

**CORPORATE OFFICE-DNM/RAILTEL CORPORATE OFFICE
TENDER DOCUMENT**

Tender No: RCIL-SIG-DHW-SRM-OT-2-04

Closing Date/Time: 16/12/2022 15:00

ED/RP/CO acting for and on behalf of The President of India invites E-Tenders against Tender No **RCIL-SIG-DHW-SRM-OT-2-04** Closing Date/Time 16/12/2022 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.

Contractors are allowed to make payments against this tender towards tender document cost and earnest money only through only payment modes available on IREPS portal like net banking, debit card, credit card etc. Manual payments through Demand draft, Banker cheque, Deposit receipts, FDR etc. are not allowed.

1. NIT HEADER

Name of Work	"Provision of supply, installation, testing and commissioning in connection with Electronic interlocking for Upgradation & replacement of lever frames with Electronic Interlocking at 5 Stations (i.e. Dhariwal, Gurdaspur, Dinanagar, Jakolari and Sarna) on ASR-PTK section of Firozpur Division on Northern Railway".		
Bidding type	Normal Tender		
Tender Type	Open	Bidding System	Two Packet System
Tender Closing Date Time	16/12/2022 15:00	Date Time Of Uploading Tender	24/11/2022 17:23
Pre-Bid Conference Required	No	Pre-Bid Conference Date Time	Not Applicable
Advertised Value	247130336.70	Tendering Section	SIGNALLING
Bidding Style	Single Rate for Tender	Bidding Unit	Above/Below/Par
Earnest Money (Rs.)	2471400.00	Validity of Offer (Days)	90
Tender Doc. Cost (Rs.)	0.00	Period of Completion	9 Months
Contract Type	Works	Contract Category	Expenditure
Bidding Start Date	02/12/2022	Are Joint Venture (JV) firms allowed to bid	No
Ranking Order For Bids	Lowest to Highest	Expenditure Type	Deposit Work

2. SCHEDULE

S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule A-EI WORK							138548210.58	
1	1	5.00	Station	15415212.15	77076060.75	AT Par	77076060.75	
	Description:- Design, Manufacture & Supply of Electronic Interlocking (EI) system (with Centralised arrangement) for way side stations as per Signal Interlocking Plan in "Hot Standby Architecture". EI system shall be provided to operate Dual VDU (55 inches LED)Control Terminal as per RDSO Specification No. RDSO/SPN/192/2019 Ver.2 with latest amendment, as per special condition of contract and technical specifications including all relevant and latest RDSO Technical Advisory Note (TAN no. STS/E/TAN/3006 dtd 02.11.12) etc. and from RDSO approved source only for the stations mentioned in the scope of work. It mainly consist of Microprocessor Equipment's, Interface Equipment's, EI Vendor specific interfacing Relays, In-built event logger, In-built power supply Equipment's. Racks (only EI rack). Indoor cables, Wires, Fuses, Fixtures, Mounting arrangement along with all accessories required to make complete EI system functional. Design of indoor EI system should be compatible as per outdoor interlocking requirement based on approved Signal Interlocking Plan(SIP) and selection table of Station/Yard. This item also includes supply of following :- (a) Supply of documents/manuals for EI system as per RDSO/SPN/192/2019 with latest amendment. (b) Supply and provision of protective devices like surge and lightening protection devices compatible to RE standard as recommended by OEM/RDSO.Note: It includes supply of all the material which is required to make complete EI system to be functional and as recommended by RDSO in RDSO Specification no. RDSO/SPN/192/2019 Ver 2.0 with latest amendments. The technical requirements are attached in technical specification. Supply of RDSO approved type of Relays are covered separately. In case of requirement of vendor specific relays for EI system being supplied, the same shall be supplied by tenderer and cost required for such relays shall be included in the cost of the EI system under this item and number and type of such relays shall be indicated separately. The EI system shall be normally suitable for 3/4 line expandable up to 20% of no. of signalling gears without any added cost and further +ve variation above 20% in signalling gears from the given SIP, it will be compensated above 20%, the cost of peripherals thus increased shall be paid as per break up submitted by tenderer at the time bidding. No extra cost for such variance in design & drawing if any shall be acceptable till PAC. System must be compatible with working in RE area.							
2	2	5.00	Lot	1631630.31	8158151.55	AT Par	8158151.55	
	Description:- Supply of the following essential spares to the extent of 10% of the quantities installed (Subject to minimum 1 No., Standard procedure of rounding off will be followed for assessing the actual quantity) as per RDSO specification and Technical Advisory Note(latest): (Inspection by RDSO).Note:(i) Each type of Input/output cards, (ii) Each type of vendor specific relays, (iii) DC-DC converter of all voltages, (iv) Switches, connectors, fuses, couplers. Breakup of spares along with unit cost to be submitted by the renderer in financial bid. Break up of spare without unit cost to be submitted in technical bid also.							

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3	3	5.00	Numbers	1071000.00	5355000.00	AT Par	5355000.00	
	Description:- "Installation, testing and commissioning of EI System with ""Hot Standby Architecture as supplied under item no. 1 above stations mentioned in the scope of work. It includes transportation of material from store 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 Microprocessors equipment, interfaced equipment, power supply equipment and all other associated accessories to make complete EI system to be functional as per RDSO specification and Technical Advisory Note(latest). This include (i).simulation arrangement, (ii)all installation and wiring material with RDSO source if applicable. (iii). Arrangement of both side goomty with all arrangement required for NI period. It shall also consists of the following but not limited to: 1. Grouting, cutting of floors . walls etc. refilling of same, re plastering , required CC/masonry works, this includes digging of cable pit (minimum inside size of 3 mtr x 2 mtr x 1 mtr) and width of wall shall not be less than 200mm as per instructions given by engineer in charge. It includes supply and filling of sand before and after coiling of cables, covering top of the cable pit by stones and brick masonry work for sides and there after plastering. . 2. Termination of indoor cables on disconnecting terminals on Din rail, painting I lettering on Equipment Rack, Relay Rack/Termination Rack 3. Fixing of racks PBT terminals Disconnect Type/Wago terminals, ND Fuses, Bus Bars, Eyelets, hylam strips of required thickness (12mm, ISI mark) as per length required at site etc. 4. Fixing of VDU , all types of Relays, Wiring and testing as per wiring diagram . 5. Installation, wiring & testing of Relay Rack/Equipment Rack/CT Rack. 6. Testing of earthing arrangement as per latest ROSO guidelines I Technical Advisory Note. Note: (i) For Technical requirements refer technical specification, RDSO technical notes and Northern Railway Circulars. (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. All the guidelines/ directives issued by RDSO and Northern Railway from time to time shall be followed."							
4	4	12.00	Numbers	825000.00	9900000.00	AT Par	9900000.00	
	Description:- Supply, installation, testing and commissioning of embedded fanless PC based VDU Control Terminal as per RDSO Specification no. RDSO/SPN/192/2019 Ver 2.0 with latest amendment & latest RDSO TAN . The display size of VDU shall be 55 inch LED. Suitable furniture like table etc required for mounting the VDU shall be provided by the contractor with prior approval of Railtel Engineer site incharge. This also includes the necessary furniture for keeping the VDU, Counterbox, BPAC panel, HASSDAC reset Box, Magneto telephones, gate telephone, VHF set 25 watt, control telepnos, PA System, ASM's registeres any other item required & all accesories like power supply, VDU PC, communication switches, OFC and other cables termination accessories. (As per drawing No Drg No. RCIL /VDU TABLE/1/22 of VDU cum Block Instrument and other equipment shown in Tender Document) (Inspection by Consignee).							
5	5	6.00	Numbers	770000.00	4620000.00	AT Par	4620000.00	
	Description:- Supply, installation, testing and commissioning of embedded fanless PC based Maintenance Terminal as per RDSO Specification no. RDSO/SPN/192/2019 Ver 2.0 with latest amendment & latest RDSO TAN. The display size of VDU shall be 42 inch LED. Suitable furniture like table etc required for mounting the VDU shall be provided by the contractor. Drawing of table required prior approval of Railtel Engineer site incharge. One laser printer along with power backup ups not less than 20 minutes shall also be supplied and installed by contractor with A-4 size color laser printer, UPS & with all necessary communication arrangement. This also include furniture i.e. table & chair for keeping MT with all accessories.(Inspection by Consignee).							
6	6	10.00	Numbers	36480.26	364802.60	AT Par	364802.60	
	Description:- Supply, installation, testing & commissioning of off line domestic sine wave type inverter of 1000VA or above with suitable rating tubular batteries and UPS make of Su-kam, Luminious, Microtech or other reputed brand for the backup of VDUs of EI as per latest TAN.(Inspection by Consignee).							
7	7	5.00	Station	92575.85	462879.25	AT Par	462879.25	
	Description:- Supply of work station note book as per Technical Specification with 17 inch screen. It also includes supply of Laser Printer. The work station should be capable of reconfiguring the system in case of any alteration in yard interlocking in future as per para 5.3 of detailed technical specification for signaling of Tender Document.							
8	8	5.00	Numbers	179536.70	897683.50	AT Par	897683.50	
	Description:- Supply, Installation, testing and commissioning of data logger failure analysis Supply, Installation, Testing and commissioning of Failure Analysis System (FAS) as per technical specification given in TS-04 of tender document with Configuration INTEL core i7, 4 GB DDR3 SD RAM, cache 8 MB, level 2, 1 TB HDD or better.							
9	9	50.00	Man-Days	986.40	49320.00	AT Par	49320.00	
	Description:- Training for Railway Tech./JE/SE/SSE by OEM in design installation testing and commissioning, maintenanceand trouble shooting of EI system complete including supply of hard/soft copies of course module for each trainees. Competency certificate to trainee to be issued by OEM.All arrangement including classroom, lab, equipment measuring instrument for the trainee should be satisfactorily arranged by the contractor at their own cost. (Job=Training of one Tech/JE/SE/SSE for one day) Inspection site incharge.							
	10	5.00	Station	162684.47	813422.35	AT Par	813422.35	

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10	Description:- Provision of Ring Earth for EI system which includes supply of all components of earthing & bonding system like earth electrode, earth enhancement material, earth pit, equi-potential earth busbar, connecting cables and tape/strips and other associated accessories in accordance with RDSO Spec.No. RDSO/SPN /197/2016 or latest consisting minimum 10 Nos. of earth pits connected in a ring to achieve less than 1 Ohms earth resistance for connecting EI equipments, relay racks, panel, power equipments as per Signal Engineering Practice. Diagram of ring earth should be supplied to RCIL for Approval before execution. All related material as recommended by RDSO in Specn. No. RDSO/SPN/197/2016 or latest, will be supplied by the contractor as per Latest TAN. (Inspection by RDSO).						
11	11	10.00	Set	59710.89	597108.90	AT Par	597108.90
	Description:- Supply of active lightening 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 seconds. A non resettable type counter should also be supplied to count the number of lighting occurrences. It also includes supply of electrolytic copper tape of 25mm X 2mm of better to connecting class A devices to the earth pit. This includes installation, testing and commissioning of Class A device on top of the building. This device should be installed at suitable height on top of the building using a GI mask as per the instruction of RCIL engineer at site. The device should be connected to earth pit using a copper tape of 25mm X 2mm or better. This copper tape should be run firmly only the side of mask with the help of spacers. It shall also be ensured that the down conductor shall not touch the building throughout. The down conductor shall be connected to the earth electrode using exothermic welding. A counter shall be installed at appropriate space to count the number of occurrences. All the accessories like spares, welding material etc. required for installation shall be arranged by the contractor. (Inspection by RDSO).						
12	12	5.00	Each	577072.65	2885363.25	AT Par	2885363.25
	Description:- Supply of Microprocessor based data logger with 512 Digital & 32 Analog Inputs as per specification no. IRS:S 99/2006 (amdt. 3) with latest amendments and shall be suitable to work with electronic interlocking system . It includes all interfacing equipments like protocol converter unit etc . It also includes design, supply and installation of all software required as standard practice of NR and as per specification no. IRS:S 99/2006 or latest. Digital input to be taken from EI through protocol converter and in addition one digital input card to be provided for digital input of important ir-interface relays. This also includes supply of E-1 (RS-232 to E-1 Converter) for networking of Datalogger, power supply of adequate capacity, battery and fault diagnostic software for failure analysis, Door Proximity switches (4-no.) with 2 way rigid connector for wire termination between proximity switches and Datalogger Tag blocks as per specs, Complete Data Logger & Processor Module shall be placed in President I Rittel rack of suitable size to be supplied. This also includes supply of one no. of Computer, one no. Computer Table(Godrej make), , UPS, Printer and one no. Operator Chair (Godrej make)- as per technical specification(Inspection by RDSO).Note: Data Logger will be installed, wired, tested and commissioned by OEMs engineer as per guidelines issued by RDSO. The Pre-commissioning check list issued by RDSO for Data Logger System will be prepared by OEMs engineer and signed jointly with Rly Site Engineer. Before commissioning of Data Logger, OEM will submit Site Installation Certificate to Railway mentioning that Data Logger has been installed, wired, tested and commissioned by approved vendor of RDSO i.e by OEM.						
13	13	5.00	Numbers	27077.26	135386.30	AT Par	135386.30
	Description:- "Installation, wiring, testing and commissioning of Data Logger as per spec . IRS: S-99/2006 with Amdt-2 or latest, including but not limited to the following : 1. Supply and loading of diagnostic software for failure analysis. 2. Interface wiring between Relay Rack to Datalogger for all the digital & Analog inputs as per standard Railway practice. 3. Relay Room Door locking checking arrangement , commercial power supply monitoring arrangement & D G Sets, 4. Interlinking & Networking of Datalogger with adjoining stations and IBSs. 5. Modification to Software & Hardware, if required, and networking with other Data Loggers along with fault logic design at Control Centre. 6. Training as per Railway Practice. 7. Software programming of Datalogger to enable Preventive maintenance of S&T assets, 8. Failure analysis, GUI of Yard Layout, extract of report in common language, accident analysis as per ROSO Guideline. 9. All installation & wiring material including supply of Relay Room Door locking checking arrangement shall be supplied by contractor & shall be procured from ROSO approved sources, wherever applicable."						
14	14	700.00	Numbers	186.91	130837.00	AT Par	130837.00
	Description:- Supply, installation, testing and commissioning of NDT type fuses of different ratings as per specifications IRS-S-78/92 or latest on relay rack or any other place and wiring the same as per standard practice and as per instruction of site engineer.(Inspection by RDSO).						
15	15	40.00	Numbers	40179.46	1607178.40	AT Par	1607178.40
	Description:- Supply fixing and wiring of Fuse Auto Changeover System (FACS main system) as per RDSO/SPN/209/2012 Rev. 2.0 with latest amendments. One automatic changeover unit comprise 32 nos of external Non Deteriorating Type or 'G' type fuses of various Ampere Rating, working voltage- 24 VDC which are in signalling circuits. System shall have 8 cards with monitoring arrangement of 4 fuses in one card. Installation , wiring, Testing and commissioning of Fuse Alarm System,it consists of fixing of modules of fuse alarm system on existing relay rack, wiring from existing fuses to modules, soldering, lacing etc. working to be executed without affecting the functioning of the existing Circuits/Gears and the work shall be supplied by the contractor. Inspection by- RDSO for supply portion.						
	16	5.00	Numbers	1070470.61	5352353.05	AT Par	5352353.05

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16	Description:- Design & supply of Relay racks, wire coils and relay wiring accessories. This includes indoor wiring of vital I/Os from EI system upto CT rack alongwith design of circuits & preparation of wiring Diagrams.(Inspection by Consignee). 1 Number= 1 rh/rr						
17	17	15.00	Numbers	20793.69	311905.35	AT Par	311905.35
	Description:- Fabrication, supply and fixing of cable termination board of size 2200mmx900mm as per Drg. No. NR/S&T/CON/4.1/97A made of angel iron size 40mmx40mmx5mm alongwith outer frame made of angle iron size 65mmx65mmx8mm duly fitted with Bakelite sheet (HYLAM MAKE or similar) of size 6mm thick. This also includes fixing of ARA terminals/strips/Wago connectors & fuse bases etc. Supply and fixing of hard wood of size 70cmx25cmx4cm in the back at bottom for jamming of armour of cables, each cable in the hole drilled separately for each cable through the salwood plank and all cable entry points on location boxes, location huts, JB's relay room/battery room to be closed with suitable masonry Works covered with sand and plastering. All the fixing materials like bolts, nuts, washers, Insulators, shoe, angle irons, flats, L- bolts, Catenary wires & cement concretes etc. will be supplied by the contractor. This includes cleaning, priming by red oxide, painting & description etc. with ISI mark paints. Inspection by- Consignee for supply portion.						
18	18	18659.79	Numbers	3.00	55979.37	AT Par	55979.37
	Description:- "Fabrication, supply and fixingof relay racks of size2200mmx690mm (as perapproved Drg. No. NR/S&T/CON/4.3/97A) madeof angle iron size45mmx45mmx6mm alongwithouter frame made of angle ironsize 65mmx65mmx8mm, fittedwith M.S. squares bars dulygalvanized, descriptions strips to accommodate Plug-in-typerelays/groups/Point contractor/ECR . All fixing material like antilting device,hyllam sheets if required, bolts & nuts, washers, insulators,shoe, angle irons, flats, L-bolts,Catenary wires and cementconcrete etc. will be suppliedby the contractor. This includescleaning, priming by red oxide,painting & description etc. withISI mark paints. Inspection by-Consignee for supply portion.(Inspection by Consignee)."						
19	19	12600.00	Numbers	80.92	1019592.00	AT Par	1019592.00
	Description:- Supply of Wago/Phoneix screwless 4 conductor disconnectong terminal suitable for copper wire of 0.5 sqmm to 4 sqmm as per spec No. RDSO/SPN/189/2004 ver 1.2. This includes end stopper, end plate, carries rail, marker strips etc for the fixing of terminals.						
20	20	250.00	Numbers	14.37	3592.50	AT Par	3592.50
	Description:- Supply of End plate for above item no 19 -2.5 mm/0.091 in thick .						
21	21	100.00	Numbers	10.16	1016.00	AT Par	1016.00
	Description:- Supply of End Stopper plate for above item item no 19 -10 mm/0.0394 in wide .						
22	22	125.00	Numbers	102.35	12793.75	AT Par	12793.75
	Description:- Supply of Carrier rails for above item no 19 - 35 mmx7.5 mm,1mm/0.039 in thickness un - slotted type,						
23	23	18.00	Numbers	45416.35	817494.30	AT Par	817494.30
	Description:- Supply of powder coated Main Cable Termination rack complete with scaffolding , fixtures & accessories including square bars for mounting 8-way terminal/modular terminal & blocks, ladders, string rods, frame, base assembly, insulators, J bolt, Ubolts & fasteners (Bakelite strips) , Rack arrangement etc. as per extant practice on n Rly for EI. Rack should be made of first class steel powder coated painting and rack manufacturer's certificate should be submitted. All runway for cables I wires shall be provided with PVC sleeve of proper size. All above material including modular terminals shall be supplied by Contractor(Inspection by Consignee).						
24	24	153.00	Numbers	3694.11	565198.83	AT Par	565198.83
	Description:- Supply and transportation of Q-Series Neutral Line Relay (QNA1 Type), 8F/8B along with plug board(base plate), connectors, retaining clips etc and confirming to BRS-931A or latest.(Inspection by RDSO).						
25	25	250.00	Numbers	3694.11	923527.50	AT Par	923527.50
	Description:- Supply and transportation of Q-Series Neutral Line Relay (QNA1 Type), 12F/4B along with plug board(base plate), connectors, retaining clips etc and confirming to BRS-931A or latest.(Inspection by RDSO).						
26	26	71.00	Numbers	4848.03	344210.13	AT Par	344210.13
	Description:- Supply and transportation of Q-Series Neutral Line Relay (QNNA1 Type), 4F/4B along with plug board(base plate), connectors, retaining clips etc and confirming to BRS-931A or latest.(Inspection by RDSO).						
27	27	390.00	Numbers	7183.47	2801553.30	AT Par	2801553.30
	Description:- Supply and transportation of Q-Series Neutral Line Relay QN1(8F/8B), 50 V for EI interface and confirming to BRS-931A or latest(Inspection by RDSO).						
28	28	100.00	Numbers	6600.00	660000.00	AT Par	660000.00
	Description:- Supply and transportation of Q-Series Neutral Line Relay QN1(8F/8B), along with plug board(base plate), connectors, retaining clips etc and confirming to BRS-931A or latest(Inspection by RDSO).						
29	29	155.00	Numbers	5161.03	799959.65	AT Par	799959.65
	Description:- Supply and transportation of Q-Series Neutral Line Relay (QSPA1 Type), 8F/4B along with plug board (base plate), connectors, retaining clips etc and confirming to BRS: 930, 931A, 932A, 933A, 934A, 935A, 937A, 943, 960 & RDSO/SPN/84 ver.2.0 (Inspection by RDSO).						

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30	30	180.00	Numbers	8300.00	1494000.00	AT Par	1494000.00	
	Description:- Supply and transportation of Contactor Unit (QBCA1 Type), 24 V DC, 2F(HD).2F/4B complete with plug board (base plate), connectors, retaining clips etc and confirming to BRS-943 and RDSO Spec no. IRS S-34 & S-23 or latest.(Inspection by RDSO).							
31	31	101.00	Numbers	8300.00	838300.00	AT Par	838300.00	
	Description:- Supply and transportation of Q-Series Neutral Line Relay (QL1 Type), 11F/4B along with plug board(base plate), connectors, retaining clips etc and confirming to BRS-931A or latest.(Inspection by RDSO).							
32	32	265.00	Numbers	4924.61	1305021.75	AT Par	1305021.75	
	Description:- Supply and transportation of Q-Series Neutral Line Relay (QECX1 Type), along with plug board(base plate), connectors, retaining clips etc and confirming to BRS-931A or latest.Relay plug in type style AC LED all aspects.(Inspection by RDSO).							
33	33	155.00	Numbers	5462.11	846627.05	AT Par	846627.05	
	Description:- Supply of QTA2 relays AC immunised plug in type DC 9 Ohm neutrak track relay miniature tractive armature with 2F/1B contacts as per BRS : 939A or latest amendments if any,BRS :966-F2,IRS-s-34 & IRS-S-23 (as applicable) (Inspection:RDSO)							
34	34	5.00	Numbers	1313212.60	6566063.00	AT Par	6566063.00	
	Description:- Supply, Installation, Testing and commissioning of Automatic Fire Detection & Alarm System (AFDAS) for Signalling installations as per specn no. RDSO/SPN/217/2016 Ver 1.0 or latest consisting of probe type bimetallic heat detector with base, UV & IR flame detectors with base, heat & smoke multisensor with base, aspirating type smoke detectors with base, linear heat sensing (LHS) cables, LHS interface module, LHS cable end of line box with modular junction box, monitor module for LHS cable alarm input to fire panel, addressable hooter, fire alarm control panel with sufficient input ports for connecting various sensors/detectors along with their interfaces, if any, and shall have sufficient output ports for controlling fire extinguishing system, operating/switching off electrical units and having provision for remote monitoring network along with software , intelligent addressable Manual call points, audio visual alarm , fire survival circuit integrity cables etc. The AFDAS shall also consist of fire suppression system as per RDSO specification . The fire alarm panel should also consist of switched mode power supply system , battery backup and charger, display board which will have character display with touch key pad, RS- 232/485 Networking Circuit, USB 2.0 Port, Programmable inputs, NAC's and Programmable relays, and loop card circuits , necessary software for display of fire alarm , necessary interconnecting cables etc. Power supply Board will have SMPS fully protected board, battery backup with built in charger as per RDSO specification(Inspection by RDSO).							
35	35	10.00	Numbers	77582.92	775829.20	AT Par	775829.20	
	Description:- Supply, installation, wiring, testing and commissioning of L.C.Gate telephone with inbuilt recorder in 1+6 configuration with central supply as per RDSO specification no. RDSO/SPN/TC/51/2011 or latest. (Inspection by RDSO).							

S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule B-BLOCK WORKING							15879313.76	
36	1	6.00	Set	1315057.00	7890342.00	AT Par	7890342.00	
	Description:- Supply, installation & commissioning of block proving with axle counter (BPAC) using UFSBI for single line suitable for 25KV electrified area as per RDSO specification No. IRS:S-105/2012 with latest amendment. (a) ELECTRONIC SIGNALLING EQUIPMENTS : Universal Fail Safe Block Interface for single line suitable for 25KV electrified area, complete with all accessories as per RDSO's specification RDSO/ SPN/ 147-2005 & IRS Specification No. IRS:S-105/2012 Ver.0 (or latest). (2 (two) numbers per block section). It comprises of Auto Changeover facility for 1 Quad & OFC working. Necessary MODEM for Quad and OFC should be supplied along with Auto-Changeover arrangement. (b)Relay rack with due locking & sealing arrangement including necessary relays (QN1, QNA1, QL1, Timer etc.) to suit single line UFSBI and wiring as per wiring diagram RDSO's drawing No. RDSO/S/32020 (latest amendment). (c)Block panel complete with accessories as RDSO Drg. No. RDSO/S/32019 (latest amendment)- 02 Nos. (d)Block telephone with accessories as per RDSO's specification No. RDSO/SPN/ 191/2006.- 02 Nos. The Block Phone should Work without any interruption after Auto changeover.(Inspection by RDSO).							
37	2	6.00	Set	852561.97	5115371.82	AT Par	5115371.82	
	Description:- Supply of Digital Axle Counter Single Track section High availability (HASSDAC) with two detection point with dual track sensor, complete set as per RDSO Spec. No. RDSO/SPN/177/2012 Version 3 or latest amendment or specification, complete set each consisting of :(a) Start Fed (SF) System-1 no. (b) End Fed (EF) System - 1 no. (c) Rest Box -2 no. (d) Reset Filter -2 no. (e) Display unit -2 no. (f) Relay Box 1VR 1PR (each box consisting of Q relay series 1000 Ohm 6F/8B-2 no.) - 4no. (g) Transmitter (Tx) coil/sensor - 4 no. & Receiver (Rx) coil/sensor -4 no., with mounting arrangement for rail contact & double rail contact with 15 mtr. Integral cable. (h) Deflectors to safe guard rail contact - 8 nos. (i) Tool Kit 1 no. or with 100% redundancy on cross approval of all equipment SSDAC as per RDSO specification RDSO/SPN/177/2012 (Ver.3)(Inspection by RDSO).Note: The supply and provision of unit maintenance free earth has been covered separately.							

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38	3	6.00	Set	22833.64	137001.84	AT Par	137001.84	
	Description:- Installation , wiring testing & commissioning of central unit of Digital Axle Counter Single Track section High Availability (HASSDAC) with two detection points set as per RDSO Spec. no. RDSO/SPN/177/2012 Ver. 3 or latest amendment or specification or with 100% redundancy on cross approval of all equipment SSDAC as per RDSO spec. no. RDSO/SPN/177/2012 (Ver.3) of RDSO/SPN/177/2003 (Ver.1) Amdt. 2 or with 100% redundancy on cross approval for all equipment of MSDAC separately for each track section as per RDSO spec. no. RDSO/SPN/176/2013 (Ver.2) or MSDAC/SSDAC with latest amendment or specification, including its associated all indoor equipment, indication panel and wiring the same to integrate with the relay circuits as per the instructions of Railway Engineer at site and as per STS/E/TAN/7008 dtd. 28.5.2019. This includes laying & termination of cable, if any from panel room to axle counter room/relay room in DWC pipe/existing ladder. Installation /programming/ configuration/ commissioning of Axle counter equipment to be carried out in accordance with latest guide line issued by Railway/RDSO preferably by authorized representative of OEM.							
39	4	6.00	Pair	71171.20	427027.20	AT Par	427027.20	
	Description:- Supply & Installation of Modem compatible with existing UFSBI system work on back up media.							
40	5	6.00	Numbers	249861.00	1499166.00	AT Par	1499166.00	
	Description:- Supply of OFC integrated access device 1U height or 1.5 U height /19" rack mountable for LVCD /Digital axle counter purpose;optical module integrated in the unit supporting dual core OFC and one 100Mbps Ethernet port for surveillance/ smoke detector; optical distance support to be 20 kms; unit to support one E&M module supporting four 2W/4W (each port configurable) to support axle counter / UFSBI/Control phone/ EC/RTU/ and one TELNET/SNMP port; unit to support DC/AC power supply ; unit to support change over mechanism between quad and optical fiber for E&M option;one number cable to be provided along with unit for E&M ; FABIO/2CX/OFC/DC & Module 2W/4W four port : Make :TEAM ENGG/FABIO/WAVES or similar /TANSY. Inspection by- Consignee.							
41	6	30.00	Job	25404.53	762135.90	AT Par	762135.90	
	Description:- a)Supply of basic material to construct unit maintenance free earth as per RDSO Specs. No RDSO/SPN/197/2008 or latest and conforming to RDSO Drg. No. SDO/ RDSO/E &B/001 dtd.19.09.08 It consist of following: 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. Earth enhancement material supplied in sealed bags of minimum 10 kg = 3 nos. Copper strip of 150x25x6 mm, to terminate earth rod = 1 no. Copper strip of 300x25x6 mm (MEEB) = 1 no. Copper strip of 150x25x6mm (SEEB) = 1 no. 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. 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. Supply of 10 sq. mm multi strand single core PVC insulated copper cable as per IS: 694 for connecting various equipment to SEEB. Supply of copper lug sleeve for 3/16 cable. Details of earthing materials are given in Technical specification of TS-10 in tender documents. Inspection-RDSO. b)Installation and commissioning of Unit Maintenance Free Earth . 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 25mm x 6 mm x 150mm 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 busbarsto various equipment. Earth electrode of 17.00 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 writers laboratories (UL) 467-2007 or latest. Copper strips of 150mm 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 busbar, copper strips of 150 mm x 25 mm x 6 mm sub equip- potential busbar in relay room, power room and panel room. Copper tape 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 300mm x 300mm (Inside dimension) of approximate 50mm 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 Specn. No. RDSO/SPN/197/2008 or latest and conforming to RDSO Drg. No. S DO/RDSO/E&B/001 or latest.							
42	7	100.00	Numbers	482.69	48269.00	AT Par	48269.00	
	Description:- Wiring of relays in relay room/relay huts as per appd wiring diagrams. All wiring material including resistances and condensers etc. except cables/wires to be supplied by contractor (Supply of cables & wires covered separately). It also includes dressing, bunching, lacing and fixing of relay bases.							

S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule C-POWER SUPPLY							14350345.50	
	1	5.00	Numbers	1790746.51	8953732.55	AT Par	8953732.55	

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43	Description:- Supply of SMPS based Integrated Power Supply (IPS) system suitable up to 3/4 line station with 'Q' Series Relay conforming to RDSO/SPN/165/2012 with latest amendment along with battery bank (55+5) 110V DC/300 AH along with remote indication panel. Total no. of modules and their ratings/capacity of each type of supply shall be as per Drg No. RCIL/IPS/4-Line/RE/2/22. It covers supply of Tool Kit containing all type of tools required for maintenance of IPS set as per RDSO specification no. RDSO/SPN/165/2012 with latest amendmen. The length of cables required from IPS to Battery bank 25 Sqmm flexible Copper Wire Red & black as per RDSO specification will be supplied by OEM .The vendor shall submit IPS configuration with load calculation sheet and shall obtain RCIL engineer approval before supply.(Inspection by RDSO).						
44	2	5.00	Numbers	46076.80	230384.00	AT Par	230384.00
	Description:- Installation,Wiring,Testing & commissioning of Integrated Power supply system conforming to specn. RDSO/SPN//165/2012 (Ver.3) or latest as per RDSO pre-commissioning checklist. This includes Installation and commissioning of 55 no. LMLA Batteries of IRS: S-88/2004 as per extant practice of NRIL along with installation of Remote indication panel in SM/ASM's room. Any masonry work,if required, will be carried out by contractor's own material. The 25 sq mm wire shall be used for connecting Batteries from IPS, 16 sq.mm Power cable is to be used for wiring of 110V DC & 110V AC and for 10 sq.mm power cable for rest of the supplies. All connectors,wiring material, ladders, DWC pipes etc as per site requirement are to be arranged by contractor as per instructions of RCIL engineer at site. The contractor will provide Supply & fitting of exhaust fan in IPS room with wire mesh and flap cover to protect the room against dust. The item includes transportation ,loading and unloading of complete IPS system with Batteries from store to site of installation. All wiring will be done by using flexible multi strand copper wires of suitable size as recommended by RDSO in IPS's pre commissioning checklist. This includes extending various power supplies up to bus bars in Relay room and upto Battery room. IPS should be connected to ring of earth of EI. This also includes supply of all types of wires/Distribution board required for interconnection from IPS to Relay rack, CT rack etc as per RDSO guidelines/Railway practice NOTE:- IPS will be installed ,wired ,tested and commissioned by OEM's engineer as per guidelines issued by RDSO. The pre-commissioning checklist issued by RDSO for IPS will be prepared by OEM's engineer and signed jointly with site engineer. Before commissioning of IPS ,OEM will submit site installation certificate by mentioning that IPS has been installed ,wired,tested and commissioned by approved vendor of RDSO i.e by OEM.						
45	3	10.00	Set	169588.45	1695884.50	AT Par	1695884.50
	Description:- Supply, wiring, installation, testing and commissioning of Earth Leakage Detector (ELD) 16 Channels as per RDSO Specn. RDSO/SPN/256/2002 or latest including on job training at site will be given by OEM engineer for installation and maintenance of ELD.(Inspection by RDSO).						
46	4	5.00	Numbers	447312.59	2236562.95	AT Par	2236562.95
	Description:- Supply, installation, wiring, testing and commissioning of Diesel Generator Set 20 KVA, Single Phase, 230 V, 1500RPM, 50Hz, 30BHP (minimum) mounted with air cooled double cylinder diesel engine with acoustic enclosure complete silent type DG sets confirming to RDSO Specn. No. IRS(S) 69/86 with latest amendment. (CPCB Noise and Emission Complaint) Kirloskar make engine/alternator. This also include supply of standard AMF control panel, supply of 12V/120 AH battery set along with battery charger of suitable rating for charging the batteries to ensure self starting arrangement of DG Sets. This include Supply and installation of Change over switch 200 Amp. 3 Phase, 415VAC, 50Hz (Side Handle) four pole, Make Havel's IHCFFE 200 or superior. It also includes supply of start/stop buttons, Volt/Ampere/Frequency meters and 63 AMP MCB(minimum). (Inspection by Consignee).Note: DG set will be procured from OEM or authorised dealer of OEM's with the warranty certificate of minimum 1 year .ALL masonry work required for installation of DG set will be done by contractor under supervision/instructions issued by site engineer in charge of RCIL.						
47	5	350.00	Job	3525.09	1233781.50	AT Par	1233781.50
	Description:- Supply and installation of earth electrodes as per std. practice. The item includes digging of pit in earth, 3 Mtrs. deep and fixing earth electrode pipe. Casting of cement concrete enclosures as per drg. No. (NR/S&T/CON/6.4/97). The soil treatement shall be done as per std. pratice. The item includes provn. of mild steel flat of size 35mm x 6mm (as per IRSEM) and nut bolted connection of MS flat with earth electrode. The other end of mild steel flat to be connected to block instrument, cable sheath of power equipment, signal base, apparatus case, CT rack / relay racks, other equipments as per the instruction of Engr. at site & IRSEM. Earhting connection location to location shall be done through cable which shall be provided by Railway. Complete materials such as earth electrodes as per drg. No. (NR/S&T/CON/6.3/97), cement, wiring material, nut bolt for connection & mild steel flat of size 35mm x 6mm or 210 sqm as per SEM etc. to be supplied by the contractor. Inspection by- RITES for supply portion.						

S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule D-CABLING							17422615.85	
48	1	33000.00	Metre	80.23	2647590.00	AT Par	2647590.00	
	Description:- Excavating and refilling of trench in Normal Soil to the level of ground with rammed earth as per drg. No.NR/S&T/CON./1.1/97A so as not to form a drain 0.3 mtrs. wide & 1 mtr. deep on both side of the station alongside the track. It shall conform to the safe distance as per signalling and cable plan. It also includes clearance of roots of trees & bushes.							

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49	2	500.00	Metre	119.37	59685.00	AT Par	59685.00	
	Description:- Excavating and refilling of trench in Rocky soil to the level of ground with rammed earth as per approved Drg. No.NR/S&T/CON/1-1/97-A1 so as not to form a drain 0.3 Mtrs. Wide & 0.5Mtr. Deep on both side of the station alongside the track .This includes 50mm thick concreting work throughout in 1:3:6 ratio. All concreting material to be supplied by the contractor. It shall conform to the safe distance as per signalling and cable plan It also includes clearance of routes of trees & bushes.							
50	3	1100.00	Metre	104.28	114708.00	AT Par	114708.00	
	Description:- Excavating and refilling of trench 0.3 Mtr. Wide & 1 Mtr. Deep from bottom of rail flange across the track or 0.5Mtr. from ground level which ever is more as per approved Drg no. NR/S&T/CON /1-2/97. Earth should be rammed so as not form a drain. This includes removal and refilling of ballast and restoration of surface under normal traffic conditions.							
51	4	500.00	Metre	124.27	62135.00	AT Par	62135.00	
	Description:- Cable trenching 0.3mt.wide 1mt at pacca/stone/brick paved surface.							
52	5	100.00	Metre	883.79	88379.00	AT Par	88379.00	
	Description:- Supply and fixing of G.I. pipe 75mm dia, 3mm thick as per spec no IS-1239, perforated at a distance of 20 CM or less of required length at culverts/ bridges/along the cuttings, suitably concreted at both ends as per approved drg. No.Drg. No.NR/S&T/CON/1-4/97.or at ASM office/other buildings suitably fixing it to the wall and at both ends. G.I. clamps of M.S. flats bolts and nut, to be supplied by the contractor. Inspection by- Consignee for supply portion.							
53	6	231000.00	Numbers	8.47	1956570.00	AT Par	1956570.00	
	Description:- Supply and laying of 2nd class bricks in the trench and laying as per Drg. No. (NR/S&T/Con./1.1/97A) and as per instruction of the site Engineer.							
54	7	2000.00	Metre	2045.40	4090800.00	AT Par	4090800.00	
	Description:- All work of horizontal boring and trenchless cabling along with supply,transpotation and insertion of double wall corrugated pipe -(ISI marked) conforming to RDSO Spec no. RDSO/SPN/204/2011 or latest, and the laying of cable in the boring under the track / road etc as per instruction of site engg. by using pipe of size 120 mm outer dia, 103.5 mm inner dia in which required number of cables to be crossed. The depth of horizontal boring should be minimum 1.0 mtr. from rail flange/road level. Inspection by- RITES for supply portion.(Inspection by Consignee).							
55	8	2000.00	Metre	285.50	571000.00	AT Par	571000.00	
	Description:- Supply, transportation and laying of Double Wall Corrugated (DWC)-HDPE pipe/duct in the cable trench parallel to the track and decided by site engineer in charge. It includes supply and insertion/laying of Double Wall Corrugated -HDPE pipe/duct as per RDSO Specn. No. RDSO/SPN/204/2011 or latest and conforming to ISI Spec. No.IS-14930, Part-II. The DWC-HDPE pipe/duct will be ANTI RODENT type and shall include supply and installation of accessories of DWC-HDPE duct/pipe like plastic coupler (push fit type with O-ring), end caps, T-Joints etc. The DWC-HDPE pipe/duct will be inspected by RDSO/RITES with the sample passed all prescribed test by RDSO like compression test, impact test, bending test, oxidation induction test etc. The contractor will submit the test reports for cables laying from point location to home location - Size 120 mm outer dia. and 103.5 mm inner dia. for cables laying from point location to home location.							
56	9	555000.00	Metre	9.10	5050500.00	AT Par	5050500.00	
	Description:- Laying of signalling/Telecom/power cables of different sizes as per approved Drg. No. NR/S&T/CON/1-1/97C and as per cable route plan approved by Railways and meggering of cable before and after its laying of all type of outdoor cables.							
57	10	11000.00	Per Conductor	14.84	163240.00	AT Par	163240.00	
	Description:- Testing & meggering of all types of outdoor cables after its laying and termination on both ends under supervision of Railway representative. This also includes preparation of test report for core to core and core to earth on prescribed proforma for each core of the cable separately after termination of cable. This also includes dressing & lacing of cable on both ends. Performa for testing & material for lacing to be supplied by the contractor.							
58	11	5.00	Numbers	13584.77	67923.85	AT Par	67923.85	
	Description:- Digging of cable pit (minimum inside size of 3 mtr x 2 mtr x 1 mtr) and width of wall shall not be less than 200mm as per instructions given by engineer in charge. It includes supply and filling of sand before and after coiling of cables, covering top of the cable pit by stones and brick masonry work for sides and there after plastering.							
59	12	300.00	Numbers	1338.03	401409.00	AT Par	401409.00	

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	Description:- Fabrication, supply and fixing of concrete cable marker as per RDSO drg. No. SDO/Cable Laying/020, dt.31.10.11. The marker shall be fixed at various places of cable route as per instruction of Eng. at site.						
60	13	1000.00	Metre	2045.40	2045400.00	AT Par	2045400.00
	Description:- Boring/Trenchless horizontal direction by machine under Track/road/ culvert/ cogested area & laying of 120mm/90mm double walled corrugated (DWC) HDPE						
61	14	200.00	Metre	516.38	103276.00	AT Par	103276.00
	Description:- Fabrication, wiring& fixing of scaffolding/cable carrier made of angle iron size 35mm x 35mm x 6mm						

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Schedule E-APPARATUS CASES							12167008.50	
62	1	180.00	Numbers	6319.15	1137447.00	AT Par	1137447.00	
	Description:- Casting,Concreting and curing of foundation and erection of App.Cases (single) of size (1160mmx760mm) at surface and 650mm deep as per drg.No. NR/S&T/CON/2.7/97. A layer of 3mm of bitumen compound has to be provided between foundation and location box to prevent ingress of water in the base of location box. All material such as cement,sand,aggregate and anchor,App.case (single) will be supplied by railways. Contractor is required to execute all type of repair worksof foundations if required during inserting the cable for termination.(Inspection:Site Incharge)							
63	2	135.00	Numbers	5539.53	747836.55	AT Par	747836.55	
	Description:- Casting,concreting and curing of foundation and erection of half App.Cases of size (670mmx670mm) and 650mm deep as per drg.No. NR/S&T/CON/2.8/97. A layer of 3mm of bitumen compound has to be provided between foundation and location box to prevent ingress of water in the base of location box. All material such as cement,sand,aggregate and anchor bolt shall be supplied by contractor. App.case half will be supplied by railway. Contractor is required to execute all type of repair works of foundations if required during inserting the cable for termination.(Inspection:Site Incharge)							
64	3	180.00	Numbers	24095.05	4337109.00	AT Par	4337109.00	
	Description:- Supply of single apparatus case steel RE with 'E' type locks and key ward No 42 & handle as per Drg No. RE/S&T/ALD/SK/219/82 & 221/82 with Alt.B . Inspection by- RITES.							
65	4	55.00	Numbers	6521.79	358698.45	AT Par	358698.45	
	Description:- Preparation of App. Case single involving wiring of relays. it includes - (i) Preparation & fixing of bakelite hylum sheet 910x800x6mm and teak wooden shelf 900x450x25mm duly fixed by angle iron piece of different size inside all the app. Cases. Hylum board shall be fixed on an angle iron frame of 25mmx25mmx3mm. Angle iron frame will be fixed in location boxes secured by nuts & bolts. (ii) Fixing of fuses, ARA terminal shelf type Q series relays and other type relays on square bars fixing and jamming of cables with 2 inch thick salwood plank provided at the bottom. This will include opening, pasting and jamming armour of each cable in the hole drilled separately for each cable through the salwood plank & all cable entry points on location boxes, location huts, JB's relay room/battery room to be closed with suitable masonry works covered with sand and plastering. (iii) Description for terminal drawing of circuits, inside app. Case. Painting from out side as well inside with red oxide and aluminum paint is covered separately. Size of lettering will be 100mm or as per instructions of Engineer at site. (iv) All materials including hard wood shelf, hylum board, salwood plank, angle iron square bar, wire and wiring material as per the IRS specn., non deteriorating type HRC fuses, bases, nuts and bolts and other items shall be supplied by the contractor. Relays, ARA terminals only shall be supplied by the RailTel. (Inspection :Engg representative.)							
66	5	85.00	Numbers	5359.38	455547.30	AT Par	455547.30	
	Description:- Preparation of App. Case single not involving wiring of relays. it includes - (i) Preparation & fixing of bakelite hylum sheet 910x800x6mm and teak wooden shelf 900x450x25mm duly fixed by angle iron piece of different size inside all the app. Cases. Hylum board shall be fixed on an angle iron frame of 25mmx25mmx3mm. Angle iron frame will be fixed in location boxes secured by nuts & bolts. (ii) Fixing of fuses, ARA terminal shelf type Q series relays and other type relays on square bars fixing and jamming of cables with 2 inch thick salwood plank provided at the bottom. This will include opening, pasting and jamming armour of each cable in the hole drilled separately for each cable through the salwood plank & all cable entry points on location boxes, location huts, JB's relay room/battery room to be closed with suitable masonry works covered with sand and plastering. (iii) Description for terminal drawing of circuits, inside app. Case. Painting from out side as well inside with red oxide and aluminum paint is covered separately. Size of lettering will be 100mm or as per instructions of Engineer at site. (iv) All materials including hard wood shelf, hylum board, salwood plank, angle iron square bar, wire and wiring material as per the IRS specn., non deteriorating type HRC fuses, bases, nuts and bolts and other items shall be supplied by the contractor. Relays, ARA terminals only shall be supplied by the RailTel. (Inspection :Engg representative.)							
	6	40.00	Numbers	3225.12	129004.80	AT Par	129004.80	

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67	Description:- Preparation of App. Case to be used as battery box (not requiring shelf and hylum of size 910x150x6mm only is reqd.): This includes fixing of fuses, ARA terminal and jamming of cables with 2 inch thick salwood plank provided at the bottom. This will include opening, pasting and jamming armour of each cable in the hole drilled separately for each cable through the salwood plank and all cable entry points on location boxes, location huts, JB's relay room/battery room to be closed with suitable masonry Works covered with sand and plastering.Wiring description for terminal drawing of circuits, inside app. Case. Painting from out side as well inside with red oxide and aluminum paint is covered separately. Size of lettering will be 100mm or as per instructions of Engineer at site. All materials including hylum board, salwood plank, wire and wiring material, catenary wires, nuts and bolts and other items shall be supplied by the contractor and shall be as per the RDSO specn.(as applicable).						
68	7	135.00	Numbers	18634.84	2515703.40	AT Par	2515703.40
	Description:- Supply of apparatus case steel RE half with 'E' type locks and key ward No 42 & handle as per Drg No. RE/S&T/ALD/SK/220/82 & 221/82 with Alt.B .Inspection by- RITES.						
69	8	30.00	Numbers	4379.83	131394.90	AT Par	131394.90
	Description:- Preparation of App. Case half involving wiring of relays: Preparation & fixing of bakelite hylum sheet 450x800x6mm and bakelite shelf 450x450x25mm duly fixed by angle iron piece of different size inside all the app. Cases. Hylum board shall be fixed on an angle iron frame of 25mmx25mmx3mm. Angle iron frame will be fixed in location boxes secured by nuts and bolts.This includes fixing of fuses, ARA terminal, Q series relays and other type relays on square bars fixing and jamming of cables with 2 inch thick salwood plank provided at the bottom. This will include opening, pasting and jamming armour of each cable in the hole drilled separately for each cable through the salwood plank and all cable entry points on location boxes, location huts, JB's relay room/battery room to be closed with suitable masonry Works covered with sand and plastering.Wiring description for terminal drawing of circuits, inside app. Case. Painting from out side as well inside with red oxide and aluminum paint is covered separately. Size of lettering will be 100mm or as per instructions of Engineer at site. All materials including Bakelite shelf, hylum board, salwood plank, wire and wiring material, non deteriorating type HRC fuses with bases, catenary wires , nuts and bolts and other items shall be supplied by the contractor and shall be as per the RDSO specn.(as applicable).						
70	9	63.00	Numbers	3701.52	233195.76	AT Par	233195.76
	Description:- Preparation of App. Case half not involving wiring of relays: Preparation & fixing of bakelite hylum sheet 910x800x6mm and Bachelite shelf 900x450x25mm duly fixed by angle iron piece of different size inside all the app. Cases. Hylum board shall be fixed on an angle iron frame of 25mmx25mmx3mm. Angle iron frame will be fixed in location boxes secured by nuts and bolts.This includes fixing of fuses, ARA terminal, fixing and jamming of cables with 2 inch thick salwood plank provided at the bottom. This will include opening, pasting and jamming armour of each cable in the hole drilled separately for each cable through the salwood plank and all cable entry points on location boxes, location huts, JB's relay room/battery room to be closed with suitable masonry Works covered with sand and plastering.Wiring description for terminal drawing of circuits, inside app. Case. Painting from out side as well inside with red oxide and aluminum paint is covered separately. Size of lettering will be 100mm or as per instructions of Engineer at site. All materials including Bachelite shelf, hylum board, salwood plank, wire and wiring material, non deteriorating type HRC fuses with bases, catenary wires, nuts and bolts and other items shall be supplied by the contractor and shall be as per the RDSO specn.(as applicable).						
71	10	42.00	Numbers	2676.82	112426.44	AT Par	112426.44
	Description:- Preparation of App. Case to be used as battery box (not requiring shelf and hylum of size 450x150x6mm only is reqd.):This includes fixing of fuses, ARA terminal and jamming of cables with 2 inch thick salwood plank provided at the bottom. This will include opening, pasting and jamming armour of each cable in the hole drilled separately for each cable through the salwood plank and all cable entry points on location boxes, location huts, JB's relay room/battery room to be closed with suitable masonry Works covered with sand and plastering.Wiring description for terminal drawing of circuits, inside app. Case. Painting from out side as well inside with red oxide and aluminum paint is covered separately. Size of lettering will be 100mm or as per instructions of Engineer at site. All materials including hylum board, salwood plank, wire and wiring material, catenary wires, nuts and bolts and other items shall be supplied by the contractor and shall be as per the RDSO specn.(as applicable).						
72	11	15.00	cum	3370.91	50563.65	AT Par	50563.65
	Description:- General concrete work in cement,coarse sand and aggregate ratio 1:3:6,work scattered at different places for items not covered in above schedule and fine plastering of top will be done with cemnt sand ratio 1:4. volume of foundation also includes volume of C.I base,anchor bolts etc. coarse sand, aggregate 25mm and cement to be supplied by contractor.(Inspection: Site Incharge)						
73	12	25.00	cum	3275.25	81881.25	AT Par	81881.25
	Description:- Providing brick masonry in ratio 1:6 cement and mortar including plastering with 1:4 cement and sand mixture both sides of bricks with thickness 20mm each end with contractors own B class bricks. It also includes excavation, curing, grouting, bolting etc. wherever required. B class bricks, sand and cement (ISI mark) will be supplied by the contractor. Providing brick masonry in ratio 1:6 cement and mortar including plastering with 1:4 cement and sand mixture both sides of bricks with thickness 20 mm each end with contractors own B class bricks. It also includes excavation, curing, grouting, bolting etc. wherever required. B class bricks, sand and cement (ISI mark) will be supplied by the contractor.						

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74	13	300.00	Numbers	6254.00	1876200.00	AT Par	1876200.00	
Description:- Supply, fixing and wiring of SPD D class(Inspection by RDSO).								

S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule F-SIGNALS							10968240.32	
75	1	101.00	Numbers	10163.34	1026497.34	AT Par	1026497.34	
	Description:- Supply of LED Signals Lighting Unit - RED Aspect as per RDSO /SPN/199/2010/REV-1 or latest. (Inspection by RDSO).							
76	2	111.00	Numbers	10163.34	1128130.74	AT Par	1128130.74	
	Description:- Supply of LED Signals Lighting Unit - YELLOW Aspect as per RDSO /SPN/199/2010/REV-1 or latest. (Inspection by RDSO).							
77	3	64.00	Numbers	10163.34	650453.76	AT Par	650453.76	
	Description:- Supply of LED Signals Lighting Unit - GREEN Aspect as per RDSO /SPN/199/2010/REV-1 or latest. (Inspection by RDSO).							
78	4	86.00	Numbers	6619.80	569302.80	AT Par	569302.80	
	Description:- Supply of LED Signal Lighting unit for subsidiary Signals (Supply of LED for Route Aspects per RDSO /SPN/153/2011/REV 4.1 or latest). (Inspection by RDSO).							
79	5	125.00	Numbers	6619.80	827475.00	AT Par	827475.00	
	Description:- Supply of LED Signal Lighting unit for subsidiary Signals (Supply of LED for Shunt Signal as per RDSO /SPN/153/2011/REV 4.1 or latest). (Inspection by RDSO).							
80	6	17.00	Numbers	6619.80	112536.60	AT Par	112536.60	
	Description:- Supply of LED Signal Lighting unit for subsidiary Signals (Supply of LED for Calling ON Signal as per RDSO /SPN/153/2011/REV 4.1 or latest). (Inspection by RDSO).							
81	7	43.00	Numbers	20635.77	887338.11	AT Par	887338.11	
	Description:- Supply & installation of LED base Colour Light Signal Unit complete as per RDSO Specification No.IRS: S-26/64 or latest. The item includes supply & erection of colour light signal post tubular 140 mm dia in required length complete with CI base, CLS unit, ladder with its base, blanking off , ladder guards, maintenance platform and MS supporting bracket in the middle of the ladder, hoods & long hoods. It also includes supply & fixing of pinnacles, offset brackets, Junction Type route indicators, if any. The item also includes wiring inside the signal unit with 2.5 sqmm multi strand wire of different colour according to signal aspect with copper lug as per standard practice. The wiring material required to be supplied by contractor. Item includes supply of number plates with photo luminescent paint /strips. cross-arms (wooden) to be provided by the contractor till the signals are introduced. Item includes padlock for signal units. Height of the post -4.6m with ladder:							
82	8	55.00	Numbers	18547.68	1020122.40	AT Par	1020122.40	
	Description:- Supply & installation of LED base Colour Light Signal Unit complete as per RDSO Specification No.IRS: S-26/64 or latest. The item includes supply & erection of colour light signal post tubular 140 mm dia in required length complete with CI base, CLS unit, ladder with its base, blanking off , ladder guards, maintenance platform and MS supporting bracket in the middle of the ladder, hoods & long hoods. It also includes supply & fixing of pinnacles, offset brackets, Junction Type route indicators, if any. The item also includes wiring inside the signal unit with 2.5 sqmm multi strand wire of different colour according to signal aspect with copper lug as per standard practice. The wiring material required to be supplied by contractor. Item includes supply of number plates with photo luminescent paint /strips. cross-arms (wooden) to be provided by the contractor till the signals are introduced. Item includes padlock for signal units. Height of the post -3.6m with ladder:							
83	9	35.00	Numbers	17305.22	605682.70	AT Par	605682.70	
	Description:- Supply & installation of LED base Colour Light Signal Unit complete as per RDSO Specification No.IRS: S-26/64 or latest. The item includes supply & erection of colour light signal post tubular 140 mm dia in required length complete with CI base, CLS unit, ladder with its base, blanking off , ladder guards, maintenance platform and MS supporting bracket in the middle of the ladder, hoods & long hoods. It also includes supply & fixing of pinnacles, offset brackets, Junction Type route indicators, if any. The item also includes wiring inside the signal unit with 2.5 sqmm multi strand wire of different colour according to signal aspect with copper lug as per standard practice. The wiring material required to be supplied by contractor. Item includes supply of number plates with photo luminescent paint /strips. cross-arms (wooden) to be provided by the contractor till the signals are introduced. Item includes padlock for signal units. Type of signal unit - 2 Aspect							
	10	27.00	Numbers	21978.19	593411.13	AT Par	593411.13	

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84	Description:- Supply & installation of LED base Colour Light Signal Unit complete as per RDSO Specification No.IRS: S-26/64 or latest. The item includes supply & erection of colour light signal post tubular 140 mm dia in required length complete with CI base, CLS unit, ladder with its base, blanking off, ladder guards, maintenance platform and MS supporting bracket in the middle of the ladder, hoods & long hoods. It also includes supply & fixing of pinnacles, offset brackets, Junction Type route indicators, if any. The item also includes wiring inside the signal unit with 2.5 sqmm multi strand wire of different colour according to signal aspect with copper lug as per standard practice. The wiring material required to be supplied by contractor. Item includes supply of number plates with photo luminescent paint /strips. cross-arms (wooden) to be provided by the contractor till the signals are introduced. Item includes padlock for signal units. Type of signal unit - 3 Aspect						
85	11	9.00	Numbers	21978.19	197803.71	AT Par	197803.71
	Description:- Supply & installation of LED base Colour Light Signal Unit complete as per RDSO Specification No.IRS: S-26/64 or latest. The item includes supply & erection of colour light signal post tubular 140 mm dia in required length complete with CI base, CLS unit, ladder with its base, blanking off, ladder guards, maintenance platform and MS supporting bracket in the middle of the ladder, hoods & long hoods. It also includes supply & fixing of pinnacles, offset brackets, Junction Type route indicators, if any. The item also includes wiring inside the signal unit with 2.5 sqmm multi strand wire of different colour according to signal aspect with copper lug as per standard practice. The wiring material required to be supplied by contractor. Item includes supply of number plates with photo luminescent paint /strips. cross-arms (wooden) to be provided by the contractor till the signals are introduced. Item includes padlock for signal units. Type of signal unit - 4 Aspect						
86	12	2.00	Numbers	25054.14	50108.28	AT Par	50108.28
	Description:- Supply and installation of 1-way route indicator junction type Drg. No. SA-23401 (Adv.) or latest with hoods & offset bracket 5½ " without signal transformer as per RDSO Specn.No.IRS-S-66/84 Amd. 1 or latest.						
87	13	10.00	Numbers	32479.39	324793.90	AT Par	324793.90
	Description:- Supply and installation of 2/3/4/5 way route indicator in type complete junction type Drg. No. SA-23401 (Adv.) or latest with hoods & offset bracket 5½ " without signal transformer as per RDSO Specn.No.IRS-S-66/84 Amd. 1 or latest.						
88	14	71.00	Numbers	3853.62	273607.02	AT Par	273607.02
	Description:- Fixing of CLS surface base, bolting on the foundation. Erection of CLS post with signal unit on the top or on an off-set bracket and fitting ladder and guard to the post at the top. Concreting ladder base and embedded into the ground with supporting bracket in the middle, blanking of the ladder for a distance of 1 feet between the height 6' 9" and 7' 9" from the rail level by MS angle and MS sheet 6mm thick wherever required. This includes provision of wooden (SAL) cross arm 1 mtr x 1 mtr for CLS unit prior to the commissioning, fixing of LED aspect, current regulator and hoods of CLS unit, terminating cables, wiring the CLS unit and focusing the signal. Elevation & distance of foundation from track shall be in accordance with schedule of dimension for Indian Railways and as per NR practice. All items for the above works except Signal unit, LED signal, Signal post, Base and Ladder shall be supplied by the contractor including but not limited to the following: i) "U" bolt for offset brackets, ii) Wooden cross arm 1 mtr. x 1 mtr., iii) MS angle and MS sheet for blanking of ladder, iv) Supply and fixing of signal number plate (Retro reflective) with complete fittings as per standard railway practice. v) Wire mesh guard, lock for unit if required, nuts, bolts etc for the following: (a) Installation, erection, wiring of 2/3/4 aspect color light signal						
89	15	12.00	Numbers	4642.09	55705.08	AT Par	55705.08
	Description:- Supply and fixing of Calling-On signal unit on signal post. The item includes fixing of Calling On signal unit on signal post with bracket, hood etc. Calling-On unit, bracket etc. to be supplied by Contractor. The item also includes termination of cable and wiring inside the Calling On signal unit as per standard practice. Calling ON boards of suitable size as decided by site engineer in charge will also be provided by the Contractor. Calling -on signal shall conform to RDSO Drg. No. SA-24351 with latest Alt.(Inspection by RITES).						
90	16	29.00	Numbers	9368.83	271696.07	AT Par	271696.07
	Description:- Supply, erection and wiring of position light shunt signal 3 Position complete with post/F marker. The item includes erection of shunt signal indicator either on post by itself with CI base or below the main signal with offset bracket. It includes supply and fixing of shunt signal unit, CLS post, offset bracket, CI base, pinnacles, hood etc. The shunt signal will be as per RDSO Drg.No.SA-23840(Adv). The item also includes termination of cable and complete wiring inside shunt signal units as per standard practice along with the expanded metal cover on front.(Inspection RITES)						
91	17	29.00	Numbers	9565.55	277400.95	AT Par	277400.95
	Description:- Supply, erection and wiring of position light shunt signal with unit offset bracket 3.5" dia. The item includes erection of shunt signal indicator either on post by itself with CI base or below the main signal with offset bracket. It includes supply and fixing of shunt signal unit, CLS post, offset bracket, CI base, pinnacles, hood etc. The shunt signal will be as per RDSO Drg.No.SA-23840(Adv). The item also includes termination of cable and complete wiring inside shunt signal units as per standard practice along with the expanded metal cover on front. (Inspection RITES)						
	18	99.00	Numbers	11756.18	1163861.82	AT Par	1163861.82

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92	Description:- Casting of CC Foundation for Signal Post in the ratio of 1:3:6 as per Northern Railway Drg. using standard size of foundation/galvanized holding down bolts required for erection of colour light signal post. Item includes excavation, ramming of CC using vibrator, curing and plastering with 1:4 cement-sand mixture (aggregate will not exceed 3.8 cm). Aggregate, cement, sand and holding down bolts will be supplied by contractor. Any machines & tools, if required for execution of this item, will be arranged/provided by contractor. Note: As per available site conditions, if sizes of foundations are required to be decreased/ increased and same has been approved/agreed by engineer incharge then variation in CC work will be calculated on volumetric basis as per rates of these items.						
93	19	29.00	Numbers	3945.83	114429.07	AT Par	114429.07
	Description:- Casting of C.C. Foundation for Position Light Shunt Signal/ Indicator/SPI as per Northern Railway Drg. in ratio 1:3:6 by using standard size of galvanized holding down/foundation bolts. Item includes excavation, ramming of CC using vibrator, curing and plastering with 1:4 cement sand mixture. Aggregate cement, sand and holding down bolts, will be supplied by contractor. Any machines and tools, if required for execution of this item, will be arranged/provided by contractor. Note: As per available site conditions, if sizes of foundations are required to be decreased/ increased and same has been approved/agreed by engineer incharge then variation in CC work will be calculated on volumetric basis as per rates of these items.						
94	20	20.00	Numbers	9877.09	197541.80	AT Par	197541.80
	Description:- Supply and installation of Goods Warning Board/ Caution Board/Stop Board/Block Section Limit Board (BSLB)/Shunting Limit Board/change of Signalling territory board etc and erection of the same. All the above said boards will be supplied in sizes and dimensions as mentioned in Signal Engineering Manual & GR with luminous strips yellow as well as black. This includes burying of post at least 1.2 mtrs and concreting of size 0.5 mtr x 0.5 mtr x 0.5 mtr with cement concrete in the ratio 1:3:6. All material will be supplied by contractor. (Inspection by Consignee).						
95	21	20.00	Numbers	809.35	16187.00	AT Par	16187.00
	Description:- Fixing and supply of 'P','C','A','G','AG' etc board as per standard practice with contractor's complete material including fixing of clamps. The work shall be done as per instruction of Rly engineer at site. Wooden white cross-arms (1000x100mm) to be provided by the contractor till the signals are commissioned with contractor's own material NOTE:- The above signal items includes supply and installation of Petty materials for fixing, clamping and mounting arrangement including wiring material (different sort of wire etc)						
96	22	35.00	Numbers	3086.76	108036.60	AT Par	108036.60
	Description:- Fixing & wiring of 2 aspect CLS						
97	23	59.00	Numbers	4599.17	271351.03	AT Par	271351.03
	Description:- Fixing & wiring of 3/4 aspect CLS						
98	24	10.00	Numbers	4369.27	43692.70	AT Par	43692.70
	Description:- Fixing & Wiring of 2/3/4 aspect CLS with Junction type 1/2/3/4 way route indicator/Stencil						
99	25	29.00	Numbers	1243.64	36065.56	AT Par	36065.56
	Description:- Installation, erection & wiring of independent position light shunt signal/F marker, this includes fixing of shunt signal, surface base signal post, LED unit, hood and all wiring & fixing material such as U' bolt, nuts, washer, wire, wire mesh etc. will be supplied by contractor.						
100	26	143.00	Numbers	1014.05	145009.15	AT Par	145009.15
	Description:- Installation, erection & wiring of LED lit C/ON signal /dependent shunt signal /illuminated 'A' marker/ 'AG' marker/ 'F' markers on the same post below the main signal on offset bracket. The wiring material to be supplied by contractor. It includes fixing of LED signal unit and hoods, wiring and focussing of the signal. Supply of offset bracket, calling-on signal/Shunt signal complete is covered as separate item of schedule. 'U' bolt for offset bracket wire and wiring material will be supplied by contractor. Note: Supply of LED signal lamps for auxiliary signals covered Separately.						

S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule G-POINT MACHINE							5847950.17	
101	1	58.00	Numbers	64478.76	3739768.08	AT Par	3739768.08	
	Description:- Supply of Electric Point Machine 143 mm stroke (AC immunity 160 VAC) complete with lock detector and slides for lock detectors non-trable to operate on 110VDC rotary locking with crank handle universal type as per RDSO Spec no. IRS S:24/2002 with latest amendment. The motor will be as per RDSO Spec no. IRS S:37/82 with latest amendment. It includes supply of set of tools in a suitable tool box along with every set of eight point machines. Cover of point machines should proper universal key and lock. (Inspection: RDSO)							
	2	58.00	Set	10219.62	592737.96	AT Par	592737.96	

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102	Description:- Supply of complete set of point rodding (ground connections) for point machines of IRS type as per RDSO drg No. SA8800-01 advance/ latest along with 'P' bracket and 'L' bracket required coal for smithy work, all types of nut & bolt and lugs for each set. This includes supply of insulation for 'L' brackets for point fitting complete consisting insulation plate 01no, ferrule-02 nos, washers 04 nos. It also includes a)Supply of insulation for L type bracket for point fitting complete(58 set). b)Supply of insulation for P type bracket for point fitting complete.(116set) (Inspection-RDSO).						
103	3	58.00	Numbers	9219.09	534707.22	AT Par	534707.22
	Description:- Fixing, wiring, testing & commissioning of Electrical Point Machine on the extended sleepers at points as per standard railway practice as per RDSO Drg.No.SA 9151-52 or 9710 or 9161ith latest amendment as per section of rails used. Item includes fixing of switch extension bracket, providing insulation for switch extension bracket, fixing ground connection, adjusting opening of the switches and adjusting the point machine with crank handle. The item also includes wiring inside the point machine, termination of tail cable in point machine and junction boxes, erection of ME-34 type junction box fixed on M.S. angle of 50 mm x 50 mm x 5 mm & 1 mtr length and provided with 24 Nos. of M6 terminals fixed on 10 mm hylum sheet for cable termination. The item includes supply and fixing of GI pipes 1 mtr long with flange for taking cable into point machine and junction box (gland pipe) and fixing of Ward plates for points. Complete material for installation like switch extension brackets, point insulation material, ME34 junction box with 10 mm hylum sheet and M6 terminals, GI pipes, wiring materials (wiring should be done with 4 mm flexible copper wire with lug), various fixing nuts & bolts including castle nuts, spring washers etc. will be supplied by the contractor. The item includes all smithy & fitting works required at site for complete installation of point machine. Installation of gauge tie plate & providing insulation for gauge tie plate & providing insulated William Stretcher Bar setting/ housing will be done by Contractor.(This item includes testing of Crank handle).						
104	6	58.00	Numbers	245.05	14212.90	AT Par	14212.90
	Description:- Supply & fixing of Spigot for point machine						
105	7	28.00	Numbers	18969.91	531157.48	AT Par	531157.48
	Description:- Supply, installation and wiring complete KLCR and its box in location boxes, supply, installation, wiring of heavy duty push button, LED indicator on MS sheet as per N.R. practice for crank handle locking. This work includes fixing & wiring of magneto telephones as per instructions of the site Engr. This includes all materials such as heavy duty push button, LED indicator (10mm), MS sheet of 4.5mm thick, nuts and bolts, fixing materials for the magneto telephone, and wiring materials to be supplied by contractor. (Inspection of KLCR by- RDSO)						
106	8	10.00	Numbers	13408.92	134089.20	AT Par	134089.20
	Description:- Supply & fixing of KLCR boxes & fixing of KLCR Relays in ASM office. It includes supply of any minor bracket, nuts, bolts, hard wood, sun mica, lock, drilling hole etc as directed by engineer at site. It also includes supply and wiring for KLCR circuit. It includes supply of all the related wiring material.						
107	9	36.00	Numbers	7931.43	285531.48	AT Par	285531.48
	Description:- Supply and transportation of Key Lock Checking Relay (KLCR), 24V DC, 2F/2B as per RDSO Spec No. TMA-1122/116-OLO, IRS:S-46 or latest. Ward number will be given by RCIL Engineer.Inspection by-RDSO						
108	10	5.00	Numbers	3149.17	15745.85	AT Par	15745.85
	Description:- Supply of Electronic Timer relay, 24 V DC, 60/ 120 sec as per RDSO Spec. IRS:S 61/2000 (Amend. No. 3) or latest. Inspection by- RDSO.						

S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule H-TRACK CIRCUITS							6000351.24	
109	1	150.00	Numbers	4290.61	643591.50	AT Par	643591.50	
	Description:- Supply of Track Feed Charger 110AC/2-4-6 VDC/10Amp. As per RDSO Spec. No.89/2013 (Amd.1) or latest from RDSO approved firm. Inspection by- RDSO.							
	2	94.00	Numbers	14321.73	1346242.62	AT Par	1346242.62	

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110	Description:- Installation of Berthing and straight DC track circuits to suit RE area as per standard practice. This will include following as per site requirement :- (a) Drilling of holes 7.2 mm dia or size as required provision of continuous G.I. wire bonding on switch portion and crossing of point with two bonds wires and two clips duly fastened with fish plates and bolts at each joints including transverse bonding with rope wire. 8 SWG G.I. soft bond wire, Channel bond pins and all other material required will be supplied by contractor.(b) Jumpering from rail to rail or to track lead junction box including polarity jumpers/cables as per track jumpering/ insulation diagram. This includes continuity of joint on rail web for TLJB bonding method, terminating the jumpers in the TL JB and fixing the jumper on the sleeper as per instructions of Engr. at site.(c) Fixing of insulated block joints complete with provision of skimmed fish plate. Fish plates shall be supplied by the Railways but skimming to be done by contractor. Supply of insulation materials for insulated block joints is not included.(d) Fixing of TL JB's as per drg. No. (NR/S&T/CON/3.2/97A) along with concrete foundation and plastering on both ends i.e.T.F. and TR end and for polarity changers as per the track jumpering/ insulation diagram. All material for fixing including angle iron shall be supplied by the contractor. This also includes supply and fixing of TLJBs with provision of M-6 terminals. TLJB to be written with track circuit number.(e) Prov. and wiring in the app. Cases/relay huts of T.F. battery charger, TF resistance 15 Ohms, track relays, choke B type (at Feed End & Relay End) & batteries as per the standard practice using fuses and terminals. This includes supply of all material by contractor as per RDSO specifications (as applicable) except supply of TF battery charger, batteries, relays which are covered separately. (f) Commissioning of track circuits as per provisions of Paras under IRS spec. S-36/87, Amd.2. This includes adjustment of track feed resistance, testing with train shunt resistance. This also includes preparation of track history cards. Track history card should be supplied by the contractor.							
111	3	48.00	Numbers	22702.14	1089702.72	AT Par	1089702.72	
	Description:- Installation of Point track circuit having single point (excluding traps) DC track circuits to suit RE area as per std. Practice. This will include following as per site requirement:- (a) Drilling of holes 7.2 mm dia or size as required provision of continuous G.I. wire bonding on switch portion and crossing of point with two bonds wires and two clips duly fastened with fish plates and bolts at each joints including transverse bonding with rope wire. 8 SWG G.I. soft bond wire, Channel bond pins and all other material required will be supplied by contractor. (b) Jumpering from rail to rail or to track lead junction box including polarity jumpers/cables as per track jumpering/ insulation diagram. This includes continuity of joint on rail web for TLJB/BOOTLEG bonding method, terminating the jumpers in the TL JB and fixing the jumper on the sleeper as per instructions of Engr. at site.(c) Fixing of insulated block joints complete with provision of skimmed fish plate. Fish plates shall be supplied by the Railways but skimming to be done by contractor. Supply of insulation materials for insulated block joints is not included. (d) Fixing of TL JB's as per drg. No. (NR/S&T/CON/3.2/97A) along with concrete foundation and plastering on both ends i.e. train shunt resistance. This also includes preparation of track history cards. Track history card should be supplied by the contractor.							
112	4	300.00	Numbers	4912.32	1473696.00	AT Par	1473696.00	
	Description:- Supply of B Type Choke as per RDSO Specn.No.IRS:S-65/83 (Amnd. 1) or latest. Inspection-RDSO.							
113	5	450.00	Numbers	2994.22	1347399.00	AT Par	1347399.00	
	Description:- Supply of sec. cell low maintenance 2 V/ 80 AH conforming to IRS S-88/2004, Rev.1 or latest with micro porous vent plugs cum floats with inter cell connectors, nuts,bolts, washers etc. Inspection by- RDSO.							
114	6	34080.00	Ampere Hour	2.78	94742.40	AT Par	94742.40	
	Description:- Charging of 80AH secondary batteries (with contractor's charging equipment) as per standard procedure. All the charging materials i.e. sulphuric acid conforming to latest IRS specifications and distilled water conforming to latest specifications will be supplied by the contractor. This also includes installation of secondary batteries, their inter-connections & wiring work as per directions of site Engineer.							
115	7	700.00	Numbers	7.11	4977.00	AT Par	4977.00	
	Description:- Supply & Installation PPTC resettable fuse through hole poly switch RXEF series 650MA							

S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule I-LC GATES							12450931.91	
116	1	14.00	Numbers	590729.64	8270214.96	AT Par	8270214.96	

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	Description:- Supply, Installation, testing and commissioning of Electrically Operated lifting barrier assembly as per RDSO Spec. No. RDSO/SPN/208/2012 (version 2.0) or latest consisting of 2 nos. of electrically operated lifting barriers, 2 pedestals, 8 band circuit controller with limit switches of Siemens, hand cranks, 2 electric motors, 110V AC, without centrifugal switch, 2 GI Boom in 4 sections of 8 feet each with 2 retroreflective stop boards, boom light boxes, MS counter weight, 2 nos. of boom support for resting boom etc. The item also consists of following items: a) Supply of motorized boom locking /unlocking assembly with electrical coil complete (1 no. each) b) Supply of level crossing gate control panel floor mounting type with switches and buttons sheet metal fabricated, (1 No) c) Supply of push button for operating the gate with 2 NO/NC contact, green colour- close & Amber-open, Siemens or Kaypee or similar make (1 no.) d) Supply of solid state electronic flasher 24V DC operated (1 no. each). e) Supply of dual tone warning bell with 20W horn & 15W amplifier (2 no. each). (ELB Set Inspection by- RDSO).						
117	2	14.00	Numbers	262478.11	3674693.54	AT Par	3674693.54
	Description:- Supply, Installation & Commissioning of Emergency Sliding Boom complete with all accessories for L/B gate. Inspection by- RITES for supply portion.						
118	3	50.00	Numbers	5066.55	253327.50	AT Par	253327.50
	Description:- Supply & installation of magneto telephone with all accessories IRS TC:36-97(Amndt.1) or latest with latest amendments.(Inspection:RDSO)						
119	4	50.00	Numbers	506.66	25332.75	AT Par	25332.75
	Description:- Installation of megneto telephone with accessories as per IRS TC:36-97 (Amndt.1) or latest with latest amendments. Inspection by- Consignee.						
120	5	6.00	Numbers	37768.21	226609.26	AT Par	226609.26
	Description:- Supply of spare electric operated lifting barrier GI booms as per latest RDSO Drg S-11600 in maximum 4 sections of 8 feet each. Inspection by- RDSO.						
121	6	14.00	Numbers	53.85	753.90	AT Par	753.90
	Description:- Installation & complete wiring of operatingcum indication panel for LC gate. 1 Number = 1 LC						

S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule J-DRAWINGS							1025676.80	
122	1	5.00	Station	77350.00	386750.00	AT Par	386750.00	
	Description:- Design, preparation & supply of all drawings including Signal Interlocking Plan, Cable Route Plan, Cable Core Chart, Selection Table/Control table, Track Bonding Plan, Power Supply Plan, Earthing Plan, VDU/ Panel Diagram ,Interface Design, Indoor Drawing & Design, SWRD etc in computer print copies and original tracing in AUTO CAD FORMAT for complete EI at each station. After completion of the work ,the complete drawings incorporating completion details are to be supplied as per Technical Specifications, SEM. Way side station(3/4/5/6 or more line). This also includes supply of two copies of draft design drawing for checking by RCIL, Railways .The contractor shall attend to rectify discrepancies, incorporate suggestions if any from RCIL, Railways and obtain necessary approvals from RCIL and Railways.							
123	2	5.00	Set	81894.77	409473.85	AT Par	409473.85	
	Description:- Supply of "As made" Documents.(i) Completion Documents as per condition of Contract.(6 Sets for each EI) (ii) Supply of documents as per Technical specification Para -10.2 of RDSO Specification no RDSO/SPN/192/2019. (6 Sets for each EI). Inspection by- Consignee.							
124	3	5.00	Numbers	45890.59	229452.95	AT Par	229452.95	
	Description:- Preparation of out doorplans i.e. cable core plans, cable route plan, Track jumper plan, Power Supply Diagrams, location description chart etc.							

S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule K-TELECOM							5694872.35	
125	1	25000.00	Numbers	106.64	2666000.00	AT Par	2666000.00	
	Description:- Supply of terminal block 25mm center M-6 (ARA terminals) as per IRS spec. No.IRS-S- 75/2006 (Rev.2) & IRS drawing No. SA-23741A(Alt.4), SA- 23745(Alt.5), SA-23746 & SA- 23756(Alt.3). (Inspection by-RDSO).							
126	2	50.00	Numbers	2160.10	108005.00	AT Par	108005.00	
	Description:- "Supply of VF Transformers (2T/3T), 1120/470 Ohms as per RDSO Specn.No. IRS: TC-76/2000 with Amnd 1 or latest for emergency joints in 6-Quad Cable. (Inspection by RDSO)."							
127	3	3.00	Kilometre	94872.00	284616.00	AT Par	284616.00	
	Description:- Supply of 24 Fiber cable as per RDSO Specification no. IRS TC 55/2006 with latest ammendment.							
	4	10.00	Numbers	17585.75	175857.50	AT Par	175857.50	

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128	Description:- Supply and installation of optical fibre cable joint enclosure as per TEC spec no. GR/OJC-02/01/ March 99 with latest amendment and splicing of optical fibre cables (24 fibres & testing). This includes provision of jointing kit (RCC/Prefabricated) as advised by engineer at site. Inspection by- Consignee for supply portion.						
129	5	200.00	Metre	883.79	176758.00	AT Par	176758.00
	Description:- Supply & fixing of G.I. pipe, 75mm DIA.						
130	6	25.00	Numbers	7349.91	183747.75	AT Par	183747.75
	Description:- Supply & making heat shrinkable straight through joint for underground 6 quad cable						
131	7	25.00	Numbers	8584.41	214610.25	AT Par	214610.25
	Description:- Supply of Thermoshrink jointing kit for jely filled six quad cable conforming to spec. IRS:TC-77/2006 (Rev 1) with latest amendment(Inspection by Consignee).						
132	8	10.00	Job	25404.53	254045.30	AT Par	254045.30
	Description:- Supply of material to constuct a maintenance free earth using copper coated steel rods.						
133	9	3.00	Kilometre	53708.67	161126.01	AT Par	161126.01
	Description:- Laying of HDPE duct in the trenches, including in HDD/Manual Boring and supply pulling of Nylon rope through is at different places as per direction of Engineer incharge/ site Engineer. It includes Supply of HDPE duct outer dia 40mm & inner dia 33mm as per TEC Gr No. G/CDS-08/02 Nov /2004 with latest amendment with end cap to be provided along with the drum at both ends. (RDSO specs No. RDSO/SPN/TC/45/2013 Rev.2.0). Inspection by- RITES for supply portion.						
134	10	10.00	Numbers	31.12	311.20	AT Par	311.20
	Description:- Supply of End plug for 40 mm HDPE duct. (Inspection : Consignee).						
135	11	10.00	Numbers	39.32	393.20	AT Par	393.20
	Description:- "Supply of Cable sealing plug for HDPE duct (Inspection: Consignee)."						
136	12	10.00	Numbers	80.20	802.00	AT Par	802.00
	Description:- Supply of plastic coupler-split fit/push fit type for HDPE Duct						
137	13	10.00	Numbers	13526.63	135266.30	AT Par	135266.30
	Description:- Supply, installation, testing and commissioning of 4-wire way DTMF base way station equipment as per spec. no. IRS-TC 60/207 or latest with power supply equipment as per spec. no. IRS-TC 72/97 with latest amendment with 12V/7AH battery and 4-wire control telephone as per spec. IRS:TC 38/97 with latest amendment. Inspection by- Consignee.						
138	14	1.00	Numbers	6470.00	6470.00	AT Par	6470.00
	Description:- Digital Insulation Tester of make Stanlay or similar.						
139	15	3.00	Kilometre	10624.86	31874.58	AT Par	31874.58
	Description:- Blowing/drawing of OFC cable in the HDPE pipe duct and in protective works already provided. This includes transportation, loading/unloading of OFC from the stores to the work site with care, sealing of the duct by sealing/caps plugs. This also includes testing of cable drums in the store premises before transportation and submissions of results thereof. The cable drums with unused cable at site to be returned by the contractor from site to stores depot.						
140	16	20.00	Numbers	1634.86	32697.20	AT Par	32697.20
	Description:- Supply & installation of 20 pair DP complete with boxes & termination of cable as per specifications, drawing and stipulations of tender documents. This includes fixing of same on 1" thick board of size as per directionsof the site Engineer with grouted nuts & bolts of suitable size and pipe fixed with clamps on pole/wall. All material required for fixing and termination including salwood /hylum board and hardware required for fixing will be supplied by contractor (Inspection : (Inspection : Consignee).						
141	17	5.00	Numbers	35251.07	176255.35	AT Par	176255.35
	Description:- Supply and installation of VHF set, 25W with power supply SMPS charger, RG-213 coaxial cable (30 mtrs) with connectors, 3dB gain antenna and maintenance free VRLA battery 12V/100AH with connecting cable and accessories. This includes masonry work also.Inspection by RDSO).						
142	18	5.00	Numbers	9527.41	47637.05	AT Par	47637.05
	Description:- Supply & installation of Annunciator (Multiway telephone exchange) 10 lines as per RDSO Drg no. TCA-3352 (Adv.) or latest. Inspection by- Consignee for supply portion.						
143	19	5.00	Numbers	207679.93	1038399.66	AT Par	1038399.66
	Description:- Supply and installation of Multiport Front End processor as per RDSO spec no. IRS-S:99/2006 Amdt-3 Or latest .(Inspection by RDSO).						

S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule L-MISC TOOLS, FURNITURES ETC.							6774819.72	

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144	1	5.00	Numbers	45641.39	228206.95	AT Par	228206.95	
	Description:- Supply of ESM furniture of Godrej or similar make consisting of the following: 1. Executive revolving bearing series low back floating chair with normal arms cushioned Chair : 1No. 2. Executive Table size 72x36x30" with 3 drawers one side, lockers cabinet on other side : 1No. 3. Visitor chair seat & back cushion with high density Foam with plastic PVC handle capsul type Flat pipe duly Painted black : 3Nos.4. One Steel Almirah of size 48"x30"x17" with lock and handle arrangement for record keeping at station. Inspection by- Consignee.							
145	2	15.00	Numbers	23028.88	345433.20	AT Par	345433.20	
	Description:- Supply of Maintainers/ASMs furniture Chair Model PCH 7002(Godrej or similar)OR better Inspection consignee.							
146	3	32.00	Numbers	5409.74	173111.68	AT Par	173111.68	
	Description:- Supply of office chair similar to methodex Model No. V29 or equivalent with arms size 830x600x550mm with PU moulded cushion and round CRP pipe complete in all respect. Make:- Godrej, Methodex or similar.							
147	4	10.00	Numbers	14710.78	147107.80	AT Par	147107.80	
	Description:- Supply of Maintainers/ASMs furniture table model of size WDXH 180cmx90 cmx72.5 cm or better as per model No. T-9 of Godrej make or similar inspection consignee.							
148	5	10.00	Numbers	18613.98	186139.80	AT Par	186139.80	
	Description:- Supply of steel almira of Godraj for keeping relay and other safty equipment. (Steel Almirah Full size (61/2') Godrej model Storewel plain)							
149	6	10.00	Numbers	7087.00	70870.00	AT Par	70870.00	
	Description:- Supply of BLUEWUD Alex Engineered Wood Open Book Shelf or similar (Finish Color - Walnut, Size- WXHXD=31.5"X65"X10.8")							
150	7	10.00	Numbers	5090.00	50900.00	AT Par	50900.00	
	Description:- Supply of Mild Steel Office Rack as per Drawing submitted by RCIL.(Wt. per rack = 50-100 Kg)							
151	8	50.00	Sqm	1342.58	67129.00	AT Par	67129.00	
	Description:- Supply & laying of anti-static PVC flooring with adhesive (PVC flooring in 2.00mm thickness) for Relay room/IPS room/battery room etc. Inspection by- Consignee for supply portion.							
152	9	1.00	Numbers	3349.49	3349.49	AT Par	3349.49	
	Description:- Supply of megger 1000V AC with earth tester.							
153	10	1.00	Numbers	8333.11	8333.11	AT Par	8333.11	
	Description:- Supply of Digital Multimeter fluke/Rishab make with latest model available in the market.							
154	11	1.00	Numbers	5995.08	5995.08	AT Par	5995.08	
	Description:- Supply of electric drilling machine							
155	12	1500.00	Numbers	262.84	394267.37	AT Par	394267.37	
	Description:- Supply of electric fuse complete with fuse block(base) for Railway signalling non- deteriorating type low voltage fuse assembly 2Amp/4Amp/16Amp. to suit . Specn. No.IRS: S-78/2006 and fuse block made of PBT/Polycarbonate as per IRS: S-75/2006 (Rev.2 & Amd.2) and drg no. 23748 (IRS), Alt-4 or latest. Fuse block shall be suitable for round head type fuses. (Inspection by RDSO).							
156	13	5.00	Set	165182.71	825913.55	AT Par	825913.55	
	Description:- Supply of tool kits with details given in Technical Specifications required for EI's maintenance. This item includes supply of suitable cabinet for storing tools and documents of EI for its long life as per recommendation of OEM and to be approved by RCIL engineer as per Annexure-I.							
157	14	5.00	Numbers	57134.02	285670.10	AT Par	285670.10	
	Description:- Supply of Maintainer's Tool Kit as per Tool Kit as per Annexure-II.							
158	15	5.00	Kilometre	59148.77	295743.85	AT Par	295743.85	
	Description:- Supply of power wires 1x6sq.mm. (Red & black), IS 694/2010 or latest. Inspection by- Consignee.							
159	16	4.00	Kilometre	162819.60	651278.40	AT Par	651278.40	
	Description:- Supply of power wires 1x16sq.mm. (Red & black), IS 694/2010 or latest. Inspection by- Consignee.							
160	17	0.50	Kilometre	250044.73	125022.37	AT Par	125022.37	
	Description:- Supply of power wires 1x25sq.mm. (Red & black), IS 694/2010 or latest. Inspection by- Consignee.Note: Wires Colors will be specified/decided by site Engineer in charge(for fuse alarm system).							
161	18	3.00	Kilometre	409734.60	1229203.80	AT Par	1229203.80	
	Description:- Supply of Indoor cable 60x1mm indoor copper conductor 60 core plain annealed high conductivity PVC insulated unarmoured as per Spec. no. IRS-S/76/89 (Amd 3) or latest amendment. (From RDSO Approved Source only).(Inspection by RDSO).							
	19	30.00	Hour	943.66	28309.80	AT Par	28309.80	

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162	Description:- Engaging mechanical excavators like JCB or other machineries for regarding & leveling the formation, dismantling any infringing structures, cleaning & removing debris etc. With all lead & lift etc. complete as pr instructions of Rly representative at site.						
163	20	3.00	Numbers	129800.00	389400.00	AT Par	389400.00
	Description:- Misc. sundry items (fuses, jumper wires 1X1 mm or any other left over petty items as per site requirement, contingency, emergencies and as per instruction of site RCIL Engineers, the cost of each items to be supported with proper bills to be reimbursed item wise under this).						
164	21	5.00	Numbers	24831.20	124156.00	AT Par	124156.00
	Description:- Cleaning, scrapping, painting and lettering of all newly installed & and existing gears such as signals, point equipment, track cct etc.						
165	22	5.00	Job	20816.91	104084.55	AT Par	104084.55
	Description:- Cleaning, scrapping, painting and lettering of all newly installed & and existing gears at LC gates						
166	23	10.00	Numbers	12980.00	129800.00	AT Par	129800.00
	Description:- Provision of Temporary Tents/ Goomtees at both ends with lights, water, MT, Chairs, Tableetc during NI work.						
167	24	55.00	Numbers	1321.24	72668.20	AT Par	72668.20
	Description:- Dismantling and releasing of colour light signal/semaphore signal post which includes dismantling of signal fittings.						
168	25	2500.00	Metre	17.95	44875.00	AT Par	44875.00
	Description:- Dismantling and releasing of rod run from lead off and final to different function i.e. points, locks, lockbars/holding						
169	26	50.00	Numbers	650.64	32532.00	AT Par	32532.00
	Description:- Dismantling and releasing of lever frame. 1 No. = 1Lever						
170	27	25.00	Numbers	1428.05	35701.25	AT Par	35701.25
	Description:- Dismantling and releasing of point signalling gears which include facing pont lock/hand plunger lock bar/holding bar/electric						
171	28	12.00	Job	3252.98	39035.76	AT Par	39035.76
	Description:- Dismantling & releasing of lifting barriers/gate leaves/ELB						
172	29	150.00	Numbers	753.16	112974.00	AT Par	112974.00
	Description:- Dismantling and releasing of location boxes/Apparatus cases/Jn.bboxes including						
173	30	5.00	Job	11303.66	56518.30	AT Par	56518.30
	Description:- Dismantling& releasing of S&T gears in battery rooms & relay rooms.						
174	31	6.00	Numbers	654.09	3924.54	AT Par	3924.54
	Description:- Dismantling & releasing of Block instruments single/Double line which includes releasing of terminal, board, relay terminals, batteries etc.						
175	32	30.00	Numbers	7395.48	221864.47	AT Par	221864.47
	Description:- Supply & installation of Carbon dioxide type fire extinguishers confirming to IS-2878 or latest, complete with hose, horn, bed pipe, bracket and trolley mounted with ISI mark. (Inspection: Consignee)						
176	33	5.00	Numbers	34048.40	170242.00	AT Par	170242.00
	Description:- Supply, Installation, Testing and commissioning of Demineraliser plant of capacity 65 liters per hour (Approx.). It includes all the pipe connecting from water source unit to collection unit. This also includes supply and fittings of two 500 liters plastic (reputed make only) water tank for this purpose including pipe fittings. It includes supply of all the minor items/material required to execute the work.(Inspection by Consignee).						
177	34	5.00	Numbers	5892.83	29464.15	AT Par	29464.15
	Description:- Fabrication, wiring & supply of Simulation panel.						
178	35	5.00	Numbers	9915.12	49575.60	AT Par	49575.60
	Description:- Fabrication, wiring & supply of lamp board.						
179	36	100.00	cum	143.77	14377.00	AT Par	14377.00
	Description:- Earth work around the location boxes, signals etc.						
180	37	15.00	Numbers	1442.77	21641.55	AT Par	21641.55
	Description:- Fixing , wiring & soldering of 200 way tag block , it includes supply also						

3. ITEM BREAKUP

No item break up added	
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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	As per tender document.	No	No	Allowed (Mandatory)

Special Technical Criteria

S.No.	Description	Confirmation Required	Remarks Allowed	Documents Uploading
1	As per tender document.	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.

Check Lst

S.No.	Description	Confirmation Required	Remarks Allowed	Documents Uploading
1	As per tender document.	No	No	Not Allowed

Commercial-Compliance

S.No.	Description	Confirmation Required	Remarks Allowed	Documents Uploading
1	As per tender document.	No	No	Allowed (Mandatory)
2	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)

General Instructions

S.No.	Description	Confirmation Required	Remarks Allowed	Documents Uploading
1	As per tender document.	No	No	Not Allowed

Special Conditions

S.No.	Description	Confirmation Required	Remarks Allowed	Documents Uploading
1	As per tender document.	No	No	Not Allowed

Technical-Compliances

S.No.	Description	Confirmation Required	Remarks Allowed	Documents Uploading
1	As per tender document.	No	No	Allowed (Mandatory)

Undertakings

S.No.	Description	Confirmation Required	Remarks Allowed	Documents Uploading
1	As per tender document.	No	No	Not Allowed

**CORPORATE OFFICE-DNM/RAILTEL CORPORATE OFFICE
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Custom

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.	Yes	Yes	Allowed (Mandatory)

6. Documents attached with tender

S.No.	Document Name	Document Description
1	01.DHARIWAL_TSIP.pdf	1 SIP Dhariwal
2	02.GURDASPUR_EI_19112020_FZR_V2_APPROVE_P20.pdf	2 SIP Gurdaspur
3	03.DINANAGAR7245.pdf	3 SIP Dinanagar
4	04.JAKOLARI7244.pdf	4 SIP Jakolari
5	05.SARNA_08.01.20217287.pdf	SIP Sarna
6	GCC_April-2022_2022_CE-I_CT_GCC-2022_POLICY_27_04_22.pdf	GCC April 2022
7	Advanceslip2022_CE-I_CT_GCC-2022Policy14_07_2022.pdf	Advance Slip Policy GCC 2022
8	EltenderDHW-SRM24.11.22Final.pdf	Tender Document

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: RICHA RANI

Designation : Manager/Tech