



इरकॉन इंटरनेशनल लिमिटेड

नवरत्न कम्पनी  
(भारत सरकार का उपक्रम)

IRCON INTERNATIONAL LIMITED

NAVRATNA COMPANY  
(A Govt. of India Undertaking)



No: IRCON/SnT/SHM\_SRC/TELECOM TENDER/24

Date: 11/01/2025

**LETTER OF ACCEPTANCE (LOA)**

M/s Arvind Limited (Telecom Division),  
Survey No. 33/1, Kondhwa Pisoli Road,  
Pisoli, Pune, Maharashtra - 411060

**Kind Attn: Shri Sandeep Manohar Kerulkar**

**Sub:** Supply, Installation, Testing and Commissioning of Server based IP exchange & provision of Railnet through GPON at Shalimar & Santragachi Station of South Eastern Railway.

**Ref:** 1. Tender No. IRCON/SnT/SHM\_SRC/TELECOM TENDER dated 25.09.2024  
2. Your Technical Bid Opened on 18.10.2024  
3. Your Financial Bid Opened on 26.12.2024  
4. Your revised financial offer on dated 03.01.2025

Dear Sir,

- 1) In reference to above referred tender, your offer for subject mentioned work has been accepted by the Competent Authority at a total cost of **Rs-3,90,42,828.00** (Rupees Three Crore Ninety Lakh Forty-Two Thousand Eight Hundred Twenty-Eight only) including GST @18% and all taxes & duties.
- 2) **Bill of Quantities (BOQ)**, indicating the quantities and rates of the items included in the scope of work is enclosed as **Annexure - A**.
- 3) **Taxes and Duties:** For compliance refer clause no 7.0 of Special Condition of Contract (SCC).
- 4) **Completion Period:** The entire work shall be completed within six (06) months from the date of issue of Letter of acceptance (LOA). You have to submit detailed program for each major element of the work using modern network technique for project monitoring for approval of the engineer. For compliance refer clause 10.0 of Special Condition of Contract (SCC).

*Ranigiri*  
11/01/2025



Regional Office (East): 378, Prantik Pally, Kasba, Kolkata-700107

EPBX: (033) 4603 6269, E-mail: ro.kolkata@ircon.org

Registered Office: C-4, District Centre, Saket, New Delhi-110017, INDIA

Tel.: +91-11-26530266, FAX: +91-11-26854000, 26522000, E-mail: info@ircon.org, Web: www.ircon.org  
CIN - L45203DL1976GOI008171





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- 5) **Defect Liability Period:** Defect Liability Period will be 12 months from the date of issue of completion certificate by the Engineer. For compliance refer clause 11.0 of Special Condition of Contract (SCC).
- 6) **Insurance:** For compliance refer clause 12.0 of Special Condition of Contract (SCC).
- 7) **Performance Guarantee & Security Deposit/Retention Money:** (As per Clause 13 of SCC & Clause 8.0 of GCC)
- Performance Guarantee in the form of irrevocable Bank Guarantee (BG) on the Proforma annexed as **Annexure-X** from any Scheduled Bank for an amount of 5% (Five percent) of the contract value i.e. **Rs-19,52,150.00** (Rupees Nineteen Lakh Fifty-Two Thousand One Hundred Fifty only) to be submitted within 21 (Twenty-One) days from the date of issue of Letter of Acceptance (LOA) before signing of Contract Agreement and shall be valid upto 60 days beyond completion period.
  - Retention money for all contracts shall be recovered from on account/ final bills of the Contractor @ 10% of gross value of each bill after adjusting EMD amount till the amount so recovered including EMD amount adds upto 5% of the contract value of the work.
  - No interest shall be payable to the Contractor on the amount retained in cash towards retention money.
- 8) **Contract Agreement** shall be signed between you and IRCON INTERNATIONAL LIMITED within 28 days from the date of issue of LOA. You have to submit a non-judicial Stamp Paper of Rs-100 and attend the office of CGM/S&T/Patna, IRCON INTERNATIONAL LIMITED, 378, PRANTIK PALLY, DHANMATH KASBA, KOLKATA – 700107 for Signing of Contract Agreement as per clause 16 of Special Condition of Contract (SCC).
- 9) You have to sign the Integrity Pact at the time of signing Contract Agreement and submit a non-judicial Stamp Paper of Rs-100 for signing the Integrity Pact as per para 10.0 of Instructions to tenderers.

*Ranigrah*

11/01/2015



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(भारत सरकार का उपक्रम)

**IRCON INTERNATIONAL LIMITED**

NAVRATNA COMPANY  
(A Govt. of India Undertaking)

- 10) Terms of Payment: As per Clause 27 of Special Condition of Contract (SCC).
- 11) Until a formal agreement is executed, acceptance of this LOA by you shall constitute to be a binding of contract. All other terms & conditions shall be as per the Tender Documents accepted by you, which shall form an integral part of this contract and shall be binding on you.
- 12) Two copies of this LOA are being sent herewith. Kindly acknowledge receipt as a token of unconditional acceptance and return one copy of the LOA, duly signed, and stamped by your authorized representative on each page, to this office within one week of issue of this LOA.

Thanking you,

Encl: Bill of Quantity -Annexure A.

For and on behalf of  
Ircon International Ltd.

*Rameswar Panigrahi*

(Rameswar Panigrahi)  
CGM/PH/ERO



Copy for information and necessary action to:

1. Chief General Manager/S&T/Patna.
2. Addl. General Manager/S&T/SHM/ Kolkata.
3. Joint General Manager/Finance/Kolkata

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CIN - L45203DL1976GOI008171



**Name of Work :-Supply, Installation, Testing and Commissioning of Server based IP exchange & Provision of Railnet through GPON at Shalimar & Santragachi Station of South Eastern Railway.**
**Bill of Quantity**

| Sr.No | Description of Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Unit | Estimate Quantity |     |       | Estimate Rate inclusive of GST (Rs.) | Total Amount Inclusive of GST |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------|-----|-------|--------------------------------------|-------------------------------|
|       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      | SRC               | SHM | Total |                                      |                               |
|       | <b>SUPPLY ITEMS</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |      |                   |     |       |                                      |                               |
|       | <b>IP EXCHANGE</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |                   |     |       |                                      |                               |
| 1     | Supply, Installation, Testing & Commissioning of set of two (1+1) Servers work (work as fully hot stand by) to work as IP-PBX. The server should support Ubuntu Server LTS 22.04.& Asterisk 18.13.0 LTS. As per Railway board letter no. 2022/Tele/9(3)/4 dated: 22.09.2022 (Note: Server Should be COTS and not any propriety server) (a) From 500 upto 1500 Subscriber(SRC & SHM )                                                                                                                                                                                                                                                 | Nos  | 1                 | 1   | 2     | 4,89,017.83                          | 9,78,035.67                   |
| 2     | Supply, Installation, Testing & Commissioning of 48 port FXS Gateway. As per Railway board letter no. 2022/Tele/9(3)/4 dated: 22.09.2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Nos  | 19                | 16  | 35    | 1,24,351.68                          | 43,52,308.92                  |
| 3     | Supply, Installation, Testing & Commissioning of 24 Port FXS Gateway 19" Rack Mountable along with PatchPanel/krone module for termination (DC or AC based as per site requirement) and Dual input ports(Fiber/Ethernet) including mounting kit and all the accessories.                                                                                                                                                                                                                                                                                                                                                             | Nos  | 3                 | 2   | 5     | 77,279.60                            | 3,86,398.00                   |
| 4     | Supply, Installation, Testing & Commissioning of 8 Port FXS Gateway (AC based ) including mounting kit and all the accessories.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Nos  | 2                 | 2   | 4     | 24,148.80                            | 96,595.20                     |
| 5     | Supply of 4 port FXS gateway.It shall be compatible in all aspects with the existing VOIP network. specification: it shall support telephone interface of RJ-11 ports, it shall support the network interface 10/100 mbps dual RJ ports it shall support PSTN fail over lifeline,it shall support voice compression of G.711,G.723,G.726 &G.729, it shall support fax over IP(T38), it shall support IP signalling of SIP, it shall support multiple SIP server profile, it shall support provisioning of TFTP,HTTP, it shall work on 12 V DC similar to Grand stream GXW 4004. Make:Grand stream/Matrix/Audio codes or similar make | Nos  | 3                 | 1   | 4     | 7,760.43                             | 31,041.72                     |
| 6     | Installation of 4 Port FXS gateway. All wiring materials and fixing materials are to be supplied by contractor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Nos  | 3                 | 1   | 4     | 388.02                               | 1,552.08                      |
| 7     | Supply, Installation, Testing & Commissioning of 16 ports FXO Gateway.For SRC & SHM. As per Railway board letter no. 2022/Tele/9(3)/4 dated: 22.09.2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Nos  | 1                 | 1   | 2     | 55,506.47                            | 1,11,012.93                   |



| Sr.No | Description of Item                                                                                                                                                                                                                                                                                                                                                                                                        | Unit | Estimate Quantity |     |       | Estimate Rate inclusive of GST (Rs.) | Total Amount Inclusive of GST |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------|-----|-------|--------------------------------------|-------------------------------|
|       |                                                                                                                                                                                                                                                                                                                                                                                                                            |      | SRC               | SHM | Total |                                      |                               |
| 8     | Supply, Installation, Testing & Commissioning of 04 Port PRI/ E1 Gateway. As per Railway board letter no. 2022/Tele/9(3)/4 dated: 22.09.2022.                                                                                                                                                                                                                                                                              | Nos  | 2                 | 1   | 3     | 96,941.25                            | 2,90,823.75                   |
| 9     | Supply and installation of Maintenance and administrative console (in form of Laptop MAC / Windows) for programming and maintenance of system with software etc . Make - HP/DELL or Similar. Including printer HP/EPSON or similar.(Configuration to be approved by Engineer in charge )                                                                                                                                   | Nos  | 1                 | 1   | 2     | 74,236.67                            | 1,48,473.33                   |
| 10    | Supply of monitoring/ maintenance console ( desktop) ( Computer set of Make - HP/DELL or Similar including software and UPS etc. (Configuration to be approved by Engineer in charge )                                                                                                                                                                                                                                     | Nos  | 2                 | 2   | 4     | 63,050.00                            | 2,52,200.00                   |
| 11    | Supply, Installation, Testing & Commissioning of analog hands free phone with CLI facility. As per Railway board letter no.2022/Tele/9(3)/4 dated: 22.09.2022                                                                                                                                                                                                                                                              | Nos  | 350               | 250 | 600   | 2,112.28                             | 12,67,370.00                  |
| 12    | Executive open standard SIP phone. As specified in Railway board letter no. 2022/Tele/9(3)/4 dated: 22.09.2022.                                                                                                                                                                                                                                                                                                            | Nos  | 30                | 15  | 45    | 13,104.81                            | 5,89,716.45                   |
| 13    | Non-Executive open standard SIP phone. As specified in Railway board letter no. 2022/Tele/9(3)/4 dated: 22.09.2022.                                                                                                                                                                                                                                                                                                        | Nos  | 150               | 120 | 270   | 5,411.91                             | 14,61,216.60                  |
| 14    | Video VoIP phone open standard. Display of 7" or higher. As specified in Railway board letter no.2022/Tele/9(3)/4 dated: 22.09.2022                                                                                                                                                                                                                                                                                        | Nos  | 10                | 5   | 15    | 48,030.84                            | 7,20,462.55                   |
| 15    | Supply ,Installation,Testing & Commissioning of layer 3 type, 24 port managed switch with 24 Nos of 10/100/1000 Ethernet ports with PoE+ support with redundant AC power supplies,dedicated Stacking module, 4x1GE SFP ports for uplink including 4 Nos. of 1Ge SFP modules, Mounting Kit, with all necessary accessories.As per RDSO Spec.RDSO/SPN/TC/83/2020 Rev 2.1 or latest. Make: CISCO, JUNIPER, HP or Similar Make | Nos  | 2                 | 2   | 4     | 1,45,016.12                          | 5,80,064.49                   |
| 16    | Supply, Installation, Testing & Commissioning of 24 port managed POE+ Layer 2 Access network switch.Make : CISCO, Juniper, HP or similar. As specified in Railway board letter no. 2022/Tele/9(3)/4 dated: 22.09.2022.                                                                                                                                                                                                     | Nos  | 6                 | 4   | 10    | 42,439.60                            | 4,24,396.00                   |



| Sr.No | Description of Item                                                                                                                                                                                                                                                                                                                                                                                                                                 | Unit | Estimate Quantity |     |       | Estimate Rate inclusive of GST (Rs.) | Total Amount Inclusive of GST |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------|-----|-------|--------------------------------------|-------------------------------|
|       |                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      | SRC               | SHM | Total |                                      |                               |
| 17    | Supply, installation, testing and commissioning of 8 plus 2 port layer-2 smart PoE switch with 02 nos 1 Gigabit ports with SFP module. As per attached technical spec. Make : CISCO, Juniper, HP or similar                                                                                                                                                                                                                                         | Nos  | 20                | 20  | 40    | 15,909.48                            | 6,36,379.20                   |
| 18    | Supply, Installation, Testing & Commissioning of 10 KVA UPS 02 Module (N+1) with a total of 2 hrs backup each . As per Railway board letter no. 2022/Tele/9(3)/4 dated: 22.09.2022 .Make: Numeric/APC or Similar make                                                                                                                                                                                                                               | Nos  | 1                 | 1   | 2     | 5,63,181.19                          | 11,26,362.38                  |
| 19    | Supply, Installation, Testing & Commissioning of 5 KVA UPS with battery Bank for mini 2 hrs . As per Railway board letter no. 2022/Tele/9(3)/4 dated: 22.09.2022 Make: Numeric/APC or Similar.                                                                                                                                                                                                                                                      | Nos  | 1                 | 1   | 2     | 1,26,678.15                          | 2,53,356.29                   |
| 20    | Supply, Installation, Testing & Commissioning of Online UPS 1KVA With Battery of Backup. Specification to be approved by engineer in charge ) . As per Railway board letter no. 2022/Tele/9(3)/4 dated: 22.09.2022. Make: Numeric/APC or Similar                                                                                                                                                                                                    | Nos  | 22                | 14  | 36    | 30,027.32                            | 10,80,983.52                  |
| 21    | Supply, Installation, Testing & Commissioning of 19" 42 U Rack with PDU, FAN and other accessories. As per Railway board letter no. 2022/Tele/9(3)/4 dated: 22.09.2022. Make: D-Link, Valrack, APC or similar.                                                                                                                                                                                                                                      | Nos  | 1                 | 1   | 2     | 58,918.88                            | 1,17,837.76                   |
| 22    | Supply, Installation, Testing & Commissioning of 19" 9 U Rack with PDU. As per Railway board letter no. 2022/Tele/9(3)/4 dated: 22.09.2022. Make: D-Link, Valrack, APC or similar.                                                                                                                                                                                                                                                                  | Nos  | 22                | 14  | 36    | 7,252.03                             | 2,61,072.96                   |
| 23    | Supply & installation of item for Maintenance free Ring Earthing for IPABX to get earth value of less than 01 Ohm. As per RDSO/SPN/197/2008 or latest.                                                                                                                                                                                                                                                                                              | Set  | 5                 | 5   | 10    | 42,021.83                            | 4,20,218.25                   |
| 24    | Supply, Installation and commissioning of 600+600 MDF+IDF both with KRONE Module and protection. Fitted with Integrated Protection Module(IPM) for all extension lines at Exchange side with specification as: 1.Min. threshold I/P voltage-230V, 2. Max. withstand voltagefor protection- 40 KV, 3.Min I/P threshold current- 0.2 Amp, 4. Operating time- 1ms. The MDF & IDF should conform to Specification No. GR/CTN-01/04.MAY, 2005 or latest. | Nos  | 0                 | 1   | 1     | 77,584.30                            | 77,584.30                     |



| Sr.No | Description of Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Unit | Estimate Quantity |     |       | Estimate Rate inclusive of GST (Rs.) | Total Amount Inclusive of GST |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------|-----|-------|--------------------------------------|-------------------------------|
|       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |      | SRC               | SHM | Total |                                      |                               |
| 25    | Supply,Installation and commissioning of 50+50 MDF+IDF both with KRONE Module and protection. Fitted with Integrated Protection Module(IPM) for all extension lines at Exchange side with specification as: 1.Min. threshold I/P voltage-230V, 2. Max. withstand voltagefor protection- 40 KV, 3.Min I/P threshold current- 0.2 Amp, 4. Operating time- 1ms. The MDF & IDF should conform to Specification No. GR/CTN-01/04.MAY. 2005 or latest.                                                   | Nos  | 13                | 12  | 25    | 6,106.84                             | 1,52,671.08                   |
| 26    | Supply, transportation, testing, installation and commissioning of 16/20/32 rating, 240/415 DP MCB with metallic box (each box should contain min. 3 nos of MCB).                                                                                                                                                                                                                                                                                                                                  | Nos  | 5                 | 5   | 10    | 572.43                               | 5,724.30                      |
|       | <b>DUCTS AND ACCESSORIES FOR OFC</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |                   |     |       |                                      | -                             |
| 27    | Supply of HDPE duct 40/33 mm permanently lubricated in lengths of 1000 mtrs and accessories including end caps for every drum length as per RDSO Spec. no. RDSO/SPN/TC/45/2013.Rev.2.0 Amendment 1.0, including latest amendment. This includes the loading, unloading and transportation at the site of work. This also includes supply of HDPE Duct Accessories like 2(two) END PLUG, 1 (one) Cable sealing plug and 1 (one) Plastic coupler-slip fit push type for every 500m of HDPE supplied. | Km   | 4                 | 3   | 7     | 84,740.66                            | 5,93,184.59                   |
| 28    | Supply of OFC Joint Enclosure for straight through joint with modification for 24 fibre OFC as per TEC specification no. GR/OJC-02/02 SEP 2003 (with latest amendment) or latest. It includes provision of pit,installation of joint enclosure,splicing of optical fibre cables (24 Fibre) and testing .                                                                                                                                                                                           | Nos  | 10                | 10  | 20    | 27,859.41                            | 5,57,188.20                   |
| 29    | Supply of factory crimped CAT6 patchcord , 0.5 m length.<br>Specification: Conducto Guage:: 23 AWG (Solid)<br>Conductor Meta : Conductor Meta : Bare Coppe<br>Insulation Material : High Density Polyethylene<br>Pairs: 4 Pair twisted wires<br>Make: AMP/Finolex/D-Link/Tech Commerce or better                                                                                                                                                                                                   | Nos  | 150               | 150 | 300   | 228.21                               | 68,461.50                     |



| Sr.No | Description of Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Unit  | Estimate Quantity |     |       | Estimate Rate inclusive of GST (Rs.) | Total Amount Inclusive of GST |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------------|-----|-------|--------------------------------------|-------------------------------|
|       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       | SRC               | SHM | Total |                                      |                               |
| 30    | Supply, transportation and fixing of Galvanised Iron Pipe (make: TATA/Jindal or better) with threaded collars (for jointing pipe) of 100 mm nominal bore Specification No. IS: 1239, thickness 3.6 mm medium grade, on bridges, culverts, drain or at places as per instruction of the site Engineer including supply and transportation of materials required for fixing the pipe as per SEM Drawing No.15-D7 including drawing of cables inside the pipe with masonry work at bridge entry and exit of the culvert and curing for 72 hours and pipes are to be clamped at max. 2 meter apart with drilling of holes on the pipe at 10 cm apart for the following: S&T Cables. The Galvanized iron pipes and other materials required for fixing to be supplied by the contractor. Material inspection shall be done by consignee before use.<br>Note: This also includes dismantling of released GI Pipe/Trough and released material should be returned at concerned store. | Metre | 150               | 150 | 300   | 1,108.02                             | 3,32,406.00                   |
|       | <b>OFC TRANSMISSION SYSTEM</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |                   |     |       |                                      | -                             |
| 31    | Supply of 10/100/1000mbps Media Converter (Single mode 20kms) as per Specification No. RDSO/SPN/TC/103/2013 Rev.2 or latest. Make: MROTEK, D-Link/TP-Link or better.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Nos   | 50                | 50  | 100   | 3,506.96                             | 3,50,696.00                   |
| 32    | Supply of 2 MB programmable Primary Digital Drop/Insert multiplexer with conference facility As per Specification No. IRS: TC-68/2012 Amd.1 or latest wired for 30 Circuits complete with power supply, Control and Basis/Common cards (i.e. PSU 02TME-01,LPC-01) Remote control supervision facility and all other accessories etc. The mux shall equipped with fallowing interface cards A) 2W/4W E&M interface card (4ckts per card)-04 nos. B) FXO Exchange loop interface card (4CKTS per card)-2 nos. C) FXS Subscriber interface card(4CKTS per card)-02 nos.                                                                                                                                                                                                                                                                                                                                                                                                           | Nos   | 1                 | 1   | 2     | 1,49,048.16                          | 2,98,096.32                   |



| Sr.No | Description of Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Unit | Estimate Quantity |     |       | Estimate Rate inclusive of GST (Rs.) | Total Amount Inclusive of GST |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------|-----|-------|--------------------------------------|-------------------------------|
|       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |      | SRC               | SHM | Total |                                      |                               |
| 33    | Supply of managed SDH (STM-1 Add/Drop MUX and upgradeable to STM-4) fully wired for 2 X 63 MB and equipped for 21E1s and with STM1 (L1.1) aggregate interface including power supply, order wire, Ethernet card, sub rack, inbuilt DDF, installation material and all other accessories, manuals etc. as per TEC. Specification GR SDH 04/02, March 02 or with latest amendment. The contractor will supply all other accessories as mentioned in the above said TEC Specifications and system will have provision of different redundancy cards as per the TEC Specifications. Note: It shall be possible to increase capacity from 21E1 to 63 E1s by adding / inserting tributary cards. This includes connecting all pig tails, optical patch cords etc. to the SDH equipment. This also includes connecting the SDH equipment with all cards to the 48V Bus including supply of wires and connectors. Termination of all E1s on DDF taking PVC cable over runway or a wall. At the terminal station, one port may be disabled if required as per instructions given by site engineer incharge. | Nos  | 1                 | 1   | 2     | 1,98,068.90                          | 3,96,137.80                   |
| 34    | Installation, wiring, testing & commissioning of managed SDH (STM-1 Add/Drop MUX and upgradable to STM-4) fully wired for 2 X 63 MB and equipped for 21 E1s and a Virtual Container (VC)-12 with STM-1(L1.1) aggregate interface including power supply, order wire, Ethernet card, sub rack, inbuilt DDF, installation material and all other accessories, manuals etc. as per TEC. Specification GR SDH 04/02, March 02 or with latest amendment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Set  | 1                 | 1   | 2     | 22,875.48                            | 45,750.96                     |
| 35    | CEL-1 Card consist 4 port 10/100Mbps Ethernet port suitable for existing STM-4 (TJ1400Model) equipment over KUR division without any accessories. Make: TEJAS TJ1400.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Nos  | 1                 | 1   | 2     | 42,635.76                            | 85,271.52                     |
| 36    | LI (optical) card for branching for STM-1 compatible with existing STM-1 over KUR division of Make: TEJAS TJ1400. This includes installation, testing & commissioning. Make: TEJAS or similar.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Nos  | 1                 | 0   | 1     | 48,861.44                            | 48,861.44                     |
| 37    | Supply of Fibre Distribution Managementsystem (FDMS)/LIU for 24 Fiber completewith all accessories with patch cord & pigtailas per TEC Spec. GR/FDM/01/02 April'2007or latest. This include supply of installationaccessories as per technical specification.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Nos  | 6                 | 10  | 16    | 3,033.00                             | 48,528.00                     |



*Signature*  
11/01/25

| Sr.No | Description of Item                                                                                                                                                                                                                                                                                       | Unit | Estimate Quantity |     |       | Estimate Rate inclusive of GST (Rs.) | Total Amount Inclusive of GST |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------|-----|-------|--------------------------------------|-------------------------------|
|       |                                                                                                                                                                                                                                                                                                           |      | SRC               | SHM | Total |                                      |                               |
| 38    | Installation, Testing & Commissioning of 6 port 19 inch rack mountable FO panel (LIU). All materials required to complete the job pertaining to this item are to be arranged by the contractor including supply of LIU with required number of SCSM Adaptors. Make: DLINK, DIGISOL, MOLEX or Similar.     | Nos  | 10                | 15  | 25    | 3,931.92                             | 98,298.00                     |
| 39    | Supply of LC to SC Single Mode Simplex/Duplex Fibre Optic Patch Cable 5m length. Make: AMP/Finolex/D-Link/Tech Commerce or better                                                                                                                                                                         | Nos  | 130               | 120 | 250   | 201.78                               | 50,445.00                     |
| 40    | Supply of LC to FC Single Mode Simplex/Duplex Fibre Optic Patch Cable 5m length. Make: AMP/Finolex/D-Link/Tech Commerce or better                                                                                                                                                                         | Nos  | 130               | 125 | 255   | 221.84                               | 56,569.20                     |
| 41    | Supply & fixing of Optical fiber termination box (wall mountable) for 2 x 24 fibre armoured cable complete with all accessories with the fixing arrangement to accommodate all fibres as per spec. no IRS:TC:81-2000 (with latest amendment). Make: D-Link or better                                      | Nos  | 3                 | 2   | 5     | 16,706.21                            | 83,531.05                     |
| 42    | Supply & installation of XA14ET card compatible with TJ 1400 to support / connect 32 E1 120 Ohm LFH male cable to drop tributary and two No Optical ports interface for support of existing STM TJ 1400.                                                                                                  | Nos  | 1                 | 0   | 1     | 78,470.00                            | 78,470.00                     |
|       | <b>POWER SUPPLY</b>                                                                                                                                                                                                                                                                                       |      |                   |     |       |                                      | -                             |
| 43    | Supply & transportation of 48V/50 A SMPS based power plant in (2+1) configuration using 3 Nos. of 48V/25A modules to charge the VRLA battery bank of 48V/200AH with lightening & surge protection as per Specification No. RDSO/SPN/TC/23/1999 Ver.4 Amnd.1 or latest for telecom purpose.                | Set  | 1                 | 1   | 2     | 75,322.94                            | 1,50,645.88                   |
| 44    | Installation, testing & commissioning of 48V/50amp SMPS based power plant in (2+1) configuration using 3 Nos. of 48V/25A modules to charge the VRLA battery bank of 48V/200AH with lightening & surge protection as per Specification No. RDSO/SPN/TC/23/1999 Ver.4 Amnd.1 or latest for telecom purpose. | Set  | 1                 | 1   | 2     | 6,077.00                             | 12,154.00                     |
| 45    | Supply of 200AH VRLA Secondary Cells for S&T installations made of hard rubber container and with nominal voltage 2 volts as per Specification No. IRS-S-88/2004 Ver. 1.0 or latest.                                                                                                                      | Nos  | 24                | 24  | 48    | 3,902.26                             | 1,87,308.48                   |
|       | <b>CABLES</b>                                                                                                                                                                                                                                                                                             |      |                   |     |       |                                      | -                             |
| 46    | Supply of 24 Fibre Armoured Optical Fibre Cable as per Specification No. IRS:TC-55/2006 Rev.1 Amd. 3 or latest. Make: Finolex, D-Link or similar.                                                                                                                                                         | KM   | 4                 | 3   | 7     | 84,526.94                            | 5,91,688.58                   |



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| Sr.No | Description of Item                                                                                                                                                                                                                                                          | Unit | Estimate Quantity |      |       | Estimate Rate inclusive of GST (Rs.) | Total Amount Inclusive of GST |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------|------|-------|--------------------------------------|-------------------------------|
|       |                                                                                                                                                                                                                                                                              |      | SRC               | SHM  | Total |                                      |                               |
| 47    | Supply of 6 Core Armoured Mono mode OFC cable as per Specification No. IRS:TC 55-2006 Rev.1 or latest. Make: Finolex, D-Link or similar.                                                                                                                                     | Km   | 3                 | 2    | 5     | 22,208.78                            | 1,11,043.90                   |
| 48    | Supply of 6 core un armoured OFC cable. Make: Finolex, D-Link or similar.                                                                                                                                                                                                    | Mtr  | 3000              | 2000 | 5000  | 19.99                                | 99,950.00                     |
| 49    | Supply of 20 pair, 0.63 mm diameter Underground Polythene insulated polythene sheathed jelly filled telephone cable with Poly-Al Moisture Barrier as per Specification No. IRS:TC:41/97 Amd.3.0 or Latest.                                                                   | KM   | 2                 | 2    | 4     | 1,84,472.94                          | 7,37,891.76                   |
| 50    | Supply of 10 Pair, 0.63 mm diameter Underground Polythene insulated polythene sheathed jelly filled telephone cable with Poly-Al Moisture Barrier as per Specification No. IRS:TC:41/97 Amd.3.0 or Latest.                                                                   | KM   | 1.5               | 1.5  | 3     | 1,26,260.00                          | 3,78,780.00                   |
| 51    | Supply of PVC Switch Board Cables 10 pair / 0.5 mm conductor dia. as per TEC specification GR/WIR-06/03 of march 02 or latest.                                                                                                                                               | Mtr  | 2000              | 2000 | 4000  | 53.10                                | 2,12,400.00                   |
| 52    | Supply of PVC Switch Board Cables 05 pair / 0.5 mm conductor dia. as per TEC specification GR/WIR-06/03 of march 02 or latest.                                                                                                                                               | Mtr  | 2000              | 2000 | 4000  | 25.96                                | 1,03,840.00                   |
| 53    | Supply of UTP CAT - 6 cable, having bare Copper Conductor of diameter 0.5 mm, Suitable for Gigabit Ethernet TEC Specification No. G/WIR 06/02 or latest. Make D-Link, AMP, Finolex or similar                                                                                | Mtr  | 9150              | 6100 | 15250 | 16.52                                | 2,51,930.00                   |
| 54    | Supply of PVC insulated Single core Multi-strands copper conductor 3 Core 2.5 sq.mm power cable with ISI marked to IS:694 latest. Make: Polycab, Havells, Anchor or similar                                                                                                  | Mtr  | 500               | 500  | 1000  | 101.48                               | 1,01,480.00                   |
|       | <b>CABLE TERMINATION AND JOINTING</b>                                                                                                                                                                                                                                        |      |                   |      |       |                                      | -                             |
| 55    | Supply of 50 mm dia PVC Conduit pipe/Casing Capping ISI mark with accessories such as bend, tee, coupling, elbow, saddle clamp, wood screw, PVC/wooden plugs, Flexible Pipe etc, all metrial are to be borne by contractor. Make : Polycab, Ashirvad, Apollo or similar.     | Mtr  | 1400              | 1000 | 2400  | 57.40                                | 1,37,760.00                   |
| 56    | Supply of 1 inch (25mm) PVC casing capping in rectangular shape with separate Casing & Capping, double lock, heavy duty & ISI mark with IS:14927 or latest with minimum 1 mm thickness all metrial are to be borne by contractor Make : Polycab, Ashirvad, Apollo or similar | Mtr  | 4000              | 4000 | 8000  | 34.22                                | 2,73,760.00                   |



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| Sr.No | Description of Item                                                                                                                                                                                                                                                             | Unit | Estimate Quantity |      |       | Estimate Rate inclusive of GST (Rs.) | Total Amount Inclusive of GST |
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|       |                                                                                                                                                                                                                                                                                 |      | SRC               | SHM  | Total |                                      |                               |
| 57    | Supply of 20 Pair krone type DP Box with disconnection and reconnection facility for 0.63 mm dia. Copper conductor as per Specification No. IRS: TC/18-75 Ver.1 or latest with screw type terminal as per IRS: S-23 or latest.                                                  | Nos  | 20                | 20   | 40    | 1,248.44                             | 49,937.60                     |
| 58    | Supply of 10 Pair krone type DP Box with disconnection and reconnection facility for 0.63 mm dia. Copper conductor as per Specification No. IRS: TC/18-75 Ver.1 or latest with screw type terminal as per IRS: S-23 or latest.                                                  | Nos  | 30                | 30   | 60    | 851.96                               | 51,117.60                     |
| 59    | Supply of Thermo-shrink Jointing (TSF) Kits for PIJF Underground Telecom Cable of different pair sizes 5/10/20/50/100/200/400 Pairs with copper conductors dia. 0.5mm, 0.63mm or 0.9mm conforming to RDSO Draft Specification No. RDSO/SPN/TC/57/2015 Rev.1, Amd.1.0 or latest. | Nos  | 15                | 15   | 30    | 3,206.06                             | 96,181.80                     |
| 60    | Supply of VF Transformer (1120:470/1120:1120/470:470/600 /1200:600 Ohm) as per Specification No. IRS-TC-76/2021 Ver 1.0 (Cylindrical type) or IRS/TC/22/ 2021 Ver 1.1 (Rectangular type) with latest amendment.                                                                 | Nos  | 10                | 10   | 20    | 1,058.46                             | 21,169.20                     |
| 61    | Supply of RJ11 Rossette/I.O box with surge suppression circuit. Make: D-Link, AMP, Polycab or similar.                                                                                                                                                                          | Nos  | 350               | 350  | 700   | 491.47                               | 3,44,029.00                   |
| 62    | Supply of RJ-45 CONNECTOR of reputed make such as D-link or better. Make: D-Link, AMP, Polycab or similar                                                                                                                                                                       | Nos  | 1000              | 1000 | 2000  | 5.32                                 | 10,643.60                     |
| 63    | Supply and installation of wall mountable RJ45 socket Make: Legrand, D-Link, AMP, Polycab or similar (Inspection: Consignee)                                                                                                                                                    | Nos  | 400               | 400  | 800   | 393.60                               | 3,14,880.00                   |
| 64    | Supply and installation of RJ-45 patch cord, seven feet long of reputed make like Molex, AMP or similar with 02 Nos of RJ-45 connectors for every patch chord                                                                                                                   | Nos  | 100               | 100  | 200   | 142.66                               | 28,532.00                     |
| 65    | Supply of line cord of reputed Make                                                                                                                                                                                                                                             | Nos  | 120               | 120  | 240   | 40.24                                | 9,657.60                      |
| 66    | Supply of HMT cord reputed Make                                                                                                                                                                                                                                                 | Nos  | 250               | 250  | 500   | 57.75                                | 28,875.00                     |
| 67    | Supply of CAT6 PATCH cord 5 meter length Specification: Conductor Gauge: 23 AWG (Solid) Conductor Material : Bare Copper Insulation Material : High Density Polyethylene Pairs: 4 Pair twisted wires Make: AMP/Finolex/D-Link/Digisol                                           | Nos  | 450               | 350  | 800   | 212.97                               | 1,70,372.00                   |



| Sr.No | Description of Item                                                                                                                                                                                                                                                                                                           | Unit | Estimate Quantity |     |       | Estimate Rate inclusive of GST (Rs.) | Total Amount Inclusive of GST |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------|-----|-------|--------------------------------------|-------------------------------|
|       |                                                                                                                                                                                                                                                                                                                               |      | SRC               | SHM | Total |                                      |                               |
| 68    | Supply of Ceiling Mount Access Point with 802.11ac standard, 1200Mbps, WAN/PoE: 1x 10/100/1000Mbps 802.3at/af PoE Port, LAN: 1x10/100/1000Mbps, Antenna: 5dBi, Multiple Operational Modes, Multiple SSID Support (Upto 4 SSIDs per frequency band). WiFi Transmit Power: Up to 27dBm, Make Digisol, D-link, Cisco or similar. | Nos  | 20                | 20  | 40    | 13,589.40                            | 5,43,576.00                   |
| 69    | Supply of smart dual band wireless Router design with full Gigabit WAN and LAN ports. Strong dual band Wi-Fi signal for multi-wall penetration, innovative MU-MIMO technology 4 x 5dBi Omni directional Antenna 1 x Wan+ 3 x Lan full gigabit ports. Make: D-Link, Cisco, TP Link, Netgear or Similar make                    | Nos  | 60                | 60  | 120   | 2,995.37                             | 3,59,444.40                   |
|       | <b>OPERATIONAL ASSTANCE FOR MAINTENANCE STAFF</b>                                                                                                                                                                                                                                                                             |      |                   |     |       |                                      | -                             |
| 70    | Supply of Steel Almirah Full size (61/2') Godrej model store well plain or similar make                                                                                                                                                                                                                                       | Nos  | 3                 | 3   | 6     | 32,416.50                            | 1,94,499.00                   |
| 71    | Supply of Office table Godrej model no.T-101 or similar make                                                                                                                                                                                                                                                                  | Nos  | 3                 | 3   | 6     | 17,633.79                            | 1,05,802.76                   |
| 72    | Supply of office Chair Godrej Model no CH-7 or similar.                                                                                                                                                                                                                                                                       | Nos  | 10                | 10  | 20    | 2,977.63                             | 59,552.50                     |
| 73    | Supply of Computer Table (1000 x 600 x 750mm), Key Board pull out tray, drawer and top made off MDF Model C-13. Make: Godrej or better.                                                                                                                                                                                       | Nos  | 2                 | 2   | 4     | 8,901.36                             | 35,605.44                     |
| 74    | SITC of Split Air Conditioner, wall mount type 1.5 ton 5 Star with hermetically sealed scroll/rotary compressor, air cooled condenser, electronic expansion valve, outdoor & indoor units, refrigeration pipe, insulation, electrical starter, PB etc. Make: Carrier, Voltas, Hitachi or similar.                             | Nos  | 2                 | 2   | 4     | 42,499.00                            | 1,69,996.00                   |
|       | <b>TOOLS AND EQUIPMENTS</b>                                                                                                                                                                                                                                                                                                   |      |                   |     |       |                                      | -                             |
| 75    | Supply of cable fault locator complete with all necessary accessories including rechargeable battery pack and charger Liquid Crystal Display (LCD) with back light. Low Insulation Faults Mode Max. Low Insulation Faults Mode Max. Range: 20 Km etc.                                                                         | Nos  | 1                 | 1   | 2     | 1,56,839.70                          | 3,13,679.40                   |
| 76    | Supply of Cable route tracer with GPS enable 10 Watt transmitter, rechargeable battery pack and main charger, direct connection lead 10 mtr. extension cable with all other accessories. Make Radiodetection, Stanley or better.                                                                                              | Nos  | 1                 | 1   | 2     | 3,51,833.52                          | 7,03,667.04                   |



| Sr.No | Description of Item                                                                                                                                                                                                                                                                                                                                                                                | Unit | Estimate Quantity |     |       | Estimate Rate inclusive of GST (Rs.) | Total Amount Inclusive of GST |
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|       |                                                                                                                                                                                                                                                                                                                                                                                                    |      | SRC               | SHM | Total |                                      |                               |
| 77    | Supply of Db Meter, Make Bentron Model No. AFT 879 with case or Similar better (digital)                                                                                                                                                                                                                                                                                                           | Nos  | 2                 | 2   | 4     | 12,928.83                            | 51,715.32                     |
| 78    | Supply of Digital Multimeter. Model No. Fluke 87V or better. Make Metravi, Stanley, Themisto or similar                                                                                                                                                                                                                                                                                            | Nos  | 2                 | 2   | 4     | 30,696.52                            | 1,22,786.08                   |
| 79    | Supply of a Standard Multifunction (Copy/Print/Scan) wireless Laser Printer with UFSBI interface with standard warranty of OEM or minimum warranty of one year whichever is higher. Make-HP/Canon or Similar.                                                                                                                                                                                      | Nos  | 2                 | 2   | 4     | 18,701.90                            | 74,807.60                     |
| 80    | Supply & installation of RFID based Electronic/Pipe route marker for S&T cable with programmable memory for saving the user specific data which can be buried at a depth range 1.5 meter. Make - Stanley/3M or similar                                                                                                                                                                             | Nos  | 100               | 100 | 200   | 2,187.72                             | 4,37,544.00                   |
| 81    | Supply of KRONE TOOL for inserting wire into insulation-displacement connectors similar to krone make.                                                                                                                                                                                                                                                                                             | Nos  | 10                | 10  | 20    | 401.20                               | 8,024.00                      |
| 82    | Supply of LAN tester UTP cable tester similar to make of Voltec/D-Link.                                                                                                                                                                                                                                                                                                                            | Nos  | 4                 | 4   | 8     | 626.58                               | 5,012.64                      |
| 83    | Supply of LAN Extender with 4 port Ethernet with 230V AC/48V DC working with AC Power cord, as per Specification No. RDSO/SPN/TC/82/2013 Rev.2.0 or latest.                                                                                                                                                                                                                                        | Pair | 5                 | 5   | 10    | 17,466.36                            | 1,74,663.60                   |
| 84    | Supply of CAT -6 Crimping Tool suitable for RJ-45 as well as RJ-11 connectors. Make -Taparia / Krone / Stanley/Fluke or similar.                                                                                                                                                                                                                                                                   | Nos  | 5                 | 5   | 10    | 2,522.00                             | 25,220.00                     |
| 85    | Supply of Line Testing Equipment for testing lines. Make: Mextech, Fluke or similar                                                                                                                                                                                                                                                                                                                | Nos  | 3                 | 3   | 6     | 485.00                               | 2,910.00                      |
| 86    | Supply of Lightening Barrier and Lightning Arrestor for surge protection as per RDSO spec. no. RDSO/SPN/ 144/2006 or latest.                                                                                                                                                                                                                                                                       | Nos  | 1                 | 1   | 2     | 39,091.00                            | 78,182.00                     |
| 87    | Supply of mini OTDR as per TEC specifications GR/OTD02/03 March 2009 with latest amendment Product details: a) Wavelength : 1310/1510 nm b) Display range : 50 dB with built in power meter , built in laser source USB and Ethernet ports , In built battery which works on 230V AC/ inbuilt battery shall include a fiber adaptor. MAKE:HP/ ANRITSU / FLUKE /FUJIKURA / STANLAY or Similar make. | Nos  | 1                 | 1   | 2     | 2,49,570.00                          | 4,99,140.00                   |
| 88    | Supply of Splicing Machine ,Single fiber, Dia 80to 150um, Fiber type-SMF, MMF, DSF, NZDSF, Make:- Stanley, Mophorn Or Fujikura Or Fittel Or Better.                                                                                                                                                                                                                                                | Nos  | 1                 | 1   | 2     | 1,76,292.00                          | 3,52,584.00                   |



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| Sr.No | Description of Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Unit     | Estimate Quantity |     |       | Estimate Rate<br>inclusive of<br>GST (Rs.) | Total Amount<br>Inclusive of GST |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------|-----|-------|--------------------------------------------|----------------------------------|
|       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |          | SRC               | SHM | Total |                                            |                                  |
| 89    | AOP110T-V10 Optical Power Meter with visual fault locator Advanced Optical power meter 850/1300/1310/1490/1550/1625nm calibrated wavelengths, Normal OPM & Auto test OPM mode operation With Auto Wave ID feature,threshold detection feature with Pass / Fail option, Measurement range +10 to - <70dBm, 0.01dB resolution, Built in VFL 10mW, Data Storage 1000 Traces, Data transfer through USB along with FC/PC Connector adaptor. (SC/PC Connector adaptor optional. AC/DC Adaptor optional). make : Stanlay, Mophorn Or Fujikura or Similar Make . | Nos      | 1                 | 1   | 2     | 24,823.90                                  | 49,647.80                        |
| 90    | Supply of SPIKE BUSTER Make: Anchor,Havelles,Sysca or Similar                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Nos      | 25                | 15  | 40    | 384.71                                     | 15,388.27                        |
| 91    | SFP Small form-factor pluggable transceiver make D- Link or similar                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Nos      | 50                | 50  | 100   | 3,570.00                                   | 3,57,000.00                      |
| 92    | Training of Server based IP-Excahnge,other telecom equipments which is installed in same work and GPON technology to Railway/IRCON official ( 10 manned days )                                                                                                                                                                                                                                                                                                                                                                                            | Lump sum | 5                 | 5   | 10    | 8,200.00                                   | 82,000.00                        |
|       | <b>EXECUTION OF ITEMS</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          |                   |     |       |                                            | -                                |
|       | <b>TRENCHING AND LAYING</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |          |                   |     |       |                                            | -                                |
| 93    | Excavation of trench in all kinds of soils including soft rocky area and clearing of roots of trees, rocks, bushes, ballast & reconditioning etc., including bailing out water and disposal of extra soil including back filling with excavated earth and ramming of trenches after cable laying for the following depths and widths as specified in Technical Circular No. 2 of 1988 & 01/2010 issued by CSTE/SER. Note:- In case, trenches are other than prescribed depth & width, Proportionate payment shall be released.                            |          |                   |     |       |                                            | -                                |
|       | Depth 1.2 meter, Width 0.5 meter.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | KM       | 0.5               | 0.5 | 1     | 78,680.04                                  | 78,680.04                        |
|       | Depth 1.0 meter, Width 0.3 meter.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | KM       | 3                 | 3   | 6     | 69,727.38                                  | 4,18,364.28                      |
|       | Depth 0.8 meter, Width 0.3 meter.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | KM       | 0.5               | 0.5 | 1     | 45,350.94                                  | 45,350.94                        |



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| Sr.No | Description of Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Unit  | Estimate Quantity |      |       | Estimate Rate inclusive of GST (Rs.) | Total Amount Inclusive of GST |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------------|------|-------|--------------------------------------|-------------------------------|
|       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       | SRC               | SHM  | Total |                                      |                               |
| 94    | Excavation of trench in all kinds of soils including soft rocky area and clearing of roots of trees, rocks etc. to a depth of 1 metre and width 0.3 mtr. For Track/ pucca road/platform crossing/ level crossing as per SEM Drawing No.15-D5 including supply, transportation and laying of DWC pipes (full) with collar(for jointing pipes) Inner diameter/Outer diameter:103mm/120mm to Specification No.14830(Part-2):2001 as per SEM Drawing No. 15 D4,in trench and drawing of cable through DWC pipes with collar(for jointing pipes) including back filling and ramming after cable laying as specified in Tech. Circular No. 2 of 1988 & 01/2010 issued by CSTE/SER for S&T Cables (Cable laying charges is included). This includes repairing and plastering of platform/pucca road after cable laying. Material inspection shall be done by Railway Site Engineer. | Mtr   | 500               | 500  | 1000  | 679.68                               | 6,79,680.00                   |
| 95    | Masonry chase cutting 3/2" x 3/2" at the work site,transport of 5/10/20/50 pair indoor,PVC switch board cable from the stores to the work site and drawal of same in HDPE/flexible HDPE pipe of suitable dia placed on the chase and covering/replastering the chase with cement after drawal of cable .HDPE/flexible HDPE PIPE of suitable dia to be supplied by the contractor.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Mtr   | 250               | 250  | 500   | 253.40                               | 1,26,700.00                   |
| 96    | Laying of Signal/Power/Telecom Cables of various cores in trench and meggering of main cables and tails cables.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | KM    | 6                 | 6    | 12    | 8,290.21                             | 99,482.48                     |
| 97    | Horizontal direction drilling/boring without damage of surface of road /Track formation. It includes supply, transportation and insertion of self lubricated HDPE pipe (Inner dia 103.5mm and outer dia 120mm). The depth of horizontal boring should be min. 1m from rail flange/road level.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Metre | 500               | 1000 | 1500  | 1,239.85                             | 18,59,775.00                  |
| 98    | Laying HDPE duct in already made trenches and through DWC/GI/RCC pipes wherever necessary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Km    | 4                 | 3    | 7     | 10,308.13                            | 72,156.91                     |
| 99    | Detailed Survey of Sites for installation of Telecom items as per site condition and submitted for approval by engineering incharge before start the execution of work.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Stn   | 1                 | 1    | 2     | 44,695.95                            | 89,391.90                     |
|       | <b>CABLE TERMINATION AND LAYING</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |       |                   |      |       |                                      | -                             |
| 100   | Transportation and fixing of following types of C.T. Box (Aluminium/Wago type) and termination of cable as per details of jointing schedule approved by Engineers.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |       |                   |      |       |                                      | -                             |
|       | 20 pair C.T. Box                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Nos   | 20                | 20   | 40    | 899.16                               | 35,966.40                     |



| Sr.No | Description of Item                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Unit  | Estimate Quantity |      |       | Estimate Rate inclusive of GST (Rs.) | Total Amount Inclusive of GST |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------------|------|-------|--------------------------------------|-------------------------------|
|       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       | SRC               | SHM  | Total |                                      |                               |
|       | 10 pair C.T. Box                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Nos   | 30                | 30   | 60    | 579.38                               | 34,762.80                     |
| 101   | Blowing/drawing of OFC cable in the HDPE pipe duct and in protective works already provided. This includes transportation, loading/unloading of OFC from the stores to the work site with care, sealing of the duct by sealing/caps plugs. This also includes testing of cable drums in the store premises before transportation and submissions of results thereof. The cable drums with unused cable at site to be returned by the contractor from site to stores depot. | KM    | 4                 | 3    | 7     | 14,300.78                            | 1,00,105.46                   |
| 102   | Transportation and Fixing of PVC Conduit pipe/channel/casing capping on wall or structure with drawal of Telecom/Power /Data cable with proper finishing.                                                                                                                                                                                                                                                                                                                  | Metre | 5400              | 5000 | 10400 | 15.34                                | 1,59,536.00                   |
| 103   | Laying Charge of optical fiber cable/UTP CAT-6 Cable/Power cable through wall/duck/conduit,including clamping/fixing duck/conduit over wall/cellingin/open space/terrace/existing fixture etc as per directive of site engineer.                                                                                                                                                                                                                                           | Metre | 8000              | 3000 | 11000 | 37.16                                | 4,08,705.00                   |
| 104   | Installation of Optical Fibre termination box and splicing of Optic fiber Cable (24 fiber) inside the termination box with provision of taking out fiber of OFC as required. This includes supply of installation accessories (as required) as detailed in technical specification and advised by IRCON's Engineer-at-site. This also includes End to End testing of all fibres of the optical fiber cable terminated between station to station.                          | Nos   | 3                 | 3    | 6     | 23,978.55                            | 1,43,871.30                   |
| 105   | Installation, wiring of all 30 channels up to krone modules, testing and commissioning of 2 Mb Programmable Primary Digital drop insert multiplexer as per RDSO Specs. No. - IRS/TC/68/2012 Rev.0 with Amendment No.1 or latest. It includes submission of all technical documents, manuals and supply of all miscellaneous items which will be required for final testing and commissioning of the system.                                                                | Set   | 1                 | 1    | 2     | 14,904.58                            | 29,809.16                     |
| 106   | Execution of Straight joint on Quad cable/ jelly filled Telecom cable using Thermo-shrink/Universal jointing kit (RTSF). This includes excavation of cable joint pit of size 1.2m x 1.2m x 1.0m for jointing of cables, back filling and ramming after jointing.                                                                                                                                                                                                           | Nos   | 15                | 15   | 30    | 1,411.28                             | 42,338.40                     |



*Signature*  
11/01/25

| Sr.No | Description of Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Unit    | Estimate Quantity |     |       | Estimate Rate inclusive of GST (Rs.) | Total Amount Inclusive of GST |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|-----|-------|--------------------------------------|-------------------------------|
|       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |         | SRC               | SHM | Total |                                      |                               |
| 107   | Transportation, installation of optical fibre joint enclosure and splicing of Optical fibre cable (24 fibers) and testing. Optical fibre cable splicing shall be done in the presence of IRCON's representative. Only joint closure shall be issued by IRCON. All other tools/ test equipments required shall be arranged by the contractor. This also includes excavation of earth for construction of masonry pit of bricks (inside complete plastered), the inner size of pit 1.2m x 1.2m (depth 0.75 m) in all types of soils for keeping cable coils at the location of OFC joints, filling the pit with sand after jointing of cables, ramming and covering with RCC slab as per instructions of site in charge of IRCON.                                                                                                                                                                                                                                                                                                                                     | Numbers | 10                | 10  | 20    | 19,176.20                            | 3,83,524.00                   |
| 108   | Supply and placing of warning tape Orange colour of 100 mm wide printed in black as "CAUTION RLY OFC CABLE" at every 1 meter interval (minimum) and to be laid in the trench in station area and as directed by the site engineer.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | KM      | 3                 | 2   | 5     | 10,652.97                            | 53,264.85                     |
|       | <b>GPON Connectivity</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |         |                   |     |       |                                      | -                             |
| 109   | Supply & configuration & commissioning of 8 port OLT including FAN unit. Dual Poer Supply, basic & enhance installation kit, all type of SFPs. Make & model TJ1400-1 or similar. OLT consisting of 1(i) 1 OLT, 1RU GPON OLT with 8 x GPON + 2 X 10GE (SFP+)+4X1GE(SFP) (FTU included)- 01 No (ii) DC PSU-2 nos. 1(iii) Basic installation kit for AC PSU cables suitable for India. Earth cable, fasteners and NMS cable -01 No. 1(iv) Enhanced installation kit for OLT system:contains:Alarm cable, BITS cable, LCT ethernet cable and Diag cable-01 No. 1(v)GPON port (OLT)Class B + SFP 08 Nos. 1(vi) Optical, SFP+, 10 base-LR/LW, STM64, 9.95Gbps to 1.3 Gbps, 1310 with CDR, 10Km, Duplex LC, Commercial- 2 Nos. 1(vii) 1000 Base LX 1310 nm, SM (10u) interfaces(10Kms)- 02 Nos. 1(viii) Patch cord, SC-APC to SC APC SM-10 Mtr.(splitter/FDMS to ONT). 1(ix) Patch cord, SCSC/APC, 10 Meters(PON port to FDMS)- 08 Nos. 1(x) Patch cord LC-LC single mode Dia 2mm 5 mtrs - 08 nos. 1(xi) Cable assy RJ45-RJ 45 shields 120 ohms clock RoHS Non OEM 3 mtrs. | Set     | 2                 | 2   | 4     | 3,29,901.57                          | 13,19,606.28                  |



| Sr.No                                                                                             | Description of Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Unit | Estimate Quantity |     |       | Estimate Rate inclusive of GST (Rs.) | Total Amount Inclusive of GST |
|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------|-----|-------|--------------------------------------|-------------------------------|
|                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |      | SRC               | SHM | Total |                                      |                               |
| 110                                                                                               | Supply & configuration & commissioning of XPON ONU 1200 Mbps wifi router with 1 PON, 2GE Port & 1FXS port as per the following specifications. PON Interface:- 1 GPON/EPON, SC single mode. Downstream - 2.4 Gbps, Upstream - 1.2 Gbps. Wavelength :- Tx-1310nm, Rx -1490nm, Optical interface:-SC/UPC connector. WLAN:- IEEE 802.11b/g/n/ac, 867Mbps, MIMO, External Antenna Gain=>5dbi. LAN Interface:-10/100/1000 Mbps adaptive, RJ45 , 1 POTS RJ11. Internet connection:- support for bridge, route, bridge/route mixed modes, Support modes:-LAN,VLAN , Multicast, QoS L3, Security, VoIP, wireless, Management, Warranty etc:Minimum 3 year or as offered by the OEM. | Nos. | 250               | 150 | 400   | 2,672.21                             | 10,68,884.00                  |
| 111                                                                                               | Supply & Installation of Patch cord for Pigtail to connect SFP modules or ONT of the type SC-SC / SC-LC as per site requirement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Pair | 60                | 60  | 120   | 60.65                                | 7,278.00                      |
| 112                                                                                               | Supply & Installation of 1:2 module type PLC splitter, SC/UPC connectorwith 2 mm to 1.5 meter cable.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Nos  | 20                | 20  | 40    | 988.09                               | 39,523.60                     |
| 113                                                                                               | Supply & Installation of 1:4 module type PLC splitter, SC/UPC connectorwith 2 mm to 1.5 meter cable.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Nos  | 35                | 35  | 70    | 1,277.00                             | 89,389.77                     |
| 114                                                                                               | Supply & Installation of 1:8 module type PLC splitter, SC/UPC connectorwith 2 mm to 1.5 meter cable.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Nos  | 30                | 30  | 60    | 1,553.23                             | 93,193.50                     |
| 115                                                                                               | Supply & Installation of joint closure box (2 ports) for ONT with dust proof device to prevent dust from entering fiber optic panels                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Nos  | 250               | 150 | 400   | 438.15                               | 1,75,260.00                   |
| 116                                                                                               | Supply of Ratio Coupler for Optical Power Splitter on main core having 95:05/90:10/80:20/70:30/50:50 as per site requirement as per technical specification TS2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Nos  | 40                | 40  | 80    | 123.85                               | 9,907.60                      |
| 117                                                                                               | Isopropyl Alcohol (2-Propanaol) packed in Plastic Bottle.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Ltrs | 5                 | 5   | 10    | 212.00                               | 2,120.00                      |
| Total Amount Including GST@18%                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |      |                   |     |       |                                      | 3,59,80,857.00                |
| Quotation Percentage 8.51% Above                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |      |                   |     |       |                                      | 30,61,970.93                  |
| Total Accepted Amount inclusive of all Taxes & Duties.                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |      |                   |     |       |                                      | 3,90,42,828.00                |
| (In words) Say Rupess: Three Crore Ninety Lakh Forty Two Thousand Eight Hundred Twenty Eight only |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |      |                   |     |       |                                      |                               |



Signature Not Verified

Digitally signed by MALAY BHADRA  
Date: 2025.01.13 13:15:16 IST  
Location: eProcurement System for Central PSUs