



MAHARASHTRA METRO RAIL CORPORATION LIMITED

Pune Metro Rail Project

Joint Venture of Govt. of India & Govt. of Maharashtra

CIN: U60100MH2015SGC262054

Maha-Metro, Block No. A2, Food Grain Godown, Near Civil Court, Next to Kamgar Putala
Vasahat, Shivajinagar, Pune-411005

No. Maha-Metro/PMRP/P1A-C02/2025/LOA/0089

Date: 17 March 2025

LETTER OF ACCEPTANCE (LOA)

To,

M/s YFC - BBG (JV)

YFC House, Plot - 14, Block - B, Infocity,

Sector - 34, Gurgaon - 122001,

Haryana, India.

Email ID: rohit.yadav@yfcprojects.com

Phone No: +91 1244368717

Kind Attention: Mr. Rohit Yadav (Head Contracts - Authorized Signatory)

Tender No. P1A-C02/2024 (ICB) dated 23 August 2024

Tender ID: 2024_MMRCL_1074671_1

Name of Work: Construction of four (04) nos Elevated Metro Stations viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti excluding viaduct, pier arms, girder erection, deck slab at concourse & platform level and E&M works but including Plumbing works on the North-South Corridor of Pune Metro Rail Project- Reach 1 Extension.

References:

- P1A-C02/2024 (ICB) dated 23 August 2024, Corrigendum I dated 11 September 2024, Corrigendum II dated 03 October 2024, Corrigendum III dated 08 October 2024 and Corrigendum IV dated 23 October 2024
- Bid Documents duly accepted and submitted by M/s YFC - BBG (JV) on or before 06 November 2024 at 16:00 Hrs.
- Post Bid Clarification Letter No. Maha-Metro/PMRP/P1A-C02-2024(ICB)/2024/3271 dated 14 November 2024
- Maha Metro letter no. Maha-Metro/PMRP/P&C/P1A-C02/2024/3346 dated 24 December 2024 regarding invitation for opening of financial bid.
- Financial Bid opening at 15:00 Hrs. on 30 December 2024
- Discussion meeting invitation letter no. Maha-Metro/PMRP/P&C/P1A-C02/2025/0043 dated 30 January 2025.
- Letter No. YFC - BBG/MMRCL/Tender/2025/0411 from M/s YFC - BBG (JV) dated 31 January 2025.
- Letter No. YFC - BBG/MMRCL/Tender/2025/0421 from M/s YFC - BBG (JV) dated 03 February 2025.

Dear Sir,

- We are pleased to inform you that your bid proposal along with various submitted documents by you i.e., **M/s YFC – BBG (JV)** as referred above; subject to all terms and conditions as defined in tender/bid documents of Tender No. **P1A-C02/2024** for the subject contract of “**Construction of four (04) nos Elevated Metro Stations viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti excluding viaduct, pier arms, girder erection, deck slab at concourse & platform level and E&M works but including Plumbing works on the North-South Corridor of Pune Metro Rail Project- Reach 1 Extension**” has been accepted by Maharashtra Metro Rail Corporation Limited with contract identification number as **P1A-C02/2024**. The Awarded Contract Price is **INR 1,06,11,70,230.96/- (INR One Hundred Six Crore Eleven Lakh Seventy Thousand Two Hundred Thirty Rupees and Ninety Six Paise only) Including GST @ 18%** as mentioned below.



Sr. No.	Schedule	Description	Amount in INR (Incl. GST @ 18%) (In Figures)	Amount in INR (Incl. GST @ 18%) (In Words)
1	Schedule A	General Works	2,26,75,250.80	Two Crore Twenty-Six Lakh Seventy-Five Thousand Two Hundred Fifty and Eighty Paise Only
2	Schedule B	DSR-2023 Items	5,61,80,794.38	Five Crore Sixty-One Lakh Eighty Thousand Seven Hundred Ninety-Four and Thirty-Eight Paise Only
3	Schedule C	Stations RCC Structure Works	19,33,45,721.42	Nineteen Crore Thirty-Three Lakh Forty-Five Thousand Seven Hundred Twenty-One and Forty-Two Paise Only
4	Schedule D	Architectural Works (NDSR Items)	31,44,87,929.80	Thirty-One Crore Forty-Four Lakh Eighty-Seven Thousand Nine Hundred Twenty-Nine and Eighty Paise Only
5	Schedule E	PEB & STRUCTURAL WORK	34,66,79,193.64	Thirty-Four Crore Sixty-Six Lakh Seventy-Nine Thousand One Hundred Ninety-Three and Sixty-Four Paise Only
6	Schedule F	Plumbing Works (NDSR Items)	4,23,24,692.94	Four Crore Twenty-Three Lakh Twenty-Four Thousand Six Hundred Ninety-Two and Ninety-Four Paise Only
7	Schedule G	External & Site development Works	1,24,06,536.38	One Crore Twenty-Four Lakh Six Thousand Five Hundred Thirty-Six and Thirty-Eight Paise Only
8	Schedule H	Signages Works	1,30,70,111.60	One Crore Thirty Lakh Seventy Thousand One Hundred Eleven and Sixty Paise Only
9	Schedule I	Any Other Items (CPWD/Pune SOR)	6,00,00,000.00	Six Crore Only
Total of all Schedules (A + B + C + D + E + F + G + H + I) (Incl. GST @ 18%)			1,06,11,70,230.96	One Hundred Six Crore Eleven Lakh Seventy Thousand Two Hundred Thirty and Ninety-Six Paise Only

2. Taxes and Duties:

- The awarded contract price is including GST & all other applicable Taxes, Duties, Levies, and Royalties etc. as specified in tender documents.
- All taxes, duties, levies prior to Base date i.e., 28 days prior to latest date of submission of Bid is deemed to be inclusive in the price quoted by Bidder.



- (iii) Any change in legislation of any kind of Taxes by GOI or GOM, after Base Date shall be accounted separately and shall be applicable both ways (Reimbursement & Deduction).
- (iv) TDS towards Income Tax, GST etc. leviable under the applicable laws shall be deducted by Maha-Metro at the time of payment of any amount towards this work. Details of taxes deducted/Tax deduction certificate at the source shall be issued to contractor as per standard practices.
- (v) You are required to furnish the statement of taxes, duties, levies, etc. to be paid by you for this work at any point of time if required.

3. Scope of Work:

Construction of four (04) nos. Elevated Metro Stations viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti excluding viaduct, pier arms, girder erection, deck slab at concourse & platform level and E&M works but including Plumbing works on the North-South Corridor of Pune Metro Rail Project- Reach 1 Extension.

The scope of work shall be governed by the details provided in Part-2 of the Bid Document and any amendments made thereto issuing corrigenda/addenda prior to the closing of bidding procedure.

4. Commencement, Completion period and Defect Liability Period (DLP) of Work:

- (i) Pursuant to Clause 8.1 of Particular Conditions of Contract of tender documents, the date for the Commencement of Works for this Contract shall be the date of issue of "Letter of Acceptance (LOA)" and accordingly this LOA is to be treated as "Notice to Proceed" and therefore you are required to commence the work hereafter considering the date of commencement as date of issue of this LOA.
- (ii) The works shall be completed within 90 (Ninety) weeks as per the time schedule given in the tender/bid documents including defect free completion and have passed the tests on completion including integrated testing wherever in the scope of work and commissioning whole of the Works and/or parts thereof before the same is taken over by the Employer, but excluding Defect Liability Period.
- (iii) Defect Liability Period (DLP) for this work is 12 Months (Twelve Months) from the date of taking over as mentioned under clause no. 1.1.27 of Section-IX, Particular Conditions of Contract, Part-3 of Tender document.

5. Performance Security:

You are required to furnish Performance Security in the form of a bank guarantee for an amount of **10% (Ten percent) of the accepted Contract Price i.e., INR 10,61,17,023/- (INR Ten Crore Sixty-One Lakhs Seventeen Thousand Twenty-Three Only)** in terms of Clause 4.2, Section-IX: Particular Conditions of Contract of Part-3 of Tender document (within 28 days from the date of issue of LOA). The format of Performance Security is attached as **Annexure - I**.

6. Retention Money:

Retention money of INR 10 (Ten) Lakhs shall be deducted from each RA bill, starting from the first RA bill, up to a total amount of INR 1.3 Crore. This amount is in addition to the 10% Performance Bank Guarantee (PBG). The retention money shall be released along with the Performance Bank Guarantee.

7. Payments:

- (i) Payment shall be dealt as per clause 14.7 of Section-IX, Particular Conditions of Contract. Monthly and final payments shall be governed by the terms and condition of contract as set forth in bid document and amended by any corrigendum/addendum (if any).
- (ii) The contractor shall submit the bills specifying work executed in the specified format as approved by the Engineer-In-Charge or the employer. All bill raised should specifically state the amount of taxes charged separately in detail.

8. Advance Payments/Mobilization Advance:

- (i) The advance payment shall be dealt as per clause 14.2 of Section-IX, Particular Conditions of Contract.



- (ii) Interest bearing Mobilization advance shall be 10% of original contract value payable in two equal installments of 5% (Five Percent) each in the currencies and proportions of the Accepted Contract Amount.
- (iii) Mobilization advance shall be paid against acceptable Bank Guarantee for an amount of 110% of the advance amount issued from a Scheduled Commercial Indian Bank or Schedule Commercial Foreign Bank (Except Cooperative Bank) having business offices in India. The Bank Guarantee shall be valid for 60 Days beyond scheduled completion time. The validity of Advance Bank Guarantee shall be extended as per extended time of contract plus 60 days, if the Advance Amount is not recovered completely. The format of Bank Guarantee for Mobilization Advance is attached as Annexure- II.
- (iv) Advance payment shall be governed in terms of condition of the contract as set forth in tender documents and amended by tender addenda/corrigenda (if any).

9. Insurances & Others:

The required insurances of the said work shall be as per the terms and conditions of Contract to be submitted within 28 days from the date of issue of LOA.

10. Additional Terms:

- (i) The contractor shall execute the 24 items listed in Annexure-IV at the rates quoted in the financial bid, up to the estimated quantities as per the BOQ. Any quantity beyond the estimate shall be executed at Maha-Metro's estimated rates.
- (ii) Items listed in Annexures V and VI of this LOA shall not be considered as LARs in other Maha-Metro contracts.

11. Drawings:

Pursuant to Clause 8.1 of Section-IX, Particular Conditions of Contract, one set of 164 number drawings is being issued. The list of attached drawings is provided in Annexure-VII.

12. Any conditions, deviation, assumption, exclusion, suggestion of alternative clauses, request of amendments in conditions & specifications of work submitted by you along with the Technical or Financial bid which is different from the Tender Document, Corrigendum, Addendum, Reply of Pre-Bid Queries issued by Maha-Metro, shall not be treated as a part of the contract Agreement & shall not be binding upon Maha-Metro in anyway whatsoever at any stage of work during execution or thereafter, unless specifically agreed to by Maha-Metro in writing.

13. The following documents shall constitute part and parcel of the Contract Agreement: -

- a. The Contract Agreement (On INR 500 Stamp paper)
- b. Performance Bank Guarantee
- c. Letter of Acceptance along with all attached Annexures
- d. Financial Bid
- e. Tender No: P1A-C02/2024 (ICB) dated 23 August 2024, Corrigendum I dated 11 September 2024, Corrigendum II dated 03 October 2024, Corrigendum III dated 08 October 2024 and Corrigendum IV dated 23 October 2024
- f. The Tender including entire bid documents covering Technical Package and Financial Package along with Tender Clarifications, confirmations and other compliances,
- g. The contractor's Proposal (Tender/Bid Submission) including any additional Proposal in the Bid to the extent not contrary to the conditions of Bid documents,
- h. Any other admitted correspondence document between Maha-Metro and the bidder with committed acceptance of Maha-Metro.



14. Execution of Contract Agreement:

- (i) Pursuant to the requirement of Clause 1.6 of the General Conditions of Contract, you are required to execute the Contract Agreement (as per Annexure-III) within 28 (Twenty-Eight) days from the date of issue of LOA. However, this LOA along with your written acknowledgment shall constitute a contract between the Contractor (M/s YFC - BBG (JV)) and the Employer (Maharashtra Metro Rail Corporation Limited), till the signing of the formal Contract Agreement.
- (ii) You are requested to submit non-judicial stamp paper of an amount of INR 500/- for signing of the Contract Agreement along with receipt of stamp duties and similar charges (if any) imposed by law in connection with entry into the Contract Agreement.

15. For further instructions, you are requested to **contact office of Chief Project Manager/Reach – 01 Stations, Pune Metro Rail Project.**

16. This Letter of Acceptance is issued with the approval of the Competent Authority of Maharashtra Metro Rail Corporation Limited.

This Letter of Acceptance is sent to you in duplicate. You are required to return one copy to Maha-Metro duly acknowledged and signed within one week of receipt of the same as an affirmation that all the parts of this Letter of Acceptance including all enclosures attached herewith, have been read, fully understood and unconditionally accepted thereof, by you.



(Atul Gadgil),
Director (Works), PMRP

For & on Behalf of **Maharashtra Metro Rail Corporation Ltd.**

We-hereby confirm our unconditional acceptance to this Letter of Acceptance for Contract **P1A-C02/2024 (ICB)** dated **23 August 2024** received from Maharashtra Metro Rail Corporation Ltd.

(Rohit Yadav)

Authorized Signatory

For and on behalf of **M/s YFC - BBG (JV)**

Documents Attached:

1. Annexure - I: Format for Performance Security (02 page)
2. Annexure – II: Format for Bank Guarantee for Mobilization Advance (02 pages)
3. Annexure – III: Format for Contract Agreement (02 pages)
4. Annexure – IV: List of 24 items as mentioned above (04 pages)
5. Annexure – V: List of items whose rates shall not be considered as LARs in other contracts (04 pages)
6. Annexure – VI: List of items whose rates shall not be considered as LARs in other contracts (08 pages)
7. Annexure – VII: List of Drawings (05 pages)
8. Annexure – VIII: Letters submitted by M/s YFC – BBG (JV) (06 pages)
9. Annexure – IX: Financial Bid and BOQ submitted by M/s YFC – BBG (JV) (126 pages)

Copy to:

1. PS-MD, Maha-Metro: For kind information please.
2. Director (Works), Maha-Metro: For kind information please.
3. Director (S & OP), Maha-Metro: For kind information please.
4. Director (Finance), Maha-Metro: For kind information please.
5. ED (P&C), PMRP: For kind information please and necessary action please.
6. GM (Finance), PMRP: For kind information and necessary action please.
7. CPM (Reach 01 Stations), PMRP: For kind information and necessary action please.
8. Chief Structural Expert (Authorized Signatory – GC) PMRP: For kind information and necessary action please.
9. Document Controller to GC, PMRP: For necessary action and record.

PERFORMANCE SECURITY

(Demand Guarantee)

Beneficiary: _____ Date: _____

PERFORMANCE GUARANTEE No.: _____

Guarantor: _____

We have been informed that _____ (hereinafter called "the Applicant") has entered into Contract No. _____ dated _____ with the Beneficiary, for the execution of _____ (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Applicant, we as Guarantor, waiving all objections and defences under the aforementioned contract, hereby irrevocably and independently undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ (____),¹ such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's first demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant has failed to duly perform the aforementioned contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the Day of, 2...², and any demand for payment under it must be received by us at this office indicated above on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

[signature(s)]

¹ The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, less provisional sums, if any, and denominated either in the currency(cies) of the Contract or a freely convertible currency acceptable to the Beneficiary.

² Insert the date twenty-eight days after the expected completion date as described in GC Clause 11.9. The

Employer should note that in the event of an extension of this date for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six



months/[one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.



Contract Form-4**Advance Payment Security****BANK GUARANTEE FOR MOBILISATION ADVANCE**

To
 Maharashtra Metro Rail Corporation Ltd.,
 Civil Court Metro Station Premises, Nyayamurti Ranade Path,
 Shivaji Nagar, Pune-411005, Maharashtra, INDIA

Bank Guarantee No. _____, dt. _____ for Rs. _____
 (Rupees _____ only).

w.e.f. : _____
 valid upto : _____
 claim upto : _____

1. In Consideration of M/s. Maharashtra Metro Rail Corporation Ltd., (hereinafter called "the Employer", which expression shall, unless repugnant to the context or subject thereof include his successor and assigns) having awarded M/s. _____ having its Registered Office at _____ (hereinafter referred to as "the Contractor", which expression shall unless repugnant to the context of meaning thereof include its successors, administrators, executors and assigns), a contract by issue of Employers Letter of Acceptance No. _____ dated _____ and the same having been mutually accepted by the Contractor, resulting in a Contract bearing No. _____ for Rs. _____ (Rupees _____ only) for Contract _____ :
 (Name of work) _____
 (hereinafter called "the Contract") and the Employer has agreed to make an advance payment to the Contractor for performance of the said Contract amounting to Rs. _____ (Rupees _____ only) of Mobilisation Advance.
2. We, _____ constituted under the _____ Act, 1955 having its Corporate Centre and Central Office at _____ and one of its Local Head Office at _____ and Branch Office at _____ (hereinafter referred to as "the Bank", which expression shall unless repugnant to the context of meaning thereof, include its successors, administrators, executors and assigns) do hereby guarantee and undertake to pay the Employer, immediately on demand any or all monies payable by the Contractor to the extent of _____ of Rs. _____ (Rupees _____ only) as aforesaid at any time upto _____



_____ without any demur, reservation, context, recourse or protest and or without any reference to the Contractor.

3. Any such demand made by the Employer on the Bank shall be conclusive and binding notwithstanding any difference between the Employer and the Contractor or any dispute pending before any Court, Tribunal, Arbitrator and shall continue to be enforceable till the Employer discharges this guarantee. However, not later than expiry date of guarantee.
4. The Employer shall have the fullest liberty without affecting in any way the liability of the Bank under this Guarantee, from time to time to vary the advance or to extend the time for performance of the Contract by the Contractor. The Employer shall have the fullest liberty without affecting his guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the Contractor and to exercise the same at any time in any manner and either to enforce or to forebear to enforce any covenants, contained or implied, in the Contract between the Employer and Contractor or any other course or demand or security available to the Employer. The Bank shall not be redeemed to its obligation under these presents by any exercise by the Employer of its liberty with reference to the matters aforesaid of any of them or by reason of any other act or forbearance or other acts of omission or commission on the part of the Employer or any other indulgence shown by the Employer or by any other matter or thing whatsoever which under law would but for this provision have the effect of relieving the bank.
5. The Bank also agrees that the Employer at his option shall be entitled to enforce this Guarantee against this bank as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee that the Employer may have in relation to the Contractor's liabilities.

Notwithstanding anything contrary contained in any law for the time being in force or banking practice this guarantee shall not be assignable or transferable by the beneficiary. Notice or invocation by any person such as assignee, transferee or agent of beneficiary shall not be entertained by the bank any invocation of guarantee can be made only by the beneficiary directly.

Notwithstanding anything contained herein:

- a) Bank liability under this Bank Guarantee shall not exceed Rs. _____
(Rupees _____ only)
- b) This Bank Guarantee shall be valid upto _____.
- c) We are liable to pay the guarantee amount or part thereof under this Bank Guarantee only & only if you serve upon us a written claim or demand on or before _____.
- d) Thereafter all your rights under this guarantee shall be forfeited and we shall be released from all our liabilities hereunder irrespective of whether the guarantee in original is returned to us or not.

Dated _____.



Contract Form-2**Contract Agreement**

THIS AGREEMENT made the _____ day of _____, _____, between Maharashtra Metro Rail Corporation Limited, Pune (hereinafter "the Employer" or Maha-Metro), of the one part, and _____ of _____ (hereinafter "the Contractor"), of the other part:

WHEREAS the Employer desires that the Works known as _____ should be executed by the Contractor, and has accepted a Bid by the Contractor for the execution and completion of these Works and the remedying of any defects therein, in the sum of *[insert Contract Price or Ceiling in words and figures, expressed in the Contract currency(ies)]* (hereinafter called "the Contract Price").

The Employer and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.
 - (a) the Letter of Acceptance (LOA)
 - (b) Accepted Financial Bid & Bill of Quantities
 - (c) Corrigendum / Addendum/ Clarifications
 - (d) the Particular Condition of Contract (PCC)
 - (e) the General Conditions (GC)
 - (f) the Work Specification & Employer's Requirement,
 - (g) the Drawings,
 - (h) Contractor's Submissions
 - (i) and any other reference documents forming part of the Contract.

If an ambiguity or discrepancy is found in the documents, the Employer shall issue any necessary clarification or instruction by approval of competent authority.

3. In consideration of the payments to be made by the Employer to the Contractor as specified in this Agreement, the Contractor hereby covenants with the Employer to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.



IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of _____ on the day, month and year specified above.

Signed by _____ (for the Employer)

Signed by _____ (for the Contractor)

Note:-

The costs of stamp duties and similar charges (if any) imposed by law and as per Stamp Duty Act (amended from time to time) of state in which the work is executed, in connection to entering into the Contract Agreement, shall be borne by the Contractor.



Tender No: P1A-C02/2024									
Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project									
S. NO.	Sched ule	Item No.	Item Description	Unit	Qty	Estimated Rate with GST @ 18%	Estimate Amount (INR) Incl. 18% GST	Rate quoted by Bidder M/s YFC- BBG Joint Venture with GST @ 18%	Amount Quoted by M/s YFC-BBG Joint Venture (INR) Incl. 18% GST
	A	Nil							
1	B1	2.4	Extra for providing and placing in position 2 Nos. 6mm dia. M.S. bars at every third course of half brick masonry	Sqm	80.00	104.80	8,384.00	400.00	32,000.00
2	B1	4.3.1	Providing and fixing glass strips in joints of terrazo/ cement concrete floors, 40 mm wide and 4 mm thick	Metre	100.00	91.75	9,175.00	200.00	20,000.00
3	B1	6.6	Distemping with oil bound washable distemper of approved brand and manufacture to give an even shade :						
		6.6.1	New work (two or more coats) over and including water thinnable priming coat with cement primer	Sqm	40.00	185.65	7,426.00	355.00	14,200.00
4	B1	6.7	Applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile Organic Compound) content.						
		6.7.1	With water thinnable cement primer on wall surface having VOC content less than 50 grams/litre	Sqm	80.00	73.95	5,916.00	355.00	28,400.00
5	B1	6.8	Finishing walls with water proofing cement paint of required shade :						
		6.8.1	New work (Two or more coats applied @ 3.84 kg/10 sqm).	Sqm	80.00	116.90	9,352.00	200.00	16,000.00
6	B1	6.9	Applying priming coat:						
		6.9.1	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/steel works	Sqm	80.00	67.40	5,392.00	125.00	10,000.00
7	B1	6.14	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete.						
		6.14.1	On concrete work (on wall)	Sqm	200.00	235.15	47,030.00	400.00	80,000.00
			Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25 mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20 mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20 mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge :						
8	B1	7.2.1	Using rough Kota stone	Sqm	40.00	2,024.70	80,988.00	5,000.00	2,00,000.00



Tender No: P1A-C02/2024									
Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project									
S. NO.	Sched ule	Item No.	Item Description	Unit	Qty	Estimated Rate with GST @ 18%	Estimate Amount (INR) Incl. 18% GST	Rate quoted by Bidder M/s YFC- BBG Joint Venture with GST @ 18%	Amount Quoted by M/s YFC-BBG Joint Venture (INR) Incl. 18% GST
9	B1	7.3	Providing and applying integral crystalline slurry of hydrophilic in nature for waterproofing treatment to the RCC structures like retaining walls of the basement, water tanks, roof slabs, podiums, reservoir, sewage & water treatment plant, tunnels / subway and bridge deck etc., prepared by mixing in the ratio of 5 : 2 (5 parts integral crystalline slurry : 2 parts water) for vertical surfaces and 3 : 1 (3 parts integral crystalline slurry : 1 part water) for horizontal surfaces and applying the same from negative (internal) side with the help of synthetic fiber brush. The material shall meet the requirements as specified in ACI- 212-3R-2010 i.e by reducing permeability of concrete by more than 90% compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure on negative side. The crystalline slurry shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the engineer in-charge. The product performance shall carry guarantee for 10 years against any leakage.	Sqm	823.14	311.50	2,56,408.40	650.00	5,35,041.60
		7.3.2	For horizontal surface one coat @1.10 kg per sqm.						
	B2		Nil						
	B3		Nil						
10	C	1.01	Providing and installing cast-in-situ vertical bored piles of approximate depth as per drawing and with M35/20 where "35" is the grade of concrete (as per OCS) incl all operations such as installation and shifting of piling rig etc, in all soil strata along elevated section and "20" is the "nominal maximum aggregate size". The cost shall also include the cost of empty boring wherever required.The stated length include test piles for initial load tests. (Measurement shall be from cut-off level to founding level). The item includes disposal of earth, muck, slush released from piles, top cutted portion of pile at dumping ground for all leads.						
		1.01.2	For 600 mm dia Pile						
			(i) By hydraulic rigs using partial depth casing with polymer	RWT	55.00	8,917.65	4,90,470.67	15,000.00	8,25,000.00
11	C	2.2	Extra for using M-40 (Min. cement content 410 kg as per requirement/ technical specifications) instead of M-35 item no. 2.01 above	Cum	40.00	101.78	4,071.20	4,000.00	1,60,000.00
12		4.4	Providing M 40/20 concrete for stitch portion in between Girders and any other locations	Cum	40.00	11,869.20	4,74,768.00	18,500.00	7,40,000.00
13	C	4.6	Providing and Fixing Swellable water bar 20 x20 mm , & fixing of chemical injection holes at construction joint and junction of raft and Pump room wall for vertical and horizontal also.	Met	446.59	844.20	3,77,012.29	3,000.00	13,39,773.60
14	D	1.3	Providing and laying in position Plumb Concrete	Cum	20.00	6,124.13	1,22,482.58	10,000.00	2,00,000.00
15	D	8.10.2	Supply & fixing of 3mm Thick SS 304 plate	Sqft	400.00	1,951.43	7,80,570.00	3,000.00	12,00,000.00



Tender No: P1A-C02/2024									
Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project									
S. NO.	Sched ule	Item No.	Item Description	Unit	Qty	Estimated Rate with GST @ 18%	Estimate Amount (INR) Incl. 18% GST	Rate quoted by Bidder M/s YFC- BBG Joint Venture with GST @ 18%	Amount Quoted by M/s YFC-BBG Joint Venture (INR) Incl. 18% GST
16	D	11.01	Cleaning the Surface , Priming the same by Kemper EP Primer Providing & Applying Kemper V 210 treatment in 2 coats on the surface as per manufactured by { KEMPER} Cleaning the externa: surface of G I Sheet Area. Kemper V 210 Polyurethane Base pails are a fast duricl waterproofing membranes with excellent chemicals resistance Properties. Kemper is Elongalcnlot break Kemper Polyurethane forms a tough flexible membranes film which eliminates need 'or a reinforcing layer. Reinforcement Flees is all area over movement Joints. Kemy: Polyurethane cure time 4 Hours. Kemper is Coverage is 2 kg / sqm. Kemper is a 2 Coats, 4 Ho each coats. Kemper is using Roller / Brush as per manufacturers Details, that is as per kenny: details and manuals & Location as per drawing & as directed by Engineer in charge .The rates includes the cost of scaffolding. waterproofing shall be guaranteed for 10 years in Approved Performa.WIDHT WATERPROOFING VARIES AS PER SITE LOCATION AT VARIOUS SECTION-(WIDTH VARIES @ FCs 300MM TO 700 MM).	Sqm	40.00	3,600.84	1,44,033.60	10,000.00	4,00,000.00
17	E	E5	Hilti Rebaring For Gutter Arrangement : Supply, Drilling/Cleaning hole and injecting chemical, Application to be desigend separately for Rebars as simply supported, Moment or splice connection as per EC2 / TR 023 or relevant tested and accepted rebar guidelines. The chemical should ETA approval for seismic rebar as a minimum qualifying criterion. Drilling hole with double flute type drill Bits or Hollow drill bits to the required/Depth by rotary hammer drill, cleaning with brush and jct of clean sir, filling resin and hardener using serrated nozzle to eliminate mixing error with standard HDE A22 battery dispenser recommendations. The Adequate diameter and embedment of rebars to be decided as per PROFIS rebar software & the report to he submitted to the project manager/design engineer for approval. Scanning before drilling to be done to avoid hitting existing rebars Re 500 for 12mm to 24mm diameter 290mm depth including necessary scaffolding Providing and fixing Decking consist of 1.2 mm thick galvanized steel deck sheet TR-80+TM (S350 Grade) conforming to IS 277:1992 used as permanent shuttering. This metal deck will be supported on structural steel beam with shear studs of 190 with 125mm long, spacing as per approved structural drawing. (Structural steel like Beam, column, joists etc. & concrete of different grade as per design will be paid separately).	Nos	600.00	670.30	4,02,179.40	1,100.00	6,60,000.00
18	E	E-8.1	Providing and fixing Decking consist of 1.2 mm thick galvanized steel deck sheet TR-80+TM (S350 Grade) conforming to IS 277:1992 used as permanent shuttering. This metal deck will be supported on structural steel beam with shear studs of 190 with 125mm long, spacing as per approved structural drawing. (Structural steel like Beam, column, joists etc. & concrete of different grade as per design will be paid separately).	Sqm	80.00	4,000.00	3,20,000.00	7,000.00	5,60,000.00
19	F	12.1	SUBMERSIBLE UNDER GROUND FOR BOREWELL (2 Nos. Bore Well) No. of Pumps: 1 (1 Working) Capacity : 200 LPM Head : 100 m	Set	8.00	69,573.00	5,56,584.00	3,10,000.00	24,80,000.00
20	G	1.1	Excavation for roadway in earth, soil of all sorts, sand, gravel or soft murum including dressing section to the required grade, camber and side slopes and conveying the excavated materials with all lifts upto a lead of 50m. and spreading for embankment or stacking as directed. MORTH 301	CUM	7.332 00	121.66	8,92,011.12	200.00	14,66,400.00
21	G	2.2	Providing and laying concrete pipes of I.S.NP. class of 300mm diameter in proper line, level and slope including necessary collars, excavation, laying, fixing with collars in cement mortar 1:1 and refilling the trench complete. Spec. No.: Bd.V.41, Page No. 573 (From gully chamber to SWD)	RMT	80.00	1,258.09	1,00,647.36	5,000.00	4,00,000.00
22	G	2.3	Providing, hoisting and fixing in position C.I. manhole, frame and cover of best quality and of required size and shape with locking arrangements including applying 2 coats of anti-corrosive paint. etc. complete. (90 x 60 cm size and weight 35 kg.)	NOS	20.00	3,947.95	78,959.04	7,000.00	1,40,000.00



Page 4 of 4

S. NO.	Sched ule	Item No.	Item Description	Unit	Qty	Estimated Rate with GST @ 18%	Estimate Amount (INR) Incl. 18% GST	Rate quoted by Bidder M/s YFC- BBG Joint Venture with GST @ 18%	Amount Quoted by M/s YFC-BBG Joint Venture (INR) Incl. 18% GST
23	G	3.1	Supplying, Laying and spreading murrum in 200 to 300 mm thickness laye compacting with a roller upto getting density of 97 % including all lead and lifts. Specification No. RD - 13 No. 194	Cum	512.00	739.32	3,78,531.84	1,500.00	7,68,000.00
24	G	5.2	Supply & fixing precast cement concrete cylindrical Bollard of size as per specifications and 900 mm height (650 mm above finish level) , manufactured by M - 30 grade of concrete & suitable reinforced & manufactured by vibro compaction process using FRP moulds , & with washed fine grit finish on the exposed surface of bollard of approved colour and texture, as per detail drawing as directed by engineer-in-charge.	NOS	120.00	2,263.98	2,71,677.84	3,500.00	4,20,000.00
	H		Nil						
			Total Amount (INR)				58,24,070.34		1,26,94,815.20

Tender No: P1A-C02/2024

Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S. NO.	Schedule	Item No.	Item Description	Unit	Qty	Rate quoted by Bidder M/s YFC-BBG Joint Venture with GST @ 18%	Amount Quoted by M/s YFC-BBG Joint Venture (INR) Incl. 18% GST
1	B1	2.4	Extra for providing and placing in position 2 Nos. 6mm dia. M.S. bars at every third course of half brick masonry	Sqm	80.00	400.00	32,000.00
2	B1	4.3.1	Providing and fixing glass strips in joints of terrazo/ cement concrete floors. 40 mm wide and 4 mm thick	Metre	100.00	200.00	20,000.00
3	B1	6.6	Distemping with oil bound washable distemper of approved brand and manufacture to give an even shade :				
		6.6.1	New work (two or more coats) over and including water thinnable priming coat with cement primer	Sqm	40.00	355.00	14,200.00
4	B1	6.7	Applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile Organic Compound) content.				
		6.7.1	With water thinnable cement primer on wall surface having VOC content less than 50 grams/litre	Sqm	80.00	355.00	28,400.00
5	B1	6.8	Finishing walls with water proofing cement paint of required shade :				
		6.8.1	New work (Two or more coats applied @ 3.84 kg/10 sqm).	Sqm	80.00	200.00	16,000.00
6	B1	6.9	Applying priming coat:				
		6.9.1	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/steel works	Sqm	80.00	125.00	10,000.00
7	B1	6.14	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete.				
		6.14.1	On concrete work (on wall)	Sqm	200.00	400.00	80,000.00
8	B1	7.2.1	Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25 mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20 mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20 mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge : Using rough Kota stone	Sqm	40.00	5,000.00	2,00,000.00



Tender No: P1A-C02/2024							
Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project							
S. NO.	Schedule	Item No.	Item Description	Unit	Qty	Rate quoted by Bidder M/s YFC-BBG Joint Venture with GST @ 18%	Amount Quoted by M/s YFC-BBG Joint Venture (INR) Incl. 18% GST
9	B1	7.3	Providing and applying integral crystalline slurry of hydrophilic in nature for waterproofing treatment to the RCC structures like retaining walls of the basement, water tanks, roof slabs, podiums, reservoir, sewage & water treatment plant, tunnels / subway and bridge deck etc., prepared by mixing in the ratio of 5 : 2 (5 parts integral crystalline slurry : 2 parts water) for vertical surfaces and 3 : 1 (3 parts integral crystalline slurry : 1 part water) for horizontal surfaces and applying the same from negative (internal) side with the help of synthetic fiber brush. The material shall meet the requirements as specified in ACI- 212-3R-2010 i.e by reducing permeability of concrete by more than 90% compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure on negative side. The crystalline slurry shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the engineer in-charge. The product performance shall carry guarantee for 10 years against any leakage.	Sqm	823.14	650.00	5,35,041.60
10	C	1.01	For horizontal surface one coat @1.10 kg per sqm. Providing and installing cast-in-situ vertical bored piles of approximate depth as per drawing and with M35/20 where "35" is the grade of concrete (as per OCS) incl all operations such as installation and shifting of piling rig etc, in all soil strata along elevated section and "20" is the "nominal maximum aggregate size". The cost shall also include the cost of empty boring wherever required.The stated length include test piles for initial load tests. (Measurement shall be from cut-off level to founding level). The item includes disposal of earth, muck, slush released from piles, top cutted portion of pile at dumping ground for all leads.				
		1.01.2	For 600 mm dia Pile				
			(i) By hydraulic rigs using partial depth casing with polymer	RMT	55.00	15,000.00	8,25,000.00
11	C	2.2	Extra for using M-40 (Min. cement content 410 kg as per requirement/ technical specifications) instead of M-35 item no. 2.01 above	Cum	40.00	4,000.00	1,60,000.00
12		4.4	Providing M 40/20 concrete for stlch portion in between Girders and any other locations	Cum	40.00	18,500.00	7,40,000.00
13	C	4.6	Providing and Fixing Swellable water bar 20 x20 mm , & fixing of chemical injection holes at construction joint and junction of raft and Pump room wall for vertical and horizontal also.	Met	446.59	3,000.00	13,39,773.60
14	D	1.3	Providing and laying in position Plumb Concrete	Cum	20.00	10,000.00	2,00,000.00



Tender No: P1A-C02/2024							
Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project							
S. NO.	Schedule	Item No.	Item Description	Unit	Qty	Rate quoted by Bidder M/s YFC-BBG Joint Venture with GST @ 18%	Amount Quoted by M/s YFC-BBG Joint Venture (INR) Incl. 18% GST
15	D	8.10.2	Supply & fixing of 3mm Thick SS 304 plate	Sqft	400.00	3,000.00	12,00,000.00
16	D	11.01	Cleaning the Surface , Priming the same by Kemper EP Primer Providing & Appling Kemper V 210 treatment in 2 cots on the surface as per manufactured by [KEMPER} Cleaning the externa: surface of G Sheet Area. Kemper V 210 Polyurethane Base palls are a fast duricl waterproofing membranes with excellent chemicals resistance Properties. Kemper is Elongalictot break Kemper Polyurethane forms a tough flexible membranes film which eliminates I need 'or a reinforcing layer. Reinforcement Flees is all area over movement Joints. Kemy: Polyurethane cure time 4 Hours. Kemper is Coverage is 2 kg / sqm. Kemper is a 2 Coats, 4 Ho each cots. Kemper is using Roller / Brush as per manufacturers Details, that is as per kenny: details and manuals & Location as per drawing & as directed by Engineer in charge .The rates includes the cost of scaffolding. waterproofing shall be guaranteed for 10 years in Approved Performa.WIDHT WATERPROOFING VARIES AS PER SITE LOCATION AT VARIOUS SECTION-(WIDTH VARIES @ FCs 300MM TO 700 MM).	Sqm	40.00	10,000.00	4,00,000.00
17	E	E5	Hilti Rebaring For Gutter Arrangement : Supply, Drilling/Cleaning hole and injecting chemical, Application to be desgind separately for Rebars as simply supported, Moment or splice connection as per EC2 / TR 023 or relevant tested and accepted rebar guidelines, The chemical should ETA approval for seismic rebar as a minimum qualifying criterion. Drilling hole with double flute type drill Bits or Hollow drill bits to the required/Depth by rotary hammer drill, cleaning with brush and jct of clean sir, filling resin and hardener using serrated nozzle to eliminate mixing error with standard HDE A22 battery dispenser recommendations. The Adequate diameter and embedment of rebars to be decided as per PROFIS rebar software & the report to he submitted to the project manager/design engineer for approval. Scanning before drilling to be done to avoid hitting existing rebars Re 500 for 12mm to 24mm diameter 290mm depth including necessary scaffolding	Nos	600.00	1,100.00	6,60,000.00
18	E	E-8.1	Providing and fixing Decking consist of 1.2 mm thick galvanized steel deck sheet TR-80+TM (S350 Grade) conforming to IS 277:1992 used as permanent shuttering. This metal deck will be supported on structural steel beam with shear studs of 19Ø with 125mm long, spacing as per approved structural drawing. (Structural steel like Beam, column, joists etc. & concrete of different grade as per design will be paid separately).	Sqm	80.00	7,000.00	5,60,000.00



Tender No: P1A-C02/2024							
Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project							
S. NO.	Schedule	Item No.	Item Description	Unit	Qty	Rate quoted by Bidder M/s YFC-BBG Joint Venture with GST @ 18%	Amount Quoted by M/s YFC-BBG Joint Venture (INR) Incl. 18% GST
19	F	12.1	SUBMERSIBLE UNDER GROUND FOR BOREWELL (2 Nos. Bore Well) No. of Pumps: 1 (1 Working) Capacity : 200 LPM Head : 100 m	Set	8.00	3,10,000.00	24,80,000.00
20	G	1.1	Excavation for roadway in earth, soil of all sorts, sand, gravel or soft murum including dressing section to the required grade, camber and side slopes and conveying the excavated materials with all lifts upto a lead of 50m. and spreading for embankment or stacking as directed. MORTH 301	CUM	7,332.00	200.00	14,66,400.00
21	G	2.2	Providing and laying concrete pipes of I.S.NP. class of 300mm diameter in proper line, level and slope including necessary collars, excavation, laying, fixing with collars in cement mortar 1:1 and refilling the trench complete. Spec. No.: Bd.V.41, Page No. 573 (From gully chamber to SWD)	RMT	80.00	5,000.00	4,00,000.00
22	G	2.3	Providing, hoisting and fixing in position C.I. manhole, frame and cover of best quality and of required size and shape with locking arrangements including applying 2 coats of anti-corrosive paint, etc. complete. (90 x 60 cm size and weight 35 kg.)	NOS	20.00	7,000.00	1,40,000.00
23	G	3.1	Supplying, Laying and spreading murum in 200 to 300 mm thickness laye compacting with a roller upto getting density of 97 % including all lead and lifts. Specification No. RD - 13 No. 194	Cum	512.00	1,500.00	7,68,000.00
24	G	5.2	Supply & fixing precast cement concrete cylindrical Bollard of size as per specifications and 900 mm height (650 mm above finish level) , manufactured by M - 30 grade of concrete & suitable reinforced & manufactured by vibro compaction process using FRP moulds , & with washed fine grit finish on the exposed surface of bollard of approved colour and texture, as per detail drawing as directed by engineer-in-charge.	NOS	120.00	3,500.00	4,20,000.00
			Total Amount (INR)				1,26,94,815.20



Tender No: P1A-C02/2024

Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S. NO.	Schedule	Item No.	Item Description	Unit	Qty	Rate quoted by L1 Bidder M/s YFC-BBG Joint Venture with GST @ 18%	Amount Quoted by M/s YFC-BBG Joint Venture (INR) Incl. 18% GST
1	A	G1-1	Detailed survey along the corridor shall be carried out with the following details: a) Establishing GPS stations (at every proposed station locations) at the interval of not more than 200-250 m. The GPS station shall be fixing concrete pillar 600 mm x 600 mm x 1000 mm on building roof free with a proper concrete platform. Stainless Steel (SS) Plate 100 mm x 100 mm x 4 mm with center punch shall be fixed on the top of the station. GPS instrument accuracy shall be minimum horizontal 5 mm + 0.5 ppm and vertical 10 mm + 0.5 ppm in static observation. The base line measurement shall be based on minimum 4 hrs. static observations and other observations shall be with minimum 2 hrs. Static observations. (The observation time may be increased if the no. of satellite is less than 8 as the project corridor is a urban section.) b) Closed traversing shall be carried out storing in total station Angle and Distance from GPS to GPS with an accuracy of 1: 50000 by observing minimum 3 sets of face right and 3 set of face left.	KM	4.00	50,000.00	2,00,000.00
2	A	G1-3	Submit colour photographs report including description of works to establish progress as directed by the Engineer and supply at monthly intervals, or as instructed by the Engineer. One set shall comprise of soft copy and one hard copy.	Per set	28.00	1,500.00	42,000.00
3	A	G1-4	Supply of video DVDs of 180 minutes duration comprising one master copy and one extra copy showing the progress of works as directed by Engineer.	Per set	28.00	2,000.00	56,000.00
4	A	G1-5	Supply of video DVDs with commentary of entire works comprising of every activities starting from commencement of work to the end of the work duly edited at the completion of work as directed by Engineer.	Per set	4.00	9,000.00	36,000.00
		G1-8	Removal and transplanting trees (up to 10KM lead) of girth (measured at height of 1.0M above ground level) including excavation, backfilling, levelling of the ground and, maintenance of tree for a period of three year as directed and specified in technical specification from the date of transplantation. (GOVT PERMISSION AND OTHER OBLIGATION SHOULD BE IN CONTRACTORS CONTACT)				
5	A	G1-8.1	Up to 30 C.M. Girth	Nos.	8.00	1,000.00	8,000.00
6	A	G1-8.2	Beyond 30 C.M. Girth up to and including 50 C.M. Girth	Nos.	8.00	2,000.00	16,000.00
7	A	G1-8.3	Beyond 50 C.M. Girth up to and including 75 C.M. Girth	Nos.	11.00	2,000.00	22,000.00
8	A	G1-8.4	Beyond 75 C.M. Girth up to and including 125 C.M. Girth	Nos.	11.00	2,000.00	22,000.00
9	A	G2-1	Drilling 150mm dia boreholes in all types of soil by using tripple tube core barrel. Item includes (a) Mobilisation of wireline hydraulic rigs and other necessary equipment required for completion of the work, (b) Setting up machinery, shifting etc (c) Conducting Standard Penetration Tests (SPT) at 1.5 m intervals, (d) Vane shear test at 1.5m intervals i in the very soft strata, (e) Collection of undisturbed samples at 11.5 m intervals alternate to SPT –	Met	400.00	1,700.00	6,80,000.00



Tender No: P1A-C02/2024

Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S. NO.	Schedule	Item No.	Item Description	Unit	Qty	Rate quoted by L1 Bidder M/s YFC-BBG Joint Venture with GST @ 18%	Amount Quoted by M/s YFC-BBG Joint Venture (INR) Incl. 18% GST
10	A	G2-3	Conducting soil tests: at the specified locations as per IS: 3043 for earthing and corrosivity of soil by Wenner's four electrode method. The tests at each location shall be conducted in series with distances between the electrodes as 1.5 m, 3 m, 6 m, 9m and 12m each on either side along each row axis as per the specification and as directed by Engineer. Note: Test shall be considered completed and shall be counted as one number only if it is conducted in all 8 directions as per the specifications and as directed by Engineer.	Nos	12.00	2,500.00	30,000.00
11	A	G2-4	Preparation and submission of three (3) copies of Draft Factual and Interpretative Reports as specified and three (3) copies of the Final Report of Geotechnical Investigations with Recommendations covering at least the following: (a) Foundation system for various structures of Metro (SBC & pile capacities) (b) Stable slope for deep excavation and method of soil retention system for deep excavation (like diaphragm wall, secant piles etc.) (d) method of dewatering, (e) liquefaction susceptibility etc. The approved report shall also be submitted on one compact disc (CDs). Report shall include photograph of soil samples, rock cores, rock exposures, pits and other Geological features.	LS	4.00	16,500.00	66,000.00
	A	G3-1.3	Deployment of adequate manpower for 8 hrs shift(3 shifts/day) for round the clock management of traffic at intersections, junctions, roadway influenced by contractor & traffic diversions at various levels as per approved traffic management plan and as directed by Engineer. Note: i. Deployed manpower shall only be used for traffic management works involved for general public and public vehicular movement only. ii. Manpower deployed shall not be utilized for contractor's facilities such as construction machinery movement, security guarding of construction materials, stores etc				



Tender No: P1A-C02/2024

Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S. NO.	Schedule	Item No.	Item Description	Unit	Qty	Rate quoted by L1 Bidder M/s YFC-BBG Joint Venture with GST @ 18%	Amount Quoted by M/s YFC-BBG Joint Venture (INR) Incl. 18% GST
12	A		(a) Supervisor	Shift	1,620.00	300.00	4,86,000.00
13	A		(b) Traffic Guards/ Traffic Regulation	Shift	3,240.00	300.00	9,72,000.00
14	A	G4-1	Providing and laying Granular Sub-base of 200mm thickness complete as per MoRT&H Spec. Cl.401. (DSR Ref Cl.16.78.1)	Cum	1,120.00	1,500.00	16,80,000.00
15	A	G4-2	Providing and laying Wet Mix Macadam base of 225mm thickness on prepared surface complete as per MoRT&H Spec. Cl.406. (DSR Ref Cl.16.79)	Cum	1,400.00	1,500.00	21,00,000.00
16	A	G4-3	Providing bituminous primer coat over granular surface with bitumen emulsion complete as per MoRT&H Spec. Cl. 502 @ 6.0 to 9.0 kg/10 sq.m.	Sqm	4,000.00	25.00	1,00,000.00
17	A	G4-9	Bringing approved quality suitable good earth from outside for general filling of land, spreading the same in interspersed layers, and compacting as per specifications such that the compacted layer thickness is limited to 150mm. Rate to include, but not be limited to-all materials, labour, tools, equipments and incidentals as necessary to complete the work as per specifications	cum	600.00	500.00	3,00,000.00
18	B1	2.2	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in:				
		2.2.1	Cement mortar 1:4 (1 cement: 4 coarse sand)	Cum	100.00	100.00	10,000.00
19	B1	2.3	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level upto floor V level.				
		2.3.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	Sqm	200.00	100.00	20,000.00
20	B1	2.6	Extra for brick work / AAC block masonry / Tile brick masonry in superstructure above floor V level, for each four floors or part thereof by mechanical means	Cum	647.32	10.00	6,473.21
21	B1	3.1	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete				
		3.1.1.1	Area of slab over 0.50 sqm at all levels.	Sqm	200.00	2,500.00	5,00,000.00



Tender No: P1A-C02/2024

Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S. NO.	Schedule	Item No.	Item Description	Unit	Qty	Rate quoted by L1 Bidder M/s YFC-BBG Joint Venture with GST @ 18%	Amount Quoted by M/s YFC-BBG Joint Venture (INR) Incl. 18% GST
22	B1	4.2	Cement plaster skirting up to 30 cm height, with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement.				
		4.2.1	18 mm thick	Sqm	51.55	330.00	17,009.92
23	B1	5.3	Providing and fixing G.I. chain link fabric fencing of required width in mesh size 50x50 mm including strengthening with 2 mm dia wire or nuts, bolts and washers as required complete as per the direction of Engineer-in-charge.				
		5.3.1	Made of G.I. wire of dia. 4 mm, PVC coated to achieve outer dia not less than 5 mm in required colour and shade	Sqm	800.00	500.00	4,00,000.00
24	B1	6.11	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade ;				
		6.11.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture	Sqm	200.00	100.00	20,000.00
25	B1	7.4	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations:				
		7.4.1	With average thickness of 120 mm and minimum thickness at khurra as 65 mm	Sqm	243.98	800.00	1,95,187.48



Tender No: P1A-C02/2024

Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S. NO.	Schedule	Item No.	Item Description	Unit	Qty	Rate quoted by L1 Bidder M/s YFC-BBG Joint Venture with GST @ 18%	Amount Quoted by M/s YFC-BBG Joint Venture (INR) Incl. 18% GST
26	B1	8.1	Designing, fabricating, testing, protection, installing and fixing in position semi (grid) unitized system of structural glazing (with open joints) for linear as well as curvilinear portions of the building for all heights and all levels, including: a) Structural analysis & design and preparation of shop drawings for the specified design loads conforming to IS 875 part III (the system must passed the proof test at 1.5 times design wind pressure without any failure), including functional design of the aluminum sections for fixing glazing panels of various thicknesses, aluminium cleats, sleeves and splice plates etc. gaskets, screws, toggles, nuts, bolts, clamps etc., structural and weather silicone sealants, flashings, fire stop (barrier)- cum-smoke seals, microwave cured EPDM gaskets for water tightness, pressure equalisation & drainage and protection against fire hazard including: (b) Fabricating and supplying serrated M.S. hot dip galvanised / Aluminium alloy of 6005 T5 brackets of required sizes, sections and profiles etc. to accommodate 3 Dimensional movement for achieving perfect verticality and fixing structural glazing system rigidly to the RCC/masonry/structural steel framework of building structure using stainless steel anchor fasteners/bolts, nylon separator to prevent bimetallic contacts with nuts and washers etc. of stainless steel grade 316, of the required capacity and in required numbers. (c) Providing and filling, two part pump filled, structural silicone sealant and one part weather silicone sealant compatible with the structural silicone sealant of required bite size in a clean and controlled factory / work shop environment, including double sided spacer tape, setting blocks and backer rod, all of approved grade, brand and manufacture, as per the approved sealant design, within and all around the perimeter for holding glass. (d) Providing and fixing in position flashings of solid aluminium sheet 1 mm thick and of sizes, shapes and profiles, as required as per the site conditions, to seal the gap between the building structure and all its interfaces with curtain glazing to make it watertight.	Sqm	732.00	100.00	73,200.00
28	B2	12.2	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer -in-charge, beyond 90 metre & upto 150 metre depth below ground level.				
		12.2.1	All Types of Soil				
		12.2.1.1	300mm dia	Metre	480.00	150.00	72,000.00



Tender No: P1A-C02/2024
 Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S. NO.	Schedule	Item No.	Item Description	Unit	Qty	Rate quoted by L1 Bidder M/s YFC-BBG Joint Venture with GST @ 18%	Amount Quoted by M/s YFC-BBG Joint Venture (INR) Incl. 18% GST
29	C	4.1	Providing and installing in position approved building expansion joint Horizontally at various locations at floor level consisting of aluminium extrusions, anti-skid serrated top plate (Straight/Curved) with vapour barrier, sealant etc. to be installed in structural gap varies from 50mm to 200mm as per details.				
		4.1.1	(i) Expansion /Contraction = +50mm/-50mm Vertical seismic movement = +10mm/-10mm	RM	728.00	5,000.00	36,40,000.00
30	C	4.3	Providing and filling sheet covering over expansion joint with iron screws as per design to match the colour / shade of wall reinforcement				
		4.3.1	(ii) Aluminium fluted strips 3.15mm thick and 200mm wide	RM	1,341.41	200.00	2,68,281.60
31	D	8.5	SS Railing with HPL Supplying, fabricating, SATIN FINISH, erection of required height (900 to1200) mm high SS hand railing system, System comprising of 38mm Dia & 1.6mm thick Top-Rail Stainless steel Grade 304 connected to 50 mm Dia 3.15mm thick Baluster through Stainless Steel Saddle Plate connector. And a Grab Rail of 38mm Dia connected to Baluster through a Stainless Steel Stem Key. Baluster fixed to slab with GI Baseplate & M16x200 mm Fastener. A SS cover plate would be provided above GI Base Plate. Infill of 6mm thick grade fundermax F-Quality panels of standard size with both side decor connected to baluster with Stainless Steel Twin- arm Spider Clamp. The panel shall be perforated as per design of Architect	Rmt	100.00	5,000.00	5,00,000.00
32	D	8.6	SS Railing with Perforated Sheet Supplying, fabricating, SATIN FINISH, erection of required height (900 to1200) mm high SS hand railing system, System comprising of 38mm Dia & 1.6mm thick Top-Rail Stainless steel Grade 304 connected to 50 mm Dia 3.15mm thick Baluster through Stainless Steel Saddle Plate connector. And a Grab Rail of 38mm Dia connected to Baluster through a Stainless Steel Stem Key. Baluster fixed to slab with GI Baseplate & M16x200 mm Fastener. A SS cover plate would be provided above GI Base Plate. Infill of perforated Aluminium Sheet of thickness 2mm connected to baluster with Stainless Steel with necessary arrangement. The panel shall be perforated as per design of Architectural approved drawings.	Rmt	1,175.85	2,500.00	29,39,625.00



Tender No: P1A-C02/2024

Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S. NO.	Schedule	Item No.	Item Description	Unit	Qty	Rate quoted by L1 Bidder M/s YFC-BBG Joint Venture with GST @ 18%	Amount Quoted by M/s YFC-BBG Joint Venture (INR) Incl. 18% GST
33	D	8.8	Providing and fixing M.S. steel hand railing as per the design and drawings and specifications to staircase approximately 1200 mm high comprising of 32 mm dia 10 Gauge MS hollow tube vertically fixed to every fourth step welded to 50 mm dia 10 gauge MS pipe on top for handrail and 20 mm dia MS pipe vertically in between welded to 2 Nos of 20 mm dia M.S. Pipe all as per the drawings, the vertical balusters are fixed in position with molten lead poured into 40 mm dia GI sleeve with 80 x 80 x 3mm GI Plate and embedded in RCC including necessary steel cover and completed as shown in the drawings or any other method of fixing as approved by the Engineer in charge like epoxy grout fixing etc., complete. All M.S. members will be painted with three coats of synthetic epoxy of approved make and colour over one coat of primer all as per manufacturer's instructions and with the engineer's approval.	Kg	1,600.00	200.00	3,20,000.00
34		9.1	Fire Check doors design & supply of approved make fire rated door fabricated and successfully tested at CBRI Roorkee in both direction satisfying two criteria (Stability and Integrity) conforming to BS-476 part II, IS3614 Part II as per schedule of requirement, complete with shutters, frames, hinges, conforming to the design intent. All fire doors must conform to the requirements of fire authority having jurisdiction and as per prototype tested by approved fire testing agency acceptable to fire authority having jurisdiction. Door shutter and frames to have all hardware preparations must be prepunctured at the factory for fixing of said hardware. Shutters & frames to be filled with suitable fillers, insulation to meet the required fire resistance criteria as specified, with all grouting, reinforcements, flushed lock seam joints including all seals, washers, linings etc. complete. All fire doors to be primed and painted with approved painting system as per tested prototype and to approved colour. Provision of mortice sash lock (ML 100A) with S.S. lever handles and door closers heavy duty (imported) LCN 1461 with standard arm on every leaf, stainless steel hinges as per approved shop drawing.				
35	D	9.1.1a	30minutes (1/2 hour) fire rated metal door assembly	Sqm	102.38	4,000.00	4,09,500.00
	D	9.1.8	Dorma make panic bar for double leaf door or similar item of similar rate.	Each	88.00	22,000.00	19,36,000.00
36	D	12.02	Providing and applying in two coats 20 mm cement plaster on external surfaces in 1:4 (1 cement : 4 parts coarse sand) including providing galvanized chicken wire mesh at the junctions of concrete and masonry work including side laps of minimum 75mm and fixing in position with galvanized wire nails, approved waterproofing chemicals including scaffolding, all leading and lifting etc. complete etc.	Sqm	17,687.18	200.00	35,37,435.62



Tender No: P1A-C02/2024
 Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S. NO.	Schedule	Item No.	Item Description	Unit	Qty	Rate quoted by L1 Bidder M/s YFC-BBG Joint Venture with GST @ 18%	Amount Quoted by M/s YFC-BBG Joint Venture (INR) Incl. 18% GST
37	D	12.03	Providing and applying 6mm thick cement plaster to ceiling of mix 1:3 (1 cement : 3 fine sand) including hacking RCC, scaffolding, drip mold, all lifting and leading etc. complete.	Sqm	400.00	100.00	40,000.00
38	D	13.2	Providing and fixing 8mm thk High Pressure Laminate panel as per EN 438-6 type EDS manufactured using specially treated acrylic resins, hardened & competed under high pressure and temperature thus providing all weather protection and light fastness with fixing of power coated substructure Aluminium box section of 50mm x 25mm or 75mmx25mm suitable sized with maximum fastening gap between 340mm-600mm using special stainless steel screw fastener and HPL should be fixed to Aluminium channel using powder coated dome head blind rivet including scaffolding/ Boom-lift, all leading & lifting etc., complete as per direction of Engineer-in-Charge.	Sqm	8,639.00	1,000.00	86,39,000.00
39	D	13.4	Supplying and installation of Facade in GI CNC laser cut works. The size and design of GI Facade as per Architectural drawings and details. 5mm thick GI sheet with powder coating of 70/80microns with complete CNC laser cutting art work as per drawings with necessary screws, fittings and cleat system.	Sqm	2,448.00	6,000.00	1,46,88,000.00
40	E		Nil				
41	F		Nil				
42	G		Nil				
43	H		Entire signage schedule- All items				1,30,70,111.60
			Total Amount (INR)				5,16,01,824.42



To, Civil Contradition - (K-01) (Extension)

Annexure - VII
Architectural Dwg.

PCMC-NIGDI CORRIDOR- ALL FOUR STATION DRAWINGS

10/3/2025

Station Name	Drawing Type	Drawing Number	Revision No.
Chinchwad	Land Plan	P1D04-LKT-AR-PRM-CIID-LP-DST-0001	P05
		P1D04-LKT-AR-PRM-CHD-LP-DST-0002	P05
		P1D04-LKT-AR-PRM-CHD-LP-DST-0003	P05
	Station Box	P1D04-LKT-AR-PRM-CHD-GL-DRP-1001	A03
		P1D04-LKT-AR-PRM-CHD-CL-DRP-1002	A03
		P1D04-LKT-AR-PRM-CHD-PT-DRP-1003	A03
		P1D04-LKT-AR-PRM-CHD-RO-DRP-1004	A03
		P1D04-LKT-AR-PRM-CHD-DSE-2001	A03
		P1D04-LKT-AR-PRM-CIID-DSE-2004	A03
		P1D04-LKT-AR-PRM-CHD-DSE-2005	A03
	E/E1	P1D04-LKT-AR-PRM-CHD-DRP-4002	A04
		P1D04-LKT-AR-PRM-CHD-DRP-4003	A04
		P1D04-LKT-AR-PRM-CHD-DRP-4004	A04
		P1D04-LKT-AR-PRM-CHD-DRP-4005	A04
		P1D04-LKT-AR-PRM-CHD-DRP-4006	A04
		P1D04-LKT-AR-PRM-CHD-DSE-4007	A04
		P1D04-LKT-AR-PRM-CHD-DSE-4008	A04
		P1D04-LKT-AR-PRM-CHD-DSE-4009	A04
		P1D04-LKT-AR-PRM-CHD-DSE-4010	A04
		P1D04-LKT-AR-PRM-CHD-DSE-4011	A04
		P1D04-LKT-AR-PRM-CHD-DSE-4012	A04
		P1D04-LKT-AR-PRM-CHD-DSE-4013	A04
		P1D04-LKT-AR-PRM-CHD-DSE-4014	A04
		P1D04-LKT-AR-PRM-CHD-DSE-4015	A04
	E/E2	P1D04-LKT-AR-PRM-CHD-DRP-4012	A04
		P1D04-LKT-AR-PRM-CHD-DRP-4013	A04
		P1D04-LKT-AR-PRM-CHD-DRP-4014	A04
		P1D04-LKT-AR-PRM-CHD-DSE-4015	A04
		P1D04-LKT-AR-PRM-CHD-DSE-4016	A04
		P1D04-LKT-AR-PRM-CHD-DSE-4017	A04
Akurdi	Land Plan	P1D04-LKT-AR-PRM-ADI-LP-DST-0001	P05
		P1D04-LKT-AR-PRM-ADI-LP-DST-0002	P05
		P1D04-LKT-AR-PRM-ADI-LP-DST-0003	P05
	Station Box	P1D04-LKT-AR-PRM-ADI-GL-DRP-1001	A03
		P1D04-LKT-AR-PRM-ADI-CL-DRP-1002	A03
		P1D04-LKT-AR-PRM-ADI-PT-DRP-1003	A03
		P1D04-LKT-AR-PRM-ADI-RO-DRP-1004	A03
		P1D04-LKT-AR-PRM-ADI-DSE-2001	A03
		P1D04-LKT-AR-PRM-ADI-DSE-2004	A03
		P1D04-LKT-AR-PRM-ADI-DSE-2005	A03
	E/E1	P1D04-LKT-AR-PRM-ADI-DRP-4002	A04
		P1D04-LKT-AR-PRM-ADI-DRP-4003	A04
		P1D04-LKT-AR-PRM-ADI-DRP-4004	A04
			Y
	E/E2	P1D04-LKT-AR-PRM-ADI-DRP-4012	A04
		P1D04-LKT-AR-PRM-ADI-DRP-4013	A04
		P1D04-LKT-AR-PRM-ADI-DRP-4014	A04
		P1D04-LKT-AR-PRM-ADI-DSE-4015	A04
		P1D04-LKT-AR-PRM-ADI-DSE-4016	A04
		P1D04-LKT-AR-PRM-ADI-DSE-4017	A04



Status 10/3/2025

Nagdi	LAND PLAN	P1D04-LKT-AR-PRM-NGI-LP-DST-0001	P04
		P1D04-LKT-AR-PRM-NGI-LP-DST-0002	P04
		P1D04-LKT-AR-PRM-NGI-LP-DST-0003	P04
	Station Box	P1D04-LKT-AR-PRM-NGI-GL-DRP-1001	A03
		P1D04-LKT-AR-PRM-NGI-CL-DRP-1002	A03
		P1D04-LKT-AR-PRM-NGI-PT-DRP-1003	A03
		P1D04-LKT-AR-PRM-NGI-RO-DRP-1004	A03
		P1D04-LKT-AR-PRM-NGI-PD-DRP-1005	A03
		P1D04-LKT-AR-PRM-NGI-DSE-2001	A03
		P1D04-LKT-AR-PRM-NGI-DSE-2005	A03
		P1D04-LKT-AR-PRM-NGI-DSE-2006	A03
	E/E1	P1D04-LKT-AR-PRM-NGI-DRP-4001	A03
		P1D04-LKT-AR-PRM-NGI-DRP-4002	A03
		P1D04-LKT-AR-PRM-NGI DSE 4003	A03
	E/E2	P1D04-LKT-AR-PRM-NGI-DRP-4012	A03
		P1D04-LKT-AR-PRM-NGI-DRP-4013	A03
		P1D04-LKT-AR-PRM-NGI-DSE-4014	A03
Bhakti Shakti	LAND PLAN	P1D04-LKT-AR-PRM-BKS-LP-DST-0001	P03
		P1D04-LKT-AR-PRM-BKS-LP-DST-0002	P03
		P1D04-LKT-AR-PRM-BKS-LP-DST-0003	P03
	Station Box	P1D04-LKT-AR-PRM-BKS-GL-DRP-1001	A03
		P1D04-LKT-AR-PRM-BKS-CL-DRP-1002	A03
		P1D04-LKT-AR-PRM-BKS-PT-DRP-1003	A03
		P1D04-LKT-AR-PRM-BKS-RO-DRP-1004	A03
		P1D04-LKT-AR-PRM-BKS-DSE-2001	A03
		P1D04-LKT-AR-PRM-BKS-DSE-2005	A03
		P1D04-LKT-AR-PRM-BKS-DSE-2006	A03
	E/E1	P1D04-LKT-AR-PRM-BKS-DRP-4002	A01
		P1D04-LKT-AR-PRM-BKS-DSE-4003	A01
	E/E2	P1D04-LKT-AR-PRM-BKS-DRP-4012	A01
		P1D04-LKT-AR-PRM-BKS-DRP-4013	A01
		P1D04-LKT-AR-PRM-BKS-DSE-4014	A01
GFC			
Bhakti Shakti	Station Box	P1D04-LKT-AR-PRM-BKS-GL-DRP-1001	B03
		P1D04-LKT-AR-PRM-BKS-CL-DRP-1002	B03
		P1D04-LKT-AR-PRM-BKS-PT-DRP-1003	B03
		P1D04-LKT-AR-PRM-BKS-RO-DRP-1004	B03
		P1D04-LKT-AR-PRM-BKS-DSE-2001	B03
		P1D04-LKT-AR-PRM-BKS-DSE-2002	B03
		P1D04-LKT-AR-PRM-BKS-DSE-2003	B03
		P1D04-LKT-AR-PRM-BKS-DSE-3001	B03
		P1D04-LKT-AR-PRM-BKS-DSE-3002	B03

Subhadra
Architectural Expert
Ar. Subhadra More



RGH

ISSUED DRAWING LIST FOR BHAKTI SHAKTI					Title	
Sr No.	Entry-Exit-01	Drawing Number	Revision			
1	a) Structural GAD	P1D04-LKT-CV-PRM-BKS-DRE-6023	A01		ENTRY EXIT 01 GAD PLAN	
	b) R/F Details					
	Beam	P1D04-LKT-CV-PRM-BKS-DRE-6031	B03		ENTRY EXIT-E1 BEAM REINF DETAIL	
		P1D04-LKT-CV-PRM-BKS-DRE-6031A	B03		ENTRY EXIT-E1 BEAM REINF DETAIL	
		P1D04-LKT-CV-PRM-BKS-DRE-6031B	B03		ENTRY EXIT-E1 BEAM REINF DETAIL	
	Column	P1D04-LKT-CV-PRM-BKS-DRE-6004	B03		ENTRY EXIT EE-01 COLUMN LAYOUT PLAN & REINF DETAIL	
		P1D04-LKT-CV-PRM-BKS-DRE-6004A	B03		ENTRY EXIT EE-01 COLUMN LAYOUT PLAN & REINF DETAIL	
	Footing	P1D04-LKT-CV-PRM-BKS-DRE-6003	B03		ENTRY EXIT EE-01 FOUNDATION PLAN	
	Slab	P1D04-LKT-CV-PRM-BKS-DRE-6036	B03		ENTRY EXIT EE-01-SLAB REINF DETAIL	
	c) PEB Roof	P1D04-LKT-CV-PRM-BKS-DRE-6001	A01		ENTRY EXIT 01 ROOF PLAN	
2	d) Escalator					
	Entry-Exit-02					
	a) Structural GAD	P1D04-LKT-CV-PRM-BKS-DGA-6026	A01		ENTRY EXIT 02 GAD PLAN	
	b) R/F Details	P1D04-LKT-CV-PRM-BKS-DGA-6026A	A02		ENTRY EXIT 02 GAD PLAN	
	Beam	P1D04-LKT-CV-PRM-BKS-DRE-6024	A01		ENTRY EXIT-E2 BEAM REINF DETAIL	
		P1D04-LKT-CV-PRM-BKS-DRE-6024A	A01		ENTRY EXIT-E2 BEAM REINF DETAIL	
		P1D04-LKT-CV-PRM-BKS-DRE-6024B	A01		ENTRY EXIT-E2 BEAM REINF DETAIL	
	Column	P1D04-LKT-CV-PRM-BKS-DRE-6029	A02		ENTRY EXIT EE 02 COLUMN LAYOUT PLAN & REINF DETAIL	
		P1D04-LKT-CV-PRM-BKS-DRE-6029A	A02		ENTRY EXIT EE 02 COLUMN LAYOUT PLAN & REINF DETAIL	
3	Footing	P1D04-LKT-CV-PRM-BKS-DRE-6028	A02		ENTRY EXIT EE-02 FOUNDATION PLAN	
	Slab	P1D04-LKT-CV-PRM-BKS-DRE-6025	A01		ENTRY EXIT EE-02-SLAB REINF DETAIL	
		P1D04-LKT-CV-PRM-BKS-DRE-6025A	A01		ENTRY EXIT EE-02-SLAB REINF DETAIL	
	c) PEB Roof	P1D04-LKT-CV-PRM-BKS-DRE-6002	A01		ENTRY EXIT-02 ROOF PLAN	
	d) Escalator					
	f) UG Tank	P1D04-LKT-CV-PRM-BKS-DGA-6027	A02		UNDER GROUND PLAN (SHEET 01 OF 02)	
		P1D04-LKT-CV-PRM-BKS-DGA-6027A	A02		UNDER GROUND PLAN (SHEET 02 OF 02)	
	STATION BOX					
	a) GAD CL	P1D04-LKT-CV-PRM-BKS-DGA-1001	B05		GENERAL ARRANGEMENT DRAWING-CONCOURSE	
		P1D04-LKT-CV-PRM-BKS-DGA-1002	B05		GENERAL ARRANGEMENT DRAWING-CONCOURSE	
	b) GAD PL	P1D04-LKT-CV-PRM-BKS-DGA-1003	B03		PLATFORM LEVEL GAD PLAN, GENERAL ARRANGEMENT DRAWING-PLATFORM	
		P1D04-LKT-CV-PRM-BKS-DGA-1004	B03		PLATFORM LEVEL GAD PLAN, GENERAL ARRANGEMENT DRAWING-PLATFORM	
	c) Girder Dimension CL	P1D04-LKT-CV-PRM-BKS CL-DRC-2007	B01		DIMENSION & SECTION DETAILS OF GIRDER CG1 AT CONCOURSE LEVEL	
		P1D04-LKT-CV-PRM-BKS CL-DRC-2008	B01		DIMENSION & SECTION DETAILS OF GIRDER CG2 AT CONCOURSE LEVEL	
		P1D04-LKT-CV-PRM-BKS CL-DRC-2009	B02		DIMENSION & SECTION DETAILS OF GIRDER CG2D AT CONCOURSE LEVEL	
		P1D04-LKT-CV-PRM-BKS-DRC-2010	B02		DIMENSION & SECTION DETAILS OF GIRDER CG3A, CG3D AT CONCOURSE LEVEL	





	P1D04-LKT-CV-PRM-BKS-DRC-2011	B04	DIMENSION & SECTION DETAILS OF GIRDER CG3, CG3C AT CONCOURSE LEVEL.
	P1D04-LKT-CV-PRM-BKS-DRC-2012	B02	DIMENSION & SECTION DETAILS OF GIRDER CG4 AT CONCOURSE LEVEL.
	P1D04-LKT-CV-PRM-BKS-DRC-2013	B01	DIMENSION & SECTION DETAILS OF GIRDER CG4D AT CONCOURSE LEVEL.
d) Girder Dimension PL	P1D04-LKT-CV-PRM-BKS-PT-DRE-3001	B02	DIMENSION & SECTION DETAILS OF GIRDER PG1B & PG1E AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3002	B02	DIMENSION & SECTION DETAILS OF GIRDER PG2B & PG2E AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3003	B02	DIMENSION & SECTION DETAILS OF GIRDER PG3B, PG3E, PG7B & PG7E AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3004	B02	DIMENSION & SECTION DETAILS OF GIRDER PG4B & PG4E AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3005	B02	DIMENSION & SECTION DETAILS OF GIRDER PG5B & PG5E AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3006	B02	DIMENSION & SECTION DETAILS OF GIRDER PG6B & PG6E AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3007	B03	DIMENSION & SECTION DETAILS OF GIRDER PG1, PG1D AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3008	B02	DIMENSION & SECTION DETAILS OF GIRDER PG2, PG2D AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3009	B02	DIMENSION & SECTION DETAILS OF GIRDER PG3, PG3D AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3010	B03	DIMENSION & SECTION DETAILS OF GIRDER PG4, PG4D AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3011	B02	DIMENSION & SECTION DETAILS OF GIRDER PG5, PG5D AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3012	B02	DIMENSION & SECTION DETAILS OF GIRDER PG6, PG6D AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3013	B02	DIMENSION & SECTION DETAILS OF GIRDER PG7, PG7D AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3014	B02	DIMENSION & SECTION DETAILS OF GIRDER PG8, PG8D AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3015	B03	DIMENSION & SECTION DETAILS OF GIRDER PG3D AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3016	B02	DIMENSION & SECTION DETAILS OF GIRDER PG1A, PG1C, (PG8A & PG8C) AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3017	B02	DIMENSION & SECTION DETAILS OF GIRDER PG2A AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3018	B02	DIMENSION & SECTION DETAILS OF GIRDER PG3A, PG4C AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3019	B03	DIMENSION & SECTION DETAILS OF GIRDER PG4A AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3020	B02	DIMENSION & SECTION DETAILS OF GIRDER PG2C, PG5A AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3021	B02	DIMENSION & SECTION DETAILS OF GIRDER PG6A, PG6C AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3022	B02	DIMENSION & SECTION DETAILS OF GIRDER PG7A, PG7C AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3023	B03	DIMENSION & SECTION DETAILS OF GIRDER PG3C AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3024	B02	DIMENSION & SECTION DETAILS OF GIRDER PG5C AT PLATFORM LEVEL.
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3025	B02	DIMENSION & SECTION DETAILS OF GIRDER PG8B & PG8E AT PLATFORM LEVEL.
e) Lift			
f) Staircase			
g) PEB Roof	P1D04-LKT-CV-PRM-BKS-DGA-4000	B01	BHAKTI SHAKTI METRO STATION ROOF PURLIN LAYOUT PLAN
	P1D04-LKT-CV-PRM-BKS-DGA-4001	B01	BHAKTI SHAKTI METRO STATION ROOF COLUMN MARKING LAYOUT PLAN
	P1D04-LKT-CV-PRM-BKS-DGA-4002	B01	BHAKTI SHAKTI METRO STATION ROOF TIE & RAFTER LAYOUT PLAN
	P1D04-LKT-CV-PRM-BKS-DSE-4003	B01	BHAKTI SHAKTI METRO STATION ROOF SECTION 1-1
	P1D04-LKT-CV-PRM-BKS-DSE-4004	B01	BHAKTI SHAKTI METRO STATION ROOF SECTION 2-2
	P1D04-LKT-CV-PRM-BKS-DSE-4005	B01	BHAKTI SHAKTI METRO STATION ROOF SIDE ELEVATION 3-3
	P1D04-LKT-CV-PRM-BKS-DGA-4006	B02	BHAKTI SHAKTI METRO STATION ROOF CONNECTION DETAIL (SHEET 1 OF 3)
	P1D04-LKT-CV-PRM-BKS-DGA-4006A	B02	BHAKTI SHAKTI METRO STATION ROOF CONNECTION DETAIL (SHEET 2 OF 3)
	P1D04-LKT-CV-PRM-BKS-DGA-4006B	B01	BHAKTI SHAKTI METRO STATION ROOF CONNECTION DETAIL (SHEET 3 OF 3)
h) Facade IP	P1D04-LKT-CV-PRM-BKS-PT-DRE-3063	B01	FACADE SUPPORTING ARRANGEMENT FIXING DETAILS DRAWING AT PLATFORM LEVEL (SHEET 01 OF 02)
	P1D04-LKT-CV-PRM-BKS-PT-DRE-3069	A01	FACADE SUPPORTING ARRANGEMENT FIXING DETAILS DRAWING AT CONCOURSE LEVEL

Signature 10/3/2025

Sketch as on 10/3/2025

i) Precast Slab	P1D04-LKT-CV-PRM-BKS PT-DRE-3064	B01	PRECAST SLAB MARKING PLAN AT PLATFORM LEVEL
	P1D04-LKT-CV-PRM-BKS PT-DRE-3065	B01	PRECAST SLAB SECTION DETAIL AT PLATFORM LEVEL
	P1D04-LKT-CV-PRM-BKS PT-DRE-3066	B01	PLATFORM LEVEL SLAB DETAIL BETWEEN GRID 9 TO 5
	P1D04-LKT-CV-PRM-BKS PT-DRE-3067	B01	PLATFORM LEVEL SLAB DETAIL BETWEEN GRID 5 TO 1
	P1D04-LKT-CV-PRM-BKS PT-DRE-3068	B01	PLATFORM LEVEL SLAB SECTION DETAIL
j) Typical Drawing For Mullion And Lintels			

hu



Ref. No: -YFC-BBG/MMRCL/Tender/2025/0411

Date: - 31/01/2025

To,
Executive Director (Procurement)
MAHARASHTRA METRO RAIL CORPORATION LIMITED
Civil Court Metro Station, Nyayamurti
Ranade Path, Pune-411005, Maharashtra, INDIA

Project: - Construction of four (04) nos Elevated Metro Stations viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti excluding viaduct, pier arms, girder erection, deck slab at concourse & platform level and E&M works but including Plumbing works on the North-South Corridor of Pune Metro Rail Project- Reach 1 Extension. **Regarding** Discussion meeting regarding assessing the reasonability of the quoted rates and review a detailed price analysis in relation on the scope, schedule and risk allocation.

Reference

1. P1A-C02/2024 (ICB) Date:23-08-2024. (Tender Number)
2. Tender Submission Dt: - 06/11/2024
3. Maha-Metro/PMRP/P&C/ P1A-C02/2024/3346. Dt: - 24/12/2024 (Invitation letter for financial Opening)
4. Maha-Metro/PMRP/P&C/ P1A-C02/2025/0043. Dt: - 30/01/2025

Dear Sir,

This is with reference to the above.

Please find attached here with list of twenty four items which were discussed in the said meeting.

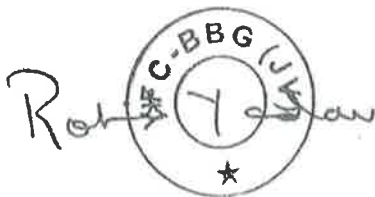
We agree to execute the estimated quantities of these items at the rates quoted by us. For the quantities of these twenty four items beyond the estimated quantities we agree to execute these items at your estimated rates.

We submit to you that this is very special consideration offered by us to Maha Metro due to our long standing relationship. We have offered this consideration only for the scope of work of this particular contract and we limit our promise only for execution of the scope of work pertaining to only this contract.

We now once again request you to kindly issue us the work order at the earliest.

Thanking you in anticipation and assuring our best services at all time.

With regards,


C-BBG

Authorized Signatory

For YFC Projects Private Limited
and BBG infrastructure Private Limited

Enclosure: - The List of twenty four items.

मह. मेट्रो रेल पुणे
आवक क्र. 4189
दिनांक 02/02/2025

Sr Dumble

31/2/25



YFC – BBG (JV)

"YFC House", Plot No. – 14, Block – B, Infocity, Sector – 34, Gurgaon – 122001, Haryana, India
Email: yfc_bbg_jv@yahoo.com



MAHARASHTRA METRO RAIL CORPORATION LIMITED

PUNE METRO RAIL PROJECT

CIN: U60100MH2015SGC262054

**Maha Metro, Block No. A3, Food Grain Godown, Near Civil Court, Next to Kamgar Putala Vasahat,
Shivajinagar, Pune 411005**

Annexure - VIII

No. Maha-Metro/PMRP/P&C/ P1A-C02/2025/ 0043

Date: 30 January 2025

To,
M/s YFC-BBG Joint Venture,
YFC House, Plot 14,
Block – B, Infocity,
Sector-34, Gurgaon - 122001,
Haryana, India
Email Id: rohit.yadav@yfcprojects.com
Phone No: +91-1244368717

Kind Attention: Mr. Rohit Yadav

Tender No.: P1A-C02/2024 (ICB) dated 23 August 2024

Name of Work: Construction of four (04) nos Elevated Metro Stations viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti excluding viaduct, pier arms, girder erection, deck slab at concourse & platform level and E&M works but including Plumbing works on the North-South Corridor of Pune Metro Rail Project- Reach 1 Extension.

Subject: Discussion meeting regarding assessing the reasonability of the quoted rates and review a detailed price analysis in relation to the scope, schedule, and risk allocation.

Reference:

1. Your submission dated 06 November 2024
2. Invitation to M/s YFC-BBG Joint Venture for opening of financial bid vide letter no. Maha-Metro/PMRP/P&C/P1A-C02/2024/3346 dated 24 December 2024

With reference to the subject work mentioned above, it is hereby informed that the Maha-Metro Evaluation Committee has observed that the rates quoted for various items in the financial bid submitted by M/s YFC-BBG Joint Venture are abnormally high or low.

Therefore, you are requested to be present for a discussion on the reasonability of the quoted rates, including a detailed price analysis of the bid price in relation to the scope, schedule, allocation of risks, and responsibilities. The discussion is scheduled for **30th January 2025 at 16:00 Hrs.** in the office of the undersigned.


30/1/25

Executive Director (Procurement & Contracts)

Pune Metro Rail Project,

For and on behalf of Maharashtra Metro Rail Corporation Limited

Copy to:

1. Director/Works (PMRP), Maha-Metro: For kind information please.
2. GM/Finance (PMRP), Maha-Metro: For kind information please.
3. CPM/Reach 01 Stations (PMRP), Maha-Metro: For kind information please.





Order No: P1A-C02/2024

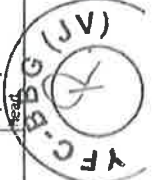
Scope of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S. NO.	Sched No.	Item No.	Item Description	Unit	Qty	Estimated Rate with GST @ 18%	Estimate Amount (INR) Incl. 18% GST	Rate quoted by L1 Bidder M/s YFC-BBG Joint Venture with GST @ 18%	Amount Quoted by M/s YFC-BBG Joint Venture (INR) Incl. 18% GST	% Increase of L1 Bidder rate wrt. Estimated Rate	Difference in Amount (INR)
1	A	NIL									
2	B1	2.4	Extra for providing and placing in position 2 Nos. 6mm dia. M.S. bars at every third course of half brick masonry	Sqm	80.00	104.80	8,384.00	400.00	32,000.00	281.68%	23,616.00
3	B1	4.3.1	Providing and fixing glass strips in joints of terrazzo / cement concrete floors. 40 mm wide and 4 mm thick	Metre	100.00	91.75	9,175.00	200.00	20,000.00	117.98%	10,825.00
4	B1	6.6	Dispersing with oil bound washable distemper of approved brand and manufacture to give an even shade :								
		6.6.1	New work (two or more coats) over and including water thinnable priming coat with cement primer	Sqm	40.00	185.65	7,426.00	355.00	14,200.00	91.22%	6,774.00
5	B1	6.7	Applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile Organic Compound) content.								
		6.7.1	With water thinnable cement primer on wall surface having VOC content less than 50 grams/litre	Sqm	80.00	73.95	5,916.00	355.00	28,400.00	380.05%	22,484.00
6	B1	6.8	Finishing walls with water proofing cement paint of required shade :								
		6.8.1	New work (Two or more coats applied @ 3.84 kg/10 sqm).	Sqm	80.00	116.90	9,352.00	200.00	16,000.00	71.09%	6,648.00
7	B1	6.9	Applying priming coat:								
		6.9.1	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanized iron/steel works	Sqm	80.00	67.40	5,392.00	125.00	10,000.00	85.46%	4,608.00
8	B1	6.14	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete.								
		6.14.1	On concrete work (on wall)	Sqm	200.00	235.15	47,030.00	400.00	80,000.00	70.10%	32,970.00
9	B1	7.2.1	Providing and laying Integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25 mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20 mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20 mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge :	Sqm	40.00	2,024.70	80,988.00	5,000.00	2,00,000.00	146.95%	1,19,012.00
		7.3	Using rough Kota stone								
10	B1	7.3	Providing and applying integral crystalline slurry of hydrophilic in nature for waterproofing treatment to the RCC structures like retaining walls of the basement, water tanks, roof slabs, podiums, reservoir, sewage & water treatment plant, tunnels / subway and bridge deck etc., prepared by mixing in the ratio of 5 : 2 (5 parts integral crystalline slurry : 2 parts water) for vertical surfaces and 3 : 1 (3 parts integral crystalline slurry : 1 part water) for horizontal surfaces and applying the same from negative (internal) side with the help of synthetic fiber brush. The material shall meet the requirements as specified in ACI- 212-3R-2010 i.e by reducing permeability of concrete by more than 90% compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure on negative side. The crystalline slurry shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.								
		7.3.2	For horizontal surface one coat @ 1.10 kg per sqm.	Sqm	823.14	311.50	2,56,408.40	650.00	5,35,041.60	108.67%	2,78,633.20





Sched Utl	Item No.	Item Description	Unit	Qty	Estimated Rate with GST @ 18%	Estimate Amount (INR) Incl. 18% GST	Rate quoted by L1 Bidder M/s YFC- BPG Joint Venture with GST @ 18%	Amount Quoted by M/s YFC-BPG Joint Venture (INR) Incl. 18% GST	% Increase of L1 Bidder rate wrt. Estimated Rate	Difference in Amount (INR)
11	B2	NII								
12	B3	NII								
13	C 1.01	Providing and installing cast-in-situ vertical bored piles of approximate depth as per drawing and with M35/20 where '35' is the grade of concrete (as per OCS) Incl all operations such as installation and shifting of piling rig etc, in all strata along elevated section and '20' is the 'nominal maximum aggregate size'. The cost shall also include the cost of empty boring wherever required. The stated length include test piles for initial load tests. (Measurement shall be from cut-off level to founding level). The item includes disposal of earth, muck, slush released from piles, top cutted portion of pile at dumping ground for all leads.								
	1.01.2	For 600 mm dia Pile								
		(i) By hydraulic rigs using partial depth casing with polymer Extra for using M-40 (Min. cement content 410 kg as per requirement/ technical specifications) instead of M-35 item no. 2.01 above	RMT	55.00	8,917.65	4,90,470.67	15,000.00	8,25,000.00	68.21%	3,34,529.33
14	C 2.2	Providing and fixing swettable water bar 20 x20 mm, & fixing of chemical injection holes at construction joint and junction of raft and Pump room wall for vertical and horizontal also.	Cum	40.00	101.78	4,071.20	4,000.00	1,60,000.00	3830.05%	1,55,928.80
15	C 4.6	Providing and fixing swettable water bar 20 x20 mm, & fixing of chemical injection holes at construction joint and junction of raft and Pump room wall for vertical and horizontal also.	Cum	40.00	11,869.20	4,74,768.00	18,500.00	7,40,000.00	55.87%	2,65,232.00
			Met	446.59	844.20	3,77,012.29	3,000.00	13,39,773.60	255.37%	9,62,761.31
16	D 1.3	Providing and laying in position Plumb Concrete	Cum	20.00	6,124.13	1,22,482.58	10,000.00	2,00,000.00	63.29%	77,517.42
17	D 8.10.2	Supply & fixing of 3mm Thick SS 304 plate	Sqft	400.00	1,951.43	7,80,570.00	3,000.00	12,00,000.00	53.73%	4,19,430.00
18	D 11.01	Cleaning the Surface, Priming the same by Kemper EP Primer Providing & Applying Kemper V 210 treatment in 2 coats on the surface as per manufactured by (KEMPER) Cleaning the external surface of G.I Sheet Area. Kemper V 210 Polyurethane Base pels are a fast durric waterproofing membranes with excellent chemicals resistance Properties. Kemper is Elongalich lot break Kemper Polyurethane forms a tough flexible membranes film which eliminates need for a reinforcing layer. Reinforcement Fibres is all area over movement Joints. Kemper Polyurethane cure time 4 Hours. Kemper is Coverage is 2 kg / sqm. Kemper is a 2 Coats, 4 Hrs each coats. Kemper is using Roller / Brush as per manufacturers Details, that is as per kemper details and manuals & Location as per drawing & as directed by Engineer in charge. The rates includes the cost of scaffolding. waterproofing shall be guaranteed for 10 years in Approved Performance. WIDHT WATERPROOFING VARIES AS PER SITE LOCATION AT VARIOUS SECTION (WIDTH VARIES @ FCs 300MM TO 700 MM).	Sqm	40.00	3,600.84	1,44,033.60	10,000.00	4,00,000.00	177.71%	2,55,966.40
19	E E5	HIT Rebaring For Gutter Arrangement : Supply, Drilling/Cleaning hole and injecting chemical, Application to be designed separately for Rebars as simply supported, Moment or splice connection as per EC2 / TR 023 or relevant tested and accepted rebar guidelines. The chemical should ETA approval for seismic rebar as a minimum qualifying criterion. Drilling hole with double flute type drill Bits or Hollow drill bits to the required/Depth by rotary hammer drill, cleaning with brush and jet of clean air, filling resin and hardener using serrated nozzle to eliminate mixing error with standard HDE A22 battery dispenser recommendations. The Adequate diameter and embedment of rebar to be decided as per PROFIS rebar software & the report to be submitted to the project manager/design engineer for approval. Scanning before drilling to be done to avoid hitting existing rebars Re 500 for 12mm to 24mm diameter 290mm depth including necessary scaffolding Providing and fixing Decking consist of 1.2 mm thick galvanized steel deck sheet TR-80-TM (\$350 Grade) conforming to IS 277:1992 used as permanent shuttering. This metal deck will be supported on structural steel beam with shear stud of 190 with 125mm long, spacing as per approved structural drawing. (Structural steel like Beam, column, joists etc. & concrete of different grade as per design will be paid separately).	Nos	600.00	670.30	4,02,179.40	1,100.00	6,40,000.00	64.11%	2,57,820.60
20	E E-8.1	Providing and fixing Decking consist of 1.2 mm thick galvanized steel deck sheet TR-80-TM (\$350 Grade) conforming to IS 277:1992 used as permanent shuttering. This metal deck will be supported on structural steel beam with shear stud of 190 with 125mm long, spacing as per approved structural drawing. (Structural steel like Beam, column, joists etc. & concrete of different grade as per design will be paid separately).	Sqm	80.00	4,000.00	3,20,000.00	7,000.00	5,60,000.00	75.00%	2,40,000.00
21	F 12.1	SUBMERISBLE UNDER GROUND FOR BOREWELL (2 Nos. Bore Well) No. of Pumps: 1 (1 Working) Capacity : 200 LPM Head : 100 m	Set	8.00	69,573.00	5,56,584.00	3,10,000.00	24,80,000.00	345.58%	19,23,416.00





Annexure - VIII

Item No.	Item Description	Unit	Qty	Estimated Rate with GST @ 18%	Estimate Amount (INR) Incl. 18% GST	Rate quoted by L1 Bidder M/s YFC-BBG Joint Venture with GST @ 18%	Amount Quoted by M/s YFC-BBG Joint Venture (INR) Incl. 18% GST	% Increase of L1 Bidder rate wrt. Estimated Rate	Difference in Amount (INR)
22	G 1.1 Excavation for roadway in earth, soil of all sorts, sand, gravel or soft murum including dressing section to the required grade, camber and side slopes and conveying the excavated materials with all lifts upto a lead of 50m. and spreading for embankment or stacking as directed. NORTH 301	CUM	7,332.00	121.66	8,92,011.12	700.00	14,66,400.00	64.39%	5,74,388.88
23	G 2.2 Providing and laying concrete pipes of I.S.NP. class of 300mm diameter in proper line, level and slope including necessary collars, excavation, laying, fixing with collars in cement mortar 1:1 and refilling the trench complete. Spec. No.: Bd V.41, Page No. 573 (From gully chamber to SWD)	RWT	80.00	1,258.09	1,00,647.36	5,000.00	4,00,000.00	297.43%	2,99,352.64
24	G 2.3 Providing, hoisting and fixing in position C.I. manhole, frame and cover of best quality and of required size and shape with locking arrangements including applying 2 coats of anti-corrosive paint, etc. complete. (90 x 60 cm size and weight 35 kg.)	NOS	20.00	3,947.95	78,959.04	7,000.00	1,40,000.00	77.31%	61,040.96
25	G 3.1 Supplying, Laying and spreading murum in 200 to 300 mm thickness layer compacting with a roller upto getting density of 97 % including all lead and lifts. Specification No. RD - 13 No. 194	Cum	512.00	739.32	3,78,531.84	1,500.00	7,68,000.00	102.89%	3,89,468.16
26	G 5.2 Supply & fixing precast concrete cylindrical bollard of size as per specifications and 900 mm height (650 mm above finish level), manufactured by M - 30 grade of concrete & suitable reinforced & manufactured by vibro compaction process using FRP moulds, & with washed fine grit finish on the exposed surface of bollard of approved colour and texture, as per detail drawing as directed by engineer-in-charge.	NOS	120.00	2,263.98	2,71,677.84	3,500.00	4,20,000.00	54.59%	1,48,322.16
27	H Nil								
	Total Amount (INR)				58,24,070.34		1,26,94,815.20	117.97%	68,70,744.86



Ref. No: -YFC-BBG/MMRCL/Tender/2025/0421

Date: - 03/02/2025

To,
Executive Director (Procurement)
MAHARASHTRA METRO RAIL CORPORATION LIMITED
Civil Court Metro Station, Nyayamurti
Ranade Path, Pune-411005, Maharashtra, INDIA

Project: - Construction of four (04) nos Elevated Metro Stations viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti excluding viaduct, pier arms, girder erection, deck slab at concourse & platform level and E&M works but including Plumbing works on the North-South Corridor of Pune Metro Rail Project- Reach 1 Extension. **Regarding** additional Bank guarantee of 1.3 corer over and above as per the contract condition.

Reference

1. P1A-C02/2024 (ICB) Date:23-08-2024. (Tender Number)
2. Tender Submission Dt: - 06/11/2024
3. Maha-Metro/PMRP/P&C/ P1A-C02/2024/3346. Dt: - 24/12/2024 (Invitation letter for financial Opening)

Dear Sir,

This is with reference to the above.

We submit to you that we are the lowest bidder for the Tender No. P1A-C02/2024. Our bid is below is the estimated cost. As per the terms of the contract we are required to submit a performance bank guarantee (PBG) of the 10% of contract amount. You have instructed us to submit and an additional Bank guarantee of Rs 1.3 crore over and above the Bank Guarantee Required as per the contract condition.

We would like to bring to your kind attention that our Bank has refused for any amendment and modification of Bank Guarantee form the terms of the contract.

In view of the above, we request you to kindly retain Rs 1.3 crore from our Running Bills. The additional retention money may please be deducted at the rate of Rs 10 lakh from every bill.

We now once again request you to kindly issue us the work order at the earliest.

Thanking you in anticipation and assuring our best services at all times.

With regards,

Robit Y



Authorized Signatory

For YFC Projects Private Limited
and BBG infrastructure Private Limited

YFC – BBG (JV)

"YFC House", Plot No. – 14, Block – B, Infocity, Sector – 34, Gurgaon – 122001, Haryana, India
Email: yfc_bbg_jv@yahoo.com



Item Wise BoQ

Validate Print Help

Tender Inviting Authority: ED P&C

Name of Work: Construction of four (04) nos Elevated Metro Stations viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti excluding viaduct, pier arms, girder erection, deck slab at concourse & platform level and E&M works but including Plumbing works on the North-South Corridor of Pune Metro Rail Project- Reach 1 Extension.

Contract No: P1A-C02/2024

Name of the Bidder/ Bidding Firm / Company :		YFC-BBG (JV)									
PRICE SCHEDULE (This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)											
NUMBER #	TEXT #	TEXT #	TEXT #	TEXT #	TEXT #	TEXT #	TEXT #	TEXT #	TEXT #	TEXT #	TEXT #
Sl. No.	Item Description	Item Code / Make	% distribution of equivalent Bidder In t INR (INR/USD/Euro)	BASIC RATE In Figures To be entered by the Bidder In (INR/USD/Euro)	TOTAL AMOUNT, it will be converted based on column L value in Rs. P	NUMBER #	TOTAL AMOUNT	NUMBER #	TOTAL AMOUNT	NUMBER #	TEXT #
1	2	3	12	13	53	55					
1	Schedule A										
1.01	Schedule A	General Works	INR	22675258.94	22675258.9400	INR Two Crore Twenty Six Lakh Seventy Five Thousand					
1.02	Schedule B	DSR Items comprising of Architectural, Plumbing & Site Development works (B1, B2 & B3)	INR	56180796.81	56180796.8114	INR Five Crore Sixty One Lakh Eighty Thousand Seven Hundred & Ninely Six and Paise Eight One One Four					
1.03	Schedule C	Stations RCC Structure Works	INR	193345721.41	193345721.4119	INR Nineteen Crore Thirty Three Lakh Forty Five					
1.04	Schedule D	Architectural Works (Non- DSR Items)	INR	314487913.74	314487913.7443	INR Thirty One Crore Forty Four Lakh Eighty Seven					
1.05	Schedule E	P&B & Structural Works	INR	346679193.66	346679193.6562	INR Thirty Four Crore Sixty Six Lakh Seventy Nine					
1.06	Schedule F	Plumbing works- Non DSR Items	INR	42324692.95	42324692.9506	INR Four Crore Twenty Three Lakh Twenty Four					
1.07	Schedule G	External & Site Development Works	INR	12406536.38	12406536.3802	INR One Crore Twenty Four Lakh Six Thousand Five					
1.08	Schedule H	Signage Works	INR	13070112.00	13070112.0000	INR One Crore Thirty Lakh Seventy Thousand One					
1.09	Schedule I	Miscellaneous Works (Fixed Sum) or CPWD/PMC/SSR-SOR basis	INR	60000000.00	60000000.0000	INR Six Crore and Paise Zero Zero Only					
Total in Figures		1061170225.8947									
Quoted Rate in Words		One Hundred Six Crore Eleven Lakh Seventy Thousand Two Hundred Eighty Five and Paise Eight One One Four									



MAHARASHTRA METRO RAIL CORPORATION LIMITED
Boq(P1A-C02/2024 (ICB))

1- Annexure-A:
Financial Bid

Sr. No.	Item Description	Unit	Qty	Unit Rate				Total Amount			
				(In INR)	(In USD)	(In EURO)	(In Any other Currency)	(In INR)	(In USD)	(In EURO)	(Any Other Currency)
A1	Schedule										
1	Schedule A	General Works	LS	2,26,75,258.94				2,26,75,258.94	0.00	0.00	0.00
2	Schedule B	DSR items comprising of Architectural, Plumbing & Site Development works (B1, B2 & B3)	LS	5,61,80,796.81				5,61,80,796.81	0.00	0.00	0.00
3	Schedule C	Stations RCC Structure Works	LS	19,33,45,721.41				19,33,45,721.41	0.00	0.00	0.00
4	Schedule D	Architectural Works (Non- DSR Items)	LS	31,44,87,913.74				31,44,87,913.74	0.00	0.00	0.00
5	Schedule E	PEB & Structural Works	LS	34,66,79,193.66				34,66,79,193.66	0.00	0.00	0.00
6	Schedule F	Plumbing Works- Non DSR Items	LS	4,23,24,692.95				4,23,24,692.95	0.00	0.00	0.00
7	Schedule G	External & Site Development Works	LS	1,24,06,536.38				1,24,06,536.38	0.00	0.00	0.00
7	Schedule H	Signage Work	LS	1,30,70,112.00				1,30,70,112.00	0.00	0.00	0.00
8	Schedule I	Miscellaneous Works (Fixed Sum) on CPWD/PWD/PMC/SSR-SOR basis	LS	6,00,00,000.00				6,00,00,000.00	0.00	0.00	0.00
Schedule Total for Schedule A1 =								1,06,11,70,225.89	0.00	0.00	0.00



Format for Financial Bid

(To be uploaded separately)

Bid Document No.: P1A-C02/2024 (ICB) Date: 23.08.2024

Date: 06-11-24

To,

The ED/Procurement & Contracts

Maharashtra Metro Rail Corporation Limited,

Civil Court Metro Station, Nyaymurti Ranade Path,

Shivajinagar, Pune-411005.

Sub: Tender No P1C-24/2024.

Name of Work: "Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project."

We hereby offer the Amount of INR 106,11,70,225.89 (INR One Hundred Six Crore Eleven Lacs Seventy Thousand Two Hundred Twenty Five and Eighty Nine Paisa) for the subject Tender as per terms and conditions of the tender and as detailed in Annexure-A for various Schedules.

- a) We confirm that We have read and understood the rules and regulations regarding the bidding process and we have inspected the various conditions as present in the site and have also inspected the physical infrastructure available on the site, plans and specifications of site and offer my/our acceptance to execute work as per the terms and conditions contained herein in the Bidding documents.
- b) This offer is being made after taking into consideration of all the terms and conditions stated in the Bid document, and after careful assessment of all risks and contingencies and all other conditions that may affect the financial Bid.
- c) I/We agree to keep my/ our offer valid for 180 days from the due date of submission of this Bid.

Signature (Authorized signatory):

Name of Signatory: Rohit Yadav

Designation: Authorised Signatory

Name & Seal of the Bidder: YFC – BBG (JV)

Address: YFC House, Plot 14, Block – B,


Infocity, Sector – 34, Gurgaon – 122001,

Haryana, India

Tel (M): + 91 9901220717

Tel (O): + 91 124 4368717

Email: yfc_bbg_jv@yahoo.com, Rohit.yadav@yfcprojects.com

Rohit




YFC – BBG (JV)

"YFC House", Plot No. – 14, Block – B, Infocity, Sector – 34, Gurgaon – 122001, Haryana, India

Email: yfc_bbg_jv@yahoo.com

MAHARASHTRA METRO RAIL CORPORATION LIMITED (PUNE METRO RAIL PROJECT)		
BILL OF QUANTITY (BOQ) - SUMMARY SHEET		
Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project		
S.NO.	Descriptions	BOQ Amount (INR)
1	SCHEDULE-A : General Works	₹ 22,675,258.94
2	SCHEDULE-B : DSR-2023 Items	₹ 56,180,796.81
3	SCHEDULE-C : Stations RCC Structure Works	₹ 193,345,721.41
4	SCHEDULE-D : Architectural Works (NDSR Items)	₹ 314,487,913.74
5	SCHEDULE-E : PEB & STRUCTURAL WORK	₹ 346,679,193.66
6	SCHEDULE-F : PLUMBING WORK (NDSR Items)	₹ 42,324,692.95
7	SCHEDULE-G : External & Site development Works	₹ 12,406,536.38
8	SCHEDULE-H : Signages Works	₹ 13,070,112.00
9	SCHEDULE-I : Any Other Items (CPWD/Pune SOR)	₹ 60,000,000.00
	Total of Schedule A+B+C+D+E+F+G+H+I	₹ 1,061,170,225.89



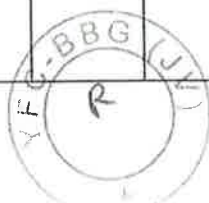
SUMMARY SHEET		
Schedule -A - General Works		
Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project		
Item	Description	Amount
	Schedule- A, General Works	
G-1	General Works	₹ 7,351,027.94
G-2	Geotechnical Works	₹ 1,364,000.00
G-3	Traffic signals, signage etc.	₹ 1,568,883.00
G-4	Road Works	₹ 12,391,348.00
	Total of Schedule -A -General works	₹ 22,675,258.94



Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

Schedule -A - General Works

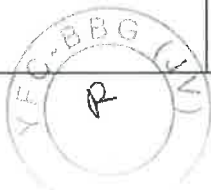
S.No.	Description	Unit	Total Qty	Basic Rate	Amount
	General Works				
G-1	Detailed survey along the corridor shall be carried out with the following details: a) Establishing GPS stations (at every proposed station locations) at the interval of not more than 200-250 m. The GPS station shall be fixing concrete pillar 600 mm x 600 mm x 1000 mm on building roof free with a proper concrete platform. Stainless Steel (SS) Plate 100 mm x 100 mm x 4 mm with center punch shall be fixed on the top of the station. GPS instrument accuracy shall be minimum horizontal 5 mm + 0.5 ppm and vertical 10 mm + 0.5 ppm in static observation. The base line measurement shall be based on minimum 4 hrs. static observations and other observations shall be with minimum 2 hrs. Static observations. (The observation time may be increased if the no. of satellite is less than 8 as the project corridor is a urban section.) b) Closed traversing shall be carried out storing in total station Angle and Distance from GPS to GPS with an accuracy of 1: 50000 by observing minimum 3 sets of face right and 3 set of face left.	KM	4.00	₹ 50,000.00	₹ 200,000.00
	Stations shall be established at an interval not more than 200 m. Closing error shall be distributed with least square method and Bowditch Method in commercial software compatible to the instrument used for traversing. The same commercial software shall be supplied to MMRC. Traverse pillar shall be established on permanent structure or providing and fixing concrete pillar 400mm x400mm x 600mm along the alignment. Total station raw data, calculations shall be submitted to the employer along with before and after adjustment co-ordinates in tabular form.				
	c) Detailed Topographical survey shall be carried out with adjusted traverse co-ordinates. All surface features, ground levels, and over-ground utilities shall be taken. Total Station raw data and calculations shall be submitted to Employer for No Objection. Drawings, raw data and calculations shall be submitted in soft and hard copy. d) A closed circuit leveling shall be run along the entire route connecting one pair of GPS to another pair of GPS station. Km. The accuracy of the leveling will be $(6/K)$, where the k is length of the leveling loop . Digital leveling/Auto level instrument shall be used to establish bench mark. Raw data from digital level shall be submitted along with adjusted and unadjusted levels in tabular form.				
	e) For station location, survey at Grid of 5m x 5m covering an area of approx. 100m beyond each side of station including area covering entry/exit structure, split concourse, property development etc. for verifying alignment and station footprint, making vertical & horizontal clearances and establishing triangular points and bench mark of the construction of station building, and matching it with the alignment of the approaches at station ends including correction, if any.				



Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

Schedule -A - General Works

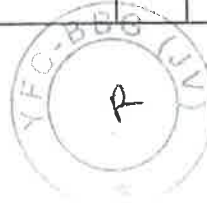
S.No.	Description	Unit	Total Qty	Basic Rate	Amount
	f) Establish all control points, traverse, bench mark and TBM. Fixing and Validating Centre line of corridor, GAD and pier locations duly considering feasibility of the pier locations on account of physical site constraints, utilities (by physical verification) and on the basis of Geotechnical Investigation Reports, vertical & horizontal clearances and establishing traverse points and bench mark for the elevated section including modifications, if any, as per drawings. No extra amount will be paid to redo or to re-establish any of the survey points. The work shall be maintained during the Contract Period including the extended contract period till the completion of the work. Rate includes all survey work including preparation of revised GAD in consultation with the Engineer. However, physical verification of utilities and Geotechnical investigations will be paid separately under relevant Schedules.				
	NOTE: i. Digital leveling instrument to be used for the work shall have the minimum accuracy of the order of ± 0.3 mm per km double run with least count not more than 0.01 mm ii. Total station instrument shall have minimum accuracy for: a) Angle measurements (Hz, V) of the order of 1" b) Distance measurement of the order of 1mm+2ppm iii. Payment at 50% of total cost of the item on checking and verification of all control points and submission of drawings and approval of the same by the employer. iv. Payment at 40% of total cost of the item equally distributed over the duration of the contract and will be paid on prorata basis. v. Payment at 10% of total cost of the item on satisfactory completion of work along with the final bill.				
2	Providing temporary barricade and arrangement for traffic diversion such as traffic signals during construction at site, for day and night as per requirement and drawing. This item will be payable only at two stages of construction. First stage involves construction of foundations and substructures: pile, pile cap & pier. The construction of typical superstructure viaduct will not require barricading, however particular superstructure works will need barricading. Second stage involves construction of particular superstructures. In both the stages of construction, the barricading and arrangements for traffic diversion has to be kept continuously. Nothing extra will be paid for dismantling and re-erecting the barricades the traffic signals and other arrangements at the same place/stretch.				
	The construction barricading will be limited to a width of 8.0m (outside to outside of barricading). This can be increased at specific locations with approval of Engineer.				
	(i) 2m height	RM	1,250.00	₹ 5,000.00	₹ 6,250,000.00



Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

Schedule -A - General Works

S.No.	Description	Unit	Total Qty	Basic Rate	Amount
	(ii) 1m height	RM	200.00	₹ 3,000.00	₹ 600,000.00
	(Note: Barricading may be required to be shifted laterally number of times but the same will be paid only once. The Payment schedule for item 2 shall be as follows:				
	(i) On completion of Piling, Pile cap, open foundation and piers as approved by Engineer- 70% of accepted amount.				
	(ii) After completion of all activities of Viaduct including removal of barricades and restoration of site with latest specification and as per the instructions of the Engineer, 30 % of accepted amount.				
	(iii) Once barricade has been provided and work started, removal of barricade is not permitted till completion of viaduct including construction of pile, pile cap, pier and pier caps. Erection of girders, segments till completion of entire super structure.				
	(iv) While erecting barricade, the bottom gap between barricade and road should be plugged with cement concrete from inside.				
	(v) There should be minimum openings at the end of barricade to allow access of lorries and machine to site work area. Even these spacing should have proper opening/closing arrangements.				
	(vi) Adequate blinking lights on barricade during night time must be ensured. The cost of this item should include provision for power pack/ Genset etc. so as to ensure the blinking of lights in night time as long as barricades are in position at the work spot.				
	(vii) After completion of the entire work, the release barricades will be the property of the contractor and he is also responsible for shifting all such release materials away from the site.				
	Note: 1 Running m= 1m LHS + 1m RHS				
	Note: 2 At Station location, where barricading periphery is not uniform the measurement shall be taken as half the total barricading perimeter.				
3	Submit colour photographs report including description of works to establish progress as directed by the Engineer and supply at monthly intervals, or as instructed by the Engineer. One set shall comprise of soft copy and one hard copy.	Per set	28.00	₹ 1,500.00	₹ 42,000.00
4	Supply of video DVDs of 180 minutes duration comprising one master copy and one extra copy showing the progress of works as directed by Engineer.	Per set	28.00	₹ 2,000.00	₹ 56,000.00
5	Supply of video DVDs with commentary of entire works comprising of every activities starting from commencement of work to the end of the work duly edited at the completion of work as directed by Engineer.	Per set	4.00	₹ 9,000.00	₹ 36,000.00



Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

Schedule -A - General Works

S.No.	Description	Unit	Total Qty	Basic Rate	Amount
6	Provide furnished site office, as per the drawing and specifications, for the use of Site Engineer and his supporting staff; at least at two locations; as per Specifications.	Per Sqm of Area			
7	Cutting, Removal, transporting, disposal of trees/handing over to the concerned department as per the instruction of Engineer of girth (measured at height of 1.0M above ground level) including excavation, backfilling and levelling of the ground as directed and specified in technical specification. (GOVT PERMISSION AND OTHER OBLIGATION SHOULD BE IN CONTRACTORS CONTRACT)				
7.1	Up to 30 CM. Girth	Nos.	20.00	₹ 510.09	₹ 10,201.84
7.2	Beyond 30 CM. Girth up to and including 50 CM. Girth	Nos.	20.00	₹ 565.46	₹ 11,309.10
7.3	Beyond 50 CM. Girth up to and including 75CM. Girth	Nos.	20.00	₹ 1,082.89	₹ 21,657.80
7.4	Beyond 75 CM. Girth up to and including 125CM. Girth	Nos.	16.00	₹ 1,500.00	₹ 24,000.00
7.5	Beyond 125 C.M. Girth	Nos.	8.00	₹ 2,000.00	₹ 16,000.00
8	Removal and transplanting trees (up to 10KM lead) of girth (measured at height of 1.0M above ground level) including excavation, backfilling, levelling of the ground and, maintenance of tree for a period of three year as directed and specified in technical specification from the date of transplantation. (GOVT PERMISSION AND OTHER OBLIGATION SHOULD BE IN CONTRACTORS CONTRACT)				
8.1	Up to 30 C.M. Girth	Nos.	8.00	₹ 1,000.00	₹ 8,000.00
8.2	Beyond 30 C.M. Girth up to and including 50.C.M. Girth	Nos.	8.00	₹ 2,000.00	₹ 16,000.00
8.3	Beyond 50 C.M. Girth up to and including 75.C.M. Girth	Nos.	11.00	₹ 2,000.00	₹ 22,000.00
8.4	Beyond 75 C.M. Girth up to and including 125 C.M. Girth	Nos.	11.00	₹ 2,000.00	₹ 22,000.00
9	Planting saplings of Belto Foura (Red Poomaruthu), Belonex Gegiya (Poomaruthu), Cashina Festila (Kanikonna), Cabobia Rosia, Decoma Scanin, Chembakom, Gulmore etc. as approved, not less than 120cm tall including digging the holes to the required size and depth, providing new cow dung/manure etc. maintaining the growth for thirty six months from the date of plantation including watering, uprooting weeds, applying pesticides etc., as and when required, replacing the sapling in case of loss etc. complete (water and electricity shall be arranged by the contractor at his cost.)	Nos.	40.00	₹ 396.48	₹ 15,859.20
G-1	Sub -Total Amount in General Works (Schedule-A)				₹ 7,351,027.94
G-2	GEOTECHNICAL WORKS				

74-239
P



Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

Schedule -A - General Works

S.No.	Description	Unit	Total Qty	Basic Rate	Amount
1	Drilling 150mm dia boreholes in all types of soil by using tripple tube core barrel. Item includes (a) Mobilisation of wireline hydraulic rigs and other necessary equipment required for completion of the work, (b) Setting up machinery, shifting etc (c) Conducting Standard Penetration Tests (SPT) at 1.5 m intervals, (d) Vane shear test at 1.5m intervals i in the very soft strata, (e) Collection of undisturbed samples at 11.5 m intervals alternate to SPT – (f) Disturbed samples (g) recording ground water table and collecting samples for testing (h) Field permeability test at every 5m interval or at change of strata in boreholes at station locations	Met	400.00	₹ 1,700.00	₹ 680,000.00
	Drilling item is Including conducting of all the relevant lab tests on all the soil samples collected during the investigation as required for preparation of Geotechnical interpretative report covering all the necessary information required for the design of Elevated and Underground Metro works. Item includes but not limited to the following: (a) Grain size analysis including Hydrometer or Pipette analysis, (b)Atterberg Limit. (c) Specific gravity. (d) Free Swell Index and Swelling Pressure Test. (e) Field density and moisture content. (f) Chemical analysis of soil samples and water samples including sulphates as SO ₄ , chlorides and pH. (g) Consolidation test including curve required for calculation of "Pc" value. (h) Unconfined compressive strength test. (i) Conducting Unconsolidated Undrained Direct shear test or Triaxial test.				
2	Drilling 75 mm dia boreholes using wireline hydraulic rigs in all types of rock by using triple tube core barrel (No separate mobilisation shall be paid from what mentioned under item no.1). Item includes including (a) Conducting Standard Penetration Tests (SPT) at 1.5 m intervals for fractured rock, (b) Preparing / recording core recovery and RQD values. (c) recording drilling rate, colour of drilling water etc.,	Met	40.00	₹ 2,000.00	₹ 80,000.00
	Drilling item is Including conducting of all the relevant lab tests on all the rock samples collected during the investigation as required for preparation of Geotechnical interpretative report covering all the necessary information required for the design of Elevated and Underground Metro works. Item includes but not limited to the following: (a) Specific gravity (b)Moisture content, porosity & Density. (C) Unconfined compression strength				
	(d)Deformation modulus (e) Point load index Note: All the soil and rock samples shall be stored in the core boxes made form tin or PVC and will be handed over to Client on completion of work with proper labeling cost of the same to be included in drilling and testing rates.				



Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

Schedule -A - General Works

S.No.	Description	Unit	Total Qty	Basic Rate	Amount
3	Conducting soi tests: at the specified locations as per IS: 3043 for earthing and corrosivity of soil by Wenner's four electrode method. The tests at each location shall be conducted in series with distances between the electrodes as 1.5 m, 3 m, 6 m,9m and 12m each on either side along each row axis as per the specification and as directed by Engineer. Note: Test shall be considered completed and shall be counted as one number only if it is conducted in all 8 directions as per the specifications and as directed by Engineer.	Nos	12.00	₹ 2,500.00	₹ 30,000.00
4	Preparation and submission of three (3) copies of Draft Factual and Interpretative Reports as specified and three (3) copie of the Final Report of Geotechnical Investigations with Recommendations covering at least the following: (a)Foundation system for various structures of Metro (SBC & pile capacities) (b) Stable slope for deep excavation and method of soil retention system for deep excavation (like diaphragm wall, secant piles etc.,) (d) method of dewatering, (e) liquefaction susceptibility etc. The approved report shall also be submitted on one compact disc (CDs) . Report shall include photograph of soil samples, rock cores, rock exposures, pits and other Geological features.	LS	4.00	₹ 16,500.00	₹ 66,000.00
5	Conducting cross hole seismic tests as per ASTM 4428D / D 4428M-00 or as per the relevant standards and as directed by Engineer. Item shall include drilling of 'three numbers of boreholes and performing all the necessary tests specified in item no. 1. and item no.2. The boreholes shall be drilled in orthogonal direction i.e. one number of boreholes as @ source and 2 no. of receiver boreholes. The readings shall be recorded at every 1.5 m interval up to the depth of 50m below ground level.The item shall include mobilisation and demobilisation of all the necessary equipment and personnel to perform the test and submission of the report.	Nos	4.00	₹ 127,000.00	₹ 508,000.00
G-2	Sub -Total Amount in Geotechnical Works (Schedule-A)				₹ 1,364,000.00
G-3	TRAFFIC SIGNALS, SIGNAGE ETC.				
1	Providing, Fixing and maintaining the road infrastructure item required for traffic diversion as per MoRTH specification/drawings and as approved by local police and as directed by Engineer-in-Charge,			₹ 0.00	
1.1	Road delineator - Supply of Rectangular Metal Delineator (Black colour rectangular Delineator with high intensity reflective sheet) Height: 1200 mm approx Size : 100 x 40 mm rectangular Reflective : 1 No. Band of 120 mm High Intensity Grade Red Colour Reflective tape and 3 Nos . Bande of 150 mm white colour paint.	Each	50.00	₹ 750.00	₹ 37,500.00
1.2	Traffic Cones Square Base cone with heavy base of size 390mm X 390mm Height: 705mm	Each	50.00	₹ 1,467.66	₹ 73,383.00



Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

Schedule -A - General Works

S.No.	Description	Unit	Total Qty	Basic Rate	Amount
	cone colour: Red colour (UV stabilised)				
	Body Material: Low Density poly Ethylene				
	Reflective Part: 1 No. White colour Engineering Grade Reflective band of 125mm width all around.				
	Note:- The specification given in this BOQ item are not complete. In addition, the items shall comply with the regulations and Tender Technical Specifications. After completion of the entire work, all the items will be the property of the contractor and he is also responsible for shifting all such release materials away from the site.				
	Deployment of adequate manpower for 8 hrs shift(3 shifts/day) for round the clock management of traffic at intersections, junctions, roadway influenced by contractor & traffic diversions at various levels as per approved traffic management plan and as directed by Engineer. Note: i. Deployed manpower shall only be used for traffic management works involved for general public and public vehicular movement only. ii. Manpower deployed shall not be utilized for contractor's facilities such as construction machinery movement, security guarding of construction materials, stores etc				
	(a) Supervisor	Shift	1,620.00	₹ 300.00	₹ 486,000.00
	(b) Traffic Guards/ Traffic Regulation	Shift	3,240.00	₹ 300.00	₹ 972,000.00
	Note-1: The deployment to be done with prior approval of Maha Metro and Traffic Police. The personnel at (a) & (b) above should be familiar with traffic rules and regulations				
	Height: 1200 mm approx Size : 100 x 40 mm rectangular Reflective : 1 No. Band of 120 mm High Intensity Grade Red Colour Reflective tape and 3 Nos . Bande of 150 mm white colour paint. (iv) Portable Signage - Supporting of Retro-Reflective Sign Board of size 900 mm Triangular or 60 mm Dia Circle or 90 x 600 mm by using high intensity Retro Reflective Sheeting on 2 mm thick Aluminum Substrate with M.S. Back Support frame. (v) Reflective lights - Hazards warning Blinkers both sides (Rechargeable with 2 Nos. sealed maintenance free Batteries) (vi) Traffic Cones Square Base Cone with heavy base of size 390 mm x 390 mm Height: 705 mm Cone Colour: Red colour (UV stabilised) Body Material : Low Density Poly Ethylene Reflective Part: 1 No. White colour Engineering Grade Reflective band of 125 mm width all around. Note: - The specifications given in this BOQ item are not complete. In addition the items shall comply with the regulations and Tender Technical Specifications. After completion of the entire work, all the items will be the property of the contractor and he is also responsible for shifting all such release materials away from the site.				



Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

Schedule -A - General Works

S.No.	Description	Unit	Total Qty	Basic Rate	Amount
	(vii) Deployment of adequate manpower for 8hrs shift for day and night management of traffic at intersection, roadway influenced by contractor and traffic diversions at various levels. (a) In-charge (minimum 1) (Total of 2070 shifts) (b) Supervisor (minimum 4) (Total of 6030 shifts) (c) Traffic Guards (minimum 50 mandays per day)				
	Note-1: The deployment to be done with prior approval of MMRC and Traffic Police. The personnel at (a), (b) & (c) above should be familiar with traffic rules and regulations the traffic signals and road delineators shall be placed as per approved plan and shall be prepared as per relevant code and Nagpur Traffic police guidelines. The payment of such item would be made on per running meter basis of the completed length. Note-2: The stage payment for the item is as follows: (i) Submission and approval of the Traffic Management plan form Traffic Police, local authority, MMRC and deployment of the traffic marshal and traffic signage's etc, along the stretch.- 10% of the accepted rate For eg: If initially a stretch of 5 Km is taken up for construction the payment to be made will be = 5000 x Accepted rate x 10/100. (ii) Completion of the Piling work and Pile cap work- 30% of the accepted rate (iii) Completion of Pier and pier cap work- 30% of the accepted rate (iv) Completion of Launching of U Girder- 10% of the accepted rate (v) Completion of entire work and restoring the Traffic to the original condition.-20% of the accepted rate				
G-3	Sub -Total Amount in Traffic signals, signage etc. (Schedule-A)				₹ 1,568,883.00
G-4	ROAD WORKS				
	Providing & construction of flexible pavement consist of 200mm thick granular sub-base (As per CI.401), 225mm thick WMM (As per CI.406), 50mm BM (As per CI.504); 100mm thick Dense Bituminous Macadam (As per CI.507) and 50mm thick Bituminous Concrete As per CI.509 of MoRT&H Specification respectively, duly excavating the ground to the required depth, preparation of subgrade by filling with contractor's good quality own earth, levelling, compaction etc. as indicated in the tender drawing including matching the top BC layer with the existing Bituminous surface of adjacent lane etc. complete. Item also includes providing and laying prime coat with bituminous emulsion @ 6.0-9.0 kg/10 sqm over WMM surface (As per CI.502) and tack coat for BM,DBM and BC (As per CI. 503 of MoRT&H Specification). Rate shall also include the lane marking of road and maintenance of roads upto end of construction.				
1	Providing and laying Granular Sub-base of 200mm thickness complete as per MoRT&H Spec. CI 401. (DSR Ref CI.16.78.1)	Cum	1,120.00	₹ 1,500.00	₹ 1,680,000.00



Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

Schedule -A - General Works

S.No.	Description	Unit	Total Qty	Basic Rate	Amount
2	Providing and laying Wet Mix Macadam base of 225mm thickness on prepared surface complete as per MoRT&H Spec. Cl.406. (DSR Ref Cl.16.79)	Cum	1,400.00	₹ 1,500.00	₹ 2,100,000.00
3	Providing bituminous primer coat over granular surface with bitumen emulsion complete as per MoRT&H Spec. Cl. 502 @ 6.0 to 9.0 kg/10 sq.m.	Sqm	4,000.00	₹ 25.00	₹ 100,000.00
4	Providing tack coat with bituminous emulsion all complete as per MoRT&H Spec. Cl 503				
4.1	(i) On granular surface treated with primer and on hungry bituminous surface @2.5 to 3.0 kg/10 sq.m.	Sqm	2,000.00	₹ 23.54	₹ 47,082.00
4.2	(ii) On Bituminous surface @ 2.0 to 2.5 Kg/10 sq.m.	Sqm	2,000.00	₹ 21.06	₹ 42,126.00
5	Providing & laying Bituminous Macadam course of 50mm thickness on prepared surface complete as per MoRTH Spec. Cl 504 (DSR Ref Cl.16.55.2)	Cum	200.00	₹ 13,000.00	₹ 2,600,000.00
6	Providing & laying Dense Bituminous Macadam course of 100mm thickness on prepared surface complete as per MoRTH Spec. Cl 507. (DSR Ref Cl.16.54.2)	Cum	200.00	₹ 13,000.00	₹ 2,600,000.00
7	Providing & laying Bituminous Concrete course of 50mm thickness on prepared surface complete as per MoRT&H Spec. Cl 509 (DSR Ref Cl.16.57.5)	Cum	200.00	₹ 13,000.00	₹ 2,600,000.00
8	Constuction of subgrade and shoulders satisfying the requirements of minimum soaked CBR value as indicated in the specification with approved material with all leads and lifts all complete as per Tech. Spec.	Sqm	2,000.00	₹ 161.07	₹ 322,140.00
9	Bringing approved quality suitable good earth from outside for general filling of land, spreading the same in interspersed layers, and compacting as per specifications such that the compacted layer thickness is limited to 150mm. Rate to include, but not be limited to-all materials, labour, tools, equipments and incidentals as necessary to complete the work as per specifications	cum	600.00	₹ 500.00	₹ 300,000.00
G-4	Sub -Total Amount in Road Works (Schedule-A)				₹ 12,391,348.00
	Grand Total Amount for Schedule-A - general works				₹ 22,675,258.94



SCHEDULE-B : DSR Items

Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

Item	Description	Amount
1	Schedule- B1 : STATION ARCHITECTURAL WORKS	₹ 33,855,068.16
2	Schedule- B2 : STATION PLUMBING WORKS	₹ 10,522,711.47
3	Schedule- B3 : EXTERNAL DEVELOPMENT WORKS	₹ 11,803,017.18
	Grand Total	₹ 56,180,796.81



SCHEDULE-B-1 : STATION ARCHITECTURAL WORKS (CPWD-2023)		
Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project		
Item	Description	Amount
1	Sub Total : S01 - Concrete Work	₹ 1,110,224 .00
2	Sub Total : S02- Brick Work	₹ 23,671,458 .20
3	Sub Total : S03 - Marble / Granite Work	₹ 683,121 .32
4	Sub Total : S04 - Flooring Work	₹ 2,739,573 .31
5	Sub Total : S05 - Steel Work	₹ 2,588,572 .16
6	Sub Total : S06 - Finishing Work	₹ 168,600 .00
7	Sub Total : S07 - Waterproofing Work	₹ 2,820,319 .18
8	Sub Total : S08 - Structural Glazing	₹ 73,200 .00
	Grand Total	₹ 33,855,068 .16



SCH-B1 (Summary)



SCHEDULE-B-1 : STATION ARCHITECTURAL WORKS (CPWD 2023 ITEMS)					
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project					
S.No.	Description	UOM	Total Qty	Rate	Amount
S01	CONCRETE WORK				
1.1	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets, sunken floor etc., up to floor five level, excluding the cost of centering, shuttering and finishing:				
1.1.1	1:2:4 (1 Cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources)	Cum	100.00	₹ 5,400.00	₹ 540,000.00
1.2	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.				
	All works above plinth level upto floor V Level				
1.2.1	Concrete of M30 grade with minimum cement content of 350 kg /cum	Cum	40.00	₹ 10,011.35	₹ 400,454.00
1.3	Centering and shuttering including strutting, propping etc. and removal of form for				
1.3.1	Lintels, beams, plinth beams, girders, bressumers and cantilevers	Sqm	100.00	₹ 736.40	₹ 73,640.00
1.3.2	Columns, Pillars, Piers, Abutments, Posts and Struts	Sqm	100.00	₹ 961.30	₹ 96,130.00
	TOTAL OF S01 CONCRETE WORK				₹ 1,110,224.00
S02	BRICK WORK				
2.1	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:				
2.1.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	Cum	135.71	₹ 7,370.65	₹ 1,000,265.01
2.2	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in:				
2.2.1	Cement mortar 1:4 (1 cement: 4 coarse sand)	Cum	100.00	₹ 100.00	₹ 10,000.00
2.3	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level upto floor V level.				
2.3.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	Sqm	200.00	₹ 100.00	₹ 20,000.00
2.4	Extra for providing and placing in position 2 Nos. 6mm dia. M.S. bars at every third course of half brick masonry	Sqm	80.00	₹ 400.00	₹ 32,000.00



SCH-B1 (BOQ)



SCHEDULE-B-1 : STATION ARCHITECTURAL WORKS (CPWD 2023 ITEMS)					
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project					
S.No.	Description	UOM	Total Qty	Rate	Amount
2.5	Providing and laying Autoclaved Aerated concrete (AAC) blocks masonry with 150 mm to 300 mm thick with Grade-1 AAC blocks of density 551 to 650 kg/cum conforming to IS:2185 (Part 3) in super structure above plinth level up to floor V level with RCC band at sill level and lintel level with approved block laying polymer modified adhesive mortar all complete as per direction of Engineer-in-Charge. (The payment of RCC band and reinforcement shall be made for separately).	Cum	2,659.14	₹ 8,500.00	₹ 22,602,719.97
2.6	Extra for brick work / AAC block masonry / Tile brick masonry in superstructure above floor V level, for each four floors or part thereof by mechanical means	Cum	647.32	₹ 10.00	₹ 6,473.21
	TOTAL OF S02 BRICK WORK				₹ 23,671,458.20
S03	MARBLE / GRANITE WORK				
3.1	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels.				
3.1.1	Granite stone slab colour black, Cherry/Ruby red				
3.1.1.1	Area of slab over 0.50 sqm	Sqm	200.00	₹ 2,500.00	₹ 500,000.00
3.1.2	Granite stone slab all colour and texture except black, Cherry/Ruby red				
3.1.2.1	Area of slab over 0.50 sqm	Sqm	40.00	₹ 3,848.70	₹ 153,948.00
3.2	Providing and fixing stone slab with table rubbed, edges rounded and polished, of size 75x50 cm deep and 1.8 cm thick, fixed in urinal partitions by cutting a chase of appropriate width with chase cutter and embedding the stone in the chase with epoxy grout or with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 6 mm nominal size) as per direction of Engineer-in-charge and finished smooth.				
3.2.1	Granite Stone of approved shade	Sqm	7.20	₹ 4,051.85	₹ 29,173.32
	TOTAL OF S03 MARBLE / GRANITE WORK				₹ 683,121.32
S04	FLOORING WORK				
4.1	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. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.	Sqm	36.19	₹ 978.45	₹ 35,414.76
4.2	Cement plaster skirting up to 30 cm height, with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement.				
4.2.1	18 mm thick	Sqm	51.55	₹ 330.00	₹ 17,009.92



SCH-B1 (BOQ)

SCHEDULE-B-1 : STATION ARCHITECTURAL WORKS (CPWD 2023 ITEMS)					
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Aku rdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project					
S.No.	Description	UOM	Total Qty	Rate	Amount
4.3	Providing and fixing glass strips in joints of terrazo/ cement concrete floors.				
4.3.1	40 mm wide and 4 mm thick	Metre	100.00	₹ 200.00	₹ 20,000.00
4.4	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption's less than 0.08% and conforming to IS : 15622 of approved make in all colours and shades, laid on 20mm thick cement mortar matching pigments etc., complete on floor and skirting				
4.4.1	Size of Tile 600x600 mm	Sqm	654.02	₹ 1,000.00	₹ 654,021.80
4.5	Providing and laying Vitrified tiles in floor in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS:15622, of approved brand & manufacturer, in all colours and shade, laid on 20 mm thick cement mortar 1:4 (1 cement: 4 coarse sand) jointing with grey cement slurry @3.3 kg/sqm including grouting the joints with white cement and matching pigments etc. The tiles must be cut with the zero chipping diamond cutter only . Laying of tiles will be done with the notch trowel, plier, wedge, clips of required thickness, leveling system and rubber mallet for placing the tiles gently and easily				
4.5.1	Glazed Vitrified tiles Matt/Antiskid finish of size				
4.5.2	Size of Tile 600 x 600 mm	Sqm	2,013.13	₹ 1,000.00	₹ 2,013,126.84
	TOTAL OF S04 FLOORING WORK				₹ 2,739,573.31
S05	STEEL WORK				
5.1	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required				
5.1.1	In stringers, treads, landings etc. of stair cases including use of chequered plate wherever required, all complete.	Kg	3,816.40	₹ 123.60	₹ 471,707.04
5.1.2	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	Kg	15,418.65	₹ 100.00	₹ 1,541,865.12
5.2	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer.				
5.2.1	M.S. tube.	Kg	60.00	₹ 250.00	₹ 15,000.00
5.3	Providing and fixing G.I. chain link fabric fencing of required width in mesh size 50x50 mm including strengthening with 2 mm dia wire or nuts, bolts and washers as required complete as per the direction of Engineer-in-charge.				
5.3.1	Made of G.I. wire of dia. 4 mm, PVC coated to achieve outer dia not less than 5 mm in required colour and shade	Sqm	800.00	₹ 500.00	₹ 400,000.00



SCH-B1 (BOQ)

SCHEDULE-B-1 : STATION ARCHITECTURAL WORKS (CPWD 2023 ITEMS)					
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project					
S.No.	Description	UOM	Total Qty	Rate	Amount
5.4	Providing and fixing concertina coil fencing with punched tape concertina coil 600 mm dia 10 metre openable length (total length 90 m), having 50 nos rounds per 6 metre length, upto 3 m height of wall with existing angle iron 'Y' shaped placed 2.4m or 3.00 m apart and with 9 horizontal R.B.T. reinforced barbed wire, stud tied with G.I. staples and G.I. clips to retain horizontal, including necessary bolts or G.I. barbed wire tied to angle iron, all complete as per direction of Engineer-in-charge, with reinforced barbed tape(R.B.T.) / Spring core (2.5mm thick) wire of high tensile strength of 165 kg/ sq.mm with tape (0.52 mm thick) and weight 43.478 gm/ metre (cost of M.S. angle, C.C. blocks shall be paid separately)	Metre	800.00	₹ 200.00	₹ 160,000.00
	TOTAL OF S05 STEEL WORK				₹ 2,588,572.16
S06	FINISHING WORK				
6.1	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade :				
6.6.1	New work (two or more coats) over and including water thinnable priming coat with cement primer	Sqm	40.00	₹ 355.00	₹ 14,200.00
6.2	Applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile Organic Compound) content.				
6.2.1	With water thinnable cement primer on wall surface having VOC content less than 50 grams/litre		80.00	₹ 355.00	₹ 28,400.00
6.3	Finishing walls with water proofing cement paint of required shade :				
6.3.1	New work (Two or more coats applied @ 3.84 kg/10 sqm).		80.00	₹ 200.00	₹ 16,000.00
6.4	Applying priming coat:				
6.4.1	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/steel works	Sqm	80.00	₹ 125.00	₹ 10,000.00
6.5	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :				
6.5.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture	Sqm	200.00	₹ 100.00	₹ 20,000.00
6.6	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc.				
6.6.1	On concrete work (on wall)	Sqm	200.00	₹ 400.00	₹ 80,000.00
	TOTAL OF S06 FINISHING WORK				₹ 168,600.00
S07	WATERPROOFING WORK				
7.1	Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying :				
	First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/ sqm. This layer will be allowed to air cure for 4 hours.				
	Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours.				



SCHEDULE-B-1 : STATION ARCHITECTURAL WORKS (CPWD 2023 ITEMS)

Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Total Qty	Rate	Amount
	(The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.)	Sqm	143.90	₹ 617.05	₹ 88,793.21
7.2	Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25 mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20 mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20 mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge :				
7.2.1	Using rough Kota stone	Sqm	40.00	₹ 5,000.00	₹ 200,000.00
7.3	Providing and applying integral crystalline slurry of hydrophilic in nature for waterproofing treatment to the RCC structures like retaining walls of the basement, water tanks, roof slabs, podiums, reservoir, sewage & water treatment plant, tunnels / subway and bridge deck etc., prepared by mixing in the ratio of 5 : 2 (5 parts integral crystalline slurry : 2 parts water) for vertical surfaces and 3 : 1 (3 parts integral crystalline slurry : 1 part water) for horizontal surfaces and applying the same from negative (internal) side with the help of synthetic fiber brush. The material shall meet the requirements as specified in ACI- 212-3R-2010 i.e by reducing permeability of concrete by more than 90% compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure on negative side. The crystalline slurry shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.				
7.3.1	For vertical surface two coats @ 0.70 kg per sqm	Sqm	2,771.23	₹ 650.00	₹ 1,801,296.90
7.3.2	For horizontal surface one coat @1.10 kg per sqm.	Sqm	823.14	₹ 650.00	₹ 535,041.60
7.4	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations:				



SCH-B1 (BOQ)

SCHEDULE-B-1 : STATION ARCHITECTURAL WORKS (CPWD 2023 ITEMS)					
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project					
S.No.	Description	UOM	Total Qty	Rate	Amount
	<p>(a) Applying a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300 mm height including cleaning the surface before treatment.</p> <p>(b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs.</p> <p>(c) After two days of proper curing applying a second coat of cement slurry using 2.75 kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge.</p>				
	<p>(d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3 mm deep.</p> <p>(e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. "All above operations to be done in order and as directed and specified by the Engineer-in-Charge :</p>				
7.4.1	With average thickness of 120 mm and minimum thickness at khurra as 65 mm	Sqm	243.98	₹ 800.00	₹ 195,187.48
	TOTAL OF 507 WATERPROOFING WORK				₹ 2,820,319.18
S08	STRUCTURAL GLAZING				



SCH-B1 (BOQ)

SCHEDULE-B-1 : STATION ARCHITECTURAL WORKS (CPWD 2023 ITEMS)

Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Total Qty	Rate	Amount
8.1	<p>Designing, fabricating, testing, protection, installing and fixing in position semi (grid) unitized system of structural glazing (with open joints) for linear as well as curvilinear portions of the building for all heights and all levels, including:</p> <p>a) Structural analysis & design and preparation of shop drawings for the specified design loads conforming to IS 875 part III (the system must passed the proof test at 1.5 times design wind pressure without any failure), including functional design of the aluminum sections for fixing glazing panels of various thicknesses, aluminium cleats, sleeves and splice plates etc. gaskets, screws, toggles, nuts, bolts, clamps etc., structural and weather silicone sealants, flashings, fire stop (barrier)- cum-smoke seals, microwave cured EPDM gaskets for water tightness, pressure equalisation & drainage and protection against fire hazard including:</p> <p>(b) Fabricating and supplying serrated M.S. hot dip galvanised / Aluminium alloy of 6005 T5 brackets of required sizes, sections and profiles etc. to accommodate 3 Dimensional movement for achieving perfect verticality and fixing structural glazing system rigidly to the RCC/ masonry/structural steel framework of building structure using stainless steel anchor fasteners/ bolts, nylon separator to prevent bimetallic contacts with nuts and washers etc. of stainless steel grade 316, of the required capacity and in required numbers.</p> <p>(c) Providing and filling, two part pump filled, structural silicone sealant and one part weather silicone sealant compatible with the structural silicone sealant of required bite size in a clean and</p>				
	<p>e) Making provision for drainage of moisture/ water that enters the curtain glazing system to make it watertight, by incorporating principles of pressure equalization, providing suitable gutter profiles at bottom (if required), making necessary holes of required sizes and of required numbers etc. complete. This item includes cost of all inputs of designing, labour for fabricating and installation of aluminium grid, installation of glazed units, T&P, scaffolding and other incidental charges including wastages etc., enabling temporary structures and services, cranes or cradles etc. as described above and as specified. The item includes the cost of getting all the structural and functional design including shop drawings checked by a structural designer, dully approved by Engineer-in-charge. The item also includes the cost of all mock ups at site, cost of all samples of the individual components for testing in an approved laboratory, field tests on the assembled working structural glazing as specified, cleaning and protection till the handing over of the building for occupation. In the end, the Contractor shall provide a water tight structural glazing having all the performance characteristics etc. all complete as required, as per the Architectural drawings, as per item description, as specified, as per the approved shop drawings and as directed by the Engineer-</p>				



SCH-B1 (BOQ)

SCHEDULE-B-1 : STATION ARCHITECTURAL WORKS (CPWD 2023 ITEMS)					
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project					
S.No.	Description	UOM	Total Qty	Rate	Amount
	<p>Note:- 1. The cost of providing extruded aluminium frames, shadow boxes, extruded aluminium section capping for fixing in the grooves of the curtain glazing and vermin proof stainless steel wire mesh shall be paid for separately under relevant items under this sub- head. However, for the purpose of payment, only the actual area of structural glazing (including width of grooves) on the external face shall be measured in sqm. up to two decimal places.</p> <p>Note:-2. The following performance test are to be conducted on structural glazing system if area of structural glazing exceeds 2500 Sqm from the certified laboratories accredited by NABL(National Accreditation Board for Testing and Calibration Laboratories), Department of Science & Technologies, India. Cost of testing is payable separately.</p>				
	<p>The NIT approving authority will decide the necessity of testing on the basis of cost of the work, cost of the test and importance of the work. Performance Testing of Structural glazing system Tests to be conducted in the NABL accredited lab or any other accreditation body which operates in accordance with ISO/ IEC 17011 and accredits labs as per ISO/IEC 17025</p> <p>1. Performance Laboratory Test for Air Leakage Test (-50pa to -300pa) & (+50pa to +300pa) as per ASTM E-283-04 testing method for a range of testing limit 1 to 200 mVhr</p> <p>2. Static Water Penetration Test. (50pa to 1500pa) as per ASTM E-331-09 testing method for a range up to 2000 ml.</p> <p>3. Dynamic Water Penetration (50pa to 1500pa) as per AAMA 501.01- 05 testing method for a range upto 2000 ml</p> <p>4. Structural Performance Deflection and deformation by static air pressure test (1.5 times design wind pressure without any failure) as per ASTM E-330-10 testing method for a range upto 50 mm</p> <p>5. Seismic Movement Test (upto 30 mm) as per AAMA 501.4-09 testing method for Qualitative test, Tests to be conducted on site.</p>	Sqm	732.00	₹ 100.00	₹ 73,200.00
	TOTAL OF S08 STRUCTURAL GLAZING				₹ 73,200.00
	Total Cost				₹ 33,855,068.16



SCH-B1 (BOQ)

SCHEDULE-B-2 : STATION PLUMBING WORKS (CPWD-2023)		
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project		
SR.NO	DESCRIPTION OF ITEMS	AMOUNT
1	SUB HEAD I - SANITARY FIXTURE & FITTINGS	₹ 522,513.20
2	SUB HEAD II - WATER SUPPLY INSTALLATION	₹ 2,202,609.60
3	SUBHEAD-III: INTERNAL DRAINAGE INSTALLATIONS	Deleted
4	SUBHEAD-IV:UPVC RAIN WATER WORK	₹ 321,224.80
5	SUBHEAD-V: EXTERNAL SEWERAGE WORK	₹ 852,302.13
6	SUBHEAD-VI: EXTERNAL STORM WATER WORK	₹ 1,185,828.40
7	SUB HEAD (VII) - EXTERNAL WATER SUPPLY	₹ 1,071,903.60
8	SUBHEAD-VIII: WATER SUPPLY PUMPS & EQUIPMENTS AND WATER TREATMENT UNIT	₹ 1,726,672.94
9	SUB HEAD-IX: MISLANIOUS ITEM	₹ 177,587.20
10	SUB HEAD-X: BIO DIGESTER (40 KLD)	Deleted
11	SUB HEAD-XI: RAIN WATER HARVESTING PIT	Deleted
12	SUB HEAD-XII: BORE WELL	₹ 2,462,069.60
TOTAL		₹ 10,522,711.47

R



STATION PLUMBING WORKS (CPWD DSR SCHEDULE)

SCHEDULE-B-2 : STATION PLUMBING WORKS (CPWD ITEMS)						
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project						
S.No.	DSR Item	Description	UOM	Total Qty	Final Rate	Amount
501		SUB HEAD I - SANITARY FIXTURE & FITTINGS				
1.1	17.3	Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid, 10 litre low level white vitreous china flushing cistern & C.P. flush bend with fittings & C.I. brackets, 40 mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :				
1.1.1	17.3.1	W.C. pan with ISI marked white solid plastic seat and lid	Each	20.000	₹ 9,510.00	₹ 190,200.00
1.2	17.7	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require:				
1.2.1	17.7.1	White Vitreous China Wash basin size 630x450 mm with a pair of 15 mm C.P. brass pillar taps	Each	24.000	₹ 3,500.00	₹ 84,000.00
1.3	17.80	Providing and fixing white vitreous china battery based infrared sensor operated urinal of approx. size 610 x 390 x 370 mm having pre & post flushing with water (250 ml & 500 ml consumption), having water inlet from back side, Including fixing to wall with suitable brackets all as per manufacturers specification and direction of Engineer-in-charge.	Each	12.000	₹ 9,000.00	₹ 108,000.00
1.4	17.31	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	Each	24.000	₹ 1,607.95	₹ 38,590.80
1.5	17.72	Providing and fixing PTMT towel ring trapezoidal shape 215 mm long, 200 mm wide with minimum distances of 37 mm from wall face with concealed fittings arrangement of approved quality and colour, weighing not less than 88 gms.	Each	12.000	₹ 231.95	₹ 2,783.40
1.6	17.34	Providing and fixing toilet paper holder :				
1.6.1	17.34.1	C.P. brass	Each	20.000	₹ 803.70	₹ 16,074.00
1.7	18.49	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931 :				
1.7.1	18.49.1	a)15 mm nominal bore	Each	8.000	₹ 506.80	₹ 4,054.40
1.8	18.50	Providing and fixing C.P. brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810 gms.				
1.8.1	18.50.1	15 mm nominal bore	Each	24.000	₹ 820.70	₹ 19,696.80
1.9	18.53	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931				
1.9.1	18.53.1	a) 15 mm nominal bore	Each	48.000	₹ 574.30	₹ 27,566.40
1.10	17.22 A	Providing and fixing CP Brass 32mm size bottle trap of approved quality & make and as per the direction of engineer in charge.	Each	24.000	₹ 1,034.80	₹ 24,835.20



SCH-B2 (BOQ)

SCHEDULE-B-2 : STATION PLUMBING WORKS (CPWD ITEMS)						
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project						
S.No.	DSR Item	Description	UOM	Total Qty	Final Rate	Amount
1.11	18.21	Providing and fixing uplasticised PVC connection pipe with brass unions :				
1.11.1	18.21.2	45 cm length				
1.11.2	18.21.2.1	15 mm nominal bore	Each	48.000	₹ 97.75	₹ 4,692.00
1.12	17.71	Providing and fixing PTMT liquid soap container 109 mm wide, 125 mm high and 112 mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour, weighing not less than 105 gms.	Each	12.000	₹ 168.35	₹ 2,020.20
		Total Cost of SUB HEAD I - SANITARY FIXTURE & FITTINGS				₹ 522,513.20
S02		SUB HEAD II - WATER SUPPLY INSTALLATION				
2.1	18.8	Providing and Fixing Chlorinated Polyvinyl Chloride (CPVC) Pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings including fixing the pipe with supports, clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer-In-Charge.				
		Concealed work including cutting chases and making good the walls etc.				
2.1.1	18.8.1	15 mm nominal dia. Pipes	Metre	156.000	₹ 497.80	₹ 77,656.80
2.1.2	18.8.2	20 mm nominal dia. Pipes	Metre	112.000	₹ 537.60	₹ 60,211.20
2.1.3	18.8.3	25 mm nominal dia. Pipes	Metre	88.000	₹ 627.25	₹ 55,198.00
2.1.4	18.8.4	32 mm nominal dia. Pipes	Metre	68.000	₹ 739.30	₹ 50,272.40
2.2	18.7	Providing and fixing chlorinated poly vinyl chloride (CPVC) pipes having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fitting, including fixing the pipe with clamps at 1 m spacing. This includes jointing of pipes & fitting with one step CPVC solvent cement and cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.				
		Internal work- Exposed on wall				
2.2.1	18.7.1	15 mm nominal dia. Pipes	Metre	384.000	₹ 286.80	₹ 110,131.20
2.2.2	18.7.2	20 mm nominal dia. Pipes	Metre	44.000	₹ 335.00	₹ 14,740.00
2.2.3	18.7.3	25 mm nominal dia. Pipes	Metre	1,752.000	₹ 401.55	₹ 703,515.60
2.2.4	18.7.4	32 mm nominal dia. Pipes	Metre	1,280.000	₹ 518.75	₹ 664,000.00
2.2.5	18.7.5	40 mm nominal dia. Pipes	Metre	476.000	₹ 702.95	₹ 334,604.20



SCH-B2 (BOQ)

STATION PLUMBING WORKS (CPWD DSR SCHEDULE)

SCHEDULE-B-2 : STATION PLUMBING WORKS (CPWD ITEMS)						
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project						
S.No.	DSR Item	Description	UOM	Total Qty	Final Rate	Amount
2.2.6	18.7.6	50 mm nominal dia. Pipes	Metre	68.000	₹ 934.15	₹ 63,522.20
2.3	18.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :				
2.3.1	18.17.1A	20 mm nominal bore	Each	16.000	₹ 539.95	₹ 8,639.20
2.3.2	18.17.1	25 mm nominal bore	Each	40.000	₹ 622.40	₹ 24,896.00
2.3.3	18.17.2	32 mm nominal bore	Each	20.000	₹ 689.60	₹ 13,792.00
2.3.4	18.17.3	40 mm nominal bore	Each	16.000	₹ 826.10	₹ 13,217.60
2.3.5	18.17.4	50 mm nominal bore	Each	8.000	₹ 1,026.65	₹ 8,213.20
		Total Cost of SUB HEAD II - WATER SUPPLY INSTALLATION				₹ 2,202,609.60
504		SUBHEAD-IV:UPVC RAIN WATER WORK				
4.1	12.41	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes.				
4.1.1	12.41.2	110 mm diameter	Mtr.	568.000	₹ 377.40	₹ 214,363.20
4.2	12.42	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.				
4.2.1	12.42.2	Single Push fit coupler				
4.2.1.2	12.42.2.2	110 mm diameter	Each	48.000	₹ 127.60	₹ 6,124.80
4.2.2	12.42.4	Single Tee without door				
4.2.2.1	12.42.4.2	110x110x110 mm dia	Each	48.000	₹ 221.35	₹ 10,624.80
4.2.3	12.42.5	Bend 87.5 Deg				
4.2.3.1	12.42.5.2	110 mm dia	Each	48.000	₹ 150.35	₹ 7,216.80
4.2.4	12.42.6	Shoe (Plain)				
4.2.4.1	12.42.6.2	110 mm dia	Each	48.000	₹ 131.85	₹ 6,328.80
4.3	12.43	Providing and Fixing on wall face unplasticised - PVC pipe clips of approved design to unplasticised - PVC rain water pipes by means of 50 x 50 x 50 mm hard wood plugs, screwed with M.S. screws of required length including cutting brick work and fixing in cement mortar 1:4 (1 Cement: 4 Coarse sand) and making good the walls etc. complete				
4.3.1	12.43.2	110 mm dia	Each	188.000	₹ 371.30	₹ 69,804.40

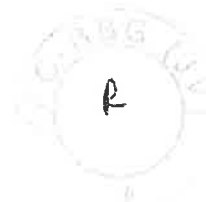
SCH-B2 (BOQ)



STATION PLUMBING WORKS (CPWD DSR SCHEDULE)

SCHEDULE-B-2 : STATION PLUMBING WORKS (CPWD ITEMS)						
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project						
S.No.	DSR Item	Description	UOM	Total Qty	Final Rate	Amount
4.4	12.22	Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1 m x1 m x 400 micron, finished with 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement, rounding the edges and making and finishing the outlet complete.	Each	8.000	₹ 298.25	₹ 2,386.00
4.5	12.44	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams.	Each	80.000	₹ 54.70	₹ 4,376.00
		Total Cost of SUBHEAD-IV:UPVC RAIN WATER WORK				₹ 321,224.80
S05		SUBHEAD-V: EXTERNAL SEWERAGE WORK				
5.1	2.6	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 Sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.				
5.1.1	2.6.1	All kinds of soil	cum	25.780	₹ 177.50	₹ 4,575.95
5.2	2.10	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, anddressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidatingeach deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed,within a lead of 50 m :				
5.2.1	2.10.1	All kinds of soil				
5.2.1.1	2.10.1.2	Pipes, cables etc. exceeding 80 mm dia but not exceeding 300 mm dia	Mtr.	220.000	₹ 352.15	₹ 77,473.00
5.3	19.1	Providing, laying and jointing glazed stoneware pipes class SP-1 with stiff mixture of cement mortar in the proportion of 1:1 (1 cement: 1 fine sand) including testing of joints etc. complete :				
5.3.1	19.1.3	200 mm diameter	Mtr.	220.000	₹ 970.35	₹ 213,477.00
5.4	19.2	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design :				
5.4.1	19.2.3	200 mm diameter S.W. Pipe	Mtr.	220.000	₹ 1,375.45	₹ 302,599.00

SCH-B2 (BOQ)



SCHEDULE-B-2 : STATION PLUMBING WORKS (CPWD ITEMS)						
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project						
S.No.	DSR Item	Description	UOM	Total Qty	Final Rate	Amount
5.5	19.7.1	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size), inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design :				
		Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions,total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) :				
5.5.1	19.7.1 .1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	Each	8.000	₹ 12,770.55	₹ 102,164.40
5.6	19.8	Extra for depth for manholes:				
5.6.1	19.8.1 .1	Size 90x80x90 cm With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	Mtr	3.600	₹ 8,825.40	₹ 31,771.44
5.7	19.9	Constructing Brick Masonry circular type manhole 0.91 m internal dia at bottom and 0.56m dia at top with FPS bricks class designation 75 in cement mortar 1:4 (1 cement : 4 Coarse sand), inside cement plaster 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of of neat cement, foundation concrete 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size) and making necessary channel in Cement Concrete 1:2:4 (1 Cement : 2 Coarse Sand : 4 Graded Stone Aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design.				
5.7.1	19.9.1	0.91m deep with SFRC cover and frame (heavy duty HD-20 grade designation) 560mm internal diameter conforming to I.S:12592, total weight of cover and frame to be not less than 182Kg. fixed in cement concrete 1:2:4 mix (1cement: 2 coarse sand: 4 graded stone aggregate 20mm nominal size) including centering, shuttering all complete.(Excavation foot rests and 12mm thick cement plaster at the external surface shall be paid for separately)				
5.7.1.1	19.9.1 .1	with common burnt clay F.P.S.(non module) brick of class designation 7.5	Each	4.000	₹ 12,725.00	₹ 50,900.00
5.8	19.10	Extra depth for circular type manholes 0.91 m internal dia (at bottom) beyond 0.91m to 1.67 m .				
5.8.1	19.10.1	with common burnt clay F.P.S.(non module) brick of class designation 7.5	Metre	2.000	₹ 7,591.80	₹ 15,183.60
5.9	13.1	12 mm cement plaster finished with a floating coat of neat cement of mix :				

SCH-B2 (BOQ)



SCHEDULE-B-2 : STATION PLUMBING WORKS (CPWD ITEMS)						
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project						
S.No.	DSR Item	Description	UOM	Total Qty	Final Rate	Amount
5.9.1	13.1.2	1:6 (1 cement: 6 fine sand)	Sqm	24.400	₹ 333.35	₹ 8,133.74
5.10	19.16	Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910, on 12 mm dia steel bar conforming to IS: 1786, having minimum cross section as 23 mmx25 mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	Each	44.000	₹ 553.70	₹ 24,362.80
5.11	19.4	Providing and fixing square-mouth S.W. gully trap class SP 1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design:				
5.11.1	19.4.1	100 x 100 mm size P type With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	8.000	₹ 2,707.65	₹ 21,661.20
		Total Cost of SUBHEAD-V: EXTERNAL SEWERAGE WORK				₹ 852,302.13
506		SUBHEAD-VI: EXTERNAL STORM WATER WORK				
6.1	2.10	Excavating trenches of required width for pipes, cables etc. Including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5M including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cms in depth including consolidating each deposited layer by ramming, watering, etc. And disposing of surplus excavated soil as directed within a lead of 50 m Hard/dense soil.				
6.1.1	2.10.1	All kind of soil				
6.1.1.1	2.10.1.2	Pipes, cables etc, exceeding 80mm dia but not exceeding 300 mm dia	Metre	72.000	₹ 352.15	₹ 25,354.80
6.1.1.2	2.10.1.3	Pipes, cables etc, exceeding 300mm dia but not exceeding 600 mm dia	Metre	168.000	₹ 549.75	₹ 92,358.00
6.2.1.1	2.14.1.1	Pipes, cables etc. exceeding 80 mm dia but not exceeding 300 mm dia	Metre	30.000	₹ 729.80	₹ 21,894.00
6.2.1.2	2.14.1.2	Pipes, cables exceeding 300 mm dia but not exceeding 600 mm dia	Metre	30.000	₹ 867.45	₹ 26,023.50
6.3	2.6	Earthwork in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift up to 1.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed, with in a lead of 50m.				

SCH-B2 (BOQ)



STATION PLUMBING WORKS (CPWD DSR SCHEDULE)

SCHEDULE-B-2 : STATION PLUMBING WORKS (CPWD ITEMS)						
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project						
S.No.	DSR Item	Description	UOM	Total Qty	Final Rate	Amount
6.3.1	2.6.1	All kind of soil	cum	36.335	₹ 177.50	₹ 6,449.50
6.4	19.6	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete :				
6.4.1	19.6.3	250 mm dia R.C.C. Pipe	Metre	72.000	₹ 899.80	₹ 64,785.60
6.4.2	19.6.4	300 mm dia R.C.C. Pipe	Metre	72.000	₹ 994.30	₹ 71,589.60
6.4.3	19.6.5	450 mm dia R.C.C. Pipe	Metre	168.000	₹ 1,620.95	₹ 272,319.60
6.5	19.3	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) up to haunches of S.W. pipes including bed concrete as per standard design :				
6.5.1	19.3.4	250 mm diameter S.W. pipe	Metre	72.000	₹ 1,016.90	₹ 73,216.80
6.5.2	19.3.5	300 mm diameter S.W. pipe	Metre	72.000	₹ 1,173.35	₹ 84,481.20
6.6	19.7.1	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size), inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design :				
		Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions,total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) :				
6.6.1	19.7.1 .1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	Each	8.000	₹ 12,770.55	₹ 102,164.40
6.7	19.8	Extra for depth for manholes:				
6.7.1	19.8.1 .1	Size 90x80x90 cm With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	Mtr	2.400	₹ 8,825.40	₹ 21,180.96

R

SCH-B2 (BOQ)



STATION PLUMBING WORKS (CPWD DSR SCHEDULE)

SCHEDULE-B-2 : STATION PLUMBING WORKS (CPWD ITEMS)						
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project						
S.No.	DSR Item	Description	UOM	Total Qty	Final Rate	Amount
6.8	19.9	Constructing Brick Masonry circular type manhole 0.91 m internal dia at bottom and 0.56m dia at top with FPS bricks class designation 75 in cement mortar 1:4 (1 cement : 4 Coarse sand), inside cement plaster 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size) and making necessary channel in Cement Concrete 1:2:4 (1 Cement : 2 Coarse Sand : 4 Graded Stone Aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design.				
6.8.1	19.9.1	0.91m deep with SFRC cover and frame (heavy duty HD-20 grade designation) 560mm internal diameter conforming to I.S:12592, total weight of cover and frame to be not less than 182Kg. fixed in cement concrete 1:2:4 mix (1cement: 2 coarse sand: 4 graded stone aggregate 20mm nominal size) including centering, shuttering all complete.(Excavation foot rests and 12mm thick cement plaster at the external surface shall be paid for separately)				
6.8.1.1	19.9.1.1	with common burnt clay F.P.S.(non module) brick of class designation 7.5	Each	8.000	₹ 12,725.00	₹ 101,800.00
6.9	19.10	Extra depth for circular type manholes 0.91 m internal dia (at bottom) beyond 0.91m to 1.67 m .				
6.9.1	19.10.1	with common burnt clay F.P.S.(non module) brick of class designation 7.5	Meter	2.400	₹ 7,591.80	₹ 18,220.32
6.10	19.27	Constructing brick masonry road gully chamber 50x45x60 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm pre-cast R.C.C. horizontal grating with frame complete as per standard design :				
6.10.1	19.27.1	with common burnt clay F.P.S.(non module) brick of class designation 7.5	Each	12.000	₹ 5,957.90	₹ 71,494.80
6.11	19.28	Constructing brick masonry road gully chamber 45x45x77.5 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) with precast R.C.C. vertical grating complete as per standard design :				
6.11.1	19.28.1	with common burnt clay F.P.S.(non module) brick of class designation 7.5	Each	12.000	₹ 6,889.80	₹ 82,677.60
6.12	13.1	12 mm cement plaster finished with a floating coat of neat cement of mix :				
6.12.1	13.1.2	1:6 (1 cement: 6 fine sand)	Sqm	27.200	₹ 333.35	₹ 9,067.12

SCH-B2 (BOQ)



SCHEDULE-B-2 : STATION PLUMBING WORKS (CPWD ITEMS)						
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project						
S.No.	DSR Item	Description	UOM	Total Qty	Final Rate	Amount
6.13	19.16	Providing orange colour safety foot rest of minimum 6mm thick plastic encapsulated as per IS : 10910 on 12 mm dia steel bar conforming to IS :1786 having minimum cross section as 23mm x 25mm and over all minimum length 263mm and width as 165mm with minimum 112mm space between protrude legs having 2mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification make to be visible even after fixing, including fixing in manholes with 30x20x15cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) complete as per design.	Each	64.000	₹ 553.70	₹ 35,436.80
6.14	19.21	Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement and making necessary channels for the drain etc. complete :				
6.14.1	19.21.3	For pipes 350 to 450 mm diameter	Each	4.000	₹ 1,328.45	₹ 5,313.80
		Total Cost of SUBHEAD-VI: EXTERNAL STORM WATER WORK				₹ 1,185,828.40
		S07 SUB HEAD (VII) - EXTERNAL WATER SUPPLY				
7.1	18.12	Providing and fixing GI pipes complete with GI fittings including trenching and refilling etc.				
7.1.1		External Work				
7.1.1.1	18.12.5	40mm dia Nominal bore	Metre	320.000	₹ 617.05	₹ 197,456.00
7.1.1.2	18.12.6	50mm dia Nominal bore	Metre	320.000	₹ 762.15	₹ 243,888.00
7.1.1.3	18.12.7	65mm dia Nominal bore	Metre	320.000	₹ 896.60	₹ 286,912.00
7.2	18.40	Painting GI pipes and fittings with two coats of anti corrosive bitumestic paint of approved quality.				
7.2.1	18.40.5	40mm diameter pipe	Metre	320.000	₹ 25.25	₹ 8,080.00
7.2.2	18.40.6	50mm diameter pipe	Metre	320.000	₹ 30.50	₹ 9,760.00
7.2.3	18.40.7	65mm diameter pipe	Metre	320.000	₹ 37.85	₹ 12,112.00
7.3	18.41	Providing and filling sand of grading zone V or coarser grade around the GI pipes in external work.				
7.3.1	18.41.5	40mm dia nominal bore	Metre	320.000	₹ 167.00	₹ 53,440.00
7.3.2	18.41.6	50mm dia nominal bore	Metre	320.000	₹ 173.25	₹ 55,440.00
7.3.3	18.41.7	65mm dia nominal bore	Metre	320.000	₹ 273.45	₹ 87,504.00



SCH-B2 (BOQ)

STATION PLUMBING WORKS (CPWD DSR SCHEDULE)

SCHEDULE-B-2 : STATION PLUMBING WORKS (CPWD ITEMS)						
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project						
S.No.	DSR Item	Description	UOM	Total Qty	Final Rate	Amount
7.4	18.37	Constructing masonry Chamber 60x45x50 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for water meter complete with C.I. double flap surface box 400x200x200 mm (inside) with locking arrangement and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) , i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand:10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :				
7.4.1	18.37.1	with common burnt clay F.P.S.(non module) brick of class designation 7.5	Each	8.000	₹ 9,698.55	₹ 77,588.40
7.5	18.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end):				
7.5.1	18.17.3	40 mm nominal bore	Each	8.000	₹ 826.10	₹ 6,608.80
7.5.2	18.17.4	50 mm nominal bore	Each	8.000	₹ 1,026.65	₹ 8,213.20
7.6	18.60	Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by Municipal Board complete with bolts,nuts, rubber insertions etc. (The tail pieces if required will be paid separately) :				
7.6.1	18.60.1	80 mm nominal bore	Each	4.000	₹ 3,627.65	₹ 14,510.60
7.7	18.13	Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including cutting and threading the pipe etc. complete :				
7.7.1	18.13.2	50 to 80 mm nominal bore	Each	4.000	₹ 1,785.35	₹ 7,141.40
7.8	18.14	Fixing water meter and stop cock in G.I. pipe line including cutting and threading the pipe and making long screws etc. complete (cost of water meter and stop cock to be paid separately).	Each	4.000	₹ 812.30	₹ 3,249.20
		Total Cost of SUB HEAD (VII) - EXTERNAL WATER SUPPLY				₹ 1,071,903.60
508		SUBHEAD-XIII: WATER SUPPLY PUMPS & EQUIPMENTS AND WATER TREATMENT UNIT				
8.1	Based on DSR-E&M-2022-18.14	Providing, installation, testing and commissioning of non-return valve of following sizes confirming to IS: 5312 complete with rubber gasket, GI bolts, nuts, washers etc.as required :				
8.1.1	18.14.4	80mm dia.	Each	4.000	₹ 8,952.32	₹ 35,809.30
8.1.2	18.14.2	50mm dia	Each	24.000	₹ 6,739.56	₹ 161,749.44



SCH-B2 (BOQ)

STATION PLUMBING WORKS (CPWD DSR SCHEDULE)

SCHEDULE-B-2 : STATION PLUMBING WORKS (CPWD ITEMS)						
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project						
S.No.	DSR Item	Description	UOM	Total Qty	Final Rate	Amount
8.1.3	18.14.1	40mm dia	Each	4.000	₹ 6,739.56	₹ 26,958.24
8.2	Based on DSR-E&M-2022-16.7.4	Providing & fixing Y - STRAINER of Ductile CI Body flanged ends with stainless steel strainer for chilled / hot water circulation including insulation as specified.				
8.2.1	16.7.4.7	50mm dia.	Each	8.000	₹ 6,858.29	₹ 54,866.30
8.2.2	16.7.4.8	40mm dia.	Each	4.000	₹ 5,120.44	₹ 20,481.74
8.3	Based on DSR-E&M-2022-18.8	Providing, laying, testing & commissioning of 'B' class heavy duty G.I. pipe conforming to IS 1239 including welding, fittings like elbows, tees, flanges, tapers, nuts, bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required :				
8.3.1	18.8.3	40 mm dia	Mtr.	100.000	₹ 967.28	₹ 96,728.40
8.3.2	18.8.4	50 mm dia	Mtr.	160.000	₹ 1,079.03	₹ 172,644.48
8.3.3	18.8.6	80 mm dia	Mtr.	200.000	₹ 1,553.94	₹ 310,788.00
8.4	DSR-2022 E&M-1.17	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as required.				
8.4.1	1.17.2	2 x 1.5 sq. mm	Metre	120.000	₹ 81.48	₹ 9,777.60
8.4.2	1.17.2 1	3 x 4 sq. mm	Metre	160.000	₹ 239.78	₹ 38,365.44
8.4.3	1.17.2 2	4 x 4 sq. mm	Metre	240.000	₹ 320.10	₹ 76,824.00
8.5	DSR-2022 E&M-5.16	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing as required.	Metre	480.000	₹ 81.48	₹ 39,110.40



SCH-B2 (BOQ)

SCHEDULE-B-2 : STATION PLUMBING WORKS (CPWD ITEMS)						
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project						
S.No.	DSR Item	Description	UOM	Total Qty	Final Rate	Amount
8.6	DSR-2022 E&M-4.1	Supplying and installing following size of perforated painted with powder coating M.S. cable trays with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.				
8.6.1	4.1.3	200mm width x 50mm depth x 1.6 mm thickness.	Metre	400.000	₹ 802.00	₹ 320,798.40
8.6.2	4.1.4	300mm width x 50mm depth x 1.6 mm thickness.	Metre	400.000	₹ 904.43	₹ 361,771.20
		Total Cost of SUBHEAD-XIII: WATER SUPPLY PUMPS & EQUIPMENTS AND WATER TREATMENT UNIT				₹ 1,726,672.94
S09		SUB HEAD-XIX: MISLANIOUS ITEM				
9.1	18.27	Providing and laying S&S centrifugally cast (spun) iron pipes (Class LA) conforming to IS - 1536 : vent pipes of Under ground tank complete.				
9.1.1	18.27.1	100mm dia	Each	32.000	₹ 1,423.10	₹ 45,539.20
9.2	19.18	Supplying and fixing C.I. cover for Under ground Water Tank				
9.2.1	19.18.1	455x610 mm rectangular C.I. cover (light duty) the weight of the cover to be not less than 22 kg	Each	32.000	₹ 1,358.00	₹ 43,456.00
9.3	19.16	Providing orange colour safety foot rest of minimum 6mm thick plastic encapsulated as per IS : 10910 on 12mm dia steel bar conforming to IS : 1786 having minimum cross section as 23mm x 25mm and over all minimum length 263mm and width as 165mm with minimum 112mm space between protrude legs having 2mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification make to be visible even after fixing, including fixing in manholes with 30x20x15cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) complete as per design. (For UGT)	Each	160.000	₹ 553.70	₹ 88,592.00
		Total Cost of SUB HEAD-XIX: MISLANIOUS ITEM				₹ 177,587.20
S12		SUB HEAD-XII: BORE WELL				
12.1	23.1 DSR	Boring/drilling bore well of required dia for casing/strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer -in-charge, up to 90 metre depth below ground level.				

SCH-B2 (BOQ)



STATION PLUMBING WORKS (CPWD DSR SCHEDULE)

SCHEDULE-B-2 : STATION PLUMBING WORKS (CPWD ITEMS)						
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project						
S.No.	DSR Item	Description	UOM	Total Qty	Final Rate	Amount
12.1.1	23.1.1	All Types of Soil				
12.1.1.1	23.1.1.1	300mm dia	Metre	720.000	₹ 707.75	₹ 509,580.00
12.2	23.2 DSR	Boring/drilling bore well of required dia for casing/strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer -in-charge, beyond 90 metre & upto 150 metre depth below ground level.				
12.2.1	23.2.1	All Types of Soil				
12.2.1.1	23.2.1.1	300mm dia	Metre	480.000	₹ 150.00	₹ 72,000.00
12.3	23.3 DSR	Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire and labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer -in-charge.				
12.3.1	23.3.2	150 mm nominal size dia	Metre	720.000	₹ 793.32	₹ 571,190.40
12.4	23.4 DSR	Supplying, assembling, lowering and fixing in vertical position in bore well unplasticized PVC medium well screen (RMS) pipes with ribs, conforming to IS: 12818, including hire & labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer-in-charge.				
12.4.1	23.4.3	200 mm nominal size dia	Metre	480.000	₹ 1,255.70	₹ 602,736.00
12.5	23.8 DSR	Gravel packing in tubewell construction in accordance with IS: 4097, including providing gravel fine/ medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineer-in-charge.	cum	80.000	₹ 2,024.50	₹ 161,960.00
12.6	23.12 DSR	Development of tube well in accordance with IS : 2800 (part I) and IS: 11189, to establish maximum rate of usable water yield without sand content (beyond permissible limit), with required capacity air compressor, running the compressor for required time till well is fully developed, measuring yield of well by "V" notch method or any other approved method, measuring static level & draw down etc. by step draw down method, collecting water samples & getting tested in approved laboratory, i/c disinfection of tubewell, all complete, including hire & labour charges of air compressor, tools & accessories etc., all as per requirement and direction of Engineer-in-charge.	Hr.	480.000	₹ 1,085.05	₹ 520,824.00
12.7	23.13 DSR	Providing and fixing suitable size threaded mild steel cap or spot welded plate to the top of bore well housing/ casing pipe, removable as per requirement, all complete for borewell of:				

R



SCH-B2 (BOQ)

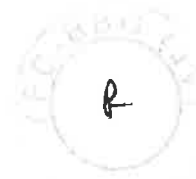
STATION PLUMBING WORKS (CPWD DSR SCHEDULE)

SCHEDULE-B-2 : STATION PLUMBING WORKS (CPWD ITEMS)						
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project						
S.No.	DSR Item	Description	UOM	Total Qty	Final Rate	Amount
12.7.1	23.13.3	200 mm dia	Each	8.000	₹ 321.15	₹ 2,569.20
12.8	23.14 DSR	Providing and fixing M.S. clamp of required dia to the top of casing/ housing pipe of tubewell as per IS: 2800 (part I), including necessary bolts & nuts of required size complete.				
12.8.1	23.14.3	200 mm clamp.	Each	8.000	₹ 2,293.65	₹ 18,349.20
12.9	23.15 DSR	Providing and fixing Bail plug/ Bottom plug of required dia to the bottom of pipe assembly of tubewell as per IS:2800 (part I).				
12.9.1	23.15.3	200 mm dia	Each	8.000	₹ 357.60	₹ 2,860.80
		Total Cost of SUB HEAD-XII: BORE WELL				₹ 2,462,069.60



SCH-B2 (BOQ)

SCHEDULE-B-3 : External & Site development Works(CPWD Items)		
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project		
SR.NO.	DESCRIPTION	AMOUNT (In INR)
1	Excavation and Dismantling	₹ 3,224,900.23
2	Storm Water Drain	₹ 275,212.00
3	Footpath,Paver Block and Kerbstone	₹ 7,232,846.55
4	Lane Marking	₹ 320,058.40
5	Street Furniture	₹ 750,000.00
	Total Amount	₹ 11,803,017.18



SCHEDULE-B-3 : External & Site development Works (CPWD Items)						
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project						
SR.NO.	DSR 2023	ITEM DESCRIPTION	UNIT	Total Qty	RATE	AMOUNT
S01		Excavation and Dismantling				
1.1	16.82	Taking out existing kerb stones of all types from footpath/ central verge, including removal of mortar etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge	RMT	1219.00	₹ 39.35	₹ 47,967.65
1.2	16.83	Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.	SQM	2641.50	₹ 131.75	₹ 348,017.63
1.3	15.59	Dismantling of flexible pavement (bituminous courses) by mechanical means and disposal of dismantled material up to a lead of 1 kilometre, as per direction of Engineer-in-charge.	CUM	1002.32	₹ 420.80	₹ 421,774.15
1.4	16.77	Scarifying the existing bituminous road surface to a depth of 50 mm and disposal of scarified material within all lifts and lead upto 1km (by mechanical means).	SQM	5962.00	₹ 7.00	₹ 41,734.00
1.5	2.25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	CUM	1466.00	₹ 196.00	₹ 287,336.00
1.6	2.70	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge.				
1.7	2.7.1	Ordinary rock	Cum	100.00	₹ 498.00	₹ 49,800.00
1.8	2.7.2	Hard rock (requiring blasting)	Cum	100.00	₹ 874.40	₹ 87,440.00
1.9	2.7.3	Hard rock (blasting prohibited)	Cum	100.00	₹ 1,432.95	₹ 143,295.00
2.0	1.1.18	Disposal of moorum/building rubbish/ malba/ similar unserviceable, dismantled or waste material by mechanical transport including loading, transporting, unloading to approved municipal dumping ground for lead upto 10 km for all lifts, complete as per directions of Engineer-in-charge. Note - item to be applicable in urban areas having directions for restricted hours for movement/ plying of load carrying motor vehicle of 3.5 cum or more.	CUM	3638.00	₹ 494.10	₹ 1,797,535.80
		Sub Total : S01-Excavation and Dismantling				₹ 3,224,900.23
S02		Storm Water Drain				
2.1	19.27.1	Constructing brick masonry road gully chamber 50x45x60 cm with bricks incement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm pre-cast R.C.C. horizontal grating with frame complete as per standard design : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	NOS	40.00	₹ 5,957.90	₹ 238,316.00



SCHEDULE-B-3 : External & Site development Works (CPWD Items)						
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, gir der erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project						
SR.NO.	DSR 2023	ITEM DESCRIPTION	UNIT	Total Qty	RATE	AMOUNT
2.2	19.21.2	Making connection of Gulley Chamber with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement and making necessary channels for the drain etc. complete :	NOS	40.00	₹ 922.40	₹ 36,896.00
Sub Total : S02-Storm Water Drain						₹ 275,212.00
S03	Footpaths, Paver Blocks & Kerbstones					
3.1	16.91.1	Providing and laying factory made chamfered edge Cement Concrete paver blocks in footpath, parks, lawns, drive ways or light traffic parking etc, of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required colour & pattern over 50 mm thick compacted bed of sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand. complete all as per direction of Engineer-in-Charge. 60 mm thick cement concrete paver block of M-35 grade with approved colour, design & pattern.	SQM	2621.00	₹ 1,045.65	₹ 2,740,648.65
3.2	16.90	Providing and laying tactile tile (for vision impaired persons as per standards) of size 300x300x9.8mm having with water absorption less than 0.5% and conforming to IS:15622 of approved make in all colours and shades in for outdoor floors such as footpath, court yard, multi modals location etc., laid on 20mm thick base of cement mortar 1:4 (1 cement : 4 coarse sand) in all shapes & patterns including grouting the joints with white cement mixed with matching pigments etc. complete as per direction of Engineer-in-Charge.	SQM	406.00	₹ 2,017.60	₹ 819,145.60
3.3	16.91.2	Providing and laying factory made chamfered edge Cement Concrete paver blocks in footpath, parks, lawns, drive ways or light traffic parking etc, of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required colour & pattern over 50 mm thick compacted bed of sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand. complete all as per direction of Engineer-in-Charge. 80 mm thick cement concrete paver block of M-35 grade with approved colour, design & pattern.	SQM	2225.00	₹ 1,091.50	₹ 2,428,587.50



SCHEDULE-B-3 : External & Site development Works (CPWD Items)

Name of Work : Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

SR.NO.	DSR 2023	ITEM DESCRIPTION	UNIT	Total Qty	RATE	AMOUNT
3.4	16.69	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5 mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured to calculate volume for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	CUM	123.00	₹ 10,117.60	₹ 1,244,464.80
		Sub Total : S03-Footpaths, Paver Blocks & Kerbstones				₹ 7,232,846.55
S04		Lane Markings				
4.1	16.62	Providing and applying 2.5 mm thick road marking strips (retro-reflective) of specified shade/ colour using hot thermoplastic material by fully/ semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	SQM	428.00	₹ 747.80	₹ 320,058.40
		Sub Total : S04-Lane Markings				₹ 320,058.40
S05		Street Furniture				
5.1	10.28	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, i/c 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 per approval of Engineer-in-charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.).	Kg	1250.00	₹ 600.00	₹ 750,000.00
		Sub Total : S05-Street Furniture				₹ 750,000.00



STATION STRUCTURAL WORKS

Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

SCHEDULE-C : STATION RCC STRUCTURE WORKS

Item	Description	Amount
	Sub Total : C01- Foundation	₹ 25,383,769.93
	Sub Total : C02- In-situ Concrete Works	₹ 61,742,488.13
	Sub Total : C03- Reinforcement Steel	₹ 99,604,011.22
	Sub Total : C04- Miscellaneous Items	₹ 6,615,452.14
	Grand Total	₹ 193,345,721.41



Schedule-C

SCHEDULE-C : STATION RCC STRUCTURE WORKS

Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

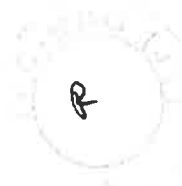
S.No.	Description	UOM	Total Qty	Rate	Amount
	C01-Foundation				
1.01	Providing and installing cast-in-situ vertical bored piles of approximate depth as per drawing and with M35/20 where "35" is the grade of concrete (as per OCS) incl all operations such as installation and shifting of piling rig etc, in all soil strata along elevated section and "20" is the "nominal maximum aggregate size". The cost shall also include the cost of empty boring wherever required. The stated length include test piles for initial load tests. (Measurement shall be from cut-off level to founding level). The item includes disposal of earth, muck, slush released from piles, top cutted portion of pile at dumping ground for all leads.				
	Reinforcement shall be paid separately. Rate shall include cost of using required dosage of admixture in concrete for obtaining required workability as per approval of Engineer. Rate shall include provision of MS Steel pipes as per OCS for cross-hole sonic test. Pipes shall extend from cut-off level to bottom of pile where pipe shall be sealed at bottom. Rate shall include testing of PIT & CHSL as per OCS and filling of tubes after sonic test using standard cement non-shrink mortar before casting of pile cap. The item includes drilling and socketing in hard rock at required depth including casing upto required depth, including casing as required				
1.01.1	For 1000 mm dia Pile				
	(i) By hydraulic rigs using partial depth casing with polymer	Rmt	55.00	₹ 15,000.00	₹ 825,000.00
1.01.2	For 600 mm dia Pile				
	(i) By hydraulic rigs using partial depth casing with polymer	Rmt	55.00	₹ 15,000.00	₹ 825,000.00



SCHEDULE-C : STATION RCC STRUCTURE WORKS

Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Total Qty	Rate	Amount
1.02	RCC M-35 Grade Open foundation/ Pile Cap including excavation at all liftthrough existing concrete and water bound macadam road /bituminous road / cement road of all thicknesses including dismantling other structures, dead utilities etc. and soil including dewatering, pumping and bailing out water, strutting and shoring etc. This item also includes formwork and backfilling with coarse sand in foundation including watering, curing, compacting with a vibratory plate compactor and loading, leading and disposal of surplus excavated material using lockable and covered trucks so as to ensure that during transportation the carried material does not spill out. Max lead to dumping ground will be all leads. Reinforcement shall be paid separately. Rate shall include cost of using required dosage of admixture in concrete for obtaining required workability as per approval of Engineer.	Cum	1,290.89	₹ 17,000.00	₹ 21,945,139.13
1.03	Providing M 15/20 concrete PCC below pile cap and open foundation slabs. Rate shall include cost of using required dosage of admixture in concrete for obtaining required workability as per approval of Engineer.	Cum	223.58	₹ 8,000.00	₹ 1,788,630.80
	Total of Sub Total : C01- Foundation				₹ 25,383,769.93
C02	In-situ Concetre Work				



SCHEDULE-C : STATION RCC STRUCTURE WORKS

Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Total Qty	Rate	Amount
2.1	Providing & laying M-35/20 (cement content as per technical specifications) Grade of concrete for Beam, Slab, columns, lift walls, walls at all levels, covering slabs for underground water tank /basement, plinth beam, chajja slab, staircase slab, steps, flight, Landing, Stinger beam, beams, sill, floor beams, cantilever beam, inverted beams, gutter beams, lintels, copings, facias, parapet, drop pardis, railing, mullions, band beams, cornices, toe wall at all levels etc. for profiles, pillars, Beams for compound wall, retaining walls etc including all scaffolding, Lead and Lifting, chamfering,all type of shuttering as per standard technical specification, suitable arrangement in formwork Doka or equivalent , placing in position all type of inserts, shear connectors,construction joints as per approved methodology at all levels and as per direction of Engineer-in-charge.	Cum	3,376.54	₹ 16,500.00	₹ 55,712,976.13
2.1.2	RCC- LINTELS & Mullions	Cum	355.73	₹ 16,500.00	₹ 5,869,512.00
2.2	Extra for using M-40 (Min. cement content 410 kg as per requirement/ technical specifications) instead of M-35 item no. 2.01 above	Cum	40.00	₹ 4,000.00	₹ 160,000.00
	Total of Sub Total : C02-In Situ Concrete Works				₹ 61,742,488.13
C03	Reinforcement Steel				
3.1	Providing steel reinforcement Thermo-Mechanically Treated (TMT) bars of grade Fe-500D or more from approved list of supplier for R.C.C. works including straightening, cutting, bending, placing in position, binding with G.I. binding wire, lapping, butt welding, cover block etc. at all height, depth & at any location including transportation complete in all respect as per specification and as per the direction of Engineer-in-charge.	MT	857.18	₹ 116,200.00	₹ 99,604,011.22
	Note:				
	(i) No laps, joints are permitted in rebars provided in super structures, Column, Beam etc However, mechanical couplers are to be used without extra cost.				



SCHEDULE-C : STATION RCC STRUCTURE WORKS

Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Total Qty	Rate	Amount
	(ii) For pile reinforcement, Welding of lap joint shall be without extra cost. Additional rings required for handling The Rebar Cage Shall Be The Responsibility Of The Contractor And Shall Not Be Paid Separately.				
	(iii) For other structural members, lap joints are permitted for bar dia-20mm, (including 20mm), else, mechanical couplers are to be provided, where in rebar ends shall be cold forged with die.				
	(iv) The cost includes all welding and providing mechanical couplers, all types of laps, standard laps, chair, spacers, bend deduction as per IS-SP34 etc., as required and nothing extra is payable on this account.				
	Total of Sub Total : C03-Reinforcement Steel				₹ 99,604,011.22
C04	Miscellaneous Items				
4.1	Expansion Joints				
	Providing and installing in position approved building expansion joint Horizontally at various locations at floor level consisting of aluminium extrusions, anti-skid serrated top plate (Straight/Curved) with vapour barrier, sealant etc. to be installed in structural gap varies from 50mm to 200mm as per details.				
4.1.1	(i) Expansion /Contraction = +50mm/ -50mm Vertical seismic movement = +10mm/ -10mm	RM	728.00	₹ 5,000.00	₹ 3,640,000.00
4.2	Vertical Expansion Joints (Strip Seal Joint)				
	Providing and Installing in position approved building expansion joint vertically at various locations (wallsand RCC Structures) at all levels as shown in execution drawings or approved by Engineer consisting of aluminium extrusions, anti-skid serrated top plate (Straight/Curved) with vapour barrier, sealant etc. as per details and specifications or as approved by Engineer. Entire installation is to be carried out Strictly in the presence of manufacturer's representative at all times. No extra payment will be made for providing thermocoal at expansion joint between columns/beams/slabs or locations shown in drawing at ths time of construction of RCC elements.				



SCHEDULE-C : STATION RCC STRUCTURE WORKS

Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Total Qty	Rate	Amount
4.2.1	(i) Expansions /Contraction = +50mn/ -50mm Vertical seismic movement = +10 mm/ -10mm	Rmt	105.00	₹ 4,945.32	₹ 519,258.92
4.2.2	(ii) Expansion /Contraction = +25mn/ -25mm Vertical seismic movement = +15 mm/ -15mm	Rmt	40.00	₹ 4,628.09	₹ 185,123.62
4.3	Providing and filling sheet covering over expansion joint with iron screws as per design to match the colour / shade of wall reinforcement				
4.3.1	(ii) Aluminium fluted strips 3.15mm thick and 200mm wide	RM	728.00	₹ 200.00	₹ 145,600.00
4.4	Providing M 40/20 concrete for stitch portion in between Girders and any other locations	Cum	40.00	₹ 18,500.00	₹ 740,000.00
4.5	Provision of RCC Core Cutting- of 36mm dia & length 600 mm for PEB braket/ any other requirement as per site conditions.	Each	40.00	₹ 1,142.40	₹ 45,696.00
4.6	Providing and Fixing Swellable water bar 20 x20 mm , & fixing of chemical injection holes at construction joint and junction of raft and Pump room wall for vertical and horizontal also.	Met	446.59	₹ 3,000.00	₹ 1,339,773.60
	Total of Sub Total:C04 Miscellaneous items				₹ 6,615,452.14
	Total Amount (Rs.)				₹ 193,345,721.41

SCH-C (BOQ)

Page 5



SCHEDULE-D : STATION ARCHITECTURAL WORKS (NDSR)		
Item	Description	Amount
1	Sub Total : N01 - Concrete Work	₹ 15,290,175.10
2	Sub Total : N02- Masonary Work	₹ 13,963,002.18
3	Sub Total : N03 - Stone /Marble / Granite Work	₹ 55,044,819.77
4	Sub Total : N04 - Flooring Work	₹ 20,520,045.38
5	Sub Total : N05 - Finishing Work	₹ 5,041,559.93
6	Sub Total : N06 - Aluminium Work	₹ 10,120,032.46
7	Sub Total : N07 - Suspended Ceiling Work	₹ 30,100,971.04
8	Sub Total : N08 - Metal Work	₹ 32,642,970.28
9	Sub Total : N09 - Fire door & Rolling Shutter Work	₹ 14,061,166.96
10	Sub Total : N10- Glass Work	₹ 2,963,021.64
11	Sub Total : N11 - Waterproofing Work	₹ 419,824.00
12	Sub Total : N12 -Plastering & Painting work	₹ 45,069,298.10
13	Sub Total : N13 - External Architectural Finishes work	₹ 69,251,026.90
	Grand Total	₹ 314,487,913.74



Schedule-D

SCHEDULE-D : STATION ARCHITECTURAL FINISHING WORKS (NDSR ITEMS)					
S.No.	Description	UOM	Total Qty	Rate	Amount
N01	CONCRETE WORK				
1.1	Providing and Laying of Foam Concrete under Raised Floor as / of density 1200kg/cum	Cum	159.14	₹ 5,272.41	₹ 839,026.72
1.2	Providing and laying in position cement concrete of specified grade M-15 including the cost of centering ,shuttering and Finishing for screed works as approved by Engineer-in-Charge	Cum	2,035.88	₹ 7,000.00	₹ 14,251,148.38
1.3	Providing and laying in position Plum Concrete	Cum	20.00	₹ 10,000.00	₹ 200,000.00
	TOTAL OF N01 CONCRETE WORK				₹ 15,290,175.10
N02	MASONARY WORK				
	SOLID BLOCK WORKS				
2.1	Providing and fixing precast cement concrete solid block (SIZE 400X200X200) with cement concrete 1:2:4 (1 Cement : 2 coarse sand : 4graded stone aggregate 20mm nominal size) including hoisting and setting in position with cement mortar 1:3 (1 Cement : 3 coarse sand), cost of required centering, shuttering etc. complete up to any height including making Openings for duct of any size & shape & Finishing the same. up to 6 m from ground level	Cum	1,249.46	₹ 10,000.00	₹ 12,494,595.20
	(i)Extra for lifting charges from 6m to 12m from ground level	Cum	786.26	₹ 693.84	₹ 545,542.08
	(ii)Extra for lifting charges from 12 m to 20 m from ground level	Cum	539.42	₹ 1,000.00	₹ 539,416.64
2.2	Providing and fixing precast cement concrete solid block (SIZE 400X200X100) with cement concrete 1:2:4 (1 Cement : 2 coarse sand : 4graded stone aggregate 20mm nominal size) including hoisting and setting in position with cement mortar 1:3 (1 Cement : 3 coarse sand), cost of required centering, shuttering etc. complete up to any height including all lead, making Openings for duct of any size & shape & Finishing the same upto 6m from ground level.	Cum	20.00	₹ 17,478.57	₹ 349,571.46
	(i)Extra for lifting charges from 6m to 12m from ground level	Cum	20.00	₹ 693.84	₹ 13,876.80
	(ii)Extra for lifting charges from 12 m to 20 m from ground level	Cum	20.00	₹ 1,000.00	₹ 20,000.00
	TOTAL OF N02 MASONARY WORK				₹ 13,963,002.18
N03	STONE / GRANITE / MARBLE WORK				
	Note: All granite Stone slabs shall be selected as per approved sample from Tamil Nadu / Karnataka (South India) of selected quality, uniform in colour, free from cracks, fissures and flakes with straight edges and perfect corners.				

SCH-D (BOQ)



SCHEDULE-D : STATION ARCHITECTURAL FINISHING WORKS (NDSR ITEMS)					
S.No.	Description	UOM	Total Qty	Rate	Amount
3.1	Providing and fixing flamed finish granite stone of any color (bull nosed) of size 1200x600x60 mm at platform edge level using 5mm thick approved thick bed adhesive as per specification over prepared base on 20mm (average) thick base of cement mortar in 1:4 (1 cement : 4 total aggregate- sand and 10mm single sized aggregate) using 43 grade cement, water reducing admixture as per ISO 9103:1999 and jointing with white cement with matching colour pigment all complete in levelling course laid to proper slopes over screed base including, base preparation including movement joint in screed as per specification with 10mm thick compressible filler to edge of screed with two parts polysulphide sealant to top edge as per approved drawing and directions of engineer-in-charge. All Light color Granites to be fixed on White Cement. As per Approved Adhesive. Minimum Compressive strength shall be as per IS 1121(part 1) .Water absorption Test shall be carried out as per IS 1124. The flooring shali be covered with POP / Gypsum powder of 12mm thick /Plywood to ensure that the flooring is not damaged till the construction work is completed and handed over.	Sqm	672.00	₹ 7,500.00	₹ 5,040,000.00
3.2	Providing and fixing 30mm thick Pre polished Granite stone on staircase treads and landings including bull nosing(rounding the nose and making groove in tread) of steps not exceeding 32cm in width of any approved colour and shade, size and pattern, (sample of granite stone shall be approved by Engineer-in-Incharge) using cement mortar 1:4 (1 cement : 4 coarse sand), laid and jointed with cement slurry and pointing with cement slurry admixed with pigment of matching shade , including rubbing, curing and polishing etc as per specifications and relevant architectural drawings. All Light color Granites to be fixed on White Cement. As per Approved Adhesive. Minimum Compressive strength shall be as per IS 1121(part 1) .Water absorption Test shall be carried out as per IS 1124. The flooring shali be covered with POP / Gypsum powder of 12mm thick /Plywood to ensure that the flooring is not damaged till the construction work is completed and handed over.	Sqm	1,654.82	₹ 4,500.00	₹ 7,446,704.12

R

SCH-D (BOQ)



SCHEDULE-D : STATION ARCHITECTURAL FINISHING WORKS (NDSR ITEMS)					
S.No.	Description	UOM	Total Qty	Rate	Amount
3.3	Providing and laying 30mm thick pre polished granite slab of sizes up to and including 1200X600mm on floor, applying sealer coat and using 5mm thick approved thick bed adhesive as per specification over prepared base on 20mm (average) thick base of cement mortar 1:4 (1 Cement : 4 total aggregates - coarse sand and 10mm single sized aggregates) using 43 grade cement, water reducing admixture as per ISO 9103:1999 and jointing with white cement with matching colour pigment all complete (Colour of granite as approved by Engineer) in levelling course laid to proper slopes over screed base including base preparation, movement joint in screed as per specification with 10mm thick compressible filler to edge of screed/ blockwork junction with two parts polysulphide sealant to top edge, drainage gullies as per approved section, curing, testing etc. all complete as per specifications and relevant drawings. All Light color Granites to be fixed on White Cement.As per Approved Adhesive.Minimum Compressive strength shall be as per IS 1121(part 1).Water absorption Test shall be carried out as per IS 1124. The flooring shall be covered with POP / Gypsum powder /3mm thick Plywood of to ensure that the flooring is not damaged till the construction work is completed and station is handed over.				
3.3.1	(i)1200X600mm sized granite slab	Sqm	6,607.60	₹ 4,500.00	₹ 29,734,186.85
3.3.2	(ii)600X600mm sized granite slab	Sqm	20.00	₹ 2,098.98	₹ 41,979.60
3.3.3	(iii)300X300mm sized granite slab	Sqm	20.00	₹ 1,819.12	₹ 36,382.32
3.4	Providing and fixing 18mm thick mirror polished Granite Stone in Risers of steps of approved colour, size and pattern, (sample of granite stone shall be approved by Engineer-in-charge) over 12 mm 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 complete as per specifications and relevant drawings.	Sqm	610.94	₹ 2,500.00	₹ 1,527,360.00
3.5	Providing and installing counters of MS Frame including fasteners (with primer and 2 coats of enamel paint) carcass in TOM, EFO, SCR etc with 30mm polished & moulded Jet Black Granite top with all cutouts/ openings including providing and fixing over 19mm thick commercial board & 19 x 3 mm teak wood lipping all complete of approved quality as per specifications and relevant drawings (Plan area shall be considered for measurement)	Sqm	77.18	₹ 6,605.34	₹ 509,773.33



SCH-D (BOQ)

SCHEDULE-D : STATION ARCHITECTURAL FINISHING WORKS (NDSR ITEMS)					
S.No.	Description	UOM	Total Qty	Rate	Amount
3.6	Providing and fixing 25mm thick polished Granite coping(Polished up to diamond level and sample should be approved by Engineer-in-Charge) one side bull-nosed on wall cladding of any colour and shade (approved by Engineer-in-Charge)using cement mortar 1:4 (1 cement : 4 coarse sand), laid and jointed with cement slurry and pointing with cement slurry admixed with pigment of matching shade , including rubbing, curing and polishing etc including Chissel in wall and fixing, Rubbing, Curing, Moulding & polishing to edge to give high gloss finish etc. complete.The finished work should be covered properly to avoid any breaking of edges, coping stone till the final handing over of the Station.	Sqm	749.65	₹ 5,000.00	₹ 3,748,245.00
3.7	Mirror Polished Granite of 20/30mm thick for wall cladding clamped by 'Z' SS angles at regular intervals fastened on to concrete or brick wall by SS expansion bolters or SS self locking screws and fixing the sealants at joints of matching or any colour recommended by the Engineer-in- charge.The cost of making necessary grooves all around stone pieces, chamfering of corner edges and cut-outs are included.	Sqm	1,569.76	₹ 4,000.00	₹ 6,279,044.10
3.8	Providing and laying sand blasted finish granite stones in desired colour as per control sample, size 1200x600x30 mm on floor using 5mm thick approved thick bed adhesive as per specification over prepared base on 20mm (average) thick base of cement mortar 1:4 (1 cement: 4 core sand) laid and jointed with neat cement slurry mixed with pigment to match the shade of granite stone complete as per specifications and relevant drawings, in external development areas. Minimum Compressive strength shall be as per IS 1121 (part 1) Water absorption Test shall be carried out as per IS 1124. The flooring shall be covered with POP/Gypsum powder of 12mm thick /Plywood to ensure that the flooring is not damaged till the construction work is completed and handed over.	Sqm	100.00	₹ 6,455.19	₹ 645,519.00
3.90	Providing and applying Non-metallic Monolithic surface hardening compound such as Nitoflor Hardtop Standard of Fosroc or approved equivalent to Concrete floor and similar locations as called for to develop proper bonding and to seal, harden, water-proof. The coverage of hardening compound shall be 5Kg/Sqm or as per manufacturer's recommendations for medium duty traffic conditions and as per direction of engineer-in-change.	Sqm	197.88	₹ 180.03	₹ 35,625.45
	TOTAL OF N03 STONE / GRANITE / MARBLE WORK				₹ 55,044,819.77
N04	FLOORING WORK				



SCH-D (BOQ)

SCHEDULE-D : STATION ARCHITECTURAL FINISHING WORKS (NDSR ITEMS)					
S.No.	Description	UOM	Total Qty	Rate	Amount
4.1	Providing and fixing access raised floor of light grade of minimum 15 KN/m ² UDL panels manufactured from pressed formed corrosion resistant galvanized steel with total overwrap of one piece top, sides and bottom flange encapsulating monolithic homogeneous totally premixed fiber reinforced calcium silicate material with balanced density over panel, to cater in the size 600 x 600 x 41mm. The panel has to be placed on the pedestal made from all solid steel construction, galvanized plated consisting of stringers, an anti-vibrational head cap with cruciform upstands and four panels locating studs, positively clipped pedestal clipped to the steel base plate. The pedestal cap shall have an electrical conductor plate for dissipation of static electricity. The steel base plate of the pedestal shall be fixed on the sub-floor with Epoxy pedestal adhesive and/or mechanical fixing with fasteners (8mm X 75mm). The Access floor should be able to take a point load of minimum 2.5 KN over 25 mm sq. and UDL of minimum 15 KN/sq. meter. The panel shall be finished with high abrasion, anti static HPL.				
4.1.1	Up to 450 mm high cavity floor	Sqm	20.00	₹ 8,816.72	₹ 176,334.48
4.2	Providing and laying 12mm (minimum) thick with 5mm (minimum) thick projection on surface yellow colored directional vitrified porcelain tactile tile of Palican or equivalent (as per specifications) laid on floor with Laticrete 111 crete filler powder mixed with Laticrete 73 latex admix and applied to a minimum thickness of 4.5mm (The mixing ratio shall be as follows: 20kg bag (Laticrete 111) : 5.5 litre (Laticrete 73). Spacer of 3mm shall be used between the tiles and joints filled using Laticrete Latapoxy SP-100 epoxy grout in Inca Gold color. The joint depth shall be 6mm. Laticrete products shall be as manufactured by Laticrete India Pvt. Ltd. / Laticrete International Inc.) over 20mm thick bed of cement mortar 1:4 (1 cement:4 coarse sand) in levelling course laid to proper slopes over screed base including base preparation including movement joint in screed as per specification with 10mm thick compressible filler to edge of screed with two parts polysulphide sealant to top edge as per approved drawings and directions of engineer-in-charge. Screed shall be measured and paid extra.				
4.2.1	300x300 hazard warning and directional tactile tiles as per approved drawings	Sqm	1,733.98	₹ 479.31	₹ 831,113.03
4.3	Providing and laying yellow visibility vitrified tile as per control sample of size 200x100x8 mm thick at platform level over 20 mm thk bed of cement mortar 1:4 (1 cement : 4 coarse sand) in levelling course laid to proper slopes over screed base including base preparation including movement joint in screed as per specification with 10mm thick compressible filler to edge of screed with two parts polysulphide sealant to top edge as per approved drawing and directions of engineer-in-charge. Screed shall be measured, and paid extra - all complete as per relevant drawings and specifications	Sqm	112.00	₹ 1,597.70	₹ 178,942.40

P



SCH-D (BOQ)

SCHEDULE-D : STATION ARCHITECTURAL FINISHING WORKS (NDSR ITEMS)					
S.No.	Description	UOM	Total Qty	Rate	Amount
4.4	Providing and fixing 1st quality Vitrified wall tiles of approved make & approved adhesive, shade, colour and finish in all colours, shades, size in skirting, wall cladding, border tiles and dados over 20/12 mm thick bed of cement Mortar 1:4 (1 cement: 4 coarse sand) and jointing with approved grouting material with pointing in white cement mixed with pigment of matching shade complete as per Engineer-in-Charge and technical specifications	Sqm			₹ 0.00
4.4.1	(i)1200X600mm sized Vitrified wall tiles	Sqm	20.00	₹ 1,665.19	₹ 33,303.82
4.4.2	(ii)600X600mm sized Vitrified wall tiles	Sqm	1,719.26	₹ 1,858.50	₹ 3,195,236.16
4.4.2	(iii)300X300mm sized Vitrified wall tiles	Sqm	20.00	₹ 895.56	₹ 17,911.30
4.3	Providing and laying 50mm thick cement concrete granolithic flooring 1:2:4 (1 cement : 2 coarse sand: 4 graded stone with 20mm nominal size stone aggregate) finished with Non-metallic Monolithic surface using hardening compound such as Nitoflor Hardtop Standard of Fosroc or approved equivalent to Concrete floor to develop proper bonding and to seal, harden, water-proof, improve abrasion, chemical resistance and to form a dust free surface as per manufacturer's specifications. Using power trowel including aluminium strips 40mm wide and 2mm thick in joints of cement concrete floor etc. complete as directed by Engineer.	Sqm	1,393.51	₹ 910.67	₹ 1,269,023.07
4.4	Providing and applying anti dust sealer (epoxy coating) 1000µ thick epoxy floor coating along with necessary floor preparation by ASIAN PAINTS PPG make or equivalent with use of APCPFLOH HFP 120 Two component, high solid, epoxy resin based floor primer @50 µ & then topcoat APCOFLOH SL2 Self levelling coatings with excellent flow & levelling characteristics, conforms to the Global Migration Standards laid down in US-FDA: 21CFR 175-300 and also having mechanical properties such as compressive strength 51 mpa (ASTM C 579), Flexural strength 12 mpa (ASTM C 580) & Tensile Strength 8 mpa (ASTM C 307) on floor as per approved colour and shade. Floor condition shall be of Trimix and the moisture content of the concrete flooring should be less than 5%	Sqm	1,393.51	₹ 2,131.08	₹ 2,969,686.63



SCH-D (BOQ)

SCHEDULE-D : STATION ARCHITECTURAL FINISHING WORKS (NDSR ITEMS)					
S.No.	Description	UOM	Total Qty	Rate	Amount
4.5	Kota stone slab flooring over 30 mm thick using 5mm thick approved thick bed adhesive as per specification over prepared base on 20mm (average) thick base of cement mortar 1:4 (1 Cement : 4 total aggregates - coarse sand and 10mm single sized aggregates) using 43 grade cement, water reducing admixture as per ISO 9103:1999 and jointing with white cement with matching colour pigment all complete (Colour of granite as approved by Engineer) in levelling course laid to proper slopes over screed base including base preparation, movement joint in screed as per specification with 10mm thick compressible filler to edge of screed/ blockwork junction with two parts polysulphide sealant to top edge, drainage gullies as per approved section, curing, testing etc. all complete as per specifications and relevant drawings. All stone slab to be fixed as per Approved Adhesive. Minimum Compressive strength shall be as per IS 1121(part 1). Water absorption Test shall be carried out as per IS 1124. The flooring shall be covered with POP / Gypsum powder of 12mm thick / Plywood to ensure that the flooring is not damaged till the construction work is completed and handed over.	Sqm	4,231.61	₹ 2,800.00	₹ 11,848,494.50
TOTAL OF N04 FLOORING WORK					₹ 20,520,045.38
N05	FINISHING WORK				
5.1	Providing & fixing Toilet Cubicle (of following standard dimension which includes door size width) made of heat, bacteria, water, chemical, scratch and impact resistant 12mm thick solid compact laminate panels tested in approved laboratory. Finish of the compact laminate should be Suede, Raw silk model includes doors, pilasters & intermediate panels finished with approved texture/shade as per the approved detail drawings & make & as per IS 2046 (Indian standard) and as per fire retardant BS-476/97 standard. This also includes providing and fixing in position necessary hardware made out of stainless steel (Grade 304) as per manufacturers specifications & Architects instructions like (1) Door knob (2) Gravity hinges (3) Thumb turn lockset with occupancy indicators (4) Coat hooks with Door stopper (5) U-channels (6) Adjustable foot/pedestal (7) Top rail with corner connector (8) Rubber noise deafening tape (9) Screws & wall plugs. All screws will be of 304 Grade in stainless steel with satin finish. All pilasters are supported by stainless steel bottom cladding. The base of the stainless steel bottom cladding will be anchored to the floor with a clearance height up to 100mm. the top fitting should consist of SS top rail which will get fixed with pilasters, with SS panel tube holder, SS corner bend (connected with top rail) will be used on the corner of cubicle in absence of brick				
5.1.1	Toilet Cubicle with standard dimension of 2000-2100mm Height x 1000mm Width x 1550mm Depth, which includes door opening size	Nos	20.00	₹ 42,614.30	₹ 852,285.94
5.2	Making grooves 15x6mm on internal/external wall plaster complete as per architectural drawing. The rates includes all materials, Labour, tools, plants and equipment. Nothing shall be paid extra on this items.	RM	71,968.00	₹ 14.21	₹ 1,022,809.22



SCH-D (BOQ)

SCHEDULE-D : STATION ARCHITECTURAL FINISHING WORKS (NDSR ITEMS)					
S.No.	Description	UOM	Total Qty	Rate	Amount
5.3	Providing and fixing at locations ceramic art glazed hand made tiles of 8-10mm thickness. Tiles shall be square or rectangular of sizes such as 25x150mm, 50x50mm, 75x75mm, 100x100mm, 75x150mm, 100x200mm, 75x225mm etc. of approved make and approved colours fixed over cement plaster surface with adhesive as per approved pattern and grout of permanent matching tile colour as per manufacturer specification complete as directed by the Engineer-In-charge at site. The Material of The Tiles shall be of Fine Quality of China Clay Mixed With Other Chemicals Like Quartz, Phelsphar and Welsonite Etc. The Contents are mixed and grind to make the Clay Ready To Provide Shape. To Shape A Particular Model Moulds & Dies Shall Be Used. The Tiles Shall Be Double Fired, First At 1130-1200 C For The Strengthening O The Tiles Called Bisquid And Secondly in 1050-1100 C For The Glazing Process Ensures That The Glaze Tiles Sustain The Extreme Weather Conditions.	Sqm	379.50	₹ 3,600.70	₹ 1,366,464.78
5.4	Providing and fixing of solid grade compact HPL as per 438-6 in 6mm thickness as per EN 438 -6 Type EDS (Exterior DurableStandard) EGS (ExteriorGeneral Standard) manufactured using specially treated acrylic resins under high pressure and temperature & hardened into sheets, thus providing all weather protection and UV Resistance on an Aluminium Sub Structure of Aluminium tube Channel having thickness 63x25x2mm, it should be powder coated with approved colour complete in all respect as per Engineer-in-Charge (used for Facade cladding, canopies, fences, pergola, outdoor cladding, balcony cladding railing gate elevation etc) including CNC cutting ofHPL (High Pressure Laminate) Acrylic solid surface as per design approved by Engineer-in-Charge	Sqm	400.00	₹ 4,500.00	₹ 1,800,000.00
	TOTAL OF N05 FINISHING WORK				₹ 5,041,559.93
N06	ALUMINIUM WORK				
6.1	ALUMINIUM LOUVER				
	Providing and fixing PVDF aluminum 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 aluminum 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. Aluminium sections shall be smooth rust free, straight as per architectural drawings and the direction of Engineer-in-charge etc. All structural steel support frame work shall be paid separately	Sqm	2,575.64	₹ 3,800.00	₹ 9,787,435.80
6.2	FIXED CUM OPENABLE WINDOWS				



SCH-D (BOQ)

SCHEDULE-D : STATION ARCHITECTURAL FINISHING WORKS (NDSR ITEMS)					
S.No.	Description	UOM	Total Qty	Rate	Amount
	Providing fabricating and installing in position pure polyester powder coated aluminum doors, windows curtain walling skylights partitions grilles, glazing with extruded aluminum sections and profiles complete in all respects in straight or faceted profiles including arched angular in elevation including sub frames in tubular aluminum (having mill finish) outer frames, architraves beading wool pile 6mm thick clear float glass gaskets, all complete. The minimum sizes, thickness and weights per unit length of the aluminum sections to be given by tenderer, however, nothing extra shall be payable to the Contractor for using larger/heavier sections than those given, if found inadequate including all fittings				
	WINDOWS TYPES				
	Openable/sliding/side hung/windows.	Sqm	49.40	₹ 6,732.73	₹ 332,596.66
	TOTAL OF N06 ALUMINIUM WORK				₹ 10,120,032.46
N07	SUSPENDED CEILING WORKS				
7.1	PERFORATED METAL PANEL CEILING				
	Providing and installing suspended ceiling system at all levels with interlocking grid of size 1200 x 600 mm / 600 x 600 mm ceiling module of size (1250 x 600) consisting of demountable infill units (size 1200 x 600 x 1.2 mm) having 50 mm gap at every 1200 mm, gap covered with 82 mm wide channel having flanges to hold ceiling panels. The panels and channels shall be made from 1.2 mm thick GI sheet, punched and bent to shape. The panels shall have perforated area 30 %- 40 %. The ceiling shall powder coated be (PPC, 80 micron) on exposed and unexposed surface with approved colour. The grid system shall include hangers and runners of size 50 x 50 x 3 mm thick hot dip galvanised steel, fixed on soffit of slab with the help of stainless steel expansion fasteners of size 10 x 75 mm (Tam Anchor), The ceiling system to include panels, hanging system including the cost of providing opening and electrical fittings/fixtures, secondary supporting system for opening and below cable tray and duct, access to maintenance, all complete as per requirement of Engineer- in- Charge. Note: The rates include all materials, Labours, tools, plant and equipment. Nothing shall be paid extra.	Sqm	139.63	₹ 5,335.06	₹ 744,916.60
7.2	CALCIUM SILICATE BOARD CEILING				
	Providing and installing suspended ceiling systems / vertical fascia as per controlled sample for concourse, 12mm thick Calcium Silicate Board panels 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.	Sqm	143.90	₹ 1,890.36	₹ 272,021.67
7.3	Baffle Ceiling				



SCH-D (BOQ)



SCHEDULE-D : STATION ARCHITECTURAL FINISHING WORKS (NDSR ITEMS)					
S.No.	Description	UOM	Total Qty	Rate	Amount
	Providing & installation of approved quality vertical linear baffle ceiling made out of folded Aluminum. The baffle units shall be in size of 50mm (W) x 150mm (H) and 1000mm x 4500mm x 1mm (thk), non-perforated. The ceiling baffle units shall be installed at a distance of 300mm c/c in one direction. The baffle units shall be attached to C-channel carriers spaced at 1200mm c/c. The C- channel carriers shall then be cross connected to perforated L-angle primary grid and suspended with M6 threaded rod hangers spaced at 1200mm and pertaining to Class A Fire Rated, as per ASTM E-84	Sqm	4,615.12	₹ 6,200.00	₹ 28,613,736.34
7.4	FLAT METAL CEILING: Providing and installing suspended false ceiling systems as per control sample for Concourse and subway areas with hook n tiles and various tile sizes, butt jointed, fully demountable, 1.2mm thick flat pressed steel infill units and facia ceiling type finished with 80 micron thick powder coated to specification K40/217A, top fixing of SS expanding anchor bolts, rigid hangers, concealed type with trim inclusive of cutting for electrical fixtures/ fittings.VAC grills fixed framing to support fixtures/fittings and providing secondary supporting system below cable tray and duct and all complete as shown in drawings and specifications nos K40/106	Sqm	47.54	₹ 3,746.74	₹ 178,128.31
7.5	Providing and fixing of Grade 3003 Aluminum coil coated perforated metal silhouette false ceiling system using the grids of USG or CMC from their US plant and tiles from USG/ CMC/Armstrong/Hunter Douglas with the suspension system designed to suspend the entire false ceiling with the help of suspended rod of 4mm dia and clamps of size 26x26x2mm thick to be fastened with anchor fastener not less than 6mm dia to the soffit of slab beam. Minimum anchorage lengths shall be in the range of 50 to 60mm main runner 'Silhouette' profile shall be suspended from the soffit of slab at an interval of 1200x600mm center to center and appropriate distance as required to sustain the suspended load including all the fixtures as shown RCP cross runner	Sqm	47.54	₹ 6,145.44	₹ 292,168.12
	having 'Silhouette' profile shall be 600mm center to center with interlocking arrangements in such a way to form grid of 600x600mm and fix the lay in tile in the grid pattern and laying of false ceiling polyester powder coated metal tile of size 597x597mmx9mm MICRO PERFORATED of 1.5 mm dia in a 3mm diagonal square pattern given 22%perforated area. in correct line and levels as per the approved design and drawings submitted. All steel sections to be marked with the manufacturer's registered trademark and hologram.				
	The rate shall include marking levels and grid of entire false ceiling as per the RCP necessary wall angles and profiles between gypsum and metal false ceiling as per the drawing, tools and tackles for installation of the complete system. The entire false ceiling system shall be supplied by the metal false ceiling supplier. The cutouts required for the down lighters, sprinklers, speakers etc. shall be made at factory only.				

R



SCH-D (BOQ)

SCHEDULE-D : STATION ARCHITECTURAL FINISHING WORKS (NDSR ITEMS)					
S.No.	Description	UOM	Total Qty	Rate	Amount
	The rate shall include providing and fixing of a thin nonwoven fabric made of cellulosic and glass fibers (weight 47 g/m ² , thickness 0.2 mm) of approved make with a hot melt adhesive (15 g/m ²) on back side of tile				
	Rate includes providing and fixing of M.S angle support for false ceiling at under the AC ducts or other equipment where ever required, Using 65mmx65mmx6mm thick and painted with two coats of red oxide primer of required length supported to the true ceiling through 12mm thick G.I treaded rod with necessary hanger fasteners. complete. Also the rate includes of providing all around wall step profile with black/white powder coated aluminum profile to get 50mm x50 mm grove , and with Gyp board 12mm groove				
	Erection of false ceiling with lay in tile system with Aluminum Coil coated Grade 3003 of 600 x 600 x 9mm depth and 0.7mm thick tile with perforation with 1.5 mm thick approved quality non woven textile on back side for acoustic purpose in specified areas etc., and as per specification, drawings as directed.				
	TOTAL OF N07 SUSPENDED CEILING WORK				₹ 30,100,971.04
N08	METAL WORK				
8.1	Supplying, fabricating, SATIN FINISH, erection of required height (900 to 1200) mm high SS hand railing system, System comprising of 38/45 mm Dia & 1.6mm thick Top-Rail Stainless steel Grade 304 connected to 50 mm Dia 3.15mm thick Baluster through Stainless Steel Saddle Plate connector. And a Grab Rail of 38/45mm Dia connected to Baluster through a Stainless Steel Stem Key. Baluster fixed to slab with GI Baseplate & M16x200 mm Fastener. A SS cover plate would be provided above GI Base Plate. Infill of 1 No. 12mm thick toughened laminated glass connected to baluster with Stainless Steel Twin- arm Spider Clamp.	Rmt	791.38	₹ 10,500.00	₹ 8,309,532.00
8.2	Supplying, fabricating, SATIN FINISH, erection of 1200mm high SS hand railing as per design comprising of 50mm dia, 3.15mm thick, Stainless steel Grade 304 with balustrades as per drawing, SS base plate, pipe adjuster M16X200mm SS fasteners for fixing railing in floor by cutting hole of required dia in floors/ landing/staircase complete in all respect and making good the floors as per Specifications and Architectural Drawings. Weight of finished product shall be measured. Rate is inclusive of all wastages. Adjustment for opening or cuttings is not allowed.	Kg	32,891.00	₹ 500.00	₹ 16,445,500.00
8.3	Supplying, fabricating, SATIN FINISH, erection of 300 mm high SS handrailing as per design comprising of 50mm dia, 3.15mm thick, Stainless steel Grade 304 with balustrades as per drawing, SS base plate, pipe adjuster M16X200mm SS fasteners for fixing railing in floor by cutting hole of required dia in floors/ landing/ staircase complete in all respect and making good the floors as per Specifications and Architectural Drawings	Kg	4,000.00	₹ 500.00	₹ 2,000,000.00



SCH-D (BOQ)

SCHEDULE-D : STATION ARCHITECTURAL FINISHING WORKS (NDSR ITEMS)					
S.No.	Description	UOM	Total Qty	Rate	Amount
8.4	Supplying, fabricating, SATIN finished, erection of wall mounted handrail as per design comprising of 50mm dia Stainless steel Grade 304 including threading on both sides to receive grub screw on one side and rail holding barrel on the other side, 25mm dia rod upright threaded to receive 50mm dia handrail, 80mm OD 6mm thick SS plate, 50mm OD-3.15mm thick pipe fixing the same by cutting 49mm dia hole in granite/vitrified tile wall cladding in required position including angular assembly at every bend and fixing handrail in concrete/block with SS fasteners complete in all respect and making good the wall as per Specifications and Architect Drawing. Weight of finished product shall be measured. Rate is inclusive of all wastages. Adjustment for opening or cuttings is not allowed.	Kg	400.00	₹ 500.00	₹ 200,000.00
8.5	SS Railing with HPL Supplying, fabricating, SATIN FINISH, erection of required height (900 to 1200) mm high SS hand railing system, System comprising of 38mm Dia & 1.6mm thick Top-Rail Stainless steel Grade 304 connected to 50 mm Dia 3.15mm thick Baluster through Stainless Steel Saddle Plate connector. And a Grab Rail of 38mm Dia connected to Baluster through a Stainless Steel Stem Key. Baluster fixed to slab with GI Baseplate & M16x200 mm Fastener. A SS cover plate would be provided above GI Base Plate. Infill of 6mm thick grade fundermax F-Quality panels of standard size with both side decor connected to baluster with Stainless Steel Twin-arm Spider Clamp. The panel shall be perforated as per design of Architect	Rmt	100.00	₹ 5,000.00	₹ 500,000.00
8.6	SS Railing with Perforated Sheet Supplying, fabricating, SATIN FINISH, erection of required height (900 to 1200) mm high SS hand railing system, System comprising of 38mm Dia & 1.6mm thick Top-Rail Stainless steel Grade 304 connected to 50 mm Dia 3.15mm thick Baluster through Stainless Steel Saddle Plate connector. And a Grab Rail of 38mm Dia connected to Baluster through a Stainless Steel Stem Key. Baluster fixed to slab with GI Baseplate & M16x200 mm Fastener. A SS cover plate would be provided above GI Base Plate. Infill of perforated Aluminium Sheet of thickness 2mm connected to baluster with Stainless Steel with necessary arrangement. The panel shall be perforated as per design of Architectural approved drawings.	Rmt	1,175.85	₹ 2,500.00	₹ 2,939,625.00
8.7	Fabricating and supply of stainless steel (Thickness to be mentioned) (conforming to grade SS 304 satin finish) four seater bench with backrest as per drawing.	Kg	960.00	₹ 500.00	₹ 480,000.00

R



SCH-D (BOQ)

SCHEDULE-D : STATION ARCHITECTURAL FINISHING WORKS (NDSR ITEMS)					
S.No.	Description	UOM	Total Qty	Rate	Amount
8.8	Providing and fixing M.S. steel hand railing as per the design and drawings and specifications to staircase approximately 1200 mm high comprising of 32 mm dia 10 Gauge MS hollow tube vertically fixed to every fourth step welded to 50 mm dia 10 gauge MS pipe on top for handrail and 20 mm dia MS pipe vertically in between welded to 2 Nos of 20 mm dia M.S. Pipe all as per the drawings, the vertical balusters are fixed in position with molten lead poured into 40 mm dia GI sleeve with 80 x 80 x 3mm GI Plate and embedded in RCC including necessary steel cover and completed as shown in the drawings or any other method of fixing as approved by the Engineer in charge like epoxy grout fixing etc., complete. All M.S. members will be painted with three coats of synthetic epoxy of approved make and colour over one coat of primer all as per manufacturer's instructions and with the engineer's approval.	Kg	1,600.00	₹ 200.00	₹ 320,000.00
8.9	Fabrication ,supply & erection of SATIN finish grade 304 SS sump covers of size 600mmX600mm suitably supported & fixed over MS frame along with granite stone matching with relevant floor finish, lifting hooks/keys etc. complete as per relevant architectural drawing.	Each	8.00	₹ 9,218.16	₹ 73,745.28
8.10	Providing & Fixing SS Grating with 3mm thick 304 grade SS pressed plate with 6mm perforations @ 12mm c/c over Grade 304 SS frame of size 35mm X 35mm X 5mm flushed with Floor finish including providing & fixing necessary MS angle frame etc. complete As/ Drawing (for payment purposes only SS item shall be measured)				
8.10.1	300mm X 300mm/200mm X 200mm/150mm X 150mm	Kg	40.00	₹ 1,000.00	₹ 40,000.00
8.10.2	Supply & fixing of 3mm Thick SS 304 plate	Sqft	400.00	₹ 3,000.00	₹ 1,200,000.00
8.11	Supply,fabrication,Primer coating, painting, transportation and installation of 1.5mm thick MS perforated sheets for FOB	Kg	400.00	₹ 336.42	₹ 134,568.00
	TOTAL OF N08 METAL WORK				₹ 32,642,970.28
N09	FIRE DOORS & ROLLING SHUTTER WORKS				



SCH-D (BOQ)

SCHEDULE-D : STATION ARCHITECTURAL FINISHING WORKS (NDSR ITEMS)					
S.No.	Description	UOM	Total Qty	Rate	Amount
9.1	Fire Check doors design & supply of approved make fire rated door fabricated and successfully tested at CBRI Roorkee in both direction satisfying two criteria (Stability and Integrity) confirming to BS:476 part II, IS3614 Part II as per schedule of requirement, complete with shutters, frames, hinges, conforming to the design intent. All fire doors must conform to the requirements of fire authority having jurisdiction and as per prototype tested by approved fire testing agency acceptable to fire authority having jurisdiction. Door shutter and frames to have all hardware preparations must be prepunctured at the factory for fixing of said hardware. Shutters & frames to be filled with suitable fillers, insulation to meet the required fire resistance criteria as specified, with all grouting, reinforcements, flushed lock seam joints including all seals, washers, linings etc. complete. All fire doors to be primed and painted with approved painting system as per tested prototype and to approved colour. Provision of mortice sash lock (ML 100A) with S.S. lever handles and door closers heavy duty (imported) LCN 1461 with standard arm on every leaf , stainless steel hinges as per approved shop drawing.				
9.1.1a	30minutes (1/2 hour) fire rated metal door assembly	Sqm	102.38	₹ 4,000.00	₹ 409,500.00
9.1.1b	60minutes (1 hour) fire rated metal door assembly	Sqm	20.00	₹ 11,452.60	₹ 229,052.00
9.1.1c	90minutes (1.5 hour) fire rated metal door assembly	Sqm	20.00	₹ 12,500.00	₹ 250,000.00
9.1.1d	120 minutes (2 hour) fire rated metal door assembly	Sqm	285.48	₹ 13,000.00	₹ 3,711,240.00
9.1.2	Clear Vision panel of 200mm*300mm per leaf with fire rating	Each	189.00	₹ 3,641.00	₹ 688,149.00
9.1.3	Heavy Duty Door closer	Each	145.00	₹ 4,100.00	₹ 594,500.00
9.1.4	Eurofile Mortice lock 240 with double pin cylinder master arrangement and SS handles	Each	145.00	₹ 4,951.76	₹ 718,005.20
9.1.5	Concealed SS finish tower bolts (300mm)	Each	189.00	₹ 1,077.74	₹ 203,692.10
9.1.6	Magnum or equivalent make SS 4 ball bearing hinges	Each	378.00	₹ 463.40	₹ 175,165.20
9.1.7	SS handles Dorma or equivalent make for double leaf door	Each	88.00	₹ 7,427.64	₹ 653,632.32
9.1.8	Dorma make panic bar for double leaf door or similar item of similar rate.	Each	88.00	₹ 22,000.00	₹ 1,936,000.00
9.2	Providing and fixing door with shutter fabricated from 18 gauge thick galvanised steel sheets press formed to provide a 46mm thick fully flushed double skin door with lock seam joints at stile edge and infill insulation Kraft core. Door frames 57x120 mm approx. to be single/Double rebated made of 16 gauge galvanised steel. Door shutter and frame to be primed in stoving grade epoxy zinc phosphate primer and finished in aliphatic grade u.v. resistance polyurethane paint. Door shutter and frames to have all hardware preparations including the installation of ironmongeries and locking system, prepunctured at the factory. all complete with and including filling of door frames with P.C.C. 1:5:10 (1 cement: 5 aggregate : 10 coarse sand).				

R



SCH-D (BOQ)

SCHEDULE-D : STATION ARCHITECTURAL FINISHING WORKS (NDSR ITEMS)					
S.No.	Description	UOM	Total Qty	Rate	Amount
9.2.1	Single leaf door shutter	SQM	148.95	₹ 7,201.38	₹ 1,072,645.77
9.2.2	Extra for 250 x 150 mm vision panel with 6mm thick clear toughened glass.	No.	45.00	₹ 1,710.34	₹ 76,965.27
9.2.3	Extra for provision of air transfer grille appx. 400x400 mm	No.	45.00	₹ 1,890.36	₹ 85,066.12
9.2.4	Heavy Duty Door Closer	Each	45.00	₹ 1,980.39	₹ 89,117.49
9.2.5	Eurofile Mortice lock -240 with double pin cylinder having master arrangement and ss handles	Each	45.00	₹ 3,780.73	₹ 170,132.87
9.2.6	Concealed SS finish tower bolts (300mm)	Each	90.00	₹ 252.05	₹ 22,684.38
9.2.7	Magnum or equivalent make SS 4 Ball Bearing hinges	Each	180.00	₹ 126.03	₹ 22,685.63
9.3	Providing, detailing, and fabricating as per specifications, transporting to site and erecting powder coated galvanised iron Sliding door including track and wheel, locking arrangement, fixing bolts, nuts, washers, cleats, stiffeners, gussets balusters, arrow heads etc. and all necessary operations like straightening, bending, cutting, drilling, grinding, machining if specified, welding etc. complete as per architecture drawings, including cleaning, Grinding and painting with approved colour, shade and brand etc. including touching up with primer etc. complete as directed by Engineer In Charge.	Sqm	12.60	₹ 5,786.13	₹ 72,905.24
9.4	Supplying and fixing automatic galvanized industrial motorized rolling shutters made of required size MS lathe interlocked together (heavy duty) of approved make i.e. Indo-Germa Ltd. Chennai or equivalent made of required sizes and shape with G.I guides control box drive unit and with all other accessories complete as per manufacturer's specifications.	SQM	389.20	₹ 7,202.56	₹ 2,803,236.35
9.4.1	Extra for providing mechanical device chain & crank operation for operating rolling shutters for area exceeding 10sqm and up to 16.80 Sqm in area	SQM	80.00	₹ 959.90	₹ 76,792.00
9.4.2	Extra for area exceeding 16.80 Sqm in area	SQM			₹ 0.00
	TOTAL OF N09 FIRE DOORS & ROLLING SHUTTER WORKS				₹ 14,061,166.96
N10	GLASS WORK				
10.1	Providing and installing fixed glazed security wall assembly of stainless steel to ticket offices, Station Control Room, etc. with SS chennal/SS bracket fixing specified fixings and finish using 2 sheets of 6mm thick toughened glass with nominal gap silicone sealant joints. Glass shall be clear, toughened and laminated with 1.52mm thick polyvinyl butyral layer-all complete as per relevant architectural drawings and specification with cut out & holes as per Engineer-in Charge.	Sqm	107.48	₹ 8,066.52	₹ 866,987.96
10.2	Providing and fixing toilet mirror in 6 mm thick clear float glass with beveled and polished at edge, fixed on wall with 6mm thick hard board backing fixed to wooden cleats with 8mm dia 38mm long stainless steel stud complete.The rates include all Materials, necessary accessories, labor, tools and plants. Nothing shall be paid extra for this item	Sqm	19.05	₹ 2,555.96	₹ 48,691.04

R



SCH-D (BOQ)

SCHEDULE-D : STATION ARCHITECTURAL FINISHING WORKS (NDSR ITEMS)					
S.No.	Description	UOM	Total Qty	Rate	Amount
10.3	Providing and fixing in position frameless glass partition walls made out of 12mm thick toughened clear float glass held in position by wall connecting profile (with or without open able glass door made out including Two set of 350mm long pull handles , Two number corner locks & Floor spring of approved make.	Sqm	183.66	₹ 9,111.61	₹ 1,673,459.43
10.4	Providing and fixing of toughened laminated glass door in EFO/ TOM (6mm + 1.52mm + 6mm) including stainless steel door handles, deadlock and Floor spring complete necessary cutting in granite flooring for housing of floor spring as per drawing and Engineer-in-Charge	Sqm	22.02	₹ 16,979.26	₹ 373,883.22
	TOTAL OF N10 GLASS WORKS				₹ 2,963,021.64
N11	WATERPROOFING WORK				
11.01	Cleaning the Surface , Priming the same by Kemper EP Primer Providing & Appling Kemper V 210 treatment in 2 cots on the surface as per manufactured by { KEMPER} Cleaning the externa: surface of G Sheet Area. Kemper V 210 Polyurethane Base pals are a fast durirc! waterproofing membranes with excellent chemicals resistance Properties. Kemper is Elongalictot break Kemper Polyurethane forms a tough flexible membranes film which eliminates need 'or a reinforcing layer. Reinforcement Flees is all area over movement Joints. Kemy: Polyurethane cure time 4 Hours. Kemper is Coverage is 2 kg / sqm. Kernper is a 2 Cots, 4 Ho each cots. Kemper is using Roller / Brush as per manufacturers Details, that is as per kenny: details and manuals & Location as per drawing & as directed by Engineer in charge .The rates includes the cost of scaffolding. waterproofing shall be guaranteed for 10 years in Approved Performa.WIDHT WATERPROOFING VARIES AS PER SITE LOCATION AT VARIOUS SECTION- (WIDTH VARIES @ FCs 300MM TO 700 MM).	Sqm	40.00	₹ 10,000.00	₹ 400,000.00
11.02	Water proofing work Ultratech Seal & Dry Providing and applying two coats of cement based acrylic emulsion polymer based elastomeric water proof coating with Ultratech seal and dry water proofing compound at an interval of twelve hours at perpendicular direction to each other and protecting it with Ultratech super stucco compound having thickness of 3mm to 5mm over and above Ultratech seal and dry coating including preparing the surface with brushing, mopping and water jetting, repairing the cracks with Ultratech Stucco, making the cracks widen and preparing the groove. The rate is including a 10years service warranty subject to no structural alteration made on the finished surface. Rates are inclusive of nozzle grouting. In addition to the above, this item needs to be executed as directed by Engineer in charge as per site requirements and approved drawings.	Sqm	40.00	₹ 495.60	₹ 19,824.00
	TOTAL OF N11 WATERPROOFING WORKS				₹ 419,824.00
N12	PAINTING & PLASTERING WORKS				



SCH-D (BOQ)

SCHEDULE-D : STATION ARCHITECTURAL FINISHING WORKS (NDSR ITEMS)					
S.No.	Description	UOM	Total Qty	Rate	Amount
12.01	Providing and applying 12 mm cement plaster of mix 1:4 (1 cement : 4 parts coarse sand) including providing galvanized chicken wire mesh at the junctions of concrete and masonry work including side laps of minimum 75mm and fixing in position with galvanized wire nails including scaffolding, all lifting and leading etc. complete.	Sqm	34,275.15	₹ 300.00	₹ 10,282,545.48
12.02	Providing and applying in two coats 20 mm cement plaster on external surfaces in 1:4 (1 cement : 4 parts coarse sand) including providing galvanized chicken wire mesh at the junctions of concrete and masonry work including side laps of minimum 75mm and fixing in position with galvanized wire nails, approved waterproofing chemicals including scaffolding, all leading and lifting etc. complete etc.	Sqm	17,687.18	₹ 200.00	₹ 3,537,435.62
12.03	Providing and applying 6mm thick cement plaster to ceiling of mix 1:3 (1 cement : 3 fine sand) including hacking RCC, scaffolding, drip mold, all lifting and leading etc. complete.	Sqm	400.00	₹ 100.00	₹ 40,000.00
12.04	20 mm water proofing cement plaster of mix 1:4 (1 cement : 4 coarse sand) in two coats for lining the drains, mixed with approved water proofing admixture for sunken areas of toilets, balconies or wherever directed by engineer in charge, including the neat cement punning over the base surface.	Sqm	400.00	₹ 560.00	₹ 224,000.00
12.05	Providing and applying two coats of Unilit's Rodeo or Spectrum Perlina fine or Heritage Granula Surface Texture paint after applying corresponding roller coat as primer on pre-plastered surface as per approved sample in approved shade. The composition of the texture paint should consist of ACRYLIC copolymer resins combined with quartz ,silica, mineral, aggregates, synthetic inorganic pigments, bactericide, fungicides and various other additives, giving the product water repellent properties. The first coat to be applied by brush or wool roller as a base coat, diluted with sufficient water and the final coat (Undiluted) to be applied by trowel and finished with acrylic trowel to maintain with or without grooves, as per details in drawings. The thickness of both coats should be 1.0 to 1.5mm. the water repellency of the product shall be $\geq 86\text{gm/m}^2$ as per test method IS:5410-1969, complete as per manufacture's specifications and instructions by Engineer in Charge at site. The rate shall include necessary scaffolding, labour and material , all leading & Lifting complete	Sqm	23,651.48	₹ 400.00	₹ 9,460,593.58
12.06	Providing and applying 3mm 1.5mm thick exterior Birla/JK or equivalent ready made putty in two coats over Brickwork/ Blockwork/ RCC surface of ceiling/beam/column etc. to prepare even and smooth surface including sand papering, grinding, scaffolding, all leading & lifting etc., complete as per direction of Engineer-in-Charge.	Sqm	25,208.69	₹ 138.77	₹ 3,498,159.72
12.07	Providing and applying Acrylic Smooth exterior paint with two or more coats of approved colour and shade to give an even shade. All as per manufacturer's specifications and as directed by the Engineer	Sqm	23,609.17	₹ 300.00	₹ 7,082,752.19



SCH-D (BOQ)

SCHEDULE-D : STATION ARCHITECTURAL FINISHING WORKS (NDSR ITEMS)					
S.No.	Description	UOM	Total Qty	Rate	Amount
12.08	Providing and applying Acrylic Emulsion to ceiling surfaces including necessary surface preparation, scaffolding / staging, all leading and lifting etc. All as per manufacturer's specifications and as directed by the Engineer	Sqm	9,268.00	₹ 150.00	₹ 1,390,200.00
12.09	Providing and applying Acrylic emulsion paint on new work with two or more coats of approved colour and shade to give an even shade including scaffolding, all leading & lifting etc., complete as per direction of Engineer-in-Charge.	Sqm	24,808.69	₹ 178.42	₹ 4,426,267.52
12.10	Proma seal or equivalent acrylic intumescent sealant 2 hours fire rated in accordance with BS 476-Part 20, IS 1530 Part 4 to seal gap & joint in fire rated walls with roof slab and around service penetration for 25 mm gap and 12 mm depth with compressible filler backing.	Rmt	2,553.76	₹ 2,000.00	₹ 5,107,520.00
12.11	Providing white washing to new wall surface in three or more coats with lime of approved quality to give an even shade including cost of material, labour complete as per specification for all heights.	Sqm	200.00	₹ 99.12	₹ 19,824.00
	TOTAL OF N12 PAINTING & PLASTERING WORKS				₹ 45,069,298.10
N13	EXTERNAL ARCHITECTURAL FINISHES WORKS				
13.1	Providing and fixing external grade Aluminum Composite panels in all colours of approved brand for wall cladding at all heights and elevations including necessary aluminium composite panel with grooves system consisting of 3mm thermoplastic core of anti oxidant LDPE sandwiched between two skin of 0.5 mm thick alloy sheet making a total sheet thickness of 4 mm. The surface shall be finished with PDVF base coating on the top side and service coating on the reverse side shall be with a polymer paint. Coating shall confirm to ECCA of AAMA. The system shall design to withstand wind pressure of 200 Kg/sqm and shall be fixed to the masonry/RCC walls with necessary clamps, bracket and anchor fasteners and should be fire rated minimum 30minutes. All Clamps and brackets shall be hot dip galvanised minium 80 micron thick and confirmed to IS : 4759 - 1996. The extruded aluminium sections shall be anodised in approved colour with anodic coating minimum 20 microns. Extruded section shall be of 6063 T5 or T6 alloy confirming to ASTM B 221. (items include cost of aluminium frame, ACP Panels, Frames 110mm size)	Sqm	4,000.00	₹ 5,800.00	₹ 23,200,000.00
13.2	Providing and fixing 8mm thk High Pressure Laminate panel as per EN 438-6 type EDS manufactured using specially treated acrylic resins, hardened & competed under high pressure and temperature thus providing all weather protection and light fastness with fixing of power coated substructure Aluminium box section of 50mm x 25mm or 75mmx25mm suitable sized with maximum fastening gap between 340mm-600mm using special stainless steel screw fastener and HPL should be fixed to Aluminium channel using powder coated dome head blind rivet including scaffolding/ Boom-lift, all leading & lifting etc., complete as per direction of Engineer-in-Charge.	Sqm	8,639.00	₹ 1,000.00	₹ 8,639,000.00



SCH-D (BOQ)

SCHEDULE-D : STATION ARCHITECTURAL FINISHING WORKS (NDSR ITEMS)					
S.No.	Description	UOM	Total Qty	Rate	Amount
13.3	Supply & fixing of perforated horizontal and vertical panels of 2 to 3 mm thick. The panel will consist of single skin of flat Aluminum alloy AA3005/3105, Panel width will be manufactured as per the project requirement. The perforation shall be customized as required without any extra charges. The panel will be coated on the exterior/ exposed surface with Exterior Architectural Coating. The horizontal joints will have a recessed joint of width of 20mm and will incorporate facilities for allowing adjustment of 1 mm, The panels will be secured to a tailor made rigid support system by means of a fixing side extrusion fixed to the panel, fixed at appropriate centers to proprietary metal clamp as per the proprietary manufacturers design: 'The panel needs to be fastened to a Suitable Aluminum substructure as per the load requirement. Installer will erect the secondary and primary substructure within the tolerances of span/1000 of plumb line and level per support (non-Cumulative to a maximum of 2 mm). Aluminum alloy for substructure will comply with IS 8147. Anodic coating on Aluminum substructure (wherever applicable) and its specified alloy will comply with IS 1968-1996. The substructure will be fixed to the backing wall by means of Aluminum/ MS brackets with wedge type/ RAWL PLUG stainless steel anchor fastener/HILTI or equivalent chemical fastener. The brackets will allow for a vertical and horizontal	Sqm	3,127.00	₹ 6,500.00	₹ 20,325,500.00
13.4	Supplying and installation of Facade in GI CNC laser cut works. The size and design of GI Facade as per Architectural drawings and details. 5mm thick GI sheet with powder coating of 70/80microns with complete CNC laser cutting art work as per drawings with necessary screws, fittings and cleat system.	Sqm	2,448.00	₹ 6,000.00	₹ 14,688,000.00
13.5	Providing & Fixing of Glass Reinforced Concrete (G.R.C) Jalli 40mm thick in approved size, pattern, design, thickness and color of M/S UniStone make or equivalent to be fixed on/between RCC/Block work Column or Structural Steel work with 'Dry fixing' method with all appropriate steel frame work, Stainless Steel (SS - 304) 'L' shaped Clamps, dash fasteners and pins including anchoring, lifting, scaffolding etc. complete as per architectural drawing and manufacture specification. The Screens should be made from '53 grade' White Portland Cement manufactured by 'JK Cement' or equivalent, Quartz, Fine Silica Sand, Alkali Resistant Glass Fiber manufactured by 'Saint Gobain' or equivalent, Super Plasticizers manufactured by 'BASF' or equivalent, Polymers manufactured by 'BASF' or equivalent and U.V resistant Synthetic inorganic pigments should be used for pigmentation manufactured by 'BAYFERROX (Germany)' or equivalent. The material casting should take place in Synthetic Rubber / FRP Mould manufactured by 'Reckli' or equivalent. The rates includes all materials (G.R.C tile, Chemical adhesive grout, galvanised steel nails and any if required), labour, tools, manlift, plant, equipment, surface preparation	Sqm	479.71	₹ 5,000.00	₹ 2,398,526.90
	TOTAL OF N13 EXTERNAL ARCHITECTURAL FINISHES WORKS				₹ 69,251,026.90



SCH-D (BOQ)

R

Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

SCHEDULE-E : PEB WORKS

Item	Description	Amount
1	Sub Total : S01- PEB WORKS	₹ 346,679,193.66
	Grand Total	₹ 346,679,193.66



SCHEDULE-E PEB Works

Name Of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Qty	Rate	Amount
E	PEB WORKS				
	Note- All bolts considered should be MS hot dipped galvanised only at all locations.				
E-1	Detailing as per approved structural design drawings, providing, fabricating to require profile and shape, painting, transportation, erecting & securing in position with proper line and level structural steel work for STATION buildings & Entry Exit structures complete as per specifications, and/or instructions from Engineers. Work under this item would generally cover all structural steel work in buildings including but not being limited to columns, beams, rafters, purlins, runners for cladding, brackets, hangers/ suspenders including runner beams for bracings etc.				
	(All HR members) along with attachment/ provisions for fixing E & M, OHE and S&T equipment's including P/F of hangers, runner channels & brackets, MS Hot dipped galvanised Holding down bolts / Anchor fasteners, HT Connection bolts of grade 8.8 etc in the steel roof building structure but excluding roof sheeting, wall cladding, Louvers, rain water gutter, down take pipes etc. Primary members for columns and rafters/Tie beams shall be fabricated from plates having minimum yield strength of 350 MPa and should confirm to IS 2062 Grade E350 or equivalent.				
	Primary members of Tubes shall be having minimum yield strength of 310 MPa and should confirm to IS 4923/ IS 1161. Primary members shall be fabricated by continuous shop automated welding using submerged arc welding. Primary members fabricated from plates shall have flanges and web joined together by welding on both sides of web (or as directed by Engineer In Charge) by continuous welding process. Work to include all test on material & fabrication work as required, sand blasting to SA2.5, primer & painting as per specification.				

2



SCH-E (BOQ)

SCHEDULE-E PEB Works

Name Of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pi er arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Qty	Rate	Amount
	All intermediate stages of activities not defined herein, but otherwise impelled for total completion of work are included. Cost to include but not limited to all material including wastages, all consumables, fasteners of all types for both temporary & permanent stages of work, all temporary stays, labour, temporary works including staging, scaffolding, all lead & lifting, tools, plants & equipment, template, grouting, workmanship etc. as per specifications. Note: 1. This includes the cost towards site survey , testing (such as D.P. Test, Radiography test, Ultrasonic and all relevent tests), assembly mock-up as per technical specifications, site requirement & Records issued along with the tender, 2. Structural Painting works shall be as per technical specifications, 3. Rates are including Traffic Diversion , Road Block for tamparary barricade, Traffic marshal , all saftey precaution & lighting arrangement.	Tonne	716.00	₹ 165,000.00	₹ 118,140,000.00
E-2	Providing, bending/crimping to required curved profile and fixing color coated ZincAlum / Galvalum AZ150 (min 150 gms / sqm total on both sides or equivalent as per AS 1397-1993) profiled standing seam Sheeting . The sheet shall be fixed to purlins with specially designed clips/Z's/clamps with concealed connections. The feed material is manufactured out of nominal 0.60 mm BMT (base metal thickness), 0.68 mm TCT (Total Coated thickness) High strength steel with min yield strength of 550MPa steel conforming to ASTM, A792/A755, JIS 3312, metallic hot dip coated with Aluminium-Zinc alloy (55% Aluminium, 43.4% Zinc , 1.6% silicon) with colorbond or equivalent steel quality super durable polyster paint coat SMP/PVF2 (with inorganic pigment).	Sqm	17,425.00	1250.00	₹ 21,781,250.00



SCH-E (BOQ)

SCHEDULE-E PEB Works

Name Of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Qty	Rate	Amount
	The paint of approved color shall have a total coating thickness of nominal 35 micron comprising of nominal 25 micron exterior coat on top surface and nominal 10 micron reverse coat on back surface. Profiled sheet shall have nominal 350 to 400mm effective cover width and nominal 10 to 20mm deep ribs with suitable arrangement for seaming/zipping at ends with 40 to 50mm deep crest. The end rib shall be designed for anti-capillary groove and return leg. Zincalum/Galvalum profiled standing seam sheet shall have marking at regular intervals regarding coil manufacturers's product details. Including fasteners with washers of min 25 micron Zinc Tin alloy coated, hex head, self drilling screws, flashing, filler blocks/ closures made of polyethene material with end caps etc complete. Sheet should be have matt or glossy finish with polyethylene guard film as masking. Weight of profile shall be 5.74 Kg/sqm (min) of covered plan area.				
	The Sheets shall be manufactured from Hi-tensile Zincalume / Galvalume steel base and galvanised hooks as approved by Engineer - In- Charge, Panel sidelap shall be field-seamed by a self-propelled and portable electrical lock-seaming machine. The machine field forms the final 180 degrees of a 360 degree MR-24™ double-lock standing seam; all sidelap sealant shall be factory applied and Panel endlap, when required, shall be at least 150mm sealed with neutralcure/silicon or equivalent sealant and fastened together by clamping plates including flashing etc. in complete. Standing seam sheets shall be in single length without any overlap along the length of sheet. The cost includes both all lead & lifting temporary arrangement of roof sheet fixing and all				



SCH-E (BOQ)

SCHEDULE-E PEB Works

Name Of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Qty	Rate	Amount
E-3	Supply & Installation of GI Gutter of 2.0mm thick with Girth of 1250MM at Roof Level including all joints, bolting, butt joints, end stopper, down take spout as per drawing, maintaining proper slope ensuring no stagnation of water. GI shall be as per IS 277: 2018/2023 Zn coating class as 180 GSM. Length of each peace of gutter shall not be less then 3.00m.	Rmt	3,144.00	₹ 4,000.00	₹ 12,576,000.00
E-5	Hilti Rebaring For Gutter Arrangement : Supply, Drilling/Cleaning hole and injecting chemical, Application to be desigend separately for Rebars as simply supported, Moment or splice connection as per EC2 / TR 023 or relevant tested and accepted rebar guidelines, The chemical should ETA approval for seismic rebar as a minimum qualifying criterion. Drilling hole with double flute type drill Bits or Hollow drill bits to the required/Depth by rotary hammer drill, cleaning with brush and jct of clean sir, filling resin and hardener using serrated nozzle to eliminate mixing error with standard HDE A22 battery dispenser recommandations. The Adequate diameter and embedment of rebars to be decided as per PROFIS rebar software & the report to he submitted to the project manager/design engineer for approval. Scanning before drilling to be done to avoid hitting existing rebars Re 500 for 12mm to 24mm diameter 290mm depth including neccesary scaffolding	Nos	600.00	₹ 1,100.00	₹ 660,000.00
E-6	Providing & Fixing Hilti Anchor cemical RE-500 Rod				
	M20X300	No	192.00	₹ 2,800.00	₹ 537,600.00
	M24X300	No	192.00	₹ 3,800.00	₹ 729,600.00



SCH-E (BOQ)

SCHEDULE-E PEB Works

Name Of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Qty	Rate	Amount
E-7	Providing, fabricating to required profile and shape, transporting, erecting and fixing in position Structural steel (conforming to IS:2062 Grade B, yield strength of 250Mpa or Tubes confirming to IS 4923/1161 Yst 210 grade) including procurement of all raw steel materials, HT bolts, nuts & washer incl. its testing, allowance for all types of wastages, straightening, cutting, bending of section wherever specified, drilling holes, bolting, provision of necessary tools, testing etc. The rate shall also include required surface preparation for application of all coats of shop and site primers and paints as specified. The rate Shall also include preparation of complete detailed fabrication drawings base on the design drawings, required for all permanent and temporary structures and their approval from Engineer - in - charge prior to execution. The rate shall also include provision and installation of base plate, anchor bolts (measured in tonnes) etc as per drawings and specifications. Any temporary support, Staging braces, strutting, tying or anchor bolt, MS Hot dipped galvanised bolts, fasteners(Chemical/ Mechanical), welding required to withstand the stresses of erection and carrying of plant and equipment's, all lead & lifting are to be included in the rate. Other terms				
	Note: 1. This includes the cost towards site survey , testing (such as D.P. Test, Radiography test, Ultrasonic and all relevent tests), assembly mock-up as per technical specifications, site requirement & Records issued along with the tender, 2. Structural Painting works shall be as per technical specifications, 3. Rates are including Traffic Diversion , Road Block for tamparary barricade, Traffic marshal , all saftey precaution & lighting arrangement.				
	Entry-Exit Structures & FOB & façade Structure	Tonne	883.00	₹ 165,000.00	₹ 145,695,000.00



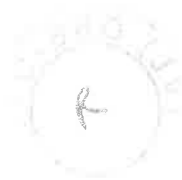
SCH-E (BOQ)

SCHEDULE-E PEB Works

Name Of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Qty	Rate	Amount
E-8	Providing and fixing Decking consist of 1.2 mm thick galvanized steel deck sheet TR-60 TM (S350 Grade) conforming to IS 277:1992 used as permanent shuttering. This metal deck will be supported on structural steel beam with shear studs of 16Ø with 100mm long, spacing as per approved structural drawing. (Structural steel like Beam, column, joists etc. & concrete of different grade as per design will be paid separately).	Sqm	1,998.00	₹ 1,500.00	₹ 2,997,000.00
E-8.1	Providing and fixing Decking consist of 1.2 mm thick galvanized steel deck sheet TR-80+TM (S350 Grade) conforming to IS 277:1992 used as permanent shuttering. This metal deck will be supported on structural steel beam with shear studs of 19Ø with 125mm long, spacing as per approved structural drawing. (Structural steel like Beam, column, joists etc. & concrete of different grade as per design will be paid separately).	Sqm	80.00	₹ 7,000.00	₹ 560,000.00

SCH-E (BOQ)



SCHEDULE-E PEB Works

Name Of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Qty	Rate	Amount
E-9	Detailing as per approved structural design drawings, providing, cold forming, fabricating, painting, transportation, erecting & securing in position secondary cold formed structural steel work Z / C/ L sections for STATION buildings complete as per specifications, and/or instructions from Engineers. Finish steel shall have minimum thickness of 3.15mm and minimum yield strength of 345 MPa and should conform to IS 2062 or ASTM A 570 Grade 50 or equivalent. Work under this item would generally cover all structural steel work in buildings for purlins, girts/ runners, minor supports, hangers etc. Connection bolts of grade 8.8 etc in the steel roof building structure but excluding roof sheeting, wall cladding, Louvers, rain water gutter, down take pipes, Turbo ventilators, Chain-link fencing etc.Item includes all intermediate stages of activities not defined herein, but otherwise impelled for total completion of work. Cost to include but not be limited to all material including wastages, all consumables, fasteners of all types for both temporary & permanent stages of work, all temporary stays, labour, temporary works including staging, scaffolding, tools, plants & equipment and cost of all incidentals & necessary testing of material, grouting,	Tonne	104.00	₹ 146,516.68	₹ 15,237,734.72



SCH-E (BOQ)

SCHEDULE-E PEB Works

Name Of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Qty	Rate	Amount
E-11	<p>FALL PROTECTION SYSTEM Supply & Installation of FALL PROTECTION SYSTEM of Make Karam or Equivalent with clamps suitable to the Standing seam roofing sheets using 4 x split Aluminium clamps below 4 corners of base plate (ROOF SHEET NON-PENETRATING), as per the manufacturer's specification or as approved.</p> <p>The Fall Protection System shall be tested to EN795-2012 Class A2 & Class C and be capable of supporting 2 users working simultaneously at any point along the 8 mm 7 x 7 stainless steel cable even in the same area between 2 posts and shall demonstrate that an individual post is capable of absorbing a direct dynamic load of 300 kg dropped through 1.5m and limit the force to the roof to 10 kN in shear without damage to the roofing substrate. The system shall hold a valid CE mark followed by 4 digit and shall hold EC declarations of conformity. Each individual post shall have a unique traceable serial No. and be manufactured from 5083 aluminium and 316 stainless steel. Evidence of salt sprays testing to 1000 hrs. with no corrosion shall also be provided. Fall arrest systems to be approved by the roofing manufacturers or</p>				
	The distance between adjacent Constant Force Post (CFP) shall not exceed 10mtr. The fall protection cable system length comprising start, end and intermediate posts shall not exceed length of 200mtr if in a straight line. And incase of ends/corners, individual system length shall not exceed 150mtr.				
	Station Roof structure	Rmt	2,188.00	₹ 3,000.00	₹ 6,564,000.00

R



SCH-E (BOQ)

SCHEDULE-E PEB Works

Name Of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Qty	Rate	Amount
E-13	MAINTENANCE WALKWAY: Design, Manufacturing ,supplying and installation of Aluminium Alloy Walkway gratings manufactured out of I- BAR with bulb duly serrated along with side stringer channels with mid support and end plates as per standard approved drawing. Top surface of Walkway will be serrated to provide anti-skid finish. Aluminium alloy shall conform to AA 6063 T6 as per BSEN-755 2. Aluminium walkway shall remain structurally stable with deflection of L/200 as per permissible limits as per BSEN 4592. Two sets of safety harness for fall protection system. The walkways are designed to sustain a load of 150 kgs. Per sq.mtr. Panel Size - 500mm/as per standing seam profile (W) x 1500mm (L). Rate inclusive of transportation, stacking, loading, unloading, lifting, shifting and installation at required location with required tools, tackles, all lead & lifting, material & manpower etc. complete.				
E-14	Supply & installation of Roof Hatch System (914mm X 914 mm) in the "metro station as under:	Nos	4.00	₹ 175,230.00	₹ 700,920.00
	1. Material: - Shutter Aluminium Cover (2.3 mm thick) & Frame in Galvanised steel gauge (2 mm thick) for location of items.				
	2. Shutter: - Hollow 25 mm, insulated with Fibre Glass, fully welded at all corners, internally reinforced for 40 psf live load.				
	3. Curb: - Height 305 mm with integral cap flashing, 25 mm fibre board insulation, fully welded at all corners, mounting flange for securing hatch to roof.				
	4. EPDM/Nitrile Gasket: - Fixed to the cover.				
	5. Hardware: - Heavy-duty pintle hinge with SS-316, Hold open device and Gas spring.				
	6. A rising pipe support for a person to go up and come down.				
	7. Supply pf roof hatches with required packing, sheet cutting, installation (including all related work activities), waterproofing with the waterproofing test, provision of scaffolding, shifting, dismantling, and transportation.				

R

SCH-E (BOQ)



SCHEDULE-E PEB Works					
Name Of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project					
S.No.	Description	UOM	Qty	Rate	Amount
	8. The cost of structural support Fabrication below the roof hatch is included in the quoted price.				
E-15	Fabrication and fixing of OHE Mast for Supporting arrangement bracket as per approved drawing	Nos	4.00	₹ 104,141.45	₹ 416,565.82
E-16	Installation of OHE Mast Foundation	Nos	4.00	₹ 58,056.00	₹ 232,224.00
E-17	Fabrication and supply of MS OHE Mast Foundation	Nos	4.00	₹ 54,516.00	₹ 218,064.00
E-18	Installing and fixing in position MS hot dipped galvanised holding down bolts (8.8 Grade) of various sizes and lengths, as per drawings and instructions, including making of pockets in foundations, column heads, beams etc. Providing, fabricating to required profile and shape, transporting, erecting and fixing in position MS members made of built-up sections/rolled or hollow structural steel sections to be used as fixtures/supports/hangers etc for system/roofing contractors at any location or as directed by Engineer in charge.	Tonne	4.00	₹ 146,516.68	₹ 586,066.72
E-18.1	Installing and fixing in position MS hot dipped galvanised holding down bolts (8.8 Grade) of various sizes and lengths, as per drawings and instructions, including making of pockets in Providing, fabricating, installing and fixing in position any additional structural connections for signages, gutters, or required by the system contractors using standard plate sections welded & built up section, tubes, square, rectangular pipe section, rolled sections such as angles, channels etc. material as per approved vendor list. (for OHE Supports, DA Supports, PIDS,Cable tray supports, False ceiling supports, framing work for wall cladding/Pier cladding etc.) Including Mechanical/ Chemical anchor fasteners as required as approved by Engineer-in-Charge.	Tonne	130.00	₹ 146,516.68	₹ 19,047,168.40
Total Amount OF Sub Total : S01- PEB WORKS					₹ 346,679,193.66

R



SCH-E (BOQ)

SUMMARY SHEET FOR SCHEDULE-F : STATION PLUMBING WORKS		
Name of Work : Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project		
PROJECT : CHINCWAD METRO STATION		
SR.NO	DESCRIPTION OF ITEMS	AMOUNT
1	SUB HEAD I - SANITARY FIXTURE & FITTINGS	₹ 503,558.33
2	SUB HEAD II - WATER SUPPLY INSTALLATION	₹ 187,088.50
3	SUBHEAD-III: INTERNAL DRAINAGE INSTALLATIONS	₹ 993,336.96
4	SUBHEAD-IV:UPVC RAIN WATER WORK	₹ 6,787,449.18
5	SUBHEAD-V: EXTERNAL SEWERAGE WORK	-
6	SUBHEAD-VI: EXTERNAL STORM WATER WORK	₹ 307,055.45
7	SUB HEAD (VII) - EXTERNAL WATER SUPPLY	-
8	SUBHEAD-VIII: WATER SUPPLY PUMPS & EQUIPMENTS AND WATER TREATMENT UNIT	₹ 10,576,337.06
9	SUB HEAD-IX: MISLANIOUS ITEM	₹ 4,026,467.47
10	SUB HEAD-X: BIO DIGESTER (40 KLD)	₹ 8,385,992.00
11	SUB HEAD-XI: RAIN WATER HARVESTING PIT	₹ 2,077,408.01
12	SUB HEAD-XII: BORE WELL	₹ 2,480,000.00
13	SUB HEAD-XIII: PREFAB TANK	₹ 6,000,000.00
TOTAL		₹ 42,324,692.95



SCHEDULE-F : STATION PLUMBING WORKS

Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Quantity	Rate	Amount
S01	SUB HEAD I - SANITARY FIXTURE & FITTINGS				
1.1	Providing & fixing CP brass 2 way Bib tap including cutting and making good the walls / metallic sheet for wash basin where				
1.1.1	15mm dia.	Each	20.00	₹ 1,699.00	₹ 33,980.00
1.2	Providing & fixing health faucet complete in all respect	Each	20.00	₹ 2,186.94	₹ 43,738.86
1.3	Providing and Fixing of CP brass twin robe hook as per approved make.	Each	20.00	₹ 821.27	₹ 16,425.42
1.4	Providing and fixing white glazed vitreous china division plates for urinals of size 680x300 mm as per approved make.	Each	16.00	₹ 2,169.59	₹ 34,713.36
1.5	Providing ,Fixing of straight / offset type flexible single body push fit type WC pan connector of with integral single mould sealing fins made of flexible EVA body to be fixed with manufacture supplied grease, including rubber bush / adaptor for use with C.I pipe as supplied with the pan connector.	Each	20.00	₹ 780.00	₹ 15,600.00
1.6	Supply installation, testing and commissioning of water cooler with Inbuilt RO purification + UV(50LPH) .Cooling capacity shall be 60 liter & 80 liter shall be storage capacity.Its should have 7 stages purification process,fully automatic,rectangular tank with Forced fin and tube condenser,Non-corrosive SS-304 outer body,Food-grade SS-304 stainless steel inner tank (18/8 or 18/10),PUF insulation,Reciprocating compressor with R22 Refrigerant.Water outlet temp is approx 17 deg c ,Operating power supply 230 + 10% V AC,50 Hz,1 PH,No of Cold water Faucet-2.	Each	4.00	₹ 79,780.00	₹ 319,120.00
1.7	Providing and fixing grab bar as per direction of Engineer-In-Charge.	Each	4.00	₹ 5,997.10	₹ 23,988.40
1.8	Providing and fixing wash basin handle for handicap toilet as per direction of Engineer-In-Charge.	Each	4.00	₹ 3,998.07	₹ 15,992.28

SCH-F (BOQ)



SCHEDULE-F : STATION PLUMBING WORKS

Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Quantity	Rate	Amount
	Total Cost of SUB HEAD I - SANITARY FIXTURE & FITTINGS				₹ 503,558.33
S02	SUB HEAD II - WATER SUPPLY INSTALLATION				
2.1	Providing and fixing Forged Brass Ball Valve (Screwed). with setting and gland of superior quality having minimum working pressure of 10 kg/cm2.				
2.1.1	15 mm dia	Each	36.00	660.00	23,760.00
2.2	Providing and fixing forged brass auto air vent valve 10 PN rating including all fitting & accessories.15 mm dia.	Each	12.00	925.00	11,100.00
2.3	Providing and fixing Brass PRV with CI wheel of approved quality (screw end) nominal bore of				
2.3.1	25mm	Each	16.00	4,300.57	68,809.10
2.3.2	32mm	Each	16.00	5,213.71	83,419.39
	Total Cost of SUB HEAD II - WATER SUPPLY INSTALLATION				₹ 187,088.50
S03	SUBHEAD-III: INTERNAL DRAINAGE INSTALLATIONS				
3.1	Providing & fixing uPVC SWR Type B pipes for soil, waste and vent as per IS 13592 on the wall surface and below ground and floor level, fixing the pipe on the wall surface with the PVC clips including suitable rubber ring joints and solvent solution as per manufacturer specification which includes bends, rubber ring, jointing, junction, clean out plugs, cowls, offset, collar, MS holder , bat clamps access pipes etc. The rate shall include cutting the pipes into required length wastage and testing as per specifications, necessary earth work in excavation and filling of the pipe line trenches providing staging and scaffolding as per requirement at the site.				



SCH-F (BOQ)

SCHEDULE-F : STATION PLUMBING WORKS

Name of Work : Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Quantity	Rate	Amount
3.1.1	110 OD mm dia Pipes	Metre	836.00	746.31	623,911.82
3.2	Providing and fixing of class III (6 kg/sqcm) uPVC Pipe as per IS-4985 for waste pipe from bottle trap to floor trap & Vent pipe including fixing at wall/ ceiling level supported by clamps and hanger etc. Cutting chases/holes in wall/floors/slabs and making good the same with cement concrete 1:2:4 complete as required (Holes in RCC shall be only machine cut and nothing extra shall be paid on this account)				
3.2.1	40mm dia	Metre	44.00	₹ 349.16	₹ 15,363.13
3.2.2	50mm dia	Metre	344.00	₹ 443.78	₹ 152,661.70
3.2.3	63mm dia	Metre	36.00	₹ 605.04	₹ 21,781.58
3.3	Providing and Fixing U-PVC (SWR) self cleansing trap P Trap with minimum water seal of 50mm as per IS :5329 and IS : 2556 complete all in respect				
3.3.1	110 mm inlet and 110 mm outlet	Each	36.00	944.88	34,015.61
3.4	Providing and Fixing floor drain points, all complete in all respect as directed				
3.4.1	b. formed out of 100 x 65 mm dia reducing PVC elbow embedded in floor	Each	72.00	473.10	34,063.13
3.5	Providing and fixing rectangular shape Stainless steel grating with frame for floor traps or drains of required pattern including cutting and making good the floors complete. Size 125x125mm	Each	108.00	955.00	103,140.00



SCH-F (BOQ)

SCHEDULE-F : STATION PLUMBING WORKS

Name of Work : Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Quantity	Rate	Amount
3.6	Providing & fixing uPVC clean out plug with suitable insert keys for opening in: brass cap, male threaded joint with threaded uPVC socket fixed to uPVC pipe joints as required complete in all respects.				
3.6.1	110mm dia.	Each	40.00	210.00	8,400.00
Total Cost of SUBHEAD-III: INTERNAL DRAINAGE INSTALLATIONS					₹ 993,336.96
SO4	SUBHEAD-IV:UPVC RAIN WATER WORK				
4.1	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes.				
4.1.1	160 mm dia	Metre	480.00	2,343.69	1,124,972.64
4.1.2	200 mm dia	Metre	1,536.0	3,678.28	5,649,836.54
4.2	Providing & fixing uPVC clean out plug with suitable insert keys for opening in: brass cap, male threaded joint with threaded uPVC socket fixed to uPVC pipe joints as required complete in all respects.				
4.2.1	110 mm dia	Each	16.00	210.00	3,360.00
4.2.2	210 mm dia	Each	16.00	580.00	9,280.00
Total Cost of SUBHEAD-IV:UPVC RAIN WATER WORK					₹ 6,787,449.18
SO6	SUBHEAD-VI: EXTERNAL STORM WATER WORK				
6.1	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) up to haunches of S.W. pipes including bed concrete as per standard design :				
6.1.1	450mm dia RCC Pipe	Metre	168.00	1,827.71	307,055.45

SCH-F (BOQ)

P



SCHEDULE-F : STATION PLUMBING WORKS

Name of Work : Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Quantity	Rate	Amount
	Total Cost of SUBHEAD-VI: EXTERNAL STORM WATER WORK				₹ 307,055.45
S08	SUBHEAD-VIII: WATER SUPPLY PUMPS & EQUIPMENTS AND WATER TREATMENT UNIT				
8.1	Providing and fixing CI wafer type Butterfly Valves confirming to PN 10/ 13095 with nuts, bolts, washers, 3 mm thick insertion rubber gasket and two matching flanges complete as per M & W specifications.				
8.1.1	80mm dia.	Each	8.00	2,281.33	18,250.67
8.1.2	50mm dia.	Each	32.00	1,774.15	56,772.67
8.1.3	40mm dia.	Each	8.00	3,006.15	24,049.17
8.2	Providing, fixing and commissioning non clog type monoblock submersible drainage pumps suitable for handling solids of 12mm size with totally water and dust proof motor as specified complete with motor control panel and float switch, inclusive all termination and earthing required all complete as per specification.				
8.2.1	Capacity- 300.lpm, Head - 10 m	Each	8.00	78,330.29	626,642.36
8.3	Providing and fixing Transistorised liquid level controllers with low voltage relays and seamless steel probes and PVC shroud including necessary wiring and conducting from probes to display panel/ motor control panels and to provide audible alarm for low level for each underground tank. (The cost of all required cabling from probes to Motor control panel to be including in the rate)				
8.3.1	For Raw water Pump	Each	8.00	36,554.14	292,433.09
8.4	To start the raw water pump at low water level in domestic treated water underground tank and stop at high water level in treated water tank and stop at low water level in raw water tank				



SCH-F (BOQ)

SCHEDULE-F : STATION PLUMBING WORKS

Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Quantity	Rate	Amount
8.4.1	For Domestic water Pump	Each	8.00	36,554.14	292,433.09
	To start the Domestic water pump at low water level in stp treated water underground tank and stop at low water level in Domestic water tank				
8.5	FILTER				
	Providing and fixing Vertical Downflow Filter in MS fabricated in accordance with IS 2825 from minimum 6 mm thick M.S. plate on shell and minimum 8 mm thick M.S. plate on dished ends, epoxy coated construction.The filter shall have :				
	a) One no. pressure tight manholes and at least one no. pressure tight side hole for maintenance purposes.				
	b) Initial charge of Filter Media.				
	c) Complete underdrain system and raw water distributor as per manufacturer's design.				
	(d)Complete uPVC frontal face piping (10 kg/cm ² rating conforming to IS:4985) and valves battery with CI Butterfly valves, pressure gauges and sampling points at inlet and outlet. etc. covering all functions of service, backwash, rinse, air release etc.				
	e) Pressure gauges (100 mm dia bourdon type pressure gauge)/ sampling points as per manufacturer design.				
	f) All internal parts of the filtration plant shall be coated with two coats of epoxy paint after thorough sand blasting. All external surfaces of the plant including piping shall be coated with two coats of red iron oxide/zinc chromate primer followed by two coats of high gloss enamel paint .				
	g) The filter shall be complete with all gaskets/fasteners of standard quality as required.				



SCH-F (BOQ)

SCHEDULE-F : STATION PLUMBING WORKS

Name of Work : Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Quantity	Rate	Amount
	h) The filter shall be designed to give rated output at given raw water quality and flow rate without any operational problem and should not get any loss of performance as long as the operating pressure remains within the given range. Any additional provision is required to make the item complete, the same should be included herein.				
8.5.1	DUAL MEDIA FILTER (for Domestic)				
	Capacity : 6600 Lph				
	Filtration rate : 15500 M ³ /M ² /hr				
	Max. operating pressure : 3.0 Kg/Sq.cm				
	Test pressure : 4.5 Kg/Sq.cm				
	Suggested Diameter : 700 mm	Set	4.00	276,132.00	1,104,528.00
8.6	WATER SOFTNER				
	Providing and fixing, testing and commissioning FRPL Downflow "Cation" Ion Exchange water Softener as per applicable IS standards. The softener shall have :				
	a) Two nos pressure tight manholes.				
	b) Initial charge of Ion Exchange resin and supporting filter media.				
	c) Strainer plate (1 Nos.) at bottom with PP strainers with removable nuts and check nuts fixed on the plate.				
	Raw water distributor at the top.				
	SS Brine distributor in the middle.				
	d) Complete uPVC frontal face piping (10 kg/cm ² rating conforming to IS:4985) comprising of connections with CI Diaphragm valves of required size for inlet, outlet, backwash inlet, backwash drain and rinse drain.				
	e) Regeneration assembly comprising of power valve, ejector, brine suction valve, and all necessary piping.				



SCH-F (BOQ)

SCHEDULE-F : STATION PLUMBING WORKS

Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Quantity	Rate	Amount
	f) Pressure gauges (100 mm dia bourdon type pressure gauge)/ sampling points with SS isolation cocks at inlet and outlet.				
	g) All internal parts of the softening plant shall be coated with two coats of food grade epoxy paint after thorough sand blasting. All external surfaces of the plant including piping shall be coated with two coats of red iron oxide/zinc chromate primer followed by two coats of high gloss enamel paint .				
	h) The softener shall be complete with all gaskets/fasteners of standard quality as required.				
	i) The softener shall be designed to give rated output at given raw water quality and flow rate without any operational problem and should not get any loss of performance as long as the operating pressure remains within the given range. Any additional provision is required to make the item complete, the same should be included herein.				
	j) The tenderer is required to submit the make, grade and quantity of resin being offered by him and the quantity of regenerant required for each regeneration.				
	Capacity -6600 lph.				
	Raw Water Hardness App. 400-600 mg/l. Assumed				
	Regeneration period 8 hrs.				
	Quantity of soft water between two regenerations=53 cum				
	Operating pressure : 3.0 kg/cm ²				
	Test pressure : 4.50 kg/cm ²				
8.6.1	Treated water hardness : Below 5 ppm	Set	4.00	368,176.00	1,472,704.00
8.7	BRINE TANK FOR REGENERATION				



SCH-F (BOQ)

SCHEDULE-F : STATION PLUMBING WORKS

Name of Work : Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Quantity	Rate	Amount
	Providing and fixing MS rubber lined/vertical, cylindrical self supporting open tank for salt mixing and brine saturation with air agitation arrangement comprising of SS air distributor laid at the bottom of tank, centrifugal TURBINE air blower complete in all respects of suitable capacity to agitate the required quantity of brine, piping interconnection between air blower and air distributor with nozzles for inlet, outlet, overflow and drain. Outside finished with high gloss enamel paint over two coats of zinc chromate primer complete including testing and commissioning. Net usable capacity of the tank excluding free board etc., should be at least 10 % more than actual capacity required. Suitable access stair/platform in MS construction shall be provided to enable the operator to reach the brine tank top and facilitate dumping of salt directly into the tank from the salt bags.				
	Min. Usable capacity : 250 Ltrs.				
	Min. Net capacity : 500 Ltrs.				
	Suggested Dia. : 300 mm				
8.7.1	Suggested HOS : 1000 mm	Set	4.00	₹ 230,110.00	₹ 920,440.00
8.8	Hydropneumatic System With Variable Speed System				
	Providing, fixing and testing of packaged fixed skid mounted hydropneumatic system comprising of :-				
	Vertical, inline multistage centrifugal pumping set with stainless steel SS-304 stage casing and SS-304 impellers with stainless steel SS-316L shaft as per IEC standards and GJL250 cast iron suction & discharge casing, connected to TEFC ventilated induction motor of 2 pole, 2900rpm, suitable for 400/440 Volts, 3 phase, 50 Hz A.C.				



SCH-F (BOQ)

SCHEDULE-F : STATION PLUMBING WORKS

Name of Work : Construction of four (04) nos Elevated Metro Stations excluding viaduct, pie r arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Quantity	Rate	Amount
	Pressure vessel of non corrosive FRP composite construction lined with NSF and/or FDA listed material, like high density polyethylene with fully replaceable polyurethane. Air cell burst pressure of minimum of 5 times the vessel operating pressure and cycle tested for 2,50,000 cycles.				
	No. and capacity of Pressure Vessel - 01 Nos. x 100 Ltrs				
	Control Panel with programmable logic controller (PLC) for cyclic operation of pumps. Pump working sequence should change after every operation. Contractor overload relays and MCBs should confirm to IEC 898 - 1995/ specifications. Blinking indications for pumps start, trip, low level trip, health supply should be provided in the panel along with the ammeter & voltmeter. Control panel should also consist of cooling fan.				
	Pressure switches bellow type fitted with micro switch and having maximum pressure and differential scale should confirming BS-6134 standards and IP55 protection class.				
	Stainless steel suction and delivery header, ball valve on each pump on section delivery side, non return valves, Y stainer complete in all respect.				
	Ball valves to be used should be Hot Pressed brass OT-58 with stainless steel ball and P.T.F.E seal and O-Ring. NRVs to be used should be with Springs and O-Ring arrangement.				
	Complete set system to be mounted on a common base frame and shall follow following duty.				
8.8.1	FOR RAW WATER SUPPLY ONLY (LOCATION- PLANT ROOM)				
	(1 working + 1 stand by)				
	Capacity : 150 lpm				



SCH-F (BOQ)

SCHEDULE-F : STATION PLUMBING WORKS

Name of Work : Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Quantity	Rate	Amount
	Head : 45 m	Set	4.00	₹ 490,901.00	₹ 1,963,604.00
8.8.2	FOR DOMESTIC WATER SUPPLY (LOCATION-PLANT ROOM)				
	(1 working + 1 stand by)				
	Capacity : 100 lpm				
	Head : 45 m	Set	4.00	₹ 475,560.00	₹ 1,902,240.00
8.8.3	FOR FLUSHING WATER SUPPLY (LOCATION-STP ROOM)				
	(1 working + 1 stand by)				
	Capacity : 100 lpm				
	Head : 45 m	Set	4.00	₹ 475,560.00	₹ 1,902,240.00
Total Cost of SUBHEAD-XIII: WATER SUPPLY PUMPS & EQUIPMENTS AND WATER TREATMENT UNIT					₹ 10,576,337.06
S09	SUB HEAD-IX: MISLANIOUS ITEM				
9.1	Providing and fixing 600mm long puddle flanges fabricated out of 300 x 300 mm and 6mm thick MS Plates along with flanges of suitable size properly fixed in walls & top slabs of underground tanks				
9.1.1	200 mm dia	Each	8.00	₹ 1,603.69	₹ 12,829.52
9.1.2	150 mm dia	Each	24.00	₹ 3,906.16	₹ 93,747.72
9.1.3	100 mm dia	Each	64.00	₹ 1,953.08	₹ 124,997.31
9.1.4	80 mm dia	Each	32.00	₹ 449.03	₹ 14,368.99
9.1.5	65 mm dia	Each	4.00	₹ 1,562.47	₹ 6,249.89
9.1.6	50 mm dia	Each	8.00	₹ 1,171.85	₹ 9,374.82
9.1.7	25 mm dia	Each	32.00	₹ 128.28	₹ 4,105.02



SCH-F (BOQ)

R

SCHEDULE-F : STATION PLUMBING WORKS

Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Quantity	Rate	Amount
	Enclosed Type Water Metre (Bulk Type)				
9.2	Providing and fixing of the enclosed type Water metre (Bulk Type) confirming to IS :2373 and tested by appropriate authority with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately)	Nos.	24.00	₹ 17,808.15	₹ 427,395.53
	Foot Valve				
	Providing and fixing of foot valve with approved quality (Screw end)				
9.2.1	Size 65mm	Nos.	16.00	₹ 9,166.12	₹ 146,657.95
9.2.2	Channel Drain	Each	24.00	₹ 4,399.75	₹ 105,594.02
9.2.3	Providing and fixing of 300mm wide channel drain with stainless / Cast iron grating	Each	40.00	₹ 2,199.88	₹ 87,995.27
9.2.4	300mm wide	M	240.00	₹ 5,575.50	₹ 1,338,120.00
9.3	Providing & Fixing Electric Control panel to open/close the solenoid valve at low/high water level through level controller in soft water tanks, including wiring , level controller probes & other accessories as required to operate the system automatically, including ultrasonic sensor.	Each	36.00	₹ 43,495.10	₹ 1,565,823.42
9.4	Manhole construction including excavation in any type of soil, trenching, bedding and surround backfilling, compaction, disposal of surplus excavated material, dewatering, blinding concrete, reinforced cement concrete of grade M25 and cover shall be equal to heavy roadway type made of ductile iron, with frame of cast iron Ft.20 for closed manholes.				
9.4.1	Man Holes Depth ranges less than 1000mm	Nos.	4.00	₹ 9,912.00	₹ 39,648.00
9.4.2	Man Holes Depth ranges between 1000mm to 2000 mm	Nos.	4.00	₹ 12,390.00	₹ 49,560.00
	Total Cost of SUB HEAD-XIX: MISLANIOUS ITEM				₹ 4,026,467.466
S10	SUB HEAD-X: BIO DIGESTER (40 KLD)				



SCH-F (BOQ)

R

SCHEDULE-F : STATION PLUMBING WORKS

Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Quantity	Rate	Amount
10.1	Design, Installation testing & commissioning of Modular type Bio Digester & Reed bed System work and Excluding of all type of civil work & (Bar Screen and Oil & Grease Separation, Anarobic treatment, Reed Bed Technology Treatment, Clear water tank) completely for Domestic Sewege for Flushing Purpose.				
	The Bio Digseter shall be designed based on the following parameters:				
	Daily average flow - 40 Cum / Day				
	pH - 6.5 - 8.5				
	BOD5 - 250 - 450 Mg/L				
	S. Solids - 200 - 400 Mg/L				
	COD - 400 - 600 Mg/L				
	Oil & Grease - 30 Mg / L				
	Effluent discharge standard after treatment				
	pH - 6.0 - 8.5				
	BOD5 - Less than 10Mg/L				
	S. Solids - Less than 5 Mg/L				
	COD - Less than 50 Mg/L				
	Oil & Grease - Nil				
	E Coli - Nil				
10.1.1	FRP Bar Screen Chamber of dimension 1200 L X 800 W X 800 H for blocking hard items like napkins, pouch, tissue papers etc to flow into Digester.	No.	4.00	₹ 64,000.00	₹ 256,000.00
10.1.2	40 KLD Bio Digester: FRP Bio Digester of 4000L X 2200 WX1200H (in MM.) size of single tank of size 10000 litres tank capacity -x 04 nos with 30% DRDO(Govt of India) approved Anarobic Molecular Inoculums (AMI)	No.	16.00	₹ 44,000.00	₹ 704,000.00
10.1.3	Underground Treated Water Tank of 10000 ltrs with level sensor.	No.	4.00	₹ 55,000.00	₹ 220,000.00



SCH-F (BOQ)

SCHEDULE-F : STATION PLUMBING WORKS

Name of Work : Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Quantity	Rate	Amount
10.1.4	Kirloskar make Waste Water Disposer Submersible Pump in SS body Model 1000SW 2880 RPM Single phase 1.25HP/1.0KW delivery pipe 40MM with AUTO CUT-OFF Arrangement	No.	8.00	₹ 24,499.00	₹ 195,992.00
10.1.5	Glass Media Filter - GMF- 1000 LPH- Flow rate : 1 cu mtr/ hr Vessel size 12 x 48 filtration media-80 kg Working Pressure - 1.8 bar to 2.5 bar , Back washing pressure 2.5 bar DP/ Cleaning Pressure / Delta P : 0.6 bar, Vessel MOC : FRP Pentair / equivalent, Glass Media : Spain, Distribution System & MPV : INITIATIVE	No	4.00	₹ 32,000.00	₹ 128,000.00
10.1.6	Supply of Ozonator (1 Set) to treat 1000 lph water suitable for waste water application. The system complete consisting of Ozone Generator, Oxygen Generator, Air Compressor, Water Chilling System, Ozone Diffusers, Pipeline & fittings, Central Control Panel etc with Re-circulation based Ozone mixing system comprision of Re- circulation Pump, Ventury Injector, Static Mixer etc complete in all respect. Capacity: 1 gm /hr. (Make: Creative/ G.S.)	Set	4.00	₹ 20,500.00	₹ 82,000.00
10.1.7	UF Ultra filtration system	Set	4.00	₹ 200,000.00	₹ 800,000.00
	Control Panel & and its accessories				
	All the Piping works				
10.1.8	Capciaty 40.0 cum/day	Set	4.00	₹ 1,500,000.00	₹ 6,000,000.00
	Total Cost of SUB HEAD-X: BIO DIGESTER (40 KLD)				₹ 8,385,992.00
S11	SUB HEAD-XI: RAIN WATER HARVESTING PIT (30 CUM)				



SCH-F (BOQ)

SCHEDULE-F : STATION PLUMBING WORKS

Name of Work : Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Quantity	Rate	Amount
11.1	Construction of brick masonry Desilting chamber of size 250x200x200cm Effective depth before rain water harvesting pit with precast concrete block in cement mortar 1:4 (1 cement : 4 coarse sand) , foundation concrete 1:4:8 mix (1 cement : 4 coarse sand; 8 graded stone aggregate 40mm nominal size), inside and outside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement inside and rough plaster on outside, including fixing of grating , neatly finished with 2 nos.manhole cover complete in all respects including necessary excavation, refilling and disposal of surplus earth, complete as per attached Sketch .	Each	16.00	₹ 80,000.00	₹ 1,280,000.00
11.2	DRILLING- Drilling of 150m.m dia. Borehole for Recharge shaft etc (It includes Drilling work of diameter 180m.m in soil /Murum/ hard rock	Rmt	360.00	₹ 624.46	₹ 224,804.16
11.3	P.V.C. CASING - Providing & fixing 180 m.m. Dia PVC Casing (6 Kg/ cm2) (IS 4985-1988)	Rmt	48.00	₹ 1,058.45	₹ 50,805.72
11.4	P.V.C. CASING - Lowering of 180 m.m. Dia PVC Casing (6 Kg/ cm2) (IS 4985-1988)	Rmt	48.00	₹ 101.47	₹ 4,870.66
11.5	P.V.C. CAP - Providing & Fixing PVC Cap 180 m.m. Diameter of above Casing top etc.	Nos	8.00	₹ 312.23	₹ 2,497.82
11.6	Supply of with S.S. Rain Water Harvesting V wire filter screen assembly suitable for Bore well casing pipe of 180mm diameter, Filter Dimention-350mm dia x 750mm ht, media - Pebbles/Quartx 150 microns SS mesh, SS304 filtering drum MS flanges. (As per Market rate)	Unit	8.00	₹ 56,825.50	₹ 454,603.97
11.7	Skilled Labour for installation of with S.S. Rain Water Harvesting V wire filter screen assembly as per PWD SSR Page no. 475 sr.no20	Nos	16.00	₹ 874.24	₹ 13,987.85
11.8	150mm Diameter bore Well upto 45 Rmt in Depth	Nos	80.00	₹ 572.97	₹ 45,837.84
Total Cost of SUB HEAD-XI: RAIN WATER HARVESTING PIT (30 CUM)					₹ 2,077,408.01



SCH-F (BOQ)

R

SCHEDULE-F : STATION PLUMBING WORKS

Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Quantity	Rate	Amount
S12	SUB HEAD-XII: BORE WELL				
	Submersible single stage single entry pumps with C.I.body and C.I. two vane enclosed type impeller connected to TEFC submersible motor for 415 volts, 3 phase, 50 cycles including MCC panel with level controllers, auto control, sequential change over facility with one proper working at low level & two proper working at high level with an audible alarm including all interconnectivity cables, with both pumps connected to common outlet header including valves, non return valves, lifting chains etc. complete in all respect				
12.1	SUBMERSIBLE UNDER GROUND FOR BOREWELL (2 Nos. Bore Well)				
	No. of Pumps: 1 (1 Working)				
	Capacity : 200 LPM				
	Head : 100 m	Set	8.00	₹ 310,000.00	₹ 2,480,000.00
	Total Cost of SUB HEAD-XII: BORE WELL				₹ 2,480,000.00
S13	SUB HEAD-XIII: PREFAB TANK				



SCH-F (BOQ)

SCHEDULE-F : STATION PLUMBING WORKS

Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No.	Description	UOM	Quantity	Rate	Amount
13.1	Providing and fixing and trandporting of Prefab Water Tank as per AS2304 Standard including all assorries withReinforced PVC Liner 760- 800gsm and fixing made of COLORBOND Zinc Aluminium High Tensile Steel Sheet/JSW Galvalume steel with Ribbed Profile coated with Cream color, which are laser cut and CNC rolled and bolted together to form the tank shell. This shell is then anchored to the ring beam with bolt chairs and nchor fasteners. This sheet comes from Australian BlueScope Steel/JSW Steel. a. Fire Water Tank 12,000 LTR (2.67m x 2.13m), b.FLUSHING Water Tank 7,100LTR (2.67m x 1.28m), c. Domestic Water Tank 7,100LTR (2.67m x 1.28m), d. Inlet/Outlet INCLUDING Hire and running charges of crane 20 tonne capacity (As per PWD SSR 21-22, INR 2025/ hour, i.e. 2025 x 8 hours x 1.05 Corporatcn area charges = INR 17,010 / day)	SET	4.00	₹ 1,500,000.00	₹ 6,000,000.00
	Total Cost of SUB HEAD-XII: BORE WELL				₹ 6,000,000.00
	Total Amount (Rs.)				₹ 42,324,692.95

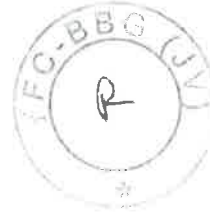


SCH-F (BOQ)

SCHEDULE-G : External & Site development Works (NDSR Items)		
Name of Work :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project		
STATION		
SR.NO.	DESCRIPTION	AMOUNT (In INR)
1	Excavation and Dismantling	₹ 1,466,400.00
2	Storm Water Drain	₹ 611,118.60
3	Footpath,Paver Block and Kerbstone	₹ 768,000.00
4	Lane Marking	₹ 399,358.78
5	Street Furniture	₹ 640,247.23
6	Signages	₹ 2,034,269.53
7	Landscaping	₹ 1,672,160.46
8	Irrigation System	₹ 1,005,877.95
9	Miscellaneous	₹ 3,809,103.83
	Total Amount	₹ 12,406,536.38

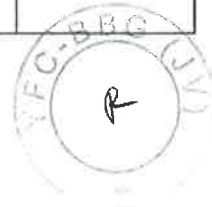


SCHEDULE-G : External & Site development Works					
SR.NO.	ITEM DESCRIPTION	UNIT	Quantity	Rate	AMOUNT
S01	Excavation and Dismantling				
1.1	Excavation for roadway in earth, soil of all sorts, sand, gravel or soft murum including dressing section to the required grade, camber and side slopes and conveying the excavated materials with all lifts upto a lead of 50m. and spreading for embankment or stacking as directed. MORTH 301	CUM	7,332.00	₹ 200.00	₹ 1,466,400.00
	Sub Total : S01-Excavation and Dismantling				₹ 1,466,400.00
S02	Storm Water Drain				
2.1	Raising or lowering circular manholes to the required level upto 20 cm including all material, form work etc. with 16 cm thick cement concrete M-15 (1:2:4) coping under frame and cover of manhole, including curing etc. complete as specified and as directed	NOS	40.00	₹ 1,777.97	₹ 71,118.60
2.2	Providing and laying concrete pipes of I.S.NP. class of 300mm diameter in proper line, level and slope including necessary collars, excavation, laying, fixing with collars in cement mortar 1:1 and refilling the trench complete. Spec. No.: Bd.V.41, Page No. 573 (From gully chamber to SWD)	RMT	80.00	₹ 5,000.00	₹ 400,000.00
2.3	Providing, hoisting and fixing in position C.I. manhole, frame and cover of best quality and of required size and shape with locking arrangements including applying 2 coats of anti-corrosive paint, etc. complete. (90 x 60 cm size and weight 35 kg.)	NOS	20.00	₹ 7,000.00	₹ 140,000.00
	Sub Total : S02-Storm Water Drain				₹ 611,118.60
S03	Footpaths, Paver Blocks & Kerbstones				
3.1	Supplying, Laying and spreading murrum in 200 to 300 mm thickness laye compacting with a roller upto getting density of 97 % including all lead and lifts. Specification No. RD - 13 No. 194	CUM	512.00	₹ 1,500.00	₹ 768,000.00
					₹ 768,000.00



SCH-G (BOQ)

SCHEDULE-G : External & Site development Works					
SR.NO.	ITEM DESCRIPTION	UNIT	Quantity	Rate	AMOUNT
S04	Lane Markings				
4.1	Providing and applying arrows, letters, numbers and symbols made from reflective "PREFORMED ROAD MARKING MATERIAL having all dimensions as per 'code of practice for Road Markings IRC 35- 1997, having thickness 2.50 to 3.00 mm on clean, dry and good road surface with 30% Glass bead, 20 binder, 10 % pigment and 35 % extenders fillers to achieve material composition as per MORTH 803 .4. 10011				
4.1.1	LETTERS & NUMERALS 1250 MM HIGH AND 313 MM WIDE	NOS	24.00	₹ 854.26	₹ 20,502.24
4.1.2	ARROW 3.50 M LONG STRAIGHT OR STRAIGHT + LEFT /RIGHT OR ONLY LEFT / RIGHT	NOS	40.00	₹ 2,303.40	₹ 92,135.82
4.1.2	PRODUCT : SYMBOL OF CYCLE TRACK & DISABLE D MAN	Per KM	16.00	₹ 1,902.67	₹ 30,442.72
4.2	Cats Eye-Supplying of Molded Shank Raised Pavement Markers made of polycarbonate and ABS moulded body and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face and shall support a load of 16000 kg tested in accordance to ASTM D 4280 Type H and complying to Specifications of Category A of MORTH Circular No RW/NH /33023/10-97 - DO III Dt 11.06. 1997. The height, width and length shall not exceed 50 mm, 100 mm and 102 +/- 2 mm and with minimum reflective area of 13 Sqcm on each side and the slope to the base shall be 35 +/- 5 degree. The strength of detachment of the integrated cylindrical shanks, (of diameter not less than 19 +/- 2 mm and height not less than 30+/- 2 mm) from the body is to be a minimum value of 500 Kgf. Fixing will be by drilling holes on the road for the shanks to go inside, without nails and using epoxy resin based adhesive as per manufacturer's recommendation and complete as directed by the Engineer In White colour	NOS	600.00	₹ 427.13	₹ 256,278.00
	Sub Total : S04-Lane Markings				₹ 399,358.78
S05	Street Furniture				
5.1	Providing and fixing stainless steel bollard of steel pipe 1.00 metre long of 250 mm inner diameter and circular top plate of 350 mm diameter with 5 mm thickness on deck of jetty in cement concrete including necessary fixtures and fastening etc. complete. (Stainless steel of grade S-304)	NOS	4.00	₹ 25,861.65	₹ 103,446.59
5.2	Supply & fixing precast cement concrete cylindrical Bollard of size as per specifications and 900 mm high (650 mm above finish level) , manufactured by M - 30 grade of concrete & suitable reinforced & manufactured by vibro compaction process using FRP moulds , & with washed fine grit finish on the exposed surface of bollard of approved colour and texture, as per detail drawing as directed by engineer in-charge.	NOS	120.00	₹ 3,500.00	₹ 420,000.00



SCH-G (BOQ)

SCHEDULE-G : External & Site development Works					
SR.NO.	ITEM DESCRIPTION	UNIT	Quantity	Rate	AMOUNT
5.3	Supply and Installation of Street Dust bin -Height - 1000 mm, Dia - 300 mm (each bin), swing type structure, . Set Contains 2 no's of dust bins, representation Stands for mounting of twin dustbins at places (Quotation by Creative Fibrotech, Bhosari, Pune)	NOS	16.00	₹ 7,300.04	₹ 116,800.64
	Sub Total S05-Street Furniture				₹ 640,247.23
S06	Signages				
6.1	Providing and fixing cautionary / warning sign board of size 60 cm. having shape of equilateral triangle with apex point upwards. prepared on 16 gauge M.S. sheet including painting with one coat of zinc cromate stoving primer and two coats each of white back ground, red border and backside gray stove enamelled, bonded with cut out of Retro reflective sheet Engineering grade, symbol / letters / numerals / border / arrow, coated with non peelable crystal clear protective transparent retaining 100% reflection including one number of M.S. Angle iron post of size 50 x 50 x 5 mm of 3.65 m. long inflated at bottom drilled on top in one piece without joint painted with white and black bands of 30 cm. fixing board and post with 2 Nos. high strength G.I. bolts and nuts of size 10 mm dia. and 20 mm long including all taxes, conveying, fixing in ground with cement concrete 1:4:8 block of 60 cm x 60 cm x 75 cm size etc. complete. 60 cm. equilateral triangle M.S. sheet with Engineering grade, Spec : IRC-67 2015	NOS	16.00	₹ 4,115.98	₹ 65,855.68
6.2	Providing and fixing Mandatory / Regulatory sign board of circular shape of size 60 cm. dia. prepared on 16 gauge M.S. sheet including painting with zinc cromate stoving primer and two coats each of white back ground, red border and backside gray stove enamelled, bonded with cut out of Retro reflective sheet Engineering grade, symbol / letters / numerals / border, coated with non peelable crystal clear protective transparent coat retaining 100% reflection including one number of M.S. Angle iron post of size 50 x 50 x 5 mm of 3.45 m. long inflated at bottom drilled on top in one piece without joint painted with white and black bands of 30 cm. fixing board and post with 2 Nos. high strength G.I. bolts and nuts of size 10 mm dia. and 20 mm long including all taxes, conveying, fixing in ground with cement concrete 1:4:8 block of 60 cm x 60 cm x 75 cm size etc. complete. circular shape of size 60 cm. dia. M.S. sheet with Retro reflective sheet Engineering grade Spec : IRC-67 2015.	NOS	48.00	₹ 4,814.92	₹ 231,116.16



SCH-G (BOQ)

SCHEDULE-G : External & Site development Works					
SR.NO.	ITEM DESCRIPTION	UNIT	Quantity	Rate	AMOUNT
6.3	Providing and fixing informatory signboards in circular shape of 60cm dia made out of 14 gauge aluminum sheet bonded with white retro reflective sheeting of Type IV High Intensity Micro-Prismatic Grade Sheeting (HIP) having pressure sensitive/heat activated adhesive retroreflective white back ground and red border and back side gray retroreflective symbols, letters, numerals, arrow. one no. of M. S. angle iron post of size 65 mm X 65 mm X 6 mm, 3.45 m long, duly painted with with flat oil paint having alternate black and white bands of 25 cm width including G.I. fixtures etc; fixing the boards in 1:3:6 concrete block of size 60cm X 60cm X 75cm including transportation etc; complete. circular shape of size 60 cm. dia. aluminum sheet with white retro reflective sheeting of Type IV High Intensity Micro- Prismatic Grade Sheeting (HIP). Spec :IRC-67 2015.	NOS	96.00	₹ 9,039.62	₹ 867,803.90
6.4	Advance Direction Boards - Supply and Fixing of Retro Reflective Advance Direction Sign Board size 1800 mm x 1800 mm made out of Wide Angle Cube Corner Micro prismatic grade sheeting conforming to IRC-67: 2012 & Type XI standards of ASTM D 4956 -09 specifications and fixed over 3mm thick ACP sheet & back support frame of 35x35x5mm MS Angle. Board shall be supported with 2 number of Powder Coated 80 NB MS Pipe Vertical post with wall thickness of 2.5 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 cm X 45 cm X 60 cm etc complete. The information message shall be made out of cut out letters in Blue color transparent overlay film as per IRC 67-2012 Guidelines. 10 years Warranty for Retro Reflective Sheeting from the original sheeting manufacturer & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be submitted by the contractor. Size of the board 1800 mm x 1800 mm. (Way finding signages)	NOS	16.00	₹ 54,343.36	₹ 869,493.79
	Sub Total : S06-Signages				₹ 2,034,269.53
S07	Landscaping				
7.1	GARDEN SOIL : Supplying on site garden soil well sieved 90% to pass through I.S. sieve of 10 mm size free from stones rubbish like dried grass roots and other such materials. The soil should be fresh from quarry. The colour of the soil generally be red. The soil will be measured by measuring box. (Farma) (Item includes Royalty charges., Transporting, loading unloading etc.) lead charges for 20 k.m. is considered.	CUM	360.00	₹ 1,161.30	₹ 418,068.00
7.2	FARM YARD MANURE: Supplying on site well decayed, well dried, well powdered, without clods and free from stones, dried grass and other rubbish material. The colour of the manure generally be black. The manure will be measured by measuring box. (Farma) (Item includes Transporting, loading unloading etc.) lead charges for 20 k.m. is considered	CUM	360.00	₹ 1,393.56	₹ 501,681.60



SCH-G (BOQ)

SCHEDULE-G : External & Site development Works					
SR.NO.	ITEM DESCRIPTION	UNIT	Quantity	Rate	AMOUNT
7.3	Planting clipped Hedge:- Excavating the ground to a required depth of 30 cms. Removing & conveying unwanted stuff to a required distance as directed. Filling fresh garden soil & manure in excavated area in 3:1 proportion to a height of 30 cms. Mixing garden soil and manure thoroughly, well, leveling, watering on previous night. Planting hedge plants of required species in two rows. Distance between two rows & between two plants will be 25 cms. Maintaining till well established by watering, weeding, stirring the soil and clipping if necessary etc. complete. (R.A. No. 5)	SQM	108.00	₹ 840.63	₹ 90,788.49
7.4	Preparing flower Bed:- Excavating the ground to a required depth of 30 cms. Removing & conveying unwanted stuff to a required distance as directed. Filling fresh garden soil & manure in excavated area in 3:1 proportion to a required height of 30 cms. Mixing garden soil and manure thoroughly, well, leveling, watering on previous night. Planting seedlings of required annuals 25 cms. apart Maintaining till well established by watering, weedings, Stirring replacing of casualties etc, Complete. (R.A. No. 6)	SQM	72.00	₹ 941.82	₹ 67,811.16
7.5	Preparing Shrubbery:- Excavating the ground to a required depth of 30 cms. Removing rubbish & conveying unwanted stuff to a required distance as directed. Filling fresh garden soil & manure in excavated area in 3:1 proportion to a height of 30 cms. Mixing garden soil and manure thoroughly well, leveling, watering on previous night. Planting well, levelling, watering on previous night. Planting well developed shrubs plants, 0.50 mtr. height, 0.45 Mtrs, apart as directed and maintaining till well established by watering, weedings, Stirring replacing, replacing casualatie etc. complete. (R.A. No. 8)	SQM	108.00	₹ 860.87	₹ 92,974.14
7.6	Planting small and medium size ornamental / flowering plant:- Digging pit with size 0.6 m x 0.6 m x 0.6 m, Removing & conveying unwanted stuff to a required distance as directed. Filling the pit with fresh garden soil & Farm Yard Manure up to a height of 0.60 m in 3:1 proportion. Mixing soil and manure thoroughly well, leveling and watering previous night. Planting one or two year old healthy plant saplings as per specifications. Maintaining till well established by watering, Stirring of soil and manure, replacing of casualties etc. complete. (R.A. No. 13)	NOS	100.00	₹ 642.93	₹ 64,292.95
7.7	Preparing ground covers:- Excavating the ground to a required depth of 20 cms. removing & conveying unwanted stuff, rubbish to the required distance as directed. Filling the Excavated area with fresh garden soil & F.Y. Mnure in 3:1 proportion to a height of 20 cms. Mixing, leveling, watering the same on previous night. Planting suitable ground covers as directed in staggering pattern distance between tow rows 25 cms., watering & maintaining till well established.. (R.A. No. 14)	SQM	72.00	₹ 885.78	₹ 63,776.11



SCH-G (BOQ)

SCHEDULE-G : External & Site development Works					
SR.NO.	ITEM DESCRIPTION	UNIT	Quantity	Rate	AMOUNT
7.8	Providing & fixing FRP Tree Grating Section having size 1.5m x 1.5m having circular opening at centre of 0.6 m to 0.9 m diameter as requirement on site as per detailed drawing & Specification having sufficient strength upto 5 ton capacity and instructions by Engineer- In - Charge.	NOS	80.00	₹ 4,659.60	₹ 372,768.00
	Sub Total : S07-Landscaping				₹ 1,672,160.46
S08	Irrigation System for Landscape Pocket				
8.1	Providing, erecting and giving test of Centrifugal Monoblock pump set conforming to IS 9079 operating at 2900 RPM with CI impeller, priming funnel, cock, suitable flanges at suction and delivery side. Pump shall have common shaft for pump and motor. Motor shall be suitable for working on 415 V \pm 10%, 3 Ph, 50 Hz A.C. Supply. Motor shall be TEFC type. Pump set shall be suitable for working at various discharge and head requirements. Pump shall be erected on Provided C.C. foundation block with suitable foundation bolts grouted in C.C. foundation block. 2.0 HP	NOS	4.00	₹ 22,305.72	₹ 89,222.87
8.2	Supplying & erecting automatic control panel for 1 Ph, 230 volt, A.C. Submersible/centrifugal pump set up to 3 HP consisting of DOL starter Of suitable relay range S.P.P., Combined ammeter/ voltmeter, phase indicating lamp enclosed in CRCA powder coated Vibration proof enclosure with IP 54 protection.	NOS	4.00	₹ 6,217.30	₹ 24,869.21
8.3	SITC of UPVC pipes of IS 4985 , having thermal stability for hot & cold water supply including all plain & brass threaded fittings including fixing the pipe with clamps at 1.00m spacing. This includes jointing of pipes & fittings with one step UPVC solvent cement and testing of joints complete as per direction of engineer in charge. (for Land scape sprinkler works) Scope also includes Excavation up to 1.5 mtr & Backfilling after laying of pipes & make surface good. (Supreme / Astral/Ashirvad/Finolex make) (for Irrigation PipingWork) NSR ITEM				
8.3.1	PVC 100 mm x 6 kg/cm2. NSR ITEM bhawan 13-2-1	RMT	200.00	₹ 1,327.99	₹ 265,597.20
8.4	Supplying at Site Complete set of Air Valve with Single ball type stop valve - Cast iron air valve (Kirloskar, IVI, IVC Nashik, Gavhane Patil, Vag, Avishkar makes) and Sigmaflow IS 14845/2000 certified Single ball type stop valve as per direction of Engineer Incharge including transportation.	NOS.	16.00	₹ 3,465.19	₹ 55,443.03
8.5	Installation of Airvalve with single ball type stop valve on a Pipeline including drilling , threading and all required fittings such as hamp rope, GI socket, Union, Distance plate etc.Also give leak proof test of joint as per direction of Engineer In-Charge.	NOS	16.00	₹ 170.85	₹ 2,733.63



SCH-G (BOQ)

SCHEDULE-G : External & Site development Works					
SR.NO.	ITEM DESCRIPTION	UNIT	Quantity	Rate	AMOUNT
8.6	Providing and constructing B.B. masonry valve chamber with 23cm thick in CM 1:6 AND 1:4:8 proportion PCC bedding excluding excavation, B.B masonry in CM 1:6 proportion 12mm thick cement plaster in CM 1:3 proportion smooth plaster on internal wall and rough plaster on external wall with providing and fixing C.I. manhole frame and cover in RCC 1:2:4 copping etc. complete as directed by Engineer-In-Charge. Note: wall thickness: 0.23m. 75 x 75 x 60cm internal size with 75 x 75 cm size CI manhole frame and cover of 50kg. (PMC W/S DSR 3-60) For Air Valves	NOS.	16.00	₹ 5,200.11	₹ 83,201.82
8.7	Providing, fixing, jointing and testing in HDPE PE-80 drip irrigation, and Antitermite treatment piping work including in exposed works and under ground complete with all plugs, clamps including transition fittings between HDPE to CPVC pipe including jointing the pipe and fittings Teflon tape on threaded ends including clamping as required by engineer in charge and manufactures specification for proper completion of work. (For IRRIGATION DRIP Piping Works) DUTRON/JAIN/KISSAN/PRINCE/ OR EQ. NSR ITEM				
	HDPE 25 mm. NSR ITEM	RMT	981.00	₹ 494.20	₹ 484,810.20
	Sub Total : S08-Irrigation System				₹ 1,005,877.95
S09	Miscellaneous				
9.1	Designing and casting M-20 cement concrete foundation suitable for 9 mtr high Octagonal pole including excavation , foundation . Nuts bolts etc PMC DSR 9-1-7-3 (10264) (For Street Light)	NOS.	120.00	₹ 6,212.80	₹ 745,536.00
9.2	Designing and casting M-20 cement concrete foundation suitable for 6 mtr high decorative pole as per PMC design including excavation , foundation . Nuts bolts etc PMC DSR 9-1-7-1 (10264) (For CCTV+Signal)	NOS	16.00	₹ 5,436.20	₹ 86,979.20
9.3	Supplying and laying (including excavation) 120 mm outside dia. Meter double wall corrugated pipes (DWC) of HDPE for enclosing cable below ground/road surface, to required depth complete.	RMT	2,008.00	₹ 441.96	₹ 887,447.65
9.4	Providing and constructing B.B. masonry pull pit with 23cm thick in CM 1:6 AND 1:4:8 proportion PCC bedding excluding excavation, B.B masonry in CM 1:6 proportion 12mm thick cement plaster in CM 1:3 proportion smooth plaster on internal wall and rough plaster on external wall with providing and fixing C.I. manhole frame and cover in RCC 1:2:4 copping etc. complete as directed by Engineer-In-Charge. Note: wall thickness: 0.23m. 75 x 75 x 60cm internal size with 75 x 75 cm size CI manhole frame and cover of 50kg. (PMC W/S DSR 3-60) at 30 m interval	NOS.	72.00	₹ 5,200.11	₹ 374,408.18



SCH-G (BOQ)

EXTERNAL SITE DEVELOPMENT WORK (NDSR SCHEDULE)

SCHEDULE-G : External & Site development Works					
SR.NO.	ITEM DESCRIPTION	UNIT	Quantity	Rate	AMOUNT
9.5	Repairing of potholes by using machanised Jetpatcher machine : Jet patcher for mobile road repair/patch repair along with accessories mounted on single mechanical driven vehicle with cost of opration cleaning and running & comprehensive maintenance inclusive labour material spares & consumeables of above machine (e.g. Aggregates emulsion) for Pot Hole repairing work	SQM	1,104.00	₹ 1,553.20	₹ 1,714,732.80
	Sub Total : S09-Miscellaneous				₹ 3,809,103.83



SCH-G (BOQ)

Schedule-H

SUMMARY SHEET FOR SCHEDULE-H : STATION SIGNAGES WORKS			
Name of work:- Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project			
Grand Summary of all Schedules			
Schedule	Particulars	Total Amount	Remark
Section- A	Suspended Signage	₹ 4,786,560.00	
Section- B	Face Mounted Signage	₹ 2,325,820.00	
Section- C	Post Mounted Signage	₹ 3,468,830.00	
Section- D	Floor Vinyl Signage	₹ 241,804.00	
Section- E	Street Signage	₹ 2,247,098.00	
	Total Amount of Signage Work	₹ 13,070,112.00	



SIGNAGE GRAPHIC SCHEDULE FOR CHINCHWAD METRO STATION

Name of Project :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No	All Sizes	Item Description	Unit	Quantity	Rate	Amount
1.000		Section- A - Suspended Signage				
1.1.1		Suspended sign, Illuminated, 2 sided				
	Drg.No.	1.1.1a,b,c,d,e				
		Providing and fixing illuminated signs including all operations from fabrication to installation all complete as per relevant drawings, technical specifications, signage schedule and to the satisfaction of the Engineer-in-Charge.>>				
		Sign Box				
		The sign box 70mm deep shall be fabricated out of 2 mm thick Aluminium extrusion channel of 25mm depth. The frame work is to be completed with internally blind revetting and brackets. Complete sign box is to be powder coated in RAL classic 7046.				
		Sign Panel-2 side illuminated face				
		Providing and fixing of Sign panel on both side of sign box with 5mm thick Opal white acrylic. On Front side plotter cut blackout self adhesive Vinyl as per specified Pantone Code should be applied over a translucent white Vinyl. The entire Sign Panel face is covered with a protective over-laminate to wrap around the edge of the acrylic to a distance of 25mm on the back side.				
		illumination				
		Providing and fixing the LED strips for proper illumination. Please see "Technical Specification" for LED				
		Above description generally holds good for the following signage unless otherwise specified except due modifications with special mention>>				
		Accessories: Providing and fixing all accessories such as nut-inserts, screws, rivets, bolts, washers, nuts, etc. complete as per drawing				
	Sizes					
1.1.1a	1200 x 300	Interior Direction Sign	Nos.	32.00	₹ 9,376.00	₹ 300,032.00
1.1.1b	1500 x 300	Interior Direction Sign	Nos.	100.00	₹ 11,480.00	₹ 1,148,000.00

SCH-H (BOQ)



SIGNAGE GRAPHIC SCHEDULE FOR CHINCHWAD METRO STATION

Name of Project :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No	All Sizes	Item Description	Unit	Quantity	Rate	Amount
1.1.1c	1800 x 300	Interior Direction Sign	Nos.	64.00	₹ 13,195.00	₹ 844,480.00
1.1.1d	600 x 300	Interior Direction Sign	Nos.	48.00	₹ 5,963.00	₹ 286,224.00
1.1.1e	1200 x 300	Interior Direction Sign	Nos.	8.00	₹ 9,376.00	₹ 75,008.00
1.1.1f	2100 x 300	Interior Direction Sign	Nos.	40.00	₹ 15,394.00	₹ 615,760.00
1.1.2		Suspended sign, Illuminated, 2 sided				
	Drg.No.	1.1.2 a,b				
		Providing and fixing illuminated signs including all operations from fabrication to installation all complete as per relevant drawings, technical specifications, signage schedule and to the satisfaction of the Engineer-in-Charge.>>				
		Sign Box				
		The sign box 70mm deep shall be fabricated out of 2 mm thick Aluminium extrusion channel of 25mm depth. The frame work is to be completed with internally blind revetting and brackets. Complete sign box is to be powder coated in RAL classic 7046.				
		Sign Panel-2 side Non- illuminated face				
		Providing and fixing of Sign panel on both side of sign box with 5mm thick Opal white acrylic. On Front side plotter cut blackout self adhesive Vinyl as per specified Pantone Code should be applied over a translucent white Vinyl. The entire Sign Panel face is covered with a protective over-laminate to wrap around the edge of the acrylic to a distance of 25mm on the back side.				
		Above description generally holds good for the following signage unless otherwise specified except due modifications with special mention>>				
		Accessories: Providing and fixing all accessories such as nut-inserts, screws, rivets, bolts, washers, nuts, etc. complete as per drawing				
	Sizes					
1.1.2a	1200x 300	Interior Identification sign - Women Only	Nos.	8.00	₹ 8,346.00	₹ 66,768.00

SCH-H (BOQ)



SIGNAGE GRAPHIC SCHEDULE FOR CHINCHWAD METRO STATION

Name of Project :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No	All Sizes	Item Description	Unit	Quantity	Rate	Amount
1.1.2b	450 x 450	Platform Number sign	Nos.	16.00	₹ 4,843.50	₹ 77,496.00
1.1.3		Suspended sign, Non-Illuminated, 1 sided				
	Drg.No.	1.1.3a				
		Providing and fixing illuminated signs including all operations from fabrication to installation all complete as per relevant drawings, technical specifications, signage schedule and to the satisfaction of the Engineer-in-Charge.>>				
		Sign Box				
		The sign box 70mm deep shall be fabricated out of 2 mm thick Aluminium extrusion channel of 25mm depth. The frame work is to be completed with internally blind revetting and brackets. Complete sign box is to be powder coated in RAL classic 7046.				
		Sign Panel-1 side Non- illuminated face				
		Providing and fixing of Sign panel on both side of sign box with 5mm thick Opal white acrylic. On Front side plotter cut blackout self adhesive Vinyl as per specified Pantone Code should be applied over a translucent white Vinyl. The entire Sign Panel face is covered with a protective over-laminate to wrap around the edge of the acrylic to a distance of 25mm on the back side. ACP to be used at the back as per description mentioned in technical specification.				
		Above description generally holds good for the following signage unless otherwise specified except due modifications with special mention>>				
		Accessories: Providing and fixing all accessories such as nut-inserts, screws, rivets, bolts, washers, nuts, etc. complete as per drawing				
	Sizes					
1.1.3a	450 x 700	TVM Sign	Nos.	8.00	₹ 5,442.50	₹ 43,540.00
1.1.3b	1800 x 300	Way Finding	Nos.	4.00	₹ 9,329.00	₹ 37,316.00
1.1.4		Suspended sign Fixing:				

SCH-H (BOQ)



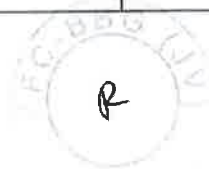
SIGNAGE GRAPHIC SCHEDULE FOR CHINCHWAD METRO STATION

Name of Project :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No	All Sizes	Item Description	Unit	Quantity	Rate	Amount
		1.1.4a				
		Suspender - Providing and fixing Suspended support for signs using 75mm dia NB 3mm thick MS hollow sections and 50mm dia NB 2.6mm thick MS hollow sections based on the sign length, as shown in the Structural Drawing, cut and finished to required length and welded to the bracket as per design. The entire assembly shall be finished in Powder Coat RAL CLASSIC 7046 color to match as per drawing and as approved by the Engineer in-charge. Including fixing at site after due site checking and making good all the surface finishes after the sign is installed perfectly aligned and levelled.				
		The rate mentioned here is for Suspender of one unit(2 pipes/per Signage)of Suspender for 2.0 meter length with pipe dia 50mm, including the top and bottom plates and bolts. When the suspender height required beyond 2 meter, for length after 1meter dia 75mm pipe to be used and cer meter of 75mmn dia pipe will be Rs. 1000/meter, The Calculation will be rounded of next or below meter. The final calculation will be based on the actual installation length, as per measured site condit on. For Suspenders with single pipe, the rate will calculated as half of INR 2500(i.e. 2500/2).				
	Sizes					
1.1.4a		Suspenders	Mtrs	1504.00	₹ 859.00	₹ 1,291,936.00
		Total Cost of Section- A - Suspended Signage				₹ 4,786,560.00
2.000		Section- B - Face Mounted Signage				
2.1.1		Face mounted sign, illuminated, 1 sided				
	Drg.No.	2.1.1 a,b,c				



SCH-H (BOQ)



SIGNAGE GRAPHIC SCHEDULE FOR CHINCHWAD METRO STATION

Name of Project :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No	All Sizes	Item Description	Unit	Quantity	Rate	Amount
		Providing and fixing illuminated signs including all operations from fabrication to installation all complete as per relevant drawings, technical specifications, signage schedule and to the satisfaction of the Engineer-in-Charge.>>				
		Sign Box				
		The sign box 70mm deep shall be fabricated out of 2 mm thick Aluminium extrusion channel of 25mm depth. The frame work is to be completed with internally blind revetting and brackets. Complete sign box is to be powder coated in RAL classic 7046.				
		Sign Panel-1 side illuminated face				
		Providing and fixing of Sign panel on both side of sign box with 5mm thick Opal white acrylic. On Front side plotter cut blackout self adhesive Vinyl as per specified Pantone Code should be applied over a translucent white Vinyl. The entire Sign Panel face is covered with a protective over-laminate to wrap around the edge of the acrylic to a distance of 25mm on the back side. ACP to be used at the back as per description mentioned in technical specification.				
		illumination				
		Providing and fixing the LED strips for proper illumination. Please see "Technical Specification" for LED Specification				
		Above description generally holds good for the following signage unless otherwise specified except due modifications with special mention>>				
		Accessories: Providing and fixing all accessories such as nut-inserts, screws, rivets, bolts, washers, nuts, etc. complete as per drawing>>				
	Sizes					
2.1.1a	1500 x 300	Interior identification sign-Ticket office	Nos.	8.00	₹ 9,429.50	₹ 75,436.00
2.1.1b	2100 x 300	Interior identification sign-Customer care	Nos.	8.00	₹ 14,405.00	₹ 115,240.00

SCH-H (BOQ)



SIGNAGE GRAPHIC SCHEDULE FOR CHINCHWAD METRO STATION

Name of Project :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No	All Sizes	Item Description	Unit	Quantity	Rate	Amount
2.1.1c	600 x 300	Way to emergency exit	Nos.	28.00	₹ 5,759.50	₹ 161,266.00
2.1.1d	2400 x 600	Face mounted sign, illuminated	Nos.	8.00	₹ 32,925.50	₹ 263,404.00
2.1.2		Face mounted sign, Non-illuminated, 1 sided				
	Drg.No.	2.1.2a,b				
		Providing and fixing illuminated signs including all operations from fabrication to installation all complete as per relevant drawings, technical specifications, signage schedule and to the satisfaction of the Engineer-in-				
		Sign Box				
		The sign box 70mm deep shall be fabricated out of 2 mm thick Aluminium extrusion channel of 25mm depth. The frame work is to be completed with internally blind revetting and brackets. Complete sign box is to be powder coated in RAL classic 7046.				
		Sign Panel-1 side illuminated face				
		Providing and fixing of Sign panel on both side of sign box with 5mm thick Opal white acrylic. On Front side plotter cut blackout self adhesive Vinyl as per specified Pantone Code should be applied over a translucent white Vinyl. The entire Sign Panel face is covered with a protective over-laminate to wrap around the edge of the acrylic to a distance of 25mm on the back side. ACP to be used at the back as per description mentioned in technical specification.				
		Above description generally holds good for the following signage unless otherwise specified except due modifications with special mention>>				
		Accessories: Providing and fixing all accessories such as nut-inserts, screws, rivets, bolts, washers, nuts, etc. complete as per drawing>>				
	Sizes					
2.1.2a	1500 x 300	lift to ground/concourse/platform sign	Nos.	36.00	₹ 6,996.00	₹ 251,856.00
2.1.2b	1189 x 841	Area map/system map/AFC/Prohibited Items/Penalties/Evacuation plan	Nos.	80.00	₹ 11,244.50	₹ 899,560.00

SCH-H (BOQ)



SIGNAGE GRAPHIC SCHEDULE FOR CHINCHWAD METRO STATION

Name of Project :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No	All Sizes	Item Description	Unit	Quantity	Rate	Amount
2.1.3		Face mounted plate sign, Non-illuminated, 1 sided				
	Drg.No.	2.1.3a,b,c				
		Providing and fixing illuminated signs including all operations from fabrication to installation all complete as per relevant drawings, technical specifications, signage schedule and to the satisfaction of the Engineer-in-Charge.>>				
		Providing and fixing plate signs made in 2mm Aluminium brush finish sheet neaty trim med and corners rounded and dressed with hoies punced/dried as per size given in drawing. Graphics to be plotter cut over self adhesive vinyl as per artwork and coplete plate covered with an protective overlamine as specified and duly approved by Engneer-in-charge. Cost to include fixing of sign at location on to door/ plastered surface/concrete/granite cladding/toughened glass etc., including all marking, alignment, drilling, plugs, Philips hexagonal head stainless steel screws and 3mm trick EPDM Rubber spacers etc complete as specified in drawings and at locations approved by the Engineer-in charge>>				
		Above description generally holds good for the following signage unless otherwise specified except due modifications with special mention>>				
		Accessories: Providing and fixing all accessories such as nut-inserts, screws, rivets, bolts, washers, nuts, etc. complete as per drawing>>				
	Sizes					
2.1.3a	297 x 210	Door names	Nos.	224.00	₹ 774.00	₹ 173,376.00
2.1.3b	210 x 300	Danger/Emergency sign/Fire Hose	Nos.	44.00	₹ 782.50	₹ 34,430.00
2.1.3c	450 x 300	Restricted Entry	Nos.	16.00	₹ 1,676.00	₹ 26,816.00



SCH-H (BOQ)



SIGNAGE GRAPHIC SCHEDULE FOR CHINCHWAD METRO STATION

Name of Project :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No	All Sizes	Item Description	Unit	Quantity	Rate	Amount
2.1.4		Face mounted opaque vinyl sticker, Non-illuminated, 1-sided				
	Drg.No.	2.1.4a,b,c				
		Providing and fixing illuminated signs including all operations from fabrication to installation all complete as per relevant drawings, technical specifications, signage schedule and to the satisfaction of the Engineer-in-Charge.>>				
		Sign Vinyl				
		Providing and fixing graphics printed on opaque vinyl directly pasted on the glass surfaces. Printed over opaque self adhesive vinyl as per artwork and completed and laminated with protective overlamine as specified and duly approved by Engineer-in-charge. Cost to include fixing of sign at location on to glass surface including its cleaning. marking. alignment; complete as specified in drawings and at locations approved by the Engineer-in-charge				
		Above description generally holds good for the following signage unless otherwise specified except due modifications with special mention>>				
		Accessories: Providing and fixing all accessories such as nut-inserts, screws, rivets, bolts, washers, nuts, etc. complete as per drawing>>				
	Sizes					
2.1.4a	150 x 225	Lift statutory	Nos.	64.00	₹ 109.50	₹ 7,008.00
2.1.4b	297 x 210	Danger/fire house	Nos.	24.00	₹ 375.00	₹ 9,000.00
2.1.4c	450 x 300	Danger/Restricted area	Nos.	8.00	₹ 437.50	₹ 3,500.00
2.1.5		Face mounted Vinyl sign, Non-illuminated, 1 sided				
	Drg.No.	2.1.5a,b,c				



SCH-H (BOQ)



SIGNAGE GRAPHIC SCHEDULE FOR CHINCHWAD METRO STATION

Name of Project :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No	All Sizes	Item Description	Unit	Quantity	Rate	Amount
		Providing and fixing illuminated signs including all operations from fabrication to installation all complete as per relevant drawings, technical specifications, signage schedule and to the satisfaction of the Engineer-in-Charge.>>				
		Sign Plate				
		Providing and fixing frame signs made in 4mm thick ACP sheet, fabricate as tray with a 29mm return with corners joined on inside with silicon sealant and neatly finished on outside and mounted on a frame made out of 3mm thick MS fabricated equal angles 25x25 powder coated to match colour Grey. Printed graphics over self adhesive vinyl as per artwork to be pasted on the sign face wrapped on the sides and complete plate covered with an protective Overlamine as specified and duly approved by Engineer-in-charge. Cost to include fixing of sign at location on to plastered surface/concrete/Granite cladding/column etc.,				
		Above description generally holds good for the following signage unless otherwise specified except due modifications with special mention>>				
		Accessories: Providing and fixing all accessories such as nut-inserts, screws, rivets, bolts, washers, nuts, etc. complete as per drawing>>				
	Sizes					
2.1.5a	300 x 475	Safety Messages-ESP/Emergency Help Point	Nos.	16.00	₹ 1,091.50	₹ 17,464.00
2.1.5b	450 x 700	Safety Messages-Surveillance	Nos.	12.00	₹ 1,783.00	₹ 21,396.00
2.1.6		Face mounted transparent vinyl sticker, Non-illuminated, 1 sided				
	Drg.No.	2.1.6a				

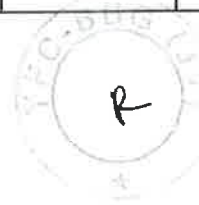
SCH-H (BOQ)



SIGNAGE GRAPHIC SCHEDULE FOR CHINCHWAD METRO STATION

Name of Project :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No	All Sizes	Item Description	Unit	Quantity	Rate	Amount
		Providing and fixing illuminated signs including all operations from fabrication to installation all complete as per relevant drawings, technical specifications, signage schedule and to the satisfaction of the Engineer-in-Charge.>>				
		Sign Face				
		Providing and pasting digitally printed signs on transparent self adhesive vinyl directly pasted on the backside of glass surfaces(contents seen from customer end), and applying frosted film on top of that, duly approved by Engineer-in-charge. Cost to include fixing of sign at location on to back surface of glass including its cleaning, marking, alignment; complete as specified in artwork drawings and at locations approved by the Engineer-in-charge				
		Above description generally holds good for the following signage unless otherwise specified except due modifications with special mention>>				
	Sizes					
2.1.6a	3000 x 800	TOM/EFO Counter	Nos	44.00	₹ 6,047.00	₹ 266,068.00
		Total Cost of Section- B - Face Mounted Signage				₹ 2,325,820.00
3.000		Section- C - Post Mounted Signage				
3.1.1		Post mounted sign, Non-illuminated, 1 sided				
	Drg.No.	3.1.1a,b,c				
		Providing and fixing illuminated signs including all operations from fabrication to installation all complete as per relevant drawings, technical specifications, signage schedule and to the satisfaction of the Engineer-in-Charge.>>				
		Sign Box				



SCH-H (BOQ)

SIGNAGE GRAPHIC SCHEDULE FOR CHINCHWAD METRO STATION

Name of Project :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No	All Sizes	Item Description	Unit	Quantity	Rate	Amount
		The sign box 70mm wide shall be fabricated out of 2 mm thick Aluminium extrusion channel of 25mm depth. The frame work is to be completed with internally blind revetting and brackets. Complete sign box is to be powder coated in RAL classic 7046.				
		Sign panel-1 side Non-illuminated face				
		Providing and fixing of Sign panel on both side of sign box with 5mm thick Opal white acrylic. On Front side plotter cut blackout self adhesive Vinyl as per specified Pantone Code should be applied over a translucent white Vinyl. The entire Sign Panel face is covered with a protective over-laminate to wrap around the edge of the acrylic to a distance of 25mm on the back side. ACP to be used at the back as per description mentioned in technical specification.				
		Post				
		Providing a Sign post of 60mm dia NB 2 mm thick SS 316 Grade hollow sections including welded Base plate in 8mm thick SS Plate and as per drawing with concrete footing. The post shall closed with a 300 mm Dia and 150 mm thick approved stone or concrete as per the drawing to ensure a rigid connection at site. The post shall be always be a single continuous element without any joints. Cost to include all activities and temporary props used for a perfect vertical in plumb installation, shim Plates for adjustment of levels and filling the gap with concrete slurry etc required for fixing the sign in an external location.				
		Above description generally holds good for the following signage unless otherwise specified except due modifications with special mention>>				
		Accessories: Providing and fixing all accessories such as nut-inserts, screws, rivets, bolts, washers, nuts, etc. complete as per drawing>>				
	Sizes					

SCH-H (BOQ)



SIGNAGE GRAPHIC SCHEDULE FOR CHINCHWAD METRO STATION

Name of Project :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No	All Sizes	Item Description	Unit	Quantity	Rate	Amount
3.1.1a	1189 x 841	Area Map/ system Map/AFC/Prohibited Items/Penalties/Evacuation Plan(on Double Post)	Nos.	80.00	₹ 11,794.00	₹ 943,520.00
3.1.1b	600 x 1800	Single Line Map (on Single Post)	Nos.	56.00	₹ 10,547.50	₹ 590,660.00
3.1.1c	450 x 800	Safety Measures (on single Post)	Nos.	16.00	₹ 6,078.00	₹ 97,248.00
3.1.1d	1800 x 600	Satation name on platform sign (on Double Post)	Nos.	16.00	₹ 12,733.50	₹ 203,736.00
3.1.1e		Single Post	Nos.	72.00	₹ 4,140.00	₹ 298,080.00
3.1.1e A		Single Post	Nos.	-	₹ 3,920.00	-
3.1.1f		Double Post	Nos.	96.00	₹ 10,279.50	₹ 986,832.00
3.1.1f A		Double Post	Nos.	-	₹ 7,840.00	-
3.2.1		Providing & Fixing of Illuminated Name Board Signage of Various Pune Metro Stations all complete from fabrication, scaffolding, transportation and installation as per drawings, technical specifications and the satisfaction of the Engineer-In-Charge, All exterior signs shall be manufactured considering harsh outdoor conditions, weatherproofing techniques.				
		Signage Depth /Thickness - 3 inches				
		Fabricated Frame of MS Angle of 16 gauge thickness of size 2" x 1" and Aluminium pipe of 18 gauge for supporting top and bottom part Channel Letters & Metro logo : Back and side channel : made of German Aluminium profile of locked-in Trim cap of 25 mm thickness with collar and bottom part made of German Aluminium Profile of 75 mm thickness in which top part is mounted with letter front face made of laser cut 040 grade Imported Virgin Acrylic, Base of Letters made with ACP Routed Tray				

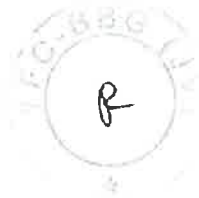


SCH-H (BOQ)

SIGNAGE GRAPHIC SCHEDULE FOR CHINCHWAD METRO STATION

Name of Project : Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No	All Sizes	Item Description	Unit	Quantity	Rate	Amount
		Letter Face: Plotter cut 3M 3530 Series Translucent Vinyl of approved shade pasted on 040 grade imported virgin acrylic. Logo of Pune Metro to be printed using 3M UV Super flex Inks on 3M clear vinyl				
		Internal lighting of channel letters & Pune Metro Logo with Branded 1-.5W Bright White LED modules of IP 68 grade with sufficient Electronic waterproof power supply and ISI Mark wiring with 3 years warranty				
		Backside lighting of channel letters & Pune Metro Logo with Branded 1.5W Warm White LED modules of IP 68 grade with sufficient Electronic waterproof power supply and ISI Mark wiring with 3 years warranty				
		Cladding of Signage: White Colour Matt Finish branded Aluminium Composite Panelling of 4.5 mm thickness on front side & 3mm thickness Aluminium Composite Panelling on backside.				
		Signage Warranty of 3 years from the date of Installation	Sqm	25.92	₹ 13,455.00	₹ 348,754.00
		Total Cost of Section- C - Post Mounted Signage				₹ 3,468,830.00
4.000		Section- D - Floor Vinyl Signage				
4.1.1		Print on self Adhesive Flooring Film				
	Drg.No.	4.1.1a,b,c,d,e,f				
		Providing and fixing illuminated signs including all operations from fabrication to installation all complete as per relevant drawings, technical specifications, signage schedule and to the satisfaction of the Engineer-in-Charge.>>				
		Sign Face				



SCH-H (BOQ)

SIGNAGE GRAPHIC SCHEDULE FOR CHINCHWAD METRO STATION

Name of Project :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No	All Sizes	Item Description	Unit	Quantity	Rate	Amount
		Providing and fixing graphics Printed on 3M self Adhesive Floor Vinyl as per artwork with Matt laminate, directly pasted on the floor surfaces. Completed as specified and duly approved by Engineer-in charge. Cost to include fixing of sign at location on to floor surface including its cleaning, marking, alignment, complete as specified in drawings and at locations approved by the Engineer in charge				
		Above description generally holds good for the following signage unless otherwise specified except due modifications with special mention>>				
	Sizes					
4.1.1a	300 x 300	PwD Floor Vinyl	Nos.	8.00	₹ 202.50	₹ 1,620.00
4.1.1a	300 x 300	PwD Floor Vinyl	Nos.		₹ 343.00	₹ 0.00
4.1.1b	140200 x 100	Warning Strip Floor Vinyl	Nos.	8.00	₹ 23,162.50	₹ 185,300.00
4.1.1c	1224 x 370	Women Only Floor Vinyl	Nos.	32.00	₹ 1,018.50	₹ 32,592.00
4.1.1d	516 x 240	Women Zone Floor Vinyl	Nos.	8.00	₹ 278.50	₹ 2,228.00
4.1.1e	2953 x 1100	Coach Door Marking Floor Vinyl	Nos.	96.00	₹ 209.00	₹ 20,064.00
		Total Cost of Section- D - Floor Vinyl Signage				₹ 241,804.00
5.000		Section- E - Street Signage				
5.1.1		Post mounted sign, Non-illuminated, 2 sided				
	Drg.No.	5.1.1a,b,c				
		Traffic Sign				
		Providing and fixing Non-illuminated signs including all operations from fabrication to installation all complete as per drawings, signage schedule and to the satisfaction of the Engineer-in- Charge. All exterior signs should be manufactured considering harsh outdoor conditions, weatherproofing techniques and materials shall be used.>>				
		Sign Face				



SCH-H (BOQ)

R

SIGNAGE GRAPHIC SCHEDULE FOR CHINCHWAD METRO STATION

Name of Project :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No	All Sizes	Item Description	Unit	Quantity	Rate	Amount
		Providing and fixing sign face panels 2 mm thick Aluminium sheet fabrication, Aluminium sheet fixed to sign structure. White retro reflective vinyl pasted over edge to edge aluminium sheet. Graphics to be printed over white retro-reflective vinyl.				
		Sign Structure				
		The sign plate to be fixed on MS Square section and provided with same material ties at centre of length welded to top and bottom member, provided with holes for fixing to the back surface. All fabrication shall be done using CNC machines. Complete mounting frame to be powder coated with RAL code duly approved by Engineer in-Charge. .>> The actual structural design of the sign for its stability shall be responsibility of the contractor including all civil work like foundation, etc as per the satisfaction of Engineer in Charge				
		Above description generally holds good for the following signage unless otherwise specified except due modifications with special mention>>				
		Accessories: Providing and fixing all accessories such as nut-inserts, screws, rivets, bolts, washers, nuts, etc. complete as per drawing>>				
	Sizes					
5.1.1a	600 x 600	International symbol of Accessibility, Parking (Square)	Nos.	16.00	₹ 9,690.50	₹ 155,048.00
5.1.1b	800 x 800	Parking for Specially abled	Nos.	8.00	₹ 16,301.50	₹ 130,412.00
5.1.1c	600 x 600	Footpath, cycle track, Shared cycle track (round)	Nos.	48.00	₹ 9,690.50	₹ 465,144.00
5.1.1d	1500 x 700	Parking (autoRickshaw, cycle, scooter, Taxi)	Nos.	12.00	₹ 2,796.00	₹ 33,552.00
5.1.1e	600 x 600 600 x 200	No Parking (picto, text)	Nos.	8.00	₹ 9,690.50	₹ 77,524.00
5.1.1f	600 x 600 600 x 450	Drop off Bay-specially abled, No parking (picto, text)	Nos.	12.00	₹ 9,690.50	₹ 116,286.00
5.1.1g	600 x 600 600 x 200 600 x 900	Drop off lane (Bus), No parking (picto, text)	Nos.	8.00	₹ 17,427.50	₹ 139,420.00



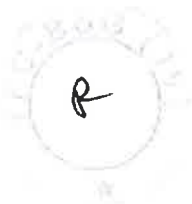
SCH-H (BOQ)



SIGNAGE GRAPHIC SCHEDULE FOR CHINCHWAD METRO STATION

Name of Project :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No	All Sizes	Item Description	Unit	Quantity	Rate	Amount
5.1.1h	600 x 600 600 x 200 600 x 450	Drop off lane (car, taxi, auto-rickshaw), No parking (picto, text)	Nos.	24.00	₹ 12,952.00	₹ 310,848.00
5.1.1i	450 x 600	Service Lane FOB	Nos.	8.00	₹ 4,719.00	₹ 37,752.00
5.1.1j	450 x 600	Subway	Nos.	8.00	₹ 4,719.00	₹ 37,752.00
5.1.2		Post mounted sign, illuminated, 2 sided				
	Drg.No.	5.1.2a				
		Providing and fixing illuminated and 2 sided totem in exterior areas of stations with NMRL Symbol close to the entrance visible approach road including all operations from fabrication to installation all complete as per relevant drawings, technical specifications, signage schedule and to the satisfaction of the Engineer-in charge.				
		Sign Structure				
		The sign box 300mm deep shall be fabricated out of 6 mm thick MS sheet. The frame work is to be completed with internally blind revetting and brackets. Complete sign box is to be powder coated in RAL Classic 7046.				
		Sign Panel :8mm thick 040 Acrylic fixed to the MS frame router cut and 15mm thick 040 Acrylic router cut according to logo profile.				
		Illumination				
		Providing and fixing the LED strips for proper illumination. Please see "Technical Specification" for LED Specification.				
		Post				



SCH-H (BOQ)

SIGNAGE GRAPHIC SCHEDULE FOR CHINCHWAD METRO STATION

Name of Project :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No	All Sizes	Item Description	Unit	Quantity	Rate	Amount
		Providinga Sign post of 150mm dia NB 3 mm thick SS 316 Grade hollow sections including welded Base plate in 8mm thick SS Plate and as per drawing with Concrete footing. The post shall closed with a 300 mm Dia and 150 mm thick Sadarahalli Stone OR Concrete as per the drawing to ensure a rigid connection at site. Providing a 6A SPN MCB electrical junction box waided to the post as specified location and making holes in the post for passing the electrical cable. The Post shall be always be a single continuous element without any joints. Cost to include all activities and temporary props used for a perfect vertical in plumb installation, shim Plates for adjustment of levels and filling the gap with Concrete slurry etc required for fixing the sign in an external location.				
		Foundation and Pedestal				
		Providing and laying foundation for the Totem sign in PCC (concrete M20) induding its compaction and all activities like Excavation, PCC base layer, Casting of hoiding down HTS anchor J bolts of 16mm dia using a sized template in MS 8mm thick for locating and accurate spacing of bolts as per drawing. Providing and fixing in position Sadarhall stone of Dia. 300 x 1200mm pedestal in hand dressed rough finish surface in required size and shape as per drawing in 2 parts.				

R



SCH-H (BOQ)

SIGNAGE GRAPHIC SCHEDULE FOR CHINCHWAD METRO STATION

Name of Project :Construction of four (04) nos Elevated Metro Stations excluding viaduct, pier arms, girder erection & deck slab at concourse and platform level viz. Chinchwad, Akurdi, Nigdi & Bhakti Shakti on Reach-1 Extension of Pune Metro Rail Project

S.No	All Sizes	Item Description	Unit	Quantity	Rate	Amount
		Making cavity in stone for accommodating electrical box instaling the two halves joined together by filling Plain cement concrete (M25) keeping a clear groove of 25mm wide recessed and finished as per drawing. 2mm thk SS clamps boited and set into 3mm thk groove made 150mm from top and 200mm from bottom of the pedestal to keep it intact and flushed to face. The item cost incldues cutting and opening the floor finish at location, and naaking good the iocation to the match the original finish after fixing and installation of sign >>				
		Above description generally holds good for the following signage unless otherwise specified except due modifications with special mention>>				
		Accessories: Providing and fixing all accessories such as nut-inserts, sCrews, rivets, bolts, washers, nuts, etc. complete as per drawing.>				
	Sizes					
5.1.2a	1100 x 4200	Totem	Nos.	8.00	₹ 92,920.00	₹ 743,360.00
		Total Cost of Section- E - Street Signage				₹ 2,247,098.00



SCH-H (BOQ)