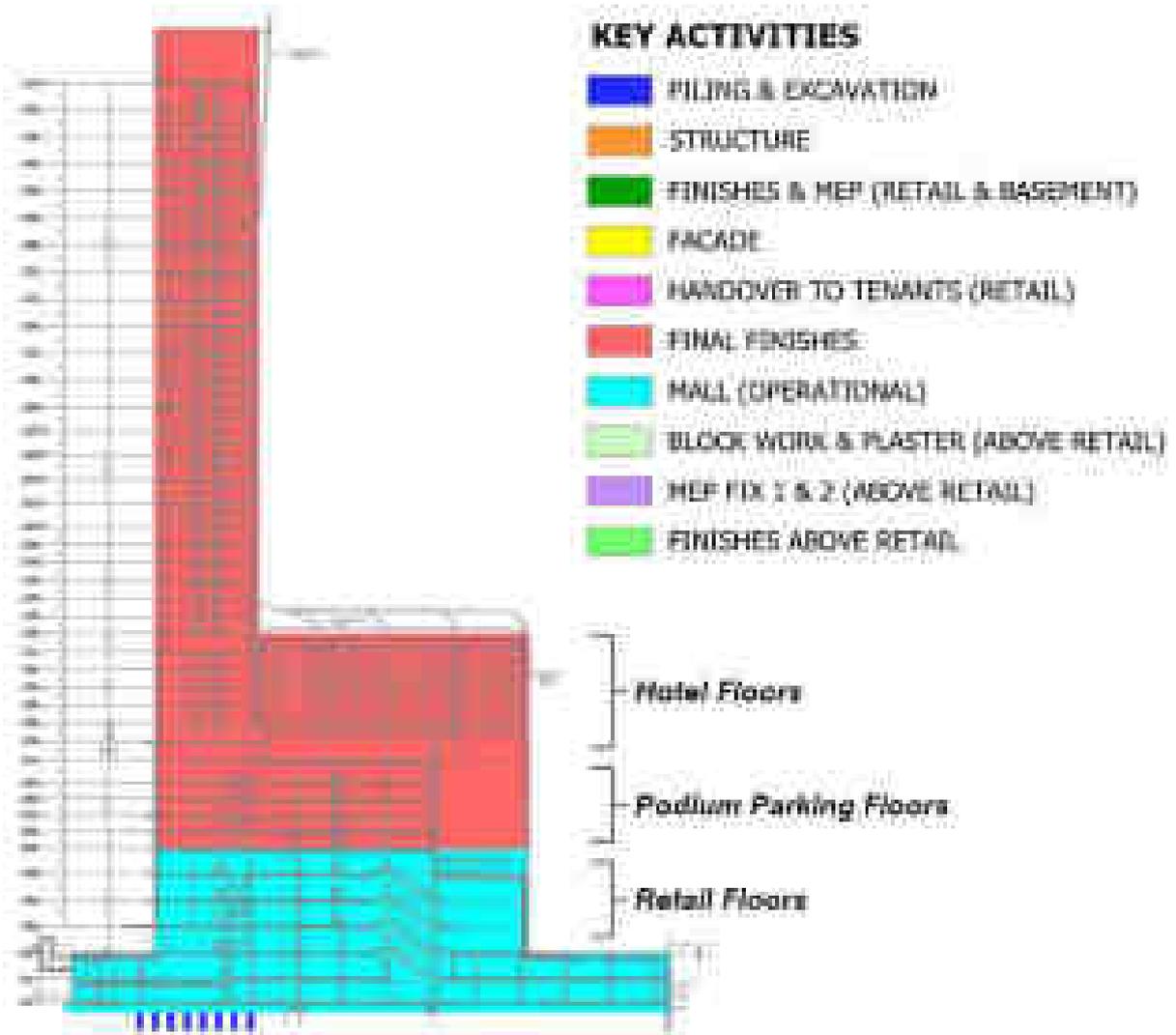


MONTH 39

# 4. Indicative Construction Sequence

## KEY MILESTONE :

- COMPLETION OF PROJECT



MONTH 42



## 4. Key Planning Considerations

| LEVEL                                      | USE                         | FLOOR AREA (sqm) | SLAB CYCLE (WORKING DAYS) |    |
|--|-----------------------------|------------------|---------------------------|----|
| Terrace                                    | Sky Bar                     | 3,600            | 15                        |    |
| Floor 27 - 28                              | Duplex                      | 5,250            | 14                        |    |
| Floor 22 - 26                              | Super Studio                | 4,650            | 13                        |    |
| Floor 16 - 21                              | Singles                     | 3,450            | 11                        |    |
| 15 <sup>th</sup> Floor                     | Service Floor-2             | 3,450            | 13                        |    |
| 14 <sup>th</sup> Floor                     | Hotel                       | 3,450            | 14                        |    |
| 10 <sup>th</sup> to 13 <sup>th</sup> Floor | Hotel                       | 3,450            | 11                        |    |
| 9 <sup>th</sup> Floor                      | Service Floor / Hotel Lobby | 3,600            | 15                        |    |
| Floor 8                                    | Parking                     | 4,500            | 15                        |    |
| 5 <sup>th</sup> to 7 <sup>th</sup> Floor   | Parking                     | 3,150            | 11                        |    |
| 4 <sup>th</sup> Floor                      | Parking                     | 3,150            | 15                        |    |
| 1 <sup>st</sup> to 3 <sup>rd</sup> Floor   | Retail                      | 5,100            | 18                        | 25 |
| Ground Floor                               | Retail                      | 5,100            | 19                        | 26 |
| Basement 1                                 | Parking                     | 5,100            | 34                        | 32 |
| Basement 2                                 | Parking                     | 4,500            | 36                        | 28 |
| Foundation                                 | 0                           | 0                | 52                        |    |

## 4. Key Planning Considerations

### TYPICAL BASEMENT INFORMATION

|                              |                              |
|------------------------------|------------------------------|
| Area of Basement Floor Plate | 14,205 Sqm                   |
| Total No. of Pours           | 19                           |
| No. of Zones in Basements    | 3                            |
| Zone Nomenclature            | Zone A, B & C                |
| <b>Zone A</b>                | <b>Residential Footprint</b> |
| - Area                       | 3,825 Sqm                    |
| - No. of Pours               | 4                            |
| - Area of each Pour          | 535 - 650 Sqm                |
| <b>Zone B</b>                | <b>Retail Footprint</b>      |
| - Area                       | 6,135 Sqm                    |
| - No. of Pours               | 6                            |
| - Area of each Pour          | 900 - 1,255 Sqm              |
| <b>Zone C</b>                | <b>Non Tower Footprint</b>   |
| - Area                       | 6,135 Sqm                    |
| - No. of Pours               | 6                            |
| - Area of each Pour          | 655 - 1,000 Sqm              |

### TYPICAL BASEMENT INFORMATION

|                                |                             |
|--------------------------------|-----------------------------|
| No. of Ramps                   | 2                           |
| No. of Cores Up to GF          | 3                           |
| No. of Lift Shafts Up to GF    | 76                          |
| No. of Columns & walls / floor | 154                         |
| No. of Core Walls / Floor      | 31 Elements                 |
| Post Tensioning                | Yes                         |
| Typical Slab Thickness         | 200 mm PT Slab              |
| Drop Panels                    | No                          |
| Beam Type                      | 1. PT Beams<br>2. RCC Beams |
| No. of Stairwells              | 7                           |
| Additional RCC Structures      | Tanks, Retaining Wall       |

## 4. Key Planning Considerations

### TYPICAL PODIUM PARKING FLOOR INFORMATION

|  |                             |
|--|-----------------------------|
| Area of Typical Podium Parking Floor Plate | 6,730 Sqmt                  |
| No. of Vehicular Ramps                     | 2                           |
| No. of Cores on each Floor                 | 3                           |
| No. of Lift Shafts                         | 14                          |
| No. of Pours                               | 8                           |
| Area of each Pour                          | 900 – 962 Sqmt              |
| No. of Columns & walls / floor             | 96                          |
| No. of Core Walls / Floor                  | 31 Elements                 |
| Post Tensioning                            | Yes                         |
| Typical Slab Thickness                     | 200 mm PT Slab              |
| Beam Type                                  | 1. PT Beams<br>2. RCC Beams |
| No. of Stairwells                          | 4                           |

### TYPICAL RETAIL FLOOR INFORMATION

|                                    |                                 |
|------------------------------------|---------------------------------|
| Area of Typical Retail Floor Plate | 7,441 Sqmt                      |
| No. of Vehicular Ramps             | 2                               |
| No. of Cores on each Floor         | 3                               |
| No. of Lift Shafts                 | 16                              |
| No. of Pours                       | 8                               |
| Area of each Pour                  | 900 – 962 Sqmt                  |
| No. of Columns & walls / floor     | 108                             |
| No. of Core Walls / Floor          | 31 Elements                     |
| Post Tensioning                    | Yes                             |
| Typical Slab Thickness             | 250 mm RCC Slab                 |
| Beam Type                          | 1. PT Band Beam<br>2. RCC Beams |
| No. of Stairwells                  | 4                               |

## 4. Key Planning Considerations

### TYPICAL HOTEL FLOOR INFORMATION

|   |                 |
|---|-----------------|
| Area of Typical Floor Plate (Floor 10 – 14) | 3,719 Sqm       |
| No. of Cores on each Floor                  | 2               |
| No. of Lift Shafts                          | 14              |
| No. of Pours                                | 4               |
| Area of each Pour                           | 500 – 962 Sqm   |
| No. of Columns & walls / floor              | 56              |
| No. of Core Walls / Floor                   | 31 Elements     |
| Post Tensioning                             | No              |
| Typical Slab Thickness                      | 240 mm RCC Slab |
| Drop Panels                                 | No              |
| Beam Type                                   | RCC Beams       |
| No. of Stairwells                           | 4               |

### TYPICAL RESIDENTIAL FLOOR INFORMATION

|   |                                |
|---|--------------------------------|
| Area of Typical Floor Plate (Floor 17 - 26) | 1,924 Sqm                      |
| Area of Typical Floor Plate (Floor 27 – 38) | 2,361 Sqm (includes mezzanine) |
| No. of Cores on each Floor                  | 2                              |
| No. of Lift Shafts                          | 11                             |
| No. of Pours                                | 2                              |
| Area of each Pour                           | 962 Sqm                        |
| No. of Columns & walls / floor              | 20                             |
| No. of Core Walls / Floor                   | 29 Elements                    |
| Post Tensioning                             | Yes                            |
| Typical Slab Thickness                      | 200 mm PT & 175 mm RCC         |
| Beam Type                                   | RCC Beams                      |
| No. of Stairwells                           | 2                              |

## 4. Programme Key Assumptions & Construction Calendar

| Programme Key Assumptions & Parameters: |  |
|---|--|
| <b>Overall Project</b>                  |  |
| 01                                      | Programme Calendar is a 5-day working week with Sundays considered as non working  |
| 02                                      | PMW's considered in the programme as per tender schedule (13 per week)   |
| 03                                      | Inclement weather considered in the programme  |
| 04                                      | Normal Working time is 12 hours per day (8 am - 8 pm) Night work considered for concreting and other critical activities   |
| 05                                      | Structure is divided into 3 Zones, Zone A (Apartment Towers), Zone B (Retail Area) & Zone C (Non Retail Elements)  |
| 06                                      | Formwork system for Zone B & C - Slab is Cupcock & Aluminium beams, Column formwork system is adjustable steel panels. For Zone Non Retail Formwork is considered  |
| 07                                      | Formwork system for Zone A - Crane Assisted Jump Formwork for column   |
| 08                                      | The overall duration of the project is 42 Months from commencement date and structure complete is at 28 Months   |
| 09                                      | LI Scope of work consists of Piling, Excavation, Structure, Blockwork, Reinforcing, Formwork, MEP, Concrete slab finishes & Ceiling Development works  |
| <b>Early Handover of Retail Areas</b>   |  |
| 10                                      | Final shop fitting for Retail & Elements to be started after completing all retail slabs to see the building & make it watertight and to avoid any possible handover in MEP services & Block                           |
| 11                                      | The overall duration of the project is 42 Months from commencement date and structure complete is at 28 Months   |
| 12                                      | The duration for early retail handover is 24 Months from commencement date which is 1 week after FMA sign off  |
| 13                                      | Structure above Retail floors will continue during retail handover works   |
| 14                                      | For Early Retail Handover, MEP works for complete project scope is considered as Basement & External areas. MEP works in central is upto Retail floors. However equipment procurement & installation may be phased out |

| CONSTRUCTION CALENDAR                | TENDER                           |
|--------------------------------------|----------------------------------|
| <b>A. LDA Date</b>                   | 25 Jun 18                        |
| <b>B. Commencement Date</b>          | 5 Jun 19                         |
| <b>C. Completion Date</b>            | 31 Dec 21                        |
| <b>D. Project Duration in Months</b> | 42                               |
| <b>E. Sundays</b>                    |                                  |
|                                      |                                  |
|                                      | 2018 28                          |
|                                      | 2019 30                          |
|                                      | 2020 30                          |
|                                      | 2021 32                          |
|                                      | <b>Total 120</b>                 |
| <b>F. Public Holidays</b>            |                                  |
|                                      |                                  |
|                                      | 2018 8                           |
|                                      | 2019 10                          |
|                                      | 2020 8                           |
|                                      | 2021 11                          |
|                                      | <b>Total 37</b>                  |
| <b>G. Minimum Days</b>               |                                  |
|                                      |                                  |
|                                      | 2018 11                          |
|                                      | 2019 15                          |
|                                      | 2020 15                          |
|                                      | 2021 15                          |
|                                      | <b>Total 56</b>                  |
| <b>H. Calendar Days</b>              | 1270                             |
| <b>I. Workdays</b>                   | 1000                             |
| <b>J. Non Working Days</b>           | 270                              |
|                                      |                                  |
|                                      | <b>% of Non Working Days 22%</b> |







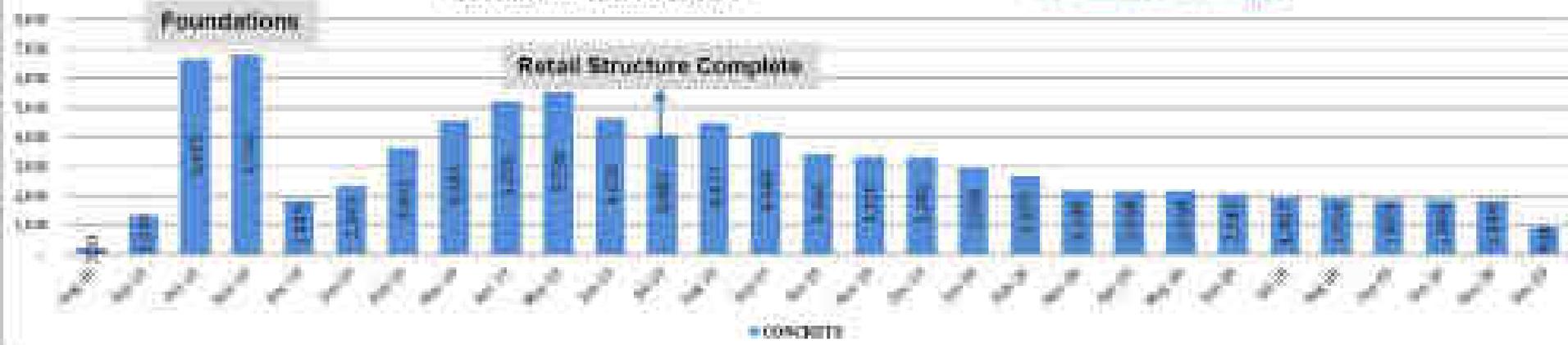
# 4. Overall Concrete & Structure Labour Histograms

CONCRETE HISTOGRAM

Peak Concrete: 6,762 DIM

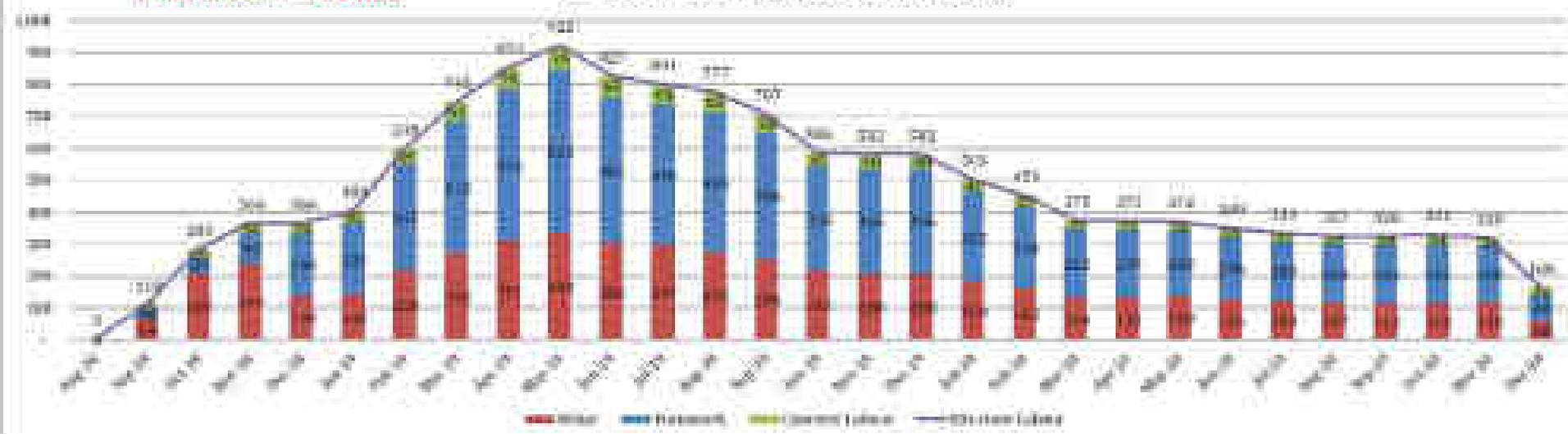
Foundations

Retail Structure Complete

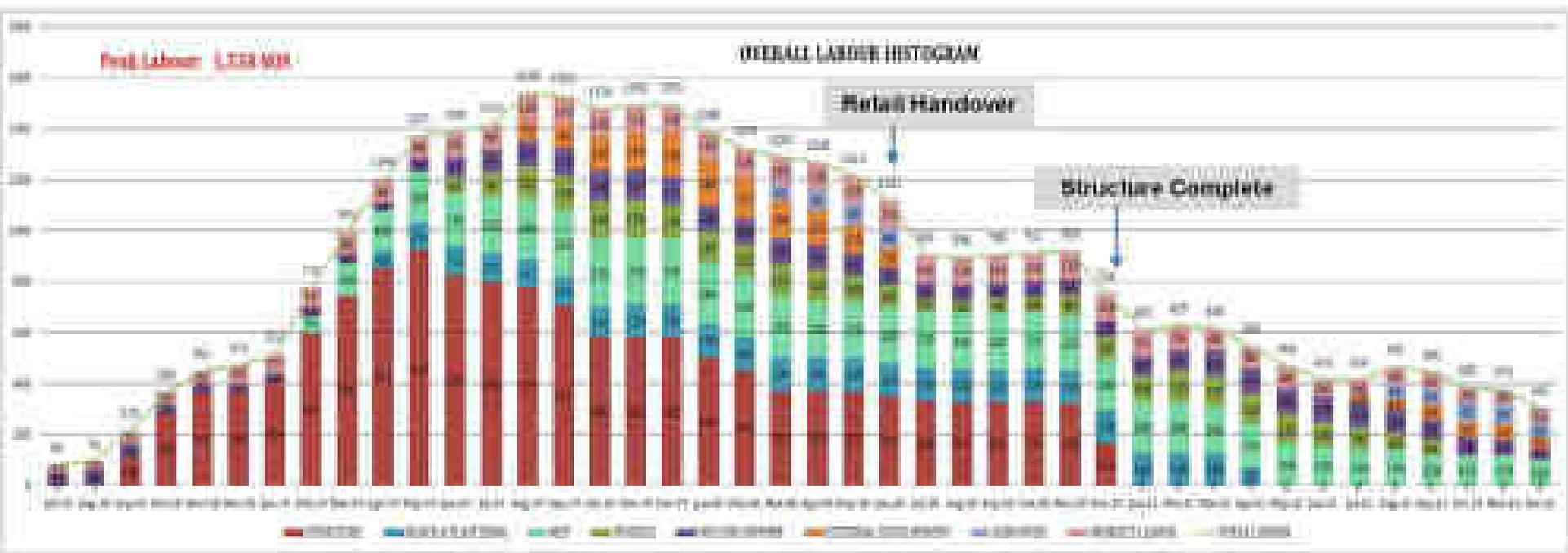


STRUCTURE LABOUR HISTOGRAM

Peak Labour: 922 NOS



# 4. Overall Labour Histogram



# 5. Organisation Charts



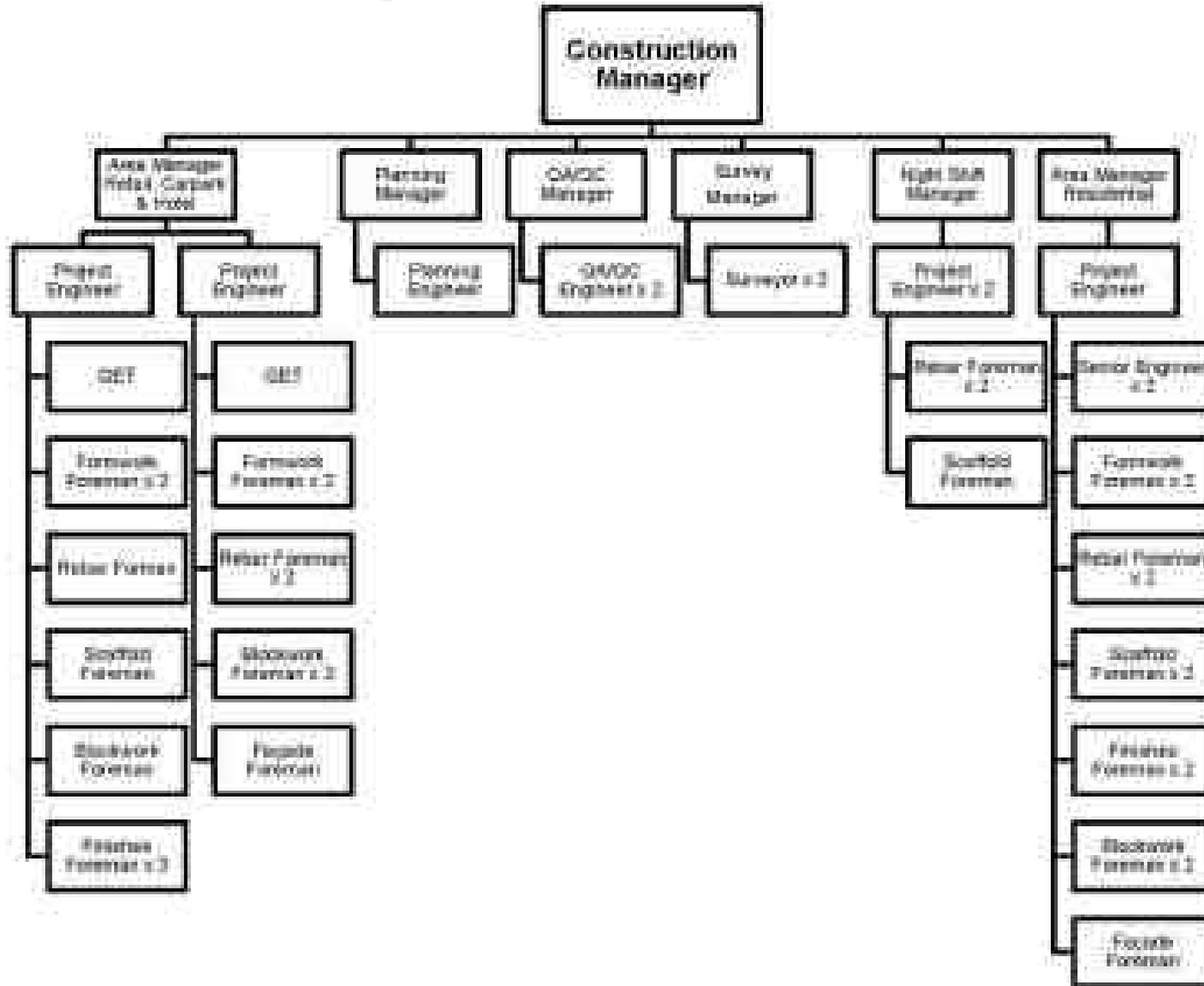
## 5. High Level Summary



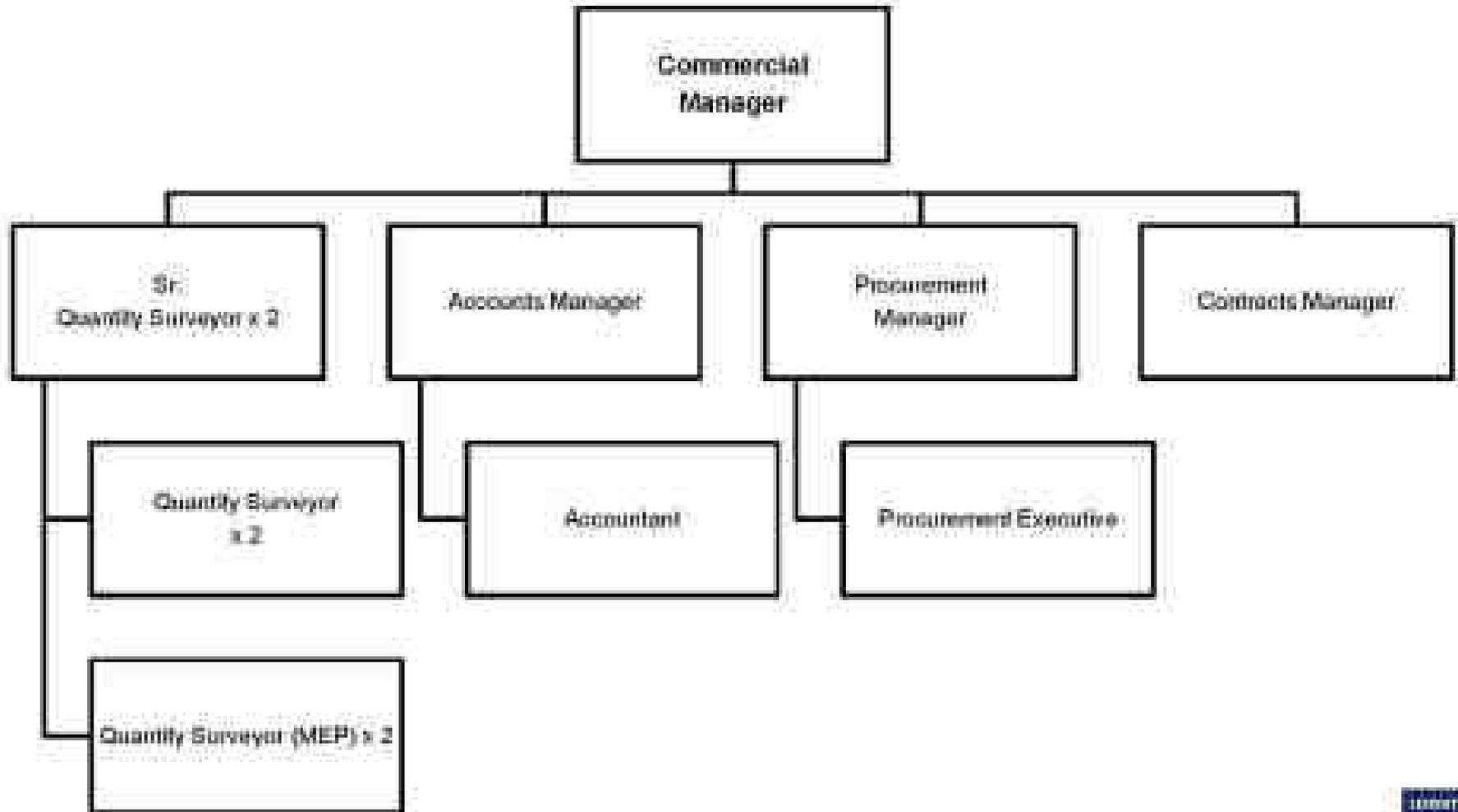
|                |     |
|----------------|-----|
| Total staff    | 120 |
| Expats         | 01  |
| National Staff | 119 |



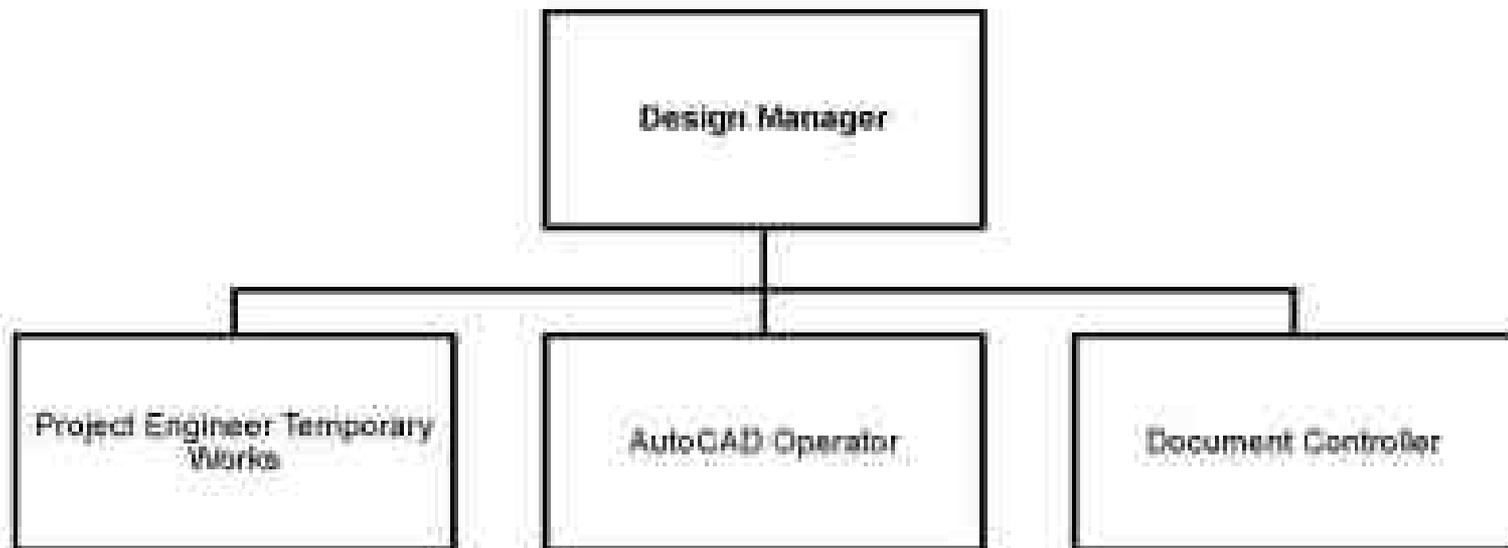
# 5. Construction Management



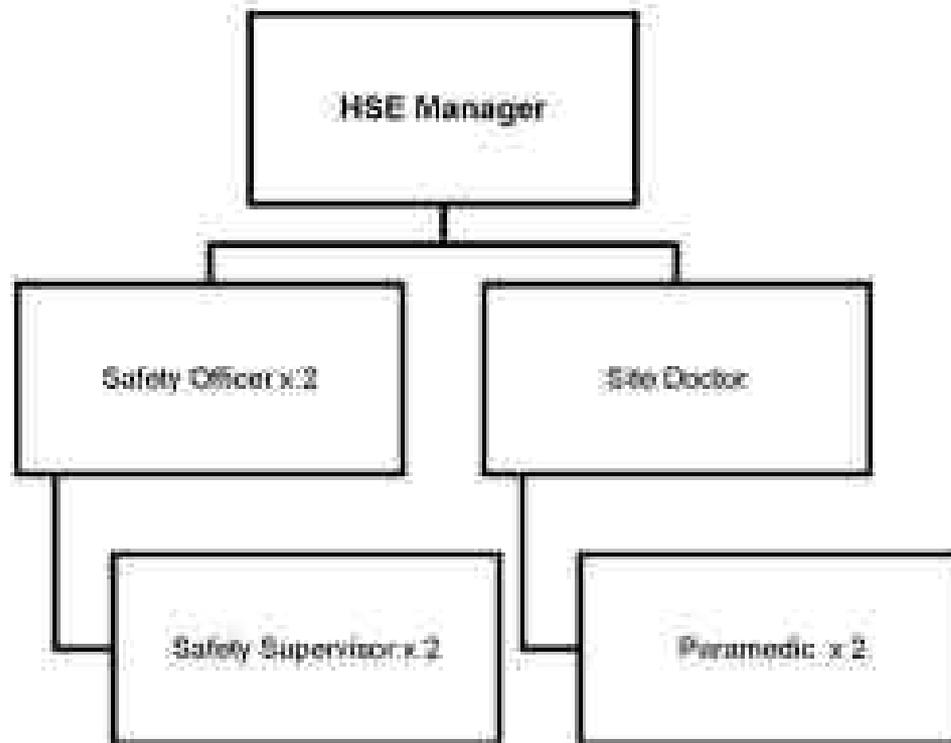
## 5. Commercial Management



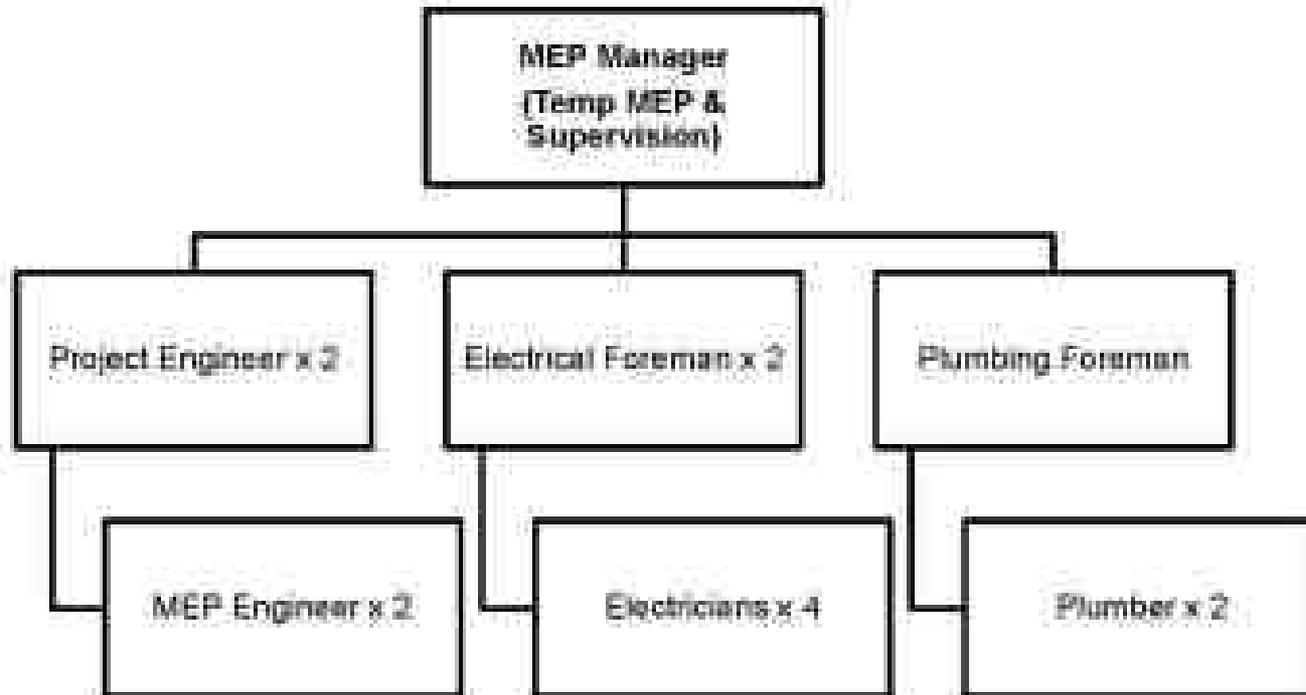
## 5. Technical Management



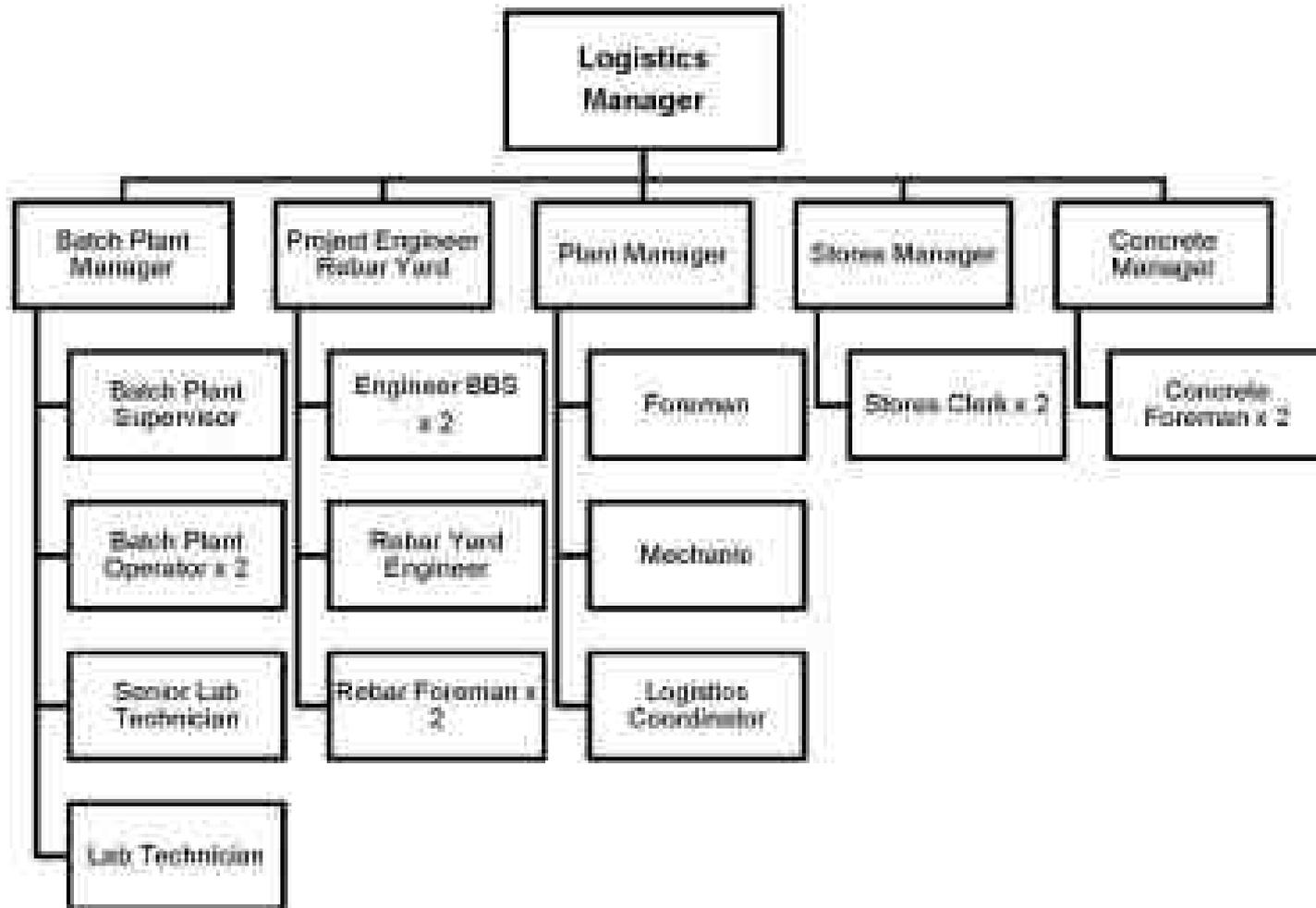
## 5. HSE Management



## 5. MEP Management



## 5. Logistics Management



|                       |   |
|-----------------------|---|
| Tower Crane Operators | 8 |
|-----------------------|---|

|                 |   |
|-----------------|---|
| Plant Operators | 6 |
|-----------------|---|



## 5. HR / Admin Management

