

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

DRM acting for and on behalf of The President of India invites E-Tenders against Tender No **SDSTE-GSU-RNGR-MSAE** Closing Date/Time 22/05/2023 15:00 Hrs. Bidders will be able to submit their original/revised bids upto closing date and time only. Manual offers are not allowed against this tender, and any such manual offer received shall be ignored.

1. NIT HEADER

Name of Work	Recast of the Detailed S&T Cost in connection with construction of connecting line with Rainagar (SER) to Masagram (ER) Station of HWH - BWN Chord Line Section in Howrah Division.Division		
Bidding type	Normal Tender		
Tender Type	Open	Bidding System	Two Packet System
Tender Closing Date Time	22/05/2023 15:00	Date Time Of Uploading Tender	26/04/2023 18:30
Pre-Bid Conference Required	No	Pre-Bid Conference Date Time	Not Applicable
Advertised Value	196557426.59	Tendering Section	S AND T
Bidding Style	Single Rate for Each Schedule Item	Bidding Unit	
Earnest Money (Rs.)	1132800.00	Validity of Offer (Days)	120
Tender Doc. Cost (Rs.)	0.00	Period of Completion	270 Days
Contract Type	Works	Contract Category	Expenditure
Bidding Start Date	08/05/2023	Are Joint Venture (JV) firms allowed to bid	Yes
Ranking Order For Bids	Lowest to Highest	Expenditure Type	Capital (Works)

2. SCHEDULE

S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule 1 -Recast of the Detailed S&T Cost in connection with construction of connecting line with Rainagar (SER) to Masagram (ER) Station of HWH - BWN Chord Line Section in Howrah Division.Division							196557426.59	
1	1	502.00	Per Functional Vital Bit	62604.18	31427298.36	AT Par	31427298.36	Above/ Below/Par
	Description:- Design, manufacture and supply of Electronic Interlocking (EI) system. Complete description is attached in the documents section							
2	2	1.00	Station	648703.52	648703.52	AT Par	648703.52	Above/ Below/Par
	Description:- Installation, wiring, testing (FAT & SAT) and commissioning of EI System with 'Hot Standby' architecture as supplied above item-100101/2/3. It includes transportation of material from consignee's depot to the site, erection and grouting of EI Relay Racks, fixing and wiring of all the interfacing relays (Vital & Non-Vital) , installation and wiring of Microprocessor equipments, interface equipments, power supply equipments and all other associated accessories to make complete EI system to be functional. Note: (i) Technical Requirements are attached with tender document (ii) Contractor has to arrange simulator/ simulation testing panel for testing and commissioning by Selection Table and Square Sheet for each Signalling function.(iii) Installation, wiring, testing and commissioning of EI system will be done by OEM after following all the guidelines/ directives issued by RDSO from time to time.							
3	3	1.00	Numbers	90229.41	90229.41	AT Par	90229.41	Above/ Below/Par
	Description:- Supply of portable work station to run along with EI configuration tools, data input, simulation and functional testing, diagnostics and trouble shooting and commissioning of EI System. It also includes supply of Laser Printer (Only branded). The minimum configuration of workstation should be Intel i5 with 8 GB RAM,500 GB HDD and 15 inches LED display of standard make such as Dell/ HP/Lenovo or Equivalent with required softwares as mentioned above and compatible ports to connect with EI. Detailed Technical Specifications should be attached with the tender document by Tendering authority. Inspection: Consignee.							
	4	1.00	Station	225175.15	225175.15	AT Par	225175.15	Above/ Below/Par

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

4									Description:- Maintenance supervision of Electronics Interlocking equipment for one years from the date of expiry of free maintenance period as per conditions of contract, as per the details given in special condition of contract agreement, as per the latest guidelines of PCSTE, and provision mentioned in Signal Engineering Manual. All the records are to be maintained as per latest circulars prevailing in the Division. During maintenance at least two expert personnel from the firm should be available at the station round the clock. NOTE-This item will be operated separately and will not restrict closure of contract. Separate bank guarantee will be submitted for this schedule item if require. Complete description for maintenance is attached in the documents section.
5	5	20.00	Man-Days	1236.34	24726.80	AT Par	24726.80	Above/ Below/Par	Description:- Training of Railway Personnel by OEM for installation, Commissioning, Testing, troubleshooting & making changes in application data and logics by railway officials to suit yard modification done at later stage including documentation. (Hard copies of training material/ course modules to be given to each participant).
6	6	1.00	Numbers	319572.79	319572.79	AT Par	319572.79	Above/ Below/Par	Description:- Supply, Installation, wiring, testing and commissioning of embedded fan less PC with VDU for control terminal/ maintenance terminal as per RDSO spec. No. RDSO/SPN/192/2019 Ver. 2 or latest .Note: (i) Technical requirements & size of VDU shall same as that of Sch item no. 1 Inspection : Consignee
7	7	1.00	Numbers	135852.40	135852.40	AT Par	135852.40	Above/ Below/Par	Description:- Supply & Installation of 230 V AC / 3 KVA UPS (in hot stand by) system, with isolation transformer at input, SMF battery, battery rack and accessories, capable to provide back-up for 3 hrs. as per RDSO SPEC. NO. RDSO / PE / SPEC / PS 0023 -2001 (REV - 1, AMD - 3) OR LATEST of Make-Su-KAM/ Luminous /Microtek or other reputed brand, battery make: - Exide / Standard / Amaron / Amara Raja or similar for the backup of VDUs of EI. Note: - Manufacturing date of ups & battery set should be of older than 6 months at the time of supply to railway stores.UPS to be covered under (3) years warranty of manufacturer. OEM certification regarding warranty needs to be attached. Inspection : Consignee
8	8	3.00	Set	23869.58	71608.74	AT Par	71608.74	Above/ Below/Par	Description:- Supply of maintainer's furniture of godrej make or superior and each set consist of(i) executive revolving bearing series low back-floating chair with normal arms cushioned chair-01 Nos. (ii) Executive table size 1650x900x728 mm with 3 drawers one side locker- 01 no.(iii) visitor chair seat & back cushion with high density foam with plastic pvc handle capsule type painted back-03 nOS. Inspection : Consignee
9	9	1.00	Per SIP	29139.58	29139.58	AT Par	29139.58	Above/ Below/Par	Description:- Designing and Plotting of Signalling Interlocking Plan(SIP) in AUTOCAD. Two copies of prints with soft copy will be submitted to Railway for checking. If alterations are suggested /proposed by Railways then again two copies of prints will be submitted for advance approval after carrying out all the alterations as suggested/proposed by the Railways. Tracings will be submitted for all the diagrams mentioned above for the purpose of approval by Railway prior to commissioning of station.
10	10	1.00	Numbers	635486.70	635486.70	AT Par	635486.70	Above/ Below/Par	Description:- Supply , Installation, testing & commissioning of new modular / pyrotech workspace Make or Cosmos or Similar, new modular control desk for provision of two numbers of 42/55/65 inch monitors in "SLAT" system as per approved drawing (attached with tender document) This item includes : (i) Desktop made of 12 mm ASS + ASS 12 mm MDF (ii) structure : powder coated aluminium sturdy structure and extreme side aesthetic legs (iii) shutters : 18mm MDF (iv) proper cooling arrangement for CPR cabinet (v) 2mm thick extruded aluminium "SLAT" wall . The workspace will be provided for storage in FLAT system, this includes space for housing two numbers of embedded PC, 2 No. of FDMS and their power supply arrangement with proper ventilation. This includes supply of two chairs (Godrej PCH 7002 D or superior , as approved by Engineer in charge) for operators to be supplied. Inspection: Consignee
11	11	20.00	Numbers	2862.11	57242.20	AT Par	57242.20	Above/ Below/Par	Description:- Supply of Office Chair make Godrej CH-7B or similar of reputed brand. Inspection: Consignee
12	12	6.00	Numbers	7975.99	47855.94	AT Par	47855.94	Above/ Below/Par	Description:- Supply of Office Revolving Chair Godrej Make Model No.9U02R Bravo or Similar of reputed brand. Inspection: Consignee
13	13	8.00	Numbers	13067.13	104537.04	AT Par	104537.04	Above/ Below/Par	Description:- Supply of Office table with laminated top with three drawers on left hand side and one locker on the right hand side. Olive brown with duplicate keys. Make: Godrej Model T-9 (136.5 cmX68cmX 75cm) or Similar of reputed brand. Inspection: Consignee

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

14	14	6.00	Numbers	16896.24	101377.44	AT Par	101377.44	Above/ Below/Par
	Description:- Supply of Steel Plain Almira with 4 adjustable shelf Size: 1980mm height, 915 mm width and 485 mm depth. Make: Godrej Storewel Plain Large or Similar of reputed brand. Inspection: Consignee							
15	15	2.00	Numbers	35887.81	71775.62	AT Par	71775.62	Above/ Below/Par
	Description:- Supply of Panel cum Block Instrument table complete as per approved drawing. It includes any modification to it if required by Engineer-in-charge at site. Inspection: Consignee							
16	16	8.00	Numbers	230100.00	1840800.00	AT Par	1840800.00	Above/ Below/Par
	Description:- Supply of Gallant make Modular Power Supply Arrangement for VDU (42" - 85") and Industrial PC (Embedded PC) with Input and Output Redundancy Arrangement and Hot Pluggable Modules. Consisting of: Input O-Ring Diode Module with Potential Free-1 No contacts (PFC) for two 110VDC Sources from IPS and Single 110VDC bus. 2.Isolated Inverters (Master/Slave) -2 Nos. Input: 110VDC, Output: 120VAC/220VAC 500VA. 3. Isolated DC-DC Converters-2 Nos. Input:110VDC, Output:24VDC/10A.4.3U SS Rack with back Panel Mother Board/ Front Panel Power Connectors Inverter Auto Change Over Switch and all required over Switch and all required protection circuits. SS Rack Dimension:- 1.3U Height for main Rack (132. Smm ± 10%), 2.1U height for Mounting (44.4mm ±10%) Inspection : Rites							
17	17	3.00	Numbers	484693.30	1454079.90	AT Par	1454079.90	Above/ Below/Par
	Description:- Supply of Micro Processor based Data Logger System with 1024 digital and 32 analog inputs with DOT Matrix Printer,80 COL as per RDSO Spec. No. IRS (S) 99/2006 with Amdt. 3.0 or latest. It includes supply of all the items required for complete indoor relay room wiring from data logger to relay rack tag blocks, drawing/extension of power supply up to Data Logger. It includes relay room door lock checking arrangement, commercial power supply monitoring arrangement & monitoring of DG sets, ELD, IPS, UFSBI, BI, interlinking and networking of Data logger. It also includes supply of leased line MODEM and other interfacing cards, if required for networking of Data logger. This also includes supply of one no. composite computer and printer table (Godrej work station table or similar) for keeping processor module workstation and one number Godrej operator chair Model PCH7001 or similar. Note: (1) Total numbers of relays and other signalling functions/ gears required to be wired as per list circulated vide RDSO Letter No.STS/E/Data logger dtd.12.09. 2011 or latest guidelines of Railway Board/ RDSO/ Zonal Railway. (2) Exceptional reports are to be generated by a computer connected to datalogger at the station and at a central location in Control Room. Datalogger software should be able to generate exceptional reports for maintenance, safety and operations as per latest guidelines of Railway Board/RDSO/ Zonal Railway. Datalogger to be installed at Site by OEM. Manufacturing date of datalogger/ RTU and printer should be of current year at the time of supply. Inspection: RDSO for Datalogger. Inspection: Consignee for Printer & other items.							
18	18	3.00	Set	33605.31	100815.93	AT Par	100815.93	Above/ Below/Par
	Description:- Supply of 24V power supply with Charger as per RDSO Spec. No. IRS-S-93/ 96B with Amdt.1 or latest with battery backup of 80AH capacity for data logger. Material to be procured from RDSO's approved source only. Inspection: -By Consignee							
19	19	3.00	Set	25596.90	76790.70	AT Par	76790.70	Above/ Below/Par
	Description:- "Supply of Dual Leased Modem internal card to fit in central processing unit rack for networking of data logger system of other stations. Each set shall comprise of one pair of modem and shall have data compatibility 1TUV 21, V2, V22 BITS, V23V23A, B V25 BITS, V32, V32 BITS V42, V42 BITS, suitable to work in either ofc media or microwave or quad cable. Inspection: By Consignee."							
	20	3.00	Numbers	28391.68	85175.04	AT Par	85175.04	Above/ Below/Par

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

20	<p>Description:- Installation, wiring, testing & commissioning of Micro Processor based Data Logger System with 1024 digital and 32 analog inputs as per RDSO Spec. No. IRS (S) 99/2006 or latest It cover complete indoor relay room wiring from data logger to relay rack tag blocks, drawing/extension of power supply up to Data Logger. It includes relay room door lock checking arrangement, commercial power supply monitoring arrangement & DG sets, ELD, IPS, UFSBI, BI interlinking and networking of Data logger. All material required for wiring, networking, power supply monitoring, door-locking arrangement etc. will be supplied by contractor. Note: Total numbers of relays and other signalling functions/gears required to be wired as per list circulated vide RDSO Letter No.STS/E/Data logger dtd.12.09.20 11 or latest guidelines of Railway Board/ RDSO/ Zonal Railway. Networking of data logger includes extraction of data report from Control room. Exceptional reports are to be generated by a computer connected to datalogger at the station and at a central location in Control Room. Datalogger software should be able to generate exceptional reports for maintenance, safety and operations as per latest guidelines of Railway Board/ RDSO/ Zonal Railway. Datalogger to be installed at Site by OEM. For networking, required communication channel (Quad/ OFC cable) will be arranged /provided by Rly in SM/ASM's room or in OFC/AUTO/ EI Huts and it will be extended by contractor up to location of data logger by using CAT-5/6 telecom cable with proper casing and capping. The contractor will supply all the material like CAT-5/6 telecom cable, casing & capping, nuts, bolts etc. The final commissioning will be done after filling up of Pre- Commissioning checklist (circulated by RDSO) with the OEM representative. Datalogger to be validated and commissioned before simulation test and put in network, validation statement should be jointly signed by railway engineer (open line), railway engineer (construction) & OEM'S engineer before simulation test with name, designation and date. Payment for this item will be released only after submission of duly signed pre-commissioning checklist of data logger in standard RDSO format, joint signature of validation statement. OEM'S engineer will also impart training to rly staff at site for proper functioning /working and applications of data logger. Inspection: Consignee.</p>							
21	21	100.00	Numbers	3685.53	368553.00	AT Par	368553.00	Above/ Below/Par
	<p>Description:- Q-Series Neutral Line Relay (QN1 Type), 12F/4B, 24/50V DC complete with plug board (base plate), connectors and retaining clips etc and conforming to BRS- 930 and RDSO Specn.No.IRS: S-34 & S-23 with Amdt. upto date or latest. The interlocking code for this unit shall be "ABCDE". Inspection authority:- RDSO</p>							
22	22	100.00	Numbers	3791.34	379134.00	AT Par	379134.00	Above/ Below/Par
	<p>Description:- Q-Series Neutral Line Relay (QN1 Type), 8F/8B, 24/50V DC complete with plug board (base plate), connectors and retaining clips etc and conforming to BRS- 930 and RDSO Specn.No. IRS: S-34 & S-23 with Amdt. upto date as applicable or latest. The interlocking code for this unit shall be "ABCDF". Inspection authority:- RDSO</p>							
23	23	100.00	Numbers	3938.00	393800.00	AT Par	393800.00	Above/ Below/Par
	<p>Description:- Q-Series Twin Neutral Line Relay (QNN1 Type), 6F/2B, 24/50V DC complete with plug board (base plate), connectors and retaining clips etc. and conforming to BRS-960 and RDSO Specn.No. IRS: 5-34 & S-23 or latest. The interlocking code for this unit shall be "ACDEK". Inspection authority:- RDSO</p>							
24	24	100.00	Numbers	3938.25	393825.00	AT Par	393825.00	Above/ Below/Par
	<p>Description:- Q-Series Twin Neutral Line Relay (QNN1 Type), 4F/4B, 24/50V DC complete with plug board (base plate), connectors and retaining clips etc. and conforming to BRS-960 and RDSO Specn. No.IRS: S-34 & S-23 or latest. The interlocking code for this unit shall be "ACE HJ". Inspection authority:- RDSO</p>							
25	25	100.00	Numbers	5801.67	580167.00	AT Par	580167.00	Above/ Below/Par
	<p>Description:- Q-Series Magnetically Latched Neutral Line Relay (QL1 Type), 11F/4B, 24V DC complete with plug board (base plate), connectors and retaining clips and conforming to BRS-935A and RDSO Specn.No. IRS: 5-34 & S-23with Amdt. upto date as applicable or latest. The interlocking code for this unit shall be "ABDEG". Inspection authority:- RDSO</p>							
26	26	100.00	Numbers	5426.82	542682.00	AT Par	542682.00	Above/ Below/Par
	<p>Description:- Q-Series Magnetically Latched Neutral Line Relay (QL1 Type), 8F/6B, 2450V DC complete with plug board (base plate), connectors and retaining clips and conforming to BRS-935A and RDSO Specn.No. IRS: 5-34 & S-23 or latest. The interlocking code for this unit shall be "ABCEG". Inspection authority:- RDSO</p>							
27	27	100.00	Numbers	3865.48	386548.00	AT Par	386548.00	Above/ Below/Par
	<p>Description:- Q-Series Neutral Line Relay (Style QN1K), 1000 Ohm, 6F/6B,24/50V DC complete with plug board(base plate) , connectors and retaining clips etc. and conforming to BRS:930 & RDSO letter no STs/E/Relays/ UEA/ PI dated 30.05.97 Annexure I and RDSO Specn.No. IRS:S-34 & 5- 23 or latest .The interlocking code for this unit shall be "BDEKX". Inspection authority:- RDSO</p>							
28	28	100.00	Numbers	4983.53	498353.00	AT Par	498353.00	Above/ Below/Par
28								

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

	Description:- Q-Series LED ECR (Universal Type i.e. QECX- 61), 4F/4B complete with plug board (base plate), connectors, retaining clips etc and conforming to BRS:94 1A STS/E/RELAYS/AC LIT LED SIGNAL/09-2002, Amdt. -1 and RDSO Specn.No.IRS: S-34 & S-23 with Amdt. upto date as applicable or latest. The interlocking code for this unit shall be "ABDHK".Inspection authority:- RDSO							
29	29	20.00	Kg	182.00	3640.00	AT Par	3640.00	Above/ Below/Par
	Description:- "Sealing wire used for sealing of signalling relays & equipments. Inspection authority:- Consignee"							
30	30	100.00	Numbers	1093.26	109326.00	AT Par	109326.00	Above/ Below/Par
	Description:- Supply of seal plier as per sample got approved from site engineer incharge. Inspection: Consignee							
31	31	500.00	Numbers	405.36	202680.00	AT Par	202680.00	Above/ Below/Par
	Description:- Fixing of Q series relay base plate/metal to metal relay mini group and major group base plate, laying, bunching, lacing, dressing & packeting of 60/40 core PVC indoor cable/flexible wire and termination of 60/40 core cable/flexible wire on tag block/base plate & base plates & soldering. This includes fuse wiring, bus bar looping etc. required for keeping installation ready for circuit wiring work & panel throughing work. The work shall be done as per approved plan, extant practice on ER & the instruction of Rly. Engineer at site. Inspection authority:- Consignee							
32	32	50.00	Numbers	4808.41	240420.50	AT Par	240420.50	Above/ Below/Par
	Description:- "DC neutral line relay QNA1K , AC immune, DC neutral line 24V, 6F/6B contacts, complete with plug board, retaining clip and connectors. Conforming to BRS:931A & RDSO letter no STs/E/Relays/UEA/PI dated 30.05.97Annexure II and IRS:534 & IRS:523 or latest. The interlocking code for this unit shall be ""CDEKY"". Inspection authority:- RDSO"							
33	33	20.00	Numbers	3901.08	78021.60	AT Par	78021.60	Above/ Below/Par
	Description:- "Q-Series Line Relay (QNA1 Type),AC immunized, 8F/8B, 24/50 V DC along with plug board (base plate), connectors, retaining clips etc and conforming to BRS-931A and RDSO Specn. No.IRS: S@45"44@ S-23 and S-60 or latest. The interlocking code for this unit shall be ""ABDGH"". Inspection authority:- RDSO"							
34	34	20.00	Numbers	3918.75	78375.00	AT Par	78375.00	Above/ Below/Par
	Description:- "Q-Series Line Relay (QNA1 Type), AC immunized, 12F/4B, 24/50 V DC along with plug board (base plate), connectors, retaining clips etc and conforming to BRS-931A and RDSO Specn.No.IRS: 5@45"44@ S-23 and 5-60 with amdt. upto date as applicable or latest. The interlocking code for this unit shall be ""ABDFH"". Inspection authority:- RDSO"							
35	35	20.00	Numbers	7080.00	141600.00	AT Par	141600.00	Above/ Below/Par
	Description:- Contactor Unit (QBCA 1 Type), 24 V DC, 2F(HD)/ 4B or 2F(HD)2F-4B complete with plug board (base plate), connectors, retaining clips etc and conforming to BRS- 943 and RDSO Specn.No.IRS: 5-34 & S-23 with amdt. upto date as applicable or latest. The interlocking code for this unit shall be "BCEJK" or "DEHJX". Inspection authority:- RDSO							
36	36	30.00	Numbers	5085.00	152550.00	AT Par	152550.00	Above/ Below/Par
	Description:- Q-Series Twin Neutral Line Relay(QNNA 1 Type), 4F/4B, 24/50V DC complete with plug board(base plate), connectors and retaining clips etc and conforming to BRS-960 and RDSO Specn.No.IRS: 5-34 & S-23 or latest. The interlocking code for this unit shall be "ACDHJ".Inspection authority: - RDSO							
37	37	18.00	Kilometre	5309.68	95574.24	AT Par	95574.24	Above/ Below/Par
	Description:- "Supply of PVC insulated multi strand, single core copper conductor of size 16/0.2 mm (0.5sqmm) as per IS 694:2010 and RDSO Specn. No. IRS: 5-76/89 (Amnd-3) or latest. Each coil should be of 100/200/500 meters length. Colour of the wire which is required will be specified by the Engineer incharge. Inspection: (i) RDSO/RITES if value of item in work more than 5 lakhs (ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board."							
38	38	10.00	Kilometre	14907.97	149079.70	AT Par	149079.70	Above/ Below/Par
	Description:- "Supply of PVC insulated multi strand, single core copper conductor of size 3/0.75 mm as per IS 694:20 10 and RDSO Specn. No.IRS: S- 76/89 (Amnd-3) or latest. Each coil should be of 100/200/500 meters length. Colour of the wire which is required will be specified by the Engineer incharge. Inspection: (i) RDSO/RITES if value of item in work more than 5 lakhs (ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board."							

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

39	39	1000.00	Metre	37.77	37770.00	AT Par	37770.00	Above/ Below/Par
	Description:- "Supply of 1 x 6 Sq.mm. (Red/Black/Green multi strand copper power wire as per IS:694:20 10 or latest, 84 conductor each dia 0.30mm +/- 0.01 with insulation thickness of 0.8 mm and nominal conductor resistance of 3.3 ohms/km and test parameters as per RDSO Specn. No.IRS:5-76/89(Amnd.3) or latest.Colour of the wire which is required will be specified by the Engineer incharge. Inspection: (i) RDSO/RITES if value of item in work more than 5 lakhs (ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board."							
40	40	900.00	Metre	120.63	108567.00	AT Par	108567.00	Above/ Below/Par
	Description:- "Supply of 1 x 10 Sq.mm. {Red/Black/Green} multi strand copper power wire as per IS:694:20 10 or latest, 140 conductor each dia 0.30mm +/- 0.01 with insulation thickness of 1.0 mm and nominal conductor resistance of 1.91 ohms/km and test parameters as per RDSO Specn.No.IRS:S-76/89(Amnd.3) or latest.Colour of the wire which is required will be specified by the Engineer incharge. Inspection: (i) RDSO/ RITES if value of item in work more than 5 lakhs (ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board."							
41	41	700.00	Metre	126.94	88858.00	AT Par	88858.00	Above/ Below/Par
	Description:- "Supply of 1 x 16 8q.mm. {Red/Black/Green} multi strand copper power wire as per IS:694:20 10 or latest, 126 conductor each dia 0.40mm +/- 0.01 with insulation thickness of 1.0 mm and nominal conductor resistance of 1.21 ohms/ km and test parameters as per RDSO Specn. No.IRS: S-76/89(Amnd.3) or latest. Colour of the wire which is required will be specified by the Engineer incharge. Inspection: (i) RDSO/RITES if value of item in work more than 5 lakhs(ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board."							
42	42	800.00	Metre	161.25	129000.00	AT Par	129000.00	Above/ Below/Par
	Description:- "Supply of 1 a 25 Sq.mm. {Red/B1aek} multi strand copper power wire as per IS:694: 2010 or latest, 196 conductor each dia 0.40mm +/- 0.01 with insulation thickness of 1.2 mm and nominal conductor resistance of 0.78 ohms/km and test parameters as per RDSO Specn. No.IRS:S-76/89(Amnd.3) or latest.Colour of the wire which is required will be specified by the Engineer incharge. Inspection: (i) RDSO/ RITES if value of item in work more than 5 lakhs (ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board."							
43	43	50000.00	Per Conductor	13.00	650000.00	AT Par	650000.00	Above/ Below/Par
	Description:- Circuit wiring/jumpering as per circuit diagrams in the relay racks/IDF rack tag blocks. This includes preparation of Jumper sheets by wire man duly checked by firm's site supervisor & wire to wire testing as per circuit diagram. Any wrong jumper done by wireman will not be paid & correction shall be done free of cost. Jumper wires will be supplied & issued by Railways. Good quality solder resin core to be supplied by contractor for soldering of Jumper wires. Soldering of jumper wires to be done after completion of testing by Railways. This item is to be used for only Alterations in any EI/PI/RRI.Inspection: Consignee							
44	44	8.00	Numbers	25233.15	201865.20	AT Par	201865.20	Above/ Below/Par
	Description:- Installation and wiring of relay rack as per DRG.NO.S&T/C-20/2001 with modification vide CSTE/ER'S LETTER NO.SG.42/9, DT.15/3/2016. Supply and fixing of fuses with base, diodes; resistances; condensers, terminal strips / tag blocks, bus bars & other equipment's required for the approved system design complete with scaffolding materials & required hardware & erection materials to accommodate 100 relays (station wise quantity to be specified by the tenderer). PVC wire as per RDSO SPEC.IRS-5-76/89, AMD-2 or latest (for wiring of relay rack) shall be supplied by the contractor, duly inspected by RDSO. This includes supply of relay rack to accommodate 100 relays complete with fittings as per DRG.NO.S&T/C-20/2001. Note: - this includes status of relay to be indicated through led indication at the top of relay rack and in this connection all the required materials to be supplied by the contractor. Rack to be fixed on rubber pad. Supply. Inspection: (i) RITES if value of item in work more than 5 lakhs. (ii)Consignee if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board.							
45	45	8.00	Numbers	82051.63	656413.04	AT Par	656413.04	Above/ Below/Par
	Description:- Execution.							
46	46	5.00	Numbers	44393.96	221969.80	AT Par	221969.80	Above/ Below/Par

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

	<p>Description:- Installation of cable termination rack with scaffolding materials ladder for supporting outdoor cable; wire guide complete with other necessary hardware as per requirements of rly. & erection materials. Wires to be procured from RDSO's approved firm only. This includes supply of cable termination rack as per DRG.NO. S&T/C-17/2001 OR latest with screw less disconnect type connectors (Wago/ Phoenix/Similar) , scaffolding materials, ladder for supporting outdoor cable, wire guide, NDT fuse complete with other necessary hardware as per requirements of railway & erection materials. Supply. Inspection: (i) RITES if value of item in work more than 5 lakhs. (ii) Consignee if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board.</p>							
47	47	5.00	Numbers	5721.90	28609.50	AT Par	28609.50	Above/ Below/Par
	<p>Description:- Execution.</p>							
48	48	1000.00	Numbers	64.85	64850.00	AT Par	64850.00	Above/ Below/Par
	<p>Description:- Supply of PBT ARA terminal as per IRS SPECN.NO. IRS: S-75-2006(REV-2) OR LATEST. Material to be procured from RDSO's approved firm only. Inspection: RDSO. 1 WAY,DRG NO.23741A, ALT-4.</p>							
49	49	500.00	Numbers	374.86	187430.00	AT Par	187430.00	Above/ Below/Par
	<p>Description:- 6 WAY, DRG.NO. 23756,ALT-3. Inspection : RDSO</p>							
50	50	200.00	Numbers	49.50	9900.00	AT Par	9900.00	Above/ Below/Par
	<p>Description:- Supply of fuse block (PBT) to spec.no.IRS-5- 75/2006(REV-2) OR LATEST, DRG.NO.SA- 23748 with fuse inserts cartridge, non- deteriorating type to spec.IRS-S-78/92 with latest amendment, to be mounted inside the location box on hylum sheet. Inspection: - RDSO. Fuse, non-deteriorating(2A/6A/10A/16A) type, cylindrical(IRS-S-78/92) Rating of fuse will be given by site engineer Inspection : Consignee</p>							
51	51	200.00	Numbers	143.32	28664.00	AT Par	28664.00	Above/ Below/Par
	<p>Description:- Fuse Base as per above schedule Inspection : Consignee</p>							
52	52	100.00	Numbers	63.46	6346.00	AT Par	6346.00	Above/ Below/Par
	<p>Description:- "Supply of indicating type fuse inserts of 0.6 A with holder (material will be supplied only from approved vendors of RDSO) as per IRS S:78/92 or Latest. Inspection: Consignee"</p>							
53	53	100.00	Numbers	66.88	6688.00	AT Par	6688.00	Above/ Below/Par
	<p>Description:- Supply of indicating type fuse inserts of 1.6 A with holder (material will be supplied only from approved vendors of RDSO) as per IRS S:78/92 or Latest. Inspection: Consignee"</p>							
54	54	100.00	Numbers	21.01	2101.00	AT Par	2101.00	Above/ Below/Par
	<p>Description:- Supply of indicating type fuse inserts of 0.6A without holder (material will be supplied only from approved vendors of RDSO) as per IRS S:78/92 or Latest. Inspection: Consignee</p>							
55	55	100.00	Numbers	18.92	1892.00	AT Par	1892.00	Above/ Below/Par
	<p>Description:- Supply of indicating type fuse inserts of 1.6A without holder (material will be supplied only from approved vendors of RDSO) as per IRS S:78/92 or Latest. Inspection: Consignee</p>							
56	56	5.00	Kilometre	153131.81	765659.05	AT Par	765659.05	Above/ Below/Par
	<p>Description:- "Supply of PVC insulated Railway Signalling multi-core Indoor Cable 60 core (0.6mm dia) conforming to IRS:76/89(Amd3) or latest. Inspection: (i) RDSO if value of item in work more than 5 lakhs (ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board."</p>							
57	57	5.00	Kilometre	103491.68	517458.40	AT Par	517458.40	Above/ Below/Par
	<p>Description:- "Supply of PVC insulated Railway Signalling multi-core Indoor Cable 40 core (0.6 mm dia) conforming to IRS:76/89(Amd3) or latest. Inspection: (i) RDSO if value of item in work more than 5 lakhs (ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board."</p>							
58	58	100000.00	Per Conductor	8.78	878000.00	AT Par	878000.00	Above/ Below/Par

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

	Description:- Termination of Outdoor Cables (Main Cables / tail cables) at both ends in location boxes, cable termination rack in relay room, station building, generator room etc. The item includes dressing of cables and wires with dressing threads as per standard practice. All material required for this item will be supplied by contractor. The outdoor cable shall be terminated in Relay Room, DG Room, ASM Room etc under supervision and instructions issued by Engr. incharge of the work. Inspection: Consignee							
	59	50000.00	Numbers	56.73	2836500.00	AT Par	2836500.00	Above/ Below/Par
59	Description:- Supply of Disconnect Terminal Block, Screw less type, as per RDSO Spec. No. RDSO/SPN/189/2004(Modular Terminal Blocks, Fuse Terminal Blocks & Miniature fuse link of international standard for Railway signalling) With latest amendments. Inspection: (i) RDSO if value of item in work more than 5 lakhs (ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board. Supply of Disconnect Terminal Block, Screw less type, 4-wire front entry (Two in-put & Two out-put) The colour will be decided by Engineer - in - Charge. (Preferably In Blue, Red & Grey Colors in the ratio of 1:2:3)							
	60	25000.00	Numbers	10.63	265750.00	AT Par	265750.00	Above/ Below/Par
60	Description:- Supply of End plate 2.5mm/0.091 in thick as per site requirement. Inspection : Consignee							
	61	10000.00	Numbers	10.63	106300.00	AT Par	106300.00	Above/ Below/Par
61	Description:- Supply of End Stopper 10mm/0.0394 in width as per site requirement. Inspection : Consignee							
	62	1000.00	Metre	111.09	111090.00	AT Par	111090.00	Above/ Below/Par
62	Description:- Supply of Carrier Rails for above 35mm x 7.5mm, 1mm/0.039 in thickness un-slotted type as per site requirement. Inspection : Consignee							
	63	50000.00	Numbers	16.54	827000.00	AT Par	827000.00	Above/ Below/Par
63	Description:- Supply of Markers strip. Inspection : Consignee							
	64	5000.00	Numbers	56.07	280350.00	AT Par	280350.00	Above/ Below/Par
64	Description:- Supply of Disconnect Terminal Block, screw less type, 2-wire front entry (One in-put & One out-put) The colour will be decided by Engineer - in - Charge. (Preferably In Blue, Red & Grey Colors in the ratio of 1:2:3) Inspection : Consignee							
	65	50000.00	Numbers	2.08	104000.00	AT Par	104000.00	Above/ Below/Par
65	Description:- Supply of shooting link (jumper) (part no - 283- 402 or similar) , suitable for 0.2 to 16 sqmm terminal block 283-901 or similar. Inspection : Consignee							
	66	100.00	Per Relay	279.92	27992.00	AT Par	27992.00	Above/ Below/Par
66	Description:- Carrying out relay alteration to the existing relay wiring at relay rack/location box as per the approved circuit diagram. These work includes the releasing of existing unused wires and wiring the relays using 16/0.2 mm copper wire as per RDSO Spec. Wire to be procured from RDSO's approved source and inspection: by RITES [for value of material above Rs. 5.0 lakhs.]. Inspection by consignee [for value of material below than Rs 5.0 lakh]. Note: - wire to be procured from RDSO's approved source only. All required material like wire, soldering material, paint etc. To be supplied by the contractor for execution of the work.							
	67	1.00	Station	136150.89	136150.89	AT Par	136150.89	Above/ Below/Par
67	Description:- Inter connection wiring with ladder arrangement from control panel to IPS to relay rack, battery & CTR. This includes interconnection, wiring with ladder arrangement between relay racks, CTRS, control cum indication panel and relay rack tag blocks for data logger. This also includes termination of cables / wires on all the above and dressing, bunching etc. As required at site. 16 sq. mm. cable to be used between IPS & it's battery duly soldered with good quality lugs in duplicate. From relay rack to panel wire should be of 40/60 core multicore cable of 1 sq.mm., 0.5mm dia., 16/0.2 mm for relays, 3/0.75 mm for MCBS and 10 sq.mm for power wiring. Indoor cable will be 60 x 1 mm /40 x 1 mm as per IRS-S-76/89, amd-2 or latest for interconnection. Supply of wires / cables by the contractor, shall be procured from RDSO's approved firm only & to be duly inspected. Note:1) necessary 40/60 multicore, 16/0.2 mm, 3.0.75 mm, 10 sq.mm cables required for wiring to be supplied by the contractor. 2)to suite load requirement necessary re- arrangement of DC-DC converters by OEM of IPS. Up to 6 Lines Station							
	68	3.00	Numbers	1170785.62	3512356.86	AT Par	3512356.86	Above/ Below/Par
68								

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

	Description:- Supply, Installation and Commissioning of SMPS based Integrated power supply (IPS) system as per RDSO Spec. No. RDSO/ SPN/165/2012 (Ver.3. 0) with latest amendment if any and also as per Sketch No. SDO/IPS/PI-6L/RE/004 or Latest along with 300AH Low maintenance lead acid cell as per E. Rly. Practice. Inspection: RDSO							
69	69	3.00	Numbers	111508.86	334526.58	AT Par	334526.58	Above/ Below/Par
	Description:- Supply of active lightning arrestor of class A for building protection as per standard NFC 17-102. It shall work on early streamer emission principle and shall be made of stainless steel with a T of 60 micro second. The dimension of the device shall be 590 mm x 120 mm or more. The provision shall be there to test this device if necessary by an external tester. A non- resettable type counter shall also be supplied to count number of lightening occurrences along with required copper tape for connecting the device with earth pit. Inspection: Consignee							
70	70	3.00	Per Unit	7422.92	22268.76	AT Par	22268.76	Above/ Below/Par
	Description:- Supply and erection of a mast / high mast suitable for ESE technology based lightning protection installation, mechanically robust good corrosion and fire resistance, 5 mtr. (including 2 mtr FRP) long GI/MS painted along with guying kit foundation and other accessories required for installation of mast. Supply material inspection by consignee.							
71	71	150.00	Metre	1381.91	207286.50	AT Par	207286.50	Above/ Below/Par
	Description:- Supply and laying of 70 sq.mm PVC insulated flexible tinned electrolytic copper down conductor placed in a metallic / PVC protective covering wherever exposed to human intervention including saddles and all accessories as required. Supply material inspection by consignee.							
72	72	3.00	Per Unit	46387.60	139162.80	AT Par	139162.80	Above/ Below/Par
	Description:- Supply & fixing of equipotential earth bonding unit between electrical & equipment Earthing in a explosion proof IP68 enclosure with inspection chamber for equipotential bonding during a surge. Supply material inspection by consignee.							
73	73	150.00	Metre	1425.70	213855.00	AT Par	213855.00	Above/ Below/Par
	Description:- Supply & laying of 25x3 mm pure electrolytic copper tape through suitable CLASS-'B' GI pipe for loop Earthing and bonding as per site requirement. Supply material inspection by consignee.							
74	74	3.00	Set	18887.44	56662.32	AT Par	56662.32	Above/ Below/Par
	Description:- Installation of class A device on the top of the building: the device shall be installed at a height of about of about 3 mtrs. From the roof of the building using a GI mast. The device shall be connected to earth pit using the copper tape of 25 mm x 2 mm or better. This copper tape shall be run firmly along the side of the mast with help of spacers. It shall also be ensured that this down conductor shall not touch the building throughout. The down conductor should be connected to earth electrode using exothermic welding or better. A counter shall be installed at a appropriate place to count number of occurrences.							
75	75	10.00	Numbers	24804.06	248040.60	AT Par	248040.60	Above/ Below/Par
	Description:- Supply and installation of lightning and surge protection device both Class 'B' & Class 'C' between line and neutral and neutral & earth of approved type. Inspection: by RITES [for value of material above Rs.5.0 lakhs.]. Inspection by consignee [for value of material below than Rs 5.0 lakh]							
76	76	28.00	Numbers	4397.12	123119.36	AT Par	123119.36	Above/ Below/Par
	Description:- Supply of Point JB fitted with 18 nos. 1-way terminal block conforming to IRS-S-75/91 (AMD-2) OR LATEST, DRG. NO. SA-2374 1A with 3 no. of 40 mm bore G I PIPE 600 mm long as per DRG. NO. SGW/MGS/PT4/91 fixed on hylum sheet with U channel (75x40x1500) mm for fixing ARA terminal to be procured from RDSO approved sources. Inspection- Consignee.							
77	77	28.00	Numbers	7092.00	198576.00	AT Par	198576.00	Above/ Below/Par
	Description:- Supply of Ground Connection [BG] Threaded Type for IRS type Point Machine, as per CWM/Signal Workshop /Howrah /E. Rly. drawing number, S1. No., Description of Drawing & CWM/SW /HWH's Drawing No. mentioned below: - 1. Detector Rod (Far End) - BS/29/721 with ALT-1 Detector Rod (Near End)- BS/29/722 with ALT-1. 2. Lock Rod (Far End) - BS/29/723 with ALT-1, Lock Rod (Near End) BS/29/724 with ALT-1. 3. Switch Extension Bracket - BS/29/725 with ALT-1. 4. Drive Rod - BS/29/726 with ALT- 1 Drive Lug- BS/29/726 A with ALT-1. 5. Sleeve- BS/29/726 B with ALT-1. 6. Lug- BS/29/726 C with ALT-1. 7. Pin- BS/29/726 D with ALT-1. 8. Sketch showing the Layout arrangement- BS/29/727 with ALT-1. Amdt. and alt. up to date if any. Inspection: by RITES [for value of material above Rs. 5.0 lakhs. Inspection by Consignee for value of material below than Rs 5.0 lakh] Turn Out							

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

78	78	28.00	Numbers	117972.62	3303233.36	AT Par	3303233.36	Above/ Below/Par
	Description:- Supply of Electric Point machine IRS type 220 mm throw, high thrust (AC immunity 160V AC), non trailable to operate on 110V, DC complete with Lock and Detector slides, Cable Termination Box and clamp lock 60 Kg. confirming to IRS: S 24/2002 & Assy. Drg. No. RDSO-S /11000 & For Motor IRS: S 37/82. (items to be procured through stores) Inspection: RDSO							
79	79	28.00	Numbers	11322.22	317022.16	AT Par	317022.16	Above/ Below/Par
	Description:- "Installation of electric point machines on MS plate fixed on wooden/ concrete sleepers complete with fixing of junction boxes, ground connections including smithy works involved, insulation of MS plate on which the point machine is to be fixed from the gauge tie plate involving riveting/welding of angle cleats, installation of point JB, termination adjustment for operation of points by crank handle, painting and lettering as required including wiring, testing and commissioning. Note: MS plate/flat/angle /angle cleats, paints, bolts & nuts and washers of sizes as required for fixing the point machine shall be supplied by the contractor except point machine."							
80	80	50.00	Set	1235.92	61796.00	AT Par	61796.00	Above/ Below/Par
	Description:- "Point insulation Complete set as per RDSO/ SPN/168/2005 for 1.Switch bracket 'D' bracket insulation for IRS point machine - One set comprises of (a)Side plate LH to Drg. No.S-3266 - 1 No. (b)Side plate RH to Drg.No.S-3265 - 1 No. (c)Insulating bush to Drg.No.S-3199 - 4 Nos. (d) Insulating washer to Drg.No.S-8640 - 4 Nos., 2. Split-Stretcher bar 2.1 Insulation for Leading stretcher bars(BG) each set comprising of (a) Insulating plate for leading insulated stretcher bars BG as per RDSO Drg.No.T-10384 - 2 Nos. (b) Insulating bushing for leading insulated stretcher bars for BG as per RDSO Drg.No.T-10535- 4 Nos. (c) Insulating Washer for insulated stretcher bar BG as per RDSO drg.No.T-10371 - 6 Nos. 2.2 Insulation for following stretcher bars BG. Each set comprising of: (a) Insulating side plate for insulated stretcher bars BG as per RDSO Drg.No.T-10367 - 3 No. (b) Insulating bushing for insulated stretcher bars BG as per RDSO Drg.No..T-10368 - 6 Nos. (c)Insulating washer for insulated stretcher bars BG as per RDSO Drg.No.T10371 - 12 Nos & 3. Gauge tie plates (52 Kg/60Kg as per site requirement) Insulation for (BG) complete with insulating bush and washer each set comprising of: (a) Insulating plate for insulated tie plate BG as per RDSO Drg.No.T-10372-1 No. (b) Insulating bushing for insulated stretcher bar BG as per RDSO Drg.No.T10368 - 3 Nos. (c) Insulating Washer for insulated stretcher bar BG to IRS 40/84 as per RDSO drg.No.T-10371 - 6 Nos. Inspection: (i) RDSO/ RITES if value of item in work more than 5 lakhs (ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board."							
81	81	100.00	Set	378.26	37826.00	AT Par	37826.00	Above/ Below/Par
	Description:- "Gauge Tie plate insulation as per RDSO/ SPN/168/2005 as per RDSO drg. No: T- 10372Alt2, T- 10368, T- 10371A1t2, T-15083/88/Alt2 & T-11690/Alt2 and as per RDSO/ SPN/168/2005 with latest amendments as applicable. Gauge tie plates (52 Kg/60Kg as per site requirement) Insulation for (BG) complete with insulating bush and washer each set comprising of: (a) Insulating plate for insulated tie plate BG as per RDSO Drg.No.T-10372-1 No. (b) Insulating bushing for insulated stretcher bar BG as per RDSO Drg.No.T10368 - 3 Nos. (c) Insulating Washer for insulated stretcher bar BG to IRS 40/84 as per RDSO drg.No.T-10371 - 6 Nos. Inspection: (i) RDSO/RITES if value of item in work more than 5 lakhs (ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board."							
82	82	28.00	Set	7810.21	218685.88	AT Par	218685.88	Above/ Below/Par
	Description:- Dismantling of existing point fittings, drilling of holes in stock rail/tongue rail/ gauge tie plate, re arrangement and refixing of existing electrical detector and installation of IRS 24/2002 with latest Amdt. point machine on MS plate fixed on wooden/concrete sleepers complete with fixing of point JB ground connections including smithy job for welding & termination & wiring of point machine, adjustment and testing as per technical specification and dismantling of all new fittings excluding point machine and marking with paint for future and transportation up to railway's store							
83	83	14.00	Numbers	7366.71	103133.94	AT Par	103133.94	Above/ Below/Par
	Description:- nstallation, wiring and testing of electrical key transmitter for crank handle arrangement, siding control as per yard diagram, approved circuit diagram. Installation portion shall include supply of necessary angles, wooden shelf, nuts & bolts as required for the work. The ward no. Of key shall be advised by the site engineer. This includes supply of electrical key transmitter with key for crank handle interlocking arrangement siding control as per yard diagram, approved circuit diagram and specn.no. IRS-S- 21/01(LATEST) AND IRS-S-23(LATEST),DRG.NO.SA- 22601 (ADV)ALT. 2. [key combination will be intimated by site engineer] Supply. Inspection : RDSO.							
84	84	14.00	Numbers	6816.23	95427.22	AT Par	95427.22	Above/ Below/Par
	Description:- Execution.							

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

	85	79.00	Per Detection Point (DP)	514645.11	40656963.69	AT Par	40656963.69	Above/ Below/Par
85	Description:- Supply, Transportation, Installation, Testing and Commissioning of Multi Section Digital Axle Counter (MSDAC) for mentioned detection Point by the purchaser & Track Section as per SIP uploaded with the tender, complete with all accessories, cable required with each track device & Card viz., Axle Detectors, Track Side Electronics/ DAC field units, Central Evaluator (Central Evaluator unit should be housed in a pre-fabricated Rack to be supplied along with the system), Reset unit, Relay unit, Event logger & Diagnostic terminals etc. required for different Detection Points & Track Sections as per RDSO Specification No. RDSO/SPN/176/2013, Ver.3 or latest as per Annexure-070801(A, B & C.) Inspection : RDSO							
	86	79.00	Per Detection Point (DP)	8009.66	632763.14	AT Par	632763.14	Above/ Below/Par
86	Description:- "Installation testing and commissioning of detection points as above as per RDSO specification no. RDSO/SPN/176/2013 (ver-3) or latest. This include installation, wiring, testing and commissioning of complete MSDAC system which includes track circuit electronics and its all accessories (track electronics unit, central evaluator and its accessories /interface device, if any. All the tools and plants for installation has to be arranged by the contractor. Wiring from cable termination rack to the central evaluator, installation of earth electrode (if required will be supplied by Railway), installation and wiring the reset box and wiring the power supply to the central evaluator including the supply of 2 core shielded cable for required size copper conductor as per IRS-5-76/89 OR IS:694/1977(or latest) as applicable with other accessories. Note- i: - all execution /installation materials as required to be supplied by the contractor. Note- ii: - (i) installation, testing and commissioning of MSDAC to be done by OEM'S engineer. (ii) pre- commissioning checklist issued by RDSO for MSDAC will be prepared by OEM's engineer and to be signed jointly with rly site engineer incharge (iii) payment for this item will be released only after submission of duly signed pre- commissioning checklist of MSDAC in standard RDSO format. (iv) OEM'S engineer will also impart training to rly staff at site for proper functioning /working and applications of MSDAC. Inspection: Consignee"							
	87	2.00	Set	814832.48	1629664.96	AT Par	1629664.96	Above/ Below/Par
87	Description:- "Supply, Installation testing & commissioning of High Availability Single Section digital axle counters (HASSDAC) with Dual sensor system as per RDSO/SPN/177/2012 version 3 or latest. This includes the supply of High frequency web mounting type Tx coil/Rx coil, VR/PR Box duly wired, Vital relays, PR Relays, Clamp with detector plates & hardware, Dual display reset box with auto resetting facility, Surge voltage protection devices and filter card to be mounted on din rail etc. as per OEM for complete installation & testing & commissioning of (HASSDAC) system NOTE: One set of HASSDAC system will include equipment required to monitor One Up line or One Dn line of a full Block Section between two stations. This include fixing of device, relays, wiring, lacing /dressing, cable termination with lug eyelet, drilling holes in rails, Installation of track devices and make it functional along with existing UFSBI/block instrument. Material required other then supply item of HASSDAC shall be arranged by contactor to make it functional. Inspection: RDSO"							
	88	1.00	Pair	1010058.80	1010058.80	AT Par	1010058.80	Above/ Below/Par
88	Description:- Supply of Block Panel BPAC (Block Proving with digital axle counter) using UFSBI as per specification IRS: S-105/2012Ver.0 with latest amendment for single line operation. NOTE: One set will include equipments required for one complete Single Line Block Section except DAC. This includes Relay, Relay Base, Retaining clip & connectors to be supplied by the contractor alongwith the UFSBI. Inspection: RDSO							
	89	1.00	Pair	36230.44	36230.44	AT Par	36230.44	Above/ Below/Par
89	Description:- "Supply of Automatic Media changeover system of Modem working on redundant channel for data transmission on OFC/Quad/ microwave radio, for seamless operation of UFSBI over multiple media. Inspection: Consignee."							
	90	1.00	Pair	60428.29	60428.29	AT Par	60428.29	Above/ Below/Par
90	Description:- "Supply of Modem for UFSBI for use with secondary media OFC/Quad. The modem shall be complete with existing system as per RDSO/SPN/147/2005 with amendment -1 or latest. Inspection: Consignee."							
	91	1.00	Pair	19934.88	19934.88	AT Par	19934.88	Above/ Below/Par
91	Description:- Installation and commissioning of modem & media change over as above. Note: all required materials for execution to be supplied by the contractor.							
	92	1.00	Pair	55980.22	55980.22	AT Par	55980.22	Above/ Below/Par
92	Description:- Installation, Testing & commissioning of Block proving by Axle Counter (BPAC) including UFSBI equipment as per standard practice & directive of engineer in charge and as per OEM guidelines. Inspection: Consignee.							
	93	1.00	Station	246608.59	246608.59	AT Par	246608.59	Above/ Below/Par

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

93	<p>Description:- Earthing of EI equipment, relay rack and power equipment etc. to be done along with the supply of all requisite materials, Earthing shall be in the form of Ring Earth conforming to RDSO spec RDSO/SPN/197 Ver.1.0 or Latest (with a minimum 10 maintenance free earth electrodes) and as per CSTE/ER/Kolkata's technical circular No.92, using copper rings with earth resistance less than 1 ohm. The earthing shall be maintenance free. The ring earth shall be connected to copper flat of size 25x3 mm in the relay room and IPS room. The copper flat fixed on the wall to the entire breadth of Relay room and IPS room as an earth bus bar and all earth connections shall be taken from it. A, B, C & D class protection shall be provided for all EI equipment. Inspection: Consignee</p>							
94	94	40.00	Numbers	8809.99	352399.60	AT Par	352399.60	Above/ Below/Par
	<p>Description:- "Supply of LED signal lamps for Main colour light Signal, 110V AC retrofittable in existing CLS housing and compatible with AC LED ECR as per RDSO Specn. No.RDSO/SPN/ 199/2010(Rev.1) or latest.{items to be procured through Storee} Inspection: RDSO" RED Aspect</p>							
95	95	45.00	Numbers	8814.07	396633.15	AT Par	396633.15	Above/ Below/Par
	<p>Description:- YELLOW Aspect</p>							
96	96	25.00	Numbers	9918.90	247972.50	AT Par	247972.50	Above/ Below/Par
	<p>Description:- GREEN Aspect</p>							
97	97	80.00	Numbers	5863.12	469049.60	AT Par	469049.60	Above/ Below/Par
	<p>Description:- "Supply of various LED signals {Subsidiary Signal}, 110V AC retrofittable in existing CLS housing and compatible with AC LED ECR as per RDSO Specn. No.RDSO /SPN/153/2011 (Rev.4.1) or latest.{items to be procured through stores) Inspection: RDSO" LED for Route Aspect</p>							
98	98	50.00	Numbers	6044.87	302243.50	AT Par	302243.50	Above/ Below/Par
	<p>Description:- LED for Shunt Signal Aspect</p>							
99	99	6.00	Numbers	7161.95	42971.70	AT Par	42971.70	Above/ Below/Par
	<p>Description:- LED for Calling ON 8igna1 Aspect</p>							
100	100	14.00	Numbers	15379.66	215315.24	AT Par	215315.24	Above/ Below/Par
	<p>Description:- "Supply of colour light signal post 5.6 mtr and ladder 5.5 mtr with bases for ladder & post as per RDSO SPEC. NO. IRS:S-6-81 (or latest) and DRG. NO. SA-23156 (ADV), ALT-1 (OR LATEST). CLS base as per DRG. NO. S-2011/M (OR LATEST). Note: - this includes signal post, base, ladder, ladder base, platform, rail guard & blanking off. Materials to be procured only from RDSO approved list of firms for manufacture & supply of mechanical signalling items. Inspection: (i)RDSO/RITES if value of item in work more than 5 lakhs (ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board."</p>							
101	101	11.00	Numbers	14058.53	154643.83	AT Par	154643.83	Above/ Below/Par
	<p>Description:- "Supply of colour light signal post 4.6 mtrs. and ladder 4.5 mtrs. With bases for ladder and post as per RDSO SPEC. NO. IRS-5-6-8 1 and DRG. NO. SA-23153/ADV/AIT- 1. All drawing should be as per latest. Note: - this includes signal post, base, ladder, ladder base, platform, rail guard & blanking off. Materials to be procured from approved list of firms for manufacturer & supply of mechanical signalling items. Inspection: (i)RDSO/RITES if value of item in work more than 5 lakhs ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board."</p>							
102	102	11.00	Numbers	18521.15	203732.65	AT Par	203732.65	Above/ Below/Par
	<p>Description:- Installation, erection and wiring of CLS unit (including post, base, ladder etc.), LED unit including paying out of tail cable from location box and Earthing of CLS [LED type]. This includes supply of CLS unit 2 aspect complete without lenses, lamps and signal transformer as per DRG.NO.SA 23001/A/ M/ADV.ALT-8 AND AS PER SPEC.NO.IRS/5-26/64. All drawings should be as per latest. Material to be procured from RDSO's approved firm only. Note: - signal unit should be compatible to 'LED' type. Note: - installation, erection & wiring of signalling unit includes led signal lightening unit including current regulator. this also includes protection of unit from rain water. Supply. Inspection: (i)RDSO/RITES if value of item in work more than 5 lakhs (ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board.</p>							
103	103	11.00	Numbers	1906.25	20968.75	AT Par	20968.75	Above/ Below/Par
	<p>Description:- Execution</p>							

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

104	104	5.00	Numbers	24379.25	121896.25	AT Par	121896.25	Above/ Below/Par
	Description:- "Installation, erection and wiring of CLS unit(including post, base, ladder etc.),LED unit including paying out of tail cable from location box and Earthing of CLS [LED type]. This includes supply of CLS unit 4 aspect complete without lenses, lamps and signal transformer as per DRG.NO.SA 23001/A/ M/ADV.ALT-8 AND AS PER SPEC.NO.IRS/5-26/64. All drawings should be as per latest. Material to be procured from RDSO's approved firm only. Note :- signal unit should be compatible to 'LED' type. Note :- installation , erection & wiring of signalling unit includes led signal lightening unit including current regulator .this also includes protection of unit from rain water." Supply. Inspection: (i)RDSO/RITES if value of item in work more than 5 lakhs (ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board.							
105	105	5.00	Numbers	2956.14	14780.70	AT Par	14780.70	Above/ Below/Par
	Description:- Execution							
106	106	9.00	Numbers	21304.25	191738.25	AT Par	191738.25	Above/ Below/Par
	Description:- "Installation, erection and wiring of CLS unit(including post, base, ladder etc.),LED unit including paying out of tail cable from location box and earthing of CLS [LED type]. This includes supply of CLS unit 3 aspect complete without lenses, lamps and signal transformer as per DRG. NO.SA 23001/A/ M/ADV.ALT-8 AND AS PER SPEC.NO.IRS/5-26/64. All drawings should be as per latest. Material to be procured from RDSO's approved firm only.Note :- signal unit should be compatible to 'LED' type. Note :- installation , erection & wiring of signalling unit includes led signal lightening unit including current regulator .this also includes protection of unit from rain water." Supply. Inspection: (i)RDSO/RITES if value of item in work more than 5 lakhs (ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board.							
107	107	9.00	Numbers	2304.87	20743.83	AT Par	20743.83	Above/ Below/Par
	Description:- Execution							
108	108	10.00	Numbers	20597.64	205976.40	AT Par	205976.40	Above/ Below/Par
	Description:- Installation, erection and wiring of junction type route indicator [LED type]. This includes supply of junction type route indicator without lamp, lenses, signal transformer. All drawings should be as per latest. Material to be procured from RDSO's approved firm only. Note: - signal unit should be compatible to 'LED' type. Note :- installation , erection & wiring of signalling unit includes led signal lightening unit including current regulator .this also includes protection of unit from rain water. Supply of 1 WAY AS PER RDSO DRG. NO. SA- 23401 (ADV)/ ALT.2 Inspection: (i)RDSO /RITES if value of item in work more than 5 lakhs (ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board.							
109	109	10.00	Numbers	860.21	8602.10	AT Par	8602.10	Above/ Below/Par
	Description:- Execution of 1 WAY AS PER RDSO DRG. NO. SA- 23401 (ADV)/ ALT.2							
110	110	5.00	Numbers	21277.18	106385.90	AT Par	106385.90	Above/ Below/Par
	Description:- "Supply of 2 WAY AS PER RDSO DRG. NO. SA- 23402 (ADV)/ ALT.2 Inspection: (i)RDSO/RITES if value of item in work more than 5 lakhs (ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board."							
111	111	5.00	Numbers	1352.04	6760.20	AT Par	6760.20	Above/ Below/Par
	Description:- Execution of 2 WAY AS PER RDSO DRG. NO. SA- 23402 (ADV)/ ALT.2							
112	112	6.00	Numbers	24051.47	144308.82	AT Par	144308.82	Above/ Below/Par
	Description:- "Supply of 3 WAY AS PER RDSO DRG. NO. SA- 23403 (ADV)/ ALT.2 Inspection: (i)RDSO/RITES if value of item in work more than 5 lakhs. (ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board."							
113	113	6.00	Numbers	1700.07	10200.42	AT Par	10200.42	Above/ Below/Par
	Description:- Execution of 3 WAY AS PER RDSO DRG. NO. SA- 23403 (ADV)/ ALT.2							
	114	21.00	Numbers	5854.34	122941.14	AT Par	122941.14	Above/ Below/Par

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

114	<p>Description:- Installation, erection and paying out of tail cable from location box and wiring of shunt signal, LED unit on the same post below the main signal as per technical specification. This includes supply of position light shunt signal unit without lenses, lamps, base, post and without signal transformer as per RDSO DRG NO. SA-23840/ADV/ALT-2. All Drawings should be as per latest. Material to be procured from RDSO's approved firm only. Note- Signal unit should be compatible to 'LED' type. Supply. Inspection: (i)RDSO/RITES if value of item in work more than 5 lakhs (ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board.</p>							
115	115	21.00	Numbers	533.36	11200.56	AT Par	11200.56	Above/ Below/Par
	<p>Description:- Execution</p>							
116	116	3.00	Numbers	114224.00	342672.00	AT Par	342672.00	Above/ Below/Par
	<p>Description:- "Supply of 2 MB Programmable Primary Digital drop insert multiplexer as per RDSO Specs. IRS TC-68/2004 (Amnd.1) or latest with conference facility and other stipulation to tender documents and fully wired for 30 channel complete with power supply card, remote control, supervision facility and all other accessories, installation material, manuals etc. It should have facilities to accommodate data interface card in multi drop mode and should be able to support cards needed for video conferencing and ISDN. It shall support NMS installed at Test Room and may operate local/remote location of entire section. It also includes submission of all technical documents, manuals and supply of all miscellaneous items which will be required for final testing and commissioning of system. The above MUX should be equipped with following circuits: - i) 2 wire/ 4 wire E&M VF circuits (minimum 16 nos ckts) ii) Subscriber loop circuits (minimum 4 nos ckts) iii) Exchange loop interface circuits (minimum 8 circuits) iv) This also includes connecting all pigtailed, optical patch cords etc. to the SDH equipments. This also includes connection of SDH and primary MUX equipment with all interface cards to the 48V Bus including supply of wires and connectors termination of all evens on DDF taking PVC cable over runway or a wall and termination of VF interface circuit to the Krone type. Inspection:(i) RDSO if value of item in work more than 5 lakhs or as per extant policy (ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in "</p>							
117	117	3.00	Numbers	6563.73	19691.19	AT Par	19691.19	Above/ Below/Par
	<p>Description:- "Installation, wiring, testing and commissioning of 2 MB Programmable Primary Digital drop insert multiplexer as per RDSO Specs. IRS TC- 68/2004 (Amnd.1) or latest with conference facility and other stipulation to tender documents and fully wired for 30 channel complete with power supply card, remote control, supervision facility and all other accessories, installation material, manuals etc. It should have facilities to accommodate data interface card in multi drop mode and should be able to support cards needed for video conferencing and ISDN. It shall support NMS installed at Test Room and may operate local/remote location of entire section. It also includes submission of all technical documents, manuals and supply of all miscellaneous items which will be required for final testing and commissioning of system. The above MUX should be equipped with following circuits: i) 2 wire/ 4 wire E&M VF circuits (minimum 16 nos ckts) ii) Subscriber loop circuits (minimum 4 nos ckts) iii) Exchange loop interface circuits (minimum 8 circuits) iv) This also includes connecting all pigtailed, optical patch cords etc to the SDH equipments. This also includes connection of SDH and primary MUX equipment with all interface cards to the 48V Bus including supply of wires and connectors termination of all evens on DDF taking PVC cable over runway or a wall and termination of VF interface circuit to the Krone type. All materials such as wires for Earthing & power supply, wire carrying aluminium ladder, MCB, Connectors, foundation bolts, nuts, base frame, mounting accessories for fitting of transformers, U-Link Panels, inter connecting cables etc. required for the above shall be supplied by the contractor. "</p>							
118	118	6.00	Numbers	7092.09	42552.54	AT Par	42552.54	Above/ Below/Par
	<p>Description:- Installation, erection and paying out of tail cable from location box and wiring of shunt signal, LED unit as per technical specification. This includes supply of position light shunt signal unit (without lenses, lamps) with Base Post and without signal transformer as per RDSO DRG NO. SA- 23840/ADV/ALT-2. All drawings should be as per latest. Material to be procured from RDSO's approved firm only. Note- Signal unit should be compatible to 'LED' type. Supply. Inspection: (i)RDSO/RITES if value of item in work more than 5 lakhs (ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board.</p>							
119	119	6.00	Numbers	526.07	3156.42	AT Par	3156.42	Above/ Below/Par
	<p>Description:- Execution</p>							
120	120	6.00	Numbers	4273.51	25641.06	AT Par	25641.06	Above/ Below/Par
	<p>Description:- Casting, concreting and curing of foundation for Shunt signal including cost of all materials required for casting and concreting. All materials required for execution will be supplied by the contractor, including holding down galvanised bolts & nuts with washers, cement, sand, stone chips, etc. As per DRG. NO SK/5/95/NKG.</p>							
	121	6.00	Numbers	2648.42	15890.52	AT Par	15890.52	Above/ Below/Par

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

121	Description:- Supply of Calling ON/ Guard Repeater Signal Unit with Brackets & Fixing accessories. Calling ON/ Guard Repeater Signal Unit shall conform to RDSO Drg no 24351(Adv) A1t1 suitable to LED Signal Lighting Unit. Inspection: (i)RDSO /RITES if value of item in work more than 5 lakhs (ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board.							
122	122	6.00	Numbers	2628.33	15769.98	AT Par	15769.98	Above/ Below/Par
122	Description:- Supply of A -sign / AG - LED Signal Lighting Unit retrofittable i n existing CLS housing and compatible with AC LED ECR (As per spec. RDSO/SPN/199/2010 Rev 1.1 or Latest with Brackets & Fixing accessories. Inspection: Consignee							
123	123	12.00	Numbers	2414.43	28973.16	AT Par	28973.16	Above/ Below/Par
123	Description:- Fixing of Calling-on Signal/A-Sign/AG-Sign unit on signal post including Guard Repeater Signal. The item includes fixing of Co- On signal /'A' sign/ 'AG' sign unit on signal post with bracket, hood etc. Item includes supply of bracket & fixing materials etc. by the contractor. The item also includes termination of cables & wiring inside Co- On signal /'A' sign/ 'AG' sign unit as per standard practice. Inspection: Consignee.							
124	124	30.00	Numbers	3648.44	109453.20	AT Par	109453.20	Above/ Below/Par
124	Description:- Supply and fixing of protective screen of expanded metal 12 SWG of size 1200 x 1500 mm on signals as per std. practice in RE Area. Inspection: Consignee.							
125	125	18.00	Numbers	569.45	10250.10	AT Par	10250.10	Above/ Below/Par
125	Description:- Supply and installation of P/ C / G/ A/ AG marker (size 250mm dia circle) high intensity prismatic(TYPE-IV) retro reflective sheet over 2 mm thick aluminium sheet & letter will be screen printing (250 mm dia circle) a s per drg. S&T/SDAH /SK-1383 and technical specification attached. This will include cost of all materials including fixing clamp required for this work. Inspection: - inspection by rites [for value of material above Rs. 5.0 lakhs.]. Inspection by consignee [for value of material below than Rs 5.0 lakh]							
126	126	38.00	Numbers	399.78	15191.64	AT Par	15191.64	Above/ Below/Par
126	Description:- "Supply, Fabrication and Fixing of Retro reflective Nomenclature Board of size 254 mm x 358 mm made of 2mm thick aluminium sheet & high intensity prismatic (hip) grade retro reflective sheet (TYPE -IV) including fixing arrangement for fixing them on existing post per DRG. NO. S&T/SDAH /SK-1386 and as per standard practice. Inspection: (i)RDSO/RITES if value of item in work more than 5 lakhs (ii) Consignee subject to procurement from RDSO approved vendors if value of whole item in work less than 5 lakhs as per extant instructions by Railway Board."							
127	127	10.00	Numbers	2075.67	20756.70	AT Par	20756.70	Above/ Below/Par
127	Description:- Supply of offset bracket for position light shunt signal (90mm outside Dia.) post with U clamps, nuts, washers complete as per RDSO DRG. NO.SA-23080/ADV/ALT-1 all drawings should be as per latest. Inspection: by consignee							
128	128	20.00	Numbers	2603.15	52063.00	AT Par	52063.00	Above/ Below/Par
128	Description:- "Supply of cast iron offset bracket for Main Signal with U clamps, nuts, washers complete DRG. NO. SA-23080/ADV/ALT-1. RDSO SPEC. NO. IRS-5- 10/78. Inspection: consignee. Note : Offset bracket has to be connected wherever necessary as per site engineer."							
129	129	30.00	Numbers	8352.98	250589.40	AT Par	250589.40	Above/ Below/Par
129	Description:- Casting, concreting & curing of foundation for Main signal including cost of all materials required for casting and concreting. All materials required for execution will be supplied by the contractor including cement, sand & stone chips as per DRG. NO. S&T/C-42(NKG).							
130	130	22.00	Numbers	3180.43	69969.46	AT Par	69969.46	Above/ Below/Par
130	Description:- Releasing of existing tail cables and drawl of new tail cables for colour light signals up to four aspects with or without route indicator, post type shunt signal and calling signals. Termination of new tail cables and wiring using wire PVC 3/0.75 mm copper as per latest RDSO spec. This work includes drawl of new tail cables into the signal post duly releasing the existing tail cables from the relevant signals [Wire PVC 3/0.75 mm copper, paints and all other miscellaneous materials shall be supplied by the contractor. Wire to be procured from RDSO's approved source only]. Inspection- consignee.							
131	131	22.00	Numbers	1273.98	28027.56	AT Par	28027.56	Above/ Below/Par
131								

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

	Description:- Dismantling of existing main signal including dependent shunt signal, calling on signal if any, fitted on the same post along with signal post, signal unit, ci base without damaging any part.							
132	132	22.00	Numbers	2257.48	49664.56	AT Par	49664.56	Above/ Below/Par
	Description:- Dismantling of existing Signal Foundation (upto ground level by hydraulic breaker).							
133	133	3.00	Numbers	65115.92	195347.76	AT Par	195347.76	Above/ Below/Par
	Description:- Supply, Installation, Testing & Commissioning of Microprocessor based Networkable Analogue Addressable up to 64 nodes 1 Loop Fire Alarm Control panel with LCD display, the panel should be equipped with sufficient No. of loop as per RDSO Specification No. RDSO/SPN/217/2018 ver 2.0 or latest. Each loop shall have capacity of 127 analogue addressable devices in 1 loop, the panel shall have sufficient No. of programmable relay control for controlling AHU's, pressurisation fans, ventilation fans at fire pump room, monitoring of fire sprinkler & sealed lead acid batteries sufficient for 24 Hours normal working & then capable of operating the system for 24 Hours during Emergency conditions as required. The panel shall have provision of connectivity of BACNET/ MODBUS / LONWOK/TCP- IP. The panel shall have dedicated RS232 serial port for direct PC or MODEM connection, optional remote printer as per RDSO Specification No. RDSO/SPN/217/2018 ver 2.0 or latest Inspection: RDSO							
134	134	48.00	Numbers	3253.82	156183.36	AT Par	156183.36	Above/ Below/Par
	Description:- Supply, Installation, Testing & Commissioning of intelligent Analogue Addressable Multi-Sensor type smoke detector with inbuilt fault isolator and integral response indicator with 360 degree viewing angle. Detector shall communicate 3 danger levels for differentiated alarm activation and high tolerance to dust, dirt, temperature fluctuations and air current. Detector should have unique address for communication and assigned through panel with mounting base as required with the protection category of IP 40. All items as per RDSO Specification No. RDSO/ SPN/ 217/ 2021 ver 3.0 or latest. Inspection: RDSO							
135	135	9.00	Numbers	3719.34	33474.06	AT Par	33474.06	Above/ Below/Par
	Description:- Supply, Installation, Testing & Commissioning of Analogue Addressable Manual Call Point with integral short circuit isolator, Analogue addressable protocol having status LED for alarming & standby mode, electronically addressed) as per RDSO Specification No. RDSO/ SPN/ 217/ 2021 ver 3.0 or latest. Inspection: RDSO							
136	136	3.00	Numbers	69579.71	208739.13	AT Par	208739.13	Above/ Below/Par
	Description:- Supply, Installation, Testing & Commissioning of UV/IR Type Flame detector with required module to communicate on main fire alarm panel as per RDSO Specification No. RDSO/ SPN/ 217/ 2021 ver 3.0 or latest. Inspection: RDSO							
137	137	700.00	Metre	777.84	544488.00	AT Par	544488.00	Above/ Below/Par
	Description:- Supply, Installation, Testing & Commissioning of Linear Heat Sensing (LHS) cable as per RDSO Specification No. RDSO/ SPN/ 217/ 2021 ver 3.0 or latest. Inspection: RDSO							
138	138	3.00	Numbers	32696.41	98089.23	AT Par	98089.23	Above/ Below/Par
	Description:- Supply, Installation, Testing & Commissioning of LHS interface module as per RDSO Specification No. RDSO/ SPN/ 217/ 2021 ver. 3.0 or latest. Inspection: RDSO							
139	139	3.00	Set	149576.07	448728.21	AT Par	448728.21	Above/ Below/Par
	Description:- Supply, Installation, Testing & Commissioning of Air Sampling Type detector shall use LASER type. This type of detector shall use piping or tubing distribution network that shall run from the detector to the area as to be protected. It should be supplied with required module & Power supply unit complete as a system with all accessories like pipes, Sampling points etc. as per RDSO Specification No. RDSO/ SPN/ 217/ 2021 ver 3.0 or latest Inspection: RDSO							
140	140	6.00	Numbers	8717.79	52306.74	AT Par	52306.74	Above/ Below/Par
	Description:- Supply, Installation, Testing & Commissioning of intelligent Addressable Loop Powered Sounder cum beacon with base inbuilt fault isolator with protection category of IP42 and duly approved as per RDSO Specification No. RDSO/ SPN/ 217/ 2021 ver 3.0 or latest. Inspection: RDSO							
141	141	700.00	Metre	117.74	82418.00	AT Par	82418.00	Above/ Below/Par
	Description:- Supply, Installation, Testing & Commissioning of FRLS unarmoured/ armoured cable(2Cx1.5 sq.mm) with all accessories for connection of all Fire Alarm devices as per RDSO Specification No. RDSO/ SPN/ 217/ 2021 ver 3.0 or latest Inspection: RDSO							

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

142	142	9.00	Numbers	5358.57	48227.13	AT Par	48227.13	Above/ Below/Par
	Description:- "Supply of CO2 type fire extinguisher capacity 4.5 Kg capacity ISI Mark IS: 15683 operating temperature (- 30)° to (50)° for class 13 B type of fire with 1 mtr. Hose pipe fitted with PVC bend horn complete in all respect. Inspection: (i) RITES if value of item in work more than 5 lakhs or as per extant policy (ii) Consignee if value of whole item in work less than 5 lakhs or as per extant policy"							
143	143	80.00	Numbers	14417.65	1153412.00	AT Par	1153412.00	Above/ Below/Par
	Description:- Supply of full size apparatus case (GKP type) (as per DRAWING NO. SW SK NO. 4/90 & other applicable GKP SW Drawing). This includes supply of location box (GKP type) with 'E' type lock & key, fitted on location door on both side, E Type lock (ward No will be specified by Engineer-in Charge) as per RDSO Drg. No. SA 3376 and Key to Drg. No. 3377 as per RDSO drawing No. RDSO/S-11500. Inspection: Consignee							
144	144	80.00	Numbers	3689.19	295135.20	AT Par	295135.20	Above/ Below/Par
	Description:- Casting, concreting and curing of concrete foundation ((in ratio 1:3:6), erection and installation of full size apparatus case (GKP type)/Stainless Steel (SS) Apparatus Case as per DRG.NO. S&T/C-6/98(NKG) with 'E' type lock on CC foundation. This includes cost of all materials required for fixing holding down bolts, casting, concreting. Note: - bolts, nuts and washers, bitumen compound to be supplied by contractor and bitumen compound to be used in between apparatus case and foundation as per site engineer. This also includes bottom of apparatus cases filled with sand and the outside covered with masonry work and neat cement plastering. Note: - Location boxes to painted with anti- corrosive paints as per IS:- 9862-1981, one and half feet from the bottom, on all surfaces- both inside and outside. Inspection: Consignee							
145	145	80.00	Numbers	5002.71	400216.80	AT Par	400216.80	Above/ Below/Par
	Description:- Fixing by slotted angle, wiring of terminal strips, hylam strip, relays, fuses with base, fixing of hard wood shelves for full size apparatus case with termination & Earthing of cables and wiring with lettering as required including supply of slotted angles, wires, ferrules for marking and miscellaneous materials per location to be supplied by contractor. (all materials except relay, terminal strips, Bakelite strip, fuses with base and hard wood shelves to be supplied by the contractor). Wires to be used for this purpose should be procured from RDSO'S approved firm and to be inspected by RDSO. [Quantity of wires to be specified by contractor]. NB- power cable to be terminated with proper lugs and required buss bar and other terminals to be supplied by the contractor. Inspection: Consignee							
146	146	20.00	Numbers	8054.87	161097.40	AT Par	161097.40	Above/ Below/Par
	Description:- "Supply of half size apparatus case (GKP type) (As per GKP TYPE DRAWING NO.SE/FE/2004/ 21 & other applicable GKP SW Drawing). This includes supply of location box (GKP type) with 'E' type lock & key, fitted on location door on both side, E Type lock (ward No will be specified by Engineer-in Charge) as per RDSO Drg. No. SA 3376 and Key to Drg. No. 3377 as per RDSO drawing No. RDSO/S-11500. Inspection: (i) RITES if value of item in work more than 5 lakhs or as per extant policy (ii) Consignee subject to procurement from RECOMMENDED LIST OF FIRMS FOR MECHANICAL SIGNALLING ITEMS if value of whole item in work less than 5 lakhs or as per extant policy."							
147	147	20.00	Numbers	3181.72	63634.40	AT Par	63634.40	Above/ Below/Par
	Description:- Casting, concreting and curing of concrete foundation (in ratio 1:3:6), erection and installation of half size apparatus case (GKP type) Apparatus Case as per DRG.NO. RE/S&T/SIG/TENDER/ SK/8/85 with 'E' type lock on CC foundation. This includes cost of all materials required for fixing holding down bolts, casting, concreting. Note: - bolts, nuts and washers, bitumen compound to be supplied by contractor and bitumen compound to be used in between apparatus case and foundation as per site engineer. This also includes bottom of apparatus cases filled with sand and the outside covered with masonry work and neat cement plastering. Note: - Location boxes to painted with anti- corrosive paints as per IS:- 9862-1981, one and half feet from the bottom, on all surfaces- both inside and outside. Inspection: Consignee.							
148	148	20.00	Numbers	3623.93	72478.60	AT Par	72478.60	Above/ Below/Par
	Description:- Fixing, wiring of terminal strips, hylam strip, relays, fuses with base and supply and fixing of shelves for half apparatus case with termination earthing of cables and wiring with lettering as required including supply of slotted angles, wires, ferrules for marking and miscellaneous materials per location to be supplied by contractor. (all materials except relay, terminal strips, Bakelite strip, fuses with base and hard wood shelves to be supplied by the contractor). Wires to be used for this purpose should be procured from RDSO's approved firm and to be inspected by RDSO. [quantity of wires to be specified by contractor]. NB- power cable to be terminated with proper lugs and required buss bar and other terminals to be supplied by the contractor. Inspection: Consignee							
149	149	80.00	Numbers	564.27	45141.60	AT Par	45141.60	Above/ Below/Par

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

149	Description:- Supply of hard wood shelves thickness 25 mm for keeping equipment's and batteries in the location box (FULL or HALF GKP /other type) with suitable varnish and anti-termite chemicals fitted on angles with nuts & bolts. Inspection: -Consignee (note-balance quantity may be taken from rly store if available) . 950 x 400 x 25 MM for full size location box .							
150	150	20.00	Numbers	451.59	9031.80	AT Par	9031.80	Above/ Below/Par
	Description:- 450 x 400 x 25 MM for half size location box .							
151	151	21.00	Square Centimetre	5360.41	112568.61	AT Par	112568.61	Above/ Below/Par
	Description:- Supply of paper base hylam sheet 12 mm thick. Inspection: consignee.							
152	152	15.00	Numbers	2790.86	41862.90	AT Par	41862.90	Above/ Below/Par
	Description:- Alteration/modification in the existing location boxes (full size), fixing of equipment's, cable insertion, termination, wiring, testing & commissioning, two coat painting, lettering to suit the circuits as per approved wiring diagrams. This includes filling with sand and plastering the same.							
153	153	15.00	Numbers	1667.81	25017.15	AT Par	25017.15	Above/ Below/Par
	Description:- Alteration/modification in the existing location boxes (Half size), fixing of equipment's, cable insertion, termination, wiring, testing & commissioning, two coat painting, lettering to suit the circuits as per approved wiring diagrams. This includes filling with sand and plastering the same.							
154	154	40.00	Numbers	694.10	27764.00	AT Par	27764.00	Above/ Below/Par
	Description:- Dismantling of location box / RCC Goomty including all its accessories & concrete foundation.							
155	155	10.00	Numbers	2003.82	20038.20	AT Par	20038.20	Above/ Below/Par
	Description:- Shifting/lifting of location box to facilitate earthwork of Engg/Con.This includes filling with sand and plastering inside location box.							
156	156	80.00	Numbers	263.55	21084.00	AT Par	21084.00	Above/ Below/Par
	Description:- Painting of two coats of synthetic enamel paint over one coat of primer on the following after scraping & cleaning surface wherever necessary with contractor's own supply of paints. Wherever required contractor shall apply coating of epoxy paint also as per instructions of site-in-charge. Epoxy paint will be supplied by Railways. NOTE: - The paint and primer should be from Asian Paints/ Nerolac / Dulux / Berger. The primer / enamel paints (Aluminum synthetic, black enamel, brilliant white and yellow) will be as per (IS 5660 of 1970) / (IS 2932 of 1974) of Apparatus Case Full Size. (Outside & inside)							
157	157	20.00	Numbers	238.73	4774.60	AT Par	4774.60	Above/ Below/Par
	Description:- Painting of two coats of synthetic enamel paint over one coat of primer on the following after scraping & cleaning surface wherever necessary with contractor's own supply of paints. Wherever required contractor shall apply coating of epoxy paint also as per instructions of site-in-charge. Epoxy paint will be supplied by Railways. NOTE: - The paint and primer should be from Asian Paints/ Nerolac / Dulux / Berger. The primer / enamel paints (Aluminum synthetic, black enamel, brilliant white and yellow) will be as per (IS 5660 of 1970) / (IS 2932 of 1974) of Apparatus Case Half Size. (Outside & inside)							
158	158	120.00	Kilometre	223867.32	26864078.40	AT Par	26864078.40	Above/ Below/Par
	Description:- Underground, Armoured, Unscreened Railway signaling cable (Heavy Duty) with high conductivity copper conductor of size 12 Core X 1.5 sq mm as per Specn. No.IRS: S-63/2014 (Rev.4.0) with latest Amdt.if any. Inspection : RDSO							
159	159	40.00	Kilometre	282270.00	11290800.00	AT Par	11290800.00	Above/ Below/Par
	Description:- UNDERGROUND RAILWAY JELLY FILLED TELECOM 6 QUAD CABLE 0.9 MM DIA FOR SIGNALLING AND TELECOM INSTALLATION CONFORMING TO SPECN.NO.IRS-TC-30/2005 VER-I WITH AMDT.- 5 OR LATEST. Inspection : RDSO							
160	160	35.00	Kilometre	71908.77	2516806.95	AT Par	2516806.95	Above/ Below/Par
	Description:- Cable OFC, 24 Fibre Armoured Underground to SPEC. No. IRS-TC-55/2006 (REV-1) with Amdt 1.1 or Latest. Inspection : RDSO							
161	161	500.00	Metre	789.87	394935.00	AT Par	394935.00	Above/ Below/Par

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

101	Description:- Supply of Medium class GI pipes 100 mm dia {4.5 mm thickneee} as per IS 1239 (Part 1): 2004 or Latest with socket & coupling on culverts bridges or at any other locations as decided by Site Engineer. It includes supply of all material required for fixing arrangement. Contractor will also supply flexible/corrugated HDPE pipe at the end of GI pipe to protect the cables from sharp edges and sudden bends.							
162	162	500.00	Metre	101.76	50880.00	AT Par	50880.00	Above/ Below/Par
	Description:- Laying 4s Firing of Medium clae GI pipee 50/ 100 mm dia {4.5 mm thickness} as per IS 1239 {Part 1}: 2004 with socket & coupling on culverts bridges or at any other locations as decided by Site Engineer. It includes installation of all material required for fixing arrangement. Contractor will install flexible/corrugated HDPE pipe at the end of GI pipe along with any masonry work(if required) to protect the cables from sharp edges and sudden bends.							
163	163	30.00	Numbers	2231.24	66937.20	AT Par	66937.20	Above/ Below/Par
	Description:- Supply of Thermo shrink Universal Jointing kit for Quad Cable (for straight joints) as per RDSO spec IRS/TC-77/ 2012 revision 3 With latest Amdt.							
164	164	30.00	Numbers	990.30	29709.00	AT Par	29709.00	Above/ Below/Par
	Description:- Jointing of 4 / 6 quad /Signaling cable with Heat Shrinkable straight through Jointing Kit. All the material required for the work are to be arranged by contractor himself at his own cost except Thermo shrinkable Joint Kit/Rapid Joint kit. After joining the cable through test such as insulation test, continuity cable losses etc. to be carried out jointly with Railway Engineer. If any defect or any damage is observed during jointing, the contactor has to redo the joint free of cost.							
165	165	2000.00	Metre	1813.30	3626600.00	AT Par	3626600.00	Above/ Below/Par
	Description:- Transportation of HDT machine with accessories including handling of stores materials, preparation of sites and boring for placing of 110 mm dia HDPE PIPE for crossing of S&T cables together a bridges/ culvers, pucca road/crossing, boring trench shall be minimum 3 (three) meter below the river bed and 1(one) meter below the track/road/pucca road crossing area. This includes supply of accessories for HDPE pipes, including, cost of fuel and all other items etc. which will be required for laying of cable through it.the work shall be executed a s per instruction of site engineer.HDPE PIPE T O BE SUPPLIED AS PER RDSO SPEC. Contactor shall provide all material required for boring and adequate nos. of labours for proper laying of cables into the bore. Cable shall be laid cautiously so that it should not get damage due to rough handling & pressure on cable. Boring up to the length of 150 meters. Preparation of site for Horizontal Boring shall be carried out in presence of Railway Representative.							
166	166	1500.00	Metre	2419.95	3629925.00	AT Par	3629925.00	Above/ Below/Par
	Description:- Boring above the length of 150 meters. Preparation of site for Horizontal Boring shall be carried out in presence of Railway Representative.							
167	167	3500.00	Metre	8.05	28175.00	AT Par	28175.00	Above/ Below/Par
	Description:- Laying of 6 quad/Signalling cable/ Power Cable/OFC with nylon rope through 110 mm HDPE pipe and back filling of boring pit.							
168	168	20.00	Numbers	375.82	7516.40	AT Par	7516.40	Above/ Below/Par
	Description:- Transferring of Signaling/Telecom cables from existing Location box to New Location box . The work include breaking/ Dismantling of Existing foundation of locations, excavating and removing / segregating coils of 2C/6C/12C/19C/24C/30C/Quad cables which may be about 10 mtrs. in length. These cables are to be disconnected and removed from the existing location one by one as per the instruction and under the supervision of Railway staff present at site. The cable is then to be inserted and terminated in new location box. The item includes neatly dressing of cable, making wiring tree etc. The material required to dressing /lacing will be arranged by contactor. The work is required to be done systematically and with due precaution during the block or disconnection within the time that may be allowed. The excavation work to be done carefully without damaging the cable to avoid undue failure. (Termination charges will be given separately). Note: Proportionate payment will be made if cable of other length. One No unit One cable of 10 m length}.							
169	169	400.00	cum	152.91	61164.00	AT Par	61164.00	Above/ Below/Par
	Description:- Earthwork in filling in embankment, guide bunds, around buried type abutments, bridge gaps, trolley refuges, rain bunds if provided, platforms etc. with earth excavated from outside railway boundary entirely arranged by the contractor at his own cost as per RDSO's latest guidelines and specifications and special condition of contract including all leads, royalty, lifts, ascents, descents, crossing of nallahs or any other obstructions. The rates shall include all dressing of bank to final profile, demarcation and setting out of profile, site clearance, removing of shrubs, roots of vegetations growth, heavy grass, benching of existing slope o f old bank, all handling/re-handling. Taxes, Octroi and royalty etc. as a complete job. Cut trees shall be property of railways and to be deposited in the railway godown unless specified otherwise in the Special conditions of contract.							

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

170	170	400.00	cum	15.72	6288.00	AT Par	6288.00	Above/ Below/Par
	Description:- Extra for mechanical compaction of earth/blanketing material filled in embankment with contractor's rollers of suitable capacity, type and size to achieve specified density as per specification, testing as per IS codes incl. cost of water, T&P consumable material and all labour as a complete job. The work is to be executed as per Latest edition of "Guidelines for Earthwork in Railway Projects" issued by RDSO, Lucknow.							
171	171	400.00	cum	143.44	57376.00	AT Par	57376.00	Above/ Below/Par
	Description:- Removal of excavated/ slip earth/ debris/ malba from the site of works to any other place outside Railway land/premises, including all excavations, handling, re-handling, loading, unloading and leading, etc. all labour and material as a complete job. Removal of Earth (all kinds of soils)/ ROCKS, BOULDERS including mud/slush, slipped earth in catch water drains, side drains, over berms in cutting, water way of bridges, over coping of toe/breast /retaining walls etc. including crossing of nallah, railway tracks, making/repairing approach roads if required, all lead, lift, ascent, descents, or any other obstruction. Earth spoils to be dumped outside the cutting or railway embankments as per direction of Engineer in charge.							
172	172	27000.00	cum	605.73	16354710.00	AT Par	16354710.00	Above/ Below/Par
	Description:- Excavation of cable trench as per cable route plan, 1 Mtr. deep and of 0.3 Mtr. to 0.6 Mtr. wide at bottom as per RDSO sketch No. SDO/CABLE LAYING/ 003 or latest alongside the track in hard soil, conforming to distances as per cable route plan and refilling. This work includes clearing of route from bushes etc., covering of cable laid in trench by loose soil for a layer of 50mm thickness approximately before covering by bricks. The work shall be done as per the extant practice on Eastern Railway and instructions of Railway Engineer at site. Note:- (a)for all trenches from distant signal to home signal and to relay room, the minimum headway above the uppermost cable in the trench should be 600mm. If due to a large no. of cables headway is not available, 4" of 1:2:4 concreting should be done. Note:-(b-1) payment will be made as per actual work done on pro-rata basis, if required depth is not available at site. (b-2) if the depth of trench is not uniform in a span of 100 mtr. Or shorter lengths if site condition demands along the cable run, minimum depth will be taken for that particular stretch for payment.							
173	173	5000.00	Metre	723.59	3617950.00	AT Par	3617950.00	Above/ Below/Par
	Description:- Supply of Split DWC Pipe in the cable Trench parallel to track or as per Site and approved cable route plan. Split DWC pipes having non flame propagation and Anti Roddent properties (minimum outer dia 250 mm & minimum Inner Dia 217 mm) with out socket /coupler as per IS:14930, Pt-II(ISI Marked). Inspection : Rites							
174	174	5000.00	Numbers	681.80	3409000.00	AT Par	3409000.00	Above/ Below/Par
	Description:- Supply of Double Walled Corrugated (DWC) HDPE Pipe/duct with associated collars etc. as per RDSO Specification No. RDSO/SPN/204/2011 or latest anti-rodent & anti-oxidant and non-flame propagating type in 6 meters straight length and of size 120 mm outer dia IN 103.5 mm inner dia. (The manufacturers, suppliers must produce valid IS license and should be certified under ISO 9000 and shall submit copy of certificate). One of the following coupling arrangements should also be supplied with each pipe as per the site requirement. 1) Suitable snap fit coupler with rubber O-Ring 2) Spacers, 3)Tees, 4)Bend, 5)End-cap (The total quantity of above items is equal to no. of pipes supplied.) DWC pipe shall be marked at every 1 mtr. length in such a way that manufacturer's name, vendor name and year of manufacture can be easily identified. Inspection : Rites							
175	175	10000.00	Running Metre	30.73	307300.00	AT Par	307300.00	Above/ Below/Par
	Description:- Placing of DWC HDPE /RCC/GI pipes along with collars in trenches at places near track and road, crossings, platform cuttings etc.							
176	176	400.00	Metre	265.15	106060.00	AT Par	106060.00	Above/ Below/Par
	Description:- Repair of pucca roads to original state in level crossing area after cable laying.							
177	177	195000.00	Running Metre	5.40	1053000.00	AT Par	1053000.00	Above/ Below/Par
	Description:- Laying of S&T Cables of various cores/ pairs/ quads in trenches/ GI pipes/ RCC pipes/ DWC pipes/ Trunking. This also includes laying of cables in track crossings & road crossings. Item includes provision of labels of coloured plastic adhesive tapes or any other identifiable material on each cable to give the cable number at each Gantry Post/hectometre post.(Cables will be meggered before and after its laying by contractor under supervision of Railway Representative and he will submit the meggering report of each testing). Length of the cable laid includes the length of the cable coiled for termination purposes.							
178	178	200.00	cum	3767.59	753518.00	AT Par	753518.00	Above/ Below/Par

178

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

			Description:- Cement concrete work for miscellaneous items in the ratio 1: 3: 6. Item includes excavation, ramming, curing and plastering with cement & sand mixture (aggregate not exceeding 3.8 cm.) (Aggregate cement & sand to be supplied by the contractor). Wherever depth of 0.5 m cable trench is not feasible, cable shall be protected as :- Preparation of cement mixture 1:3:6 with contractor's own materials and spreading cement concrete mixture layer of 100 mm thick over the already laid cables in the excavated trench.					
179	3.00	Numbers	170786.69	512360.07	AT Par	512360.07	Above/ Below/Par	
	Description:- Supply Wiring, installation, testing and commissioning of Earth Leakage Detector (12 nos. channel) as per RDSO specification no. RDSO/SPN/256/2002 or latest having 6-digit counter, 12 Channel bus bar voltage of 110V AC/DC and/or 60V/24V/12V DC measurement in 19" sub rack along with insulation resistance meter, remote indication & buzzer in ASM room at station. The tenderer should submit three years' warranty certificate along with supply of material. This includes supply of fuse terminal strip for incoming power supply wires. On job training at site will be given by OEM engineer for installation and maintenance of ELD. Inspection by RDSO.							
180	30.00	Lot	18203.91	546117.30	AT Par	546117.30	Above/ Below/Par	
	Description:- "Supply of basic material to construct unit maintenance free earth as per RDSO Specs. No RDSO/SPN/197 Ver.1.0 or latest and conforming to RDSO Drg. No. SDO / RDSO/ E&B/001 or Latest. Necessary testing certificate of UL, IEC to be produced. It consist of following: (a) Copper bonded steel electrode of 3.0 m long, 17.2 mm dia with copper bonding thickness of minimum macrons and UL listed and marked = 1 no. (b) Earth enhancement material supplied in sealed bags of minimum 10 kg = 3 nos. (c) Copper strip of 150x25x6 mm, to terminate earth rod - 1 no. (d) Copper strip of 300x25x6 mm (MEEB) = 1 no. (e) Copper strip of 150x25x6mm (SEEB) = 1 no. (ii) Supply of 35 sq. mm multi strand single core PVC insulated copper cable as per IS: 694 for connecting main earth electrode to MEEB in the equipment room in duplicate.(minimum 10 meter) (iii) Supply of 16 sq. mm multi strand single core PVC insulated copper cable as per IS: 694 for connecting MEEB to SEEB and SPD to MEEB (minimum 10 meter) (iv) Supply of 10 sq. mm multi strand single core PVC insulated copper cable as per IS: 694 for connecting various equipments to SEEB (v) Supply of copper lug sleeve for 3/16 cable Inspection: RDSO"							
181	30.00	Set	6107.87	183236.10	AT Par	183236.10	Above/ Below/Par	
	Description:- "Installation of Unit Maintenance Free Earth as supplied in above item. It includes (i) Digging the earth to the required depth. (ii) Insertion of electrode. (iii) Filling of earth enhancing compound (Approx.30 Kg) (iv) Provision of exothermic weld connections to copper tape of 25 mm x 6 mm x 150 mm to the earth electrodes. All material tools and features required for weld will be arranged by contractor. (v) This also includes CC cover 1.5 ft x 1.5 ft. 1 ft wall thickness 2 inch with cover 3 inch thickness. Cables 35 Sq mm/ 16 Sq mm/10 sq mm for connecting earth to busbar, busbar to busbar and bus bars to various equipments. Earth electrode of 17.20 mm dia and 3.00 meter long high tensile low carbon steel circular rods molecularly bonded with copper and outer surface (minimum copper bonding thickness of 250 microns to made requirement of under writer's laboratories (UL) 467-2007 or latest. Copper strips of 150 mm x 25 mm x 6 mm to be welded with each earth electrode, copper strips of 300 mm x 25 mm x 6 mm for main equip- potential bus bar, copper strips of 150 mm x 25 mm x 6 mm sub equip-potential bus bar in relay room, power room and panel room. GI strip 25 mm x 2 mm for ring formation of earth pits Earth enhancement material in bags for each Earth Electrode. Inspection chamber of site 300 mm x 300 mm x 300 mm (Inside dimension) of approximate 50 mm thick with pulling hooks to cover the earth pits. Note: The installation of this item shall be carried out by the contractor as per RDSO Specs. No RDSO/SPN/197 Ver.1.0 or latest and conforming to RDSO Drg. No. SDO / RDSO/ E&B/001 or Latest.Inspection: Consignee"							
182	100.00	Numbers	1522.81	152281.00	AT Par	152281.00	Above/ Below/Par	
	Description:- "Supply of earth electrode mild steel galvanized, light class, IS:1239(PART-I) -1979.earth electrode pipe should be with 3 mm thick, 50 mm dia and perforated(staggered),5 mm dia holes, 2 nos per 305 mm length with clamp of MS FLAT(galvanised) of size 35 mm x 6 mm (SPEC. NO.226 STD). Earth pipe should include CI threaded cap. Materials to be procured and designed as per CSTE /ER'S DRG.NO.S&T-1/2007. Inspection: - BY RITES [for value of material above Rs. 5.0 lakhs.]. Inspection by consignee [for value of material below than Rs 5.0 lakh]"							
183	200.00	Numbers	874.83	174966.00	AT Par	174966.00	Above/ Below/Par	
	Description:- Supply of MS FLAT (SPEC. NO. 226 STD or latest) of size 35 mm x 6 mm with length 5 mtr with holes of 12 mm dia at both ends as per CSTE/ER'S DRG. NO. S&T-1/2007 (or latest). Inspection : by consignee.							
184	200.00	Numbers	1203.31	240662.00	AT Par	240662.00	Above/ Below/Par	

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

184	<p>Description:- Fixing of earth electrode including laying and installation of MS flat of size 35 mm x 6 mm with length 5 mtr or as per extant practice of Eastern Railway. As per CSTE/ ER'S DRG. NO. S&T 1/2007 for apparatus cases, signal post & other equipment as per instruction of site engineer. Provision for fixing MS flat at apparatus cases/ signal post/other equipment should be made by the firm at site. Full threaded bolts of 10 mm dia and length 40 mm should be welded in the apparatus cases in such way that the MS flat at apparatus case end can be fixed from outside or from inside. Welding arrangement with accessories and welding materials should be arranged by the contractor for fixing of bolts at equipment end where required as per instruction of site engineer. All hardware and other miscellaneous materials required for installation to be supplied by the contractor except earth electrodes and MS flat. Note:-all materials required to be arranged by the contractor except 2 core cable will be supplied by the railway.</p>							
185	185	200.00	Numbers	591.93	118386.00	AT Par	118386.00	Above/ Below/Par
	<p>Description:- Provision of cement concrete enclosure for earth electrodes as per DRG. NO. S&T/C-36(NKG). This includes supply of all materials by the contractor duly inspected by consignee.</p>							
186	186	1.00	Set	484745.69	484745.69	AT Par	484745.69	Above/ Below/Par
	<p>Description:- "Supply of Electrically Operated Lifting Barrier complete set suitable for 24V DC, supply with hand generator back up & motorized boom locking arrangements as per RDSO Spec. SPN/208/2012 with latest amendment. One set consisting of 2 nos. of lifting barrier pedestals, each with 8 contact circuit controller with top roller type limit switches, hand crank, 2 electric motors, 24vdc of capacity suitable to operate barriers upto 32' long booms, 2 nos. of steel octagonal booms of 32 feet length with 2 nos. Stop boards, boom light boxes, MS counter weights and 2 nos. of boom support with motorised boom locking but without fringes along with control panel with buttons and indicating lamps, motor connectors and MCB and hand generator (24VDC) to operate 2 barriers of 1 set. This includes supply and installation of gate hooter - 1 no and Dual Tone Bell /Buzzer with Flasher arrangement and 20 Watt horn working on 24 V DC/ 110 V AC- 1 no with all fixing arrangements. All of the above items including supply of nuts & bolts, foundation as required & supply of cement, civil work materials and etc. Shall be done by the contractor for commissioning. Only 230VAC supply shall be arranged by the railway in nearby relay room. The complete electric lifting barrier set shall conform to RDSO SPEC NO. RDSO/SPN/208/2012 with latest amendment. Inspection - RDSO. along with Spares & tool kit mentioned in RDSO Spec. SPN/208/2012 clause 10.1 & 10.2 as below - Following spares shall be supplied alongwith each set (02 nos.) of Electric lifting barrier as per requirement of the purchaser i) Steel boom - 1 no. complete. ii) Belt - 1 no. iii) Crank handle 1 no. iv) Motor Contactor - 1 no. v) Motor protection MCB- 1 no. vi) Push button complete- 2 nos. vii) Limit switch - 3 nos. (1 lever type and 2 top roller type) viii) Fuses used - 2 sets Tool kit consisting of standard sizes of wrench / spanner and Allen keys should also be supplied with each set (02 nos.) of Electric Lifting barrier. Inspection: RDSO"</p>							
187	187	1.00	LC Gate	48534.29	48534.29	AT Par	48534.29	Above/ Below/Par
	<p>Description:- Installation, testing and commissioning of electrically operated lifting barrier, complete with Casting of cement concrete foundation (including supply of sand, stone, cement, bolt, plate etc.) for pedestal and boom rest post, cabling, power supply connection & wiring with complete outdoor work as per approved drawing, wiring etc. Inspection: Consignee</p>							
188	188	2.00	Set	1772.70	3545.40	AT Par	3545.40	Above/ Below/Par
	<p>Description:- Supply of Yellow Retro reflective sheet for LC Boom prismatic grade reflective sheets of size 305 x 290 mm one set consist 18 pieces. Inspection: Consignee</p>							
189	189	1.00	Numbers	21965.30	21965.30	AT Par	21965.30	Above/ Below/Par
	<p>Description:- "Supply, installation and commissioning of ELB opening ,closing and emergency key operation system as per CSTE/ ER'S Typical circuit diagram No-S.I./TYP/ 0062 Which requires i) Rugged 'NO' press switch(Green) - INo ii) Rugged 'NO' press switch (Red)- INo iii) Robust type rotary switch similar to P.I. SM'S key-1 No. iv) Veeder counter to record the count of emergency key operation- INo v)Superior quality 24VDC pizo buzzer- 1 No vi)Good quality 10 mm LED Green- INo vii)Good quality 10mm LED Red-1 No viii)Good quality 10mm LED yellow-4 No ix)Robust Indication Board with white hylam sheet top (approx dimension 8"x12"x2")- INo. x)good quality 6"x6" box with transparent cover with locking and sealing arrangement to accomodate emergency rotary switch and veeder counter. Note -contactor has to provide all other items require like flexible wire 16/0.2sq mm for wiring ,casing, capping etc require for installation with one spare for each item from item number -i to viii).Inspection -Consignee."</p>							
190	190	1.00	Numbers	16041.40	16041.40	AT Par	16041.40	Above/ Below/Par
	<p>Description:- Supply and installation of LED type table mounting gate control-cum-indication panel of required size as per site engineer and as per signalling plan including supply of wooden table (hard wood) of standard height for mounting of panel, cable entry in panel with 50 mm dia gallant. Note- gate panel should have button operation for gate close & open instead of switch. The switch for signal operation preferably should have 2NC/2RC contact. Make-Deltron or similar. Inspection- Consignee.</p>							

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

191	191	2.00	Numbers	5050.82	10101.64	AT Par	10101.64	Above/ Below/Par
	Description:- C.I. foundation 'A' type with hole SPEC.IRS-5- 10/78 (LATEST). Inspection - Consignee.							
192	192	2.00	Numbers	1766.82	3533.64	AT Par	3533.64	Above/ Below/Par
	Description:- C.I. foundation 'B' type with hole SPEC.IRS-5- 10/78 (LATEST). Inspection - Consignee.							
193	193	4.00	Numbers	2800.86	11203.44	AT Par	11203.44	Above/ Below/Par
	Description:- Casting of A/B type foundation for fixing adjustment arc lever, accommodating crank etc. With supply of cement, sand and ballast.							
194	194	5.00	Numbers	53725.31	268626.55	AT Par	268626.55	Above/ Below/Par
	Description:- "Electronic LC gate telephone systems with voice recorder as per RDSO SPEC.NO.RDSO /SPN/TC/ 51/2011 REV 4.0. Inspection-consignee. Material to be supplied from RDSO's approved source only with 03(three) years full warranty. Note: - 1) the date of manufacture of the item should be of current year at the time of supply to railway stores. 2)Installation by OEM" Supply of Master telephone with voice recording facility. Inspection : Consignee.							
195	195	5.00	Numbers	7513.37	37566.85	AT Par	37566.85	Above/ Below/Par
	Description:- Execution o f Master telephone with voice recording facility. This Includes testing and commissioning, all installation related material to be supplied by the contractor as per site requirement.							
196	196	5.00	Numbers	5600.61	28003.05	AT Par	28003.05	Above/ Below/Par
	Description:- Supply of Gate (slave)te1ephone. Inspection : Consignee.							
197	197	5.00	Numbers	797.18	3985.90	AT Par	3985.90	Above/ Below/Par
	Description:- Execution of Gate (slave)telephone. This Includes testing and commissioning, all installation related material to be supplied by the contractor as per site requirement.							
198	198	5.00	Numbers	7239.08	36195.40	AT Par	36195.40	Above/ Below/Par
	Description:- Supply of 24V Power supply unit with MF Battery and Charger for Master Telephone. Inspection : Consignee.							
199	199	5.00	Numbers	1025.10	5125.50	AT Par	5125.50	Above/ Below/Par
	Description:- Execution of 24V Power supply unit with MF Battery and Charger for Master Telephone. This Includes testing and commissioning, all installation related material to be supplied by the contractor as per site requirement.							
200	200	2.00	Numbers	34236.05	68472.10	AT Par	68472.10	Above/ Below/Par
	Description:- SUPPLY OF DOMINO TYPE DIRECTIONAL PANEL (DP) AS PER SPEC. NO. RDSO/SPN/186/2004 REV-2.0 OR LATEST. INSPECTION : AUTHORISE REPRESENTATIVE OF Sr.DSTE/HWH							
201	201	6.00	Numbers	203.55	1221.30	AT Par	1221.30	Above/ Below/Par
	Description:- Installation of magneto / control telephone, annunciator with all accessories and dry cells (2 nos.) For each phone with wooden battery box. This includes supply of magneto telephones with all accessories including supply of 2 nos. Dry cell for each telephone with wooden battery box. (i) SPEC.FOR magneto telephone IRS-TC- 79/2000.AMD-1 OR LATEST. Execution.							
202	202	6.00	Numbers	3664.64	21987.84	AT Par	21987.84	Above/ Below/Par
	Description:- Supply of magneto telephone, desk type, spec. No IRS-TC-79/ 2000 AMDT. 1 or latest. Inspection: by consignee							
203	203	2.00	Numbers	5399.31	10798.62	AT Par	10798.62	Above/ Below/Par
	Description:- Supply of Universal 2/4 wire way side DTMF control telephone as per RDSO spec. no. IRS: TC:82: 2005 (with Amdt. 3) or latest. Inspection: Consignee							
204	204	2.00	Numbers	4020.95	8041.90	AT Par	8041.90	Above/ Below/Par

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

	Description:- Supply of power supply unit for telecom installation at way side station suitable to operate max 6 equipments of DTMF type (12V/7AH) battery with suitable battery charger) as per RDSO spec. No. IRS: TC-72-97 or latest. Inspection: consignee.							
205	205	2.00	Numbers	7213.98	14427.96	AT Par	14427.96	Above/ Below/Par
	Description:- Supply of 4W way station DTMF equipment as per RDSO spec. no IRS- TC@45<45@93 or latest (with 4 wire telephone as per spec. No IRS- TC@45&45@97 or latest. Make- Bentrion, Epsilon or similar and supply of 12V/7AH power supply unit for control phone. Inspection by Consigne							
206	206	2.00	Numbers	1350.65	2701.30	AT Par	2701.30	Above/ Below/Par
	Description:- Installation of 4W way station DTMF equipment as per RDSO spec. no IRS-TC@47<47@93 or latest(with 4 wire telephone as per spec. No IRS-TC- 38/97 or latest. Make-Bentrion,Epsilonor similar and supply of 12V/7AH power supply unit for control phone.							
207	207	10.00	Numbers	840.04	8400.40	AT Par	8400.40	Above/ Below/Par
	Description:- Supply, Fixing and wiring of f 1 0 Pairs Krone type D.P. box a s per Tech spec, make Hensel or Similar. Inspection: Consignee							
208	208	10.00	Numbers	1208.70	12087.00	AT Par	12087.00	Above/ Below/Par
	Description:- Supply, Fixing and wiring of f 2 0 Pairs Krone type D.P. box a s per Tech spec, make Hensel or Similar. Inspection: Consignee							
209	209	135.00	Metre	45.28	6112.80	AT Par	6112.80	Above/ Below/Par
	Description:- Supply of PVC cable channel of 15 MM x 15 MM l as per specification. Inspection: consignee.							
210	210	135.00	Metre	18.48	2494.80	AT Par	2494.80	Above/ Below/Par
	Description:- Execution/fixing of 15 MM x 15 MM PVC channel on wall including supply of all fixing materials & accessories by contractor. Returning the left over material to the railway store.							
211	211	138.00	Metre	66.54	9182.52	AT Par	9182.52	Above/ Below/Par
	Description:- Supply of PVC cable channel of 25 MM x 25 MM as per specification. Inspection: consignee.							
212	212	138.00	Metre	20.33	2805.54	AT Par	2805.54	Above/ Below/Par
	Description:- Execution/fixing of 25 MM x 25 MM PVC channel on wall including supply of all fixing materials & accessories by contractor. Returning the left over material to the railway store.							
213	213	10.00	Numbers	8415.19	84151.90	AT Par	84151.90	Above/ Below/Par
	Description:- Supply and installation of Wall mounted 19",9U Steel Rack in 600X500mm Section with fan and 6 no sockets and accessories. Make: HCL, VALRACK & APW or Similar. Inspection : Consignee							
214	214	2.00	Numbers	290541.20	581082.40	AT Par	581082.40	Above/ Below/Par
	Description:- "Supply of standard 19"rack mountable , -48V DC working, Add-Drop STM-4 SDH equipment conforming to GR No. TEC/GR/TX/SDH 010/03.Jan 2011 (with latest amendment) complete with redundant power supply, 2 no. STM 4 of aggregate L.4.2 Optical interface modules/ Cards one each for East and west side, TX/RX and 2 nos. of STM-1 S 1.1 optical interface modules complete with 5 mtrs long optical fibre cords, 21 E1s with DDFs and cable assembly for termination to DDF and minimum 8 nos. of 10/100 Base-T Ethernet ports, Fast Ethernet on SDH [EoS] 10/100 Base-I interface module/card supporting with LCAS and GEP, order wire subrack DDF installation material, manuals and other accessories. Complete Engineering order wire (EOW) arrangement. Necessary/ Firmware for local/remote monitoring/ configuration of the equipment through EMS and Software/ Firmware interface to work all Network elements as Gateway Network Element [GNE], 2 nos of MCBs of appropriate rating and necessary connecting cords and cables for power supply modules. " Inspection : RDSO							
215	215	2.00	Numbers	24389.88	48779.76	AT Par	48779.76	Above/ Below/Par
	Description:- "Installation and commissioning of STM-4 in the existing rack with ready infrastructure or in new rack as desired by the site Engineer. "							
216	216	3.00	Numbers	23941.90	71825.70	AT Par	71825.70	Above/ Below/Par

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

	Description:- "Supply of 25 Watt VHF synthesised trans receiver set, synthesised in frequency band 136 MHz to 174 MHz (full band), with DTMF microphone and cords, with GP antenna, 30 m of feeder cable and suitable BNC connectors, with 3m of power cord and 12V/13.5V 10Amp/ 15Amp power supply suitable for 25W VHF set, as per RDSO spec. RDSO/ SPN/TC/107/2018, Rev. 0.0 Amndt 1 or latest. Inspection : RDSO							
217	217	3.00	Numbers	21043.49	63130.47	AT Par	63130.47	Above/ Below/Par
	Description:- "Supply of DC-DC converter. for emergency communication through V.H.F. as per specification - the DC DC converter shall be independent for each vhf base equipment (voice equipment) and shall allow to work from -48V nominal input (-48V to -60V variation) & output 12V DC. The power capacity to deliver 10A current with output short circuit protection & ripple voltage less than 5mv for telecom circuit. Short circuit current not more than 2 mA, input- output insulation by 2.5 KV, load & output regulation +/-1% with ERTL certification. Make: DACS, Pune or Webfil Kolkata or Machronics, Kolkata or similar. Inspection: consignee. "							
218	218	2.00	Numbers	14038.23	28076.46	AT Par	28076.46	Above/ Below/Par
	Description:- "Supply of Buffer amplifier for emergency communication through V.H.F. As per voice frequency channel shall be 600 ohms balanced 4W (viz. 2W for transmit, 2W for receive) and 2W for E&M signalling. The nominal voice frequency signal shall be 0 dbm level the buffer amplifier should work of -48vdc or can from the DC-DC converter. Burn in of the complete equipment at 55 degree centigrade to avoid infancy failures. During the test the equipment shall be kept continuously on. Inspection :consignee. "							
219	219	3.00	Numbers	60227.20	180681.60	AT Par	180681.60	Above/ Below/Par
	Description:- SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF PROTOCOL CONVERTER UNIT SUITABLE FOR INTERFACING DATALOGGER WITH ELECTRONIC INTERLOCKING EQUIPMENT. INSPECTION : Consignee							
220	220	3.00	Numbers	776.55	2329.65	AT Par	2329.65	Above/ Below/Par
	Description:- "Supply of V.F. transformer 1220:600/470 /:1220 as per IRS:TC-22/ 76 or latest. Inspection - consignee "							
221	221	3.00	Numbers	456.15	1368.45	AT Par	1368.45	Above/ Below/Par
	Description:- "Installation of V.F. transformer 1220:600/470 /:1220 as per IRS:TC-22/ 76 or latest. Inspection:-consignee "							
222	222	5.00	Numbers	7248.91	36244.55	AT Par	36244.55	Above/ Below/Par
	Description:- "Supply, fixing and wiring of surge protection device in attachment plug module with replaceable surge protection for coaxial signal, interfaces N-connector plug/socket installed as surge protection between antenna and 25 W VHF sets, make- Phoenix Contact model CN-UB- 280DC-SB-28 18148 or similar as per specifications. this includes mounting plate and reserve gas filled surge arrestor (one no.) with all required connectors /clamp for commissioning of SPD at site. Inspection: Consignee "							
223	223	3.00	Numbers	6423.95	19271.85	AT Par	19271.85	Above/ Below/Par
	Description:- "Installation, testing and mounting of G.P. antenna on a GI pipe which is to be fitted on the roof of equipment room and lightning arrestors also to be mounted on a GI pipe. All fixing materials to be supplied by the tenderer and left over material to be returned to the railway store. N.B.G.P. Antenna, GI pipe(50 mm dia) and lightning arrestor will be supplied by the railway. "							
224	224	10.00	Numbers	116903.87	1169038.70	AT Par	1169038.70	Above/ Below/Par
	Description:- Supply of Failure Analysis System (FAS) with Fault Analysis Software (Datalogger Analyser) consisting of a PC (Make- Dell /HP or Equivalent) as per Technical Specifications. The specification of FAS should be got approved from the Engineer in charge before supply. Note: The minimum specification should be as given core i7 or higher version processor (speed 3.2 GHZ, 4 MB cache memory), 8 GB RAM,2TB HDD or Higher, Two front and four rear USB port,1 Serial & 1 Parallel Port,1VGA Port,21" LED Colour Monitor (HP/DELL or equivalent) or Bigger Size, Sound Card with Speaker,1000 MBPS Network Card, Keyboard, Optical Mouse,10/100 T Lan Card, Combo Drive, Microsoft Windows 10 Licensed OS with Licensed (Antivirus, MS Office etc.),UPS 750 VA with 30 Minutes minimum backup(APC/ Microtek or Equivalent) , Laserjet Printer(H P Pro 1108 or superior). Inspection: Consignee							
225	225	30.00	Numbers	3686.55	110596.50	AT Par	110596.50	Above/ Below/Par
	Description:- Supply of optic fibre splice closure (24 fibre) as per tec. Specification no. G/OJC-02/01, March'99 with latest amendment or latest including all miscellaneous items and consumables for fibre splicing. Inspection:- by consignee.							

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

226	226	30.00	Numbers	11008.36	330250.80	AT Par	330250.80	Above/ Below/Par
	Description:- Jointing, terminating & splicing of 24 fibre optic fibre cable and fixing of termination box/FDF/placing of joint closures in the pit required at various locations including transportation of all the jointing & terminating materials from railway store to the work site and returning leftover materials to the railway store.							
227	227	2.00	Set	108331.15	216662.30	AT Par	216662.30	Above/ Below/Par
	Description:- Supply of Tools Kit for High frequency Digital Axle Counter Multi section. This includes Supply of Service test panel including meter for test of track equipment, tools for mounting and adjustment of track equipment and standard jig for drilling holes in rail. It should be as per Principal manufacturers (OEM) recommended list adequate for installation, day to day maintenance, and adjustment of indoor and outdoor gears. This shall also include kit for making and drilling of holes on rail. Note: (1) this also includes supply of cross talk measuring set as per RDSO SPEC. TC 45-88 or latest, dB meter for measuring attenuation loss & 500v insulation tester, dummy wheel, torque wrench (2) multimeter should be pure sine wave digital multimeter make Fluke Model 287/ Rishabh Model 28s. Each measuring tools & equipments to be supplied with OEM'S test certificate/ guarantee certificate (as applicable). Detail Specification of tools kit are provided in tender document. Inspection: Consignee							
228	228	200.00	Metre	254.40	50880.00	AT Par	50880.00	Above/ Below/Par
	Description:- RE-INSTATEMENT OF PLATFORM AND REPAIRING TO ORIGINAL STATE AFTER CABLE LAYING							
229	229	38.00	Numbers	733.42	27869.96	AT Par	27869.96	Above/ Below/Par
	Description:- CLEANING , SCRAPPING AND PAINTING AFTER APPLICATION OF PRIMER OF THE FOLLOWING SIGNALLING EQUIPMENT.THIS INCLUDES SCRAPING OF OLD PAINT & RUSTS AND PRIMA COATING FOLLOWED BY FINAL PAINTING. (COLOURS OF THE SIGNALLING EQUIPMENT AS PER SIGNAL ENGG. MANUAL). ALL MATERIALS WILL BE SUPPLIED BY THE CONTRACTOR AND CONTRACTOR HAS TO SUPPLY APPROVED QUALITY OF PAINTS LIKE ASIAN / BARGER / SHALIMAR. GRADE OF THE PAINT AS PER FOLLOWING. ALLUMINIUM : IS:2339/63 WITH AMDT.1 OR LATEST. BLACK: IS:8662/93 OR LATEST GOLDEN YELLOW: ISS:356 & IS:8662 OR LATEST RED OXIDE : ISC:446 & IS:123/62WITH AMDT.1OR LATEST MACLS COMPLETE WITH POST, BASE, LADDER STAGE ETC. THIS INCLUDES CALLING ON SIGNAL, SHUNT SIGNAL, JUNCTION TYPE ROUTE INDICATOR ETC.							
230	230	27.00	Numbers	185.20	5000.40	AT Par	5000.40	Above/ Below/Par
	Description:- POINT MACHINE ALONG WITH WRITING OF THE POINT MACHINE NUMBER IN WHITE COLOUR. THIS INCLUDES WRITING OF THE POINT NUMBER DETAILS AS PER INSTRUCTION OF SITE ENGINEER.							
231	231	27.00	Numbers	69.03	1863.81	AT Par	1863.81	Above/ Below/Par
	Description:- POINT JB BLACK (INSIDE ALLUMINIUM AND OUTSIDE BLACK). THIS INCLUDES WRITING OF THE POINT NUMBERB AS PER SITE							
232	232	27.00	Numbers	193.96	5236.92	AT Par	5236.92	Above/ Below/Par
	Description:- PAINTING OF GROUND FITTING OF POINT MACHINE							
233	233	100.00	Numbers	2558.00	255800.00	AT Par	255800.00	Above/ Below/Par
	Description:- Supply and Installation of RFID based Electronic /Pipe marker for S&T Cable with programmable memory for saving the user specific data which can be buried up to depth of 1.5 Meter. Make Stanley/3M or Similar. Inspection: Consignee							
234	234	19.00	Numbers	2558.00	48602.00	AT Par	48602.00	Above/ Below/Par
	Description:- Single push button telephone. Inspection : consignee							
235	235	5.00	Day	3533.00	17665.00	AT Par	17665.00	Above/ Below/Par
	Description:- Hiring of DG 2 nos round the clock during non interlocking period including supply of Diesel							
236	236	5.00	Day	10233.00	51165.00	AT Par	51165.00	Above/ Below/Par
	Description:- Provision of Communication Facility PA System during non Interlocking period and provision of temporary goomty 4 nos Chair-12 Nos, Table 4 Nos for Operational facility during NI Period. All required materials to be arranged by the contractor, on hiring basis along with lightening arrangement at site Goomty as per site							
	237	1.00	Numbers	97742.00	97742.00	AT Par	97742.00	Above/ Below/Par

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

237	Description:- Preparation of Cable Route Plan , Cable Core Chart, SWRD, Power Supply Layout, Cable Termination Chart, in Relay Room, Location Box, Location Wiring Plan, Cable Insulation Chart, Fuse Analysis Equipment disposition plan, Track Bonding Plan, , work to be made by qualified engineer conversant with Signalling work along with endroement.Note: Cable protection arrangement and the tail cables should be shown in the cable route plan.							
238	238	2.00	Numbers	2181.98	4363.96	AT Par	4363.96	Above/ Below/Par
	Description:- "Installation, testing & commissioning of operating panel room VHF/SIMPLEX VHF base equipment, DC-DC simplex VHF base equipment, DC-DC converter, buffer amplifier and laying of co-axial cable simplex VHF base equipment, DC-DC converter, buffer amplifier should be mounted on rack of suitable size and other fixing arrangement "							
239	239	17.00	Month	43300.00	736100.00	AT Par	736100.00	Above/ Below/Par
	Description:- Hiring of Vehicle non AC Monthly Basis Cab & Taxi Hiring Services - SUV; 24x7; Local 24*7 on Km 1500 per month. This includes driver and fuel cost.							
240	240	1.00	Numbers	50430.84	50430.84	AT Par	50430.84	Above/ Below/Par
	Description:- Alteration Work for Control Cum Indication Panel to suit Approved Panel Face Diagram. All Materials to be supplied by the contractor required for the work. Wire required for the purpose to be procured from RDSO approved source onle. Inspection: Consignee							
241	241	2.00	Numbers	811.52	1623.04	AT Par	1623.04	Above/ Below/Par
	Description:- Releasing of existing block instrument and allied gadgets.							
242	242	2.00	Set	9151.63	18303.26	AT Par	18303.26	Above/ Below/Par
	Description:- Installation, interconnection and commissioning of single / double line/ tokenless block instrument in the station. All materials (except block instrument) to be supplied along with wooden stand for keeping the instrument, filter unit & block bell.							
243	243	2.00	Numbers	35887.81	71775.62	AT Par	71775.62	Above/ Below/Par
	Description:- Supply of Panel cum Block Instrument table complete as per approved drawing. It includes any modification to it if required by Engineer-in-charge at site. Inspection: Consignee							
244	244	2.00	Numbers	4327.48	8654.96	AT Par	8654.96	Above/ Below/Par
	Description:- Supply of block bell equipment, block bell, block phone as per spec. No. IRS-TC-44/ 88 (LATEST). Material to be procured from RDSO approved firm. BLOCK BELL EQUIPMENT. Inspection: by RDSO							
245	245	2.00	Numbers	9989.43	19978.86	AT Par	19978.86	Above/ Below/Par
	Description:- BLOCK BELL. Inspection: by RDSO							
246	246	2.00	Numbers	4610.31	9220.62	AT Par	9220.62	Above/ Below/Par
	Description:- BLOCK TELEPHONE. Inspection: by RDSO							
247	247	2.00	Numbers	29484.49	589696.98	AT Par	589696.98	Above/ Below/Par
	Description:- Supply of Double Line Block Instruments(DLBI) RDSO type (MFG)							
248	248	114.00	Man-Days	372.00	42408.00	AT Par	42408.00	Above/ Below/Par
	Description:- Supply of Labour for Installation & Taking Measurement of Signalling Gears Assistance to Inspector/Officer during supervision of field work in measurement. By action as look out men, Chowkidars, Petrolmen, etc and to assit in Office work as per instruction of Site Engineer In Charge. The inspector concerned well maintained proper record of supply of labour by the agency.							
249	249	5.00	Numbers	27538.37	137691.85	AT Par	137691.85	Above/ Below/Par
	Description:- "Supply , installation commissioning of 500 watt Amplifier Make Ahuja model SSA 5000EM.or Similar. Inspection : Consignee "							
250	250	14.00	Numbers	6344.42	88821.88	AT Par	88821.88	Above/ Below/Par
	Description:- Supply of high fidelity PA horn speaker IP-65 rated model AMH-402T, make Ahuja or similar.							

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

3. ITEM BREAKUP

No item break up added

4. ELIGIBILITY CONDITIONS

Important : All documents uploaded and remarks / confirmation entered by the bidders against any eligibility condition shall be opened as part of technical bid only

Special Financial Criteria

S.No.	Description	Confirmation Required	Remarks Allowed	Documents Uploading
1	The tenderer must have minimum average annual contractual turnover of V/N or " V" whichever is less;where V= Advertised value of the tender in crores of Rupees, N= Number of years prescribed for completion of work for which bids have been invited. The average annual contractual turnover shall be calculated as an average of "total contractual payments" in the previous three financial years, as per the audited balance sheet. However, in case balance sheet of the previous year is yet to be prepared/ audited, the audited balance sheet of the fourth previous year shall be considered for calculating average annual contractual turnover. The tenderers shall submit requisite information as per Annexure-VIB, along with copies of Audited Balance Sheets duly certified by the Chartered Accountant/ Certificate from Chartered Accountant duly supported by Audited Balance Sheet.	No	No	Allowed (Mandatory)

Special Technical Criteria

S.No.	Description	Confirmation Required	Remarks Allowed	Documents Uploading
1	The tenderer must have successfully completed any of the following during last 07(seven) years, ending last day of month previous to the one in which tender is invited: Three similar works costing not less than the amount equal to 30% of advertised value of the tender, or Two similar works costing not less than the amount equal to 40% of advertised value of the tender, or One similar work costing not less than the amount equal to 60% of advertised value of the tender. Similar Nature of work for this tender is -" Panel Interlocking work {Indoor or (Indoor+ Outdoor)}/ Route Relay Interlocking work {Indoor or (Indoor + Outdoor)}/ Electronic Interlocking Work {Indoor or (Indoor+ Outdoor)} of RDSO approved make)".	No	No	Allowed (Mandatory)

Submission of Document Verification Certificate

S.No.	Description	Confirmation Required	Remarks Allowed	Documents Uploading
1	Please submit a certificate in the prescribed format (please download the format from the link given below) for verification / confirmation of the documents submitted for compliance of eligibility / qualifying criteria. Non submission of the certificate, or submission of certificate either not properly filled in, or in a format other than the prescribed format shall lead to summary rejection of your offer. (Click here to download the Format of Self Certificatio)	No	No	Allowed (Mandatory)

5. COMPLIANCE

Important : All documents uploaded and remarks / confirmation entered by the bidders against any compliance condition shall be opened as part of technical bid only.

Commercial-Compliance

S.No.	Description	Confirmation Required	Remarks Allowed	Documents Uploading
1	Please enter the percentage of local content in the material being offered. Please enter 0 for fully imported items, and 100 for fully indigenous items. The definition and calculation of local content shall be in accordance with the Make in India policy as incorporated in the tender conditions.	No	Yes	Allowed (Optional)

Technical-Compliances

S.No.	Description	Confirmation Required	Remarks Allowed	Documents Uploading
-------	-------------	-----------------------	-----------------	---------------------

**HOWRAH DIVISION-S AND T/EASTERN RLY
TENDER DOCUMENT**

Tender No: SDSTE-GSU-RNGR-MSAE

Closing Date/Time: 22/05/2023 15:00

1	Successful bidder has to submit MOU from RDSO approved firm before starting execution of work.	Yes	Yes	Allowed (Optional)
---	--	-----	-----	-----------------------

6. Documents attached with tender

S.No.	Document Name	Document Description
1	E-TENDER-DOCOPENTENDER_1.pdf	E Tender Document
2	DescriptionofSchitemno1.pdf	Description of Sch item 1
3	Annexure-VI-ABidSecurity.pdf	Annexure VI A
4	Annexure-VI-BAnnualturnoverdeclaration.pdf	Annexure VI B
5	Annexure-X.pdf	Annexure X
6	Annexure-XI.pdf	Annexure XI
7	CheckListAnnexItoVIII.pdf	Chek list Annexure I to VIII
8	GCC_April-22_pdf_27.04.22.pdf	GCC ACS 14th July 2022
9	GCCACS14thJuly2022.pdf	GCC ACS 14th July 2022
10	Termsofpayment1.pdf	Terms of Payment
11	Updatedtenderdocument.pdf	Updated Tender Document
12	Annexure-IX.pdf	Annexure IX
13	DescriptionofMailIntenanceforScheduleItemNo.4.pdf	Description of Maintenance Item 4
14	TentativeSIPMSAE.pdf	Tentative SIP

This tender complies with Public Procurement Policy (Make in India) Order 2017, dated 15/06/2017, issued by Department of Industrial Promotion and Policy, Ministry of Commerce, circulated vide Railway Board letter no. 2015/RS(G)/779/5 dated 03/08/2017 and 27/12/2017 and amendments/ revisions thereof.

As a Tender Inviting Authority, the undersigned has ensured that the issue of this tender does not violate provisions of GFR regarding procurement through GeM.

Signed By: ARYAN KUMAR

Designation : DSTE/1/HWH