

भा.वि.प्रा./इंजि/ व. प्रबंधक(इंजि-वि) /एनईआर-जीएचटी/ डब्ल्यू ओ-01 /2020-21/  
AAI/ENGG/SM (E-E)/NER-GHT/ WO-01/ 2020-21/

04.05.2020

सेवा मे, /To,  
मैसर्स: हियू सर्विस प्राइवेट लिमिटेड  
M/s Hue Service Pvt. Ltd.,  
हाउस नं. 60, द्वितीय तल, भुवन रोड  
House 60, 2<sup>nd</sup> Floor, Bhuban Road,  
उज़ान बाज़ार, गुवाहाटी-781001  
Uzan Bazar, Guwahati --781001

**Sub: - Provision of CCTV system including 3 years all inclusive comprehensive maintenance contract (AICMC) after DLP of 3 years for RED office complex and AAI residential colony at Guwahati Airport.**

संदर्भ /Reference:

1. आपकी वित्तीय निविदा CPP पोर्टल के माध्यम से 24.02.2020 को खुली। /  
Your financial bid opened on 24.02.2020 through CPP Portal.
2. (निविदा आई. दि:/ Tender ID: 2020\_AAI\_41154\_1)  
NIT No & Dt. - AAI/ELECT/GHY/CCTV/NIT02/19-20/6118-23, Dt.27.01.2020

महोदय /Sir (s),

1. उल्लेखित कार्य हेतु आपकी निविदा अध्यक्ष, भारतीय विमानपत्तन प्राधिकरण के द्वारा संलग्न अनुसूची के अनुसार आपके द्वारा उद्धृत मद दर जिसकी कुल राशि रु 45,62,413.00 (पैंतालीस लाख बासठ हजार चार सौ तेरह रुपये मात्र) जो कि अनुमानित राशि रु 47,68,857.00..से 4.33% प्रतिशत कम है, एतद्वारा स्वीकार की जाती है।

Your 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. 45,62,413.00 (Rupees Forty Five Lakhs Sixty Two Thousand Four Hundred Thirteen only) which is 4.33% below the estimated cost of Rs. 47,68,857.00.

2. संयुक्त.महाप्रबंधक (अभि-वि), भारतीय विमानपत्तन प्राधिकरण, क्षेत्रीय मुख्यालय, उ.पू.क्षेत्र, इस कार्य के इंजीनियर प्रभारी होंगे। आपसे अनुरोध है कि आप संविदा करार पर हस्ताक्षर करने एवं उसे पूरा करने हेतु इस पत्र के जारी किये जाने के 15 दिन के भीतर संयुक्त.महाप्रबंधक (अभि-वि), भारतीय विमानपत्तन प्राधिकरण, क्षेत्रीय मुख्यालय, उ.पू.क्षेत्र के कार्यालय में उपस्थित हों। संविदा करार रु.100/- (सौ रुपये मात्र) के न्यायिकेतर (नॉन ज्युडिशियल) स्टाम्प पेपर पर बनाया जाएगा और स्टाम्प पेपर की लागत आपको वहन करनी होगी।

Jt.General Manager(E-E), AAI, RHQ, NER shall be the Engineer-in-Charge of the work. You are requested to attend office of the Engineer-in-charge i.e. Jt. General Manager(E-E), AAI, RHQ, NER within 15 days from the date of issue of this letter, 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.

3. आपके निविदा के साथ प्राप्त रु 95,377.00 (पांचानवे हजार तीन सौ सतहतर रुपये मात्र) की अग्रिम धन राशि को संविदा दस्तावेज के पृष्ठ 37 एन आई टी पर दी गई शर्त 1 (A) के अनुसार सुरक्षा जमा के हिस्से के रूप में परिवर्तित कर दिया गया है। कृपया इस पत्र के जारी होने के 10 दिन के भीतर शेष प्रतिभूति जमा के रूप में रु 3,60,864.00 (तीन लाख साठ हजार आठ सौ चौसठ रुपये मात्र) जमा करें अन्यथा इस राशि की कटौती संविदा दस्तावेज के पृष्ठ 37 एन आई टी पर दी गई शर्त 1(A) के अनुसार आपके चालू बिलों से काट ली जाएगी।

The earnest money amount of Rs. 95,377.00 (Rupees Ninety Five Thousand Three Hundred Seventy Seven only) received along with your Tender has been converted as part of security deposit as per Clause no. 1 (A) of GCC on page no. 37 in contract document. Please deposit Rs. 3,60,864.00 (Rupees Three Lakhs Sixty Thousand Eight Hundred and Sixty Four only) towards security deposit within 10 (Ten) days from the date of issue of this letter, failing which, the same will be deducted as per condition of Clause no. 1 (A) of GCC on page no. 37 in contract document.

4. आपसे अनुरोध है कि संविदा श्रमिक (विनियमन एवं समापन) अधिनियम 1970 और संविदा श्रमिक (विनियमन एवं समापन) केन्द्रीय नियमावली 1971, अधिन, केन्द्रीय और राज्य सरकार के न्यूनतम मजदूरी अधिनियम और ई.पी.एफ.एक्ट, 1952 एवं ई. एस. आई. एक्ट नियमों का पालन करें।

You are requested to comply with provision of Contract Labour (Regulation and Abolition) Act of 1970 and contract (Regulation and Abolition) Central rules 1971, Minimum Wages Act & Rules, EPF Act, 1952 and ESI act thereof Central & State Governments.

5. आपको निर्देश दिए जाते हैं कि आप वरिष्ठ प्रबंधक (अभि-वि), भारतीय विमानपत्तन प्राधिकरण, क्षेत्रीय मुख्यालय, उ.पू.क्षेत्र से तत्काल सम्पर्क करें जो कि आपको कार्यस्थल सुपेर्द करने की व्यवस्था करेंगे।  
You are also directed to contact Senior Manager (E-E), AAI, RHQ, NER immediately who will arrange to hand over the site to you.

6. काम के प्रारंभ के लिए लामबंदी / तैयारी गतिविधियों को शुरू करने के लिए आपसे अनुरोध कर रहे हैं। कृपया यह नोट कर लें कि काम करने का समय 02 (दो) महीने है जिसे इस पत्र के जारी होने की तारीख के 10 दिन बाद से गिना जाएगा।

You are here by requested to start mobilization/preparatory activities for the commencement of work. Please note that the time allowed for carrying out the work shall be 02 (Two) months and the same shall be reckoned from the 10th day from the issue of this letter.

7. संविदा के संबंध में आगे किया जाने वाला पत्राचार सामान्यतः इंजीनियर प्रभारी से किया जाए।  
Any further correspondence in connection with the contract should normally be addressed to the Engineer-in-Charge.
8. कृपया पत्र की पावती भेजें तथा साथ में संलग्न इस पत्र की दूसरी प्रति पर स्वीकारोक्ति के रूप विधिवत हस्ताक्षर करके हमें वापस भेजें।  
Please acknowledge the receipt and return the duplicate copy of this letter enclosed herewith after duly signing it to the undersigned as a token of acceptance.
9. यदि कोई विसंगति पाई जाती है तो अंग्रेजी भाषा ही मान्य होगी।  
In case any discrepancy is found, then English version will be taken as correct.

धन्यवाद/ Thanking you

Encl: 1. Schedule of Quantities

भवदीय / Yours faithfully,

(रोहित वर्मा) / (Rohit Verma)

वरिष्ठ प्रबंधक(अभि-विद्युत)

Senior Manager (E-E)

भा.वि.प्रा., क्षे.मु. उ.पू.क्षे, गुवाहाटी

AAI, RHQ, NER, Guwahati.

# SCHEDULE OF QUANTITIES

Name of Work: Provision of CCTV system including 3 years all inclusive comprehensive maintenance contract (AICMC) after DLP of 3 years for RED Office Complex and AAI Residential Colony at Guwahati Airport.

Tender Id: 2020\_AAI\_41154\_1

| Sl.No | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No. of Qty | Units | Rate        | Amount      |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------|-------------|-------------|
| 1     | <p><b>SH A: SITC of CCTV system</b></p> <p><b>SITC of following :</b></p> <p>(i) <b>64 channel NVR</b> with minimum Quad-core embedded processor, Embedded LINUX OS or Windows, 1 HDMI up to 3840X2160 resolution output, with one channel audio input and one channel audio output, suitable for Live view of 16 Nos, 1080P cameras and recording playback, 1GBPS network Card, should support HTTP, TCP/IP, IPV4/IPV6, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS, FTP, Alarm Server, IP Search, P2P, network throughput Input 320 Mbps; Output 320 Mbps, Recording Mode Schedule (Regular/Continuous, Motion Detection, Alarm); Manual; Stop, the NVR should be able to monitor from anywhere using the mobile apps for both Apple® and Android™ devices, should support at least 12 user access the NVR simultaneously, etc. complete as required.</p> <p><b>Make : Bosch, Pelco, Ultrak, Honeywell</b></p> <p>(ii) <b>64 TB internal inbuilt storage</b> supports Surveillance grade HDDs (8 TB Surveillance HDD each)</p> <p>(iii) <b>2 kVA, 1 Phase, 50Hz, 230V, IGBT Based Online UPS</b> with inbuilt 12V SMF batteries, minimum back up 30 minutes, suitable to input voltage range of 170V to 280V and frequency range 40 Hz to 60 Hz etc. complete as required.</p> <p><b>Make : Emerson, Vertiv, APC, Numeric</b></p> <p>(iv) <b>17U Floor Standing Rack</b> has steel sheet punched, formed, welded and Powder coated, 14001 Certified Company &amp; UL Listed, welded frame with side panel and vented top cover, 600mm wide &amp; 1000mm deep, conforms to DIN 41494 or Equivalent EIA / ISO / EN/CEA Standard, 1 No. PDU, 1Ph, 230V, 32A, 50/60Hz, Zero U standard with minimum 6 or 12 Indian Round Pin 5/15A sockets, two Circuits of 16A MCB, etc. complete as required.</p> <p>(v) <b>Indoor Managed Network Switch</b> 20 ports, 10/100/1000T PoE and 4 Combo ports. Minimum PoE power budget 185 watt or better, min 56Gbps or higher Switching capacity, min 41Mbps or higher forwarding rate, Port Mirroring, IEEE 802.1d Spanning-Tree, IEEE 802.1w Rapid Spanning-Tree, IEEE 802.1s Multiple Spanning-Tree, Broadcast Storm Protection, Port Based VLAN, Support SNMPv1/v2/v3, Web-based configuration, Compliant UL 1950, UL94V-0, WEEE, IEC 68-2-32, IEC 68-2-29, IEC 68-2-36., FCC/EN55022 Class A, VCCI Class A, C-Tick, EN60950 (TUV), EN55024, CE, CSA / CUL and RoHS, loaded with 2 Nos of SM 1G SFP Transceivers, etc. complete as required.</p> <p>(vi) <b>OFC cable termination</b> including LIU with Pigtail, Patch cord with SC/LC connectors, complete as required. ( applicable for OFC cable termination)</p> <p>(vii) <b>CAT 6 cable termination</b> including Patch Panel, Patch cord with RJ 45 connectors etc. complete as required. (applicable for CAT6 cable termination)</p> | 1          | JOB   | 4,92,894.00 | 4,92,894.00 |
| 2     | <p><b>SITC of full HD LED Monitor</b> of size not less than 43 inches including wall-bracket complete as required.</p> <p><b>Make: LG, Samsung, Sony, Bosch, Ultrak, Pelco</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1          | JOB   | 26,600.00   | 26,600.00   |
| 3     | <p><b>SITC of indoor dome type CCTV camera</b> of 2 MP, 1/2.8" Progressive Scan CMOS; H.265, 0 Lux with IR range 20 m or Higher ;30fps/60fps(1920x1080); 3mm fixed lens; 120dB WDR; 3 streams; 3D DNR; BLC; IP66; IK10; PoE; Built-in micro SD/SDHC slot; with accessories as per specification, with video analytic: Face Detection, Object Abandoned, Object Missing, Intrusion, cyber secured UL/FCC/EN / RoHS certified with mounting/fixing accessories including software, termination with existing CAT 6/ OFC cable, etc. complete as per actual site requirement.</p> <p><b>Make : Bosch, Pelco, Ultrak, Honeywell</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 36         | JOB   | 22,610.00   | 8,13,960.00 |

| Sl.No | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No.of Qty | Units | Rate      | Amount      |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------|-------------|
| 4     | SITC of outdoor bullet type CCTV camera of 2 MP IR Bullet Camera, 1/2.8" progressive scan CMOS, Automatic motorised, vari-focal 2.8~ 12mm, 120dB WDR, 60 m IR Range (Internal/External), PoE, Built-in micro SD/SDHC slot, Housing - IP66 , IK10, H.265,Cyber Security Hardware chipset for private key, ONVIF, video analytic like: Motion Detection, Video Tampering, Face Detection, Audio Detection, Object Abandoned, Object Missing supported outdoor bullet camera with mounting/fixing accessories including software.termination with existing CAT 6/ OFC cable,etc. complete as per actual site requirement.<br><b>Make : Bosch, Pelco, Ultrak, Honeywell</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 20        | JOB   | 36,575.00 | 7,31,500.00 |
| 5     | <b>SITC of following :</b><br><b>(i) Indoor Managed Network Switch with 8 ports</b> 10/100/1000T PoE, 2 combo ports , minimum 75 watt PoE or better, min 20Gbps or higher Switching capacity, min 14Mpps or higher forwarding rate, Port Based VLAN, support Broadcast Storm Protection, Port Mirroring ,IEEE 802.1d Spanning-Tree, IEEE 802.1w Rapid Spanning-Tree,IEEE 802.1s Multiple Spanning-Tree, Web-based configuration, Complaint of UL 1950,UL94V-0,WEEE, IEC 68-2-32, IEC 68-2-29, IEC 68-2-36, FCC/EN55022 Class A, VCCI Class A,C-Tick, EN60950 (TUV), EN55024, CE, CSA / CUL and RoHS, loaded with 2 Nos of SM 1G SFP Transceivers etc.complete as required.<br><b>(ii) 600VA, 1 Phase, 50Hz, 230V, Line-Inetractive UPS</b> with 12V SMF inbuilt battery back up of 30 minutes suitable to input voltage range of 220 V to 230 V and frequency range 50 hz to 60 hz, etc. complete as required .<br><b>Make : Emerson, Vertiv, APC,Numeric</b><br><b>(iii) 6U Wall Mount Rack</b> has steel sheet punched, formed, welded and Powder coated, 14001 Certified company & UL Listed, welded frame with side panel and vented top cover, 550mm wide & 600mm deep, conforms to DIN 41494 or equivalent EIA /ISO / EN/CEA Standard, 1 No of PDU, 1Ph, 230V, 8A, with 6 Indian round pin 5A sockets, 8A Fuse, etc.complete as required.<br><b>(iv) OFC cable termination</b> including LIU with Pigtail ,Patch cord with SC/LC connectors, etc. complete as required.<br><b>( applicable for OFC cable termination)</b><br><b>(v) CAT 6 cable termination</b> including Patch Panel,Patch cord with RJ 45 connectors etc. complete as required. (applicable for CAT6 cable termination)                             | 5         | JOB   | 74,066.00 | 3,70,330.00 |
| 6     | <b>SITC of following components :</b><br><b>(i) Indoor Managed Network Switch</b> 20ports , 10/100/1000T PoE and 4 Combo ports. Minimum PoE power budget 185Watt or better, min 56Gbps or higher Switching capacity, min 41Mpps or higher forwarding rate, Port Mirroring ,IEEE 802.1d Spanning-Tree, IEEE 802.1w Rapid Spanning-Tree,IEEE 802.1s Multiple Spanning-Tree, Broadcast Storm Protection, Port Based VLAN, Support SNMPv1/v2/v3 , Web-based configuration, Compliant UL 1950,UL94V-0,WEEE, IEC 68-2-32, IEC 68-2-29, IEC 68-2-36,, FCC/EN55022 Class A, VCCI Class A,C-Tick, EN60950 (TUV), EN55024, CE, CSA / CUL and RoHS, loaded with 2 Nos of SM 1G SFP Transceivers, etc. complete as required.<br><b>(ii) 600VA, 1 Phase, 50Hz, 230V, Line-Inetractive UPS</b> with 12V SMF inbuilt battery back up of 30 minutes suitable to input voltage range of 220 V to 230 V and frequency range 50 hz to 60 hz, etc. complete as required .<br><b>Make : Emerson, Vertiv, APC,Numeric</b><br><b>(iii) 6U Wall Mount Rack</b> has steel sheet punched, formed, welded and Powder coated, 14001 Certified company & UL Listed, welded frame with side panel and vented top cover, 550MM Wide & 600MM Deep, conforms to DIN 41494 or Equivalent EIA /ISO / EN/CEA Standard, 1 No of PDU, 1Ph, 230V, 8A, with 6 Indian Round Pin 5A sockets, 8A Fuse etc. complete as required.<br><b>(iv) OFC cable termination</b> including LIU with Pigtail ,Patch cord with SC/LC connectors etc. complete as required. ( applicable for OFC cable termination)<br><b>(v) CAT 6 cable termination</b> including Patch Panel,Patch cord with RJ 45 connectors, etc. complete as required. (applicable for CAT6 cable termination) | 1         | JOB   | 84,850.00 | 84,850.00   |

*[Handwritten signature]*

| Sl.No | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No. of Qty | Units | Rate   | Amount      |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------|--------|-------------|
| 7     | Supply of 4 pairs, Unshielded Twisted Pair, Category 6, TIA / EIA 568-C.2, 23 AWG solid bare copper or better, Polyethylene, Sheath Fire retardant PVC Compound (FRPVC) Flame Rating : 60 deg. C As per UL 1685 CM/CMR, Minimum 250Mhz (certified) support up to 600 Mhz, UL Verified, ISO 9001 and 14001 certified<br>Make : RALLISON/ DELTON/ RHINO/ CM/ POLY/CAB/ LEGRAND/ UNICAB/ AVOCAB/ RR KABEL/ GEMSCAB/ CORDS/ SCHNEIDER                                                                                                                                                                                                                                                               | 1000       | Mtrs. | 24.00  | 24,000.00   |
| 8     | Supply of CAT 6, 4-Pair of Solid Insulated Copper 23 AWG, ANSI/TIA/EIA-568 and ISO/IEC 11801, Flammability Test: CM, Conductor Dia. Nom. (mm) : 0.565, Polyester Binder, Outer Diameter: 7.30mm +0.2, Tensile Strength (Mpa): ≥13.8, Frequency /Attenuation /NEXT/ PSNEXT/ ACRF /PSACRF /RL/DELAY Tested upto 250 Mhz, ISO 9001:2008, ISO 9001:14001, ISO 50001 certified manufacturing unit<br>Make : RALLISON/ DELTON/ RHINO/ CM/ POLY/CAB/ LEGRAND/ UNICAB/ AVOCAB/ RR KABEL/ GEMSCAB/ CORDS/ SCHNEIDER                                                                                                                                                                                      | 200        | Mtrs. | 97.00  | 19,400.00   |
| 9     | Supply of fiber optic cable, with numbers of core not less than 6, Single Mode, OS2, Armored, Loose Tube – Unitube, CSTA, Jelly Filled, 9/ 125, Telcordia's GR-20 and ITU-T 652.D Compliance, OS2, BELLCORE GR 20 / IEC 794-1, Cable must have water blocking compound, maximum crush resistance not less than 2000N/100mm, High density polyethylene, anti - termite, anti - rodent suitable for direct burial application., Polymer Coating over Corrugated Steel tape, As per ANSI/TIA-568-C.3 and ISO/IEC-11801, ICEA-640<br>Make : CRYSTAL / RALLISON / KEI / WORLD/CAB / RAVIN / DELTON / DYNAMIC / RHINO / CM/ POLY/CAB / UNICAB / AVOCAB / RR KABEL / GEMSCAB / HAVELLS / BONTON/ CORDS | 2000       | Mtrs. | 41.00  | 82,000.00   |
| 10    | Supply of 3 Core, 1.5 SQMM copper conductor XLPE insulated PVC sheathed armoured cable conforming to IS 7098 Part I-1988 with upto date amendment as required.<br>Make : RALLISON/ DELTON/ RHINO/ CM/ POLY/CAB/ UNICAB/ AVOCAB/ RR KABEL/ GEMSCAB/ CORDS/ SCHNEIDER                                                                                                                                                                                                                                                                                                                                                                                                                             | 200        | Mtrs. | 126.00 | 25,200.00   |
| 11    | Supply and fixing of 25 mm of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as per technical specifications complete as required.                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 800        | Meter | 36.00  | 28,800.00   |
| 12    | Drawing of CAT 6, 4 pairs, UTP or SF/UTP cable in the existing surface/recessed steel /PVC conduit as per technical specifications complete as required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 800        | Meter | 23.00  | 18,400.00   |
| 13    | Laying and fixing of one number CAT 6, 4 pairs, UTP or SF/UTP cable or OFC on wall surface as per technical specifications complete as required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 200        | Meter | 30.00  | 6,000.00    |
| 14    | Laying of one number OFC in the existing RCC/ HUME/ METAL/HDPE pipe as per technical specifications complete as required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1800       | Meter | 73.00  | 1,31,400.00 |
| 15    | Supplying and laying of 25 mm dia (nominal), PN 12.5 pressure rating, ISI marked HDPE pipe (PE 100) along with all accessories like socket, bend, couplers etc. conforming to relevant IS complete with fitting and cutting, jointing etc.direct in ground (25 cm below ground level) including excavation and refilling the trench but excluding sand cushioning and protective covering etc., complete as required.                                                                                                                                                                                                                                                                           | 1800       | Meter | 48.00  | 86,400.00   |
| 16    | Supplying and laying of 25 mm dia (nominal), PN 12.5 pressure rating, ISI marked HDPE pipe (PE 100) along with all accessories under the road/ drain/ hard standing i/c excavation , laying of pipe,back filling of earth and making good the road/ surface / drain similar to existing one complete as per site requirements.                                                                                                                                                                                                                                                                                                                                                                  | 100        | Meter | 48.00  | 4,800.00    |
| 17    | Supplying and fixing of 25 mm dia (nominal), PN 12.5 pressure rating, ISI marked HDPE pipe (PE 100) along with all accessories on wall/surface for cable protection etc as per technical specifications complete as required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 100        | Meter | 48.00  | 4,800.00    |

| SI.No | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No.of Qty | Units | Rate        | Amount      |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-------------|-------------|
| 18    | Supplying and fixing 25 mm dia PVC flexible pipe along with all accessories like coupler etc. as per technical specifications complete as required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 400       | Mtrs. | 33.00       | 13,200.00   |
| 19    | <p><b>SITC of following components</b></p> <p>(i) 16 channel NVR with minimum Quad-core embedded processor, Embedded LINUX OS / Windows OS, 1 HDMI up to 3840x2160 resolution output, with one channel audio input and one channel audio output, suitable for live view of 16 Nos. 1080P cameras and recording playback, 1 GBPS network Card, should support HTTP, TCP/IP, IPV4/IPV6, NTP, DHCP, DNS, IP Filter, PPPOE, DDNS, FTP, Alarm Server, IP Search, P2P, onboard 16 ports POE IEEE802.3at, network throughput Input 320 Mbps; Output 320 Mbps, Recording Mode Schedule (Regular/ Continuous, Motion Detection, Alarm); the NVR should be able to monitor from anywhere using the mobile apps for both Apple® and Android™ devices, should support at least 12 user access the NVR simultaneously etc. complete as required.</p> <p>Make : Bosch, Pelco, Ultrak, Honeywell</p> <p>(ii) 16 TB internal storage supports Surveillance grade HDDs expandable upto 64 TB (8TB Surveillance HDD each)</p> <p>(iii) 2 kVA, 1 Phase, 50Hz, 230V, IGBT Based Online UPS with inbuilt 12V SMF batteries, minimum back up of 30 minutes, suitable to input voltage range of 170V to 280V and frequency range 40 hz to 60 hz complete as required . Make : Emerson, Vertiv, APC, Numeric</p> <p>(iv) 6U Wall Mount Rack has steel sheet punched, formed, welded and Powder coated, 14001 Certified company &amp; UL Listed, welded frame with side panel and vented top cover, 550mm wide &amp; 600mm deep, conforms to DIN 41494 or Equivalent EIA /ISO / EN/CEA Standard, 1 No.of PDU, 1Ph, 230V, 8A, with 6 Indian Round Pin 5A sockets, 8A Fuse etc. complete as required.</p> <p>(v) Indoor Managed Network Switch with 8*10/100/1000T PoE, 2 combo ports , minimum 75 watt PoE or better, min 20Gbps or higher switching capacity, min-14Mbps or higher forwarding rate, Port Based VLAN, support Broadcast Storm Protection, Port Mirroring ,IEEE 802.1d Spanning-Tree, IEEE 802.1w Rapid Spanning-Tree, IEEE 802.1s Multiple Spanning-Tree, Web-based configuration, Complaint of UL 1950 UL94V-0, WEEE, IEC 68-2-32, IEC 68-2-29, IEC 68-2-36, FCC/EN55022 Class A, VCCI Class A-C-Tick, EN60950 (TUV), EN55024, CE, CSA / CUL and RoHS, loaded with 2 Nos of SM 1G SFP Transceivers etc. complete as required.</p> <p>(vi) OFC cable termination including LIU with Pigtail ,Patch cord with SC/LC connectors, complete as required. ( applicable for OFC cable termination)</p> <p>(vii) CAT 6 cable termination including Patch Panel, Patch cord with RJ 45 connectors etc. complete as required. (applicable for CAT6 cable termination)</p> | 1         | JOB   | 2,42,710.00 | 2,42,710.00 |

| Sl.No | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No. of Qty | Units | Rate        | Amount      |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------|-------------|-------------|
| 20    | <p>SITC of following components</p> <p>(i) Industrial Grade Managed Switch with minimum 4x10/100 Base-T PoE+ ports and 2x100/1000X SFP ports. Minimum PoE budget should be 120Watt, min. 4.8 Gbps, Console port: RJ45 x 1 or Equivalent. Min 2K MAC address table and support 2K VLAN simultaneously, 48 VDC Redundant power inputs. Min. IP 30/31 Metal Case, Switch enclosure should be with Aluminium Shell, DIN Rail / Wall mount support, Operating Temperature: -10 - 75°C, Storage Temperature: -40 - 85°C, Switch Should be UL, EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN60068-2-27, EN60068-2-6, RoHS and NEMA TS2, Rapid Ring Protection /resiliency technology as per the IEEE 802.17 / RPR / ERPS or equivalent technology providing the convergence time as per the standards specified above for less than/sub 50 millisecond convergence. VLAN IEEE 802.1Q, GVRP, double tagging (Q-in-Q), Port Based VLAN, LACP, RSTP, MSTP, loaded with 2 Nos of SM 1G SFP Transceivers.</p> <p>(ii) 600VA, 1 Phase, 50Hz, 230V, Line-Intractive UPS with 12V SMF inbuilt battery back up of 30 minutes suitable to input voltage range of 220 V to 230 V and frequency range 50 hz to 60 hz, etc. complete as required. Make : Emerson, Vertiv, APC, Numeric</p> <p>(iii) OFC cable termination including LIU with Pigtail, Patch cord with SC/LC connectors, etc, complete as required. (applicable for OFC cable termination)</p> <p>(iv) CAT 6 cable termination including Patch Panel, Patch cord with RJ 45 connectors etc. complete as required. (applicable for CAT6 cable termination)</p> <p>(v) Pole mount Enclosure of size 06UH x 600W x 500D, All Round welded construction with through design degree opening with concealed hinges, Front Hinged Single Door with Hood Provision, 130, Top with Rain Canopy and 1 no. Fan Provision, Bottom flush type gland plate, with rear wall for wall mounting provision, Foam Gasketing, 04 number 19" recess angle, Finish RAL 7035 STR, Rain Canopy of size 600W x 500D -1 No. Pole mounting bracket -2 Nos., Pole clamp 'C' Channel Bracket- 4 Nos., IP54 Inlet/Outlet Filter - Snap type with PU Gasket Overall Grill Size -148 x 148 - 2 Nos., Filter Hood for 148 x 148 Filter - 1 No., Fan-1 No., Power Distribution Unit - 06 Amp 6 x Sockets</p> <p>(vi) Power Input Line surge protector</p> <p>(vii) Data (Ethernet) line Surge Protector</p> | 3          | JOB   | 1,35,092.00 | 4,05,276.00 |
| 21    | <p>Supply, Erection of Galvanized pole made out of 150 mm nominal dia medium class Gi pipe of 6 metre long with clear height above ground level not less than 5 mtr. including earthing connection complete as required. The pole shall be installed in RCC foundation: 1:2:4 i.e 1 cement : 2 coarse sand : 4 graded stone of size 1200mm X 400mm X 400mm and P.C.C foundation of 1:4:8 i.e 1 cement : 4 coarse sand: 8 graded stone of size 150mm X 600mm X 600mm by laying iron bar mesh including providing two numbers 25 mm dia 1.0 metre long HDPE pipe to carry loop in loop out cables etc. complete as required.</p> <p>GI Pipe make - PRAKASH SURYA / TATA/ HSL/ JINDAL</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3          | JOB   | 26,700.00   | 80,100.00   |
| 22    | <p>SITC of point to point 5 Ghz 800 Mbps or Higher Outdoor Wireless Radio , Radio- 802.11ac/n/a Radio Frequency Range: 5.150 -5.250 GHz 5.250 - 5.350 GHz 5.470 - 5.725 GHz 5.725 - 5.825GHz Tx Power 27dBm Rx Sensitivity 867Mbps: - 67dBm@10% PER 300M: -74dBm@10% PER 54M: -78dBm@10% PER 1M: -98dBm@10% PER, Antenna-25dBi dual-polarized panel directional antenna Beam width (HPBW) Horizontal: &gt;10°, Vertical:&gt;10° Open space up to 1-45km or better, Interfaces-1 x 10/100/1000 Base-T Ethernet Gigabit LAN with Passive PoE Grounding Terminal, Security - Integrated Firewall WPA/WPA2; WPA-PSK / WPA2-PSK Encryption; 64/128-bit WEP, Enclosure Die-cast Aluminium, Ingress protection IP67 , Lighting Protection 8kV or Higher , ESD Protection 16kV or Higher, Power 24VDC or PoE, CE, FCC, RoHS Compliant.</p> <p>Make : Cisco, Ubiquiti, Aruba, WIS</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1          | JOB   | 48,545.00   | 48,545.00   |

*[Handwritten Signature]*

| Sl.No | Description of Work / Item(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No.of Qty | Units                 | Rate        | Amount              |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------------------|-------------|---------------------|
| 23    | Remote Viewer<br>(i) SITC of client Machine PC i7 8Gen Processor 8 GB RAM, 1TB internal HDD, 1 GBPS NIC, 4GB Dedicated Graphics Card with 32 Inch Monitor, NVR Viewer software for view multi NVR in a single software over Internet/Intranet. Main video viewing screen capable of showing 1, 4, 9, 16, and other customized split salvos of live or recorded video. Standard presets shall be customizable to the user preferences. Capable of saving current salvo as a View and allowing the user to drag this view at any later point in time. Capable of exporting user selected image or video clips in encrypted formats. Capable of attaching a digital signature for authentication of exported clips etc. complete as required.<br>PC make - HP / DELL / WIPRO / IBM<br>(ii) 600VA, 1 Phase, 50Hz, 230V, Line-Inertive UPS with 12V SMF inbuilt battery back up of 30 minutes suitable to input voltage range of 220 V to 230 V and frequency range 50 hz to 60 hz, etc. complete as required. Make : Emerson, Vertiv, APC, Numeric and<br>Mobile Viewing Software capable to view live and recorded video on mobile, and streaming data route through Indian, UK and US servers, declaration pertaining to this shall be provided by both OEM and agency. | 1         | JOB                   | 1,25,286.00 | 1,25,286.00         |
|       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           | <b>SUBTOTAL SH: A</b> |             | <b>38,66,451.00</b> |
| 24    | SH B: 3 years all inclusive CMC (AI CMC) for CCTV system after defect liability period of 3 years                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1         | JOB                   | 1,93,323.00 | 1,93,323.00         |
| 25    | All inclusive CMC for the system 1st year after 3 years DLP (Excluding GST) @ 5% of (A)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1         | JOB                   | 2,31,987.00 | 2,31,987.00         |
| 26    | All inclusive CMC for the system 2nd year after 3 years DLP (Excluding GST) @ 6% of (A)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1         | JOB                   | 2,70,652.00 | 2,70,652.00         |
|       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           | <b>SUBTOTAL SH: B</b> |             | <b>6,95,962.00</b>  |
|       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           | <b>TOTAL</b>          |             | <b>45,62,413.00</b> |

(INR Forty Five Lakhs Sixty Two Thousand Four Hundred Thirteen Only)

*[Signature]*  
04/05/2020

Rohit Verma  
Senior Manager (E-E)  
AAI, RHQ, NER

Signature Not Verified

Digitally signed by ROHIT VERMA  
Date: 2020.07.20 12:15:33 IST  
Location: eProcurement System for  
Central PSUs