



भारतीय विमानपत्तन प्राधिकरण

AIRPORTS AUTHORITY OF INDIA

भा.वि.प्रा./प.क्षे./एटीएस/अभि.-सिविल/158/2023/102

दिनांक / Date : 11.09.2023

By Speed Post

To,
M/s. Fermium Constructions LLP
14/3, Mathura Road, Sector 31,
Haryana near Mewala Mahraipur
Metro Station, Faridabad – 121003
E-Mail: info@fermium.co.in
Tel.: 91464 91464

**Subject : Civil & Electrical works for New Automation System at Mumbai Airport.
SH : Porta Cabin & related temporary structure at ATS Complex & Sky Tower.**

संदर्भ / Ref.:- आपका ई-टेंडर दिनांक 28.08.2023 को खोला गया / Your e-tender opened on 28.08.2023

महोदय / Dear Sir (s),

1. ऊपर वर्णित कार्य हेतु आपका टेंडर, अध्यक्ष, भारतीय विमानपत्तन प्राधिकरण की ओर से स्वीकृत किया जाता है, आपके द्वारा बताए गये मद मूल्यों पर आपकी राशि कुल रुपये 3,32,15,762.00 (रुपए तीन करोड़ बत्तीस लाख पन्द्रह हजार सात सौ बासठ मात्र) GST रहित है, जो कि टेंडर की अनुमानित लागत राशि रु. 3,57,18,024.00 (रुपए तीन करोड़ सत्तावन लाख अठारह हजार चौबीस मात्र) GST रहित से 7.01% नीचे है।

Your E- tender for the work mentioned above is hereby accepted on behalf of Chairman, Airports Authority of India, at the item rates quoted by you totaling to **Rs. 3,32,15,762.00 (Rupees Three Crore Thirty-Two Lakh Fifteen Thousand Seven Hundred Sixty-Two only) excluding GST** which is **7.01% below** the estimated cost put to tender of **Rs. 3,57,18,024.00 (Rupees Three Crore Fifty-Seven Lakh Eighteen Thousand Twenty-Four Only) excluding GST.**

2. सहायक महाप्रबंधक (अभि.-सिविल), भा.वि.प्रा., ए.टी.एस. कॉम्प्लेक्स, मुम्बई कार्य के प्रभारी अभियंता होंगे। आपसे निवेदन है कि कार्य आदेश की तिथि के दस दिनों के अंदर सहायक महाप्रबंधक (अभि.-सिविल) भाविप्रा, एटीएस कॉम्प्लेक्स, मुम्बई के कार्यालय में उपस्थित हो तथा अनुबंध समझौता को पूरा करें। अनुबंध समझौता 100/- रु के नोन-ज्यूडिशियल स्टैम्प पेपर पर निष्पादित किया जाएगा, तथा स्टैम्प पेपर का खर्च आपके द्वारा उठाया जाएगा।

Asst. Gen. Manager (Engg-Civil), AAI, ATS Complex, Mumbai shall be the Engineer-in-charge of the work. You are requested to attend the office of **Asst. Gen. Manager (Engg-Civil), AAI, ATS Complex, Mumbai** within 10 days from the date of award of the work to sign and complete the contract agreement. The contract agreement shall be executed on a non-judicial stamp paper of value Rs.100/- (Rupees One Hundred only) and the cost of the stamp paper shall be borne by you.



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3. आपके टेंडर के साथ प्राप्त धरोहर राशि रु. 7,14,360.00 (रुपये सात लाख चौदह हजार तीन सौ साठ मात्र) ठेके के दस्तावेज के पृष्ठ 16 पर दी गई शर्त के अनुसार जमानत राशि में परिवर्तित कर दी गई है। कृपया इस पत्र के जारी होने की तिथि से 10 दिनों के अंदर जमानत राशि कि बकाया रु. 26,07,216.00 (रुपये छब्बीस लाख सात हजार दो सौ सोलह मात्र) जमा करें, वरना ठेके के दस्तावेज से पृष्ठ 16 पर दी गई शर्त 1 (ए) के अनुसार आपके रनिंग बिल से काट लिया जाएगा।

The earnest money amount of Rs. 7,14,360.00 (Rupees Seven Lakh Fourteen Thousand Three Hundred & Sixty only) received along with your tender will be treated and converted as part of security deposit as per Clause No 1A on page no.16 of contract document. Please deposit Rs. 26,07,216.00 (Rupees Twenty-Six Lakh Seven Thousand Two Hundred & Sixteen only) towards security deposit within 10 days from the date of issue of this letter, failing which the same will be deducted as per condition of Clause no.1A at page no. 16 of contract document.

4. आपसे अनुरोध है कि केन्द्रीय और राज्य सरकारों के नियमों एवं जीसीसी के शर्त 19 पेज न. 49 के अनुसार अनुबंध श्रम (विनियमन और उन्मूलन) अधिनियम 1970 और अनुबंध श्रम (विनियमन और उन्मूलन) केंद्रीय नियम 1971, बाल श्रम (निषेध और विनियमन) अधिनियम 1986, निर्माण श्रमिक (रोजगार और सेवा की शर्त का विनियमन) अधिनियम 1996, बिल्डिंग और अन्य निर्माण श्रमिक कल्याण सेस अधिनियम 1996 के प्रावधान का पालन करें।

You are requested to comply with the provision of Contract labour (Regulation and Abolition) Act 1970 and Contract Labour (Regulation and Abolition) Central rules 1971, Child Labour (Prohibition & Regulation) Act 1986, Construction Workers (Regulation of Employment and Condition of Service) Act 1996, Building and other Construction Workers Welfare Cess Act 1996 as specified in Clause 19 on page no. 49 of GCC of tender and rules of Central and State Government.

5. आपको निर्देश दिया जाता है आप तुरंत सहा. प्रबंधक (अभि.-सिविल) भाविप्रा, एटीएस कॉम्प्लेक्स, मुम्बई से मिलें वह आपको कार्य स्थल सौंपने की व्यवस्था करेंगे।

You are directed to contact Asst. Mgr. (Engg-Civil), AAI, ATS Complex, Mumbai immediately who will arrange to hand over the site to you.

6. कृपया नोट कर लें कि काम करने का अनुमानित समय तीन (03) माह हैं जो कि इस पत्र के जारी करने के बाद दसवे दिन से गिना जाएगा।

Please note that the time allowed for carrying out the work shall be Three (03) Months and same shall be reckoned from the 10th day after issue of this letter.

7. इस ठेके के संबंध में आगे का कोई भी पत्राचार प्रभारी अभियंता को संबोधित किया जाए।
Any further correspondence in connection with the contract should normally be addressed to the Engineer-in-charge.

8. उपरोक्त संदर्भित सभी पत्र इस ठेके का भाग होंगे।
All the letters referred above shall form part of contract.

9. ठेके दस्तावेजके अनुसूचि क्रम सं.17 पृष्ठ 47-48 में उल्लिखित त्रुटि की दायित्व अवधि बारह महीने होगी।
The defects liability period mentioned in Clause No. 17 on page no.47-48 of the contract document is Twelve Months.



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10. यदि ठेकेदार सुरक्षा नियमों का भंग करता है तो, उनको कालियादी मे सम्मेलित किया जाएगा एवं उचित कानूनी कार्यवाही के अधिन होंगे।

If Contractor is found violating any of Security Regulations, he shall be Black listed and will be subjected to other Legal Proceedings.

11. कृपया इस पत्र कि प्राप्ति सूचना दें तथा इसके साथ संलग्न अनुप्रति पर हस्ताक्षर करके टोकन के प्रतिग्रहण के रूप मे अधोहस्ताक्षरी को वापस भेजे।

Please acknowledge the receipt and return the duplicate copy of this letter enclosed herewith after signing it to the undersigned as a token of acceptance.

12. यदि कोई विसंगति पाई जाती है तो अंग्रेजी संस्करण को प्रभावी माना जाएगा।

In case of any discrepancy English version will prevail.

संलग्न / Enclosed:

- 1) शिड्यूल /Schedule – अ / A
- 2) फॉर्म / Form – V

भवदीय / Yours faithfully,

11.9.23

सहायक महाप्रबंधक (अभि.-सिविल)
Asst. Gen. Manager (Engg-Civil)

भाविप्रा अध्यक्ष के लिए एवं उसकी और से

For and on behalf of the Chairman, AAI.



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फॉर्म - V / Form V

नियम 21(2) देखें / See Rule 21(2)

मुख्य नियोक्ता द्वारा प्रमाण पत्र / Form of Certificate by Principal Employer

Certified that AAI have engaged the applicant **M/s. Fermium Constructions LLP**, as a contractor for the work of "**Civil & Electrical works for New Automation System at Mumbai Airport SH : Porta Cabin & related temporary structure at ATS Complex & Sky Tower.**" AAI undertakes to be bound by all the provision of Contract Labour (Regulation and Abolition) Act 1970 and Contract Labour (Regulation and Abolition) Central Rules 1971, Child Labour (Prohibition & Regulation) Act 1986, Construction Workers (Regulation of Employment and Condition of Service) Act 1996, Building and other Construction Workers Welfare Cess Act 1996, in so far as the provisions are applicable to them in respect of the employment of contract labour by the applicant in this establishment.

प्रमाणित किया जाता है कि एएआई ने आवेदक मैसर्स फर्मियम कंस्ट्रक्शन एलएलपी, को मुंबई हवाईअड्डे पर न्यू ऑटोमेशन सिस्टम के लिए सिविल और इलेक्ट्रिकल कार्य: एटीएस कॉम्प्लेक्स और स्काई टॉवर में पोर्टा केबिन और संबंधित अस्थायी संरचना के लिए ठेकेदार के रूप में लगाया है। एएआई आवेदक को अनुबंध श्रम (विनियमन और उन्मूलन) अधिनियम 1970 और अनुबंध श्रम (विनियमन और उन्मूलन) केंद्रीय नियम 1971, बाल श्रम (निषेध और विनियम) अधिनियम 1986, निर्माण कार्यकर्ताओं (रोजगार और सेवा की शर्तों का विनियमन) अधिनियम 1996, भवन और अन्य निर्माण श्रमिक कल्याण उपकर अधिनियम 1996, जहां तक इस प्रतिष्ठान में अनुबंध श्रम के रोजगार के संबंध में प्रावधान लागू होते हैं। आवेदक द्वारा एएआई के सभी प्रावधानों से बंधेगा।

सहायक महाप्रबंधक (अभि.-सिविल)

Asst. Gen. Manager (Engg-Civil)

भाविप्रा अध्यक्ष के लिए एवं उसकी और से

For and on behalf of the Chairman, AAI.

सेवामें / To,

M/s. Fermium Constructions LLP
14/3, Mathura Road, Sector 31,
Haryana near Mewala Mahrajpur
Metro Station, Faridabad – 121003
E-Mail: info@fermium.co.in
Tel.: 91464 91464

Item Rate BoQ

Validate

Print

Help

Tender Inviting Authority: AGM (E-C), O/o. ATS Complex, Andheri (East) Mumbai-400099

Name of Work: Civil & Electrical Works for New Automation System at Mumbai Airport. SH - Modification works in existing ATS Complex & Sky Tower. (Phase - I)
SH - Porta Cabin & related temporary structure at ATS Complex & Sky Tower.

Contract No: AAI/WR/MUM/ATS/E-C/158/2023

Name of the Bidder/ Bidding Firm / Company :	Fermium Constructions LLP					
PRICE SCHEDULE						
NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER #	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder in Rs. P	TOTAL AMOUNT Without Taxes in Rs. P	TOTAL AMOUNT In Words
1	2	4	5	13	53	55
1	Manufacturing, Supplying, Transportation and Erection of Prefabricated Structure, which is Ground floor +1 floor structure as per the concept drawing given in tender document. The agency shall prepare architectural drawing based on but not limited to the concept drawing and the same shall be got approved from Engineer-in-charge. Each floor height i.e. clear height from actual finished floor to false ceiling should be of 3.35m. In addition to the normal live and dead load, additional load due to CNS equipment's will be 1.5 Tonne in New AHMS room proposed on 1st floor. The scope shall include all works upto and above plinth level for this G+1 structure, including soil investigation, all type of designing, Foundation Works including RCC grade slab at ground and 1st floor, Prefabricated steel structure with walls and roof, floor, wall tiling, False Ceiling, staircase, Doors and Windows, Internal electrical and internal plumbing & sanitary works including all type of fixtures and fittings, HVAC, firefighting etc. all complete as detailed and as per the directions of Engineer-in-charge. The doors, windows, sanitary fixtures, ventilation system etc. shall be as per industry standard and complete as per concept design / drawing in approved make, material, colour, shade and design as approved by Engineer-in-charge with all requisite fixtures, nut, bolts, etc. complete job. Provision shall be made for necessary lightening, opening for plumbing works and other services as required and shall be strictly manufactured on approval of the shop drawing from AAI authorities. Shop drawings to be submitted by the agency shall with stand a wind pressure and all the relevant applicable loading and shall be designed based on the latest IS codes and standards. All the structural drawings shall be vetted from IIT, NIT college and should be Good For Construction (GFC) drawing. The agency shall submit all the GFC drawing to AAI before start of relevant activity at site. The structural stability and waterproofness of the building shall be the sole responsibility of the agency and the rates quoted shall be all inclusive of vetting from IIT, NIT. The work and rate shall include cost of all material, labour, T & P, transportation, design, drawing, vetting etc. involved in this item all complete as per direction of Engineer-in-charge. Technical Specification mentioned below:					
1.01	A. CIVIL WORKS					
1.02	1) Foundation - The sub structure shall be designed as per the safe Bearing capacity and other relevant parameters of the soil as per the geotechnical report. (The agency has to make soil investigation from AAI approved agency or any govt. Engineering college at their own cost and nothing extra shall be paid on this account) and as per vetted and approved structural design. The foundation shall be isolated /combined footing type with RCC column, plinth beam and RCC grade slab as per vetted and approved structural design. The plinth height shall be +600mm from NGL with a grade slab of 100 mm thickness. The depth and size of the foundation shall be as per the approved and vetted design. The work includes all works upto plinth level such as excavation, PCC, RCC, Centring and shuttering, steel reinforcement, back filling, filling of crush stone sand below plinth in full depth, RCC grade slab including PCC, necessary brick work below plinth level, Plinth Protection, Anti-Termite Treatment etc. all complete.					

7/11/23

1.03	2) Structural support - Prefabricated structure should be mounted on load bearing structural steel conforming to IS: 2062 Gr. The structure should be designed as per latest IS code such as IS 800: 2007 and other relevant IS codes using Built-up sections/ Square/rectangular hollow sections/ ISMB/ISCM, purlins, girts etc. Minimum dead load on roof to be considered shall be 0.15KN/sqm and minimum live load on roof shall be minimum 0.75KN/sqm. Additional load due to CNS equipment's will be 1.5 Tonne in New AHMS room proposed on 1st floor. The structural design shall be vetted by IIT, NIT and shall be in the scope of the agency. The surface of the structural members shall be prepared by Shot blasting as per IS standard meeting the minimum requirement of SA 2.5. The structure shall be treated with one coats of red oxide primer and Two coats of synthetic Enamel Paint of 25 microns each of desired colour as per engineer in charge. The agency has to submit MTC for structural steel.					
1.04	3) Flooring System (i.e. ceiling of ground floor & flooring of first floor) – Providing and fixing roofing consist of galvanized steel deck sheet of the designed thickness, confirming to IS 277:1992 used as permanent shuttering over which RCC concrete slab of designed thickness and reinforcement including edge trim covered with 100 mm thick concrete of M25 grade. This metal deck will be supported on structural steel beam with shear studs. Design of all the elements of this flooring system such as deck sheet, RCC slab, joists, etc., are to be vetted by IIT, NIT.					
1.05	4) Flooring Finish (Dry Areas on Ground floor and 1st Floor) – The flooring shall be done with 600 mm x 600 mm vitrified tiles of approved make and designed as per manufacturers & CPWD specifications shall be laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand). Joints shall be grouted with White cement mixed with matching colour pigment.					
1.06	5) Flooring Finish (Wet Areas) – The flooring shall be with 600 mm x 600 mm matt finished vitrified tiles of approved make as per manufacturers and CPWD specifications shall be laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand). Joints shall be grouted with White cement mixed with matching colour pigment.					
1.07	6) Flooring Finish (ASMGCs Room and AMHS Room) – Providing and fixing removable raised/false access flooring with system and its components of approved make for different plenum height with possible height adjustment upto 50 mm, comprising of modular load bearing floor panels supported on G.I. rectangular stinger frame work and G.I. Pedestal etc. all complete, as per the architectural drawings, as specified and as directed by Engineer-in-charge consisting of: (a) Providing at required spacing to form modular framework, pedestals made out of GI tube of thickness minimum 2 mm and 25 mm outer diameter, fully welded on to the G.I. Base plate of size 100mm x 100mm x 3mm at the bottom of the pedestal tube, G.I. pedestal head of size 75mmx75mmx3.5 mm welded with GI fully threaded stud 16mm outer diameter with two GI Check nuts screwed on the stud for level adjustment upto 50mm, locking and stabilizing the pedestal head in position at the required level. The pedestals shall be fixed to the subfloor (base) through base plate using epoxy based adhesive of approved make or the machine screw with rawl plug. (b) Stringers system in all steel construction hot dipped galvanized of rectangular size 570x20x30x0.80mm thick having holes at both ends for securing the stringers on to the pedestal head using fully threaded screws ensuring maximum lateral stability in all directions, the grid formed by the pedestal and stringer assembly shall receive the floor panel, this system shall provide adequate solid, rigid support for access floor panel, the system shall provide a minimum clear uninterrupted clearance between the bottom of the floor for electrical conduits and wiring etc. all complete as per the architectural drawings, as specified and as directed by the Engineer-in-charge. (c) Providing and fixing Access Floor panel of 600x600x32 mm medium grade Filled Steel anti-static high pressure Lamination of 800H grade (FS800H). Access Floor panel shall be steel welded construction with an enclosed bottom pan with uniform pattern of 64 hemispherical cones. The top and bottom plates of Steel Gauges: top 0.6 mm and bottom 0.7 mm fused spot welded together (minimum 64 welds in each dome and 20 welds along each flange). The panel should be Corrosist epoxy coated for lifetime rust protection and cavity formed by the top and bottom plate is filled with Pyrogrip noncombustible Portland cementitious core mixed with lightweight foaming compound. The access floor shall be factory finished with Anti-static High Pressure laminate with Non Warp technology upto 1mm thickness for superior adhesion and Surface flatness within 0.75mm. The panel is to withstand a Concentrated Load of 363 kgs applied on area 25mm x 25mm without collapse in the centre of the panel which is placed on four steel blocks. The panel will withstand and Uniformly Distributed Load (UDL) minimum 1250 kg/sqm and an impact load of 50kg all complete as per the approved manufacturers specification and as per the direction of Engineer-in-charge. All specification must be printed on the side of the panel to ensure the quality of the product. 450 mm Finished Floor Height (FFH). Ramps for change of level from false flooring to normal floor has to be provided at all the doors of ASMGCs and AMHS rooms.					

7/2/20

1.08	7) Outer Walls – The room walls shall be constructed of 50 mm thick Glasswool insulated sandwich panels with glasswool density of 24 +/- 2 kg/m ³ , laminated with Pre-coated Galvalume (GL) sheet outside and inside of walls. Both the sheet shall be AZ 150 with min 550 Mpa tensile strength of 0.5 mm TCT. The colour of the top side sheet will RAL 9002 of 20-30 microns Pure Polyester coating over 4-7 microns Primer on the top side and 5 microns of backer coat over the primer on the bottom side of the sheet. These panels are factory assembled in continuous manufacturing line into a complete unit to eliminate the necessity of field assembly of units prior to installation. The joining of panels shall have tongue and groove arrangement. The agency has to submit MTC for Glasswool and GL sheet as per the direction of Engineer-in-charge.					
1.09	8) Roof panels – The roof shall be constructed of 80mm (50mm base +30mm crest) thick Glasswool insulated sandwich panels with glasswool density of 24 + 2 kg/m ³ laminated with Pre-coated GL sheet at top and bottom side of the panel. The top sheet shall be high ribbed in trapezoidal shape and bottom sheet shall be Micro Ribbed Pre-Coated PPGL sheet of 0.5mm thickness. The top side of the roof panels shall have 30 mm crest at 200 mm centre to centre pitch with a flute for capillary action in full length on one side of the crest portion, so as to prevent the water leakages in the event of valley filled with water. The top edge of the panels shall have overlap joinery systems. The bottom edges of the panels shall have continuous lined tray systems on which the other panel rests or fits properly to provide a continuous engagement for the full length of the roof panels. The colour of the top side sheet will preferably be Appliance White of 20-30 microns Pure Polyester coating over 4-7 microns Primer on the top side and 5 microns of backer coat over the primer on the bottom side of the sheet. These panels are factory assembled in continuous manufacturing line into a complete unit to eliminate the necessity of field assembly of units prior to installation. The roof panels shall be screwed to purlins with SDST (Self Drilling and Self Tapping) screws. The effective cover width of the panel shall be of 1000 mm and length of the panels shall be as per transportable length. The roof shall be fitted with gutter made from PPGL sheet and suitable size PVC downtake pipes with all required hardware and accessories. The agency has to submit MTC for Glasswool and PPGL sheet as per the direction of Engineer-in-charge.					
1.10	9) Internal Wall – The room walls shall be constructed of 50 mm thick Glasswool insulated sandwich panels with glasswool density of 24 +/- 2 kg/m ³ , laminated with Pre-coated GL sheet outside and inside of walls. Both the sheet shall be AZ 150 with min 550 Mpa tensile strength of 0.5 mm TCT. The colour of the top side sheet will RAL 9002 of 20-30 microns Pure Polyester coating over 4-7 microns Primer on the top side and 5 microns of backer coat over the primer on the bottom side of the sheet. These panels are factory assembled in continuous manufacturing line into a complete unit to eliminate the necessity of field assembly of units prior to installation. The joining of panels shall have tongue and groove arrangement. The agency has to submit MTC for Glasswool and GL sheet as per the direction of Engineer-in-charge.					
1.11	10) Connections – All welding shall be carried out using MIG/MMA welding process connections as per suppliers/manufacturers design.					
1.12	11) Doors with frames – Aluminium Double leaf door : 1600 x 2100 mm - 12 Nos.; Aluminium Single leaf door- 1200 x 2100 mm - 9 Nos.; Aluminium Single leaf door- 900 x 2100 mm - 7 Nos as per approved plan including aluminium frame. Door made of Extruded Aluminium Jamb profile, half Glass (5 mm) and half Pre laminated board (12 mm) fitted on Aluminium powder coated (minimum thickness of powder coating 50 micron) door profile with AL hinges, AL tower bolt inside, AL L-Drop outside, door stopper & AL American-handle on both sides, hydraulic door closer, mortice latch, screw EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge etc. of approved make and upto the satisfaction of Engineer-in-charge.					
1.13	12) Windows with frame – Windows of size 900 x 1200 mm - 28 Nos. The windows shall be provided at desired locations as per drawing & design or as per approved shop drawing. The windows shall be in aluminium sections of horizontal sliding type. The windows shall be decorated by anodized aluminium extruded section powder coated in desired shade & colour fitted with sliding shutter, safety glass sheets of clear vision. The windows shall be provided with steel rain – shed made from PPGI material from outside. Windows with frame made of Extruded Aluminium Jamb profile, fully Glazed with glass (5 mm) fitted on Aluminium powder coated (minimum thickness of powder coating 50 micron) door profile with AL hinges, AL tower bolt inside, & AL American-handle, push lock, screw EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge etc. of approved make and upto the satisfaction of Engineer-in-charge.					
1.14	13) Ventilator – Ventilator of size 600 x 600 mm - 10 Nos. The ventilator shall be provided at desired locations as per drawing & design or as per approved shop drawing. The ventilator shall be made from PPGI sheet of 0.5 mm Thickness with tinted glass louvers of 5mm thickness, etc. complete as per the architectural drawings and the directions of engineer-in-charge etc. of approved make and upto the satisfaction of Engineer-in-charge.					

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1.15	14) False ceiling – Providing & fixing false ceiling at all height including providing & fixing of framework made of special section, power pressed from M.S. sheets and galvanised with zinc coating of 120 gms/ sqm (both side inclusive) as per IS : 277 and consisting of angle cleat of size 25mm wide x 1.6mm thick with flanges of 27mm and 37mm, at 1200mm c/c, one flange fixed to the ceiling with dash fastener 12.5mm dia x 50mm long with 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25 x10 x0.50mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I channels 45 x15 x 0.90mm running at the spacing of 1200 mm c/c, to which the ceiling section 0.5mm thick bottom wedge of 80mm with tapered flanges of 26 mm each having lips of 10.5mm, at 450mm c/c, shall be fixed in a direction perpendicular to G.I intermediate channel with connecting clip made out of 2.64mm dia x 230mm long G.I wire at every junction, including fixing perimeter channels 0.50mm thick 27mm high having flanges of 20mm and 30mm long, the perimeter of ceiling fixed to wall/ partitions with the help of Rawl plugs at 450mm centre, with 25mm long dry wall screws @ 230mm interval, including fixing of Calcium Silicate Board to ceiling section and perimeter channels with the help of dry wall screws of size 3.5 x25mm at 230mm c/c, including jointing & finishing to a flush finish of tapered and square edges of the board with recommended jointing compounds, jointing tapes, finishing with jointing compounds in three layers covering up to 150mm on both sides of joints and two coats of primer suitable for boards, all as per manufacture's specification and also including the cost of making opening for light fittings, grills, diffusers, cut outs 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: 8 mm thick Calcium Silicate Board made with Calcareous & Siliceous materials reinforced with cellulose fiber manufactured through autoclaving process.				
1.16	15) Flashings and Hardware: Flashings, Hardware's: The Prefabricated building shall be provided with U Channel, Internal and external flashing, Silicon Sealants, Rives, Nuts, Bolts, etc.				
1.17	16) Staircase and Steps: The staircase shall be provided of minimum width given in concept drawing and should be made using MS / Structural steel including SS railing. The staircase shall be clad with 6mm thick MS chequered plates in steps and 2mm thick MS plain sheet in risers of the staircase. Complete staircase structure except SS railings should be treated with one coats of red oxide primer and Two coats of synthetic Enamel Paint of 25 microns each of desired colour as per engineer in charge.				
1.18	17) Wall Tiling in wash area: Internal Surface of the walls of wash area shall be clad with 6 mm thick Fiber Cement board. Above this board, the vitrified Wall Tile upto 2.1 m height in colour, shade & size as approved by engineer in charge & as per manufacturer specifications of approved make fixed over the cement board with suitable adhesive of approved make.				
1.19	B. SANITARY WORKS				
1.20	Toilets - Toilet shall be furnished with required sanitary fittings of approved make -i.e. Western Style W.C. with flushing arrangement, Health Faucet with two way bibcock, toilet paper holder, wash basin with faucet, soap dispenser & Mirror, white vitreous china flat back urinal with flushing cistern etc. including all internal plumbing works such as cpvc pipes of required diameter, stop cocks, gate valve, drain pipes, etc. all complete as per the direction of E-I-C as per below BOQ and approved makes. All plumbing fixtures should be of C.P. brass material except china ware & mirror items and as per the directions of E.I.C.				
1.21	1. English EWC with cistern as single unit (wall mounted along with required brickwork for support) :- Qty. 12 Nos. Specifications as follows -Providing and fixing white vitreous china extended wall mounting water closet of size 780x370x690 mm of approved shape including providing & fixing white vitreous china cistern with dual flush fitting, of flushing capacity 3 litre/ 6 litre (adjustable to 4 litre/ 8 litres), including seat cover, and cistern fittings, nuts, bolts and gasket etc complete.				
1.22	2. Wash Basin with pedestal - Qty. 10 Nos. (Jaquar code of wash basin-QPS-WHT-7803PM+QPS-WHT-7303PM or equivalent) along with all necessary fixtures such as C.P. brass pillar cock with aerator of Jaquar make (product code ALI-CHR-85001 or equivalent). CP Brass 32mm size Bottle Trap, C.P. brass angle cock along with PVC connection pipe with brass unions, waste coupling, waste pipe, flanges, etc. of approved quality & make and as per the direction of Engineer-in-charge.				
1.23	3. Urinals Qty:- 06 Nos (Urinal Jaquar code- URS-WHT-13261 or equivalent) with partition (Jaquar code -JSE-CHR-810UC450X or equivalent), two CP brass brackets, flushing system (Jaquar code-PRS-CHR-077 or equivalent) including spreader, CP Brass 32mm size Bottle Trap, flanges all complete as per direction of Engineer-in-charge.				
1.24	4. Polished Mirror and other supporting arrangement:- Qty. 10 Nos. Specifications as follows -Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing : Rectangular shape 453x357 mm				
1.25	5. Coat Hook:- Qty. 12 Nos , Jaquar code - ACN-CHR-1161N or equivalent				
1.26	6. Hand Drier:- Qty. 6 Nos , Jaquar code - HDR-SSF-AK2807 or equivalent				
1.27	7. Toilet Paper Holder (stainless steel):- Qty. 12 Nos Jaquar code - ACN-CHR-1151N or equivalent				
1.28	8. Soap Dispenser:- Qty. 10 Nos ,Jaquar code - SDR-WHT-DJ0010F or equivalent				

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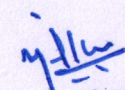
1.29	9. C.P. brass health faucet (Jaquar code-ALD-CHR-565 or equivalent) along with 2 way bib cock - 12 nos. (Jaquar code-DRC-CHR-37041 or equivalent)					
1.30	10. Toilet Cubicals - 12 Nos. Providing & fixing of modular toilet cubicles (Sturdo Classique-Evergreen series of Greenlam Industries or Titan 12 mm Box-up series of Merino or T-Line or approved equivalent) consisting of high pressure 12 mm thick compact laminated board as per IS 2046 (Indian Standards) and as per fire retardant BS-476/97 standards with phenolic core panels for partitions of intermediate divider, doors (The cubicle shall have dimensions of 1550 mm depth x 1000 mm width x 1980 mm height with a door size of minimum 600 mm(W) x 1750mm(H), head rail on top of panels and panels shall be fixed on the floor with a clearance of maximum 150 mm using stainless steel satin finish adjustable legs screwed to the floor.) including providing and finishing stainless steel (SS) lock set, SS door knob, SS gravity self-closing hinge, SS coat hook with door stopper, SS U channel, SS head rail, SS adjustable foot, SS tabular holder, SS head rail wall bracket, SS head					
1.31	12. Holding rod in handicapped toilet - 4 nos.					
1.32	13. UPVC nahani trap with grating - Qty- 18 nos. along with UPVC drainage line.					
1.33	C. ELECTRICAL WORKS					
1.34	Supply, installation, testing and commissioning of following electrical equipment / items as per technical specifications and directions of Engineer-in-Charge as required.					
1.35	1. 2ft x 2ft 36 W LED Down light Qty -180 Nos 2. LED Tube 18/22W Qty - 20 Nos 3. 15 W LED Down light Qty -20 Nos 4. Wall Mount Fan 2100mm sweep - Qty 44 Nos 5. Power Point 20A with MCB Qty - 30 Nos 6. Power Point 16A Qty - 50 Nos 7. Power Point 6A Qty - 80 Nos 8. Exhaust Fan 450mm sweep - Qty 10 Nos 9. Distribution Boards 12 Way TPN - Qty 4 Nos 10. GI Pipe Earthing: 2 Nos 11. Lighting Protection System: 1 Nos. 12. Modular Switch/Sockets as per approved drawing 13. PVC conduiting and cabling with FRLS insulated copper wires of suitable diameter as per technical specification.					
1.36	Electrical Make-					
1.37	LED light Fixture - As per AAI Approved make list Wall Mount Fan/Exhaust Fan - As per AAI Approved make list Copper Wire & Cable - As per AAI Approved make list Modular Switch & Sockets - As per AAI Approved make list Required PVC Conduit of different size - As per AAI Approved make list DBs & MCBs - As per AAI Approved make list All electrical items should as per AAI Approved make list.					
1.38	D. Fire Alarm and Detection System Works					
1.39	The design, supply, installation testing & commissioning of entire fire alarm system shall conform to BS / NFPA 72. All devices including Main Fire Alarm Panel shall be UL / EN listed and as per technical specification.					
1.40	1. Addressable main Fire Panel 2. Addressable multi sensor detector 3. Addressable Manual Call Point 4. Addressable Hooter 5. Addressable network repeater panel 6. Addressable auto align beam detector 7. Monitor Module (input to fire alarm panel) 8. Control Module (output from fire alarm panel) 9. Fire Cable: Multi core Copper conductor cable shall be PVC insulated, FRLSZH type conforming to BIS specification.					
1.41	E. Air conditioning					
1.42	Supply, installation testing & commissioning of Energy Efficient air-conditioning system as per design and heat load calculations as per instruction of Engineer In-Charge and as per relevant technical specifications.					
1.43	1. VRF/VRV/Split High wall/Cassette airconditioning indoor unit and outdoor unit Qty: 60 Ton 2. DBs for Air conditioning electrical supply as per requirement					
1.44	(i)Material shall be supplied in knock down conditions and shall be erected at site with proper safety and HSE regulations.					

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1.45	(ii) Drawing approval for manufacturing - The bidder has to submit the super structure design, shop drawing with Bill of Materials as per specification and size required by AAI for final approval (The design must be vetted by IIT, NIT).					
1.46	Total of Item no. 1	1.00	Job	32461812.00	32461812.00	INR Three Crore Twenty Four Lakh Sixty One Thousand Eight Hundred & Twelve Only
2	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 : 250 mm dia. R.C.C. pipe.	70.00	metre	1000.00	70000.00	INR Seventy Thousand Only
3	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: 100x100 mm size P type With common burnt clay F.P.S. (non modular) bricks of class designation 7.5.	2.00	each	1400.00	2800.00	INR Two Thousand Eight Hundred Only
4	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg), R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 fine sand : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand), finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design: Inside dimensions 600x 850 mm and 45 cm deep for pipe line with three or more inlets : With common	2.00	each	12000.00	24000.00	INR Twenty Four Thousand Only
5	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) with R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 coarse sand (zone-III) : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand (zone-III) : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm 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 120x90 cm and 90 cm deep including C.I. cover with frame (heavy duty) 560 mm internal diameter, total weight of cover and frame to be not less than 208 kg (weight of cover 108 kg and weight of frame 100 kg) : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	2.00	each	12000.00	24000.00	INR Twenty Four Thousand Only
6	Extra for depth for manholes : Size 120x90 cm With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	1.20	metre	750.00	900.00	INR Nine Hundred Only
7	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 : For pipes 100 to 250 mm diameter	1.00	each	2200.00	2200.00	INR Two Thousand Two Hundred Only
8	Dismantling roofing including ridges, hips, valleys and gutters etc., and stacking the material within 50 metres lead of: G.S. Sheet	144.00	sqm	600.00	86400.00	INR Eighty Six Thousand Four Hundred Only
9	Dismantling steel work in built up sections in angles, tees, flats and channels including all gusset plates, bolts, nuts, cutting rivets, welding etc. including dismembering and stacking within 50 metres lead.	3000.00	kg	22.00	66000.00	INR Sixty Six Thousand Only
10	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : 1:1½:3 (1 Cement: 1½ coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)	10.00	cum	8000.00	80000.00	INR Eighty Thousand Only
11	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : 1:4:8 (1 Cement : 4 coarse sand (zone-III) derived from natural sources : 8 graded stone aggregate 40 mm nominal size derived from natural sources)	10.00	cum	7000.00	70000.00	INR Seventy Thousand Only
12	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge. Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	10.50	cum	2300.00	24150.00	INR Twenty Four Thousand One Hundred & Fifty Only
13	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 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 consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m : All kinds of soil. Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia.	70.00	metre	700.00	49000.00	INR Forty Nine Thousand Only
14	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. All kinds of soil	10.00	cum	350.00	3500.00	INR Three Thousand Five Hundred Only
15	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 : 150 mm diameter	20.00	meter	1300.00	26000.00	INR Twenty Six Thousand Only

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16	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 : 150 mm diameter S.W. pipe	20.00	meter	6000.00	120000.00	INR One Lakh Twenty Thousand Only
17	Providing and placing on terrace (at all floor levels) polyethylene water storage tank, IS : 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.	2000.00	per litre	30.00	60000.00	INR Sixty Thousand Only
18	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 clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. Internal work - Exposed on wall. 25 mm nominal dia Pipes	50.00	meter	900.00	45000.00	INR Forty Five Thousand Only
Total in Figures					33215762.00	INR Three Crore Thirty Two Lakh Fifteen Thousand Seven Hundred & Sixty Two Only
Quoted Rate in Words				INR Three Crore Thirty Two Lakh Fifteen Thousand Seven Hundred & Sixty Two Only		


 Agm (E-4)
 11.9.23

Signature Not Verified

Digitally signed by UJAWAL PRAKASHRAO KATHALE
 Date: 2024.03.27 13:17:14 IST
 Location: eProcurement System for Central PSUs

