

Dy.CPM/S and T-II/North/DFCCIL/Mumbai acting for and on behalf of The President of India invites E-Tenders against Tender No **MUM_N_SnT_LC-81** Closing Date/Time 21/12/2021 15:00 Hrs. Bidders will be able to submit their original/revised bids upto closing date and time only. Manual offers are not allowed against this tender, and any such manual offer received shall be ignored.

1. NIT HEADER

Name of Work	For Supply , Installation , Testing and commissioning of Two sets of Electric Lifting Barriers along with Sliding boom barriers and Video Surveillance System in connection with Road widening work at LC 81 (CH : 175/4-6) in Railway station of Virar - Surat Section of Mumbai Division of Western Railway		
Bidding type	Normal Tender		
Tender Type	Open	Bidding System	Single Packet System
Tender Closing Date Time	21/12/2021 15:00	Date Time Of Uploading Tender	
Pre-Bid Conference Required	Yes	Pre-Bid Conference Date Time	14/12/2021 11:00
Advertised Value	6394502.09	Tendering Section	TENDER
Bidding Style	Single Rate for Each Schedule	Bidding Unit	
Earnest Money /Bid Security (Rs.)	0.00	Validity of Offer (Days)	120
Obtain Bid Security Declaration in lieu of Bid Security	Yes		
Tender Doc. Cost (Rs.)	5900.00	Period of Completion	3 Months
Contract Type	Works	Contract Category	Expenditure
Bidding Start Date	07/12/2021	Are Joint Venture (JV) firms allowed to bid	Yes
Ranking Order For Bids	Lowest to Highest	Expenditure Type	Capital (Works)

2. SCHEDULE

S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl. (%)	Amount	Bidding Unit
Schedule A-Schedule A							5002942.38	Above/Below/Par
1	1	1.00	Set	67582.68	67582.68	AT Par	67582.68	
	Description:- LED type control-cum indication panel complete with prewired Tag- Blocks, Wires MS angles etc. for LC gate , depicting the yard layout Signal, Point, Track circuit, Operating / emergency Push Button, counter with sealing arrangements, house in a Steel metal cabinet. This shall be consist 15 x 10 exchangeable Domino Unit as per Spec. SPN/186/2004 ver. 1 or latest amendment							
2	2	2.00	Set	502785.36	1005570.72	AT Par	1005570.72	
	Description:- Supply of Electrically Operated Lifting Barrier assembly as per RDSO/SPN/208/2012 with hand generator and 110V DC / 24 V DC operations as per site requirements. The exact requirement of operating supply, type of locking shall be taken from engineer in charge at the time of supply.							
3	3	6.00	Numbers	55926.76	335560.56	AT Par	335560.56	
	Description:- Supply of Aluminium boom 32 feet long-fabricated from 3mm (1 section), 2.5 (2 section) and 1.9mm (3rd & 4th section) aluminium sheets die pressed to form tapering channels with special suttening bends in the channels. Two such channels then join together with batten plates by riveting to form a tapering box section suitable for supplied gate machine.							

4	4	4.00	Numbers	10133.41	40533.64	AT Par	40533.64	
	Description:- Fail Safe Electronic Flasher device for Railway Signaling operate on 24V DC/110V AC (as per site requirement) with over voltage protection 50-60 flashes per minute and as per RDSO specification No. RDSO/SPN/173/2002 (Amd. 1) or Latest.							
5	5	1.00	Set	1006899.90	1006899.90	AT Par	1006899.90	
	Description:- Supply & commissioning of SMPS based Integrated Power Supply System For L.C GATES AND RELAY HUTS in Auto section as per RDSO SPECN.NO.RDSO/SPN/165 /2012 AND DRG.NO.CSTE 6155/2 OF 7.							
6	6	1.00	Numbers	26365.68	26365.68	AT Par	26365.68	
	Description:- Cable termination racks as per Drg. no. CSTE 5004, 5005, 5006 complete along with fitting arrangements and also with arrangement for fixing four 8-way terminal strips/ Screw less terminals on each row having 16 such rows. Supply of 8 way terminal strips/ Screw less terminals not covered under this item. Cable termination rack shall be Powder Coated.							
7	7	4.00	Numbers	2084.37	8337.48	AT Par	8337.48	
	Description:- Tag block 200 way/160 way with PVC covers as per (IRS: S-77/2006 (Rev.1) or latest & Drg.no.SA-24751 & 52.							
8	8	4.00	Numbers	1310.20	5240.80	AT Par	5240.80	
	Description:- Tag block 96/100 with PVC Cover - as per requirement as per (IRS :S-77/2006 (Rev.1)							
9	9	1.00	Kilometre	6850.80	6850.80	AT Par	6850.80	
	Description:- PVC insulated Railway Signaling Indoor Single core wire conforming to IRS 76/89 (Amd3) or latest. Note: - Wire Colours shall be decided by engineer - in - Charge. (1 X 1Sqmm)							
10	10	1.00	Kilometre	117237.40	117237.40	AT Par	117237.40	
	Description:- Flexible cable (Power wire), multi-strand copper conductors cross section (1x16Sq.mm).101 Conductors each diameter 0.45 + 0.01 as per IS 694/2010 with insulation thickness of 1.2mm nominal conductor resistance 1.127 Ohms/Km and test parameters as per IRS(S) 76/89.							
11	11	1.00	Numbers	199440.80	199440.80	AT Par	199440.80	
	Description:- Earth Leakage Detector as per RDSO/SPN/256/2002 with latest amendments. The basic detector unit shall comprise of 12 channels, for use on signaling circuits of 110V AC/DC and/or 60V/24V/12V DC as ordered by purchaser. If the detector is required for less number of channels, dummy plates shall be provided. For additional requirement add on /expendable cabinet may be used. The voltage specified shall be provided with + 25% and - 10% tolerance.							
12	12	50.00	Numbers	46.98	2349.00	AT Par	2349.00	
	Description:- G-Type fuse Block indicating non detorating fuse base 1.6Amp							
13	13	50.00	Numbers	46.98	2349.00	AT Par	2349.00	
	Description:- G-Type fuse Block indicating non detorating fuse base 3.0 Amp							
14	14	50.00	Numbers	17.08	854.00	AT Par	854.00	
	Description:- Indicative type Fuse suitable to G type fuse base/holder of capacity1.6 Amp							
15	15	50.00	Numbers	17.00	850.00	AT Par	850.00	
	Description:- Indicative type Fuse suitable to G type fuse base/holder of capacity3.0 Amp							
16	16	1.00	Numbers	284049.26	284049.26	AT Par	284049.26	
	Description:- Failure Analysis System or Central Monitoring Unit with Printer. As per technical specification IRS: S-992006 (Amdt-3) or latest. The specification of Failure Analysis System should be got approved from the Engineer in charge before supply. Note: The Specification of Failure Analysis System shall be as per technical specification given in contract Agreement or higher version as approved by Engineer In-Charge.(Technical specification shall be provided in tender documents.)							

17	17	2.00	Each Module	33957.00	67914.00	AT Par	67914.00	
	Description:- Fuse auto changeover system for used in Railway Signaling System as per RDSO/SPN/209/2012 rev.1 with latest amendments.. One Automatic changeover Unit comprise 32 nos. of external Non Deteriorating Type or 'G' type fuses from 0.6 Amp to 4 Amp capacities which are in signaling circuits. System shall have 8 cards with monitoring arrangement of 4 fuses in one card.							
18	18	2.00	Set	210341.00	420682.00	AT Par	420682.00	
	Description:- Sliding boom for LC gate							
19	19	3.00	Kilometre	182665.00	547995.00	AT Par	547995.00	
	Description:- Supply of Cable Signalling underground, armoured, unscreened, PVC insulated, PVC sheathed, annealed Copper Conductor Size: 12 Core X 1.5 Sq.mm as per RDSO Specn. No. IRS:S: 63/2014 Rev.4.0.							
20	20	20.00	Numbers	4801.44	96028.80	AT Par	96028.80	
	Description:- Rapid Joint LS3, suitable for cable Jonting of Signalling cable of various size, having dielectric strength > 20KV/mm, Non Toxic, low viscosity, Flamability point > 200 C, Re-entrable, Long storage life Make RAYTECH or Similar.Cable Size 12 x 1.5 Sq. mm.							
21	21	10.00	Numbers	11576.32	115763.20	AT Par	115763.20	
	Description:- Rapid Joint LS3, suitable for cable Jonting of Signalling cable of various size, having dielectric strength > 20KV/mm, Non Toxic, low viscosity, Flamability point > 200 C, Re-entrable, Long storage life Make RAYTECH or Similar.Cable Size 4/6 Quad							
22	22	1.00	Numbers	5118.40	5118.40	AT Par	5118.40	
	Description:- Tools for installation of Rapid Cable Joint kit.							
23	23	6.00	Numbers	16589.23	99535.38	AT Par	99535.38	
	Description:- Apparatus Case Single NE Rly Type as per Drg. No. W. Rly/SW/47/68 Alt-A, fitted with two nos of E Type lock (ward No will be specified by Engineer-in Charge) as per RDSO Drg. No. SA 3376/3473 and Key to Drg. No. 3377.							
24	24	6.00	Numbers	2249.88	13499.28	AT Par	13499.28	
	Description:- Miniature 'E' type lock complete with keys as per RDSO Drg. No. SA 3473, 3373 & spec. IRS(S) 30/64. Ward to be specified by Engineer - in - charge.							
25	25	6.00	Numbers	4777.92	28667.52	AT Par	28667.52	
	Description:- Supply of Phenolic Laminated sheet P3 Grade of size 1220mm x 1220mm x 12mm. as per Spec. No. IS2036 of 1995 or latest.). (Test report of manufacturer to be supplied).							
26	26	2.00	Numbers	5411.30	10822.60	AT Par	10822.60	
	Description:- Supply of Phenolic Laminated sheet P3 Grade of size 1220mm x 1220mm x 10mm. as per Spec. No. IS2036 of 1995 or latest.). (Test report of manufacturer to be supplied).							
27	27	4.00	Numbers	8533.70	34134.80	AT Par	34134.80	
	Description:- Key Lock Relay with different ward combinations (Three ward plates to be supplied with each relay). Siemens Make working on 60V DC, AC Immunized or functional equivalent without base plates.Key ward shall be specified by Engineer In-charge as per requirement							
28	28	4.00	Numbers	6169.31	24677.24	AT Par	24677.24	
	Description:- Time element Relay 0@45<45@120ssec RSSK 30/0052-1 or equivalent							
29	29	4.00	Numbers	7080.00	28320.00	AT Par	28320.00	
	Description:- Supply of Relay QBCA1 special type point contactor relay AC immune 24V DV biased contactor (QBCA1) complete with plug board reatining clip and connectors conforming to BRS 943 configuration 2HF-4B complete with plug board.							
	30	8.00	Numbers	4956.00	39648.00	AT Par	39648.00	

30	Description:- Supply of Relay AC Immune Plug in type style QNNA1 DC Twin DC Neutral line 24-volt 6F/2B for LH and RH frontand back contact metal to carbon complete with plug board retaining clip and connector confirming to BRS 960,						
31	31	6.00	Numbers	5004.12	30024.72	AT Par	30024.72
	Description:- Supply of Q series Neutral line relay AC Immunized (QNA1)24V DC conforming to BRS 931A (as per latest RDSO vender list) configuration 8F-8B complete with plug board.Ref. SOR item 45						
32	32	1.00	Kilometre	34859.54	34859.54	AT Par	34859.54
	Description:- Flexible cable single core multi strand 2.5 sq. mm as per specn. IRS: 76/89 and II or latest conductor size tollerance details etc. as per IRS 76/89.						
33	33	2000.00	Numbers	67.20	134400.00	AT Par	134400.00
	Description:- ARA Terminal blocks with links made of PBT Spec No.IRS/75/2006(Rev - 2) with latest amendments and RDSO Drg.No.SA-23741A Alt.4.						
34	34	6.00	Numbers	9896.44	59378.64	AT Par	59378.64
	Description:- Supply of Safe Earth Electrode - (Maintenance Free Earth Electrode) as per Drg. No. SDO / RDSO/ E&B/001, DT 19.09.08 and RDSO Spec No. RDSO / SPN/197/2008. consists of the following: - (a) Copper bonded steel Electrodes 3.0 m long 17mm dia with Copper bonding thickness of (MIN) 250 micron & UL listed & marked=1 No., (b) Earth Enhancement compound of RDSO approved brand supplied in sealed bags of 10 Kgs=3 Nos., (c) Copper strips of 150X25X6 mm to terminate Earth Rod=1No., (d) Copperstrip of 300X25X6mm						
35	35	10.00	Numbers	1995.96	19959.60	AT Par	19959.60
	Description:- Supply of Double walled corrugated (DWC) Pipe with associated collars etc. as specification No. IS 14930 Part-I & II or latest, anti-rodent and anti-oxidant and non-flame propagating type in 6 mtr. Straight length of size 120 mm Outer dia & 103 mm Inner dia . The following required coupling arrangement should also be supplied:						
36	36	6.00	Numbers	199.59	1197.54	AT Par	1197.54
	Description:- Pad locks Godrej make 65 mm 7 lever with common keys for all the locks (This includes supply of 74 no keys of common ward).(The manufacture, supplied must produce valid IS license)						
37	37	1.00	Numbers	6799.40	6799.40	AT Par	6799.40
	Description:- Earth tester hand operted fourterminal range 1-10-100 ohms with kit for earth tester, canvas bag, 4 spikes, wires, screw driver and plier, make-WACO or SHANTI or CIE.						
38	38	1.00	Numbers	55450.00	55450.00	AT Par	55450.00
	Description:- FLUKE 289 Model True RMS Electronic Logging Hand Held Multimeter having 4.5 Display digit with50000 counts, AC/DC Voltage range of 1000 V, and AC/DC current measuring range of 10 Amps. resistance						
39	39	1.00	Numbers	17995.00	17995.00	AT Par	17995.00
	Description:- Digital low current clamp meter to measure current leaks (plastic draws down to 1 mA) and electric loads from 1mA to 100 Amp AC/DC and voltages from 0 to 600 V AC/DC, small jaw size to measure current in signaling circuits, 4 digit display. Make-Fluke/GTG/KEW or suerior with better specification as mentioned, with all accessories like test load, batteries and carrying case, sample may be got approved from consignee before supply HSN code- 9030						

S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule B-Schedule B							731790.71	Above/Below/Par
	1	1.00	Lumpsum	11187.48	11187.48	AT Par	11187.48	

1									<p>Description:- Design of circuits and plans to suit layout given in the signaling plan of IBS/ABS/LC GATE. All plans and wiring diagram shall be prepared on Auto cad Drawing and supplied with CD. This will include supply of Control cum Indication panel diagram, Route section plan, square sheet, wiring diagrams, Relay rack/Relay arrangements, Bus bar details, Fuse analysis, contact analysis, Relay room tag block analysis, panel tag block analysis, Power panel diagram, IPS wiring diagram, Auto change over diagram, Power equipment arrangement with program switch, Block circuit wiring diagram, Digital Axle counter wiring diagram and all other relevant drawings. NOTE: The contactor shall initially supply 2 sets of documents (Paper Prints) for approval of Railways. Railway will return one set to the contactor duly approved with alterations/corrections, if any. The contactor shall incorporate Railways' alterations/ corrections/ comments, if any, in the tracing & CD without any deviation and submit all the tracings and Final CD complete with all respect for Approval of Railways. After Approval of Railways on the tracings, the contractor shall submit 3 sets of final approved diagrams to the Railways within 15 days. He shall ensure the each sheet has a block for signature of railway official as well as a block for signature of firm, duly signed by the authorized signatory of the firm. The name of the work as given by Railways shall be written on every sheet under the work column. All the drawing shall be supplied in a good quality folder for each IBS/ABS/LC Gate.</p>
2	2	1.00	Numbers	6596.95	6596.95	AT Par	6596.95		<p>Description:- Installation and complete wiring of operating cum indication panel for LC gate as per technical specification and site requirement. The indoor wiring inside panel shall be terminated on tag block as per instructions of Engineer-in-charge. The wiring on panel tag blocks shall be repeated on tag blocks located in relay room. This includes laying & termination of cable, if any from Panel Room to Relay Room in HDPE pipe.</p>
3	3	2.00	Set	43852.98	87705.96	AT Par	87705.96		<p>Description:- Installation and Commissioning of power operated gate barrier machine complete with panel, motor, booms, weights, warning bells, hooters etc. to make a complete system compatible with gate panel as per approved signalling plan. The item includes casting of foundation for gate machines, road signals and installations and wiring of road signals and hooters to make the complete system as per approved diagram/plans. This includes caring out wiring, digging, cable laying from gate relay room to gate machines etc.</p>
4	4	4.00	Each	1773.10	7092.40	AT Par	7092.40		<p>Description:- Supply and fixing of yellow and black retro-reflective sheet on lifting barrier boo.</p>
5	5	2.00	Set	14363.16	28726.32	AT Par	28726.32		<p>Description:- Installation testing and commissioning of sliding booms with E-type lock and KLCR. This includes wiring of KLCR, running of cables, necessary painting and transportation of materials from store to site. Sliding boom gate shall be supplied by railway. However all other materails including KLCR Box required for commissioning of the gate will be supplied by contractor as per site requirement.</p>
6	6	1.00	Set	27573.09	27573.09	AT Par	27573.09		<p>Description:- Casting of CC foundation in the ratio of 1:3:6 for sliding boom as per drg. Attached at annex IX. Minimum 10 Nos of foundation per set shall be cast using std size holding down bolts & nuts for erection. Item includes excavation ramming, curing and plastering with 1:4 cement and sand mixtures. Aggregate, cement, sand and holding down bolts, nuts to be supplied by the contractor.</p>
	7	500.00	cum	293.42	146710.00	AT Par	146710.00		

7	<p>Description:- Digging of 1.0 M deep and 0.3 M wide trenches in all type of soils, including soft rock as per cable route plan & back filling after laying of cables. The item includes covering of cable laid in the trench by soil for 5 cm before covering by trunking & capping. This also includes clearing of roots of trees and bushes and temporary obstruction on the selected route. Ramming of soil and planting cable marker at every 50 m or as per site requirement and at every locations where direction of trench changes. Where digging of 1.0 M depth is not possible or loose soil/ muck is encountered, the depth can be reduced / increased as per directions of the Engineer-in-charge of the works, payment shall be decreased/increased proportionate to the depth of excavation compared to 1.0 mtr. In cases where the depth is required to be increased above 1.0 mtrs, the width of the trench may be increased by 0.1 mtr for every 0.3 mtr increase in depth above 1.0 mtrs. (Supply of RCC Cable route marker covered in Schedule A' & Laying of Cables and laying of trunking /capping is covered separately in Schedule 'B'.)</p>							
8	8	50.00	cum	269.92	13496.00	AT Par	13496.00	
	<p>Description:- Digging of trench 1.2 M deep from rail flange/ road level and, 0.3 Mtrs to 0.6 Mtrs wide and back filling after placing of DWC/ RCC/GI pipe. (Placing of DWC/RCC/GI pipe covered separately).The ballast disturbed be screened and dressed as required by Engineer-in-charge or his representatives and road tarred immediately. For track crossing, Drg. No.CSTE/3644 Pg.7 of 11 and for Road Crossing, Drg. No. CSTE/3644 Pg. 5 of 11 are to be followed.</p>							
9	9	100.00	Running Metre	1286.92	128692.00	AT Par	128692.00	
	<p>Description:- Horizontal direction drilling/Boring without damage to surface road using Augur machine. The bore shall be 100mm dia. The boring shall be done at a depth of minimum 1200mm from the ground level. The ground level shall be considered ignoring bank height of the bank or road. The length of bore shall be minimum 4 Mtr.long.Contractors will provide all materials for boring and adequate numbers of labours for proper laying of cables into the bore.</p>							
10	10	50.00	Numbers	87.56	4378.00	AT Par	4378.00	
	<p>Description:- Removal of rails (13m) in the way of cable route. In case of panels (39m) each will be considered as three rails for payment purpose.</p>							
11	11	50.00	Numbers	87.56	4378.00	AT Par	4378.00	
	<p>Description:- Removal of PRC sleepers in way of cable route.</p>							
12	12	60.00	Running Metre	31.65	1899.00	AT Par	1899.00	
	<p>Description:- charge. Note : (1) This also includes running the cable through the existing DWC/GI/ RCC / HDPE pipe/ GI troughing wherever practicable as decided by the site incharge. (2) Taking the cable inside the relay room/relay huts of pre-fabricated structures from cable pit, for which duct has to be left by the tenderer at the time of construction of relay room/installation of the pre-fabricated structure.(3) Covering the cable entry with masonry work after terminating the cables.</p>							
13	13	1500.00	Running Metre	23.13	34695.00	AT Par	34695.00	
	<p>Description:- Placing of half round RCC pipe after laying of cables in trench.</p>							
14	14	3000.00	Running Metre	9.73	29190.00	AT Par	29190.00	
	<p>Description:- Laying of S&T Cables of various cores/pairs/quads in trenches/GI pipes/RCC pipes/DWC/HDPE pipes /trunking/truffings. This also includes laying of cables in track crossings & road crossings. Item includes provision of labels on each cable of coloured plastic adhesive tapes or any other identifiable material to give the cable number at each G.P. (Cables will be meggered before and after its laying by contractor under supervision of Railway Representative and he will submit the maggering report of each testing.) Length of the cable laid includes the length of the cable coiled for termination purposes.</p>							
	15	6.00	Numbers	7989.96	47939.76	AT Par	47939.76	

15	Description:- Excavation and Casting of SS Location Box foundation with contractor's own materials including cement and anchor bolts of standard size. The required scaffolding Ferma etc for Casting of foundation will have to be brought by the contractor at his own cost.Single Apparatus Case						
16	16	6.00	Numbers	1205.16	7230.96	AT Par	7230.96
	Description:- Installation of Apparatus Cases with miniature 'E' type lock on CC foundation. This includes filling of location foundations with river bed sand and plastering on top of the sand. 'E' Type lock will be provided by Railway. Single Apparatus cases						
17	17	6.00	Numbers	2284.00	13704.00	AT Par	13704.00
	Description:- Fabrication and fixing of phenolic laminated sheet of size 12mm thick in location box by providing all fixtures as per Railway Drawing including fixing of PVC coated string rods at the back side for cable support with contractor's own materials. The work shall be done as per drg and arrangement similar to SK 783-1/2. with latest alterations & as per instructions of Rly engineer at site.						
18	18	2000.00	Numbers	2.00	4000.00	AT Par	4000.00
	Description:- Termination of outdoor cables, main cables laid in location boxes, Cable termination rack etc at both ends. Both ends of a cable core terminated shall be counted as one terminal.The item includes dressing of cables, making wiring tree etc., digging soil to take the cable into existing location boxes, backfilling and carrying out masonry work inside location box after termination of the cable.(Terminals used in location boxes & cable termination rack will be Wago/phonix or similar & ARA type).						
19	19	30.00	Numbers	1139.04	34171.20	AT Par	34171.20
	Description:- Jointing of 4 / 6 quad /Signaling cable with Heat Shrinkable straight through Jointing Kit. All the material required for the work are to be arrange by contractor himself at his own cost except Thermo shrinkable Joint Kit . After jointing the cable through test such as insulation test, continuity cable losses etc. to be carried out jointly with Railway Engineer. If any defect or any damage is observed during jointing, the contactor has to redo the joint free of cost.						
20	20	2.00	cum	4027.29	8054.58	AT Par	8054.58
	Description:- Cement concrete work for miscellaneous items in the ratio 1:3:6. Item includes excavation, ramming, curing and plastering with cement & sand mixture (aggregate not exceeding 3.8 cm.) (Aggregate cement & sand to be supplied by the contractor). NOTE: Due to local condition in very special circumstances if the size of the foundation for all the above items required to be increased / decreased, the extra payment / deductionfor variation of the CC work shall be calculated on volumetric basis as per rate of this item.						
21	21	3.00	cum	2209.45	6628.35	AT Par	6628.35
	Description:- Providing brick masonry in ratio 1:6 cement and mortar including plastering with 1:4 cement and sand mixture both sides, 20 mm thick each with contractor's own IInd class bricks, including excavation, curing, grouting, bolting etc. wherever required. Bricks, sand and cement to be supplied by the contractor.						
22	22	6.00	Numbers	1410.08	8460.48	AT Par	8460.48
	Description:- Installation of Maintenance Free Earth Electrode as per Std. Practice and connecting it to equipments to be earthed as per drawing no. Drg. No. SDO / RDSO/ E&B/001 of RDSO/SPN/197/2008. This item includes digging of pit in earth, casting of cement concrete enclosure & cover as per Drg No. S&T/Tender/27 & fixing safe earth electrode & all accessories as per Drg. No. SDO / RDSO/ E&B/001 of RDSO/SPN/197/2008. This item includes provision of earth lead wires / copper strips and soldering of lead wires / copper strips all other material required as per Drg. No. SDO / RDSO/ E&B/001 of RDSO/SPN/197/2008 for Earthing arrangement, which is not covered in schedule 'A2'.						
	23	14.00	Numbers	366.26	5127.64	AT Par	5127.64

23	Description:- Fixing of Q series relay base plate/metal to metal relay mini group and major group base plate, laying, bunching, lacing, dressing & packeting of 60/40 core PVC indoor cable/flexible wire and termination of 60/40 core cable/flexible wire on tag block/base plate & base plates & soldering. This includes fuse wiring, bus bar looping etc. required for keeping installation ready for circuit wiring work & panel throughing work. The work shall be done as per approved plan, extant practice on WR & the instruction of Rly. Engineer at site.						
24	24	1.00	LC Gate	7305.48	7305.48	AT Par	7305.48
24	Description:- Complete painting and varnishing work at level crossing gates for newly installed signalling equipments at stations and at LC gates and equipments all over the block sections. This includes painting of signal posts and fittings, apparatus cases, junction boxes, rail post, battery boxes, etc complete. This also includes, letter writing on all indoor & outdoor relays, relay racks, timers, terminals of CT racks, on operation cum indication panel, on LT panel, power equipments, batteries, varnishing terminal nos. apparatus cases,						
25	25	4.00	Numbers	1883.64	7534.56	AT Par	7534.56
25	Description:- Fixing of KLCR relays in field in half location boxes Item includes supply and fixing of MS sheet and wiring of push buttons and LEDs for KLCR circuit. The KLCR relays, push buttons, LEDs to be fixed on a MS sheet of min.3mm in the half location box. The MS sheet should cover the full length and breadth of the half location box and can be in two pieces of approx. 48cm x 46cm and 80cm x 46cm. The first piece to be fitted on top and will contain the KLCR relays, LEDs and push buttons. The second piece to be fitted below the first piece to divide the two halves of the location box. (Supply of KLCR relays covered in Schedule A).						
26	26	100.00	Numbers	476.52	47652.00	AT Par	47652.00
26	Description:- Supply and installation of RCC cable route marker engraved and painted on both side along the route every 50mm and route diversion as per Drg. No 4014/00/CC4 or latest/ Stone marker.						
27	27	2.00	Numbers	830.75	1661.50	AT Par	1661.50
27	Description:- Installation wiring testing and commissioning of Fuse change over system (FACS). This includes provision of common Buzzer & indication at ASM Room & ESM Duty Room and painting of fuse details. This also includes fabrication of frame for installation of FACS at Station/ LC gate where installation of relay racks not feasible.						

S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule C-Schedule C							659769.00	Above/Below/Par
1	1	1.00	Numbers	266897.00	266897.00	AT Par	266897.00	
1	Description:- Supply of Server Hardware/NVR for Video Management & Recording and all other required accessories to make the system operational, as per RDSO Specification RDSO/SPN/TC/65/2019 Rev.5.0 with latest amendment							
2	2	1.00	Numbers	103200.00	103200.00	AT Par	103200.00	
2	Description:- Supply of PC Workstation including Software with License as per RDSO Specification RDSO/SPN/TC/65/2019 Rev 5.0 with latest amendment and as per technical specification.							
3	3	5.00	Numbers	21517.00	107585.00	AT Par	107585.00	
3	Description:- Supply, Installation, Testing & Commissioning of Fixed Box type, FHD, IP colour camera including Varifocal Lens, housing, mount and all other accessories as per RDSO Specification RDSO/SPN/TC/65/2019 Rev 5.0 with latest amendment and as per technical specification.							
4	4	1.00	Numbers	12314.00	12314.00	AT Par	12314.00	
4	Description:- Supply of 4 TB Surveillance HDD.As per specification							
5	5	1.00	Numbers	25232.00	25232.00	AT Par	25232.00	
5	Description:- Supply of 32" LED TV as per specification.							

6	6	5.00	Each	891.00	4455.00	AT Par	4455.00	
	Description:- Supply, Installation, Testing & Commissioning of Video Management Software with License as per RDSO Specification RDSO/SPN/TC/65/2019 Rev 5.0 with latest amendment and as per technical specification.							
7	7	5.00	Each	534.00	2670.00	AT Par	2670.00	
	Description:- Supply, Installation, Testing & Commissioning of Video Recording Software with License as per RDSO Specification RDSO/SPN/TC/65/2019 Rev 5.0 with latest amendment and as per technical specification.							
8	8	1.00	Numbers	2320.00	2320.00	AT Par	2320.00	
	Description:- Supply of 6U Rack and as per technical specification.							
9	9	305.00	Metre	22.00	6710.00	AT Par	6710.00	
	Description:- Supply of STP CAT 6 Cable as per RDSO Specification RDSO/SPN/TC/65/2019 Rev 5.0 with latest amendment and as per technical specification.							
10	10	300.00	Metre	56.00	16800.00	AT Par	16800.00	
	Description:- Supply of Power cable as per RDSO Specification RDSO/SPN/TC/65/2019 Rev 5.0 with latest amendment and as per technical specification.							
11	11	300.00	Metre	23.00	6900.00	AT Par	6900.00	
	Description:- Supply of Aerial Armoured Optical Fiber Cable, 6 Core, Single Mode and as per technical specification.							
12	12	1.00	Numbers	23752.00	23752.00	AT Par	23752.00	
	Description:- Supply of 1 KVA on line UPS as per specification.							
13	13	10.00	Numbers	320.00	3200.00	AT Par	3200.00	
	Description:- Supply of Fiber Optic Duplex Patch cord and as per technical specification.							
14	14	100.00	Metre	33.00	3300.00	AT Par	3300.00	
	Description:- Supply of Permanently Lubricated HDPE Duct with all accessories and as per technical specification.							
15	15	1.00	Numbers	5338.00	5338.00	AT Par	5338.00	
	Description:- Installation, Testing & Commissioning of Video Management & recording Server with required accessories as as per RDSO Specification RDSO/SPN/TC/65/2019 Rev. 5.0 with latest amendment and as per technical specification.							
16	16	1.00	Numbers	3559.00	3559.00	AT Par	3559.00	
	Description:- Installation, Testing & Commissioning of PC Workstation including Software with License as per RDSO Specification RDSO/SPN/TC/65/2019 Rev 5.0 with latest amendment and as per technical specification.							
17	17	2.00	Numbers	16725.00	33450.00	AT Par	33450.00	
	Description:- Supply, Installation, Testing & Commissioning of Field Switch 8 port as per RDSO Specification RDSO/SPN/TC/65/2019 Rev 5.0 with latest amendment and as per technical specification.							
18	18	305.00	Metre	13.00	3965.00	AT Par	3965.00	
	Description:- Laying of STP CAT 6 cable as per specifaion, including laying in conduit pipe (All laying materials including coduit will be supplied by the contractor) and as per technical specification.							
19	19	300.00	Metre	13.00	3900.00	AT Par	3900.00	
	Description:- Laying of Power cable as per technical specification of Chapter-4.35 (Wherever required, Power cable to be laid in conduit pipe/flexible pipes/casing capping then these items will be supplied by the contractor)							

20	20	300.00	Metre	13.00	3900.00	AT Par	3900.00	
	Description:- Laying of Aerial Armoured Optical Fiber Cable, 6 Core, Single Mode as per specification including laying in conduit pipe and as per technical specification .							
21	21	2.00	Numbers	4761.00	9522.00	AT Par	9522.00	
	Description:- Erection / Fixing and Installation of Poles including RCC work, depth as per site requirement and as per technical specification.							
22	22	100.00	Running Metre	16.00	1600.00	AT Par	1600.00	
	Description:- Placing of DWC/RCC/GI pipes along with collars in trenches at places of track and road crossing,platform cuttings etc and as per technical specification.							
23	23	100.00	Metre	92.00	9200.00	AT Par	9200.00	
	Description:- Digging of 1.0 M deep and 0.3 M wide trenches in all type of soils including soft rock as per cable route plan, back filling after laying of cables. This includes clearing of roots of trees, bushes and temporary obstruction. Ramming of soils and planting of cables markers at every 30 to 50 mtrs as well as where direction of trench changes. Where Digging of 1.0M depth is not possible or the same is reduced and accepted by engg. In-charge of the work, payment shall be decreased proportionate to the depth excavated compared to 1.0M. Any dry stone pitching disturbed during the work shall be restored back to the original conditions by the contractor with own materials and labour and as per technical specification.							

3. ITEM BREAKUP

No item break up added

4. ELIGIBILITY CONDITIONS

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

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

S.No.	Description	Confirmation Required	Remarks Allowed	Documents Uploading
1	As per Tender Document	No	No	Not Allowed

6. Documents attached with tender

S.No.	Document Name	Document Description
1	1_NIT_for_LC81.pdf	NIT for LC 81
2	2_Tender_documents_LC81.pdf	Tender documents LC 81
3	4_Financial_Bid_LC81.pdf	Financial Bid LC 81
4	3_Additinal_Instructions_to_bidders_1.pdf	Additional Instructions to Bidders

Signed By: MAHENDRA JIVANJI PATEL

Designation : DYCPM/S&T-II/North, Mumbai