CHENNAI METRO RAIL LIMITED

CHENNAI METRO RAIL PROJECT PHASE-I

CONTRACT UAA-10

"DESIGN AND CONSTRUCTION OF UNDERGROUND COMMUTER AMENITIES CENTRE AT SHENOY NAGAR METRO STATION (SSN) INCLUDING ALL TEMPORARY AND PERMANENT WORKS LIKE DIAPHRAGM WALLS, BASE SLAB, FLAT SLAB BASEMENT SLAB & ROOF, ENTRY / EXIT STRUCTURES, ARCHITECTURAL FINISHES, SUMP AND PUMPS, VENTILATION SHAFTS, ELECTRICAL & MECHANICAL WORKS, PLUMBING & FIRE FIGHTING, VENTILATION & AIR CONDITIONING AND LAND SCAPING"

ADDENDUM - 2

MARCH 2018

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B1.	NIT and all other Places in the Document	Name of the Work: UAA-10 **"Design and Construction of Underground Commuter Amenities Centre at Shenoy Nagar Metro station (SSN) including All Temporary and Permanent Works like Sheet Piling, Soil Anchors, RCC retaining walls/ Diaphragm wall, Base Slab, Flat Slab Basement Slab & Roof, Entry/Exit Structures, Architectural Finishes, Sump and Pumps, Ventilation Shafts, Electrical Mechanical Works, Plumbing & Fire Fighting, Ventilation, Air Conditioning and Land Scaping"**	Revise as follows: Name of the Work: UAA-10 **"Design and Construction of underground Commuter Amenities centre at Shenoy Nagar Metro Station (SSN) including all Temporary and Permanent works like Diaphragm walls, Base slab, Flat slab Basement slab & Roof, Entry / Exit structures, Architectural finishes, Sump and pumps, Ventilation shafts, Electrical & Mechanical works, Plumbing & Fire Fighting, Ventilation & Air Conditioning and Landscaping"**

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B2.	Volume -1, Section-II, Bid data Sheet	ITB 1.1	For Name of Bid and Detailed Scope of Bid refer to B4 of Addendum-2

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B3.	Volume-1, Section-1 Instructions to the bidder	In connection with the Invitation for Bids **specified in the Bid Data Sheet (BDS),** the Employer, as **specified in the BDS,** issues these Bidding Documents (herein after referred to as" Bidding Documents") for the procurement of Building and Engineering Works, Designed by the DDC as specified in Employer's Requirements, to be validated by the Tenderer. The name, identification, and number of the lot(s) (contract(s)) comprising this Competitive Bidding are **specified in the BDS.**	In connection with the Invitation for Bids **specified in the Bid Data Sheet (BDS),** the Employer, **as specified in the BDS,** issues these Bidding Documents (herein after referred to as" Bidding Documents") for the procurement of Building and Engineering Works, to be Designed by the contractor's Designer as specified in Employer's Requirements. The name, identification, and number of the lot(s) (contract(s)) comprising this Competitive Bidding are **specified in the BDS**.

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B4.	Volume -3, Section-B, Employer's requirement - Functional	Concept, objective and Scope of Works	Replace the Concept, Objective and Scope of Works as follows

EMPLOYER'S REQUIREMENTS - FUNCTIONAL

CONCEPT

It is proposed to develop the underground Commuter Amenities Centre with basement-1 and basement-2 on the East and West side of the existing Shenoy Nagar Metro Station. The 1st basement shall have provision for car/two wheeler parking and the 2nd basement shall have passenger amenities (Shops, food courts etc.). It is proposed that the 2nd basement shall have air-conditioning & ventilation and the 1st basement shall have ventilation jet fans for car Parking Ventilation.

The method of construction envisaged is Top-Down construction method with 800mm thick Diaphragm Walls. A space of 3m should be left along the Shenoy Nagar Metro Station Diaphragm Wall and the New Diaphragm walls. Also a 3m space along the outer periphery of the park and the new Diaphragm walls should be left for planting deep rooted trees along the boundary of the Park. The flat slab system is proposed for all the slabs. After the construction of the structure, water proofing of the basement walls and roofs shall be done before refilling. For of Diaphragm wall, block wall with supper drain shall be planned on the inside of the basements. On the refilled park area, the landscaping and park restoration has to be done which shall be handed over to Chennai Corporation. All necessary facilities like entry/exits, ramp, lift/escalator pits, Architectural Finishes, Boundary wall for the park, all MEP works, Ventilation, Air-conditioning and Firefighting for complete and safe operation of the Centre are to be designed and executed by the contractor.

The development has to be with barrier free Built Environment for Disabled and Elderly Persons as per CPWD norms. Entry structures are to be designed as dominant structures with structural glazing. Lift lobbies as the main circulation core for passenger dispersion movements. Flooring work in 2nd Basement to is proposed to be done in Public area and main corridors only. Remaining areas to be left as bare slab. Flooring work in 1st Basement (car Parking area) is with granolithic flooring except in main circulation public area. Fire Alarm & sprinkler system has to be done for both the basements except that for the non-ceiling areas of Basement-2 (retail areas). Only tap-off points with valve & flow switch along the corridor to serve the retail area in between the corridors will be provided and all further distribution inside retail area will be done by the individual retailer. Fire hydrant to be provided for all the common areas and staircases as per standards / TNFRSD requirement

Toilet provision are to be provided at Street Level, Basement-1 and Basement-2 on both east and west sides as per toilet block sizes provided in tender drawings. Administrative office, lunch room, janitor room, CCTV/security room, Electrical panel room, Battery /UPS room, TCS Panel room are to be provided as per requirement although not shown in the tender drawings. False ceiling, 4.0 metres wide (2.0 m wide corridor & 1.0m overlap on

either side) to be planned and constructed only in public areas and corridors connecting AHUs / Fire escape staircases in 2nd basement as indicated in the tender Drawings. (In 1st basement parking area, false ceiling is not required, except for Public areas).

Separate waste water & sewage water lines required with individual pumps. The sewage system is to be connected to the existing sewer system of CMWSSB. The Fire sump can be at one side with piping extended to both east and west sides.

VAC has to be provided in 2nd basement and ventilation jet fans in 1st basement. Indoor temperature of 24 + 1^0 C is to be maintained in 2nd basement. Operational hours to be considered for the retail area is 8 AM to 10 PM. For Basement-2, even though, the design has to be done for the Full area, only tap-off points to be provided from the corridor, which shall later be extended by the individual tenants.

Smoke control and extraction system in to be provided in both Basement-1 & Basement-2 based on the smoke zoning layout. Smoke zoning to be done for both basements.

Fire sprinkler system to be designed and provided in Basement-1 & Basement-2. For Basement-2, even though, the design has to be done for the Full area, only tap-off points to be provided in the False ceiling area indicated in the tender drawings, which shall be later extended by the individual tenants.

Design, Supply & Installation of outdoor HT panels, Transformers & Diesel Generators are in the scope of the works. In case of indoor type transformers, they should be housed in a Transformer room at street level. Supply and Installation of Lift & escalators is not in the scope of works, but all Civil, Electrical and Firefighting provisions have to be made, interfacing with the L&E Contractor.

The park serves as the breathing space amidst the concrete jungle. It has its uniqueness with respect to its location, as it is approached by 9 roads and surrounded by the Pulla Avenue road at its periphery. The park has to be designed as a Thematic park with creation of an eco-friendly environment, climatic responsive, use of innovative technologies / ideas like using recycled materials and making it suitable for differently- abled. The park should serve as the identity and add value to the local residents. The park has to utilize the state generic resources and create environmental awareness with adequate recreational facilities suitable for all age groups. Landscaping for Park development should be of word class standards integrating innovative concepts by engaging an Expat or Award-winning Indian Landscaping Architect.

Tree cutting, tree transplanting, Road / footpath/ boundary wall demolishing and Utility shifting etc. shall be paid as per Utility Department's schedule of rates. But Construction of New Boundary wall along the periphery with gates (5Nos) is included in the scope of works.

OBJECTIVE

The objective of the Contract is the design, construction completion, testing and commissioning of the permanent works by the Contractor (Civil, structural, Architectural, Mechanical , Electrical, Plumbing, Fire suppression, prevention and Firefighting, Ventilation and Air-conditioning, Landscaping and park redevelopment but excluding supply and installation of Lifts &Escalators), including without limitation, the design,

installation and removal of the Temporary Works, and the rectification of defects appearing in Permanent Works, in the manner and to the standards and within the time stipulated by the Contract. In full recognition of this objective, and with full acceptance of the obligations, liabilities and risks which may be involved, the Contractor shall undertake the execution of the Works.

B1 GENERAL

(1) The design and performance of the Permanent Works shall comply with the specific core requirements contained in these Employer's Requirements.

(2) The design of the Permanent Works shall be developed in accordance with these Employer's Requirements Section B - Functional, the Employer's Outline Design Specifications, the Employer's Outline Construction Specifications, as included in this Contract, other requirements of the Contract and the Contractor's Technical Proposals.

(3) The Permanent Works shall be designed and constructed to the highest standards available using proven up-to-date good practice. The Contractor's Specification shall in any case not specify standards which, in the Employer's Representative's opinion, are less than or inferior to those described in the Outline Design Specifications and Outline Construction Specifications, respectively, and shall be carried out employing the procedures established by the Contractor in his Quality, Safety and Environmental and Interface management plans.

(4) The Contractor shall be responsible for obtaining all necessary approvals from the relevant agencies in the construction of the Works, Water and Sewerage connection, Fire services Department etc.

B2 : SCOPE OF WORKS

A) Civil, Structural Architectural and General

(1) The Permanent and Temporary works shall comprise the Design and Construction of all Works and services necessary to complete the underground section complete as per Contract Outline Design and Construction Specifications, including, but not limited to, the following:

(2) Survey and Investigation including Soil Investigation, Topographic Survey, Existing Building Survey, Utilities Investigation, Existing Water Wells Investigation as necessary.

(3) Site clearance and the fencing, barricading and securing of the site areas and works areas, Temporary ventilation, plumbing and lighting during construction

(4) Engineer's Site office for the duration of the contract. as per Appendix 13

(5) Location, Protection, temporary support and reinstatement /relocation of utilities to the satisfaction of the concerned Utility Company. Paver block footpath along

the periphery of the park to be demolished and made good, (if required) after construction activity, which will be paid extra. (Payment for Utility shifting shall be made separately as per the SOR of the concerned Utility Company.)

(6) Traffic management and road works, both temporary and permanent including diversions of roads and footpaths, pedestrian walkways, etc. if required.

(7) All Temporary works necessary, Survey instrumentation, Pre-condition surveys and reports, ground treatment, ground and building monitoring, risk analysis, settlement prediction, wherever required, preventative and corrective actions, Identification, monitoring, protection and/or removal of existing water wells;

(8) Architectural Planning, development of Plans, elevations & sections, Flood control measures and to follow IGBC certification requirements in construction.

(9) Design and construction of Diaphragm Walls including guide wall, bentonite circulation, D'wall excavation with grab, stop ends, water bar & Reinforcement, couplers etc for top down construction method. Leaving Temporary openings in slabs for excavation etc. and closing the same afterwards.

(10) Design and construction of Underground and above ground structures including, plunge columns, Permanent columns, ventilation shafts; and Entry/Exit, Mumty, Emergency Staircases, AHU rooms, Pump rooms, service rooms, administration rooms etc.

(11) Design & Construction of all structural RCC works, lift pits, Escalator supports, block work for fire staircase rooms, vent shafts, Low height corridors walls upto skirting height in basement-2, pump rooms. The Finish schedule as per Attachment -2 of Addendum-2 to be followed. False ceiling 4m wide 4.0 metres wide (2.0 m wide corridor & 1.0m overlap on either side) to be planned and constructed only in public areas and corridors connecting AHUs / Fire escape staircases in 2nd Basement as indicated in the tender Drawings. (In 1st Basement parking area, false ceiling is not required, except for Public areas). Partition walls and False ceiling in Retail area in Basement-2 is not in the scope of works.

(12) Water proofing on top of roof slab and, RCC basement walls, filling earth over roof slab, filling good earth & manure for the last 500mm fill for development of park. Block work for full height of Diaphragm walls and Scupper drain are to be constructed inside the basement -1 and Basement-2

(13) Making 4 Nos Openings of size 3.5mx2.5m in both diaphragm walls, for Connecting to existing SSN Station at Concourse Level by cutting the

Diaphragm Walls, making NATM tunnel between the Diaphragm walls and strengthening the opening and finishing.

(14) Construction of Boundary wall and MS security grill and security gates, as per indicative tender drawing.

(15) Disposal of surplus soil/material/building debris in approved dumping area(s) as per the Employer's Requirements including compaction to the desired levels to the satisfaction of the Engineer..

(16) Wall & Ceiling plastering, Wall cladding, skirting, flooring, Wall painting.

(17) Structural glazing work at street Level for Entry /Exit Structures.

(18) Storage tanks for WS, Waste water, Sewage & Fire Fighting, Drinking water fountains at passenger catchment areas

(19) Supply, installation and testing of Pumps including. sump pumps and pipes for drainage/sewerage; and

(20) Safety & directional signages in line with the Shenoy Nagar Metro Station signages.

(21) Provision for Advertisement Panels over Columns and in Block works (with Niche) & with concealed Electrical wiring up to the panel:
(a) Street Level: Walls in Entry area, Staircase/Escalator/Lift area: 20Nos
(b) Basement-1 : Columns: All Columns, In Block Work: 50Nos approx
(c) Basement-2 : Columns: Nil, In Block Work: 20 Nos Approx

(22) Parking lots are to be marked and numbered in Basement-1 Parking area.

(23) Drilling and development of 2 Nos bore Wells one on east and west sides of the park along with submergible pumps and pipes up to storage tanks.

(24) Restoration plan for Shenoy Nagar Park by Expert Landscaping Consultant that include; execution of horticulture works. i/c Lawn, plants& shrubs, stone art, children play area (with design & installation of equipment like swing, slide, seesaw, spinners etc.), Flexible walking track around and across the park, Paver block path/CC pavement, planting deep rooted trees saplings along the periphery of the park, Devolvement of Miyawaki concept forest area at 4 corners of the park and other landscaping elements.

(25) Laying network of pipes and valves, flexible hosepipes etc. for ease of maintenance of the park.

(26) The rain water drain to collect water from above ground structures and discharging in Miyawaki forest area proposed in the 4 corners of the park.

(27) Maintenance of park, plants & shrubs for 2 years (DLP Period) after handing over i/c all manure, replacing of dead saplings etc.

(28) VRF AC units to be provided above staircase mumty with access stair and the VRF units are to be protected with galvanium sheet roofing and side covering to match with the park landscaping

(29) Connection of service ducts at street level (above roof slab) with RCC Hume pipes.

(30) The Contractor shall be responsible for obtaining approval for the designs of the stations and structures (both underground and above ground) by all relevant civic authorities having jurisdictional authority wherever required. CMRL shall facilitate in getting the approvals and Application Fee for the approvals shall be reimbursed on production of receipts.

(31) The Contractor shall be responsible for obtaining relevant certificates or clearance from local civic Authorities if required

B) MEP:

(32) Design, Supply, Installation, testing & Commissioning of HT Panels, Dry type Indoor Transformers - 2Nos of capacity 2000 KVA each and Silent Diesel Generators -1No of capacity 910 KVA for Commuter Amenities Centre

(33) Low voltage power distribution system: Bus way, cable, conduit, raceway, etc.

(34) Low Voltage switchboards: Main, sub-main, distribution boards, load centre, etc.

(35) Lighting system: Interior, Exterior, sign illumination, exit & fire exit, Emergency Lighting, road lighting;

(36) Small power system: Socket outlet, RCD, safety switches, power supply for mechanical equipment; charging sockets.

(37) Earthing and bonding system;

(38) Uninterruptible power supply (UPS) of capacity 1No. of 20KVA for 2Hrs backup (only for common Essential services and not for individual Retail Shops);

(39) BMS system: Design, supply, installation, testing and commissioning of BMS SCADA system for Car Park ventilation, VAC, MEP, firefighting system, CCTV, PAVA and integrating with Lift& Escalator (through interface).

(40) All internal services including Electrical and Mechanical works, UPS system of for essential services, LED lighting & fire protection, plumbing for water supply, waste water, sewerage works etc. for Basement -1 and Basement-2 except retail areas.

(41) In case of indoor type transformers, they should be housed in a Transformer room at street level / or above one of the fire staircase's roof, with necessary protection / fencing.

(42) Getting HT supply from TANGEDCO, point of location and all the necessary co-ordination / Interface shall be done by the contractor. Connection charges including cable for HT connection up to HT panel shall be borne by CMRL

(43) Fire Alarm & sprinkler system design & execution has to be done for both the basements except that for the non-ceiling areas of Basement-2 (retail areas). For basement-2 Only tap-off points with valve & flow switch along the corridor to serve the retail area in between the corridors will be provided and all further distribution inside retail area will be done by the individual retailer.

(44) Fire hydrant to be provided for all the common areas and staircases as per standards / TNFRSD requirement in Basement-1, Basement-2 and at street Level

(45) Common MEP services to be provided in Full basement-1, staircases and system & plant rooms, public corridor of Basement-2

(46) Main electrical supply for Basement-2 to be provided at 4 corners of the basement for taking electrical supply to individual shops at a later stage by CMRL. No. of shops & No. of Feeder requirements will be decided by CMRL later. The Downstream Panel with Circuit breaker and metering will be done by CMRL at a later stage.

(47) For basement-2 Trays for Power & Control cables along the main Corridors shown in the tender drawing.

(48) Fire detection and suppression system and all other control and safety services

(49) Supply, delivery, installation and functional testing of earth mat / earth pits and embedded earth cables, lightening arresters.;

(50) Street lighting in the park as well as over the boundary wall, with separate power connection to be later handed over to Chennai Corporation. Getting separate power connection from TANGEDCO for park is in the scope of contractor. Connection charges including cost of transformer and cable for HT connection shall be borne by CMRL. Solar powered LED lighting to be provided for the entire park area except in shadow areas

(51) Design Supply and installation of CCTV system and Public address system in strategic locations as per requirement at strategic locations in Basement-1 & Basement-2. CCTV cameras at to be provided at entry / exit points, at all junction of corridors at basement-2 (Commuter Amenities Centre) and at all locations to cover the entire basement-1 (Car Parking Area). A 30-day storage of CCTV footage is to be considered.

C) VAC

(52) The works to be executed under the Contract include the Design, Manufacture, Supply, Delivery, Installation, Testing, Commissioning (including System Acceptance Testing, Integrated Testing & Commissioning and Operational Acceptance) along with supply of Operation and Maintenance Manuals, Training of Operation and Maintenance Personnel, Supply of Spares, Special Tools and Maintenance Tools and Assistance for Maintenance, Defect liability period, for a complete integrated Ventilation and Air Conditioning System (VAC) including associated automatic control & monitoring systems (SCADA), associated electrical power supply and distribution system from the low voltage main distribution panel (MDB) / Emergency main distribution panel(EMDB) to the VAC equipment.

(53) Design and construction for Air Conditioning and Mechanical Ventilation systems including elements of the fire detection and firefighting systems. For Basement-2, even though, the design for VAC& Fire fighting has to be done for the Full area, only tap-off points to be provided from the corridors, which shall be later extended by the individual tenants.

(54) VAC system design including electrical and SCADA system shall cover the entire basement-2.

(i) All air conditioning equipment shall be designed and installed considering the peak load conditions and it shall cover the entire basement-2. Cooling load calculation shall be submitted for both summer and monsoon conditions. VAC equipment rooms shall be designed and located at basement level-1.

(ii) Air conditioning ducting shall be designed and installed from VAC equipment room to the entire corridor of the basement level-2. Main ducting shall be covered at entire corridor of the basement level-2 along with branch ducting tapping, VCD and FD / MFSD at few locations in order to utilize for the future usage of entire PD area or air conditioning

rooms. Contractor shall make such facility in the design as well as at field.

(iii) Refrigerant piping shall be designed and installed from VAC equipment room i.e. AHUs to the VRF outdoor units by the Contractor. In case if the designed Air-conditioning capacity by way of VRF units and AHUs if felt are not sufficient during the period of tenancy due to any reasons inside the PD area, and to augment the said purpose, the contractor shall make the extra space provision and wall cut-outs to run copper refrigerant pipes of suitable sizes along with the electrical and signal cabling and distribution system from PD area to outdoor unit location. The routing of VAC services and outdoor unit location for the augmented air conditioning capacity shall be shown in the drawings suitably considering the above situation.

(iv) Contractor shall make facility in the central controller and power distribution indicator from OEM of VRF units in order to utilize for the future usage of entire PD area or air conditioning rooms.

(v) Drain point shall be designed inside the PD area in order to utilize for the future usage of entire PD area or air conditioning rooms.

(vi) In addition to the above contractor shall provide the preliminary VAC system design calculation and drawings including ducting associated air distribution system including smoke extraction system, refrigerant piping, electrical and SCADA system for the future usage of the PD areas. Contractor shall make all VAC provisions for the PD area from the corridors for the installation of VAC equipment / services including wall cut-outs where necessary. All VAC services inside the PD area shall be provided and installed by the future tenant.

(55) Ventilation system for toilets, pump room and any other ventilation rooms.

(56) Smoke management system for safety of the passengers / public, O&M staffs and tenants based on the smoke zoning layout. Also, pressurization of firemen and fire escape stairs in case of fire / emergency conditions.
All smoke extraction system shall be designed considering the entire area of the basement-2. Smoke extraction ducting shall be designed and installed from VAC equipment room to the entire corridor of the basement level-2. Main ducting shall be covered at entire corridor of the basement level-2 along with the branch ducting tapping, high temperature VCD and MSD in order to utilize for the future usage of entire PD area or air conditioning rooms. Contractor shall make such facility in the design as well as at field.

(57) Electrical power supply and distribution system from MDB / EMDB to all VAC equipment's.

(58) Automatic control and monitoring of complete Ventilation and Air Conditioning System by Building management SCADA system.

(59) Interface with Civil and other systems internally to meet the general, performance and safety of the integrated VAC system.

(60) The entire VAC system and equipment premises shall be provided with suitable Signage and the same shall be submitted to Employer for notice of no objection.

(61) Contractor shall engage independent design checker to verify, validate and certify the design requirements to satisfy the normal and emergency conditions.

(62) The design criteria and other details provided here for preliminary reference only. Hence, Contractor shall propose the design criteria and other details based on the relevant standard requirement and experience gained from other projects to design complete air conditioning and Ventilation system during the preliminary design for notice of no objection. In addition, Contractor to liaise with Civil / Architect and other system teams internally to get the accurate details to design the complete VAC system.

D) BASEMENT CAR PARKING VENTILATION

(63) Ventilation system for entire car parking area, corridor / public area, any other basement area in the drawing.

(64) Smoke management system for safety of the passengers / public, O&M staffs and tenants based on the smoke zoning layout.

(65) Electrical power supply and distribution system from MDB / EMDB to all CPV equipment's.

(66) Automatic control and monitoring of complete CPV System by Building management SCADA system.

(67) Interface with Civil and other systems internally to meet the general, performance and safety of the integrated CPV system.

(68) Contractor shall engage independent design checker to verify, validate and certify the design requirements to satisfy the normal and emergency conditions.

(69) The design criteria and other details provided here for preliminary reference only. Hence, Contractor shall propose the design criteria and other details based on the relevant standard requirement and experience gained from other projects to design complete car parking ventilation system during the preliminary design for notice of no objection. In addition, Contractor to liaise with Civil / Architect and other system teams internally to get the accurate details to design the complete CPV system. Also to meet the Space

optimization to park more number of cars in the available area, reduced running cost and enhanced aesthetic look of Basements.

E) INTERFACE FOR LIFT AND ESCALATORS CONTRACTOR

(70) The contractor shall interface with L&E civil contractor for shaft dimensions

(71) All necessary civil works or modifications (like cable trays, wall opening, providing earthing pits, correction of shaft verticality, Entrances corrections & Lift pit corrections, etc. whatever may be required) in related to logistics, installation and commissioning of Lifts & Escalators and restoring to final finishes.

(72) The L&E Contractor shall verify the vertical rises, travels, stops, delivery routes and all other relevant information by co-ordination with the respective Civil Contractor

(73) Interfacing with Civil, MEP or any other interfacing contractor to complete the L&E works in scope of works.

(74) All necessary interface with MEP related to works required for Fire alarm integration with Fire alarm system

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B5.	Volume -1, Section-III, EQC	2.4.2 (a) Specific Experience	Add the additional clause. Bidder should have experience in Diaphragm wall construction of minimum of 200m length. In case of they don't have experience in Diaphragm wall construction, they should engage a sub-contractor having the said experience. Details of proposed sub-contractor and his association with the bidder shall be submitted along with the bid.

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B6	Volume-1, Section-III, EQC	1.1.2 Equipment	Replace the Table of Equipment as follows

1.1.2. Equipment

No.	Equipment Type and Characteristics	Minimum number Required
1	D'Wall Grab	2
2	Piling Rigs	2
3	Dumpers	20
4	Excavators-Short Arm	8
5	Crane- 100T	5
6	Crane-150T	3
7	Loaders	4
8	Batching Plant (60 M^3/Hr)	1
9	Batching Plant (30 M^3/Hr)	1
10	Transit mixer, 6 m^3	18
11	Concrete pump with Boom Placer	2
12	Static Pump	4

Sl. No.	Original Drawing No.	Original Clause	Revised Clause
B7. 15.	Volume-6, Tender Drawings	Tender Drawings	The Following Drawings revised

Sl. No.	Original Drawing No.	Revised Drawing No.	Drawing Title
2.	CMRL - SSN - AR - 1800002 - B	CMRL - SSN - AR - 1800002 - C	Basement Level - 01 / Car Parking (Preliminary Design)
3.	CMRL - SSN - AR - 1800003 - B	CMRL - SSN - AR - 1800003 - C	Basement Level - 02 / PD (Preliminary Design)
4	CMRL - SSN - AR - 1800005 - A	CMRL - SSN - AR - 1800005 - B	Cross Section(Typical) (Preliminary Design)
5	CMRL - SSN - AR - 1800015 – A	Deleted	Dimension Detail - Parking Level (Preliminary Design)

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B8.	Volume-4, Outline Design Criteria Section- 4 Architectural Works	4.15 Landscaping and Architecture For planting earth work excavation has to be done manually. excavated earth should not be re used for back filling. The planting pits must be filled with soil mixture at ratio of 1:1:1 (Good Red Earth: River Sand: Organic manure). Only indigenous tree sapling must be planted with a pit dimension of 60cm x 60cm x 60cm. Depending on the site condition light /shade loving plants must be distributed. Only perennial ornamental /flowering plants should be planted (avoid annual and biannual plants). Watering the plants need huge quantity of good water. hence plant drought hardy plants which consumes less water. Laying lawns can be avoided in public park since it needs more maintenance and watering. Miyawaki planting areas has to be done with the guidance of ES/CMRL. After developing the garden, it should be maintained for minimum 3 years till it established. the causalities have to be replaced the and there. payment will be made only on the basis of survival rates. Gardeners watch and wardens has to be provided.	Replace the entire clause 4.15 with the following. For planting earth work excavation has to be done manually. excavated earth should not be re used for back filling. The planting pits must be filled with soil mixture at ratio of 1:1:1 (Good Red Earth: River Sand: Organic manure). Only indigenous tree sapling must be planted with a pit dimension of 60cm x 60cm x 60cm. Depending on the site condition light /shade loving plants must be distributed. Only perennial ornamental /flowering plants should be planted (avoid annual and biannual plants). Watering the plants need huge quantity of good water. hence plant drought hardy plants which consumes less water. Laying lawns can be avoided in public park since it needs more maintenance and watering. Miyawaki planting areas has to be done with the guidance of ES/CMRL. After developing the garden, it should be maintained for minimum 2 years (after handing over). The causalities have to be replaced. Gardeners have to be provided during the maintenance Period.

Sl. No.	Original Drawing No.	Original Clause	Revised Clause
B9.	Volume-4, Outline Design Criteria Section- 4 Architectural Works	4.15 Landscaping and Architecture	Add the additional Detail as follows

4.15 LANDSCAPING & HORTICULTURE

2. The Following specifications has to be followed strictly without any deviations. If any doubts or clarifications, please call and discuss with Environmental Specialist of CMRL.

a. Miyawaki Plantations: This has to be developed on either side of the entrance i.e four spots. This technique will be demonstrated at the site for one spot. This has to be followed for the other three spots. Only evergreen and deciduous indigenous deep rooted trees can be planted in this zone.

b. Along the Diaphragm wall, on the outer pheriphery, sufficient width has been provided parallel to the walk path. Broad leaf species has to be planted. Compound leaf species to be avoided to keep the garden and walk path clean from dry leaves. The trees must have good foliage to give good shade and oxygen to the walkers. They must feel comfort, healthy atmosphere while walking. The sapling selected for sapling should not be less than 6 feet in height. Nowhere fruit bearing trees are recommended to stop stone pelting.

c. Gardening Works: - Most of the gardening area falls on the roof top of the underground constructions, so they gardening work is similar to roof garden. At any circumstances dampness or seepage must not occur in the underground stations.

d. The species selection must be according to the site conditions i.e. light loving plants or shade loving plants to be planted as per the ground reality. All the gardening plants must be perennial. No seasonal plants such as annual and biannual has to be totally avoided.

e. Species of the trees and the garden plant details will be discussed at site personally. Similarly, the ground preparation will be discussed at site before commencement of preparatory works.

f. Maintenance will be discussed in detail such as watering regime, spraying pesticides, applying organic fertilizers, weeding and soil working will be given on allotment of garden work.

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B10.	Part-1, Section-IV Bidding Forms	1.5 FINANCIAL PROPOSAL/PACKAGE	The table of Price Centre shall be replaced as follows

Price Centre – A1 Preliminaries shall be equal to 5% of the Total of Price Centres B, C and D

Item No.	Item Description	Unit	Qty.	% of sub-items
A1	Preliminaries			
	General Items			
A1.1a	Submission of PII, Bond, insurances, etc.	Item	1	10%
A1.1b	Submission of Performance BG			
A1.1 c	Professional Indemnity Insurance			
A1.1 d	"CAR" Policy (insurances)			
A1.2	Initial Works Programme,	Item	1	4%
A1.2	Detailed Works Programme, updates, revisions and Three Month Rolling Programme	No.	1, 3, 5	15%
A1.3	Monthly Progress Reports, Employers site office & maintenance	No.	24 months	18%
A1.4	Quality Assurance & Quality Control Plans & Audits			
	Plan	One time	1	5%
	Audit	No.	24 months	12%
A1.5	Project Management Information System	Item	1	2%
A1.6	Contractor's Staff Organization Plan & Key Staff.	No	1	2%
A1.7	Project Sign Boards	Item	1	2%
A1.8	OHS&E Plan Submission	Item	1	2%
A1.9	Compliance with Occupational Safety, Health and Environmental Plan & Audits	No	24	12%
A1.10	Environmental Management Plan & Audits to include; Spoils Management, and Dust Control Plans & Audits	No	24	12%
A1.11	All other remaining items that are included or inferred in the Employer's Requirements	No	24	4%
	Total			**100%**

Price Centre "A2" Preliminaries shall be equal to 5% of the Price Centre "E"

Item No.	Item Description	Unit	Qty.	% of sub-items
A2	**General Items**			
A2.1	Initial E&M Works Programme,	Item	1	4%
A2.2	Detailed Works Programme, updates, revisions and Three Month Rolling Programme	No.	1, 3, 5	10%
A2.3	E& M Monthly Progress Reports and Employer's site office & Maintanance	No.	24 months	12%
A2.4	Quality Assurance & Quality Control Plans & Audits			
	Plan	One time	1	5%
	Audit	No.	24 months	8%
A2.5	Project Management Information System	Item	1	2%
A2.6	Contractor's Staff Organization Plan & Key Staff.	No	1	3%
A2.7	Project Sign Boards	Item	1	2%
A2.8	OHS&E Plan Submission	Item	1	2%
A2.9	Compliance with Occupational Safety, Health and Environmental Plan & Audits	No	24	10%
A2.10	Environmental Management Plan & Audits to include; Spoils Management, and Dust Control Plans & Audits	No	24	12%
A.2.11	Interface management plan	Item	1	8%
A.2.12	Interface works programme and completion of Interface works	Qtly	6	12%
A2.13	All other remaining items that are included or inferred in the Part 1, 2 & 3	No	24	10%
	Total			**100%**

Price Centre "A3" Preliminaries shall be equal to 5% of the Price Centre F

Item No.	Item Description	Unit	Qty.	% of sub-items
Obtain Notice of No Objection from the Employer / Employer's Representative for:				
A3.1	Monthly progress report	Months	24	10%
A3.2	Site Office for the Employer's Representative.	Each	Item (60%)	15%
	Maintenance of Employer's site office	Months	24 (40%)	
A3.3	System Reliability, Availability, Maintainability and Safety Plans	Nos	Item	5%
	Audits & site test report	Months	24	5%
A3.4	OHS&E Plans	Each	Item	2.5%
A3.5	Compliance with Occupational Safety, Health and Environmental Audits	Months	24	10%
A3.6	Internal Interface Management Plan.	Each	Item	5%
A3.7	Internal Interface Management works and Audits.	Months	24	10%
A3.8	Quality Assurance & Quality Control Plans	Each	Item	2.5%
A3.9	Quality Assurance & Quality Control Audits.	Months	24	10%
A3.10	Submission of all type of insurance, Performance Security, etc…	Each	Item	5%
A3.11	Contractor's Organization Chart & manpower deployment.	Months	24	10%
A3.12	Project management plan and deliverables	Each	Item	2.5%
A3.13	Signages requirements	Each	Item	5%
A3.14	Any other item(s) considered necessary to comply with the scope of Works.	Each	Item	2.5%
	Total for Cost Centre A3			**100%**

Price Centre "A4" Preliminaries shall be equal to 5% of the Price Centre G

Item No.	Item Description	Unit	Qty.	% of sub-items
Obtain Notice of No Objection from the Employer / Employer's Representative for:				
A4.1	Monthly progress report	Months	24	10%
A4.2	Site Office for the Employer's Representative.	Each	Item (60%)	15%
	Maintenance of Employer's site office	Months	24 (40%)	
A4.3	System Reliability, Availability, Maintainability and Safety Plans	Nos	Item	5%
	Audits & site test report	Months	24	5%
A4.4	OHS&E Plans	Each	Item	2.5%
A4.5	Compliance with Occupational Safety, Health and Environmental Audits	Months	24	10%
A4.6	Internal Interface Management Plan.	Each	Item	5%
A4.7	Internal Interface Management works and Audits.	Months	24	10%
A4.8	Quality Assurance & Quality Control Plans	Each	Item	2.5%
A4.9	Quality Assurance & Quality Control Audits.	Months	24	10%
A4.10	Submission of all type of insurance, Performance Security, etc…	Each	Item	5%
A4.11	Contractor's Organization Chart & manpower deployment.	Months	24	10%
A4.12	Project management plan and deliverables	Each	Item	2.5%
A4.13	Signages requirements	Each	Item	5%
A3.14	Any other item(s) considered necessary to comply with the scope of Works.	Each	Item	2.5%
	Total for Cost Centre A4			**100%**

PRICE CENTRE: B (Civil Works)

S.No	Description of major items of Work	% Distribution of Price Centre
1	Design, supply and install barricading, including lighting, signage and painting with CMRL logo and maintain the same in satisfactory condition for the duration of the works. Traffic diversion and maintenance of the diverted traffic during work period.	3%
2	Supply of Detailed designs and drawings for Structural and Architectural works	5%
3	Construction of Diaphragm Wall Works in 50% of Area	15%
4	Construction of Diaphragm Wall Works 100% of Area	15%
5	Excavation in 50 % area including removal of and disposal of the excavated material up to the designated dumping yards, and dewatering measures including cutoff testing and recharging if necessary.	5%
6	Excavation in 100% area including removal of and disposal of the excavated material upto the designated dumping yards, and dewatering measures including cutoff testing and recharging if necessary.	5%
7	Construction of 50 % Roof slab in all respects such as providing drainage system and water proofing layers	7%
8	Construction of 100 % Roof slab in all respects such as providing drainage system and water proofing layers	7%
9	Construction of 50 % of roof slab of 2nd Basement	7%
10	Construction of 100 % of roof slab of 2nd Basement	7%
11	Construction of 50% of Base Slab	7%
12	Construction of 50% of Base Slab	7%
13	Completion of all entry Structures, shafts, Fireman staircases with suitable cutouts and other inserts if any as per system requirements	5%
14	TOTAL	95%

PRICE CENTRE C (Architectural finishes)

S.No	Description of major items of Work	% Distribution of Price Centre
1	Construction and completion of Block & Plastering for system rooms, Entry Structures, pump rooms, Staircase bottom, security rooms etc	20%
2	Completion of Flooring works in entry Structures, Corridors, system room, passages etc	20%
3	Completion of Painting works in corridors and Passages (putti with emulsion) above wall claddings in Public areas, Sealcoat paint system rooms,	10%
4	Completion ceiling works and Plumbing works	10%
5	Completion of all railing works at entry structures, Public Staircases, Fireman and Fire escape staircases, lobby areas, Ramps	10%
6	Providing Doors , gates with all fixures at entry, lobby area, system rooms, structural galzing, Boundary wall and Grills ,	15%
7	Site Development at entry structures and other access to public facilities	10%
	Total	95%

PRICE CENTRE D (Landscaping Works)

S.No	Description of major items of Work	% Distribution of Price Centre
1	Approval of Conceptual plan for restoration of Park	10%
2	Approval of Detailed plan for restoration of Park and issue of GFC	10%
3	Completion of Detailed Park development including of all horticultural works as per approved plan	35%
4	Completion of walking track, and Paver block paths,Toilet facilities for park usage etc	15%
5	Provision of Park Amenities like children play area, Fountain etc as per approved equipment's and fixtures	15%
6	Provision of Electrical fixtures for park Lighting including all necessary wiring, Borewell and domestic pumps with all accessories	10%
	Total	95%

PRICE CENTRE E (MEP Works)

Schedule		Description	%Distribution of Price Centre	Total %
A	A1	Design basis report, Complete preliminary Design of MEP system and design interfacing works.	5	15%
	A2	Complete Detailed Design of MEP system and design interfacing works.	5	
	A3	Complete Construction reference Design of MEP system and design interfacing works.	5	
B	B1	Vendor Submittal Approval, Factory Visit & FAT	2.5	70%
	B2**	Manufacture, Supply and Delivery to Site	30	
	B3	Installation	12.5	
	B4	Equipment Testing / Pre commissioning	5	
	B5	System Testing / Commissioning	10	
	B6	Integrated Testing & commissioning	5	
	B7	System Acceptance Testing / Handover	5	
C	C1	Operation & Maintenance Manuals	2.5	10%
	C2	Training of Operation & Maintenance Personnel	2.5	
	C3	Spares, Special Tools & Maintenance Tools	2.5	
	C4	Assistance for Maintenance	2.5	
	TOTAL		95%	

Note:**For claiming payments mentioned in B2, contractor shall complete the work associated works as shown in table A & B1 above

PRICE CENTRE F (VAC Works):

S.No	Description	% Distribution of Price Centre	Total %
1a	Design basis report, Complete preliminary Design of VAC and associated electrical works and SCADA System and design interfacing works.	5	10%
1b	Complete detailed design of VAC and associated electrical works and SCADA System and design interfacing works including following: CFD analysis, RAMS & EMC analysis, Energy management study and analysis, Acoustic and Vibration Analysis.	5	
2a	Complete Vendor Submittal and Factory Visit	5	70%
2b	Complete Factory acceptance test, Manufacture, Supply and Delivery to Site	25	
2c	Complete good for construction drawings based on the co-ordination from SEM, CSD & RCP and 3D Modelling drawings	5	
2d	Complete construction interface and Installation of VAC and associated electrical works and SCADA System.	10	
2e	Complete Equipment Testing / Pre commissioning of VAC and associated electrical works and SCADA System	5	
2f	Complete System Testing / Commissioning of VAC and associated electrical works and SCADA System	10	
2g	Complete Integrated Testing & commissioning of VAC and associated electrical works and SCADA System	5	
2h	Complete System Acceptance Testing / Handover or achieve issuance of completion certificate for revenue service	5	
3a	Operation & Maintenance Manuals	3.75	15%
3b	Training of Operation & Maintenance Personnel	3.75	
3c	Spares, Special Tools & Maintenance Tools	3.75	
3d	Assistance for Maintenance	3.75	
	TOTAL	95%	

Note: For claiming payments mentioned in 2a to 2h above, contractor shall complete the work associated as shown in table 1a to 1c above.

Bidder shall submit the cost breakup for the cost centres 2a to 2h & 3a to 3d to Employer for notice of no objection prior to claiming mobilization advance.

During the DLP, contractor shall perform all preventive maintenance (weekly, monthly, quarterly and yearly) related to CPV system. DLP management plan along with check list shall be submitted by the contractor to Employer for notice of no objection.

10% of the Price centre – F shall be treated as AMC cost for 5 years & should be provided as Bank Guarantee by the sub-contractor at the end of DLP along with executing an agreement with CMRL

PRICE CENTRE G (Car Parking Ventilation Works)

Schedule		Description	% Distribution of Price Centre	Total %
A	A1	Design basis report, Complete preliminary Design of CPV and associated electrical works and SCADA System and design interfacing works.	2	10%
	A2	Complete detailed design of CPV and associated electrical works and SCADA System and design interfacing works including following: CFD analysis, RAMS & EMC analysis, Energy management study and analysis, Acoustic and Vibration Analysis.	8	
B***	B1	Complete Vendor Submittal and Factory Visit	5	70%
	B2**	Complete Factory acceptance test, Manufacture, Supply and Delivery to Site and 3D Modelling drawings	25	
	B3	Complete good for construction drawings based on the co-ordination from SEM, CSD & RCP	5	
	B4	Complete construction interface and Installation of CPV and associated electrical works and SCADA System.	10	
	B5	Complete Equipment Testing / Pre commissioning of CPV and associated electrical works and SCADA System	5	
	B6	Complete System Testing / Commissioning of CPV and associated electrical works and SCADA System	10	
	B7	Complete Integrated Testing & commissioning of CPV and associated electrical works and SCADA System	5	
	B8	Complete System Acceptance Testing / Handover or achieve issuance of completion certificate for revenue service	5	
C***	C1	Operation & Maintenance Manuals	3.75	15%
	C2	Training of Operation & Maintenance Personnel	3.75	
	C3	Spares, Special Tools & Maintenance Tools	3.75	
	C4	Assistance for Maintenance	3.75	
		Total	95%	

** For claiming payments mentioned in B2, contractor shall complete the work associated as shown in table A1, A2, A3& B1 above.

*** Bidder shall submit the cost breakup for the cost centres B1 to B8 and C1 to C4 to Employer for notice of no objection prior to claiming mobilization advance.

During the DLP, contractor shall perform all preventive maintenance (weekly, monthly, quarterly and yearly) related to CPV system. DLP management plan along with check list shall be submitted by the contractor to Employer for notice of no objection.

2% of the Price centre – G shall be treated as AMC cost for 5 years & should be provided as Bank Guarantee by the sub-contractor at the end of DLP along with executing an agreement with CMRL

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B11.	Volume-1, Section- VI Particular Conditions	Liquidated Damages	The Liquidated damages shall be replaced as follows

CONTRACT PACKAGE UAA-10 LIQUIDATED DAMAGES FOR SSN COMMUTER AMENITIES				
Key Dates	**Description of Key Date**	**Amount in (INR) per day**	**Amount in (INR) per day**	**Amount in (INR) per day**
		(0 to 28 days)	(29 to 56 Days)	(from 57th day onward)
CIVIL, STRUCTURAL, MEP AND LANDSCAPING				
KD-1	Employer's office Establishment, Ground Investigation, Mobilization of equipment at Site, Submission of Preliminary designs	10000	20000	50000
KD-2	Submission of Detailed Structural Design	10000	20000	50000
KD-3	Construction of D'wall for 50% area	10000	20000	50000
KD-4	Excavation of 50% area up to roof slab	10000	20000	50000
KD-5	Construction of D'wall for 100% area	10000	20000	50000
KD-6	Completion casting of 50 % area of Roof Slab	10000	20000	50000
KD-7	Excavation of 100% area up to roof slab	10000	20000	50000
KD-8	Excavation of 50% area between roof slab and 1st basement slab	10000	20000	50000
KD-9	Completion of casting of 100 % area of Roof Slab	10000	20000	50000
KD-10	Excavation of 50% area between roof slab and 1st basement slab	10000	20000	50000
KD-11	Completion of 50 % area of 1st basement slab	10000	20000	50000
KD-12	Completion of 100 % area of 1st basement slab	10000	20000	50000
KD-13	Excavation of 50% area between 1st basement slab and base slab	10000	20000	50000
KD-15	Completion of Base slab along with Water Proofing below in 50 % area	10000	20000	50000
KD-16	Completion of Base slab along with Water Proofing below in 100 % area	10000	20000	50000

KD-17	Works in Basement and above ground including columns and associated structures for shafts , staircases etc.	10000	20000	50000
KD-18	Completion of 50 % area of E&M services in lower basement	10000	20000	50000
KD-19	Completion of 100 % area of E&M services in lower basement	10000	20000	50000
KD-20	Shared access to other System contractors	10000	20000	50000
KD-21	Completion of 50 % area of E&M services in upper basement	10000	20000	50000
KD-22	Completion of 100 % area of E&M services in upper basement	10000	20000	50000
KD-23	Completion of entry structures with all associated structures at Street Level	10000	20000	50000
KD-24	Completion of street level E&M works including Transformer/HT/LT panel	10000	20000	50000
KD-25	Completion of complete Electrical testing & CEIG approval	10000	20000	50000
KD-26	Completion of complete Fire protection system & TNFRSD approval	10000	20000	50000
KD-27	Completion of all architectural works including all cladding works	10000	20000	50000
KD-28	Completion of Park development works including E&M services and making available for Public Usage	10000	20000	50000
KD-29	Issuance of Taking Over Certificate	10000	20000	50000

VAC Works				
Key Dates	**Description of Key Date**	**Amount in (INR) per day**	**Amount in (INR) per day**	**Amount in (INR) per day**
		(0 to 28 days)	(29 to 56 Days)	(from 57th day onward)
KD-32	Complete detailed design of VAC and associated electrical works and SCADA System and design interfacing works including following: CFD analysis, RAMS & EMC analysis, Energy management study and analysis, Acoustic and Vibration Analysis.	10000	20000	50000
KD-33	Complete Vendor Submittal, Factory Visit	10000	20000	50000
KD-34	Complete Factory acceptance test, Manufacture, Supply and Delivery to Site and 3D Modelling drawings	10000	20000	50000
KD-35	Complete good for construction drawings based on the co-ordination from SEM, CSD & RCP.	10000	20000	50000
KD-36	Complete construction interface and Installation of VAC and associated electrical works and SCADA System.	10000	20000	50000
KD-37	Complete Equipment Testing / Pre commissioning of VAC and associated electrical works and SCADA System.	10000	20000	50000
KD-38	Complete System Testing / Commissioning of VAC and associated electrical works and SCADA System	10000	20000	50000
KD-39	Complete Integrated Testing & commissioning of VAC and associated electrical works and SCADA System	10000	20000	50000
KD -40	Complete System Acceptance Testing / Handover or achieve issuance of completion certificate for revenue service	10000	20000	50000

BASEMENT CAR PARKING VENTILATION				
Key Dates	**Description of Key Date**	**Amount in (INR) per day**	**Amount in (INR) per day**	**Amount in (INR) per day**
		(0 to 28 days)	(29 to 56 Days)	(from 57th day onward)
KD-42	Complete detailed design of CPV and associated electrical works and SCADA System and design interfacing works including following: CFD analysis, RAMS & EMC analysis, Energy management study and analysis, Acoustic and Vibration Analysis.	10000	20000	50000
KD-43	Complete Vendor Submittal, Factory Visit	10000	20000	50000
KD-44	Complete Factory acceptance test, Manufacture, Supply and Delivery to Site and 3D Modelling drawings	10000	20000	50000
KD-45	Complete good for construction drawings based on the co-ordination from SEM, CSD & RCP.	10000	20000	50000
KD-46	Complete construction interface and Installation of CPV and associated electrical works and SCADA System.	10000	20000	50000
KD-47	Complete Equipment Testing / Pre commissioning of CPV and associated electrical works and SCADA System.	10000	20000	50000
KD-48	Complete System Testing / Commissioning of CPV and associated electrical works and SCADA System	10000	20000	50000
KD-49	Complete Integrated Testing & commissioning of CPV and associated electrical works and SCADA System	10000	20000	50000
KD -50	Complete System Acceptance Testing / Handover or achieve issuance of completion certificate for revenue service	10000	20000	50000

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B12.	Volume-3, Employer Requirement, Section-F, Appendices	Appendix 2B, Contract Key dates and Completion Date	Appendix 2B, Contract Key dates and Completion Date shall be replaced as follows

KEY DATES CIVIL, ARCHITRECTURAL, MEP & LANDSCAPING

S.No	Key Dates	Description	Completion Date from the date of commencement
1	KD-1	Employer's office Establishment, Ground Investigation, Mobilization of equipment at Site, Submission of Preliminary designs	30
2	KD-2	Submission of Detailed Structural Design	45
3	KD-3	Construction of D'wall for 50% area	100
4	KD-4	Excavation of 50% area up to roof slab	120
5	KD-5	Construction of D'wall for 100% area	150
6	KD-6	Completion of casting of 50 % area of Roof Slab	150
7	KD-7	Excavation of 100% area up to roof slab	175
8	KD-8	Excavation of 50% area between roof slab and 1st basement slab	200
9	KD-9	Completion of casting of 100 % area of Roof Slab	200
10	KD-10	Excavation of 50% area between roof slab and 1st basement slab	220
11	KD-11	Completion of 50 % area of 2st basement roof slab	245
12	KD-12	Completion of 100 % area of 2nd basement slab	275
13	KD-13	Excavation of 50% area between 2nd basement roof slab and base slab	275
14	KD-14	Excavation of 100% area between 2nd basement roof slab and base slab	310
15	KD-15	Completion of Base slab along with Water Proofing below in 50 % area	340

S.No	Key Dates	Description	Completion Date from the date of commencement
16	KD-16	Completion of Base slab along with Water Proofing below in 100 % area	370
17	KD-17	Works in Basement and above ground including columns and associated structures for shafts , staircases etc.	430
18	KD-18	Completion of 50 % area of E&M services in Upper basement	450
19	KD-19	Completion of 100 % area of E&M services in Upper basement	500
20	KD-20	Shared access to other System contractors	500
21	KD-21	Completion of 50 % area of E&M services in Lower basement	520
22	KD-22	Completion of 100 % area of E&M services in Lower basement	550
23	KD-23	Completion of entry structures with all associated structures at Street Level	575
24	KD-24	Completion of street level E&M works including Transformer/HT/LT panel	600
25	KD-25	Completion of complete Electrical testing & CEIG approval	630
26	KD-26	Completion of complete Fire protection system & TNFRSD approval	680
27	KD-27	Completion of all architectural works including all cladding works	700
28	KD-28	Completion of Park development works including E&M services and making available for Public Usage	720
29	KD-29	Issuance of Taking Over Certificate	730
30	KD-30	Issuance of Performance Certificate	1460

KEY DATES FOR VAC SYSTEM

The Contractor shall prepare and submit the detailed works Programme so as to achieve key dates of various activities on time. The Contractor shall complete the work in a phased manner by fixing priorities to different stretches of work as per the key dates (mile stones) indicated below.

S.No	Key date	Description	Completion Date from the date of Commencement
1	KD -31	Design basis report, Complete preliminary Design of VAC and associated electrical works and SCADA System and design interfacing works.	120
2	KD-32	Complete detailed design of VAC and associated electrical works and SCADA System and design interfacing works including following: CFD analysis, RAMS & EMC analysis, Energy management study and analysis, Acoustic and Vibration Analysis.	270
3	KD-33	Complete Vendor Submittal, Factory Visit	315
4	KD-34	Complete Factory acceptance test, Manufacture, Supply and Delivery to Site and 3D Modelling drawings	500
5	KD-35	Complete good for construction drawings based on the co-ordination from SEM, CSD & RCP.	500
6	KD-36	Complete construction interface and Installation of VAC and associated electrical works and SCADA System.	620
7	KD-37	Complete Equipment Testing / Pre commissioning of VAC and associated electrical works and SCADA System.	650
8	KD-38	Complete System Testing / Commissioning of VAC and associated electrical works and SCADA System	680
9	KD-39	Complete Integrated Testing & commissioning of VAC and associated electrical works and SCADA System	705
10	KD -40	Complete System Acceptance Testing / Handover or achieve issuance of completion certificate for revenue service	730

Notes on Key Dates:

1. The achievement of a key date shall be subject to the issuing of a notice of no objection from the Employer.

2. The achievement of a key date shall require completion of all the works specified for achievement of the Key date.

3. The achievement of a key date shall be read in conjunction with the interface specifications to establish access requirements.

KEY DATES FOR BASEMENT CARPARKING VENTILATION SYSTEM

The Contractor shall prepare and submit the detailed works Programme so as to achieve key dates of various activities on time. The Contractor shall complete the work in a phased manner by fixing priorities to different stretches of work as per the key dates (mile stones) indicated below.

S. No.	Key date	Details of Works to be completed	Completion Date from the date of Commencement
1	KD-41	Design basis report, Complete preliminary Design of CPV and associated electrical works and SCADA System and design interfacing works.	120
2	KD-42	Complete detailed design of CPV and associated electrical works and SCADA System and design interfacing works including following: CFD analysis, RAMS & EMC analysis, Energy management study and analysis, Acoustic and Vibration Analysis.	270
3	KD-43	Complete Vendor Submittal, Factory Visit	315
4	KD-44	Complete Factory acceptance test, Manufacture, Supply and Delivery to Site and 3D Modelling drawings	500
5	KD-45	Complete good for construction drawings based on the co-ordination from SEM, CSD & RCP.	500
6	KD-46	Complete construction interface and Installation of CPV and associated electrical works and SCADA System.	620
7	KD-47	Complete Equipment Testing / Pre commissioning of CPV and associated electrical works and SCADA System.	650
8	KD-48	Complete System Testing / Commissioning of CPV and associated electrical works and SCADA System	680
9	KD-49	Complete Integrated Testing & commissioning of CPV and associated electrical works and SCADA System	705
10	KD -50	Complete System Acceptance Testing / Handover or achieve issuance of completion certificate for revenue service	730

Notes on Key Dates:

1. The achievement of a key date shall be subject to the issuing of a notice of no objection from the Employer.

2. The achievement of a key date shall require completion of all the works specified for achievement of the Key date.

3. The achievement of a key date shall be read in conjunction with the interface specifications to Establish access requirements.

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B13.	Volume-4, Outline Design Specifications, Section- 7 VAC Works	1.1.6 Scope of works (a) Air-conditioning system for entire property development rooms / area, corridor / public area, any other air conditioning rooms by using Variable refrigerant flow (VRF) system with Air handling units and VRF indoor units including associated refrigerant pipe works.	1.1.6 Scope of works a) VAC system design including electrical and SCADA system shall cover the entire Basement-2. (i) All air conditioning equipment shall be designed and installed considering the peak load conditions and it shall cover the entire basement-2. Cooling load calculation shall be submitted for both summer and monsoon conditions. VAC equipment rooms shall be designed and located at basement level-1. (ii) Air conditioning ducting shall be designed and installed from VAC equipment room to the entire corridor of the basement level-2. Main ducting shall be covered at entire corridor of the basement level-2 along with branch ducting tapping, VCD and FD / MFSD at few locations in order to utilize for the future usage of entire PD area or air conditioning rooms. Contractor shall make such facility in the design as well as at field. (iii) Refrigerant piping shall be designed and installed from VAC equipment room i.e. AHUs to the VRF outdoor units by the Contractor. In case if the designed Air-conditioning capacity by way of VRF units and AHUs if felt are not sufficient during the period

S. No.	Clause of Bid Document	Original Clause	Revised Clause
			of tenancy due to any reasons inside the PD area, and to augment the said purpose, the contractor shall make the extra space provision and wall cut-outs to run copper refrigerant pipes of suitable sizes along with the electrical and signal cabling and distribution system from PD area to outdoor unit location. The routing of VAC services and outdoor unit location for the augmented air conditioning capacity shall be shown in the drawings suitably considering the above situation. (iv) Contractor shall make facility in the central controller and power distribution indicator from OEM of VRF units in order to utilize for the future usage of entire PD area or air conditioning rooms. (v) Drain point shall be designed inside the PD area in order to utilize for the future usage of entire PD area or air conditioning rooms. (vi) In addition to the above contractor shall provide the preliminary VAC system design calculation and drawings including ducting associated air distribution system including smoke extraction system, refrigerant piping, electrical and SCADA system for the future usage of the PD areas. Contractor shall

S. No.	Clause of Bid Document	Original Clause	Revised Clause
			make all VAC provisions for the PD area from the corridors for the installation of VAC equipment / services including wall cut-outs where necessary. All VAC services inside the PD area shall be provided and installed by the future tenant.

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B14.	Volume-4, Outline Design Specifications, Section- 7 VAC Works	1.1.6 Scope of works (c) Smoke management system for safety of the passengers / public, O&M staffs and tenants based on the smoke zoning layout. Also, pressurization of firemen and fire escape stairs in case of fire / emergency conditions.	Replace 1.1.6(c) as follows c) Smoke management system for safety of the passengers / public, O&M staffs and tenants based on the smoke zoning layout. Also, pressurization of firemen and fire escape stairs in case of fire / emergency conditions. All smoke extraction system shall be designed considering the entire area of the basement-2. Smoke extraction ducting shall be designed and installed from VAC equipment room to the entire corridor of the basement level-2. Main ducting shall be covered at entire corridor of the basement level-2 along with the branch ducting tapping, high temperature VCD and MSD in order to utilize for the future usage of entire PD area or air conditioning rooms. Contractor shall make such facility in the design as well as at field.

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B15.	Volume-4, Outline Design Specifications, Section- 7 VAC Works	3.4.6 Centrifugal Fan and Motor Section	Add additional clause (G) For detailed specification refer the clause 8.4.2: Centrifugal fans.

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B16.	Volume-4, Outline Design Specifications, Section- 7 VAC Works	Section 3 : Air Handling Unit	Add the following Additional clause 3.4.6.1 Plug Fan with AC Motor a) Fans shall be backward curved Plenum plug fan with aerofoil design blades so as to give maximum efficiency for given duty condition. b) Plug fan with casing shall be certified by an acclaimed certifying body like Eurovent, or AHRI or AMCA, and the entire Fan + Motor assembly will be balanced to suit the requirement. c) Suitable number of bearings and overhung sheaves shall be provided for safe operation. d) Fan wheel rims and blades shall be fabricated from adequate thickness. e) Wheel / blades shall be aerofoil shaped made of GSS with PR12 polyester powder coating finish with minimum of 100 microns. Zinc coating thickness on GSS shall be of minimum 275 GSM. f) Fan housing / casing shall be of GSS with adequate thickness with PR12 polyester powder coating finish with

S. No.	Clause of Bid Document	Original Clause	Revised Clause
			minimum of 100 microns. Zinc coating thickness on GSS shall be of minimum 275 GSM. g) All support steel frames of fan shall be hot dip galvanized with PR12 polyester powder coating finish with minimum of 100 microns. For detailed specification refer the addendum-2 No: B-16 (Clause 8.4.2.1)

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B17.	Volume-4, Outline Design Specifications, Section- 7 VAC Works	4. Copper REFRIGERANT Pipes and FITTINGS (e) The insulated pipes shall be laid on perforated cable tray and fully covered with top plain cover sheet. Perforated cable tray and top plain cover sheet shall be made of hot dip galvanised steel sheet with minimum of 0.8 mm thickness.	The clause is revised as follows: 4. Copper REFRIGERANT Pipes and FITTINGS (e)The insulated pipes shall be laid on cable tray and fully covered with top plain cover sheet. Cable tray and top plain cover sheet shall be made of galvanised steel sheet with minimum of 0.8 mm thickness. Insulated pipe wherever visible the same should be provided with galvanised steel sheet which shall be aesthetically good and protected from mechanical damage.

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B18.	Volume-4, Outline Design Specifications, Section- 7 VAC Works	7.4.2 Outdoor Unit (A) General Requirements	Add the following additional clauses. k.) The dip switch shall be available in ODU to check correct amount of refrigerant charged.

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B19.	Volume-4, Outline Design Specifications, Section- 7 VAC Works	7.6 Installation Requirements	Add the following additional clauses. 7.6 Installation Requirements Refrigerant gas leak detection sensor and system shall be installed to detect the leakage of refrigerant in copper pipe line above false ceiling, shaft, near ODU, IDU &AHU (VAC equipment Room). Number of sensor should be proposed to suit the requirement. This should be the compatible with central controller of VRF system and VAC SCADA System. Service checker shall be provided to monitor IDUs, ODUs and refrigerant filed parameter and same shall be monitored from VRF central controller and VAC SCADA system.

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B20.	Volume-4, Outline Design Specifications, Section- 7 VAC Works	Section 8 – Fans 8.4.2 Centrifugal Fans	Add the following additional clauses. 8.4.2.1 **Plug Fan with AC Motor** Fans shall be backward curved Plenum plug fan with aerofoil design blades so as to give maximum efficiency for given duty condition. 1. Plug fan with casing shall be certified by an acclaimed certifying body like Eurovent, or AHRI or AMCA, and the entire Fan + Motor assembly will be balanced to suit the requirement. 2. Suitable number of bearings and overhung sheaves shall be provided for

S. No.	Clause of Bid Document	Original Clause	Revised Clause
			safe operation. 3. Fan wheel rims and blades shall be fabricated from adequate thickness. 4. Wheel / blades shall be aerofoil shaped made of GSS with PR12 polyester powder coating finish with minimum of 100 microns. Zinc coating thickness on GSS shall be of minimum 275 GSM. 5. Fan housing / casing shall be of GSS with adequate thickness with PR12 polyester powder coating finish with minimum of 100 microns. Zinc coating thickness on GSS shall be of minimum 275 GSM. 6. All support steel frames of fan shall be hot dip galvanized with PR12 polyester powder coating finish with minimum of 100 microns. 7. Each fan and its outboard motor drive shall be mounted on common hot dipped galvanized steel frame / extruded aluminium frame and mounted on spring vibration isolation base. The motor bases shall be of heavy-duty design and easily adjustable, mounted inside the casing on a slide base to permit adjustment of drive belt tension. 8. Fan casing shall be of airtight construction using lock seam or continuous welded joint construction. Extended inlet collars shall be provided for duct connection. Discharge collars shall be equipped with removable angles and bolts for attaching flexible connections. 9. Fan wheels and sheaves shall be splinted, or keyed and fastened to the shaft with setscrews. 10. Fan shaft shall be of solid C45 carbon polished steel with lacquer finish and designed to prevent deflection

S. No.	Clause of Bid Document	Original Clause	Revised Clause
			and oscillation. 11. Motor shall comply with IEC standard and it shall be provided with minimum of IE3 efficiency Motors shall be of minimum Class F insulation and rated for continuous operation in ambient temperature of 50°C. 12. Motors shall comply with the requirements specified in 'Motors' Section of the Technical Requirements. Compliance matrix for the motors shall be submitted for notice of no objection. 13. Nominal motor nameplate rating shall be minimum 15% higher than the fan brake power absorbed at design conditions. 14. Flexible connectors used for duct connections to fan unit shall have same temperature and fire rating as that of the associated fan unit and ductwork system. It shall comply with the requirements specified in "Flexible duct connector" Section of the Technical Requirements. Compliance matrix for the motors shall be submitted for notice of no objection 15. Heavy duty anti-vibration mounts shall be provided for isolating the unit casing. 16. Fire retardant, waterproof silicone rubber impregnated flexible connection shall be provided at the fan inlet/ discharge. 17. Fan outlet velocity shall not exceed 10 m/s unless otherwise specified. 18. Plug fan a) All points mentioned above for the plug fans shall be complied by the manufacturer except the wheel.

S. No.	Clause of Bid Document	Original Clause	Revised Clause
			b) Cabinet shall be of GSS with minimum 0.6 mm thickness. Zinc coating thickness on GSS shall be of minimum 275 GSM. c) Fan shall be provided with inlet and outlet flange for easy duct connection. d) Motor and drive assemble shall accessible through removal of side panels. e) Modular / penta post construction with ABS plastic corner piece, aluminium extruded panel construction with reinforced galvanised sheet panel shall be provided. f) Acoustic lining with perforated sheet facing shall be provided where necessary to meet the noise / sound pressure level criteria specified in "Acoustic Treatment and Vibration Control" section of the Technical Specification.

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B21.	Volume-4, Outline Design Specifications, Section- 7 VAC Works	4.2 Manufacturer's Eligibity criteria, Quality Assurance and performance Requirements	Add the following additional clauses. f) Refrigerant piping layout shall be submitted along with the software tool by the OEM.

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B22.	Volume-4, Outline Design Specifications, Section- 7 VAC Works	7.4.1 Indoor Unit	Add the following additional clauses. K) Occupancy / image sensor shall be provided in the indoor units. L) Filter cleaning device with dust collector shall be included in indoor units.

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B23.	Volume-4, Outline Design Specifications, Section- 7 VAC Works	7.4.2 P) Central / Master Controller:	Add the following additional clause. l) Self demand control and equal run hours shall also be considered in central controller.

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B24.	Volume-4, Outline Design Specifications, Section- 7 VAC Works	APPENDIX- 5, LIST OF MAKES / VENDORS	Add the following additional makes / vendors. AHU: Flakt Woods VRF: Hitachi

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B25.	Volume-4, Outline Design Specifications, Section- 7 VAC Works & Section -8 Car parking Ventilation Works	APPENDIX- 1	Add the following additional clause. **Annual Maintenance Contract with Sub-Contractor (VAC Works)** 1. 10% of the final value of Price centre-F (excluding escalation) shall be taken as cost towards AMC for 5 years after the DLP period. 2. Separate Agreement shall be signed by the Sub-contractor (VAC Works) with CMRL for AMC of 5 years. 3. The main contractor shall liaise with Sub-contractor (VAC Works) in making an agreement for AMC 4. This is an obligation of the contractor and it shall be fulfilled before issuing of performance certificate. 5. Separate bank guarantee 10% of AMC cost amount shall be submitted by the sub-contractors (VAC

S. No.	Clause of Bid Document	Original Clause	Revised Clause
			Works) and shall form a part of agreement. 6. Payment shall be made to the sub-contractor on quarterly basis for the agreement amount on production of service reports, maintenance Check-lists. **Annual Maintenance Contract with Sub-Contractor (Car Park Ventilation Works)** 1. 2% of the final value of Price centre - F (excluding Escalation) shall be taken as cost towards AMC for 5 years after the DLP period. 2. Separate Agreement shall be signed by the Sub-contractor (Car Parking Ventilation Works) with CMRL for AMC of 5 years. 3. The Main contractor shall liaise with the Sub-Contractor (Car Parking Ventilation Works) in making an agreement for AMC 4. This is an obligation of the contractor and it shall be fulfilled before issuing of performance certificate 5. Separate bank guarantee of 10% of AMC cost amount shall be submitted by the sub-contractor and shall form a part of agreement. 6. Payment shall be made to the sub-contractor (Car Parking Ventilation Works) on quarterly basis for the agreement amount on production of service reports, maintenance Check-lists.

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B26.	Volume-3, Employer Requirements, Section E - Manufacture, Installation and Testing	E4: Maintenance	Add the Following additional clause: **Annual Maintenance Contract with Sub-Contractor (VAC Works)** **1.** 10% of the final value of Price centre-F (excluding escalation) shall be taken as cost towards AMC for 5 years after the DLP period. 2. Separate Agreement shall be signed by the Sub-contractor (VAC Works) with CMRL for AMC of 5 years. 3. The Main contractor shall liaise with the Sub-Contractor (VAC Works) in making an agreement for AMC 4. This is an obligation of the contractor and it shall be fulfilled before issue of Performance certificate 5. Separate bank guarantee of 10% of AMC cost amount shall be submitted by the sub-contractor (VAC Works) and shall form a part of agreements. 6. Payment shall be made to the sub-contractor on quarterly basis for the agreement amount. **Annual Maintenance Contract with Sub-Contractor (Car Park Ventilation Works)** **1.** 2% of the quoted price of Price centre-F shall be taken as cost towards AMC for 5 years after the DLP period. 2. Separate Agreement shall be signed by the Sub-contractor (Car Parking Ventilation Works) with CMRL for AMC of 5 years.

S. No.	Clause of Bid Document	Original Clause	Revised Clause
			3. The Main contractor shall liaise with the Sub-Contractor (Car Parking Ventilation Works) in making an agreement for AMC 4. This is an obligation of the contractor and it shall be fulfilled before of issuance of performance certificate 5. Separate bank guarantee of 10% of AMC cost amount shall be submitted by the sub-contractor (Car Parking Ventilation Works) and shall form a part of agreements. 6. Payment shall be made to the sub-contractor (Car Parking Ventilation Works) on quarterly basis for the agreement amount.

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B27.	Volume-1, Section IV, Bidding Forms	Table-2 , Risk table	Replace (1) and (18) as follows

Table-2 RISK TABLE		
S. No	**Risk Item**	**Description of Item**
1.	Geotechnical risks	Validation of Geotechnical profile given in the tender as reference Document and if required conduct additional geotechnical investigations and for any unforeseen/unforeseeable ground conditions, the tenderer should include this risk in his price.
18.	Safety of existing Shenoy Nagar station and continuing of train Ops	Contractor to ensure the stability & safety of existing SSN UG station, before excavating up to concourse level, by dewatering, Instrumentation & Monitoring (I & M), removal of surcharge above roof slab if required.

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B28.	Volume-1, Section IV, Bidding Forms	Risk table	Add additional clause (19) as follows

Table-2 RISK TABLE		
S. No.	**Risk Item**	**Description of Item**
19	Design Risks	Contractor should Design all the Civil, Architectural, Structural Works, MEP, Ventilation and Air-conditioning Works, Firefighting works etc with qualified Designers / firms and should take all responsibilities to guarantee the designs, safe for public use.

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B29.	Volume-4 Outline Design Specifications, , Section -4, Architectural Building Works	**4.16.2 ATTACHEMENT A2 "LIST OF FINISH MATERIALS"**	The unclear " Attachment A2" is reproduced here (No Change from the Previous one in the tender document)

ATTACHMENT A2

LIST OF FINISH MATERIALS								
NO	**DESCRIPTION**	**FLOORING**		**SKIRTING**	**WALL FINISH**		**CEILING**	**DOORS**
1	**Entry structures**	Polished granite flooring		Polished granite	**Internal finish**	Vitrified tile cladding till the sill level + granite coping at sill level + Steel + Glass	Sandwich Aluminum panel with perforated metal false ceiling	Sliding and folding glass door and protected with collapsible gates.
					External finish	Granite/ Mosaic tiles till sill level + granite coping at sill level + Steel + Glass		
2	**Parking area**	**Flooring**	Granolithic flooring	Granolithic skirting	**Internal finish**	Acrylic emulsion paint over cement plaster	Acrylic emulsion paint over cement plaster	
		Vehicular ramp	Granolithic flooring					
3	**Passenger amenity area (Corridors)**	Polished granite with vitrified tactile tiles		Polished granite	**Internal finish**	vitrified tile cladding till 2500 mm height (100mm skirting + 4 tiles of 600 x 600mm) or the bottom of false ceiling whichever is lower.	Perforated metal false ceiling	
4	**Passenger amenity area**	-		-	**External finish along D wall**	Acrylic emulsion paint over cement plaster	-	
5	**Lift lobbies**	Polished granite		Polished granite	polished granite cladding		Perforated metal false ceiling	
6	**Public staircases**	**Tread**	Polished granite	Polished granite	**Internal finish**	vitrified tile cladding over cement plaster	Perforated metal false ceiling	Sliding and folding glass door at ground level
		Riser	Polished granite					
		Landing	Polished granite					
		Handrails	SS railing					
		Handrails at double height portion	SS railing with glass		**Waist slab finish**	Acrylic emulsion paint over cement plaster		
7	**Fire escape staircases**	**Tread**	Kota stone	Kota stone	**Internal finish**	Acrylic emulsion paint over cement plaster	Oil bound distemper paint on concrete	4 hours fire rated door
		Riser	Kota stone					
		Landing	Kota stone		**Waist slab finish**	Oil bound distemper paint on concrete		
		Handrails	GI railings		**External finish**	To be finished in relation to the park		
8	**Columns**				**Parking area**	Acrylic emulsion paint over cement plaster/ Advertisement boards		
					Passenger amenity area	Free standing columns inside passenger amenity areas	Concrete shutter finish	
						Columns aligned with walls	To be finished in line with wall finish	
						Free standing columns in other areas	ACP cladding/ Advertisement boards	
					Service areas	Anti dust sealer coat over cement plaster		
9	**Toilet area**	Anti skid vitrified tiles		Vitrified tiles		vitrified tile cladding till 2500 mm height or the bottom of false ceiling whichever is lower.	Perforated metal panel ceiling	4 hours fire rated door
					Internal wall	Toilet cubicles as per approved materials		Toilet door cubicle
10	**Admin office room**	Vitrified floor tiles		Vitrified tiles	Acrylic emulsion paint over cement plaster		Acrylic emulsion paint over cement plaster	4 hours fire rated door
11	**Service rooms**	Granolithic flooring		Granolithic skirting	Anti dust sealer coat over cement plaster		Anti dust sealer coat	4 hours fire rated door
12	**Ducts/ service shaft**				**Internal finish**	Block work	Plastered finish	4 hours fire rated door
						RCC work	Concrete shutter finish	
					External finish	To be finished in line with the wall finish of the rooms at basements and in relation to the park at above ground level		
13	**Compound walls**				**Internal finish**	Acrylic emulsion paint over cement plaster		MS grill gates
					External finish	Low height walls, with textured painted finish with grooves and MS grill above		
14	**Cross passage (connecting the proposed development with the existing station)**	Polished granite flooring		Polished granite	vitrified tile cladding till 2500 mm height or the bottom of false ceiling whichever is lower.		Perforated metal false ceiling	4 hours fire rated door

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B30.	Volume-1, Section IV, Bidding Forms	1.5 Financial Proposal / package	Delete the table of " Summary of Contract Price" entirely.

S. No.	Clause of Bid Document	Original Clause	Revised Clause
B31.	Part-1, Section-IV Bidding Forms	1.5 FINANCIAL PROPOSAL/PACKAGE	The table of Financial Proposal shall be replaced as given as Annexure -1

FINANCIAL PROPOSAL/PACKAGE

Schedule	Description	Lump sum Amount (In Figures)(INR)	Amount (in words)
Schedule B	**Design and Build Civil Structure including all temporary works, Traffic Diversion etc. as detailed in Scope of Work**		**Rupees……**
Schedule C	**Design and Build all architectural works as per scope of work detailed in Tender Drawings**		**Rupees……**
Schedule D	**Design, Build and Development of Park including provision all Park amenities as detailed in scope of Work and Tender drawings**		**Rupees……**
Schedule E	**Design, Supply, erection and Provision of all MEP Systems as detailed in Scope of Work**		**Rupees……**
Schedule F	**Design, Supply, Erection and Provision HVAC System Completely in all respects at Lower Basement (excluding AMC)**		**Rupees……**
Schedule G	**Design, Supply, Erection and Provision Ventilation System Completely in all respects at Upper Basement in Parking area (excluding AMC)**		**Rupees……**

	Sub Total		**-----**
	Add GST@18%		**Rupees……** **……...**
	Add Basic Customs Duty (if applicable)		**Rupees……** **……...**
	TENDER TOTAL		**Rupees……** **……** **…….....
Schedule H	**Provisional sum towards Demolition and shifting of utilities, Payment to DAB etc.** **(Will be paid as per concerned departmental rates)**	**2,00,00,000**	**Rupees Two Crores Only.**

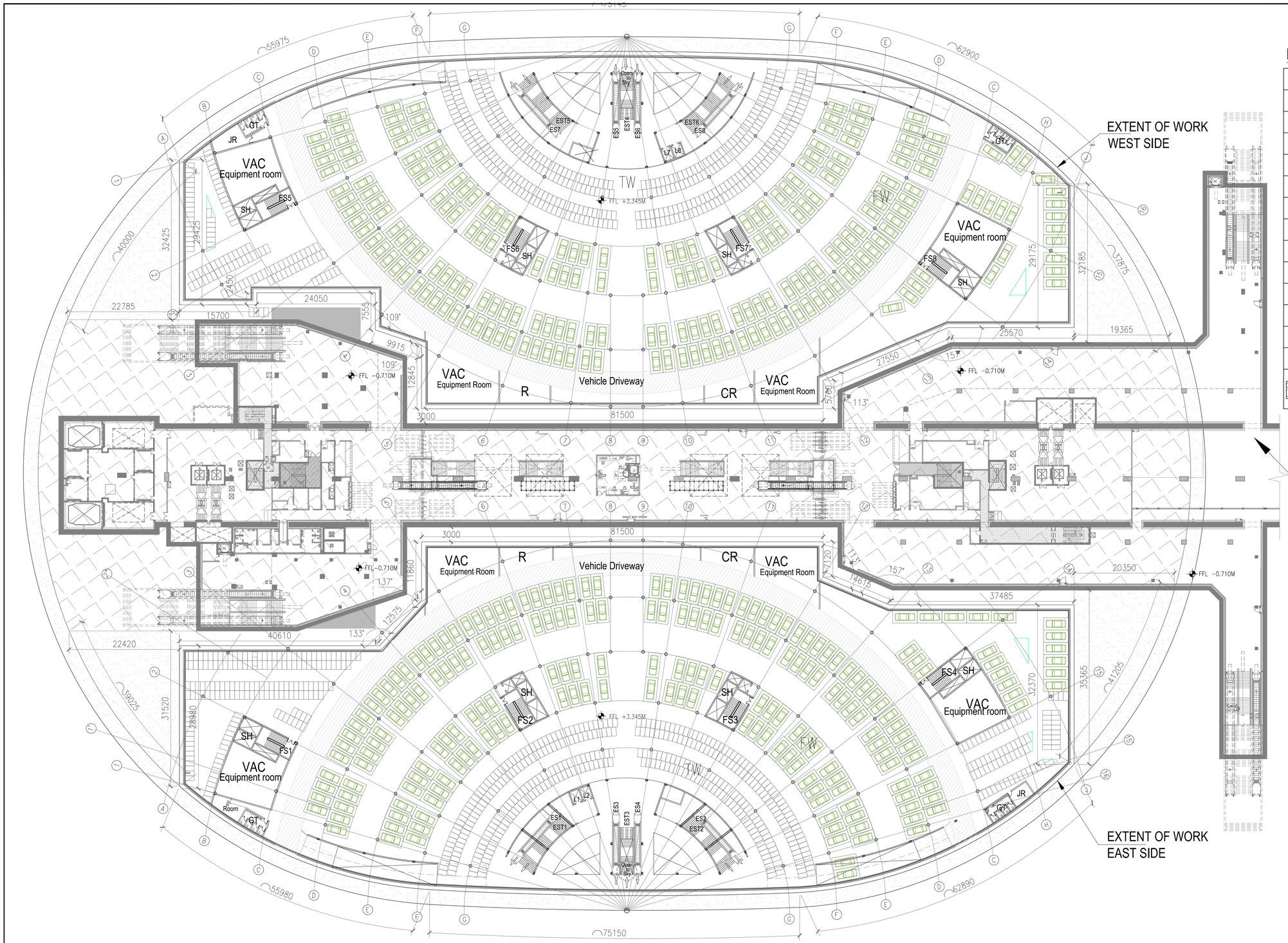
Notes:

a) Payments for this contract will be made in Indian Rupees. Bidders shall quote for price schedule A to G excluding GST and BCD (if applicable).

b) Bidders shall note that the Basic Customs Duty and GST indicated in the above table will be reimbursed by the Employer on proof of documentary support having paid the tax. Input Tax Credit, if any, shall be passed on to CMRL

c) If the rate of GST Changes from 18%, to a lower or higher rate, it shall be adjusted accordingly after notification by the Government.

Authorized Signatory with Company Seal



PROGRAM AREA LEGEND :-

EST	ENTRANCE STAIRCASE
L	LIFT
ES	ESCALATOR
SH	SHAFT
FS	FIRE ESCAPE STAIRCASE
VAC	VENTILATION & AIR CONDITIONER
CR	CONTROL ROOM
AR	ADMIN ROOM
JR	JANITOR ROOM
GT	GEN'S TOILET
LT	LADES TOILET
R	ROOM
TW	TWO WHEELER PARKING
FW	FOUR WHEELER PARKING
	EXISTING SHENOY NAGAR STATION

AREA DETAILS:

FLOOR AREA (Basement Level 01 & 02)

WEST SIDE – 9907.68 Sqm (APPR.)
EAST SIDE – 9912.00 Sqm (APPR.)

MIYAWAKI AREA:

WEST SIDE(01) – 428.00 Sqm (APPR.)
WEST SIDE(02) – 411.00 Sqm (APPR.)
EAST SIDE(01) – 364.00 Sqm (APPR.)
EAST SIDE(02) – 431.00 Sqm (APPR.)

TENDER DRAWINGS

GENERAL NOTES :
ALL DIMENSIONS ARE IN MILLIMETER. UNLESS OTHERWISE NOTED.

DRAWN: CAD (DES/CONS)
DESIGNED: ARCH (DES)
CHECKED : DGM (ARCH)
APPROVED : JGM / DES

REV.	DATE	DESCRIPTION
C	05-02-2018	Revises as indicated
B	02-02-2018	Revises as indicated
A	12-01-2018	Tender

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CHENNAI METRO RAIL LIMITED

TITLE : SHENOY NAGAR STATION COMMUTER AMENITIES CENTER

SHEET NO: 02 of 09
SHEET SIZE: A3
SCALE: NTS
DRAWING NAME: BASEMENT LEVEL - 01 / CAR PARKING (PRELIMINARY DESIGN)
DRAWING NUMBER: CMRL - SSN- AR-1800002 - C
DRAWN DATE: 05-02-2018

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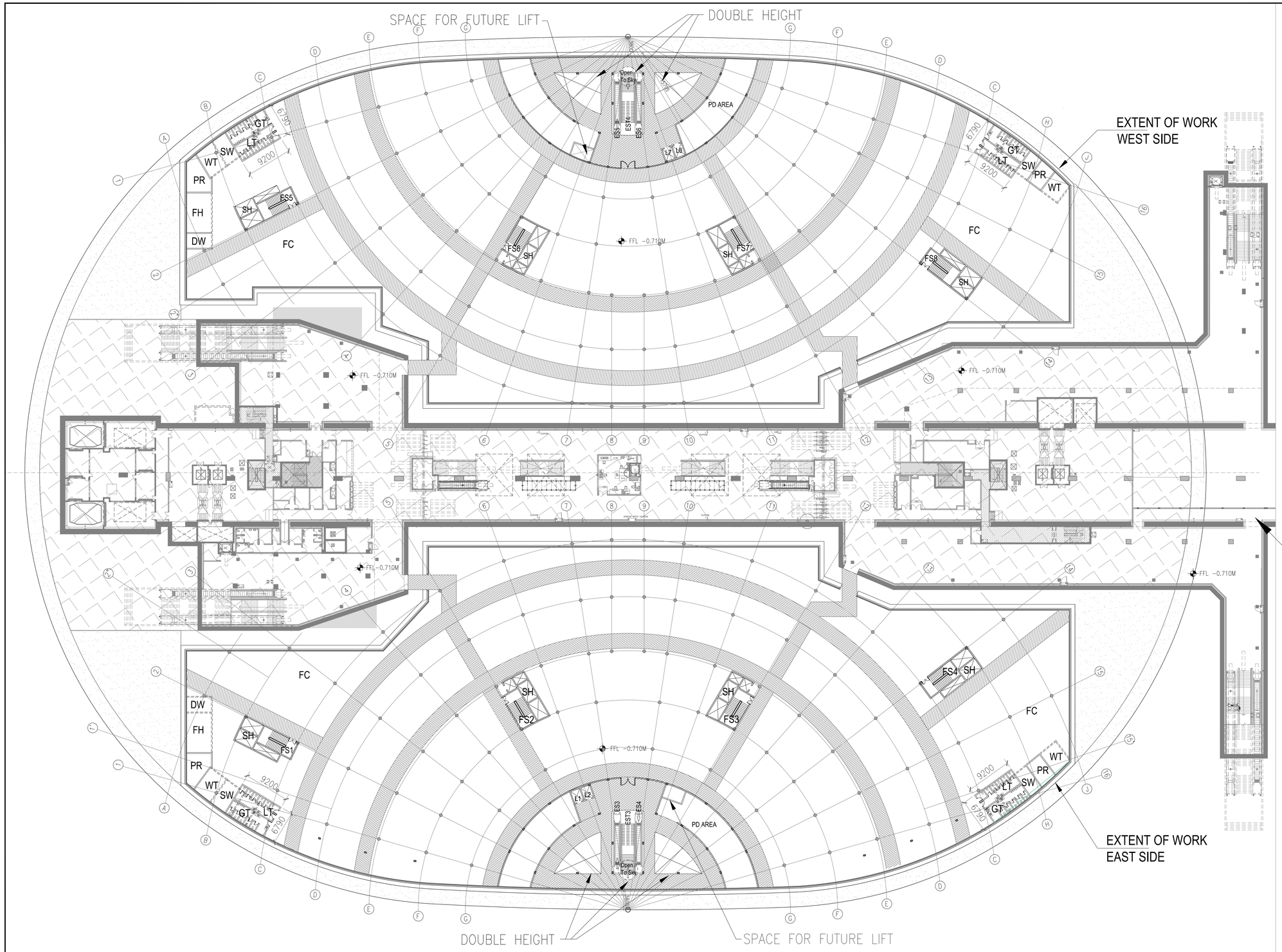

NORTH

PROGRAM AREA LEGEND :-

EST	ENTRANCE STAIRCASE
L	LIFT
ES	ESCALATOR
SH	SHAFT
FS	FIRE ESCAPE STAIRCASE
JR	JANITOR ROOM
GT	GEN'S TOILET
LT	LADES TOILET
DW	DRINKING WATER TANK
PR	PUMP ROOM
FH	FIRE HYDRANT TANK
SW	SEWAGE WATER TANK
WT	WASTE WATER TANK
FC	FOOD COURT AREA
	PROPOSED MAIN CORRIDOR WITH FALSE CEILING 4M WIDE @ CORRIDORS
	EXISTING SHENOY NAGAR STATION

NOTES:

1. L1,L2,L7,L8 – PRESENT LIFTS
2. L3,L4,L5,L6 – FUTURE LIFTS

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CHENNAI METRO RAIL LIMITED

TITLE : SHENOY NAGAR STATION COMMUTER AMENITIES CENTER

SHEET NO: 03 of 09
SHEET SIZE: A3

DRAWING NAME: BASEMENT LEVEL - 02 / PD (PRELIMINARY DESIGN)
SCALE: NTS
DRAWING NUMBER: CMRL - SSN- AR-1800003-C
DRAWN DATE: 05-02-2018

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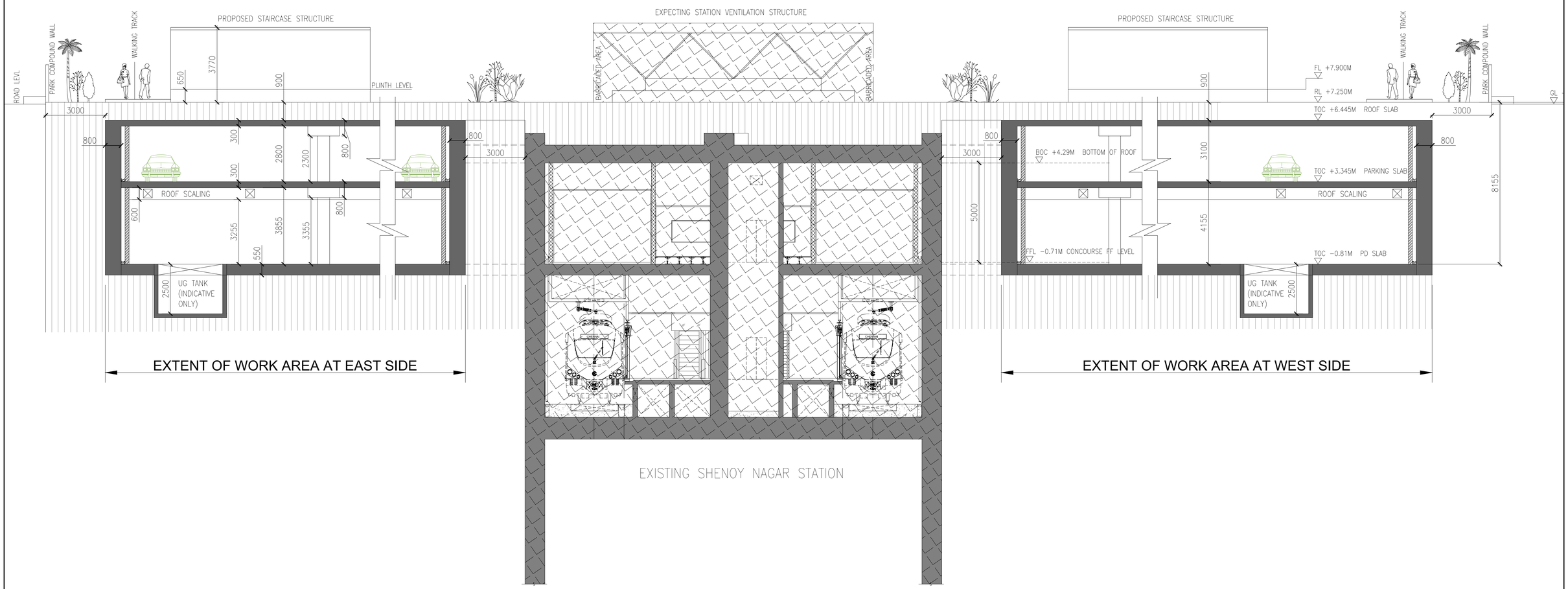

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CHECKED : DGM (ARCH)
APPROVED : JGM / DES

REV.	DATE	DESCRIPTION
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TITLE : SHENOY NAGAR STATION COMMUTER AMENITIES CENTER

SHEET NO: 05 of 09
SHEET SIZE: A3

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