

## RAJASTHAN RAJYA VIDYUT PRASARAN NIGAM LIMITED

[Corporate Identity Number (CIN):U40109RJ2000SGC016485]

Regd. Office: Vidyut Bhawan, Jyoti Nagar, Jaipur-302005

### **OFFICE OF THE SUPERINTENDING ENGINEER (T&C), BHILWARA**

220 KV GSS PREMISES PUR ROAD BAPU NAGAR BHILWARA.

**Tele:** 01482-240739, **E-mail:** [se.400bhilwara@rvpn.co.in](mailto:se.400bhilwara@rvpn.co.in) **Web:** [www.rvpn.co.in](http://www.rvpn.co.in)

No. RVPNL/SE/T&C/BHILWARA/Tech./NIT/2016-17/D. 158

DT: 08/08/2016

To

All Registered Contractors,  
Ajmer Zone(T&C), RRVPL Ajmer

Subject :- Consent for Erection of steel structures, laying of earth mesh, erection of equipments, busbar, jumpers & cable laying work on CLRC against TN-2975 for Construction of 01 no. 132 KV feeder bay at 132 KV GSS Raila(Bhilwara) for M/S Railway Electrification, Jaipur

Ref :-

1. CLRC against TN-2975 vide letter no. RVPN/SE/SSPC/TK/A.1/TN-2975/CLRC/D.501 Dated 24.05.2013
2. Extension of CLRC order No. RVPN/SE/SSPC/TK/A.1/TN-2975/CLRC/D.1151 Dated 11.09.2015

With reference to above cited subject it is proposed to award contract **“Erection of steel structures, laying of earth mesh, erection of equipments, busbar, jumpers & cable laying work on CLRC against TN-2975 for Construction of 01 no. 132 KV feeder bay at 132 KV GSS Raila (Bhilwara) for M/S Railway Electrification, Jaipur”** on CLRC-2013 under TN-2975 as such you are requested to please submit your consent to this office within ten days from the date of issue of this letter positively so that work order procedure may be initiated.

The tentative cost of work as per enclosed “G-Schedule” is Rs. 2,16,617=00 (Two Lacks Sixteen Thousand Six Hundred Seventeen) including 60% premium of CLRC-2013 for your reference. Please submit your consent scheduled date.

Enclosed : “G-Schedule”

**Superintending Engineer (T&C)**  
**RVPNL, Bhilwara**

Copy submitted/Forwarded to the following for information & necessary action:-

1. The Zonal Chief Engineer(T&C-A/Z), RRVPL Ajmer
2. The Account Officer (T&C), RRVPL Bhilwara
3. The Feeder Manager (T&C), RRVPL Ajmer to please upload the consent
4. Notice Board

— sd —

**Superintending Engineer (T&C)**  
**RVPNL, Bhilwara**

## 'G' SCHEDULE

Name of Office: EXECUTIVE ENGINEER(400 KV GSS), RRVPNL, BHILWARA  
Circle Office : SUPERINTENDING ENGINEER(T&C), RRVPNL, BHILWARA

Name of Work: Erection of steel structures, laying of earth mesh, erection of equipments, busbar, jumpers & cable laying work on CLRC against TN-2975 for Construction of 01 no. 132 KV feeder bay at 132 KV GSS Raila for M/S Railway Electrification, Jaipur

Deposited Work(2016-17)


Scheme Code : 160300

Project Code : 160301

Reference : CLRC against TN-2975 vide letter no. RVPN/SE/SSPC/TK/A.1/TN-2975/CLRC/D.501 Dated 24.05.2013

D.No. 501 dated 24.5.2013 including Income tax , Service tax , Sales tax, Insurance charges and work contract taxes and CESS on building & other construction works leviable, as per note (6) of CLRC


Sr. NO.	Item no. of BSR	PARTICULARS OF WORK	UNIT	QTY.	RATE	AMOUNT In Rs.
1	2	3	4	5	6	7
1	A-1	Laying earth mesh with 25mm./ 28mm dia M.S. rod at a depth of 0.80 metre from top level of foundations, including excavation of trench of required depth and backfilling of the same, transportation of M.S. Rod from site store to location,welding of M.S. Rod to M.S. Rod along the length, at crossings and with earth electrodes as per drawing, application of bitumen impregnated tape on all welded joints, for the type of soil prevalent at 0.80 metre below top level of foundations ( M.S. Rod of above sizes & M.S. Flat as required shall be made available by RVPN )				
		(a) In case electricity is made available by RVPN without charges				
		i) Normal dry soil	Metres	100	18-	1800
		ii) Hard soil / Murram / Black cotton soil	Metres	200	19-	3800
		iii) Soft rock	Metres	300	26	7800
2	B-1	Laying of earthing risers of 50x6 mm /50x10/ 50x12 mm size M.S. Flat at a depth of 0.80 metre from top level of foundation, including excavation of trench of required depth and back filling of the same, transportation of M.S. Flat from site store to locations, preparation of risers, bending as per requirement ( after heating if necessary ), fixing on and welding / bolting / to equipment / structure and peaks of structures laying in the trench welding to the earth mesh of M.S. Rod as per drawing, including welding of extra length of M.S. Flat if required , application of bitumen compound and covering with bitumen impregnated tape on all welded joints, painting of all surfaces of risers above ground level with red oxide and green paint for the type of soil prevalent at 0.80 metre below top level of foundations (M.S. Rod of above sizes & M.S. Flat as required shall be made available by RVPN )				
		(a) In case electricity is made available by RVPN without charges				
		i) Normal dry soil	Metres	100	20 .	2000
		ii) Hard soil / Murram / Black cotton soil	Metres	300	21-	6300
		iii) Soft rock	Metres	300	29	8700
		C/F				30400

  
JUNIOR ENGINEER ASSISTANT ENGINEER  
400 KVGSS RRVPNL 400 KVGSS RRVPNL  
BHILWARA BHILWARA

  
EXECUTIVE ENGINEER (400 KV GSSO)  
R.R.V.P.N.L. BHILWARA

Sr. NO.	Item no. of BSR	PARTICULARS OF WORK	UNIT	QTY.	RATE	AMOUNT In Rs.
1	2	3	4	5	6	7
		<b>B/F</b>				<b>30400</b>
3	C-1	Placing / Driving of earth electrode of 25 / 28mm dia. M.S. Rod of length 3.30 meters (approx) to a depth of 3.80 meters from the top level of foundations, including excavation of pit as required and back filling of the same transportation of M.S. Rod from site store to locations cutting of M.S. Rod to desired length preparation of one end as spike if necessary, welding of earth electrode to earth mesh of M.S. Rod as per drawing application of bitumen compound and covering with bitumen impregnated tape on all welded joints, for the type of soil prevalent at 3.80 metres below top level of foundation (M.S. Rod of above sizes & M.S.Flat as required shall be made available by RVPN )				
		(a) In case electricity is made available by RVPN without charges				
		i) Normal dry soil	Nos.	2	150	300
		ii) Hard soil / Murram / Black cotton soil	Nos.	3	250	750
		iii) Soft rock	Nos.	10	400	4000
3	2	ERECTION OF SUB-STATION STEEL STRUCTURES columns, beams, lighting mast and equipment structures ( excluding Circuit Breakers and Capacitor Banks ) of all types including transportation of structure member nuts & bolts, Washers, etc. from site store to locations, their assembly, placing on foundation, fixing of template, with foundation bolts as required levelling and preparing for grouting as required , but excluding grouting. erection after grouting and tightening & punching of nuts & bolts ( Maximum height of structures up to 20 meters)	M T	15	1744	26160
	3	<b>BUS- BAR WORK</b>				
4	A	STRINGING of 220 KV, 132 KV, 33 KV & 11 KV Bus Bar of ACSR conductor, including transportation of conductor, disc insulators and tension hardware from site stores to location, laying and cutting required length of conductor. Cleaning and assembly of disc insulators as required along with fitting of bolted type or compression type tension hardware as made available ( compression machine shall be provided by RVPN on rent free basis) . Making up at one end, stringing of conductors between the beams with specified sag and tension, also equalizing sag and fitting spacers and spacers T-clamps for twin conductor, for three phases of conductors in each bus-section.				
		i) Single ACSR Panther	section	2	875	1750
		ii) Single ACSR Zebra	section	1	1019	1019
		<b>C/F</b>				<b>64379</b>

  
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**400 KVGSS RRVPNL**  
**BHILWARA**

  
**ASSISTANT ENGINEER**  
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**EXECUTIVE ENGINEER (400 KV GSSO)**  
**R.R.V.P.N.L. BHILWARA**

Sr. NO.	Item no. of BSR	PARTICULARS OF WORK	UNIT	QTY.	RATE	AMOUNT In Rs.
1	2	3	4	5	6	7
		<b>B/F</b>				<b>64379</b>
5	B	JUMPERS OF ACSR conductor ( 3 nos. Y- type ) between bus to equipment or between equipment to equipment or between bus to bus, including transportation of conductor, disc insulators and hardware from site stores to locations, cleaning and assembly of disc insulators as required along with fitting of suspension hardware and erection as required, cutting required length of conductor, making connections, fixing of spacers & spacer T-clamps as required, tightening of clamps/ connectors, dressing, etc., for three phases.				
		I) Single ACSR Zebra/ panther conductor	Set	30	250	7500
6	4	STRINGING of Earth wire (size 7/ 3.15mm or 7/ 4.00mm ), including transportation of earthwire, tension hardwares, etc., from site store to locations, laying and cutting required length of earthwire fitting of bolted type or compression type hardware as made available ( compression machine shall be provided by RVPN on rent free basis ) making up at one end, stringing of earthwire between structure peaks with specified sag and tension jumpering and connecting earth bonds. For single earthwire.	Each	10	219	2190
	5	<b>ERECTION OF SUB-STATION EQUIPMENTS</b>				
7	B	Erection of Current Transformer / Potential Transformer / Capacitive voltage Transformer/ Series Reactor / Residual Voltage Transformer / Neutral Current Transformer with clamps & connectors on already erected steel structure including transportation from site store to locations. Fabrication of base frame, fixing of terminal connectors, tightening of nuts & bolts etc., complete in all respects.				
		II) 132 KV CT / PT / CVT	Nos.	9	1063	9567
8	C	Erection of lightning Arrestor on already erected steel structure including transportation of lightning arrestor , clamps & connectors surge counter etc. from site store to locations. fabrication of base frame, fixing of terminal connectors, surge counter. tightening of nuts & bolts etc., complete in all respects.				
		ii) 132 KV	Nos.	3	1069	3207
9	D	Erection of Isolators on already erected steel structure including transportation of base frame P. I. "s. contacts. Mechanism box, clamps & connectors etc. from site store to locations. minor fabrication as required and fixing of terminal connectors etc., adjustment / alignment of isolator and its earth blade. If provided, for their smooth operation and final adjustment if required after jumpering.				
		ii) 132 KV				
		a) Without Earth Blade	Nos.	2	1950	3900
		b) With Single Earth Blade	Nos.	1	2288	2288
		<b>C/F</b>				<b>93031</b>

  
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Sr. NO.	Item no. of BSR	PARTICULARS OF WORK	UNIT	QTY.	RATE	AMOUNT In Rs.
1	2	3	4	5	6	7
		<b>B/F</b>				<b>93031</b>
10	E	Erection of Wave trap on already erected structure beam, including transportation of wave trap, disc insulators, hardware, clamps and connectors, etc. from site store to locations. Cleaning & assembly of disc insulators alongwith fitting of suspension arrangement and erection, fixing of terminal connectors etc.				
		ii) 132 KV	Nos.	2	450	900
11	G	Erection of 220 KV or 132 KV Circuit Breakers, including transportation of equipment, structure members. Nuts & bolts, Clamps & connectors accessories etc. from site store to location assembly of support structure their placing on foundation leveling and preparing for grouting as required but excluding grouting assembly/ placing of support columns / poles. Mechanism box / control cubicle, and other accessories as per manufacturers drawings fitting of SF 6 gas pipeline fabrication of air / oil pipeline as required, electrical wiring from pole to control cubicle fixing of terminal connectors as required, but excluding commissioning of CB, for all types of operating mechanism, as required				
		ii) 132 KV	Nos.	1	11438	11438
12	I	Erection of Post Insulators on already erected structures including transportation of P.I."s, nuts & Bolts . Clamps & connectors. Etc. from site store to locations, fabrication of base frame & assembly if required. fixing of clamps etc.				
		ii) 132 KV	Nos.	18	500	9000
13	6	Erection of Control & Relay Panels complete in all respects including transportation from site store to control room, placing on foundation / cable trench as per layout, interconnection between control & relay panels and with existing panels, fixing of side / top covers and doors earthing to existing earth strip in control room, connection of bus wiring to existing panels and between control and relay panel. As required.				
		ii) Duplex panel	Nos.	1	950	950
14	7	Erection of Marshalling Kiosk /Line Matching Unit (LMU) / Line Matching & Distribution Unit (LMDU) complete in all respect including transportation from site store to location, placing on foundation / cable trench as per layout, preparing for grouting of foundation bolts but excluding grouting etc.				
		i) 220 KV or 132 KV marshalling Kiosk	Nos.	2	281	562
		<b>C/F</b>				<b>115881</b>



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Sr. NO.	Item no. of BSR	PARTICULARS OF WORK	UNIT	QTY.	RATE	AMOUNT In Rs.
1	2	3	4	5	6	7
		<b>B/F</b>				<b>115881</b>
	10	LAYING AND TERMINATION OF CABLES				
	A	Control Cables				
15		i) Laying of P.V.C. insulated unarmoured/ armoured control cables of 1.1 KV grade with copper conductor in cable trenches as per specification as required, including transportation of cable drums from site store to location laying in cable trenches, cutting to required length, placing them on cable/ racks/ cable trays/ & dressing. Including removing and re-fixing trench covers as required making necessary connections, testing, cable marking on both the terminating ends, etc. as required for all sizes from 2c x 2.5 sq. mm. to 20c x 2.5sq. mm. 4c x 4sq. mm. and 4c x 6sq. mm.				
		a) unarmoured control cable.	Metres	4000	4.00	16000
16		ii) fixing of control cables in position with single compression nickel plated brass cable glands conforming to IS: 12943 & having three metal washers and one rubber ring, including preparation of cable and drilling of corresponding holes in gland plates, etc. as required, & including cost of cable gland for each cable gland of size				
		a) 19 mm unarmoured control cable	Nos.	30	33.00	990
		c) 25 mm unarmoured control cable	Nos.	10	50.00	500
17		iii) Termination of wires of cables with copper conductor using copper terminal ends ( pin or ring type as required of Dowells or equivalent make as approved by the Engineer-in charge) duly crimped with crimping tool, including making wire ends ready for crimping, ferruling & dressing of wires, etc. as required, including cost of terminal ends for all wires for each cable at both ends for cables of the following sizes				
		c) 4c x 2.5 sq. mm	Each	15	32.00	480
		f) 12c x 2.5 sq. mm	Each	5	96.00	480
18		in case all the wires of any cable are not got terminated then a deduction at the rate of Rs. 4.00 shall be made for each end of the wires not terminated.				
		i) 4c x 4.0 sq. mm	Each	10	43.00	430
19		in case all the wires of any cable are not got terminated then a deduction at the rate of Rs. 5.00 shall be made for each end of the wires not terminated.				
		<b>TOTAL</b>				<b>₹ 134,761.00</b>
		Add 60% above as per CLRC vide D No.501 Dtd. 24.5.13				<b>₹ 80,856.60</b>
		<b>Gross Amount</b>				<b>₹ 215,617.60</b>
In words (Rupees.TWO LACKS FIFTEEN THOUSAND SIX HUNDRED SEVENTEEN paisa SIXTY Only. )						

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