



AmulFed Dairy

A UNIT OF GUJARAT CO-OPERATIVE MILK MARKETING FEDERATION LIMITED

(PREVIOUSLY KNOWN AS MOTHER DAIRY, GANDHINAGAR)

AFD: CIVIL: INQ: 20241201

December 12, 2024

To,

Sub: - Inquiry for Civil work for Expansion & addi. alt. of Prop. 10 LPH UHT Trial Laboratory above ghee plant at AmulFed Dairy Gandhinagar.

We invite your most competitive offer, quoting your lowest rate and shortest execution period for item mentioned as under. Your offer must be sent in sealed reply envelope attached herewith by registered post/courier or by person. Mention, "Civil work for Expansion & addi. alt. of Prop. 10 LPH UHT Trial Laboratory above ghee plant at AmulFed Dairy Gandhinagar." on top of the offer reply envelope.

Detailed Technical Specification & Schedule of Quantities as per Enclosed Annexure: - I

Last date of receipt of Quotation: 23rd December 2024.

TERMS & CONDITIONS:-

1. Your rates should be including of all material cost, labour cost, octroi, loading, unloading at AFD site.
2. Specify Tax Condition. GST will be applicable or not. If tax condition is not specified your rates shall be considered as inclusive of all taxes.
3. **It is advisable to visit the site before quoting your rates.**
4. If work is to be carried out in emergency basis or during Shutdown period, contractor is bide to carry out work on emergency basis, night work, as per production schedule.
5. Payment terms: Within 30 days after submission of bill.
6. Quantity indicated here is estimated; it may vary on either side up to any extent however payment shall be made as per the actual work executed at site.
7. If any extra item is to be executed as per site condition, this will be paid as per actual rate analysis Plus 15 % profits and overheads to contractor.
8. All the legal/administrative records like muster roll, salary register, labour license, PF, ESI etc. to be maintain & submitted as and when required and contractor is the responsible for labour laws and rules/regulations etc.
9. Cleaning of site must be required after day-to-day work.
10. Your workmen should compulsory wear the identity card and uniform of the company while executing jobs in AmulFed Dairy if not follow then penalty would be Rs. 1000/-.

M. C. S. Mehta
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11. In case, any of your workmen get injured due to Accident, while working within premises of AFD, or any damage to our equipment or property has taken place due to your workmen, you will repay the damages/losses.
12. We are ISO 22000 and 14000 certified unit. We expect you to follow eco-friendly process in your Company such as waste minimization, reduction in air pollution, waster pollution and soil Contamination etc.
13. Chewing pan masala, tobacco & smoking is strictly prohibited in AFD premises and if any person is catch then penalty would be Rs. 5000/- each.
14. You shall be working in running factory and ensure that the day to day operations of the factory are not hampered in any way due to your activities. Any damages occurred by you shall be recovered.
15. Water and Electricity will be provided by AFD at one point and it will be chargeable basis 0.5% for electricity and 0.5% for Water will be recovered from your bills.
16. During the work contractor must depute /appoint at least one year experienced one Diploma Civil Engineer as site engineer and shall remain responsible for the quality workmanship, timey execution the job as per the drawings and instructions of our engineers and liasioning with our engineers for satisfactory execution of the jobs in time and desired quality.
17. Follow the Safety rules and regulations including the personal protective equipments like Helmet, safety belt and other accessories if require, if any person not following the safety rules and regulations penalty would be Rs. 1000/- from the Bill.
18. Cement supply is in your scope and shall be OPC 53 Grade, Make: - Ultratech, JK Laxmi, Binani.
19. Reinforcement Steel FE 500 TMT Bar and structural steel supply is in your scope and Make: - TATA, Vaizag, SAIL/ reputed ISI mark makes pre-approved by AFDG.
20. No price variation or price adjustment will be applicable for supply of cement and steel
21. All jobs executed must remain under **one year defect liability period pertaining to defects due to bad workmanship, use of sub-standard materials, improper methods of application etc.** and must be attended free of charge during this period.
22. **Security deposit 5% of the total cost of the project**, which will be submitting in the form of bank guarantee at time of acceptance of order and will be released after 12 months from completion date.
23. Completion of the said work in 90 Days from Site Handover.

AmulFed Dairy shall not accept the offer, received later than the date mentioned above.

"Thanking you"

Yours faithfully,

M.C. Mehta

For AmulFed Dairy, Gandhinagar.

| SUMMARY | | | |
|---|--------------------------------------|------------|--------|
| Civil work for Expansion & addi. alt. of Prop. 10 LPH UHT Trial Laboratory above ghee plant at AmulFed Dairy Gandhinagar. | | | |
| S.NO. | DESCRIPTION | | Amount |
| 1 | EARTHWORK. | | --- |
| 2 | PLAIN AND REINFORCED CEMENT CONCRETE | | |
| 3 | MASONRY WORK | | |
| 4 | WOOD WORK, DOORS, WINDOWS | | --- |
| 5 | ALUMINIUM WORKS | | |
| 6 | WALL FINISHES, FALSE CEILING | | |
| 7 | WATER-PROOFING | | |
| 8 | PAVING AND FLOOR FINISHING | | |
| 9 | IRON AND STEEL WORKS | | |
| 10 | ROOFING WORKS | | |
| 11 | MISCELLANEOUS WORKS | | |
| PLUMBING WORKS | | | |
| 1 | SANITATION & FAUCET | | --- |
| 2 | SOIL & WASTE | | |
| 3 | WATER SUPPLY SYSTEM | | |
| 4 | SEWERAGE AND DRAINAGE SYSTEM | | |
| Total Amount | | Rs. | |
| Rebate if any | | Rs. | |
| Total Amount After Rebate | | Rs. | |
| Add @ 18% GST | | Rs. | |
| Total Amount with GST | | Rs. | |

M. C. Mehta

Annexure : I

Technical Specification and Scope of work for Civil work for Expansion addi. alt. of Prop. 10 LPH UHT Trial Laboratory above ghee plant at AFDG.

| Civil work for Expansion & addi. alt. of Prop. 10 LPH UHT Trial Laboratory above ghee plant at AmulFed Dairy Gandhinagar. | | | | | |
|---|--|------------------|------|--------|--------|
| Item No. | Item Description | Unit | Rate | Qty | Amount |
| SECTION -2.00 | | | | | |
| PLAIN AND REINFORCED CEMENT CONCRETE | | | | | |
| | General Note : All Concrete shall be machine batched, machine mixed and machine vibrated design mix fair finish / smooth finish reinforced cement concrete design for severe condition with minimum cement content as per grade (without fly ash, content) and as per latest IS 456 for all PCC & RCC elements of all shape, all size, at all places and heights/ depths including transporting, laying of concrete to site by any means like pumping or tower crane etc., finishing and curing etc. and including Admixtures in recommended proportions as per IS 9103 to accelerate, retard setting of concrete as per direction of Engineer-in-charge. Rate shall be inclusive of providing grooves, drip moulds, ghis, pockets, cutouts etc. and labour for insert sleeves if any wherever required while casting. Rate also to include lift charges and scaffolding for all heights / depths from FFL / GL. (unless otherwise specified) | | | | |
| 2.6 | Extra for providing and mixing water proofing material in cement concrete work @ 1 kg per 50 kg of cement approved make and quality as per requirement and manufacturer's specification. | per 50 kg cement | | 83.00 | |
| 2.8 | Providing and erecting in position formwork shuttering and boxing including strutting, propping using steel/ plywood shuttering materials of approved quality for concrete elements vertical, horizontal or inclined in all shapes as per drawing at any level upto plinth including necessary scaffolding, bolts fastener nails, wires keeping in position till concrete is laid and members have acquired required strength, removal of formwork thereafter, applying shuttering oil etc. complete as directed by Engineer.(Nothing extra shall be paid for erection of false staging, if any) | | | | |
| 2.8.2 | (-do-) as item No. 2.8 but in superstructure upto floor V level for columns, walls, beams, lintels, bond beams, suspended slabs, landing, shelves, folded plates, staircase including steps and waistslab, hangers, mullions, facias, parapets, pergola beams, trellis etc. for form work height 5.2 M. | sqm | | 345.00 | |
| 2.11 | 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.. The conversion of weigh batched proposition to the volumetric one if desired by the contractor should be got approved from engineer before execution. | | | | |
| | 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 1.1 times of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement. | | | | |
| 2.11.2 | All works above plinth level upto floor V level | | | | |
| 2.11.2.1 | Concrete of M25 grade with minimum cement content of 330 kg /cum | Cum | | 39.00 | |

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Annexure : I

Technical Specification and Scope of work for Civil work for Expansion addi. alt. of Prop. 10 LPH UHT Trial Laboratory above ghee plant at AFDG.

| Item No. | Item Description | Unit | Rate | Qty | Amount |
|----------|--|------|------|---------|--------|
| 2.14 | Providing, fabricating and fixing in position steel reinforcement for RCC structures as per design including unloading and incidental charges for handling cutting, bending, and binding with 16 gauge GI wires (to be supplied by the contractor at his own cost). Welding if necessary etc. complete as directed for all the heights. Payment will be made on the length basis and converted into weight by using standard IS co-efficient. All work upto All level. | | | | |
| 2.14.1 | Thermo-Mechanically Treated bars of grade Fe-500D or more. | kg | | 4396.00 | |
| 2.16 | Grouting the pockets, foundation bolts, base plates etc. with ACC shrinkkomp ready mixed concrete including shrinkkomp grade 2/GP2 of FOSROC or FLOWGROUT – 60 of FAIRMATE ready mixed, non shrink, free flow, self leveling, cementitious grout including making holes if necessary in concrete, curing etc complete as per the manufacturer specifications. The work shall be measured based on the size of pockets actually grouted or size of pockets shown in the approved drawing, whichever is less. Similarly, in case of grouting below the base plate of machine/equipment, measurement shall be based on the area of grout and the thickness as per the drawing or as per actual whichever is less. | Cum | | 0.05 | |
| 2.17 | Providing & Fixing DURA FILL Expansion joint filler Board (Formerly known as SIL FIL) of Dawn Color, manufactured by The Supreme Industries Limited or approved equivalent make, thickness built up using minimum 10 MM specifically extruded high performance sheet, minimum density 28 kg / Cu. Mt & compression strength of 0.21 Kg / Sq.mtr, when tested as per ASTM D-3575, including using adhesive or double sided adhesive SIL SEAM tape to the casted surface to form the expansion joint of required width. SIL FIL will become one side of the shuttering while the expansion joint is being created. This item shall include preparation of surfaces by cleaning of dust, oil, loose aggregate etc., also include the cost and transportation of all material, labour charges, taxes etc. complete at all heights & all levels as per drawing and as directed by Engineer-in-charge. | | | | |
| 2.17.1 | Expansion joint 100 mm Thick. | sqm | | 10.00 | |
| 2.24.1 | Providing and Fixing of reinforcement steel dowel bar in the existing RCC elements by re-bar method including machine drilling (minimum drilling hole dia. shall be 1.5 times of the dia. of dowel bar to be inserted and up to suitable inset depth as directed), supply of necessary anchoring chemicals such as epoxy based resin and hardener of approved make like HILTI India or equivalent approved and work to be carried through the competent agency including all materials, labours, tools, etc complete as directed for 8 mm dia bars. (Reinforcement shall be paid under relevant item of this tender), complete as directed. | No. | | 15.00 | |
| 2.24.2 | Providing and Fixing of reinforcement steel dowel bar in the existing RCC elements by re-bar method including machine drilling (minimum drilling hole dia. shall be 1.5 times of the dia. of dowel bar to be inserted and up to suitable inset depth as directed), supply of necessary anchoring chemicals such as epoxy based resin and hardener of approved make like HILTI India or equivalent approved and work to be carried through the competent agency including all materials, labours, tools, etc complete as directed for 10 mm dia bars. (Reinforcement shall be paid under relevant item of this tender), complete as directed. | No. | | 15.00 | |
| 2.24.3 | Providing and Fixing of reinforcement steel dowel bar in the existing RCC elements by re-bar method including machine drilling (minimum drilling hole dia. shall be 1.5 times of the dia. of dowel bar to be inserted and up to suitable inset depth as directed), supply of necessary anchoring chemicals such as epoxy based resin and hardener of approved make like HILTI India or equivalent approved and work to be carried through the competent agency including all materials, labours, tools, etc complete as directed for 12 mm dia bars. (Reinforcement shall be paid under relevant item of this tender), complete as directed. | No. | | 15.00 | |

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Annexure : I

Technical Specification and Scope of work for Civil work for Expansion addi. alt. of Prop. 10 LPH UHT Trial Laboratory above ghee plant at AFDG.

| Item No. | Item Description | Unit | Rate | Qty | Amount |
|---|--|-------|------|-------|--------|
| 2.24.4 | Providing and Fixing of reinforcement steel dowel bar in the existing RCC elements by re-bar method including machine drilling (minimum drilling hole dia. shall be 1.5 times of the dia. of dowel bar to be inserted and up to suitable inset depth as directed), supply of necessary anchoring chemicals such as epoxy based resin and hardener of approved make like HILTI India or equivalent approved and work to be carried through the competent agency including all materials, labours, tools, etc complete as directed for 16 mm dia bars . (Reinforcement shall be paid under relevant item of this tender), complete as directed. | No. | | 10.00 | |
| 2.24.5 | Providing and Fixing of reinforcement steel dowel bar in the existing RCC elements by re-bar method including machine drilling (minimum drilling hole dia. shall be 1.5 times of the dia. of dowel bar to be inserted and up to suitable inset depth as directed), supply of necessary anchoring chemicals such as epoxy based resin and hardener of approved make like HILTI India or equivalent approved and work to be carried through the competent agency including all materials, labours, tools, etc complete as directed for 20 mm dia bars . (Reinforcement shall be paid under relevant item of this tender), complete as directed. | No. | | 10.00 | |
| SUM CARRIED OVER TO SUMMARY PAGE | | | | | |
| SECTION - 3.00 | | | | | |
| MASONRY WORK | | | | | |
| 3.1 | Providing and constructing brick masonry with common burnt clay F.P.S. bricks of class designation 75 of best approved quality, well set and shaped bricks having minimum crushing strength 75 Kg/cm ² in wall foundation, trenches and plinth including cost of necessary scaffolding, filling & racking out of joints up to 15 mm deep rubbing and cleaning the surface, curing etc complete as directed. | | | | |
| 3.1.1 | With cement mortar 1:6 (1 cement : 6 coarse sand). | cum | | 5.00 | |
| 3.8 | Providing and fixing in position 28 SWG Aluminium sheet profiled to the required shape in cavity walls as indicated on drawing as per the directions of the Architect with 75mm laps at the joints in the sheet. The rate shall include providing and laying cement concrete fillet in mix 1:3:6 (1 cement : 3 coarse sand : 6 coarse aggregate 12.5 mm nominal size) at the bottom of cavity etc complete as directed. The net area of the aluminum sheet shall be considered for payment. (lapse and wastage shall not be paid.) | sqm | | 5.00 | |
| 3.9 | Providing and fixing in 19 mm dia (OD), 150mm long, 2 mm wall thickness PVC conduit pipes of approved make in cavity walls with galvanized mosquito netting over mouth of pipe, pipes placed at the required spacing and aligning the same vertically and horizontally etc. complete as directed. The net length of PVC conduit pipes shall be considered for payment. | metre | | 10.00 | |
| 3.10 | Providing and fixing 50 mm thick extruded polystyrene rigid insulation board of required size between cavity wall, complying with ISO 4898:2008 & ASTM C 578-08b - type VI, having thermal conductivity of 0.0289 W/m K as per ASTM C 578 (measured as per IS 3346), compressive strength of > 350 kPa listed as per ASTM D 1621, density of 34-36 kg/cum as per ASTM D 1622, water absorption < 1% by volume as per ASTM D 2842, oxygen index of 24.1 to 28.1 listed as per ASTM D 2863, cell size 0.4 mm of dia (max) as per ASTM D 3576. Fire retardant property as per DIN 4102, Part 1 of class B2 and as per ASTM E84 class A, fixed with suitable water based adhesive and fastener, complete in all respect as per the directions of Engineer-in-Charge. | sqm | | 10.00 | |

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Technical Specification and Scope of work for Civil work for Expansion addi. alt. of Prop. 10 LPH UHT Trial Laboratory above ghee plant at AFDG.

| Item No. | Item Description | Unit | Rate | Qty | Amount |
|---|---|------|------|-------|--------|
| 3.11 | Providing and constructing Autoclaved Aerated (Cellular) Concrete block masonry works for all walls 100 to 230 mm thick in CM 1:6 by using Autoclaved Aerated (Cellular) Concrete blocks conforming to IS 2185-Part 3 - 1984 and manufactured with cement, lime, sand/fly ash, gypsum for all walls, wall foundations, trenches, water tank wall, compound wall, parapet wall, stair cabin wall, gable wall, load walls, curved walls, machine foundations, columns etc. as per drawing in line, level and plumb with necessary independent double raw (legged) scaffolding, as per IS 6041 - 1985 in specified course of approved bond with uniform joint thickness less than 10mm, racking out joints, rubbing and cleaning the surface, curing etc. complete and as directed, at all levels below and above plinth level. | cum | | 84.00 | |
| SUM CARRIED OVER TO SUMMARY PAGE | | | | | |
| SECTION - 5.00 | | | | | |
| 5.0 | ALUMINIUM WORKS | | | | |
| 5.1 | Providing and fixing to walls, columns, lintels and such to receive doors, windows, partitions, ventilators, Sub-frame of Polyester powder coated aluminium extruded standard tubular sections of alloy conforming to IS designation HE 9/HV 9 WP alloy with chemical composition and technical properties in accordance with IS-733 and IS 1285 respectively, (Polyester Powder coated aluminium (minimum thickness of powder coating 50 micron)), joints mitred and jointed with heavy duty aluminium angle pieces using self tapping nickel plated hardened steel screws (Nettlefold or equivalent) and fixed with W.E. (Wedge expansion type) Fasteners 10mm dia. 40 long of approved manufacture at 450mm centre to centre to masonry and concrete surfaces as per design and profile at all locations, as called for, as per approved drawings or as directed complete as directed. | Kg | | 37.00 | |
| 5.2 | Providing and fixing composite units of windows and ventilators as per architectural drawings fabricated out of Polyester powder coated aluminium built-up extruded sections of alloy conforming to IS designation HE 9 WP/HV 9 WP alloy with chemical composition and technical properties in accordance with IS 733 and IS 1285 respectively (Polyester powder coated aluminium (minimum thickness of powder coating 50 micron)), designed to deflection up to L/175 of span at wind-load of 150kg/sqm in accordance with IS.875 , joints mitred and jointed with heavy duty aluminium angle pieces with fins to match the sections of the frame by crimping and fixed with nickel plated steel screws (Nettlefold or equivalent) at 300mm centre to centre to sub-frame (cost of sub-frame to be paid separately) including providing and fixing hardware items of Earl Bihari or approved equivalent make, | | | | |
| | approved EPDM gaskets of Anand Lescuyer make or approved equivalent to suit the size and profile and at locations as called for, silicon sealant of G.E., Dow Corning or approved equivalent make, hinges, pivots, expansion bolts, cleats, clamps, bolts, nuts, screws, rivets and other accessories as required and all incidentals complete. Rate for all openable shutters shall also include heavy duty stainless steel (SS 304 grade) adjustable heavy duty friction windows stays of approved make at top and bottom, shutter cleats, shutter EPDM, pressure die-cast handles duly powder coated "PULSE"(PL205H / Model) of LGF Sysmac (I) Pvt. Ltd. or equivalent make. Rate for all sliding shutters shall also include concealed sliding handles with self locking latch arrangements, shutter cleats, shutter EPDM, woolpile manufactured by Anand Reddiplex or approved equivalent and with all accessories and also other hardware items. Supply and installation of ONLY glass NOT included in this item. (Item to carry guarantee for a period of two years against faulty structural design, water leakage, unsound material and workmanship and defective powder coating as per guarantee bond) | | | | |

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Technical Specification and Scope of work for Civil work for Expansion addi. alt. of Prop. 10 LPH UHT Trial Laboratory above ghee plant at AFDG.

| Item No. | Item Description | Unit | Rate | Qty | Amount |
|-------------------------------------|---|------|------|--------|--------|
| 5.2.1 | Fully Fixed Windows and Ventilators (measured outer to outer of frame) | Kg | | 229.00 | |
| 5.6 | Providing and fixing fly proof stainless steel grade 304 wire gauge, to windows and clerestory windows using wire gauge with average width of aperture 1.4 mm in both directions with wire of dia. 0.50 mm all complete. | sqm | | 11.00 | |
| | Fly proof stainless steel net having 50 micron pure polyester powder coating of approved make and shade for aluminium sliding shutter / fixed shutter or in front of aluminium louvers as per shop drawing prepared by contractor and sample as approved by consultants, at all floors, all levels, all heights. Only installed area of mosquito net shall be measured and paid in Sqm without considering any wastage. All aluminium sections shall be paid under relevant tender item. Sample shall be approved before execution the work. | | | | |
| TOTAL CARRIED TO SUMMERY | | | | | |
| SECTION 6.00 | | | | | |
| WALL FINISHES, FALSE CEILING | | | | | |
| 6.1 | Providing and applying 6 mm thick plain cement plaster finish at all heights above and below highest plinth level to beams, ceiling, stairs, columns, pardiies, moulds, pattas, grooves etc over any brick or concrete surface of any shape as specified including scaffolding, curing and finishing smooth etc complete as directed. | | | | |
| 6.1.1 | With CM 1:3 (1 cement : 3 parts sand- 50% coarse and 50% fine) | Sqm | | 10.00 | |
| 6.2 | Providing & laying 12mm. thick cement plaster in single coat, in C.M. 1:4 (1 cement : 4 coarse sand) at all the heights up to floor -V level with cement mala finish (finished with steel trowel) including scaffolding, curing, making grooves, forming pattas and drip mould, etc. complete as directed. | sqm | | 27.00 | |
| 6.3 | Providing & laying 15mm. thick cement plaster in single coat, in C.M. 1:4 (1 cement :4 coarse sand) at all the heights up to floor -V level with cement mala finish (finished with steel trowel) including scaffolding, curing, making grooves, forming pattas and drip mould, etc. complete as directed. | sqm | | 368.00 | |
| 6.4 | 18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement: 5 coarse sand) and a top layer 6 mm thick cement plaster 1:3 (1 cement : 3 coarse sand) finished rough with sponge at all the heights up to floor -V. | Sqm | | 414.00 | |
| 6.5 | Providing & applying on new work three coats (first two coats are with brush and final coat is with roller) of Glossy, satin or Matt/luster enamel paint of desired shade, of approved make, shade, brand and manufacture, on any surfaces i.e., steel work, wall dado over plaster etc., at all heights, to give an even shade, including thoroughly brushing the surface free from mortar droppings and other foreign matter and sand papering smooth. The paint shall be applied after applying a coat of primer of approved brand and preparation of base surface using plaster of paris putty / white cement putty / metal putty etc. as applicable or as per manufacturer's specification or as directed by Architect | sqm | | 25.00 | |
| 6.9 | Providing and fixing approved galvanized chicken wire mesh (24 gauge 12 mm size) to junction of concrete and masonry work and other locations where called for at all the heights with necessary scaffolding etc. including cutting to required sizes, side laps of minimum 75 mm and fixing in position with galvanized wire nails as approved complete. | Sqm | | 55.00 | |
| 6.14 | Providing & applying two component high solids Acylic Polyurethane Paint at all locations, prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete as per detail given below. | | | | |

Annexure : I

Technical Specification and Scope of work for Civil work for Expansion addi. alt. of Prop. 10 LPH UHT Trial Laboratory above ghee plant at AFDG.

| Item No. | Item Description | Unit | Rate | Qty | Amount |
|----------|---|------|------|--------|--------|
| | Surface preparation : Hand or power tool clean to a minimum St2 (ISO 8501-1:2007) or SSPC-SP2. Note, all scale must be removed and areas which cannot be prepared adequately by chipping or needle gun should be spot blasted to a minimum standard of Sa2 (ISO 8501-1:2007) or SSPC-SP6. Loose or flaking coatings should be removed back to a firm edge. Glossy finishes may require light abrasion to provide a physical 'key'. | | | | |
| | Primer Coat : | | | | |
| | Providing & Applying two component Epoxy Primer- Interseal 670HS (having 3000 hours of salt spray result as per ISO7253 resistance to neutral salt spray at 35 Degree C with no filf defect and less than 1.0 mm corrosion creep)of 82% volume solids or Equivalent in two coat of 100 Microns each at 200 microns DFT on MS Structure Surface (Two or more coat) , The entire work shall be carried out as per manufacturer specification & directions and to the satisfaction of the Engineer-in-charge | | | | |
| | Polyurethane paint : | | | | |
| | Providing & Applying two coat of two component high solids Acylic Polyurethane finish of 100 micron in two coat (50 micron each) which contains no free isocyanates, Interthane 990 of 57 % volume solids or Equivalent of desired RAL shades, at all locations, to give an even shade, The entire work shall be carried out as per manufacturer specification & directions and to the satisfaction of the Engineer-in-charge | | | | |
| | Approved make : AkzoNobel (International Brand) / PPG / Hempel | | | | |
| | Total minimum DFT of the system shall be 300 Microns | | | | |
| 6.14.1 | On steel work | Sqm | | 327.00 | |
| 6.18 | Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete. | Sqm | | 368.00 | |
| 6.19 | Providing & applying on new works three coats (first two coats are with brush and final coat is with roller) of plastic emulsion paint of desired shade, of approved make, brand and manufacture, on any surfaces, at all heights, to give an even shade, including thoroughly brushing the surface free from mortar droppings and other foreign matter and sand papered smooth. The paint shall be applied after applying a coat of primer and white cement putty (Birla white wall care Or JK of approved company like Asian. | sqm | | 368.00 | |
| 6.20 | Providing and fixing false ceiling at all height including providing and fixing of frame work made of special sections, power pressed from M.S. sheets and galvanized with zinc coating of 120 gms/sqm (both side inclusive) as per IS : 277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flanges of 27 mm and 37mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50mm long with 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25x10x0.50 mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I. channels 45x15x0.9 mm running at the spacing of 1200 mm centre to centre, to which the ceiling section 0.5 mm thick bottom wedge of 80 mm with tapered flanges of 26 mm each having lips of 10.5 mm, at 450 mm centre to centre, shall be fixed in a direction perpendicular to G.I. intermediate channel with connecting clips made out of 2.64 mm dia x 230 mm long G.I. wire at every junction, including fixing perimeter channels 0.5 mm thick 27 mm high having flanges of 20 mm and 30 mm long, | | | | |

M. c. mehta

Annexure : I

Technical Specification and Scope of work for Civil work for Expansion addi. alt. of Prop. 10 LPH UHT Trial Laboratory above ghee plant at AFDG.

| Item No. | Item Description | Unit | Rate | Qty | Amount |
|---|---|------|------|--------|--------|
| | the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450 mm centre, with 25mm long dry wall screws @ 230 mm interval, including fixing of gypsum board to ceiling section and perimeter channel with the help of dry wall screws of size 3.5 x 25mm at 230 mm c/c, including jointing and finishing to a flush finish of tapered and square edges of the board with recommended jointing compound, jointing tapes, finishing with jointing compound in 3 layers covering upto 150 mm on both sides of joint and two coats of primer suitable for board, all as per manufacturer's specification and also including the cost of making openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitably fixed, all complete as per drawings, specification and direction of the Engineer in Charge but excluding the cost of painting with : | | | | |
| 6.20.1 | 12.5 mm thick tapered edge gypsum plain board conforming to IS: 2095- (Part I) :2011 (Board with BIS certification marks) | Sqm | | 32.00 | |
| 6.21 | Supply & Fixing of lay-in tile ceiling system (600mm x 600mm) manufactured out of 0.70mm (+/- 0.1 mm) thick aluminium, powder coated in manufacturer's standard colour shades, with square or bevelled edges and flanges, produced on advanced equipment, which includes several levelling stages in the manufacturing process. | Sqm | | 160.00 | |
| | All tiles to be installed on a standard 600mm x 600mm module 24mm table exposed metal grid and are precision made to within plus or minus 0.25mm. Suspension system would be standard 24mm table exposed metal grid features main runners and cross tees roll formed from galvanised steel to BS 2989Z-18 zinc coating, minimum tensile strength 270 Mpa. Grid system to be designed to satisfy ASTM C635 loading and deflection criteria. The main and cross runners to be provided with beyonet coupling for quick installation and shall have a height of 38mm. The grid is suspended from the roof with G. I. wire rods or quick adjustment suspension hangers at maximum 1200mm along the main runners. The tiles would be designed for lay-in mounting from below into the standard grid. The main runners shall normally be fixed at 1200mm and shall be infilled with 1200mm and 600mm cross tees. Hangers to be fixed to roof by expansion fasteners. Wall angle to be 23x23x0.5mm thick coil coated aluminium matching the colour of tiles. This system also including the cost of making openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channel suitably fixed all complete as per drawing and specification and direction of the Engineer-in-charge | | | | |
| | Make : Arm Strong, Hunter Duglus, Durlum | | | | |
| 6.26 | Providing and Fixing 25 to 30mm thk Puf Panel for Ceiling including ceiling suspended on RCC Roof Slab with required framing in line & level to withstand positive pressure of 20 pascal with all fixtures and making cut-outs for lighting fixtures & Air deffusor Grill etc. complete as per detail and directed. | sqm | | 158.00 | |
| 6.27 | Providing and Fixing 40mm thk Puf Panel Wall cladding including wall- ceiling suspended on Brick wall, RCC Roof Slab with required framing in line & level to withstand positive pressure of 20 pascal with all fixtures and making cut-outs for door, window, ventilation, switch board, lighting fixtures & Air deffusor Grill etc. complete as per detail and directed. | sqm | | 150.00 | |
| SUM CARRIED OVER TO SUMMARY PAGE | | | | | |
| SECTION 7.00 | | | | | |
| WATER-PROOFING | | | | | |

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Technical Specification and Scope of work for Civil work for Expansion addi. alt. of Prop. 10 LPH UHT Trial Laboratory above ghee plant at AFDG.

| Item No. | Item Description | Unit | Rate | Qty | Amount |
|---|--|------|------|--------|--------|
| 7.1 | 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: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 300mm height including cleaning the surface before treatment. | | | | |
| | b) Laying brick bats with mortar using broken bricks/brick bats 25mm 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 20mm 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. | | | | |
| | 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.d) Finishing the surface with 20mm 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 of 300 X 300 mm square 3mm deep. | | | | |
| | 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. | | | | |
| 7.1.1 | With average thickness of 120mm and minimum thickness at khurra as 65 mm. | sqm | | 168.00 | |
| 7.15 | Providing and laying China Mosaic flooring work over the water proofing surfaces in slope using broken equal pieces of white glazed tiles not more than 25 to 37 mm wide and long and colored glazed tiles equal pieces for making pattas, vattas etc. as per details with necessary bedding in CM (1:4) laid in required slope, consolidating with wooden hammer, filling joints with Birla white cement, cleaning the surface and acid washing etc. complete as directed at any height. 1. The Work to be carried out at all the heights. The individual rates shall be inclusive of all lifts, lead and handling of materials, necessary scaffolding and staging, 2. Rates shall be inclusive of the slopes to be provided in all the above flooring items as directed and as per the drawings. | sqm | | 168.00 | |
| SUM CARRIED OVER TO SUMMARY PAGE | | | | | |
| SECTION 8.00 | | | | | |
| PAVING AND FLOOR FINISHING | | | | | |

M. C. Mehta

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Technical Specification and Scope of work for Civil work for Expansion addi. alt. of Prop. 10 LPH UHT Trial Laboratory above ghee plant at AFDG.

| Item No. | Item Description | Unit | Rate | Qty | Amount |
|----------|---|-------|------|--------|--------|
| 8.10 | <p>Providing & applying Flow / Trowel applied topping in average thickness of 6 mm (1 mm Scratch Coat + 5 mm Top Coat) of a 4 component, single layer, seamless, solvent-free, moisture insensitive and food-safe Ucrete MF(6MM) polyurethane concrete flooring system or approved equivalent make of density more than 1950 kg/cu.mtr to have a smooth & even matt finish matching below mentioned performance properties:</p> <p>Surface Preparation : Concrete substrates must be mechanically prepared by using Surface Grinder, Scarifier, Grit or Shot Blasting, so that the large aggregate of the concrete is exposed, The dust and debris to be removed by Industrial Vacuum Cleaner.</p> <p>Anchor Grooves : Must be provided along the perimeter of floor area, around columns, open drains, along construction joints, cable trenches, etc. To be cut of size 1.5 to 2 times the thickness of the floor topping at approximately 100 mm away parallel from wall and adjacent to doorways, covering not more than 20 Sqm. Open up all the cracks in to anchor grooves. Fill all the anchor grooves with Ucrete MF or approved equivalent make, mixed with heavy duty slow speed drilling machine fixed with mixing paddle, prior to application of scratch coat.</p> <p>Scratch Coat : After-12-24 hours of Anchor Grooves filling, apply average 1 mm thick scratch coat of four-component, Cementitious Polyurethane Screed topping of Ucrete MF or approved equivalent make using flat trowel by mixing all components and colour pigment in mixing vessel using heavy duty slow speed drilling machine fixed with mixing paddle, etc and complete as per manufacturer's specification.</p> <p>Top Coat : After 12-24 hours of the scratch coat, apply average 5 mm thick top coat of heavy duty, four component Polyurethane concrete floor topping of Ucrete MF or approved equivalent make using flat trowel by mixing all components and colour pigment in mixing vessel using heavy duty slow speed drilling machine fixed with mixing paddle, etc and complete as per manufacturer's specification.</p> <p>mixed density more than 1900kg/cu.mtr, / abrasion resistance class of AR0.5 as per BS 8204-2 / Cleanable to standards of Stainless steel / Zero Absorption as per CP.BM2/67/2 / Static Modulus of Elasticity of 3.3×10^3 Mpa and Toughness of 96.7×10^3 Mpa as per Modified ASTM C469/C469M / Coefficient of thermal expansion of 3.6×10^{-5} /oC as per ASTM C531 / Shore D hardness of 80 / Tensile strength of >7Mpa / Flexural strength of >20Mpa / Adhesion to concrete of more than 2Mpa or until concrete fails / slip resistance</p> | sqm | | 149.00 | |
| 8.11 | <p>Providing & applying of a textured finish 75 mm x 75 mm coving at junctions of floor and wall using a Polyurethane concrete moisture insensitive coving mortar UcreteRG or approved equivalent make matching the following performance requirement.</p> <ol style="list-style-type: none"> 1. Moisture tolerant 2. Zero Absorption as per CP.BM2/67/2 3. Density >2000kg/cu.mtr 4. Flexural Strength >15Mpa as per EN 13892 part 2 <p>Applied over a polyurethane primer including surface preparation.</p> | Metre | | 67.00 | |
| 8.18 | Extra for providing edge moulding to 18 mm thick marble stone counters, Vanities etc. including machine polishing to edge to give high gloss finish etc. complete as per design approved by the Engineer in charge. | | | | |
| 8.18.1 | Granite work | metre | | 81.00 | |
| 8.19 | Extra for fixing marble /granite stone over and above coresponding basic item, in facia and drops of width upto 150 mm with epoxy resin based (Araldite or equivalent) adhesive including cleaning etc. complete. | metre | | 81.00 | |
| 8.20 | Extra for providing opening of required size & shape for wash basins/ kitchen sink in kitchen platform, vanity counters and similar location in marble/stone work including necessary holes for pillar taps etc. including rubbing and polishing of cut edges etc. complete. | each | | 2.00 | |

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| Item No. | Item Description | Unit | Rate | Qty | Amount |
|---|---|------|------|--------|--------|
| 8.24 | Providing and laying 18 mm. to 20 mm thick pre-polished to mirror finish machine cut approved quality Granite stone Flooring of required size & shape (length and width of the stone slab), colour in approved pattern including bands, strips patta in flooring, treads ,sill,copings,parapet top, window sill, planter top and such other locations of uniform colour, texture and pattern over 20 mm thick cement mortar 1:4 (1 part cement : 4 part coarse sand) with cement paste @ 4.4 Kg/SqM filling of joints with white cement / cement mixed with colour pigments to match the shade, applying epoxy based damp proof coating on the base concrete surface,nosing, rounding off & polishing the exposed edges as per the drawing or as directed, necessary curing, polishing, protection of finished surface, cleaning the same finally etc. complete as directed.The stone used for platform top, treads etc. should be in one single long piece up to 1500mm length as per the drawing. (Only finished granite work shall be measured & considered for payment. (Basic rate of Granite Rs. 2000/- per sqm). | sqm | | 41.00 | |
| 8.26 | Providing and laying 18 mm. to 20 mm thick pre-polished to mirror finish machine cut approved quality Granite stone of required size & shape (length and width of the stone slab), colour in approved pattern, single piece in skirting , risers of uniform colour, texture and pattern over 12 mm thick cement mortar 1:3 (1 part cement : 3 part coarse sand) with cement paste @ 4.4 Kg/SqM filling of joints with white cement / cement mixed with colour pigments to match the shade, applying epoxy based damp proof coating on the base concrete/wall surface, polishing the exposed edges as per the drawing, necessary curing, polishing, protection of finished surface, cleaning the same finally etc. complete as directed.The stone used should be in one single long piece up to 1500mm length as per the drawing. (Only finished granite work shall be measured & considered for payment. (Basic rate of Granite Rs. 2000/- per sqm). | Sqm | | 10.00 | |
| 8.29 | Extra for finishing the cement concrete/ trimix floor using Hardner NITOFLOOR HARDTOP (FOSROC) or approved equivalent laid as per manufacturers specifications complete. | kg | | 100.00 | |
| SUM CARRIED OVER TO SUMMARY PAGE | | | | | |
| SECTION 9.00 | | | | | |
| IRON AND STEEL WORKS | | | | | |
| 9.1 | Structural steel work in riveted, bolted or welded in built up sections framed work including supplying, fabricating, cutting, assembling, hoisting and fixing in position at all heights of all shapes and size with all leads and lifts as per latest IS 4923, IS 1161, IS 806 for the work of monkey ladder, all types of staircase, handrail, railing, grill, gate, duct platform, insert plate, grating, brackets, facade sub structure, framing for shed, MS post and frame work for fencing, holding down bolts and similar works. It should be including necessary rolled joists, channels, angles, tees, flats, angle cleats, gusset plates, position hip and jack lifters, purlins, etc. including cutting and welding the members as per detailed drawing and design. | | | | |

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Technical Specification and Scope of work for Civil work for Expansion addi. alt. of Prop. 10 LPH UHT Trial Laboratory above ghee plant at AFDG.

| Item No. | Item Description | Unit | Rate | Qty | Amount |
|----------|--|------|------|---------|--------|
| | The rate shall include dry sanding, degreasing (wet cleaning) & preparation of rustfree surface manually or mechanically, metal putty to make the surface even and smooth, 1 coat of zinc chromate primer of approved make over all the surfaces of the steel sections or as specified in the drawing. (Only standard measurements will be paid for as actual cut length used at site). Shop drawings for the connection details shall be prepared for the approval of the architect. Rate shall be inclusive of cutting, wastage, welding, bending (shop at site), bolting wherever necessary, in position welding of required length, grinding, finishing edges, filling the welded spots with metal putty and primer and paint. It should also include the cost of approved ISI make and size zinc coated nut-bolt and Anchor fasteners of Hilti or Fisher as approved by engineer-in-charge. The fabrication work shall start after approval of finished sample as per drawing by Architect. Fabrication works to be carried out as per relevant IS standards. | | | | |
| 9.1.1 | Rolled steel sections (equal and unequal angles, square or round bars, flats, angles, tees, channels, plates of different sizes etc.), | Kg. | | 3563.00 | |
| 9.2 | Providing, cutting to shape and fixing in position M.S. chequered plates in slab shuttering, stair steps, landing, platforms etc. including tag welding to steel members complete as per drawings including painting with one coat of red oxide paint etc., complete as directed. | Kg. | | 100.00 | |
| 9.3 | Providing, fabricating and fixing in position MS inserts such as nosing, corner angles of columns, plates, flats, tees, protection channels of reception dock, provision for pipe hangers, supports, brackets and monorails, hooks, frame around cut-out, MS pipe sleeves etc. as per drawings and specifications, in true line and level including embedding the same into the permanent works at the time of casting of RCC works or fixing the same into the existing work by using anchor / desh fastener of size as mentioned in drawing or as directed by Engineering in charge, with necessary welding, grinding, bolting and painting with two coat of first quality synthetic enamel paint of approved make over a coat of primer etc. complete as directed. | Kg. | | 150.00 | |
| 9.4 | Providing, fabricating, erecting placing in position M.S. and structural work with hollow rectangular/ square section, in roof trusses, columns, portal frames, beams, bracings, platforms, MS frames stairs, brackets, etc. including cutting, wastage welding (shop and site), grinding bolting wherever necessary painting with one coat of red oxide paint etc., complete as directed. | Kg. | | 1158.00 | |
| 9.6 | Providing & fixing in position mild steel holding down bolts of specified dia with nut, washer PLATES etc. complete as per drawing and as directed. | Kg. | | 50 | |
| 9.8 | Providing and fixing hand rail of approved size by welding etc, to steel ladder railing, balcony railing & staircase railing including applying a priming coat of approved steel primer and two coats of approved shade and make synthetic enamel paint etc., complete as directed. | | | | |
| 9.8.1 | M.S. tube B class | Kg. | | 138.00 | |
| 9.9.1 | Providing fabricating and installing in position exposed SS Grade-304 pipes for drainages including cutting, bending, welding, grinding, drilling, tapping, weep hole and all other incidentals and approved buffing to stainless steel members etc. complete as directed. | Kg | | 361.00 | |

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| Item No. | Item Description | Unit | Rate | Qty | Amount |
|---|--|------|------|--------|--------|
| 9.11 | Providing, fabricating and fixing in walls, columns (round/square) and such other locations cladding with stainless steel sheets/plates of grade-304 consisting of s.s flats, s.s. angles etc of grade-304 for its framework, including all necessary accessories such as s.s. inserts, flat etc., all cutting, bending, welding, grinding, drilling, tapping and all other incidentals, and approved buffing to stainless steel members as directed by the Engineer-in-charge. | Kg | | 172.00 | |
| SUM CARRIED OVER TO SUMMARY PAGE | | | | | |
| SECTION 10.00 | | | | | |
| ROOFING WORKS | | | | | |
| 10.6 | Providing & fixing Structural Decking of approved or equivalent make & DECK Profile of 960 mm effective cover width profile with nominal 51 mm deep ribs and nominal pitch of 316 mm centre-to-centre. The deck profile is having embossment and stiffeners. Embossments on top of the flanges provide the mechanical interlocking between steel and concrete. In the assembled state the profile comprises of intermediate male and female ribs for every interlocking side-lap joint. The sheet will comprise of Base Metal Thickness (BMT) of 0.8 mm with minimum yield strength of 550 MPa. The sheets shall have a hot dipped zinc coating with total mass coating of 275 gms/sq.mt on both sides conforms to Australian Standard AS 1397 and BS EN 10147:2000. | Sqm | | 170.00 | |
| SUM CARRIED OVER TO SUMMARY PAGE | | | | | |
| SECTION 11.00 | | | | | |
| MISCELLANEOUS WORKS | | | | | |
| 11.3.2 | Providing and laying cement concrete vatas in proportion 1:2:4 (1 cement :2 course sand :4 10 mm or down graded stone aggregate) finish with good surface etc. as directed | Rmt | | 10.00 | |
| 11.9 | Dismantling brick masonry walls and partitions, plastered or unplastered as per instructions including finishing the broken surface to match with the surrounding, removing the debris as directed within site, cutting if any etc. complete as directed. The dismantling of stone masonry, BBCC, Stone pitching would be measured under this item. | CUM | | 18.00 | |
| 11.10 | Dismantling the RCC beams, slabs, lintels, columns, parti walls, platform etc. including finishing the broken surface to match with the surrounding, removing the debris within site, including cutting the reinforcement if any etc. complete as directed. | CUM | | 6.00 | |
| 11.11 | Dismantling IPS concrete in flooring /pavement etc. as per instruction and disposing the debris/muck within the site at approved location. | Sqm | | 10.00 | |
| 11.12 | Dismantling kotah stone/ mandana stone/ Endura Tiles in floor ceramic/glazed tiles floor/dado /skirting ,C.I.Tiles etc. with mortar bedding as per instructions including finishing the broken surface to match with the surroundings. Disposing debris/ muck as directed within the site or as directed by Eng. Incharge etc. complete as directed. | Sqm | | 10.00 | |
| 11.13 | Dismantling PCC in floor as per instructions including finishing the broken surface to match with the surroundings. Disposing debris/ muck as directed within the site or as directed by Eng. Incharge etc. complete as directed. | CUM | | 1.00 | |

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| Item No. | Item Description | Unit | Rate | Qty | Amount |
|----------|---|------|------|--------|--------|
| 11.14 | Dismantling and removing of the existing water proofing flooring including chaina mozaic of any thickness (plain cement concrete type) from the existing terrace and chajjas at all levels and slopes and at all heights by chiselling only including all safety measures, removal and disposal of debris within site and levelling the same, cleaning site etc. complete as directed. | Sqm | | 180.00 | |
| 11.20 | Dismantling C.I./ G.I./ PVC rain water pipe of all diameters with fittings and clamps etc., at all heights including scaffolding and stacking within the premises upto a lead of 350m as directed. | Rmt | | 22.00 | |
| 11.22 | Dismantling steel work in built up sections in angles, tees, flats, pipes, chain link, barbed wire, baseplate and channels including all gusset plates, bolts, nuts, cutting rivets, welding etc. at all heights including dismembering and stacking within the premises upto a lead of 350m. and scaffolding complete as directed. | KG | | 50.00 | |
| 11.23 | Dismantling / scrapping and removing existing plain/sand faced/grit cement plaster of any thickness from the brick/RCC works including necessary scaffolding at all heights and levels and disposing the debries within the site etc. complete as directed. | Sqm | | 10.00 | |
| 11.24 | Dismantling roof mounted ventilators of 600mm diameter, including dismembering and stacking within the premises upto a lead of 350m. complete as directed.with all accesaries. | Each | | 3.00 | |
| 11.25 | P/F special Stain less steel floor drains (Amul Trap) as per the sample approved by the dairy and fixing the same as per detailed drg. Sketch,the same in floor at required levels including necessary (excavation, providing and laying 75 mm thick PCC 1:4:8 - 230 mm thick brick masonry so as to form a chamber of size 30 x 30 cms. or as directed, inside plaster 12 mm thick in CM 1:4 (1cement : 4 coarse sand) , IPS flooring 38 mm thick in floor of chamber), fixing the trap and jointing the same with the HDPE/ SS pipe with CM 1:1 (1 cement : 1 coarse sand) and jute fiber, matching the top of floor drain with the finished floor level etc. all complete. The vertical connecting HDPE/ SW pipe shall be paid for separately under the relevant items. [The rate includes cost of all the required material including of SS floor drains which will be supplied by contractor as per sample approved by | Each | | 1.00 | |
| | | Each | | 3.00 | |
| 11.26 | Do-as per it no- 11.25 but Fixing in FF slab lvl | | | | |
| | SUM CARRIED OVER TO SUMMARY PAGE | | | | |
| | PLUMBING WORKS | | | | |
| 2.00 | SECTION B (SOIL & WASTE) | | | | |
| 2.14 | Providing and making Khurras with average minimum thickness of 5cm Cement Concrete 1:2:4 (1 Cement : 2 Coarse Sand : 4 Graded Stone Aggregate) over PVC/ HDPE sheet (400 microns min. thickness), finished with 12mm Cement Plaster 1:3 (1 Cement : 3 Coarse Sand, admixed with waterproofing compound) and a coat of neat cement rounding the edges and making & finishing complete. | | | | |
| a) | Khurra Size 450 x 450mm, for 150 / 200 mm dia outlet with 5mm thick circular/square vertical C.I grating. | Each | | 1.00 | |
| b) | Khurra Size 300 x 300mm, for 90 / 110 mm dia outlet with 5mm thick circular/square vertical C.I grating. | Each | | 1.00 | |
| | Sum Carried over to summary page | | | | |
| 3.00 | SECTION C (WATER SUPPLY SYSTEM) | | | | |

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| Item No. | Item Description | Unit | Rate | Qty | Amount |
|----------|--|-------|------|-------|--------|
| 3.02 | Providing and fixing CPVC (Chlorinated Poly Vinyl Chloride) water supply pipes with pipe as per CTS SDR 11 at working pressure of 400 PSI at 23. Deg.C & 100 PSI at 82 Deg.C. using solvent welded CPVC fittings i.e Tees, Elbows, Couplers, Unions, Reducers, brushings etc. including transition fittings connection between CPVC & metal pipe/G.I i.e Brass Adaptors (Both male & Female threaded) conforming to ASTM D-2846 with only CPVC solvent cement conforming to ASTM F-493 with fabricated and subsequently hot dip galvanised clamps/structural steel supports as required/directed at site including cutting chase and fitting the same with cement concrete/cement mortar as required. All termination points for installation of faucets shall have brass termination fittings. Installation shall be to the satisfaction of the Engineer-In-Charge/ Consultant. | | | | |
| 3.02.1 | 15 mm dia. | Metre | | 10.00 | |
| 3.02.2 | 20mm dia | Metre | | 10.00 | |
| 3.02.3 | 25mm dia | Metre | | 25.00 | |
| 3.02.4 | 32mm dia | Metre | | 10.00 | |
| 3.02.5 | 40mm dia | Metre | | 50.00 | |
| 3.02.6 | 50 mm dia | Metre | | 25.00 | |
| 3.09 | Providing and fixing forged brass lever operated ball valve of full flow with forged brass ball (Machined to mirror smooth finish with hard chrome plated) and spindle with setting and gland of superior quality having minimum working pressure of 25 kg/cm ² etc. complete in all respect. | | | | |
| 3.09.3 | 25mm dia | Each | | 1.00 | |
| 3.09.4 | 32mm dia | Each | | 1.00 | |
| 3.09.5 | 40mm dia | Each | | 1.00 | |
| 3.09.6 | 50mm dia | Each | | 1.00 | |
| 3.14 | Providing and fixing M.S structural work fabricated from standard sections e.g. M.S. rounds, angles, channels, plates including cutting to size, welding, drilling with concrete drilling bits and fixing dash fasteners in RCC structural members including cutting and making good the walls, ceilings and floors (for all types of pipe supports, clamps, etc.) complete, as directed by the Engineer in charge. | Kg. | | 50.00 | |
| | Sum Carried over to summary page | | | | |
| 4.00 | SECTION D (SEWERAGE AND DRAINAGE SYSTEM) | | | | |
| 4.07 | Providing and fixing square mouth 'P' type S.W gully trap grade 'A' of size 180x150mm complete with C.I grating, brick masonry chamber and water tight C.I cover with frame of 450 x 450 mm size. The weight of cover to be not less than 10 Kg and and frame to be not less than 4 Kg as per standard design and detail. | Each | | 1.00 | |
| 4.08 | Providing and fixing square mouth 'P' type S.W gully trap grade 'A' of size 150x100mm complete with C.I grating, brick masonry chamber and water tight C.I cover with frame of 300 x 300 mm size. The weight of cover to be not less than 4.50 Kg and and frame to be not less than 2.70 Kg as per standard design and detail. | Each | | 2.00 | |
| | Sum Carried over to summary page | | | | |

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