000001

CEMINDIA PROJECTS LTD.

(Formerly ITD Cementation India Ltd.)

Cemindia®

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

PART – 1

ARCHITECTURAL / FINISHING WORKS FOR LIGHT HOUSE UNDER GROUND STATION

in connection with

"CONSTRUCTION OF UNDER GROUND STATIONS AT LIGHT HOUSE, KUTCHERY ROAD, ALWARPET, BHARATHIDASAN ROAD INCLUDING UNDERGROUND STABLING YARD AND CROSS OVER AT LIGHT HOUSE STATION AND ASSOCIATED TWIN TUNNEL, PROJECT START FROM CHAINAGE 0+001M TO END CHAINAGE 5+150M (DOWN LINE)" – CHENNAI METRO RAIL PROJECT PHASE 2, CORRIDOR 4

SINGLE STAGE TWO ENVELOPE BIDDING

BIDDING PROCEDURES

SECTION – IV

PRICING DOCUMENT

AUGUST 2026

1. GENERAL

1.1 This Pricing Document is governed by the conditions / specifications laid down in this Tender Documents.

1.2 The quoted rate shall remain fixed and firm for the entire duration of the subcontract.

1.3 The Sub-contractor shall not be entitled to claim any increase in rates due to fluctuations in the cost of materials, labour, fuel, plant and machinery, changes in market conditions, or for any other reason during the currency of the Contract.

2. SCOPE OF QUOTED RATES

2.1 The rates quoted in the Bill of Quantities are inclusive of the cost of materials, wastage, equipment and tools, specialized technicians, quality control, all complementary stainless steel elements for fixation, required labour, supervision, instruments, tools, tackles, plants, machineries, fuel, all incidental expenses, all temporary works, safety & environmental requirements, permits and clearance, consumables, all statutory duties, taxes (**excluding GST**), cess, levies as applicable including overhead and profits etc. as required for the complete job unless otherwise stated elsewhere in this document. Main Contractor will not be liable for violation of any of the statutory compliances by the Subcontractor.

2.2 The costs of all materials & equipment, labour, supply, erection, testing etc. complete in all respect for fulfilling of scope work as per these specifications shall be borne by the Subcontractor and shall be deemed to have been included in the Bill of Quantities / price schedule. No extra payment will be made for any equipment, services, testing etc.

2.3 The rates quoted against each item of the BOQ shall be deemed to include, but not be limited to, compliance with all safety, health, environmental, and quality requirements as stipulated in the Tender Documents and the Main Contract.

2.4 The rates quoted shall be deemed to include the cost of working in congested urban areas, traffic regulation, protection of utilities, liaison with authorities, and coordination with other contractors.

3. MEASUREMENT AND CERTIFICATION

3.1 Measurement of quantities shall be based on the drawings for the purpose of billing on the finished quantities installed at site and as per back-to-back certification by the Engineer/Employer.

3.2 The accepted quantity measured shall be paid for at the unit rates shown in the Bill of Quantities. The payment shall include all materials and work required to carry out the work in accordance to specifications and shown on the drawings or as instructed by the Main Contractor/Engineer.

3.3 It will be the responsibility of the Subcontractor to utilize its expertise and experience in such works and obtain the certification of the measurement, consistent with the corresponding provisions of the Main Contract, from the Employer/Engineer till the completion of the Subcontract.

4. PAYMENTS

4.1 Mobilization Advance

DELETED

4.2 Secured Advance

Payment of secured advance shall be made strictly in accordance with the provisions of Special Conditions of Sub-Contract Clause 14.8 (Secured Advance against Materials) of this Sub-Contract and shall be limited to **sixty percent (60%)** cost of such approved materials, subject to certification by the Project Manager and receipt of the corresponding payment from CMRL by the Main Contractor.

4.3 Interim Bill

4.3.1 Measurement of quantities will be based on the executed quantities derived from approved GFC drawings and certified by the Employer/Main Contractor. The Subcontractor will be exclusively responsible to get the quantities certified from the Employer (CMRL)/Main Contractor for the executed part of the work and payment will be made on actual quantities certified by the Employer/Main Contractor on back-to-back basis of the Main Contract.

4.3.2 Subcontract's RA bills shall be raised once in a month as per terms and conditions of the Main Contract. Quantity shall be paid as certified by the Employer and the Contractor's Project-in-charge and this will be binding on Subcontractor.

4.3.3 The unit of measurement shall be as per the **Priced Schedule of Quantities and Rates, PART – 1: Pricing Document**. The Main Contractor will check the bill and may suggest the Subcontractor for any correction /modification in the bill submitted by him, if required.

4.3.4 All interim payments would be considered as an advance against the final bill. Any over/excess payment made to the Subcontractor will be recovered by the Main Contractor from the next and subsequent interim bills or the final bill.

4.3.5 The Main Contractor's payment is made by the Employer in two parts (a) 1st Payment of 80% of certified amount and (b) 2nd Payment of 20% of certified amount.

Payment towards Interim Bills (RA bills) related to the execution of subcontract works shall be released by the Main Contractor in part as follows:

(a) 80% of the certified payment to the Subcontractor shall be released within 7 (seven) days from the date of receipt of the corresponding 1st payment of 80% from the Employer.

(b) The balance 20% shall be released within 7 (seven) days from the date of receipt of the corresponding 2nd payment of 20% from the Employer.

4.3.6 Net payment will be disbursed after all statutory deduction, taxes and levies as applicable in accordance with the Main Contract.

4.3.7 The Subcontractor shall not be entitled for any interest in event of delay in release of payments for any reasons whatsoever.

4.4 Security Deposit / Retention Money (Other than Performance Security):

4.4.1 Cash retention as an agreed 2.5% of the value of all progress bills for a maximum of 2.5% of the Subcontract Price shall be withheld/ deducted by the Main Contractor from all invoices of Subcontractor.

If the Subcontractor so desires, upon written request of the Subcontractor, the Main Contractor may accept the replacement of the said cash retention by a Bank Guarantee/s (the Retention Bank Guarantee - RABG) of equivalent value in an approved format. In that case the Subcontractor shall obtain the RABG from an approved nationalized/ scheduled bank.

4.4.2 **Refund of Security Deposit:** Security Deposit mentioned in sub clause 4.4.1 above shall be returned to the Subcontractor without any interest after the occurrence of any of the following, whichever is later,

(a) Payment of the Final Bill of the subcontractor.
(b) Within 30 days after issuance of the Completion Certificate by the Main Contractor for the Subcontractor's Scope of Works,
(c) Receipt of No Claim Certificate from the Subcontractor by the Main Contractor,
(d) Receipt of the entire corresponding payment by the Main Contractor from the Employer related to the Subcontractor's scope of works.

4.4.3 **Forfeiture of Security Deposit**: Whenever the Subcontract is rescinded as a whole under Special Conditions of Sub-Contract Cl. No. – 20, the Security Deposit already in possession of the Contractor under the Subcontract shall be forfeited. However, in case the Subcontract is rescinded in part or parts under relevant clause of the Main Contract, the Security Deposit shall not be forfeited. No claim for interest shall be permissible to the Subcontractor at any stage and in respect of any money or balance Security Deposit which may be due from the Contractor, owing to any dispute or otherwise.

4.5 Final Bill

(a) The Final Bill shall be submitted within 30 days from the date of completion of the Subcontractor's Works, together with all necessary evidence of statutory compliances and a reconciliation statement of free issue materials (if any),

(b) The payment of the Final Bill shall be subject to rectification of all defects during the Defects Liability Period and certification of completion of such rectification by the Main Contractor,

(c) Amount in Final bill shall be paid to the Subcontractor after receipt of "No Claim Certificate" from the Subcontractor and deduction of any money which is due and payable to the Main Contractor or any statutory authorities, subject to approval of the entire Sub-contractor's works by Engineer/ Employer and receipt of payment against Final bill from Employer under the Main Contract.

4.6 Price Variation Clause / Escalation

Not Applicable

5. TAXES & DUTIES

5.1 Subcontract Price is inclusive of all statutory Taxes, **(excluding GST)**, Custom Duties, Cess, Levies, custom clearance together with Local Charges whatsoever as applicable during the tenure of the Subcontract works.

5.2 The Subcontractor is responsible for fulfillment of all statutory requirements under the Subcontract. The Subcontractor should submit the copy of GST return to the Contractor upon filling of GST return to the Authority.

5.3 Subcontractor shall pay all state and central taxes, duties, fees, cess, levies, charges and other fees as required to be paid under this Subcontract, and the Subcontract Price shall not be adjusted for any of these costs.

5.4 **Royalty, Seigniorage Fee, Mineral Land Bearing Tax and Other Statutory Dues**

5.4.1 The Subcontractor shall be solely responsible for payment of all royalties, seigniorage charges, Mineral Land Bearing Taxes, duties, and other statutory levies in connection with the procurement, transportation, and use of materials such as sand, aggregates, stones, earth, and any other construction materials used in the execution of the Subcontract Works.

5.4.2 The Main Contractor and the Employer shall have no liability whatsoever towards payment of any royalty or similar charges arising from the Subcontractor's activities. The Subcontractor shall indemnify and hold harmless the Main Contractor and the Employer from any claim, demand,

penalty, or proceedings arising out of non-payment or delayed payment of such royalties or statutory levies.

5.4.3 The Subcontractor shall, upon request of the Main Contractor, submit satisfactory documentary evidence of payment of royalties, seigniorage charges, and other statutory dues made to the appropriate Government authorities in connection with the materials used for the Subcontract Works.

5.4.4 In the event the Main Contractor or Employer is compelled to pay any such royalty, seigniorage, tax, penalty, or levy due to the failure of the Subcontractor to comply with its obligations, the Main Contractor shall have the right to recover the same from any monies due or becoming due to the Subcontractor under this Subcontract, including through encashment of the Performance Guarantee or other securities.

5.5 **Payment of Tax and Filing of return under GST:** The Subcontractor shall be responsible for all procedural compliances related to the payment of Indirect Taxes, including CGST, SGST, UTGST, IGST as applicable under the Subcontract including filing of returns and payment of taxes. In case of any modifications or incorrect disclosure in the outward return, the Subcontractor should either accept changes or issue debit note/credit note for the tax adjustment. The Subcontractor shall be solely responsible for any proceedings initiated by any Competent Authority in respect of any non-payment, short-payment, wrong levy of tax, non-compliance, penalty, interest or other such issue, and for all liabilities and expenses related to such proceedings. Any costs arising to the Contractor on account of default of the Subcontractor in filing of returns or payment of taxes or both shall be borne entirely by the Subcontractor.

5.6 **Invoicing & Payment of GST:** The Subcontractor shall issue appropriate tax invoice containing all prescribed particulars as required by the relevant statutory indirect tax legislation, including but not limited to breakup of applicable indirect taxes on the face of the invoice, as may be applicable to the Subcontract Works. It is the responsibility of the Subcontractor to determine appropriate rate of tax and place of supply/services. In case of any error, the Main Contractor shall not be liable to make payment of such Indirect Tax or reimburse the same by any means. Further, in case of goods return, deficiency in service, price difference amounting to tax impact, the Subcontractor will be solely responsible for issuance and reporting of credit note or debit note. Any cost arising to the Main Contractor as a result of default made by the Subcontractor in issuance of the tax invoice in a manner as required by the applicable legislation, which could result in denial of credit or not taking of credit by the Main Contractor, shall be borne entirely by the Subcontractor.

5.7 The invoice including the tax component shall be paid to the Subcontractor only upon filing of returns showing the work done under Subcontract and payment of taxes as applicable to the Subcontract, with the Government. A proof of payment of the applicable indirect taxes shall be furnished to the Main Contractor. In case of applicability of Central Goods and Services Tax Act and State Goods and Services Tax Act/Union Goods and Services Tax Act or Integrated Goods and Services Tax Act, the entire Invoice amount including the tax component shall be paid only after the amount is reflected in the GSTR-2A of the Main Contractor. In case of any credit mismatch arising with respect to a supply being made under this Subcontract, it shall be the obligation of the Subcontractor to resolve the same within the period provided by the Government for resolving the mismatch. Any cost arising to the Main Contractor as a result of the above, which could result in denial of credit or not taking of credit by the Main Contractor, shall be borne by the Subcontractor.

5.8 In case of regular default by the Subcontractor on payment of applicable taxes or filing of returns or issuance of proper documents entitling the Main Contractor to avail credit, or rectifying the mismatch, then, notwithstanding anything contained in the Subcontract, the Main Contractor shall have the right to terminate the Subcontract forthwith and also shall have the right to recover any losses arising to the Main Contractor as a result of such default by the Subcontractor, either by withholding the amounts due to the Subcontractor or by recovering the amount from the Subcontractor.

5.9 Deduction of Taxes at Source (TDS):

5.9.1 Main Contractor shall deduct from payments to be made to the Subcontractor, as per statutory rules applicable for deduction of taxes at source (TDS) and pay to the Government Authority any and all taxes including but not limited to TDS under GST Act.

5.9.2 Income Tax, as applicable in India, will be deducted by the Main Contractor from each interim bill and final bill raised by the Subcontractor under this Subcontract.

5.9.3 If the Subcontractor wishes to and is eligible for lower or nil deduction of income tax at source, then the Subcontractor need to obtain withholding tax order/certificate from the relevant Government Authority under section 197 of the (Indian) Income-tax Act, 1961 for determination of the appropriate withholding tax, before the Main Contractor can make the remittance to the Subcontractor. Such remittance will be effected only after the Subcontractor provides Main Contractor with the withholding tax order/certificate for lower or nil deduction at source. Otherwise, remittance will be released to the Subcontractor after deducting normal applicable rate of TDS under Income Tax Act 1961.

5.10 Where there is a delay or default in obtaining the withholding tax order or certificate referred above by the Subcontractor due to fault of the Subcontractor and where the Main Contractor is subject to interest, penalty or other actions by the Government Authority on account of such delay, the Subcontractor hereby agrees to indemnify and hold harmless the Main Contractor from and against any and all such actions including taxes on disallowances, interests, penalty, liabilities, attorney fees and other expenses incurred or required to be incurred by the Main Contractor, which the Main Contractor shall become subject to under any applicable Law in respect of taxes.

6. VARIATIONS & ADDITIONAL WORKS

6.1 The estimated quantities under this Subcontract may change as per the requirement of the works based on actual drawings approved by the Engineer/ Employer and/or as instructed by the Engineer / Employer. The Main Contractor shall have the right to reduce and / or increase the estimated quantities under the Contract to any extent. The subcontractor shall not be entitled for any compensation or claim whatsoever on account of non-operation of any BOQ items during execution of the work. If the cost of variation, on account of quantity variation of all items put together exceeds by ±25% of the Contract Price, then, the rates for such items whose variation cost exceeds the said limit will be agreed to, or determined, provided that: The amount of item (Quantity X Rate) constitutes more than 5% of the Contract Price, then the rates will be derived as per Clause 6.3 below.

6.2 When any additional work apart from the designated work shown on the drawings is required by the Subcontractor for his own convenience, such additional work shall be required to be restored with acceptable material and finished by the Subcontractor in a manner satisfactory to the Main Contractor. The Subcontractor shall submit his plans for such proposed work in writing to the Main Contractor for approval before commencement of the Work.

6.3 Additional/extra works mean, the works instructed by the Main Contractor to the Subcontractor as additional/extra, and for which approval is received from the Engineer / Employer. This additional/extra work shall be governed by clause 51 of Particular Conditions of Contract and 12.3 of GCC of Main Contract.

6.4 The Main Contractor shall have the right, at any time during the currency of the Subcontract, to delete or reduce the scope of the Subcontract Works, either in whole or in part, due to project requirements, changes in design, Employer's instructions, or any other reason whatsoever, without assigning any reason.

In such cases, the Subcontractor shall not be entitled to any claim, loss of profit, loss of opportunity, overheads, or consequential damages on account of the reduced or deleted work. The Subcontract Price shall be

adjusted accordingly by reducing the value of such deleted or reduced works based on the applicable BOQ rates.

Such deletion or reduction shall not invalidate the Subcontract, and the Subcontractor shall continue to execute the remaining scope of work in accordance with the terms of this Subcontract.

7. SUPPLY OF GRANITE MATERIAL

7.1 Supply and Permissible Wastage

The Employer (CMRL) shall supply standard pre-cut granite pieces for the Works at one designated location nearer to the work area. The quantity of granite supplied to the Sub-contractor includes an allowance for permissible wastage of five percent (5%).

Any wastage arising during handling, cutting, laying, fixing, or execution of the Works in excess of the permissible 5% shall be solely at the risk and cost of the Subcontractor/Bidder, who shall be held liable for such excess wastage.

7.2 Scope of Handling and Cutting

Any minor or incidental site-level cutting required for proper fitting and finishing shall be included in the Subcontractor's/Bidder's scope of work. From the designated point of delivery, all handling, including lead, lift, stacking, protection, and placement, shall be entirely in the Subcontractor's/Bidder's scope and cost.

7.3 Recovery for Excess Wastage

In the event that the wastage of Department-supplied granite exceeds the **permissible limit of 5%,** recovery for the excess quantity shall be effected from the Subcontractor/Bidder at the rates stipulated in **Annexure–2**, as applicable, without prejudice to any other rights of the Employer/Main Contractor under this Contract.

TAMIN Rate for Granite:

S.No	Material Name	Polished TAMIN Rates (Rs.Per Sqft)	Leather TAMIN Rates (Rs.Per Sqft)
20mm Thickness			
1	Columbo Jubrana (Naganoor)	210	230
2	Hawks Eye (Kommedu)	200	220
3	Fox Brown (Sengunam)	200	220
4	Paradiso (Chendarapalli)	200	220
5	Sudanur Black	310	330
6	Purphery Red	209	242
30mm Thickness			
1	Columbo Jubrana (Naganoor)	318	338
2	Hawks Eye (Kommedu)	293	313
3	Fox Brown (Sengunam)	296	316
4	Paradiso (Chendarapalli)	295	315
5	Sudanur Black	475	495
6	Purphery Red	272	286

S.No	Material Name	Polished TAMIN Rates	Leather TAMIN Rates
50mm Thickness			
1	Columbo Jubrana (Naganoor)	464	484
2	Hawks Eye (Kommedu)	424	444
3	Fox Brown (Sengunam)	430	450
4	Paradiso (Chendarapalli)	425	445
5	Sudanur Black	710	730
6	Purphery Red	352	374
18mm Thickness			
1	Columbo Jubrana (Naganoor)	195	215
2	Hawks Eye (Kommedu)	180	200
3	Fox Brown (Sengunam)	182	202
4	Paradiso (Chendarapalli)	190	205
5	Sudanur Black	300	320
10mm Thickness			
1	Columbo Jubrana (Naganoor)	165	185
2	Hawks Eye (Kommedu)	155	175
3	Fox Brown (Sengunam)	156	176
4	Paradiso (Chendarapalli)	155	170
5	Sudanur Black	235	255

PRICED SCHEDULE OF QUANTITIES AND RATES

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1 PREAMBLE

a) The Pricing Document shall be read in conjunction with the Instructions to Bidders and all other Tender Documents, Specifications, Designs and associated documents.

b) The Bidder shall quote for each item in the BOQ inclusive of all costs, charges, overheads and profit, **but excluding GST**. GST shall be reimbursed separately upon submission of documentary evidence of payment.

c) The quantities indicated for the execution of this Subcontract Work are indicative only. Payment shall be made based on the actual quantities of work executed in accordance with the approved GFC Drawings issued by the Main Contractor, Engineer and/or Employer, as applicable.

d) Any payment due to the Main Contractor from the Employer in respect of the Architectural Provisional Sum Works shall be dealt with in accordance with the Contract (C4-UG-01), following due reconciliation of the scope of work, Employer's Requirements and Employer's Drawings, and in accordance with the applicable Contract Conditions.

2 Summary of Priced Schedule of Quantities and Rates

ARCHITECTURAL / FINISHING WORKS FOR LIGHT HOUSE UNDER GROUND STATION

in Connection with

"Construction of Under Ground Stations at Light House, Kutchery Road, Alwarpet, Bharathidasan Road including Underground Stabling Yard and Cross Over at Light House Station and Associated Twin Tunnel, Project Start from Chainage 0+001m to End Chainage 5+150m (Down Line)"– Chennai Metro Rail Project, Phase-2, Corridor-4

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Sch. No.	Description	Amount in INR	Amount in Words
1	**Light House Station**		
A	Schedule - A : Painting Works (Wall/Ceiling)		
B	Schedule - B : Flooring Works		
C	Schedule - C : Metal Works		
D	Schedule - D : Ceiling Works		
E	Schedule - E : Wall Cladding Works		
F	Schedule - F : Signages		
G	Schedule - G : Toilet Fixtures		
H	Schedule - H : Roof Canopy		
1	**Total of Light House Station (in figure & Words)**		

Note : 1. This Price of Schedule and Rates is to be s**ubmtted as per ITB Cl.11.3**

2. The unit rates and the prices shall be quoted by the bidder in **Indian Rupees ONLY**.

Signature of Bidder **Cemindia Projects Ltd.**

Seal of Bidder Seal of Cemindia Projects Ltd.

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PRICED SCHEDULE OF QUANTITIES AND RATES

ARCHITECTURAL / FINISHING WORKS FOR LIGHT HOUSE UNDER GROUND STATION in Connection with

"Construction of Under Ground Stations at Light House, Kutchery Road, Alwarpet, Bharathidasan Road including Underground Stabling Yard and Cross Over at Light House Station and Associated Twin Tunnel, Project Start from Chainage 0+001m to End Chainage 5+150m (Down Line)"– Chennai Metro Rail Project, Phase-2, Corridor-4

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
A	**Schedule - A : Painting Works (Wall/Ceiling)**						
A.1	**Painting Works (Wall)**						
1	Providing and applying **Acrylic emulsion paint** on Wall and Ceiling new work for interior finishes with three or more coats of approved colour and shade to give an even shade, including appropriate priming coat, preparation of surface and scaffolding etc. complete all as per manufacturer's specifications and as directed by the Engineer: **Interior Finishes**.	Sqm	7030				
2	Providing and applying **Anti fungal and Anti Algal Exterior emulsion Paint** on Wall and Ceiling with three or more coats of approved colour and shade to give an even shadencluding appropriate priming coat, preparation of surface and scaffolding etc. complete all as per manufacturer's specifications and as directed by the Engineer. for **Exterior Finishes**.	Sqm	410				
3	Providing and Applying two coats (maximum 8 sqm/litre per coat with minimum 25 micron wet film thickness per coat) of two-part, high build, solvency free, water emulsified epoxy resin based **anti-dust concrete sealer coating** on fair faced over primer coat / initial coat on Walls as per manufacturer's recommendation- all complete to give an even approved shade as per specification including all necessary scaffolding, cost of materials, labour, lead and lift at all levels and for all heights as approved by the engineer. Rate shall include cost of primer also.	Sqm	12420				
4	Providing and painting **Polyurethane paint** of approved brand, on new work (plaster, wood or metal), including two or more coats, to give an even shade, including provision or primer, preparation of surface using automotive putty, thinners etc. surface duly emery papered to give a perfectly smooth and even prepared surface before painting as per specification including all necessary scaffolding, cost of materials, labour, lead and lift at all levels and for all heights and location as approved by the engineer.	Sqm	70				
5	Providing and applying decorative thick **Texture wall finish** (exterior grade) of approved brand including two coats of water repellent over texture finish for protection to the wall surface as per specification including all necessary scaffolding, cost of materials, labour, lead and lift at all levels and for all heights and location as approved by the engineer.Rates shall be inclusive for all types of pattern & Design scaffolding for Exterior finishes.	Sqm	350				
A.2	**Painting Works (Ceiling/Floor)**						
6	Providing and applying **acrylic emulsion paint** on new work to ceiling surfaces with two or more coats of approved colour and shade as per Engineer's choice, to achieve an even and uniform finish, including appropriate primer coat, scaffolding, and all necessary materials, labour, tools & plants (T&P), complete as per manufacturer's specifications and directions of the Engineer-in-Charge.	Sqm	10540				
7	Providing and Applying two coats (maximum 8 sqm/litre per coat with minimum 25 micron wet film thickness per coat) of two-part, high build, solvency free, water emulsified epoxy resin based **anti-dust concrete sealer coating** on fair faced over primer coat / initial coat on soffits, floors and waist slabs as per manufacturer's recommendation- all complete to give an even approved shade as per specification including all necessary scaffolding, cost of materials, labour, lead and lift at all levels and for all heights as approved by the engineer. Rate shall include cost of primer also.	Sqm	3320				
8	**Fire sealant** works include the supply and application of approved fire-rated sealants at joints, gaps, and penetrations through walls to maintain the fire-resistance rating of building elements as per approved drawings and fire safety standards. The work covers surface preparation, cleaning, application of fire sealant (intumescent or non-intumescent as specified), tooling, and finishing to achieve a smoke-tight and fire-resistant seal. All materials and workmanship must comply with project specifications, UL/FM certification, and relevant codes ensuring a durable and tested fire protection system.	Rmt	11410				
A.3	**Putty**						
9	Providing and applying two coat of white cement based **putty** of average thickness 2 mm, of approved brand and manufacturer, over the plastered wall/Rcc wall and ceilings surface to prepare the surface even and smooth complete.	Sqm	16980				
	Total of Amount of Schedules - A (in figure)						
	Total of Amount of Schedules - A (in words)						

Note : 1. This Price of Schedule and Rates is to be s**ubmtted as per ITB Cl.11.3**

2. The unit rates and the prices shall be quoted by the bidder in **Indian Rupees ONLY**.

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PRICED SCHEDULE OF QUANTITIES AND RATES

ARCHITECTURAL / FINISHING WORKS FOR LIGHT HOUSE UNDER GROUND STATION in Connection with

"Construction of Under Ground Stations at Light House, Kutchery Road, Alwarpet, Bharathidasan Road including Underground Stabling Yard and Cross Over at Light House Station and Associated Twin Tunnel, Project Start from Chainage 0+001m to End Chainage 5+150m (Down Line)"– Chennai Metro Rail Project, Phase-2, Corridor-4

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
B	**Schedule - B : Flooring Works**						
B.1	**Flooring**						
1	52 mm thick cement concrete flooring with concrete hardener topping, under layer 40 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) and top layer 12 mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate 6 mm nominal size) by volume, hardening compound mixed @ 2 litre per 50 kg of cement or as per manufacturer's specifications. Including 2mm thick epoxy top coating as per approved manufacturer specification. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.	Sqm	4550				
2	Providing and fixing 10mm thick **acid and/or alkali resistant tiles** of approved make, colour, size and pattern in flooring, laid over 10mm thick mortar bed in CM 1:4 (1 acid proof cement : 4 coarse sand), complete as per IS: 4457, approved drawings, specifications, and directions of the Engineer-in-Charge. The joints shall be filled with approved acid and/or alkali resistant cement to ensure chemical resistance, durability, and watertight performance, including unloading, lowering , internal shifting to work location and protection.	Sqm	50				
3	Providing and laying 10mm thick **glazed vitrified tiles** (GVT) in different sizes with water absorption's less than 0.08% and conforming to IS : 15622 of approved make in all colours and shades, laid on 25mm thick cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with white cement and matching pigments etc., complete. Including unloading, lowering , internal shifting to work location and protection.	Sqm	800				
4	Providing and laying 10mm thick, double charged, 1st quality **vitrified floor tiles** (anti-skid) in different sizes with water absorption's less than 0.08% and conforming to IS:15622 of approved make in all colours and shades, laid on sqm 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with matching pigments etc., complete. Including unloading, lowering , internal shifting to work location and protection.	Sqm	190				
5	Providing and laying 10mm thick white **ceramic floor tiles** of 1st quality conforming to IS : 15622 of approved make in colours such as white, Ivory, Grey, Fume Red Brown, laid on 20mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), including pointing the joints with white cement and matching pigment etc, complete.	Sqm	520				
6	Providing and laying 16 mm thick, full body **vitrified floor tiles** in different sizes with water absorption's less than 0.08% and conforming to IS:15622 of approved make in all colours and shades, laid on sqm 20mm thick cement mortar 1:4 (1 cement: 4 coarse sand) including grouting the joints with matching pigments etc., complete. Including unloading, lowering , internal shifting to work location and protection.	Sqm	150				
7	Providing and fixing removable 450 mm high **raised/false access flooring** system of approved make with height adjustment up to 50 mm, comprising modular load-bearing floor panels supported on G.I. pedestal and rectangular stringer framework, complete as per approved drawings and directions of the Engineer-in-Charge. The system shall consist of 600 × 600 × 32 mm filled steel anti-static HPL finished access floor panels of 800H grade (FS800H), having steel welded construction with enclosed bottom pan, corrosion-resistant epoxy coating, and non-combustible cementitious core infill. The top and bottom steel sheets shall be minimum 0.6 mm and 0.7 mm thick respectively, with welded construction as per approved manufacturer's specifications. The complete raised flooring system shall be manufactured using non-combustible/fire-resistant materials and shall have minimum 1-hour fire resistance rating tested as per relevant standards such as BS 476 / ASTM E84 / EN 13501 or equivalent approved standards. The panels shall be factory finished with anti-static high pressure laminate having non-warp technology and surface flatness within 0.75 mm. The panel shall withstand concentrated load of 363 kg, uniformly distributed load (UDL) of minimum 1500 kg/sqm, and impact load of 50 kg, complete as per approved manufacturer's specifications. The rate shall include supply and fixing of panels, pedestals, stringers, fasteners, accessories, cutting for services, edge finishing, labour, tools & plants (T&P), handling, installation, testing, cleaning, and all incidental works required for complete installation.	Sqm	210				
B.2	**Wall Tile**						
8	Providing and fixing 8.5mm +/- 0.5mm thick 1st quality **Vitrified glazed wall tiles** conforming to IS : 15622 of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge in wall laid with cement based high polymer modified quick set tile adhesive (Water based) conforming to IS: 15477, in average 6mm thickness, including grouting of joint complete as per specification and relevant drawing.	Sqm	4520				

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TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
B.3	**Granite Work**						
9	Laying **20 mm thick Granite** as in the flooring drawings in required design and patterns, in linear as well as curvilinear portions of the building all complete as per the architectural drawings using 5mm thick approved adhesive over adhesive fixed 0.5mm thick polyethylene vapor retarder confirming to the ASTM D4397 with a maximum permeance rating of 7.5 ng/Pa x s x sq. m and 25 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with white cement slurry admixed with pigment of matching shade including lowering, internal shifting to work location and protection of floor (Using 3mm Polypropylene Corugated Sheet with 4mm Ply wood) till handover all complete as specified and as directed by the Engineer-in-Charge. Note: Granite will be provided by CMRL either in pellets or in loose condition.	Sqm	6930				
9.1	Providing and laying **20 mm thick Granite** as in the flooring drawings in required design and patterns, in linear as well as curvilinear portions of the building all complete as per the architectural drawings using 5mm thick approved adhesive over adhesive fixed 0.5mm thick polyethylene vapor retarder confirming to the ASTM D4397 with a maximum permeance rating of 7.5 ng/Pa x s x sq. m and 25 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with white cement slurry admixed with pigment of matching shade including lowering , internal shifting to work location and protection of floor (Using 3mm Polypropylene Corugated Sheet with 4mm Ply wood) till handover all complete as specified and as directed by the Engineer-in-Charge. **(quantity variation of ±25% is not applicable on this item)**	Sqm	200				
10	Laying **50mm thick granite** stone flooring at platform edge level over a prepared base of 50mm thick Cement Mortar 1:4 (1 cement: 4 coarse sand) laid and jointer with white cement with matching pigment all complete in levelling course laid and jointed with white cement slurry admixed with pigment of matching shade including lowering , internal shifting to work location and protection of floor (Using 3mm Polypropylene Corugated Sheet with 4mm Ply wood) till handover all complete as specified and as directed by the Engineer-in-Charge. Note: Granite will be provided by CMRL either in pellets or in loose condition.	Sqm	190				
10.1	Providing and laying **50mm thick granite** stone flooring at platform edge level over a prepared base of 50mm thick Cement Mortar 1:4 (1 cement: 4 coarse sand) laid and jointer with white cement with matching pigment all complete in levelling course laid and jointed with white cement slurry admixed with pigment of matching shade including lowering , internal shifting to work location and protection of floor (Using 3mm Polypropylene Corugated Sheet with 4mm Ply wood) till handover all complete as specified and as directed by the Engineer-in-Charge. **(quantity variation of ±25% is not applicable on this item)**	Sqm	50				
B.4	**Staircase**						
11	Laying **30mm thick granite stone** flooring in treads and landings (including bull nosing, rounding the nose and making groove) of any colour, using 5mm thick approved adhesive over adhesive fixed 0.5mm thick polyethylene vapor retarder confirming to the ASTM D4397 with a maximum permeance rating of 7.5 ng/Pa x s x sq. m and 25mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with white cement slurry mixed with pigment to match the shade of granite stone including lowering, internal shifting to work location and protection. **Note:** Granite will be provided by CMRL either in pellets or in loose condition.	Sqm	590				
11.1	Providing and laying **30mm thick granit**e stone flooring in treads and landings (including bull nosing, rounding the nose and making groove) of any colour, using 5mm thick approved adhesive over adhesive fixed 0.5mm thick polyethylene vapor retarder confirming to the ASTM D4397 with a maximum permeance rating of 7.5 ng/Pa x s x sq. m and 25mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with white cement slurry mixed with pigment to match the shade of granite stone including lowering, internal shifting to work location and protection. **(quantity variation of ±25% is not applicable on this item)**	Sqm	100				
12	Laying **10mm thick granite** stone in risers as in the approved drawings in required design and patterns over adhesive fixed 0.5mm thick polyethylene vapor retarder confirming to the ASTM D4397 with a maximum permeance rating of 7.5 ng/Pa x s x sq. m and 25mm thick bed of cement mortar 1:4(1 cement:4 coarse sand) and jointed with neat cement slurry mixed with pigment to match the shade of granite stone including unloading, lowering & internal shifting to work location and protection of floor including lowering , internal shifting to work location and protection. **Note:** Granite will be provided by CMRL either in pellets or in loose condition.	Sqm	210				
12.1	Providing and laying **10mm thick granite** stone in risers as in the approved drawings in required design and patterns over adhesive fixed 0.5mm thick polyethylene vapor retarder confirming to the ASTM D4397 with a maximum permeance rating of 7.5 ng/Pa x s x sq. m and 25mm thick bed of cement mortar 1:4(1 cement:4 coarse sand) and jointed with neat cement slurry mixed with pigment to match the shade of granite stone including unloading, lowering & internal shifting to work location and protection of floor including lowering , internal shifting to work location and protection. **(quantity variation of ±25% is not applicable on this item).**	Sqm	50				

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
13	**50 mm thick cement concrete flooring** with concrete hardener topping in staircases, base layer 38 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) and top layer 12 mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate 6 mm nominal size) by volume, hardening compound mixed @ 2 litre per 50 kg of cement or as per manufacturer's specifications. This includes cost of cement slurry.	Sqm	660				
B.5	**Skirting**						
14	Providing and fixing machine cut, mirror polished **12mm thick granite stone for skirting**, of approved colour, size, design and pattern, complete as per architectural drawings, over 12mm thick base cement mortar in CM (1:3), laid and jointed with neat cement slurry mixed with pigment to match the shade of granite stone, including lead and lift at all levels and heights, complete as per specifications and approved drawings, and as directed by the Engineer.	Sqm	520				
15	Providing and fixing dry cladding height as per approved drawings, with **20 mm thick Gang saw cut polished granite** stone of approved colour in required size, design and patterns, with the help of steel clamps/cramps, pins etc., and sealing the joints with approved weather sealant as per approved drawing and direction of engineer. Rate to be inclusive of all clamps, cramps, pins etc.	Sqm	310				
16	Providing, cleaning, and fixing 2" wide **retro reflective yellow warning tape** at designated locations as per approved drawings, specifications, and directions of the Engineer-in-Charge. The surface shall be properly cleaned and prepared prior to application to ensure proper adhesion and durability. The rate shall include all materials, labour, tools & tackles, surface preparation, cutting, alignment, and all incidental works, complete in all respects for all levels and locations.	Rmt	1630				
17	Supplying and laying 20mm thick manufactured **quartz stone** of approved yellow colour as warning strip of 100mm width at platform level, laid over 20mm thick cement mortar bed in CM 1:4 (1 cement : 4 coarse sand), complete as per approved drawings, specifications, and directions of the Engineer-in-Charge. The joints shall be finished with white cement slurry mixed with matching pigment, including rubbing, grinding, and polishing to achieve a uniform finished surface. The rate shall include supply of all materials, labour, cutting to required size, edge finishing, coordination with other agencies for cut-outs/openings and necessary finishing around the same, tools & tackles, curing, unloading, lowering, internal shifting to the work location, and all incidental works required for complete execution. The rate shall also include protection of finished flooring using 3 mm thick polypropylene corrugated sheets over 4 mm thick plywood until handing over of the work, complete in all respects and as directed by the Engineer-in-Charge.	Sqm	50				
18	Providing and fixing gang saw cut polished granite of 20mm thickness of approved colour, size, design and pattern, complete as per architectural drawings for **coping work on upstand, ledge wall,** etc. laid over 16mm thick external grade plywood with all necessary framework, fasteners, etc., including making provisions for fixing fittings, cut-outs, edge moulding and polishing to edges to give a smooth all complete as specified and directed by the Engineer (EFO, SCR, ticketing, Toilets and Staff rooms and similar locations).	Sqm	140				
19	Providing and fixing gang saw cut polished granite of 20mm thickness of approved colour, size, design and pattern, complete as per architectural drawings for **counter slabs**, **Benches,** etc. laid over 16mm thick external grade plywood with all necessary framework, fasteners, etc., including making provisions for fixing fittings, cut-outs, edge moulding and polishing to edges to give a smooth all complete as specified and directed by the Engineer (EFO, SCR, ticketing, Toilets and Staff rooms and similar locations).	Sqm	80				
	Total of Amount of Schedules - B (in figure)						
	Total of Amount of Schedules - B (in words)						

Note : 1. This Price of Schedule and Rates is to be s**ubmtted as per ITB Cl.11.3**

2. The unit rates and the prices shall be quoted by the bidder in **Indian Rupees ONLY**.

PRICED SCHEDULE OF QUANTITIES AND RATES

ARCHITECTURAL / FINISHING WORKS FOR LIGHT HOUSE UNDER GROUND STATION in Connection with

"Construction of Under Ground Stations at Light House, Kutchery Road, Alwarpet, Bharathidasan Road including Underground Stabling Yard and Cross Over at Light House Station and Associated Twin Tunnel, Project Start from Chainage 0+001m to End Chainage 5+150m (Down Line)"– Chennai Metro Rail Project, Phase-2, Corridor-4

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
C	**Schedule - C : Metal Works**						
C.1	**Railings**						
1	Providing and fixing M.S. railing made of Hollow tubes, channels, plates etc., including welding, grinding and making curvature (wherever required) and fitting the same with necessary nuts and bolts complete, including fixing the railing with necessary accessories & dash fasteners , bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per Specifications, Architectural Drawings and as per approval of Engineer-in-charge. Rate also included providing and applying two coat epoxy paint including primer coat.	Kg	7330				
2	Providing and fixing stainless steel railing made of Grade 316 hollow tubes, channels, and plates, rate including Welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, including fixing the railing with necessary accessories & stainless steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as approved drawings and approval of Engineer-in-charge.	Kg	8170				
3	Providing and fixing stainless steel glass railing system of 1200mm height from finished floor level (FFL). The railing shall comprise (6 +1.52PVB + 6)mm thick clear laminated toughened glass panels, railing made of Grade 316 hollow tubes, channels, and plates. Rates shall be including Welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, including fixing the railing with necessary accessories & stainless steel dash fasteners, stainless steel bolts etc., following SS sections (3mm thick) shall be used for Railing as per approved drawings and approval of Engineer-in-charge. For the purpose of measurement and payment, the actual elevation area of glazing shall be considered, including joint thickness and the portion of glass embedded inside the SS channel.	Sqm	280				
4	Providing & Fixing SS Grating of length as per architectural drawing with 3mm thick 316 Grade SS pressed plate with 6mm wide slits @ 15mm c/c with 35mm X 35mm X 5mm SS grade 316 tube section welded all around edges and at suitable interval for support, flushed with Floor finish including providing & fixing necessary SS angle frame etc, complete as per approved drawing with weight not more than 7kgs/m.	Kg	390				
C.2	**Aluminium Louvers**						
5	Aluminium Extruded Louvers Providing and fixing PVDF aluminium extruded single bank louvers with AMCA certification complete. The louvers should have hidden mullions and an insect screen and should be equivalent to C/S louver model RS-1605. All work to be complete with extruded aluminium sub frame extruded built up standard elliptical section conforming to IS 733 and IS 1285 fixed with raw plugs and stainless steel screws or with fixing clip or with expansion hold fasteners including necessary filling up of gaps at junctions at top bottom and sides with required PVC/neoprene felt complete in all respect. Alumnium sections shall be smooth rust free, straight as per architectural drawings and the direction of Engineer-in-charge etc.	Sqm	24				
C.3	**SS Tactile**						
6	Providing and fixing warning and directional tactile indicators/plates of size 300 mm × 300 mm, manufactured from SS-316 grade stainless steel with matte finish, suitable for heavy pedestrian traffic areas and compliant with applicable accessibility guidelines/standards. The tactile plates shall consist of 1.5 mm thick stainless steel base with tactile projections of 3.0 mm to 3.5 mm height, such that the overall finished projection above finished floor level (FFL) shall not exceed 5 mm. All exposed edges shall be smoothly chamfered and burr-free. The tactile indicators shall be fixed using approved heavy-duty epoxy/adhesive system in properly prepared/drilled locations as per manufacturer's recommendations. The installation shall ensure proper alignment, uniform spacing, firm bonding, and resistance against displacement, corrosion, wear, and pedestrian impact. The scope shall include supply of all materials, labour, cutting, surface preparation, drilling, adhesives, tools & plants (T&P), finishing, cleaning, and all incidental works required for complete installation as per approved drawings and as directed by the Engineer-in-Charge.						
6(a)	Directional metal tactile indicator	Sqm	220				
6(b)	Hazardous metal tactile indicator	Sqm	70				
C.4	**SS Corner Trim**						
7	Providing and fixing SS corner trim/profile for tile edges, manufactured from SS-316 grade stainless steel with brushed finish, of approved shape and size as directed by the Engineer-in-Charge, to provide neat, true, and protected edges at external corners and tile terminations. The profile shall be of minimum 1.0 mm thick stainless steel, free from dents, scratches, waviness, and other surface defects. The corner trim shall be fixed in position using approved adhesive/mortar during tile laying, ensuring proper alignment, uniform level, straightness, and firm bonding with adjoining tile surfaces. All joints and intersections shall be neatly finished, and exposed edges shall be smooth and burr-free. The scope shall include supply of all materials, cutting, mitring at corners, fixing, alignment, finishing, cleaning, labour, tools & plants (T&P), and all incidental works required for complete installation as per approved drawings and as directed by the Engineer-in-Charge.	Rmt	64.80				
C.5	**SS Cladding**						

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
8	Providing and fixing stainless steel cladding of 4mm thick, using SS-316 grade stainless steel sheets with brushed finish, of approved thickness, design, pattern, and dimensions as shown in approved drawings and as directed by the Engineer-in-Charge. The stainless steel sheets shall be free from dents, waviness, oil canning effect, scratches, and other surface defects. The cladding shall be fixed over approved framework/backing arrangement using stainless steel fasteners, brackets, cleats, anchors, screws, or adhesive system as required to achieve proper alignment, rigidity, and true finish. All joints shall be uniform, properly aligned, and finished neatly. Exposed edges shall be folded/returned/chamfered as required to achieve a smooth and safe finish. The work shall include cutting, bending, grooving, edge folding, fabrication, welding, grinding, polishing, provision of stiffeners/supports wherever required, protective coating/film during installation, scaffolding, labour, tools & plants (T&P), and all incidental works necessary for complete installation in accordance with approved shop drawings and directions of the Engineer-in-Charge. The rate shall include preparation and submission of detailed shop drawings, coordination with other services, and obtaining approvals prior to execution. Measurement shall be carried out on actual visible surface area basis, complete in all respects.	Sqm	20				
C.6	**Rolling Shutters**						
9	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - Part 1 and M.S top cover of required thickness for rolling shutters with 80x1.25 mm M.S. laths with 1.25 mm thick top cover, ball bearings and mechanical motorised operation.	Nos	82				
C.7	**Structural Steel Works**						
10	Steel work welded in builtup section framed work or MS tubular sections including cutting, housing ,fixing in position and applying a primary coat of approved steel primer including synthetic enamel paint as required for frames, guard bars,ladders, railings ,brackets, gates, lighting frames, grills, cable tray supports and similar works. (Shop drawings to be submitted before execution for approval of Engineer). Rate shall include all labour, tools and tackles to complete the work as per drawings and as directed by Engineer in charge.	Kg	1000				
11	Providing, fabricating to required profile and shape, transporting, erecting and fixing in position at all levels of steel work conforming to IS 2062:2011 including procurement & testing of all raw steel materials, HSFG all grades of bolts, nuts & washer, fasteners, fabrication, joining, welding, threading, sleeves etc. Allowance for all types of wastage's, straightening, cutting, bending of section wherever specified, drilling holes, bolting provision of necessary tools, testing etc. The rate shall also include surface preparation like sand blasting, application of one coat of Zinc Silicate (DFT 75mm) and epoxy Zinc Phosphate (DFT 35mm) primet and one coat of Epoxy Zinc phosphate (DFT 35mm) paint ,Epoxy high build micaceous iron oxide coating polyamide cured DFT-90mm and two coats of Acrylic polyurethane finish alphatic,isocyanate cred DFT -30 mm as per technical specfications. The rate shall also include supplying and providing of detailed fabrication drawings based on the GFC drawings, required for all permanent and temporary structures and their approval from Engineer in charge's prior to execution. The rate shall also include provision and installation of base plate, anchor bolts (measured in tonnes) etc. all as per relevant drawings, specifications and directions of engineer. Using standard plate sections, rolled sections, angles, channels, I sections, T sections, C sections, H sections, hollow round/square/rectangle sec etc., welded and built.	MT	20				
	Total of Amount of Schedules - C (in figure)						
	Total of Amount of Schedules - C (in words)						

Note : 1. This Price of Schedule and Rates is to be s**ubmtted as per ITB Cl.11.3**

2. The unit rates and the prices shall be quoted by the bidder in **Indian Rupees ONLY**.

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PRICED SCHEDULE OF QUANTITIES AND RATES

ARCHITECTURAL / FINISHING WORKS FOR LIGHT HOUSE UNDER GROUND STATION in Connection with

"Construction of Under Ground Stations at Light House, Kutchery Road, Alwarpet, Bharathidasan Road including Underground Stabling Yard and Cross Over at Light House Station and Associated Twin Tunnel, Project Start from Chainage 0+001m to End Chainage 5+150m (Down Line)"– Chennai Metro Rail Project, Phase-2, Corridor-4

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
D	**Schedule - D : Ceiling Works**						
D.1	**Aluminium Metal Ceiling**						
1	Supply and fix suspended Aluminium Metal Ceiling clip-in perforated Tegular edge global white color tiles of size 600mm wide and 600mm length perforated square panels in size to suit design. Panels are manufactured from 0.7mm thick aluminum sheets, perforated to L15 pattern giving a 2.5mm diameter holes, and a 16% free area. Panels have a factory laid-in black acoustic tissue. Panels to have a 10mm plain margin to all four edges, having NRC (Noise Reduction Coefficient) of 0.7, PVDF of thickness 60 microns (minimum), including factory painted after bending and perforation, and backed with a black Glass fiber acoustical fleece. Includes provision for demountable ceiling supports for removal of Fan coil units at stations as shown in the drawings.(Ceiling suspension system should be earth quake compliant) (SCR, Security Room, Toilets, etc.)	Sqm	50				
D.2	**Calcium Silicate Board Ceiling**						
2	Providing and installing suspended ceiling systems,12mm thick Calcium Silicate Board panels. The calcium silicate board and their sub components shall be of non-combustible type in accordance with requirements of NFPA 130 and 101. Max flame spread 25 and max smoke developed 450 no continued propagation of fire tested to NFPA 255, with paint as per specification including supply of suspension system of galvanized steel as per manufacturer's recommendation, top fixing of SS expanding anchor bolts, rigid hangers, accessories inclusive of providing opening for electrical fixtures / fittings, fixed framing to support fixtures / fittings and providing secondary supporting system for cable tray and duct and all complete as per relevant drawings and the direction of Engineer-in-charge. (Ceiling suspension system should be earth quake compliant) (SCR, etc.)	Sqm	190				
D.3	**Aluminum Composite Panel Ceiling**						
3	Supplying and fixing fire rated (120mins) 4mm thick, aluminium composite panel (ACP) fixed with extruded aluminium basis frame angle cleats, weather sealants, rivets, GI brackets all as approved, using suitable bolts on structural steel work including necessary accessories complete in all respects including all labour charges etc., including cost of structural steel fabrication, scaffolding charges, if any, all complete as per relevant drawings and the direction of Engineer- in-charge.	Sqm	3320				
D.4	**Baffle (Wave Pattern) Ceiling System**						
4	Providing & fixing of 1.5mm thick Aluminum powder coated baffle ceiling with bigger wave pattern and Ceiling with smaller wave pattern ceiling system, finished with PVDF coating of at least 60 microns of approved color and shade. the price includes all the needed metal profiles and suspension system and all accessories needed for fixation and all materials needed to finish the works according to manufacturer's recommendation and all complete as per relevant drawings and the direction of Engineer- in-charge.	Sqm	420				
D.5	**Baffle (Striped Pattern) Ceiling System**						
5	Providing & fixing of 1.5mm thick Aluminum powder coated baffle ceiling with striped pattern and, finished with PVDF coating of at least 60 microns of approved color and shade. the price includes all the needed Metal profiles and suspension system and all accessories needed for fixation and all materials needed to finish the works according to manufacturer's recommendation and all complete as per relevant drawings and the direction of Engineer- in-charge.	Sqm	1120				
	Total of Amount of Schedules - D (in figure)						
	Total of Amount of Schedules - D (in words)						

Note : 1. This Price of Schedule and Rates is to be s**ubmtted as per ITB Cl.11.3**

2. The unit rates and the prices shall be quoted by the bidder in **Indian Rupees ONLY**.

PRICED SCHEDULE OF QUANTITIES AND RATES

ARCHITECTURAL / FINISHING WORKS FOR LIGHT HOUSE UNDER GROUND STATION in Connection with

"Construction of Under Ground Stations at Light House, Kutchery Road, Alwarpet, Bharathidasan Road including Underground Stabling Yard and Cross Over at Light House Station and Associated Twin Tunnel, Project Start from Chainage 0+001m to End Chainage 5+150m (Down Line)"– Chennai Metro Rail Project, Phase-2, Corridor-4

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
E	**Schedule - E : Wall Cladding Works**						
1	Providing and fixing 6 mm thick opaque lacquered toughened glass for wall panelling and column cladding, of approved colour and shade, conforming to relevant IS standards and as per approved drawings and directions of the Engineer-in-Charge. The glass shall be back-painted/lacquer-coated with uniform finish and provided with protective safety backing film. All edges of the glass panels shall be machine cut and polished. The glass panels shall be fixed over 12mm thick calcium silicate boards backed with MS frame support system with primer and epoxy coating of all members, designed and installed as per vendor's recommendations and approved shop drawings. The glass shall be fixed using approved high-strength neutral cure silicone/adhesive system to ensure proper bonding, alignment, rigidity, and durability. The installation shall maintain proper line, level, alignment, uniform joints, and required expansion gaps. All exposed surfaces shall be free from scratches, waviness, distortion, dents, stains, edge chips, and other visible defects. The scope includes complete design, engineering, preparation of shop drawings, and obtaining approval from the structural design consultant, along with supply and fixing of lacquered glass, calcium silicate boards, MS frame support system with primer and epoxy coating of all members, adhesives, sealants, spacers,, cutting, edge polishing, fabrication, handling, protection during installation, scaffolding, labour, tools & plants (T&P), cleaning, and all incidental works required for complete installation as per approved shop drawings and directions of the Engineer-in-Charge. (Note: Calcium Silicate Boards, MS Support Support System shall be measured and paid under relevant BoQ items).	Sqm	4720				
2	Supplying, fabricating, and installing frameless fully glazed partition system using laminated toughened glass comprising 6 mm thick toughened glass + 1.52 mm PVB interlayer + 6 mm thick toughened glass, of approved make and quality, complete with counter opening(s) as shown in the approved drawings and as directed by the Engineer-in-Charge. The glass panels shall be fixed using SS-316 grade stainless steel patch fittings, brackets, connectors, pivots, fasteners, gaskets, and approved sealant system, complete with all necessary accessories and concealed fixing arrangements connected to the main structural support/frame. All exposed edges of the glass shall be machine cut and polished to provide smooth, true, and safe edges. The partition system shall be designed and installed to maintain proper alignment, rigidity, structural stability, and uniform joints, ensuring a clean frameless appearance. The scope shall also include necessary cut-outs and provisions for light fixtures, access panels, electrical/services interface coordination, scaffolding/staging, handling, protection during installation, cleaning, labour, tools & plants (T&P), and all incidental works required for complete installation in accordance with approved shop drawings and directions of the Engineer-in-Charge. All stainless steel components shall conform to AISI 316 grade with approved finish. Measurement shall be carried out on actual visible finished surface area basis, complete in all respects. (Applicable for EFO/TOM rooms.)	Sqm	58				
3	Providing and fixing smoke downstand system continuously running U channel (secret fixed) within the galvanized steel substrate hold the laminated glass of 6mm + 0.38mm (PVB) + 6mm in place by means of SS patch plats and countersunk allen keys. Cushioning pads are included within the U channel which receives the glass. The laminated glass is to be procured in modules of 600 or 1200 or as shown in the detailed drawings. The alignment of the glass is maintained using alignment minders (clip types) or continuous frames as may be deemed necessary after structural calculations. The laminated glass drops below the false ceiling for a minimum of 600mm as recommended by NBC 2016 or as shown in the detailed drawings. The nominal gaps between the glass to glass and glass to supporting civil structure shall be within the maximum limits as declared by the manufacturer in the test report as per EN 12101-1/equivalent, complete with all accessories, hardwares. The gap shall be Smoke Sealed. The item includes Providing and fixing 3M Ultra S800 film onto glass on the non fire face. The complete assembly should be fire rated and structurally stabled.	Sqm	70				

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
4	Providing and fixing 12 mm thick calcium silicate board cladding for wall panelling and column cladding, conforming to relevant IS standards and as per approved drawings and directions of the Engineer-in-Charge. The calcium silicate boards shall be free from cracks, warping, edge damage, moisture-related defects, and other visible imperfections. All exposed edges shall be neatly cut and finished. The calcium silicate boards shall be fixed over Block Work or MS frame support system with primer and epoxy coating of all members, designed and installed as per vendor's recommendations and approved shop drawings. The installation shall be carried out using approved fasteners, screws, anchors, jointing compounds, sealants, and accessories to ensure proper bonding, alignment, rigidity, and durability. The installation shall maintain proper line, level, alignment, uniform joints, and required expansion gaps. The scope includes complete design, engineering, preparation of shop drawings, and obtaining approval from the structural design consultant, along with supply and fixing calcium silicate boards, MS frame support system with primer and epoxy coating of all members, adhesives, sealants, spacers, cutting, edge polishing, fabrication, handling, protection during installation, scaffolding, labour, tools & plants (T&P), cleaning, and all incidental works required for complete installation as per approved shop drawings and directions of the Engineer-in-Charge. (Rate inclusive of the MS support system with epoxy coating, 12mm calcium silicate boards and all fixing accessories.)	Sqm	2480				
5	Supply and fixing of 4mm thick fire rated (120 mins) openable ACP panels with pale petal pink color over aluminum channels/ As per vendor fixed to precast / RCC elements which are supporting the PSD structures as shown in the drawings including necessary accessories complete in all respects including all labour charges etc., including back support arrangements, scaffolding charges . The price should include all necessary fixing elements and selants as required.	Sqm	680				
6	Supplying and fixing fire rated (120mins) 4mm thick, aluminium composite panel (ACP) fixed with extruded aluminium basis frame angle cleats, weather sealants, rivets, GI brackets all as approved, using suitable bolts on structural steel work including necessary accessories complete in all respects including all labour charges etc., including back support arrangements, scaffolding charges around the Smoke downstand/ Stair, Escalator openings , if any, all complete as per relevant drawings and the direction of Engineer- in-charge. The price should include all necessary fixing elements and selants as required.	Sqm	490				
7	Providing, fabricating, and fixing SS L-shaped corner frame/profile of size 30 mm × 30 mm × 4 mm thick, made of SS-316 grade stainless steel with approved brushed finish, for wall cladding systems as per approved drawings and directions of the Engineer-in-Charge. The work shall include cutting, fabrication, alignment, and fixing of the SS L-shaped profile at panel edges, corners, junctions, and terminations using approved adhesives and/or mechanical fasteners, ensuring proper line, level, rigidity, smooth joints, and neat finish. All exposed edges shall be smooth and burr-free. The rate shall include supply of stainless steel sections, welding, grinding, polishing, fasteners, accessories, labour, tools & plants (T&P), scaffolding, handling, cleaning, and all incidental works required for complete installation.	Rmt	560				
E.1	**Non-Fire Rated Glass Door**						
1	Supplying, fabricating, and installing frameless single shutter fully glazed door system using laminated toughened glass comprising 6 mm thick toughened glass + 1.52 mm PVB interlayer + 6 mm thick toughened glass, of approved make and quality, as shown in the approved drawings and as directed by the Engineer-in-Charge. The glass door shutter shall be fixed using SS-316 grade stainless steel patch fittings, floor springs, pivots, handles, locks, connectors, fasteners, gaskets, and approved sealant system, complete with all necessary accessories and concealed fixing arrangements connected to the main structural support/frame. The floor spring shall be of approved make and suitable capacity for smooth and durable operation of the door shutter. All exposed edges of the glass shall be machine cut and polished to provide smooth, true, and safe edges. The door system shall be designed and installed to maintain proper alignment, rigidity, structural stability, smooth opening and closing operation, and uniform joints, ensuring a clean frameless appearance. The scope shall include necessary cut-outs, hardware fixing arrangements, scaffolding/staging, handling, protection during installation, cleaning, labour, tools & plants (T&P), and all incidental works required for complete installation in accordance with approved shop drawings and directions of the Engineer-in-Charge. All stainless steel components shall conform to AISI 316 grade with approved finish.(Applicable for EFO/TOM rooms).	Nos.	5				
	Total of Amount of Schedules - E (in figure)						
	Total of Amount of Schedules - E (in words)						

Note : 1. This Price of Schedule and Rates is to be s**ubmtted as per ITB Cl.11.3**

2. The unit rates and the prices shall be quoted by the bidder in **Indian Rupees ONLY**.

PRICED SCHEDULE OF QUANTITIES AND RATES

ARCHITECTURAL / FINISHING WORKS FOR LIGHT HOUSE UNDER GROUND STATION in Connection with

"Construction of Under Ground Stations at Light House, Kutchery Road, Alwarpet, Bharathidasan Road including Underground Stabling Yard and Cross Over at Light House Station and Associated Twin Tunnel, Project Start from Chainage 0+001m to End Chainage 5+150m (Down Line)"– Chennai Metro Rail Project, Phase-2, Corridor-4

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
F	**Schedule - F : Signages**						
F.1	**SUSPENDED SINGLE SIDED NON-ILLUMINATED SIGN**						
F.1.1	Providing and fixing suspended single-sided non-illuminated signs, including all operations from fabrication to installation, complete as per approved drawings, technical specifications, signage schedule, and to the satisfaction of the Engineer-in-Charge/CMRL.						
F.1.2	All materials used in the fabrication of signage, including ACP panels, graphic films, adhesives, gaskets, sealants, and ancillary components, shall be fire-retardant, low smoke, and low toxicity, complying with the applicable Fire & Life Safety requirements of CMRL, NFPA 130, and relevant IS/EN standards. ACP panels shall comprise a low-density polyethylene (LDPE) core sandwiched between two aluminium alloy skins. ACP sheets of 3 mm, 4 mm, or 5 mm thickness may be used for sign faces and associated cladding works. The sheets shall be factory pre-coated and pre-finished with non-staining coatings and colours matching the approved specifications, such as PVDF Kynar 500 (70:30), LUMIFLON, DURAGLOSS 5000, or equivalent approved coatings. The ACP manufacturer shall provide a minimum 10-year warranty against defects including, but not limited to, delamination, colour fading, and loss of gloss. Valid product test certificates and warranty documents from the manufacturer shall be submitted for approval. The signage shall incorporate an easily accessible mechanism for the removal of content/information panels to facilitate inspection, maintenance, and access to associated services.						
F.1.3	Sign box shall be 50 mm deep and fabricated from an aluminium modular system with anodized finish of AO 01250 / AO 6037 or approved equivalent with 250 mm mill finish complete. The sign box, including channels, supports, suspension rods, brackets, and fixing accessories, shall be anodized to match the approved colour scheme and design guidelines. Front face, pictograms, and graphics shall be fabricated from 4 mm thick acrylic sheet with approved graphics applied using 3M block-out vinyl or approved equivalent self-adhesive vinyl, electro-cut and pasted as per approved artwork. The rear covering sheet shall be 4 mm thick ACP panel of approved fire-retardant grade. All graphics, symbols, and directional information shall conform to the approved signage standards and fabrication drawings. All suspended non-illuminated signs installed within underground station premises shall be rated minimum IP52 for interior signages and IP65 for external signages. All Signages shall be suitable for the station environmental conditions. The signage system shall incorporate a removable access mechanism for inspection, maintenance, cleaning, and access to station services wherever required.						
F.1.4	Sizes:						
F.1.4.a	900mm x 300mm	Sqm	0.810				
F.1.4.b	1500mm x 300mm	Sqm	0.900				
F.1.4.c	1800mm x 300mm	Sqm	1.620				
F.1.4.d	2100mm x 300mm	Sqm	3.150				
F.1.4.e	2400mm x 300mm	Sqm	2.160				
F.2	**SUSPENDED SINGLE SIDED ILLUMINATED SIGN**						
F.2.1	Providing and fixing suspended single-sided illuminated signs, including all operations from fabrication to installation, complete as per approved drawings, technical specifications, signage schedule, and to the satisfaction of CMRL.						
F.2.2	All materials used in the fabrication of signage, including ACP panels, acrylic sheets, graphic films, adhesives, sealants, gaskets, electrical insulation materials, LED modules, drivers, and ancillary components, shall be fire-retardant, low smoke, and low toxicity, complying with the applicable Fire & Life Safety requirements of CMRL, NFPA 130, and relevant IS/EN standards.ACP panels shall comprise a low-density polyethylene (LDPE) core sandwiched between two aluminium alloy skins. ACP sheets of 3 mm, 4 mm, or 5 mm thickness may be used for sign faces and associated cladding works. The sheets shall be factory pre-coated and pre-finished with non-staining coatings and colours matching the approved specifications, such as PVDF Kynar 500 (70:30), LUMIFLON, DURAGLOSS 5000, or equivalent approved coatings. The ACP manufacturer shall provide a minimum 10-year warranty against defects including, but not limited to, delamination, colour fading, and loss of gloss. Valid product test certificates and warranty documents from the manufacturer shall be submitted for approval. The signage shall incorporate an easily accessible mechanism for the removal of content/information panels to facilitate inspection, maintenance, and access to associated services.						

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Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
F.2.3	Sign box shall be 50 mm deep and fabricated from an aluminium modular system with anodized finish of AO 01250 / AO 6037 or approved equivalent with 250 mm mill finish complete. The sign box, including channels, supports, suspension rods, brackets, and fixing accessories, shall be anodized to match the approved colour scheme and design guidelines. Front face, pictograms, and graphics shall be fabricated from 4 mm thick acrylic sheet with approved graphics applied using 3M block-out vinyl and approved colour 3M cast vinyl, electro-cut and pasted as per approved artwork. The sign shall be internally illuminated using high-efficiency LED modules of approved make, providing uniform illumination without hotspots. LED modules shall have a minimum rated service life of 50,000 operating hours, minimum viewing angle of 140 degrees, and shall be complete with all associated drivers, wiring, connectors, mounting accessories, and power supply arrangements as required for proper operation. The rear covering sheet shall be 4 mm thick fire-retardant ACP panel. All graphics, symbols, and directional information shall conform to the approved signage standards and fabrication drawings. All suspended illuminated signs installed within underground station premises shall be rated minimum IP52 for interior signages and IP65 for external signages. All Signages shall be suitable for the station environmental conditions. The signage system shall incorporate a removable access mechanism for inspection, maintenance, cleaning, and access to station services wherever required.						
F.2.4	Sizes:						
F.2.4.a	900mm x 300mm	Sqm					
F.2.4.b	1500mm x 300mm	Sqm	1.350				
F.2.4.c	1800mm x 300mm	Sqm					
F.2.4.d	2100mm x 300mm	Sqm	0.630				
F.2.4.e	2400mm x 300mm	Sqm					
F.3	**SUSPENDED DOUBLE SIDED NON-ILLUMINATED SIGN**						
F.3.1	Providing and fixing suspended double-sided non-illuminated signs, including all operations from fabrication to installation, complete as per approved drawings, technical specifications, signage schedule, and to the satisfaction of CMRL.						
F.3.2	All materials used in the fabrication of signage, including ACP panels, acrylic sheets, graphic films, adhesives, sealants, gaskets, electrical insulation materials, LED modules, drivers, and ancillary components, shall be fire-retardant, low smoke, and low toxicity, complying with the applicable Fire & Life Safety requirements of CMRL, NFPA 130, and relevant IS/EN standards. ACP panels shall comprise a low-density polyethylene (LDPE) core sandwiched between two aluminium alloy skins. ACP sheets of 3 mm, 4 mm, or 5 mm thickness may be used for sign faces and associated cladding works. The sheets shall be factory pre-coated and pre-finished with non-staining coatings and colours matching the approved specifications, such as PVDF Kynar 500 (70:30), LUMIFLON, DURAGLOSS 5000, or equivalent approved coatings. The ACP manufacturer shall provide a minimum 10-year warranty against defects including, but not limited to, delamination, colour fading, and loss of gloss. Valid product test certificates and warranty documents from the manufacturer shall be submitted for approval.The signage shall incorporate an easily accessible mechanism for the removal of content/information panels to facilitate inspection, maintenance, and access to associated services.						
F.3.3	Sign box shall be 50 mm deep and fabricated from an aluminium modular system with anodized finish of AO 01250 / AO 6037 or approved equivalent with 250 mm mill finish complete. The sign box, including channels, supports, suspension rods, brackets, and fixing accessories, shall be anodized to match the approved colour scheme and design guidelines. Both sign faces, pictograms, and graphics shall be fabricated from 4 mm thick acrylic sheet with approved graphics applied using 3M block-out vinyl or approved equivalent self-adhesive vinyl, electro-cut and pasted as per approved artwork. The rear and internal structural components shall be adequately reinforced to maintain rigidity and alignment of both sign faces. All graphics, symbols, and directional information shall conform to the approved signage standards and fabrication drawings. All suspended double-sided non-illuminated signs installed within underground station premises shall be rated minimum IP52 for interior signages and IP65 for external signages. All Signages shall be suitable for the station environmental conditions. The signage system shall incorporate a removable access mechanism for inspection, maintenance, cleaning, and access to station services wherever required.						
F.3.4	Sizes:						
F.3.4.a	900mm x 300mm	Sqm					
F.3.4.b	1500mm x 300mm	Sqm					
F.3.4.c	1800mm x 300mm	Sqm	2.160				
F.3.4.d	2100mm x 300mm	Sqm	3.150				
F.3.4.e	2400mm x 300mm	Sqm	2.160				
F.4	**SUSPENDED DOUBLE SIDED ILLUMINATED SIGN**						
F.4.1	Providing and fixing suspended double-sided illuminated signs, including all operations from fabrication to installation, complete as per approved drawings, technical specifications, signage schedule, and to the satisfaction of CMRL.						

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
F.4.2	All materials used in the fabrication of signage, including ACP panels, acrylic sheets, graphic films, adhesives, sealants, gaskets, electrical insulation materials, LED modules, drivers, and ancillary components, shall be fire-retardant, low smoke, and low toxicity, complying with the applicable Fire & Life Safety requirements of CMRL, NFPA 130, and relevant IS/EN standards. ACP panels shall comprise a low-density polyethylene (LDPE) core sandwiched between two aluminium alloy skins. ACP sheets of 3 mm, 4 mm, or 5 mm thickness may be used for sign faces and associated cladding works. The sheets shall be factory pre-coated and pre-finished with non-staining coatings and colours matching the approved specifications, such as PVDF Kynar 500 (70:30), LUMIFLON, DURAGLOSS 5000, or equivalent approved coatings. The ACP manufacturer shall provide a minimum 10-year warranty against defects including, but not limited to, delamination, colour fading, and loss of gloss. Valid product test certificates and warranty documents from the manufacturer shall be submitted for approval.The signage shall incorporate an easily accessible mechanism for the removal of content/information panels to facilitate inspection, maintenance, and access to associated services.						
F.4.3	Sign box shall be 50 mm deep and fabricated from an aluminium modular system with anodized finish of AO 01250 / AO 6037 or approved equivalent with 250 mm mill finish complete. The sign box, including channels, supports, suspension rods, brackets, and fixing accessories, shall be anodized to match the approved colour scheme and design guidelines. Both sign faces, pictograms, and graphics shall be fabricated from 4 mm thick acrylic sheet with approved graphics applied using 3M block-out vinyl and approved colour cast vinyl, electro-cut and pasted as per approved artwork. The sign shall be internally illuminated using high-efficiency LED modules of approved make, providing uniform illumination across both sign faces without hotspots. LED modules shall have a minimum rated service life of 50,000 operating hours, minimum viewing angle of 140 degrees, and shall be complete with all associated drivers, wiring, connectors, mounting accessories, and power supply arrangements required for proper operation. The internal structure and rear panels shall be fabricated using approved fire-retardant materials. All graphics, symbols, and directional information shall conform to the approved signage standards and fabrication drawings. All suspended double-sided illuminated signs installed within underground station premises shall be rated minimum IP52 and shall be suitable for the station environmental conditions. The signage system shall incorporate a removable access mechanism to facilitate inspection, maintenance, replacement of LED modules and drivers, cleaning, and access to station services wherever required						
F.2.4	Sizes:						
F.2.4.a	450mm x 450mm	Sqm					
F.2.4.b	525mm x 300mm	Sqm	0.473				
F.2.4.c	600mm x 300mm	Sqm					
F.2.4.d	1050mm x 300mm	Sqm	0.315				
F.2.4.e	1500mm x 300mm	Sqm					
F.2.4.f	1800mm x 300mm	Sqm					
F.2.4.g	2100mm x 300mm	Sqm					
F.2.4.h	2400mm x 300mm	Sqm					
F.2.4.i	2100mm x 300mm	Sqm					
F.2.4.j	2400mm x 300mm	Sqm					
F.2.4.k	2700mm x 300mm	Sqm					
F.2.4.l	3000mm x 300mm	Sqm					
F.5	**SIGNAGE SUSPENDER FABRICATION**						
F.5.1	Steel work in built-up tubular 3mm thick (round, square or rectangular hollow tubes etc.) for Signage suspender including cutting, fixing directly to the true ceiling slab using approved chemical anchors/fasteners, and applying a priming coat of approved steel primer, including welding and bolting. Hot finished seamless type tubes complete. Note: All MS Components to be powder coated after completion of all fabrication including drilling of holes etc.						
F.5.1.a	50mm Dia MS Hollow Pipe, 3mm Thickness – Various lengths (750mm / 1600mm / 2600mm long) as per approved drawings	kgs	100.000				
F.5.1.b	32mm Dia MS Hollow Pipe, 3mm Thickness – 300mm long as per approved drawings	kgs	80.000				
F.6	**WALL / FACE MOUNTED NON-ILLUMINATED SIGN**						
F.6.1	Providing and fixing of Wall/Face mounted non-illuminated signs including all operations from fabrication to installation, complete as per relevant drawings, technical specifications, signage schedule, harmonised guidelines and to the satisfaction of CMRL/Engineer-in-Charge.						

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Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
F.6.2	50mm deep Sign box made from Aluminium modular system with anodized finish of AO 01250 / AO 6037 or equivalent of 250 micron mill finish, complete. Sign box including channel supports are to be anodised and coated to match the colour as per approved drawing and guideline. Front facia, pictograms and graphics are to be made up of ACP panels shall comprise a low-density polyethylene (LDPE) core sandwiched between two aluminium alloy skins. ACP sheets of 3 mm, 4 mm, or 5 mm thickness may be used for sign faces and associated cladding works. The sheets shall be factory pre-coated and pre-finished with non-staining coatings and colours matching the approved specifications, such as PVDF Kynar 500 (70:30), LUMIFLON, DURAGLOSS 5000, or equivalent approved coatings. The ACP manufacturer shall provide a minimum 10-year warranty against defects including, but not limited to, delamination, colour fading, and loss of gloss. Valid product test certificates and warranty documents from the manufacturer shall be submitted for approval. All internal signs shall be **IP54** certified and all external/platform-level signs shall be **IP65** certified as per approved graphics and fabrication drawings. The signage shall have an easy mechanism for removing and replacing content/information for inspection and maintenance access. All materials used shall be **non-combustible / fire retardant** and suitable for underground/enclosed environments as per relevant transit safety standards.	Sqm	50.000				
	Note: All aluminium components to be powder coated / anodized after completion of all fabrication. All fixings to be SS-316 grade. No ferrous metals to be used in humid/underground zones. The signage shall incorporate an easily accessible mechanism for the removal of content/information panels to facilitate inspection, maintenance, and access to associated services.						
F.6.3	**VINYL ON ACRYLIC NON ILLUMINATED SIGN** Providing and fixing of signage graphics consisting of approved colour 3M cast vinyl / equivalent electro-cut vinyl lettering, pictograms, and design elements, applied on 4mm thick clear / white acrylic sheet or equivalent fire-retardant board, including all operations from design, printing, cutting, lamination, and installation complete as per approved signage schedule, graphics manual, harmonised guidelines and to the satisfaction of CMRL/Engineer-in-Charge. Vinyl to be applied using approved pressure-sensitive adhesive (PSA) / 3M approved adhesive, ensuring full and uniform bond across the entire surface without air pockets, bubbles, or lifting at edges. The acrylic / equivalent board shall be fixed to the sign box face or wall-mounted frame using approved neutral cure silicone adhesive and/or SS-316 standoffs / flush fixings as per approved drawings. 3M block-out vinyl backing to be applied on the reverse face using compatible adhesive to prevent light bleed and ensure full opacity. All vinyl and adhesive materials to be UV-stable, moisture-resistant, and suitable for underground/enclosed humid environments. Rate per Sqm.	Sqm	50.000				
	Note: Adhesive type to be submitted for engineer's approval prior to application. Vinyl graphics to be applied free of air bubbles, wrinkles, or misalignment. Colour matching to be done as per approved colour palette and graphics manual. Acrylic / board edges to be polished and sealed. All materials to comply with fire-retardant requirements for underground station use.						
F.6.4	**RETRO REFLECTIVE VINYL SIGNAGES** Providing and fixing of retro reflective vinyl signages including all operations from design, printing, cutting, application, and installation complete as per approved signage schedule, graphics manual, harmonised guidelines and to the satisfaction of CMRL/Engineer-in-Charge. Retro reflective vinyl shall be of 3M Diamond Grade / Engineer Grade / High Intensity Prismatic (HIP) series or approved equivalent, conforming to ASTM D4956 / BS EN 12899 standards. Vinyl to be applied on 4mm thick aluminium composite panel using approved pressure-sensitive adhesive (PSA) / 3M approved adhesive, ensuring full and uniform bond across the entire surface without air pockets, bubbles, or lifting at edges. The backing board shall be fixed to the wall / sign box face / designated substrate using approved neutral cure silicone adhesive and/or SS-316 standoffs / flush fixings as per approved drawings. 3M block-out vinyl to be applied on the reverse face to ensure full opacity. All retro reflective vinyl and adhesive materials to be UV-stable, moisture-resistant, weather-resistant, and suitable for underground/enclosed humid environments. Rate per Sqm.	Sqm	30.000				
	Note: Retro reflective vinyl grade (Engineer Grade / High Intensity / Diamond Grade) to be confirmed as per approved signage schedule and emergency evacuation requirements. Adhesive type and vinyl sample to be submitted for engineer's approval prior to application. Graphics to be applied free of air bubbles, wrinkles, or misalignment. Colour and reflectivity values to match approved colour palette and graphics manual. All materials to comply with fire-retardant requirements for underground station use.						

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Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
F.6.5	**SELF-ADHESIVE VINYL STICKERS — DIRECT APPLICATION** Providing and applying of self-adhesive vinyl stickers directly onto approved substrate surfaces including walls, glass, doors, columns, floors, or any designated surface, including all operations from design, printing, cutting, surface preparation, application, and finishing complete as per approved signage schedule, graphics manual, harmonised guidelines and to the satisfaction of CMRL/Engineer-in-Charge. Vinyl stickers shall be of 3M cast vinyl series 180C / 3M IJ180 / Avery Dennison MPI 1005 or approved equivalent, applied using factory-coated pressure-sensitive permanent / removable adhesive as per application requirement. Surface to be thoroughly cleaned, degreased, and dried prior to application. All edges to be firmly pressed and sealed to prevent lifting, peeling, or moisture ingress. Vinyl to be applied using approved squeegee / application tool ensuring full and uniform bond across the entire surface without air pockets, bubbles, wrinkles, or misalignment. Application fluid to be used where required for repositioning during installation. Rate per Sqm.	Sqm	70.000				
	Note: Vinyl type — permanent or removable adhesive — to be confirmed as per approved signage schedule and surface type. Vinyl sample and adhesive type to be submitted for engineer's approval prior to bulk application. Colour matching to be done as per approved colour palette and graphics manual. All materials to comply with fire-retardant requirements for underground station use.						
F.6.6	**STAINLESS STEEL WALL MOUNTED SIGNAGES** **Statutory signs, door name signs**, and similar signage shall be fabricated from 1.6 mm thick Grade SS-316 stainless steel sheet (16 gauge) with a brushed or satin finish. All text, pictograms, graphics, and other information shall be chemically etched onto the stainless steel surface and colour-filled with approved enamel paint in accordance with the approved design and artwork. The finished signage shall be free from defects, with all edges neatly deburred, smooth, and free from sharp projections.						
F.6.6.a	Signage to be directly fixed to wall surface using SS-316 studs / standoffs with necessary hardware, ensuring plumb, level and true to line installation. All fixings, studs, standoffs and hardware to be SS-316 grade. No ferrous metals to be used in underground / humid zones. Rate per Sqm.	Sqm	50.000				
F.6.6.b	Signage to be fixed directly onto door surface using approved high-bond double-sided adhesive tape / structural adhesive, suitable for bonding stainless steel to door substrate (timber / metal / laminate / ACP as applicable). Adhesive to be 3M VHB (Very High Bond) tape series / approved equivalent or neutral cure structural silicone adhesive, ensuring full and uniform bond across the entire rear face of the signage without gaps or voids. Door surface to be thoroughly cleaned, degreased and dried prior to application. No mechanical fixings / studs / drilling to door face unless specifically approved by engineer. Rate per Sqm.	Sqm	70.000				
	Note: SS plate grade, gauge and finish to be confirmed as per approved signage schedule and material specification. Chemical etching depth and colour fill shade to be submitted for engineer's approval prior to fabrication. All SS surfaces to be free of scratches, dents, weld marks or discolouration. Protective film to be retained until final handover. Sizes to be as per approved signage schedule and drawings.						
F.7	**WALL / FACE MOUNTED ILLUMINATED SIGN**						
F.7.1	Providing and fixing of wall/face-mounted illuminated signs, including **Station Name Signage**, complete with all operations from fabrication, supply, assembly, testing, and installation, in accordance with the relevant drawings, technical specifications, signage schedule, harmonised guidelines, and as approved by CMRL/Engineer-in-Charge. The rate shall include all necessary materials, fixtures, supports, accessories, wiring, and associated works required for a complete installation.						

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Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
F.7.2	50mm deep Sign box made from Aluminium modular system with anodized finish of AO 01250 / AO 6037 or equivalent of 250 micron mill finish, complete. Sign box including channel supports are to be anodised and coated to match the colour as per approved drawing and guideline. Front facia, pictograms and graphics are to be made up of 4mm thick A2 fire-rated / non-combustible core ACP, suitable for underground station environment. Acrylic sheet decorated with 3M block-out vinyl and approved colour 3M cast vinyl design electro cut and pasted on it. Internally illuminated using LED module of GE Tetra Mini Max or approved equivalent with a minimum lifespan of 50,000 hours and 140 degree viewing angle. LED driver to be housed within the sign box with easy access for maintenance. LED colour temperature and lumen output to be as per approved lighting and signage schedule. All electrical connections and wiring within the sign box to be compliant with IEC 60598 / IS 10322 standards and suitable for underground station environment. All LED components and drivers to be low voltage (max 24V DC) for safety in public transit areas. Back covering sheet shall be 4mm thick A2 fire-rated ACP. All internal signs shall be IP54 certified and all external / platform-level signs shall be IP65 certified as per approved graphics and fabrication drawings. The signage shall have an easy mechanism for removing and replacing content / information and for accessing LED components for inspection and maintenance. All materials used shall be non-combustible / fire retardant and suitable for underground / enclosed environments as per relevant transit safety standards. Rate per Sqm.	Sqm	90.000				
	Note: All aluminium components to be powder coated / anodized after completion of all fabrication. All fixings to be SS-316 grade. No ferrous metals to be used in humid / underground zones. LED make and model to be submitted for engineer's approval prior to procurement. Electrical works to be carried out by licensed electrician and comply with all relevant codes. Sizes shall be as per approved signage schedule and drawings.						
F.8	**POST MOUNTED SINGLE SIDED NON-ILLUMINATED SIGN**						
F.8.1	Providing and fixing of Post mounted single / double sided non-illuminated signs including all operations from fabrication to installation, complete as per relevant drawings, technical specifications, signage schedule, harmonised guidelines and to the satisfaction of CMRL/Engineer-in-Charge.						
F.8.2	**SIGN BOX** 50mm deep Sign box made from Aluminium modular system with anodized finish of AO 01250 / AO 6037 or equivalent of 250 micron mill finish, complete. Sign box including channel supports are to be anodised and coated to match the colour as per approved drawing and guideline. Front facia, pictograms and graphics are to be made up of 4mm thick **A2 fire-rated / non-combustible core ACP**, suitable for underground station environment. Acrylic sheet decorated with 3M block-out vinyl and approved colour 3M cast vinyl design electro cut and pasted on it. Back covering sheet shall be 4mm thick **A2 fire-rated ACP**. All internal signs shall be **IP54** certified and all external / platform-level signs shall be **IP65** certified as per approved graphics and fabrication drawings. The signage shall have an easy mechanism for removing and replacing content / information for inspection and maintenance access. Sign box to be suitable for **single sided or double sided** display as per approved design requirement. All materials used shall be non-combustible / fire retardant and suitable for underground / enclosed environments as per relevant transit safety standards. **Rate per Sqm.**	Sqm	60.000				
	Note: Post size, section, and spacing to be confirmed as per approved signage and structural drawings. All welding to be continuous, smooth, and free from slag / spatter. Base plate fixing to floor / slab via approved chemical anchor bolts — embedment depth to be confirmed by structural engineer. No ferrous metals to be used without approved protective coating in underground / humid zones.						
F.8.3	SIGN POST:						
F.8.3.a	**Stainless Steel (SS-316) Post** — 40x40mm hollow section or as per approved drawing, 3mm thick base plate, anchor bars, single / double post as per design, including all fabrication, welding, fixing and finishing	kgs	150.000				
F.8.3.b	**Mild Steel (MS) Post** — 80mm dia hollow section or as per approved drawing, 6mm thick base plate, anchor bars, single / double post as per design, including all fabrication, welding, powder coating, fixing and finishing	kgs	150.000				
F.8.3.c	**Mild Steel (MS) Post** — 50mm × 50mm square hollow section or as per approved drawing, 6mm thick base plate, anchor bars, single / double post as per design, including all fabrication, welding, powder coating, fixing and finishing	kgs	150.000				
F.8.3.d	**Aluminium Post** — 40x40mm hollow section or as per approved drawing, 4mm thick base plate, anchor bars, single / double post as per design, including all fabrication, welding / jointing, anodizing / powder coating, fixing and finishing	kgs	150.000				
	Note: All sections to conform to **IS 1161 (steel tubes) / IS 4923 (hollow sections) / IS 1285 (aluminium sections)** as applicable. Thickness to be verified and confirmed as per approved structural and signage drawings. In case of discrepancy, **approved drawings shall take precedence.**						
F.9	**POST MOUNTED DOUBLE SIDED NON-ILLUMINATED SIGN**						

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
F.9.1	Providing and fixing of Post mounted double sided non-illuminated signs including all operations from fabrication to installation, complete as per relevant drawings, technical specifications, signage schedule, harmonised guidelines and to the satisfaction of CMRL/Engineer-in-Charge.						
F.9.2	SIGN BOX 50mm deep Sign box made from Aluminium modular system with anodized finish of AO 01250 / AO 6037 or equivalent of 250 micron mill finish, complete. Sign box including channel supports are to be anodised and coated to match the colour as per approved drawing and guideline. Front facia, pictograms and graphics are to be made up of 4mm thick A2 fire-rated / non-combustible core ACP, suitable for underground station environment. Acrylic sheet decorated with 3M block-out vinyl and approved colour 3M cast vinyl design electro cut and pasted on it. Back covering sheet shall be 4mm thick A2 fire-rated ACP. All internal signs shall be IP54 certified and all external / platform-level signs shall be IP65 certified as per approved graphics and fabrication drawings. The signage shall have an easy mechanism for removing and replacing content / information for inspection and maintenance access. All materials used shall be non-combustible / fire retardant and suitable for underground / enclosed environments as per relevant transit safety standards. Rate per Sqm.	Sqm	30.000				
	Note: All aluminium components to be powder coated / anodized after completion of all fabrication. All fixings to be SS-316 grade. No ferrous metals to be used in humid / underground zones. Sizes shall be as per approved signage schedule and drawings.						
F.9.3	**SIGN POST** Inclusive of providing and fixing sign post in **80mm dia MS hollow section, 4mm wall thickness**, along with **6mm thick MS mounting / base plates**, provided with anchor bars welded to bottom for embedding / fixing into floor / concrete / true structural slab as per approved drawings and engineer's instruction. Post to be **single or double** as per approved design requirement. All MS components to be **powder coated** after completion of all fabrication including drilling of holes. **Rate per Kg.**	kgs	100.000				
	Note: Post size and wall thickness to be verified and confirmed as per approved signage and structural drawings. All welding to be continuous, smooth, and free from slag / spatter. Base plate fixing to floor / slab via approved chemical anchor bolts — embedment depth to be confirmed by structural engineer. In case of discrepancy between BOQ description and approved drawings, **approved drawings shall take precedence.**						
F.10	**STATION NAME - FLAG POST TOTEM**						
F.10.1	Providing and fixing of Post mounted double sided illuminated projection signage including all operations from design, fabrication, electrical works, transportation and installation complete as per relevant drawings, technical specifications, signage schedule, harmonised guidelines and to the satisfaction of CMRL/Engineer-in-Charge.						
F.10.2	SIGN BOX Sign box fabricated using 40mm × 25mm × 3mm thick A6 6037 aluminium profile from approved manufacturer (Sanmati Aluminium or equivalent), with anodized finish, complete with all channel supports and internal framing. Front fascia graphics to be plotter cut and pasted edge to edge on sheet using block-out and pre-coloured vinyl (LG or approved equivalent). Solid logo panel to be made up of 4mm thick 0/40 solid acrylic (Sinkolite or equivalent) pasted on surface, with approved colour LG cast vinyl design electro cut and pasted on logo front fascia. Back panel to be 3.0mm Polymac polycarbonate solid translucent white sheet (Sarawati Polychem or approved equivalent). Sign box to be double sided as per approved design. Sign box size 1000mm × 1565mm or as per approved drawings. All aluminium components to be anodized / powder coated as per approved finish schedule. IP65 certified as per approved drawings and specifications. Rate per Sqm. Sign box to be internally illuminated using LED 1.5W modules, 12V DC (Arhant or approved equivalent), uniformly distributed along the inner perimeter of the sign box frame to ensure even illumination across the full face area. LED driver and wiring to be housed within the sign box frame with easy access for maintenance. Electrical wiring to be done using 1.5 sqmm 3 core Polycab / RR cable or approved equivalent, compliant with IEC 60598 / IS 10322 standards. All electrical connections to be suitable for underground station environment. Rate per Sqm — included in sign box rate.	Sqm	50.000				
	Note: All aluminium components to be anodized / powder coated after completion of all fabrication. All fixings to be SS-304 / SS-316 grade. Sizes to be confirmed as per approved signage schedule and drawings.						
F.10.3	SIGN POST Inclusive of providing and fixing sign post in 100mm × 100mm × 3mm MS hollow section with 450mm × 450mm × 10mm thick MS base plate, black matt powder coated, provided with anchor bars / 20mm dia J-hook welded to bottom for embedding / fixing into floor / concrete / true structural slab. Signage box to be fixed onto the post with the help of 16mm galvanized threaded rod with uncleared bar nuts covered with 40mm × 1mm SS-304 pipe. Base to include (50mm × 75mm) 5mm thick galvanized gusset plates, powder coated, and 1.5mm thick GI cover plate, powder coated, for neat and clean base finish. Post to be single as per approved design. All MS components to be powder coated — black matt finish after completion of all fabrication including drilling of holes. Rate per Kg.	kgs	100.000				
F.11	**TOILET ICON SIGN**						

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
F.11.1	Providing and fixing toilet icon signage comprising of 3mm thick acrylic sheet, precision cut to shape of male and female pictogram icons with PU paint finish in dark brown colour or as per approved colour scheme, fixed on wall with chemical glue / adhesive of approved make. The female icon shall be 210mm in height and male icon shall be 185mm in height, placed within an overall sign zone of 450mm height, mounted at 1200mm from finished floor level to bottom of sign zone. The acrylic icons shall be of uniform thickness, smooth edges, free from warping or surface defects. Sign shall be IP52 certified and suitable for internal application. Rate shall include all labour, material, tools, tackles, approved chemical adhesive, surface preparation, touch-up if any, and proper completion of work as per drawings and as directed by Engineer-in-charge. The product shall be of approved make equivalent to Alucobond, Eurobond or similar approved.						
F.11.1.a	Providing and fixing female toilet icon signag	Nos.	2.000				
F.11.1.b	Providing and fixing male toilet icon signag	Nos.	2.000				
F.11.1.c	Providing and fixing PH toilet icon signag	Nos.	2.000				
F.11.1.d	Providing and fixing Third toilet icon signag	Nos.	2.000				
F.12	**BRAILLE SIGNAGE**						
F.12.1	**TACTILE MAP** Providing and fixing Braille Map Sign comprising of 3mm thick acrylic sheet with approved braille artwork in paint finish, with raised braille dots of 0.5mm on the acrylic surface, fixed on wall with the help of SS studs, complete with all text, icons, tactile path, directional indicators and legend as per approved artwork and colour scheme. Size: 800mm x 450mm or as per approved drawings. Rate shall include all labour, material, tools, tackles, SS studs, surface preparation, braille artwork, and proper completion of work as per drawings and as directed by Engineer-in-charge.	Sqm	25.000				
F.12.2	**RAILING BRAILLE SIGNAGE** Providing and fixing Railing Braille Sign comprising of 1mm thick 304 stainless steel sheet with curve finish, curved to wrap around existing 40mm diameter railing, with approved braille artwork embossed on the surface including 1.5mm diameter, 0.75mm embossed arrow and 1.5mm diameter, 0.75mm embossed braille dots, fixed on existing railing with 3M double sided VHB tape, complete with all text and directional indicators as per approved artwork. Rate shall include all labour, material, tools, tackles, 3M VHB tape, surface preparation, braille artwork, and proper completion of work as per drawings and as directed by Engineer-in-charge.	Nos.	25.000				
F.12.3	STAINLESS STEEL BRAILLE MAP MOUNTING FRAME Providing and fixing post-mounted stainless steel frame for Braille Map Sign comprising of SS tubular posts with base plate, SS frame to hold the braille map sign panel in vertical (non-inclined) position, with all necessary brackets, connectors, and fixing accessories, finished in SS hairline / satin finish, complete in all respects as per approved drawings and as directed by Engineer-in-charge. Rate shall include all labour, material, welding, grinding, polishing, base plate fixing, anchor fasteners, and proper completion of work as per drawings and as directed by Engineer-in-charge.	kgs	70.000				
F.13	**YELLOW FLOOR MARKING**						
F.13.1	Providing and fixing 75 mm wide yellow coloured floor markings using anti-slip, fade-resistant, and scratch-resistant material, complete with surface preparation, application, and finishing as per approved drawings, specifications, and Engineer's instructions.	Sqm	50.000				
	Total of Amount of Schedules - F (in figure)						
	Total of Amount of Schedules - F (in words)						

Note : 1. This Price of Schedule and Rates is to be **submtted as per ITB Cl.11.3**

2. The unit rates and the prices shall be quoted by the bidder in **Indian Rupees ONLY**.

PRICED SCHEDULE OF QUANTITIES AND RATES

ARCHITECTURAL / FINISHING WORKS FOR LIGHT HOUSE UNDER GROUND STATION in Connection with

"Construction of Under Ground Stations at Light House, Kutchery Road, Alwarpet, Bharathidasan Road including Underground Stabling Yard and Cross Over at Light House Station and Associated Twin Tunnel, Project Start from Chainage 0+001m to End Chainage 5+150m (Down Line)"– Chennai Metro Rail Project, Phase-2, Corridor-4

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
G	**Schedule - G : Toilet Fixtures**						
G.1	**EWC FOR MALE & FEMALE TOILETS**						
G.1.1	Providing and fixing wall-hung of approved make and model, manufactured from high-quality white vitreous china, complete with push-button flush mechanism, concealed/exposed cistern, dual-flush system, seat cover, and all necessary fixing arrangements. The item shall include supply and installation of all associated accessories and fittings such as angle valves, flexible braided connectors, inlet and outlet pipes, P-trap/S-trap as applicable, floor/wall fixing brackets, anchor fasteners, rubber seals, gaskets, sleeves, escutcheons, and all other ancillary components required for a complete and functional installation. The work shall also include making connections to the water supply and drainage system, testing for proper operation and leak-free performance, and commissioning of the fixture. All fittings and accessories shall be of approved make and compatible with the specified fixture. Low-flow water-efficient fittings and flush mechanisms shall be provided wherever applicable to meet the project's water conservation requirements. The complete installation shall conform to the approved drawings, specifications, manufacturer's recommendations, and the directions of the Engineer-in-Charge. **(Reference Model: Jaquar LAS-WHT91953BIUFSM or approved equivalent).**	Nos.	9				
G.2	**ABOVE COUNTER WASH BASIN FOR MALE & FEMALE TOILETS**						
G.2.1	Providing and fixing above-counter wash basin of approved make and model, manufactured from high-quality white vitreous china/ceramic, complete with low-flow sensor-operated faucet, waste coupling, bottle trap, angle valves, flexible braided connectors, inlet and outlet connections, fixing brackets, mounting hardware, escutcheons, seals, gaskets, and all other necessary CP fittings and accessories required for a complete and functional installation. The work shall include all necessary plumbing connections, testing, commissioning, and ensuring leak-free operation. All fittings and accessories shall be of approved make and compatible with the specified wash basin. The low-flow sensor faucet shall be water-efficient and compliant with the project's sustainability and water conservation requirements. The complete installation shall conform to the approved drawings, specifications, manufacturer's recommendations, and the directions of the Engineer-in-Charge. **(Reference Model: Jaquar JDS-WHT-25909 or approved equivalent).**	Nos.	9				
G.3	**URINALS WITH INBUILT SENSOR**						
G.3.1	Providing and fixing wall-hung urinal of approved make and model, manufactured from high-quality white vitreous china, complete with integrated sensor-operated low-flow flushing system and all associated fittings and accessories required for a complete and functional installation. The item shall include spreader, waste outlet, inlet and outlet connections, angle valves, flexible braided connectors, fixing brackets, anchor fasteners, seals, gaskets, escutcheons, sensor control unit, power supply arrangements, and all other ancillary components necessary for proper installation and operation. The work shall include all necessary plumbing and electrical connections, testing, commissioning, calibration of the sensor system, and ensuring leak-free and trouble-free performance. The sensor-operated flushing system shall be water-efficient and designed to minimize water consumption while maintaining effective flushing performance. All fittings and accessories shall be of approved make and compatible with the specified urinal. The complete installation shall conform to the approved drawings, specifications, manufacturer's recommendations, and the directions of the Engineer-in-Charge. **(Reference Model: Jaquar URS-WHT-13267S or approved equivalent).**	Nos.	6				
G.4	**HEALTH FAUCET**						

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
G.4.1	Providing and fixing chrome-plated (CP) health faucet of approved make and model, complete with trigger-operated hand spray, flexible stainless steel braided hose, wall-mounted hook/holder, angle valve, connectors, fixing accessories, and all other ancillary components required for a complete and functional installation. The work shall include all necessary plumbing connections, testing, commissioning, and ensuring leak-free operation. All components shall be manufactured from corrosion-resistant materials and shall be compatible with the specified fixture. The health faucet assembly shall be capable of withstanding normal operating water pressure and shall provide smooth and efficient operation. Low-flow water-efficient fixtures shall be provided wherever applicable to meet the project's water conservation requirements. The complete installation shall conform to the approved drawings, specifications, manufacturer's recommendations, and the directions of the Engineer-in-Charge. **(Reference Model: Jaquar ALD-CHR-573M or approved equivalent).**	Nos.	12				
G.5	**TOILET ROLL HOLDER**						
G.5.1	Providing and fixing wall-mounted toilet roll holder of approved make and model with chrome-plated (CP) finish, complete with all necessary mounting brackets, anchor fasteners, screws, wall plugs, fixing accessories, and other ancillary components required for a complete and secure installation. The item shall be fabricated from high-quality, corrosion-resistant material with a durable CP finish, suitable for use in toilet and washroom environments. The work shall include proper alignment, fixing, testing for stability, and all incidental works required for a neat and functional installation. All fittings and accessories shall be of approved make and compatible with the specified fixture. The complete installation shall conform to the approved drawings, specifications, manufacturer's recommendations, and the directions of the Engineer-in-Charge. **(Reference Model: Jaquar ACN-CHR-1153S or approved equivalent).**	Nos.	11				
G.6	**HAND DRYER**						
G.6.1	Providing and fixing wall-mounted automatic sensor-based hand dryer of approved make and model, having stainless steel or high-impact ABS body construction, complete with infrared sensor, motor assembly, heating element (where applicable), air outlet system, mounting brackets, anchor fasteners, screws, and all other accessories required for a complete and functional installation. The work shall include supply, installation, testing, commissioning, and connection to the electrical system, including power cable termination, earthing, and all incidental works necessary for proper operation. The hand dryer shall be suitable for continuous use in public washroom environments, with vandal-resistant construction, low maintenance requirements, and energy-efficient operation. All materials and components shall be of approved make and compatible with the specified equipment. The complete installation shall conform to the approved drawings, specifications, manufacturer's recommendations, and the directions of the Engineer-in-Charge. **(Reference Models: Jaquar HDR-SSF-AK2803D, Euronics Trimax H4, or approved equivalent).**	Nos.	8				
G.7	**SOAP DISPENSER**						
G.7.1	Providing and fixing wall-mounted automatic sensor-operated soap dispenser of approved make and model, complete with dispenser unit, integrated infrared sensor, sensor control unit, power supply arrangements, mounting brackets, anchor fasteners, screws, wall plugs, fixing accessories, and all other ancillary components required for a complete and functional installation. The soap dispenser shall be manufactured from high-quality, durable, and corrosion-resistant materials suitable for use in public washroom environments. The integrated sensor system shall provide touch-free and hygienic operation, ensuring reliable soap dispensing while minimizing wastage. The work shall include all necessary electrical connections, testing, commissioning, calibration of the sensor system, and ensuring trouble-free performance. All fittings, accessories, and components shall be of approved make and compatible with the specified dispenser. The complete installation shall conform to the approved drawings, specifications, manufacturer's recommendations, and the directions of the Engineer-in-Charge. **(Reference Make: Jaquar, Euronics, or approved equivalent).**	Nos.	12				
G.8	**SQUAT TOILET — IWC**						

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
G.8.1	Providing, fixing, testing and commissioning Indian Water Closet (IWC) / Squat Toilet of white vitreous china, conforming to relevant IS standards, of approved make, model and size, complete with integrated footrests, flushing arrangement, flush valve/flush pipe, all necessary chromium-plated (CP) brass fittings, inlet and outlet connections, traps, coupling joints, fixing accessories, anchor fasteners, sealing materials and all ancillary components required for a complete installation. The work shall include cutting and making good of walls/floors wherever required, alignment, leveling, connection to the water supply and soil/waste drainage system, testing for proper flushing performance, water-tightness and leak-free operation, cleaning, commissioning, and handing over in complete working condition, all in accordance with approved drawings, specifications, manufacturer's recommendations and as directed by the Engineer-in-Charge. **(Reference Model: Jaquar ECS-WHT-451 or approved equivalent.)**	Nos.	2				
G.9	**PHYSICALLY HANDICAPPED TOILET — EWC**						
G.9.1	Providing, fixing, testing and commissioning wall-hung or floor-mounted European Water Closet (EWC) suitable for physically handicapped / accessible toilets, made of white vitreous china conforming to relevant IS standards, of approved make, model and size, complete with low-flow flushing system and sensor-operated automatic flush mechanism for water conservation and hygienic operation, including all associated control units, power supply/battery pack, sensors and accessories as required. The work shall include flushing cistern/flush valve assembly, soft-close seat cover, all necessary chromium-plated (CP) brass fittings, inlet and outlet connections, traps, couplings, fixing brackets, anchor fasteners, sealing materials and all ancillary components required for a complete installation. The fixture shall be provided with all necessary arrangements to ensure compliance with accessibility requirements and barrier-free design standards. The scope shall further include all plumbing and electrical connections required for the sensor-operated flushing system, testing, commissioning, calibration of sensors, functional performance testing, leak testing, alignment, leveling, cutting and making good of walls/floors wherever required, cleaning, and handing over in complete working condition. The installation shall be carried out in accordance with approved drawings, specifications, manufacturer's recommendations and as directed by the Engineer-in-Charge. **(Reference: Jaquar or approved equivalent.)**	Nos.	2				
G.10	**PHYSICALLY HANDICAPPED TOILET — WASH BASIN**						
G.10.1	Providing, fixing, testing and commissioning wash basin suitable for physically handicapped / accessible toilets, made of white vitreous china / ceramic conforming to relevant IS standards, of approved make, model and size, complete with sensor-operated low-flow faucet for water conservation and touch-free hygienic operation, including all associated sensors, control units, power supply/battery pack and accessories as required. The work shall include all necessary chromium-plated (CP) brass fittings, angle valves, flexible connection hoses, bottle trap/P-trap, waste coupling, inlet and outlet connections, fixing brackets, concealed supports, anchor fasteners, sealing materials and all ancillary components required for a complete installation. The wash basin shall be installed at the appropriate height and projection to comply with accessibility requirements and barrier-free design standards. The scope shall further include all plumbing and electrical connections required for the sensor faucet system, testing, commissioning, calibration of sensors, functional performance testing, leak testing, alignment, leveling, cutting and making good of walls/floors wherever required, cleaning, and handing over in complete working condition. The installation shall be carried out in accordance with approved drawings, specifications, manufacturer's recommendations and as directed by the Engineer-in-Charge. **(Reference: Jaquar or approved equivalent.)**	Nos.	2				
G.11	**PHYSICALLY HANDICAPPED TOILET — WASH BASIN GRAB BAR**						

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
G.11.1	Providing, fixing, testing and commissioning U-shaped grab bar for wash basin in physically handicapped / accessible toilets, manufactured from high-quality stainless steel (SS 304 grade or higher) with satin/matt finish, of approved make, model, size and load-bearing capacity, designed to provide safe support and assistance to users in compliance with accessibility and barrier-free design requirements. The grab bar shall be securely fixed to the wall using stainless steel brackets, heavy-duty anchor fasteners, concealed fixing arrangements, cover flanges and all necessary fixing accessories as recommended by the manufacturer. The work shall include drilling, fixing, alignment, leveling, tightening of connections, corrosion protection measures wherever required, and making good of the surrounding surface after installation. The scope shall further include supply of all materials, labour, tools and equipment necessary for complete installation, testing for rigidity, stability and load-bearing performance, cleaning and handing over in complete working condition, all in accordance with approved drawings, specifications, manufacturer's recommendations and as directed by the Engineer-in-Charge. **(Reference: Euronics EGR03 U-Shaped Grab Bar or approved equivalent.)**	Nos.	2				
G.12	**SENSOR FAUCET**						
G.12.1	Providing, fixing, testing and commissioning wall-mounted or deck-mounted sensor-operated faucet of approved make, model and capacity, with high-quality chromium-plated (CP) finish, suitable for wash basins in toilets and other designated areas, complete with infrared sensor, electronic control unit, solenoid valve, aerator, flow regulator, power supply unit/battery pack, mounting accessories and all associated components required for touch-free and water-efficient operation. The work shall include all necessary inlet connections, angle valves, flexible hoses, coupling arrangements, concealed/open wiring as required, fixing accessories, anchor fasteners and sealing materials for a complete installation. The sensor faucet shall be capable of automatic activation and shut-off, ensuring hygienic usage and optimum water conservation. The scope shall further include all plumbing and electrical connections, testing, commissioning, calibration of the sensor system, adjustment of sensing range and flow rate, functional performance testing, leak testing, cleaning and handing over in complete working condition. The installation shall be carried out in accordance with approved drawings, specifications, manufacturer's recommendations and as directed by the Engineer-in-Charge.						
a	Male and Female Toilet wash Basin faucet **(Reference: Jaquar SNR-CER-91019EB or approved equivalent.)**	Nos.	9				
b	PH Toilet wash Basin faucet **(Reference: Jaquar SNR-CHR-15019PMEB or approved equivalent.)**	Nos.	2				
G.13	**GRAB BAR FOR PH TOILET**						
G.13.1	Providing, fixing, testing and commissioning L-shaped grab bar/handrail for physically handicapped / accessible toilets, manufactured from high-quality SS 316 grade stainless steel with matt/satin finish, having 32 mm diameter tubular section, overall dimensions of approximately 600 mm (vertical leg) × 750 mm (horizontal leg), or as indicated in the approved drawings and manufacturer's specifications. The handrail shall be securely fixed to the wall using stainless steel mounting flanges, concealed fixing arrangements, heavy-duty anchor fasteners, cover plates and all necessary fixing accessories to ensure adequate load-bearing capacity and long-term durability. The scope shall include supply of all materials, labour, tools and equipment required for complete installation, drilling, fixing, alignment, leveling, tightening of connections, provision of corrosion-resistant fixings, cutting and making good of wall finishes wherever required, testing for rigidity, stability and load-bearing performance, cleaning and handing over in complete working condition. The installation shall be carried out in accordance with approved drawings, specifications, manufacturer's recommendations, accessibility standards and as directed by the Engineer-in-Charge. **(Reference: Euronics EGR04 Disabled Grab Bar – L-Shaped Handrail, SS 316, 32 mm dia., 600 mm × 750 mm, or approved equivalent such as Jaquar.)**	Nos.	2				
G.14	**GRAB BAR FOR URINAL**						

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
G.14.1	Providing, fixing, testing and commissioning stainless steel grab bar for physically handicapped / accessible toilets and urinal areas, manufactured from SS 316 grade stainless steel with matt finish, having 32 mm diameter tubular sections, overall dimensions of approximately 600 mm width × 300 mm height, with side support arms projecting 600 mm and intermediate support spacing of 300 mm, or as per approved drawings and manufacturer's specifications. The grab bar shall be securely fixed to walls or supporting structures using stainless steel brackets, concealed mounting plates, heavy-duty anchor fasteners, cover flanges and all necessary fixing accessories. The work shall include drilling, fixing, alignment, leveling, tightening of connections and provision of all accessories required for a complete and durable installation. The scope shall further include supply of all materials, labour, tools and equipment necessary for installation, corrosion-resistant fixings, cutting and making good of wall finishes wherever required, testing for rigidity, stability and load-bearing performance, cleaning and handing over in complete working condition. The installation shall be carried out in accordance with approved drawings, specifications, manufacturer's recommendations, accessibility standards and as directed by the Engineer-in-Charge. **(Reference: Euronics EGR5U Urinal Safety Steel Grab Bar, 32 mm dia., 600 mm × 300 mm configuration, or approved equivalent.)**	Nos.	6				
G.15	**GRAB BAR FOR IWC TOILET — L SHAPED**						
G.15.1	Providing, fixing, testing and commissioning L-shaped grab bar/handrail for physically handicapped / accessible toilets, manufactured from high-quality SS 316 grade stainless steel with matt/satin finish, having 32 mm diameter tubular section, overall dimensions of approximately 600 mm (vertical leg) × 750 mm (horizontal leg), or as indicated in the approved drawings and manufacturer's specifications. The handrail shall be securely fixed to the wall using stainless steel mounting flanges, concealed fixing arrangements, heavy-duty anchor fasteners, cover plates and all necessary fixing accessories to ensure adequate load-bearing capacity and long-term durability. The scope shall include supply of all materials, labour, tools and equipment required for complete installation, drilling, fixing, alignment, leveling, tightening of connections, provision of corrosion-resistant fixings, cutting and making good of wall finishes wherever required, testing for rigidity, stability and load-bearing performance, cleaning and handing over in complete working condition. The installation shall be carried out in accordance with approved drawings, specifications, manufacturer's recommendations, accessibility standards and as directed by the Engineer-in-Charge. **(Reference: Euronics EGR04 Disabled Grab Bar – L-Shaped Handrail, SS 316, 32 mm dia., 600 mm × 750 mm, or approved equivalent such as Jaquar.)**	Nos.	2				
G.16	**PADDED REST SEAT FOR PH TOILET**						
G.16.1	Providing, fixing, testing and commissioning wall-mounted foldable padded rest seat / shower seat for physically handicapped / accessible toilets and shower areas, manufactured from SS 316 grade stainless steel frame with padded seat surface, of approved make, model and dimensions approximately 405 mm (W) × 281 mm (L) × 38 mm (H), or as per approved drawings and manufacturer's specifications. The unit shall be of foldable type with smooth operating mechanism, enabling the seat to be folded against the wall when not in use to maximize usable space. The stainless steel frame shall be corrosion-resistant and capable of safely supporting the specified design load. The work shall include supply and installation of the complete unit, including all stainless steel mounting brackets, concealed fixing arrangements, heavy-duty anchor fasteners, cover plates, hinges, supports and all necessary fixing accessories required for a complete and durable installation. The seat shall be securely fixed to the wall at the approved location and height, ensuring stability, rigidity and user safety. The scope shall further include drilling, fixing, alignment, leveling, tightening of connections, cutting and making good of wall finishes wherever required, testing for smooth folding operation, rigidity, stability and load-bearing performance, cleaning and handing over in complete working condition. The installation shall be carried out in accordance with approved drawings, specifications, manufacturer's recommendations, accessibility standards and as directed by the Engineer-in-Charge. **(Reference: Euronics EPGR31 Grab Bar with Padded Rest Seat, SS 316 Grade Stainless Steel, 405 mm × 281 mm × 38 mm, foldable wall-mounted type, or approved equivalent.)**	Nos.	2				
G.17	**BABY DIAPER CHANGING SEAT**						

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
G.17.1	Providing, fixing, testing and commissioning wall-mounted foldable baby diaper changing seat/table, manufactured from high-quality HDPE (High-Density Polyethylene) with smooth, non-porous and easy-to-clean surface, of approved make, model and dimensions approximately 800 mm (W) × 425 mm (H) × 490 mm (D) in open position, capable of safely supporting a minimum load of 25 kg, complete with integrated safety belt/child restraint system and all accessories required for safe operation. The work shall include supply and installation of the complete unit, including wall-mounting brackets, concealed fixing arrangements, heavy-duty anchor fasteners, support mechanisms, hinges, cover plates and all necessary fixing accessories required for a complete and durable installation. The unit shall be securely fixed to the wall at the approved location and height to ensure stability, rigidity and user safety. The scope shall further include drilling, fixing, alignment, leveling, tightening of connections, cutting and making good of wall finishes wherever required, testing for smooth folding operation, functionality of the safety belt system, stability and load-bearing performance, cleaning and handing over in complete working condition. The installation shall be carried out in accordance with approved drawings, specifications, manufacturer's recommendations and as directed by the Engineer-in-Charge. (Reference: Euronics EDC1 Foldable Baby Diaper Changing Station, HDPE construction, 800 mm × 425 mm × 490 mm, minimum load capacity 25 kg, with integrated safety belt, or approved equivalent.)	Nos.	4				
G.18	**BABY PROTECTION SEAT**						
G.18.1	Providing, fixing, testing and commissioning wall-mounted or floor-mounted baby chair / child safety seat, manufactured from high-quality ABS (Acrylonitrile Butadiene Styrene) material with smooth, durable and easy-to-clean finish, of approved make, model and dimensions approximately 290 mm (W) × 665 mm (H) × 305 mm (D) in open position and 290 mm (W) × 665 mm (H) × 90 mm (D) in closed position, complete with integrated child safety belt/restraint system and all accessories required for safe operation. The work shall include supply and installation of the complete unit, including mounting brackets, concealed fixing arrangements, heavy-duty anchor fasteners, hinges, support mechanisms, cover plates and all necessary fixing accessories required for a complete and durable installation. The unit shall be securely fixed at the approved location and height to ensure stability, rigidity and user safety. The scope shall further include drilling, fixing, alignment, leveling, tightening of connections, cutting and making good of wall/floor finishes wherever required, testing for smooth folding operation, functionality of the safety belt system, stability and load-bearing performance, cleaning and handing over in complete working condition. The installation shall be carried out in accordance with approved drawings, specifications, manufacturer's recommendations and as directed by the Engineer-in-Charge. (Reference: Euronics EDC5W Foldable Baby Chair / Child Safety Seat, ABS construction, dimensions 290 mm × 665 mm × 305 mm (open) and 290 mm × 665 mm × 90 mm (closed), with integrated safety belt, or approved equivalent.)	Nos.	4				
G.19	**MALE AND FEMALE TOILET MIRROR**						
G.19.1	Providing and fixing toilet mirror comprising 6 mm thick clear float glass of approved quality, with all edges machine bevelled and polished, backed with 6 mm thick hardboard or moisture-resistant backing board, complete with stainless steel clamps, brackets, studs and all necessary fixing accessories. The mirror shall be securely fixed to the wall using stainless steel clamps on all sides and stainless steel studs, fasteners and supports as required to ensure rigidity, alignment and durability. The work shall include cutting to required dimensions and shapes, edge finishing, provision of backing board, drilling, fixing, alignment, leveling, sealing of edges wherever required, and making good of adjoining surfaces. The scope shall further include supply of all materials, labour, tools and equipment necessary for complete installation, cleaning of mirror surfaces, protection against damage during construction, and handing over in finished condition. The mirror shall be installed in accordance with approved architectural drawings, specifications and as directed by the Engineer-in-Charge.	Sqm	30				
G.20	**PH TOILET MIRROR**						

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
G.20.1	Providing and fixing mirror for physically handicapped / accessible toilets, comprising 6 mm thick clear float glass of approved quality, with all edges machine bevelled and polished, backed with 6 mm thick hardboard or moisture-resistant backing board, complete with stainless steel clamps, brackets, studs and all necessary fixing accessories. The mirror shall be securely fixed to the wall using stainless steel clamps on all sides and stainless steel studs, fasteners and supports as required to ensure rigidity, alignment and durability. The mirror shall be installed with its bottom edge at a height not exceeding 1000 mm above finished floor level and shall be tilted at an angle of approximately 30° from the vertical to provide improved visibility and usability for wheelchair users, in compliance with accessibility and barrier-free design requirements. The work shall include cutting to required dimensions and shapes, edge finishing, provision of backing board, fabrication and installation of suitable tilting support brackets, drilling, fixing, alignment, leveling, sealing of edges wherever required, and making good of adjoining surfaces. The scope shall further include supply of all materials, labour, tools and equipment necessary for complete installation, cleaning of mirror surfaces, protection against damage during construction, and handing over in finished condition. The mirror shall be installed in accordance with approved architectural drawings, accessibility standards, specifications and as directed by the Engineer-in-Charge.	Sqm	15				
G.21	**SS FLOOR DRAIN**						
G.21.1	Providing and fixing of Stainless Steel (SS) floor drain of approved make, fabricated from AISI 316 stainless steel, complete with removable stainless steel grating/cover of suitable load-bearing capacity, integrated hair strainer / debris trap, and deep-seal anti-odour water seal arrangement to prevent foul smell backflow. The drain shall be suitable for installation in toilet, bathroom, pantry, and utility areas, designed to ensure efficient surface water discharge with smooth internal finish to prevent clogging and facilitate easy cleaning. The unit shall be provided with all necessary fixing accessories, sealing compounds, and connections to existing waste/soil pipe system as per approved drawings and directions of Engineer-in-Charge, including testing for leak-proof performance. Work shall include cutting, making good of flooring, alignment, installation at required slope, and complete commissioning for trouble-free operation.	Nos.	26				
G.22	**SS SINK**						
G.22.1	Providing and fixing of Stainless Steel (SS) sink for lunch room/pantry use with integrated drain board, fabricated from AISI 316 grade stainless steel, of approved make and finish (matte/satin), complete in all respects. The unit shall be of overall size approx. 1200 mm (L) × 600 mm (W) × 200 mm (D) or as per approved shop drawing, comprising a single/double bowl sink with adjoining integrated drain board for drying utensils. The sink bowl shall have smooth, hygienic, rounded corners for easy cleaning and shall be provided with anti-splash edges and sound-deadening pads. The sink shall be designed for flat countertop mounting (flush/level installation) ensuring a seamless top surface with the counter, without raised edges, suitable for hygienic food preparation areas. The installation shall include proper sealing with food-grade silicone, necessary SS fasteners, brackets, supports, and all fixing accessories. The unit shall be complete with SS waste coupling, strainer, bottle trap, and connection to waste line, ensuring leak-proof operation. The drain board shall have a slight slope towards the bowl for effective drainage.	Nos.	2				
G.23	**TOILET CUBICLE**						
G.23.1	Providing, fabricating, supplying, and fixing toilet cubicles using 11.52 mm thick lacquered toughened laminated glass partitions and doors of 2100 mm height above finished floor level, comprising factory-finished opaque lacquered glass with polished edges, complete with heavy-duty SS 304 grade hardware including hinges, door handles, thumb-turn locks with occupancy indicators, support brackets, connectors, and all necessary accessories. The work shall include cutting, edge finishing, drilling, fixing, sealants, anchoring arrangements, transportation, erection, testing, and commissioning complete in all respects. **Glass Make/Colour: Saint-Gobain, Pristine Grey**	Nos.	11				
G.24	**PH TOILET EMERGENCY ALARM SYSTEM**						
G.24.1	Supply, installation, testing, and commissioning of a wireless emergency assistance call system for accessible/disabled toilet consisting of a wireless pull-cord call unit, reset switch, over-door audio-visual indicator, and central monitoring display panel. The system shall operate on RF wireless communication and provide audible and visual alarm indication upon activation. The system shall be suitable for humid restroom environments and require no interconnecting signal wiring.	Nos.	2				
G.25	**Fittings**						

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
G.25.1	Supplying, installing and testing 15mm Long body CP bib cock with CP flanges including necessary fixing materials, all of approved make and as per drawings & Employer requirements etc, complete. All sanitary item to be complied with latest IGBC norms. Flow Requirement (in LPM) shall be 6 LPM at design water pressure 3.0 bar	Nos.	11				
G.25.2	Supplying, installing and testing 15mm Short body CP bib cock with CP flanges including necessary fixing materials, all of approved make and as per drawings & Employer requirements etc, complete. All sanitary item to be complied with latest IGBC norms. Flow Requirement (in LPM) shall be 6 LPM at design water pressure 3.0 bar	Nos.	11				
G.25.3	Providing & fixing C.P. brass towel rail with C.P. brass wall brackets & C.P brass screws complete as required and all of approved make and as per Specification/drawings & Employer requirements etc	Nos.	10				
G.25.4	Supply installation, testing and commissioning of floor standing single bottle filling station and with one drinking station raddii stainless steel body , operating between 50 to 120 PSI, non-chilling unit supply complete with all accessories. Green building, GRIHA,TUV And NSF Certified, RO+UF+UV+Auto TDS Water Purifer, Storage Tank Material - ABS Food Grade (MicroBlock).Purification Production Rate-80 lph @ 25 degree. Filters-Pre-Filter, Sediment, Pre-Carbon, RO Membrane, Calcium Booster+ Post Carbon, UF, UV.Filtration Stage-9 .TDS Reduction->=90%(approx.).Warranty-2 year on product including RO membrane. **The storage capacity for the above will be 40 Liters.**	Nos.	1				
G.25.5	Supply installation, testing and commissioning of wall mounting single bottle filling station , stainless steel body , operating between 50 to 120 PSI, non-chilling unit supply complete with all accessories. Green building, GRIHA,TUV And NSF Certified, RO+UF+UV+Auto TDS Water Purifer,Storage Tank Material-ABS Food Grade (MicroBlock).Purification Production Rate-20 lph @ 25 degree. Filters-Pre-Filter, Sediment, Pre-Carbon, RO Membrane, Calcium Booster+ Post Carbon, UF, UV.Filtration Stage-9 .TDS Reduction->=90%(approx.).Warranty-2 year on product including RO membrane. **The storage capacity for the above will be 8 Liters.**	Nos.	1				
	Total of Amount of Schedules - G (in figure)						
	Total of Amount of Schedules - G (in words)						

Note : 1. This Price of Schedule and Rates is to be s**ubmtted as per ITB Cl.11.3**

2. The unit rates and the prices shall be quoted by the bidder in **Indian Rupees ONLY**.

PRICED SCHEDULE OF QUANTITIES AND RATES

ARCHITECTURAL / FINISHING WORKS FOR LIGHT HOUSE UNDER GROUND STATION in Connection with

"Construction of Under Ground Stations at Light House, Kutchery Road, Alwarpet, Bharathidasan Road including Underground Stabling Yard and Cross Over at Light House Station and Associated Twin Tunnel, Project Start from Chainage 0+001m to End Chainage 5+150m (Down Line)"– Chennai Metro Rail Project, Phase-2, Corridor-4

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
H	**Schedule - H : Roof Canopy**						
H.1	**GALVALUME STEEL ROOFING**						
H.1.1	Providing, fabricating, supplying and fixing factory-manufactured profiled metal roofing sheets fabricated from Galvalume steel (zinc-aluminium alloy coated steel) of approved grade, coating thickness, profile and colour finish, installed over the supporting roof structure and laid to the required slope, line and level as indicated in the approved drawings and specifications. The roofing sheets shall comprise colour-coated Galvalume steel sheets with approved base metal thickness (BMT), zinc-aluminium alloy coating (minimum AZ150 or as specified), and factory-applied PVDF/SMP/polyester coating suitable for external exposure and climatic conditions. The sheets shall be free from defects, corrosion, distortion and surface imperfections. The work shall include supply and installation of all necessary accessories including closure strips, trims, sealants, fillers, spacers and other associated roofing accessories required for a complete weatherproof roofing system. Fixing shall be carried out using approved self-drilling/self-tapping fasteners, concealed clips where applicable, stainless steel accessories and fasteners with EPDM/neoprene washers, complete with all necessary fixing arrangements. The sheets shall be installed with the required side laps, end laps, overlaps and expansion provisions in accordance with the manufacturer's recommendations and approved shop drawings.	Sqm	1000.00				
	The item shall include cutting, notching, bending, forming, drilling, sealing, edge treatment, fixing around openings and penetrations, coordination with roof-mounted services, making good disturbed finishes, cleaning and protection of completed works. The rate shall include all materials, labour, tools, equipment, transportation, lifting, scaffolding, wastage, handling, installation, testing for watertightness where specified, and all incidental works necessary to complete the roofing system in accordance with the approved drawings, specifications and directions of the Engineer-in-Charge.						
H.2	**SKYLIGHT - DOUBLE LAMINATED TEMPERED GLASS**						
H.2.1	Providing, fabricating, supplying and fixing skylight glazing system comprising double laminated tempered/toughened safety glass of approved make and specification, consisting of two layers of 6–8 mm thick tempered glass bonded with approved interlayer (PVB/SGP or equivalent), forming a laminated safety glass assembly, complete with supporting aluminium framing and fixing system as indicated in the approved drawings. The skylight system shall include extruded aluminium alloy sections of approved grade and temper comprising aluminium snap caps, pressure caps, fixed base brackets, adjustable/varying base brackets, support members, glazing beads, cover plates and all associated framing components necessary for a complete installation. Aluminium members shall be finished with approved anodized, powder-coated or PVDF-coated finish as specified. The work shall include supply and installation of EPDM/neoprene gaskets, weather seals, structural silicone sealant, weatherproof sealants, setting blocks, spacers, drainage provisions, flashings, stainless steel fasteners, anchor bolts, brackets and all ancillary accessories required to ensure structural stability, weather tightness and thermal performance.	Sqm	290.00				
	The item shall include fabrication, shop drawings, structural design coordination, cutting, drilling, fixing, sealing, alignment, levelling, testing, cleaning and protection of completed works. All interfaces with adjacent roofing, waterproofing and façade systems shall be made fully watertight. The rate shall include the cost of glass, aluminium framing system, snap caps, pressure caps, fixed and adjustable base brackets, gaskets, sealants, fasteners, accessories, labour, tools, equipment, lifting arrangements, scaffolding, testing and all incidental works required for the complete installation of the skylight system in accordance with the approved drawings, specifications and directions of the Engineer-in-Charge.						
H.3	**GYPSUM BOARD FALSE CEILING**						

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
H.3.1	Providing, supplying and fixing 12.5 mm thick moisture-resistant gypsum board false ceiling below roof canopy, fixed on a suspended framework comprising minimum 0.50 mm thick galvanized steel sections including perimeter channels, ceiling sections, intermediate channels, cross members, suspension hangers and all necessary fixing accessories. Necessary MS support members with approved anti-corrosive treatment shall be provided wherever required. Gypsum boards shall be fixed using approved drywall screws and all joints shall be treated with approved jointing compound, paper/fibre joint tape, corner beads and finishing materials to achieve a seamless, crack-free and uniform surface. The work shall include provision for openings, cut-outs and supports required for lighting fixtures, air-conditioning grilles, speakers, detectors, sprinklers, signage and other services as indicated in the approved drawings. The rate shall include all materials, labour, tools, equipment, scaffolding, transportation, wastage, primer coat and incidental works required for complete installation as per approved drawings, specifications and directions of the Engineer-in-Charge.	Sqm	615.00				
H.4	**ROOF GUTTER**						
H.4.1	Providing, fabricating, supplying and fixing gutter formed from 3.0 mm thick galvanized iron (GI) plate of approved grade, bent and shaped to the required profile and dimensions as indicated in the approved drawings, for collection and conveyance of rainwater at the periphery of the roof canopy. The work shall include all necessary brackets, supports, cleats, outlet nozzles, end caps, sealants, fasteners and fixing accessories. Gutters shall be installed to the required line, level and slope, with watertight joints and complete rainwater outlet connections. All exposed surfaces and cut edges shall be treated with approved anti-corrosive primer and paint system. The rate shall include fabrication, bending, cutting, fixing, sealants, supports, painting, labour, tools, equipment and all incidental works required for complete installation as per approved drawings, specifications and directions of the Engineer-in-Charge.	Sqm	125.00				
H.4.2	Supply and installation of Supply of 2mm thk SS Gutter & SS Sleve for SS Gutter With SS Spout for water drain exluding PVC Rain Water Pipe (Grade SS 304) with support flashings (1 RM / RM Gutter) including 2mm thick GI Accessories for Barge Board & Eave Angle Erection work,Loading and unloading of material, Providing & Fixing of access tower, complete including all materials, tools, Plants & machinary,labour as directed by the Engineer in charge	Sqm	125.00				
H.5	**WATERPROOF JOINT SEALANT**						
H.5.1	Providing and applying **high-performance waterproof joint sealant** for glass canopy works using **neutral cure, UV resistant, non-staining silicone sealant** of approved make, suitable for exterior structural glazing, for sealing all **glass-to-glass, glass-to-aluminium, and perimeter joints** to ensure complete waterproofing, air tightness, and resistance against wind-driven rain, dust ingress, and thermal movement; the joints shall be properly cleaned, prepared, and masked before application, with provision of closed-cell backer rod wherever required to control joint depth; the **sealant thickness shall be minimum 6 mm and generally maintained between 6 mm to 10 mm**, with suitable width-to-depth ratio to accommodate movement; the work shall include application, tooling for smooth finish, curing, removal of masking tape, and leak-proof testing including water spray test, all complete as per approved drawings, manufacturer's specifications, and directions of Engineer-in-Charge.	Rmt	610.00				
H.6	**DRY GASKET SYSTEM**						
H.6.1	Providing and fixing dry gasket system for water and air barrier in structural glazing / glass canopy works using high-quality EPDM (Ethylene Propylene Diene Monomer) rubber gasket of approved make, UV resistant, ozone resistant, weatherproof, and durable under varying climatic conditions, suitable for exterior façade applications. The gasket shall be installed continuously in aluminium frame grooves to achieve effective air tightness and complete water ingress protection, ensuring uniform compression against glass and frame without gaps, twisting, or deformation. The gasket thickness shall generally be 6 mm to 10 mm, selected as per approved system design and groove dimensions to ensure proper sealing performance and compression fit. The work shall include supply of primary/secondary/pressure gaskets as applicable, corner cutting and jointing, proper alignment, fixing, and installation strictly as per approved shop drawings and manufacturer's specifications, including all accessories required for continuity and leak-proof performance, complete in all respects as per directions of Engineer-in-Charge.	Rmt	460.00				
H.7	**SS FOLDABLE SLIDING GATE**						

TENDER No. – 01-AT-052022-C4-UG01-SC_ARC-LH

Item No.	Description of Work	Unit	Quantity	Rate in INR	Rate In Words	Amount (in INR)	Amount (in Words)
H.7.1	Supplying and fixing of Stainless Steel (SS) foldable/sliding gate with integrated glazing panels, fabricated from AISI 304 grade stainless steel hollow sections of approved make, size and finish (satin/brushed finish), complete with all structural members, sub-frames, tracks, guides, rollers, hinges (for folding type), locking arrangement and necessary hardware for smooth and durable operation. The infill shall be 6 mm thick toughened glass (or as approved) fixed to SS frame using approved SS glass clamps, beading, neoprene/EPDM gaskets and structural sealant, ensuring firm, vibration-free and safe fixing. The gate shall be fixed to RCC/steel/aluminium supports using approved SS fasteners/anchor bolts of required size and shall include necessary filling of gaps at junctions such as top, bottom and sides with EPDM rubber/neoprene gasket and sealant all around to ensure dust-proof and weather-resistant installation. SS sections shall be straight, smooth, rust-free, properly welded, ground and finished, with all joints mechanically strengthened wherever required. The rate shall include all accessories such as floor guide channel, stopper, locking system, handles and alignment arrangements, including fabrication, transportation, installation, testing for smooth sliding/folding operation, adjustments and commissioning complete in all respects as per architectural drawings and directions of Engineer-in-Charge.	Sqm	85.00				
	Total of Amount of Schedules - H (in figure)						
	Total of Amount of Schedules - H (in words)						

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