

Rajasthan Rajya Vidyut Utpadan Nigam Ltd.  
Kalisindh Thermal Power Project

## **KALISINDH THERMAL POWER PROJECT (2 X 600 MW) OF RRVUNL**

**Tender Document**

**for**

**Earthwork in Formation and Permanent Way work inside Kalisindh  
Thermal Power plant in connection with Railway siding work**

**June'2010**

**No. IRCON/3014/RRVUNL.RS/TENDER/P-way inplant/ 13.07.2010**

### **ADDENDUM/CORRIGENDUM No.2**

**IRCON INTERNATIONAL LIMITED  
(A Government of India Undertaking)**

Project Office  
RRVUNL Project,  
Room No. 502, Palika Bhavan,  
Sector-XIII, R.K.Puram  
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Rajasthan Rajya Vidyut Utpadan Nigam Ltd.  
Kalisindh Thermal Power Project

No. IRCON/3014/RRVUNL.RS/TENDER/P-way inplant/

13.07.2010

To,

1. IRCON's Web site [www.ircon.org](http://www.ircon.org)
2. Buyers of tender document as per mailing list

**Sub: ADDENDUM/CORRIGENDUM No.2**

Ref: NIT NO- IRCON/3014/RRVUNL.RS/TENDER/P-way inplant/ dated 24.06.2010

Name of Work: Earthwork in Formation and Permanent Way work inside Thermal Power plant in connection with Railway siding work consisting of Earthwork in formation, supply of blanketing material, ballast and p-way material, p-way linking, commissioning and associated work.

Following Addendum/ Corrigendum No.2 to tender documents is issued:

S.No.	Reference of tender document	Page no.	Addendum/ Corrigendum
1.	Volume-I, Detailed Notice Inviting Tender, Annexure-A, Sr. no. 1, 2, 3, 4 & 5	10 & 11 of Vol-I	Replace Sr. No. 1, 2, 3, 4 & 5 by Annexure-Add-1
2.	Volume-I, Instruction to Tenderers, Sr. No.1.2 (c)	16 of Vol-I	Sr. No. 1.2 (c) stands deleted
3.	Volume-II, Section-1, Special condition of contract, Clause no. 16, Sales tax on Works Contract, Article 16.2	10 of Vol-II	The description given under clause 16.2 shall be read as  "Employer is registered with the Sales Tax Department of Rajasthan, under the <b>Composition Scheme</b> and shall deposit Sales Tax on works contract as applicable rates under Rajasthan VAT Act-2006. The Contractors may consider this aspect while quoting their rates. The Contractor shall arrange necessary TDS exemption certificate from Sales tax/Commercial tax/Trade tax authorities for exemption from deduction of tax at source. Till the TDS exemption certificate is submitted by the Contractor, the Employer will continue to deduct the Sales tax at source from the payments due to the Contractor and deposit the same with Sales Tax Department. The Employer shall issue necessary certificate in this regard."

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S.No.	Reference of tender document	Page no.	Addendum/ Corrigendum
4	Volume-II, Section-1, Special condition of contract, Clause no. 16, Sales tax on Works Contract, Article 16.3	10 of Vol-II	<p>The description given under clause 16.3 shall be read as</p> <p>“The Contractor shall get registered with the concerned Service tax Department and submit a copy of Registration Certificate to the Employer. He shall be responsible for payment of Service Tax, filing returns and assessments, as necessary as per prevalent Laws, Rules and Regulations and shall also furnish necessary proof for Payment of Service Tax and copy of relevant document to Employer. In case of failure to do so, Employer will deduct the required amount from the payment due to contractors and deposit the same with concerned Service Tax Department.”</p>
5	NA	NA	Key plan of Inplant yard is enclosed as Annexure-Add-2
6	Volume-II, Section-1, Special condition of contract, Clause no. 6, Stage Payment	05 & 06 of Vol-II	Under column “Condition of eligibility of payment” of the table given, Sr. No. 5 wherever mentioned, The word “Bank Guarantee” shall be replaced by <b>“Indemnity Bond”</b>
7	Volume-II, Section-1, Special condition of contract, Clause no. 6, Stage Payment & Section-2, Special Technical condition of contract, Clause No.8, Specifications & Explanations for the items of BOQ	05 & 06, 24 to 52 of Vol-II	<p>The Item No. against the Description of items of BOQ of Amended Volume-III vide Addendum/ Corrigendum no.1 dated 06.07.2010 has been changed due to insertion of some new items in original BOQ (Replaced vide Sr. No. 6 of Addendum/ Corrigendum no.1 dated 06.07.2010), whereas Item no. mentioned under Clause No. 6 of Section-1 and Clause No.8 of Section-2 in the Volume-II (Special condition of contract and Special Technical condition of contract) against Description of Item is as per the original BOQ.</p> <p>Hence Item no. mentioned against Description of Item anywhere in Clause no.6 of Special condition of contract and Clause no. 8 of Special Technical condition of contract shall be read as Item no. of corresponding Description of Item as per Revised BOQ in Amended Vol-III vide Addendum/ Corrigendum no.1 dated 06.07.2010.</p> <p><b>i.e. Under any discrepancies in Item No. for same Description of Item, “Description of Item” will prevail over “Item no.”</b></p> <p>Explained by Example: Under clause no. 6 of Special condition of contract, Section-1 of Volume-II, The Item no. for Reinforcement steel has been written as 10, but in Amended Vol-III the corresponding Item no. has</p>

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			changed to 13. So Description of Item prevails and 10 shall be read as 13. Similar correction shall be deemed in all Item no. mentioned under Clause no.6 of Special condition of contract and Clause no. 8 of Special Technical condition of contract
8	Amended Volume-III of Addendum/ Corrigendum No1 dated 06.07.2010	Amended Volume-III, Page No. 4 to 18	“Amended Volume-III” of Addendum/ Corrigendum No1 dated 06.07.2010 shall be replaced by <b>“Amended Volume-III (Add/Corrg-2)”</b>  <b><i>Tenderers are advised to quote their rates in “Amended Volume-III (Add/Corrg-2)” attached with this ADDENDUM/CORRIGENDUM No.2</i></b>

This **ADDENDUM/CORRIGENDUM No.2** will form the part of Tender document and should be duly signed and submitted by the tenderer along with complete tender document. All other terms and conditions as mentioned in original tender document will remain same for the purpose of tender.

**ANNEXURE- Add-1**

Essential Qualifying Criteria

Criteria	Compliance Requirements			
	Single Entity	Joint Venture		
		All Partners Combined	Each Partner	Lead Partner
<p><b>1. Contracts of similar size and Nature</b></p> <p>The contractor should possess the experience of having successfully completed similar works during the last 7 years (ending last day of the month previous to the one in which tenders are invited) which should be any one of the following:-</p> <p>(i) Three similar completed works each costing not less than the amount equal to 30% of the estimated cost.</p> <p>(ii) Two similar completed works each costing not less than the amount equal to 40% of the estimated cost.</p> <p>(iii) One similar completed work costing not less than the amount equal to 65% of the estimated cost.</p> <p><b><u>Notes :</u></b></p> <p>Works are considered similar if the work consists of Civil works involving Earthwork in formation and /or Bridge work and/or P.Way work in Railways/Highways.</p>	Must meet requirement	Must meet requirement	Not applicable	<p>Must meet requirement of (iii)</p> <p style="text-align: center;">OR</p> <p>under (i)- at least Two works out of Three works</p> <p style="text-align: center;">OR</p> <p>under (ii)- at least One work out of Two works</p>

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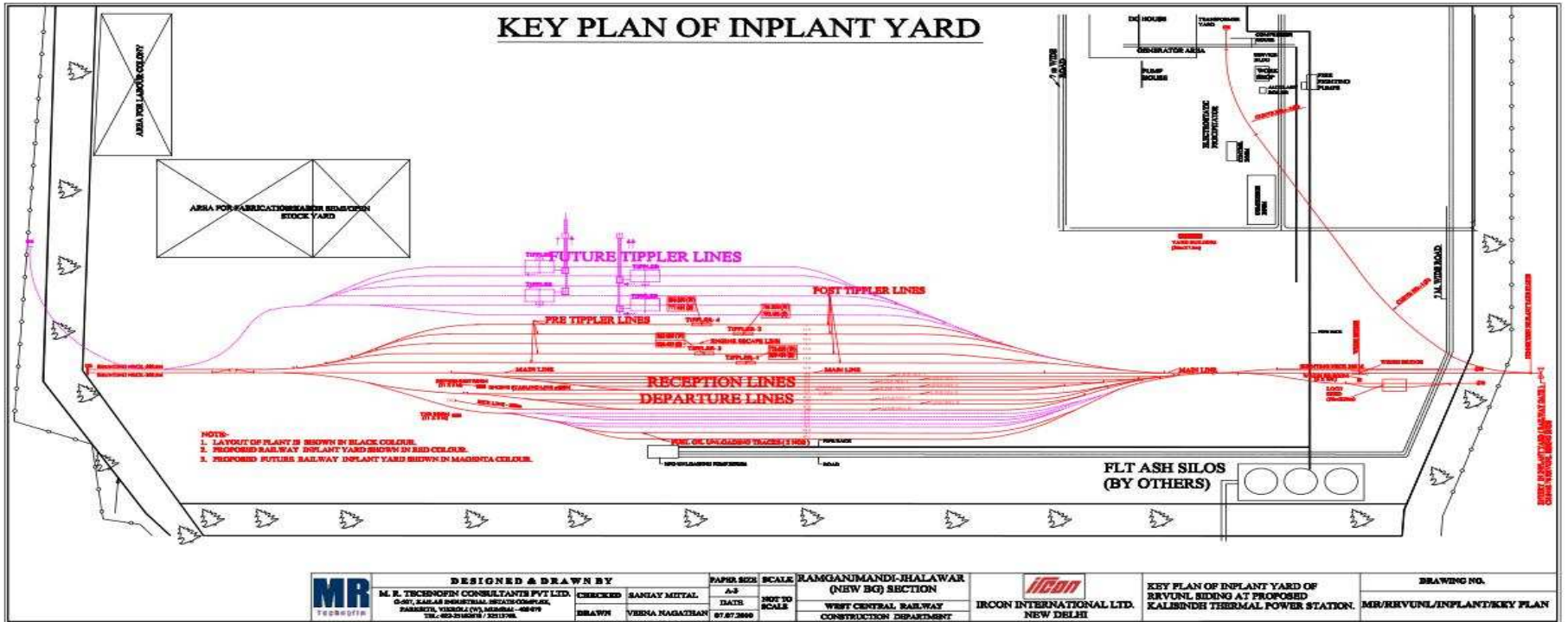
Criteria	Compliance Requirements			
	Single Entity	Joint Venture		
		All Partners Combined	Each Partner	Lead Partner
<p><b>2. Experience in Specialized activity</b></p> <p>The contractor should possess the experience of having successfully completed following specialized activity in one or separate contract during the last 7 years (ending last day of the month previous to the one in which tenders are invited)</p> <p>(i) Total quantity of at least 70,000 Cum of Earthwork in formation or/and blanketing/GSB or both in Railway line/Highway in one contract</p> <p>(ii) Linking of 10 Km Long railway line in one contract</p>	Must meet requirement	Must meet requirement	Must meet requirement of either 2 (i) or 2 (ii)	Must meet requirement of either 2 (i) or 2 (ii)
<p><b>Note:</b></p> <p><b>A.</b> The contractor should submit performance certificates in reference to S.No.1 &amp; 2 [minimum 3 nos., 2 nos. or 1 no. as the case may be for 1 (i), 1 (ii) or 1 (iii) respectively] above from clients for having successfully completed similar works in the last 7 years.</p> <p><b>B.</b> The value of work completed under Joint ventures shall be considered as the percentage of share in the Joint ventures of the participating firm. For verification of percentage of share in Joint ventures of completed work the tenderer should submit the completion certificate from the client mentioning the percentage of share of each partener in the Joint venture or partnership agreement duly authenticated by the client.</p>				

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Criteria	Compliance Requirements			
	Single Entity	Joint Venture		
		All Partners Combined	Each Partner	Lead Partner
<p><b>3. Average Annual Financial Turnover</b></p> <p>The average annual financial turnover during the last 3 years ending 31<sup>st</sup> March of the previous financial year should be at least 30% of the estimated cost.</p> <p>Notes :</p> <p>The financial turnover shall be judged from ITCC or Annual Reports including Profit and Loss Account.</p>	Must meet requirement	Must meet requirement	Must meet at least 25% of the requirement	Must meet at least 50% of the requirement
<p><b>4. Net-Worth</b></p> <p>The Contractor should have positive networth. This will be judged from the audited Balance Sheet of the last financial year ending on a date not prior to 18 months from the due date of submission of the tender.</p>	Must meet requirement	Must meet requirement	Must meet requirement	Must meet requirement
<p><b>5. Liquid-Assets</b></p> <p>The contractor should have Liquid assets and/or availability of credit facilities of not less than <b>15%</b> of the estimated cost, individually/ amongst the members of the JV (in case of a Joint Venture). In support, the contractor should submit Solvency certificate from their bankers.</p>	Must meet requirement	Must meet requirement	Must meet at least 25% of the requirement	Must meet at least 50% of the requirement

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ANNEXURE- Add-2



## **KALISINDH THERMAL POWER PROJECT (2 X 600 MW) OF RRVUNL**

**Tender Document**

**for**

**Earthwork in Formation and Permanent Way work inside Kalisindh  
Thermal Power plant in connection with Railway siding work**

**June'2010**

**AMENDED VOLUME-III (Add/Corrg-2)**

**IRCON INTERNATIONAL LIMITED  
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**B-FINANCIAL BID**

**AMENDED VOLUME -III**

**SCHEDULE OF ITEMS & QUANTITIES**

## **SCHEDULE OF ITEMS & QUANTITIES**

1. The schedule of Quantities ( Also called as Bill of Quantities or BOQ) shall be read in conjunction with the Instructions to Tenderers, General condition of contract, Special condition of contracts, Special Technical condition of contract and Drawings
2. The quantities in BOQ are estimated and provisional, and are given to provide common basis for tendering. The basis of payment will be actual quantities of work ordered and carried out, as measured by the contractor and certified by the Engineer and valued at the rates and prices tendered in the BOQ, where applicable, and otherwise at such rates as the Engineer may fix within the terms of Contract
3. Payment made under stage payment for the quantities shall be the provisional payment subject to the final measurement of finished product. The items damaged/ lost/ unused during the execution for which stage payment has been made, will be recovered in subsequent running account bill/ final bill.
4. The rates and amount tendered in the BOQ shall, except in so far it is otherwise provided under the contract, include all plant & machinery, labour, supervision, material, erection, maintenance, insurance, profits, taxes and duties together with all general risks, liabilities and obligation set out or implied in the contract.
5. The rates and amount shall be quoted entirely in **INDIAN RUPEE**
6. The tenderer shall fill in the rates in terms of %age above/below/at par (both in figures and words) over the basic cost for each Schedule of BOQ in the Summary of Cost with total cost of work under the concerned schedule. Grand total of all Schedules shall be filled in respective column at the end of Summary of cost both in figures and words
7. If tenderer omits any of the schedule, the tender shall be considered as non –responsive shall be summarily rejected.
8. Any corrections if required shall be made by striking out, rewriting, signing and dating.
9. Where there is discrepancy between rate in figures and words, the rate in words will govern.
10. Where there is discrepancy between rate and line item total resulting from adding the % age above/below/at par, the rate as per Sr. no.9 will govern and the total will be corrected accordingly for evaluation/award of contract
11. Where there is discrepancy between the individual Schedule total cost and the Grand total of all schedule, the total cost of schedule as per Sr. No. 10 will govern and Grand total will be corrected accordingly for evaluation/award of contract.
12. General directions and description of work and materials are not necessarily repeated or summarized in the BOQ. Reference to the relevant sections of the contract documents shall be made before entering rates or prices against each schedule in the BOQ.

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13. Errors will be corrected by the Employer for any arithmetic errors pursuant to clause 17.2 of Instruction to Tenderers.
14. All rates shall be filled in indelible ink. The person authorized to sign on behalf of the tenderer shall sign in full with the date at the bottom of all pages.

**Name of Work: Formation and Permanent Way work inside Kalisindh Thermal Power plant in connection with Railway siding work**

**SUMMARY OF COST**

Sr. No.	Schedule No.	Description of Schedule	Basic cost in Rupees	Contractor % above/ at par/ below to be quoted in figures and words		Total cost in Rupees (To be quoted by the tenderer)
				In Figures	In Words	Rs.
1	2	3	4	5	6	7
1	Schedule (A) From Item no. 01 to 04	Earthwork in Formation	66430160			
2	Schedule (B) From Item no. 05 to 10	Drainage/ Minor Bridge/ Culvert	38417348.19			
3	Schedule (C) From Item no. 11 to 20	P.Way Supply	101497211.4			
4	Schedule (D) From Item no. 21 to 36	P.Way Linking	25645725			
<b>GRAND TOTAL</b>			<b>231990444.6</b>	<b>Quoted Total of all Schedules</b>		

**Notes:**

- 1 The tenderer shall fill in the rates in terms of %age above/below/at par (both in figures and words) over the basic cost for each Schedule of BOQ in the Summary of Cost with total cost of work under the concerned schedule. Grand total of all Schedules shall be filled in respective column at the end of Summary of cost both in figures and words
- 2 If tenderer omits any of the schedule, the tender shall be considered as non –responsive and shall be summarily rejected.

**SCHEDULE (BILL) OF QUANTITIES**

**Name of Work :Formation and Permanent Way work inside Thermal Power plant in connection with Railway siding work Consisting of Earthwork for formation supply of blanketing of material, ballast and p-way material, p-way linking, commissioning and associated work.**

Item no.	Description of Item	Unit	Qty.	Unit Rate in Rupees	Amount in Rupees
<b>SCHEDULE (A)</b>					
<b>EARTHWORK IN FORMATION</b>					
1	<p>Earthwork in filling in embankment and compaction, trolley refuges with approved quality earth as per the relevant specifications, <b>using excavated earth or earth already stacked in project site or using contractor's earth from borrow pits etc.</b> including all lead, lifts, ascend, descend, crossing of nallah/streams, tracks, or any other obstructions. The earth will be laid spread and leveled using grader in 30cm layers loose state for enabling proper compaction. The bank width will be kept 0.50m extra beyond the design profile width to facilitate the mechanical compaction of bank upto edge of required profile and no extra payment of this 0.50m extra width of earth work will be made. Heavy mechanical compaction of earth with contractor's vibratory compactor / rollers of 10 tones and above capacity. The earth filling in bank under this item will not be paid unless minimum in situ dry density of 98% MDD is achieved. Payment shall be made by taking initial and finished cross section at every 25m/chainage of profile or as directed by Engineer.</p> <p>The rates shall include, demarcation and setting out of profiles, site clearance, benching (30cm vertical and 60cm horizontal), cutting down of shrubs, vegetation growth, heavy grass, plants with girth upto 60 cm and one round of heavy rolling of sub-soil after making good the pockets and depression left in soil during clearing and uprooting of jungle at site, including cost of watering all T&amp;P consumable materials with all labour and material, handling and re-handling as a complete job.</p>				
	(a) Using excavated earth or earth already stacked in project site i.e. earth to be provided by IRCON, within 5 km of plant boundary	Cum	71000	112.10	7,959,100.00
	(b) using contractor's earth from borrow pits etc. i.e. earth to be arranged by the contractor on his own cost.	Cum	10000	124.60	1,246,000.00
2	<p>"Earthwork in cutting in formation, trolley refuges, side drains, yard drains, catch water drains etc. and stacking/ spreading of extra usable/unusable cutting spoils with all lead and lifts within the plant boundary as per the direction of Engineer-incharge (Earthwork in filling in embankment with this excavated earth will be paid separately in item No.-1 above) , ascent, descent, crossing of nallah/streams, tracks, or any other obstructions. The rate shall include demarcation and setting out of profiles, site clearance, cutting down of shrubs, vegetation growth, plants with girth upto 60 cm heavy grass, dressing of side slopes and bed of cutting to final profile as per specification and direction of Engineer as a complete job.</p>				
	(a) Earthwork in cuttings in all types of soil for formation	Cum	65000	121.10	7,871,500.00
	(b) Earthwork in cutting in soft rock for formation	Cum	6000	323.10	1,938,600.00
	(c ) Earthwork in cutting in hard rock for formation	Cum	3420	486.00	1,662,120.00
	(d) Extra over Item 2 (a), (b) & (c ) for disposing cut spoil (all type of soil/ soft rock/ hard rock) outside project area in the land to be arranged by the contractor.	Cum	20000	50.00	1,000,000.00

**SCHEDULE (BILL) OF QUANTITIES**

**Name of Work :Formation and Permanent Way work inside Thermal Power plant in connection with Railway siding work Consisting of Earthwork for formation supply of blanketing of material, ballast and p-way material, p-way linking, commissioning and associated work.**

<b>Item no.</b>	<b>Description of Item</b>	<b>Unit</b>	<b>Qty.</b>	<b>Unit Rate in Rupees</b>	<b>Amount in Rupees</b>
3	Supplying, Spreading, watering, Compaction in layers etc. of blanketing material, quarry/crusher grit of size less than 10mm as per the special specifications with contractors own materials, labour, tools and plants, machinery, transportation etc. inclusive of all taxes, royalty etc. Rate also includes 500mm extra width required on each side of the bank in excess of theoretical profile to enable compaction near the edge. Heavy mechanical compaction of earth/blanket materials with contractor's vibratory soil compactor / rollers of 10 tones and above capacity in layers of 20 cm (loose state) at or near OMC so as to achieve minimum dry density (worked out as per relevant IS Codes ) including cost of watering all T&P consumable materials with all labour and material as a complete job. The blanketing material in formation under this item will not be paid unless minimum in situ dry density of 98% MDD is achieved. Payment shall be made by taking initial and finished cross section. The payment shall be done falling within the design profile.	Cum	98842.4	450.00	44,479,080.00
4	Supplying and turfing (country/sarkanda grass) as decided by Engineering-in-charge on the slope of bank with sods spaced not more than 150 mm apart 10cm. thick including dressing. The rates are inclusive of contractors own labour, equipments, machinery, taxes, lead, lift, watering, as required until properly rooted (as ordered by engineering-in-charge). Note: 50% payment will be made on completion of turfing and 50% will be made after proper rooting of the turf).	Sqm	17110	16.00	273,760.00
<b>Total of Schedule (A)</b>					<b>66,430,160.00</b>

**SCHEDULE (BILL) OF QUANTITIES**

**Name of Work :Formation and Permanent Way work inside Thermal Power plant in connection with Railway siding work Consisting of Earthwork for formation supply of blanketing of material, ballast and p-way material, p-way linking, commissioning and associated work.**

Item no.	Description of Item	Unit	Qty.	Unit Rate in Rupees	Amount in Rupees
<b>SCHEDULE (B)</b>					
<b>DRAINAGE / MINOR BRIDGE / CULVERT</b>					
5	Earthwork in excavation for foundation including back filling for piers, abutments, return walls, columns, Box bridge, etc. in all categories of soils such as sand, clay, moorum with or without stones, boulders (excl. rock) as per specification and stacking/ spreading of extra useable/unusable cutting spoils with all lead and lifts within the plant boundary as per the direction of Engineer-in-charge and special conditions of the contract and as directed by the Engineer.				
	(a) Earthwork in cutting all types of soil for foundation	Cum	3147	170.77	537,413.19
	(b) Earthwork in cutting in soft rock for foundation	Cum	2796	382.00	1,068,072.00
	(c) Earthwork in cutting in hard rock for foundation	Cum	2796	725.59	2,028,749.64
6	Uncoursed rubble stone masonry of any width in foundations and plinth for steps and retaining wall in cement mortar 1:6 with all contractor's materials, labour including all leads and lifts and curing etc., complete as per specifications and as directed by the Engineer-in-charge. ( Minimum Cement content to be used = 82.5 Kg/m <sup>3</sup> )	Cum	70	1801.00	126,070.00
7	Tuck pointing on stone masonry with cement mortar (1:3) including scaffolding with contractor's labour and material, complete as per the direction of Engineer-in-charge	Sqm	160	58.00	9,280.00
8	CEMENT CONCRETE grade M-15 IN FOUNDATION with clean well graded broken STONE AGGREGATE NOT exceeding 40mm size, including ramming, watering, curing etc. complete .	Cum	1718	3529.22	6,063,199.96
9	Precast/ Cast-in-situ Plain/Reinforced CEMENT CONCRETE grade M-20 IN Drains, walls, substructure, oil apron floor, slabs, etc. with clean well graded broken STONE AGGREGATE NOT exceeding 20mm size, including formwork, shuttering, curing etc. excluding reinforcement which will be paid under separate item, complete.	Cum	3670	5032.22	18,468,247.40
10	Precast Reinforced CEMENT CONCRETE grade M-20 IN slabs with clean well graded broken STONE AGGREGATE NOT exceeding 20mm size, including fabrication of required moulds, formwork, shuttering, staging, curing etc. complete with contractor's labour materials, excluding reinforcement which will be paid under separate item.	Cum	379	5834.00	2,211,086.00
11	Extra for higher grade concrete of M-25 over Item no. 9 & 10 of CC grade M-20	Cum	1660	300.00	498,000.00
12	Providing and laying heavy duty NP-4 class RCC Hume pipe as per RDSO drawing and conforming to IS458 with RCC collars, jointing with 1:2 cement and sand mortar including testing but excluding earthwork and concrete as a complete job. (Note: Earthwork in excavation and filling & cement concrete will be paid separately under relevant items				
	(a) 300 mm diameter	Mtr.	200	2030.00	406,000.00
	(b) 600 mm diameter	Mtr.	200	4000.00	800,000.00

**SCHEDULE (BILL) OF QUANTITIES**

**Name of Work :Formation and Permanent Way work inside Thermal Power plant in connection with Railway siding work Consisting of Earthwork for formation supply of blanketing of material, ballast and p-way material, p-way linking, commissioning and associated work.**

<b>Item no.</b>	<b>Description of Item</b>	<b>Unit</b>	<b>Qty.</b>	<b>Unit Rate in Rupees</b>	<b>Amount in Rupees</b>
13	<p><b>HYSD Bars:</b> Providing and placing in any position cold twisted High Yield Strength Deformed bars (TMT or CRS) conforming to IS:1786/IS:1785 of all diameters in all RCC items of foundation, Sub structure, Super structure, Piles and Pile caps etc. as per the approved drawings.</p> <p>The rate includes supply, loading, unloading, transporting to site, cutting, bending, hooking, placing and tying in position with contractor's own galvanized binding wire, all lead and lift etc. using contractor's own equipments, labour, taxes, machineries as per the approved drawings and as specified in special conditions and as directed by the Engineer in charge.</p> <p>NOTE: The item will be paid only for quantity used actually. The wastage, cut pieces shall be taken away by contractor and same will not be paid.</p>	MT	90	62995.00	5,669,550.00
14	<p>Fabricating, supplying and erecting in position standard structural steel sections like Angles, Tees, Channels, Flats, plates etc. conforming to IS :2062- 1992 (including latest amendments) including welding with approved quality welding rods, supply and fixing of correct size turn bolts including one primer coat of red lead paint conforming to IS:102 or Zinc chromate paint conforming to IS:104 followed by two coats of Aluminium paint as per IS : 2339 with all contractor's materials, labour, tools and plants etc in bolted/welded construction as directed by Engineer in charge. Work shall be carried out as per IS:800-1984 (with latest amendments), IRS specification No. B3-61 part 2 and IS 816 for welding.</p>	MT	10	53168.00	531,680.00
<b>Total of Schedule (B)</b>					<b>38,417,348.19</b>

**SCHEDULE (BILL) OF QUANTITIES**

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Item no.	Description of Item	Unit	Qty.	Unit Rate in Rupees	Amount in Rupees
<b>SCHEDULE (C)</b>					
<b>P. WAY SUPPLY</b>					
15	Supplying at site of work including leading, loading, unloading and stacking 60 Kg PSC sleepers to RDSO Drg.No. T-4148 and T-4148 A with fastenings & fixtures with metal liners/GFN for 52 Kg rail section for provision on level crossings as per specifications procured from firms approved by RDSO for manufacture of this item duly inspected & approved by Rly's inspecting authority with contractor's labour, tools, machinery, transport etc. complete.	Nos.	300	2595.00	778,500.00
16	Supplying at site of work including leading, loading, unloading and stacking 60 Kg PSC sleepers to RDSO Drg.No. T-4170 to 4173 with fastenings & fixtures with metal liners/GFN for 52 Kg rail section for curved track for four degree curve as per specifications procured from firms approved by RDSO for manufacture of this item duly inspected & approved by Rly's inspecting authority with contractor's labour, tools, machinery, transport etc. complete.	Nos.	1500	2536.00	3,804,000.00
17	Supplying at site of work including leading, loading, unloading and stacking 60 Kg PSC sleepers to RDSO Drg.No. T-4183 to 4186 with fastenings & fixtures with metal liners/GFN for 52 Kg rail section for curved track for five degree and above curve as per specifications procured from firms approved by RDSO for manufacture of this item duly inspected & approved by Rly's inspecting authority with contractor's labour, tools, machinery, transport etc. complete.	Nos.	1500	2930.00	4,395,000.00
18	Supplying at site of work of 01 meter long Fish plate 52 Kg as per RDSO Drg No. T- 5915 with bolt (or as per latest RDSO's approved drawings), & as per specification procured from firms approved by RDSO for manufactures of this item duly inspected & certified by approved inspecting authority including transportation to site of work with contractors labour, tools, transport, fuel and loading, unloading etc.	Pair	3210	2667.00	8,561,070.00
19	Supplying at site of work including leading, loading, unloading and stacking of fastenings and fixtures for 60 Kg PSC line sleeper as per specifications procured from firms approved by RDSO for manufacture of respective item, duly inspected and approved by authorised inspecting authority with contractor's labour, tools, machinery, transport etc. complete.				
	<b>(a) Grooved rubber pad</b> as per Drg No RDSO/ T-3711 (or as per latest RDSO's approved drawings).	Nos.	95600	26.46	2,529,576.00
	<b>(b) Metal liners</b> as per Drg No RDSO/ T-3741 & 3742 (GS) (or as per latest RDSO's approved drawings) <u>Note:</u> A set comprising 02 numbers.	Set	95600	36.81	3,519,036.00
	<b>(c) GFN liners</b> as per Drg No RDSO/ T-3707 (GS) & 3708 (NGS) (or as per latest RDSO's approved drawings) <u>Note:</u> A set comprising 02 numbers.	Set	5000	31.03	155,150.00
	<b>(d) Elastic Rail / pandrol Clips</b> as per Drg No RDSO/ T-3701 (or as per latest RDSO's approved drawings).	Nos.	182780	82.00	14,987,960.00
	<b>(e) Supply of J-Clips</b> conforming to RDSO/T-4158 (or as per latest RDSO's approved drawings).	Nos.	6420	89.27	573,113.40

**SCHEDULE (BILL) OF QUANTITIES**

**Name of Work :Formation and Permanent Way work inside Thermal Power plant in connection with Railway siding work Consisting of Earthwork for formation supply of blanketing of material, ballast and p-way material, p-way linking, commissioning and associated work.**

Item no.	Description of Item	Unit	Qty.	Unit Rate in Rupees	Amount in Rupees
20	Supplying at site of work of Joggled Fish plate 52 Kg as per RDSO Drg No. T- 5848 with bolt or clamps (or as per latest RDSO's approved drawings), & as per specification procured from firms approved by RDSO for manufactures of this item duly inspected & certified by approved inspecting authority including transportation to site of work with contractors labour, tools, transport, fuel and loading, unloading etc.	Pair	20	2334.00	46,680.00
21	Supplying at site of work of BG 1 in 8.5 turnout, Fan shape design to RDSO drg No T-4865 made from 52 kg 90 UTS, T-12 (1st quality) rails, 6400 mm curved switch to RDSO drg No T-4866 and CMS crossing to RDSO drg No T-4867 & 4867/2 including all fittings complete with all materials including insulated stretcher bar & gauge tie plate, fish plates and fish bolts etc. and all fittings suitable for PSC sleepers, suitable for motor points, track circuited area, check rails, etc including all lead and lift along with stacking in plant area as directed by the engineer. as a complete job. (The rate includes cost of all material except PSC sleepers and lead rails which will be supplied by IRCON)	Per set	46	644316.00	29,638,536.00
22	Supplying at site of work including leading, loading, unloading and stacking Glued Insulated Rail joints of 52Kg rail section 6.5 m long G3L at site on main line, loop lines and sidings on PSC sleepers with all fittings complete as per RDSO Drg. No. T-5361 with 10 mm end post thickness and as per RDSO specifications and as directed by the engineer procured from firms approved by RDSO for manufactures of this item duly inspected & approved by Rly's inspecting authority. (The rate includes cost of all materials)	Nos.	15	30906.00	463,590.00
23	Supplying and stacking of machine crushed Track Ballast conforming to RDSO Specifications of Track Ballast, June 2004 with latest amendments. Stacking of ballast to be done along the alignment on cess/toe of the embankment/inside cutting within plant area as directed by the engineer, including all types of transportation upto the site including all leads, lifts crossing of tracks and any other obstructions. The rate includes leveling of the stacking space properly and all taxes, levies, duties, octroi, royalty, etc. including all material and labour. No deduction will be made on stack measurement for shrinkage.	Cum	57800	525.00	30,345,000.00
24	Supply, Installation , testing & commissioning of In Motion Electronic Weigh Bridge of 100 MT capacity with digital recording facility as per approved manufacturer's specification and as directed by Engineer incharge	Nos.	1	1700000.00	1,700,000.00
<b>Total of Schedule (C)</b>					<b>101,497,211.40</b>

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**Name of Work :Formation and Permanent Way work inside Thermal Power plant in connection with Railway siding work Consisting of Earthwork for formation supply of blanketing of material, ballast and p-way material, p-way linking, commissioning and associated work.**

Item no.	Description of Item	Unit	Qty.	Unit Rate in Rupees	Amount in Rupees
<b>SCHEDULE (D)</b>					
<b>P. WAY LINKING</b>					
25	Handling /lifting / leading (all leads) & spreading Track ballast including preparation of formation to receive ballast, spreading ballast to a uniform level and light rolling of ballast bed by using 5 to 10 T light rollers (minimum two passes) to achieve required ballast cushion. The ballast shall be lead from existing stacks to the proposed alignment of the track and spread there to make ballast bed for the track including subsequent supplementation of ballast after linking / packing of track as required to make proper ballast profile on straight/curved/Turnouts track including ballast in shoulders and cribs as a complete job.	Cum	57800	100.40	5,803,120.00
26	Laying and linking of Permanent way (BG) on straight / curve (with ordinary/ wider gauge sleepers) with 52 Kgs. rails welded in to 3 rail panels/ fish plated track on straights/curves on 60 kg PSC sleepers with elastic fastenings to correct track parameters as per specification, complete. Rails 52 kg for plain track (straight & curve) will be supplied free of cost to the contractor by Employer from store in the plant area. The contractor shall have to handle, lead and lay them at site as per specification. PSC Sleepers for straight/curve track and fittings shall be lead by him to site..The payment for Alumino Thermic Welding and testing of welded rail joints not included in this item and shall be paid separately. On fish plated rail joints J clips to RDSO drg No. T- 4158 will have to be used. This also includes laying of track on L.C. on specified type of sleepers and fastenings and check rails but extra payment for laying check rail will be made as per relevant item of the schedule.	Track Km.	27.5	161030.00	4,428,325.00
	Note:				
	(1)Rate will include kuccha packing and surfacing to adjust longitudinal and cross levels/alignment etc.				
	(2) Rate includes re-pulling/handling of rails for creation of gap				
	(3)Rate includes lubrication of joints, greasing & oiling of fish plates/bolts and elastic rail clips etc. with contractor's material and labour.				
	(4)Rate includes leading of rails/welded panels & sleepers with all lead ,lift, crossing of tracks etc. complete				
27	Manual through packing of newly laid tracks incl. level crossings, on straight or curve to a good geometry to conform to specified alignment & level and other track parameters including squaring of sleepers, slewing of tracks to correct alignment, gauging, tightening of fittings, fixing them in correct position, lifting of track if required to obtain the required longitudinal/cross levels and designed ballast cushion, packing below the sleepers & boxing to approved Ballast profile with all tools & labours as a complete job. As the through packing is to be done on PSC sleeper track, all care be exercised to ensure that the sleepers are not damaged during packing. If the sleepers are damaged in the process of through packing the contractor will have to replace them at his own cost.				
	a) First round of through packing	Track Km.	27.5	14400.00	396,000.00
	b) Second through packing providing full ballast cushion and proper ballast profile.	Track Km.	27.5	14400.00	396,000.00
	c) Third and final through packing providing full ballast cushion and final ballast profile.	Track Km.	27.5	14400.00	396,000.00

**SCHEDULE (BILL) OF QUANTITIES**

**Name of Work :Formation and Permanent Way work inside Thermal Power plant in connection with Railway siding work Consisting of Earthwork for formation supply of blanketing of material, ballast and p-way material, p-way linking, commissioning and associated work.**

Item no.	Description of Item	Unit	Qty.	Unit Rate in Rupees	Amount in Rupees
28	Giving assistance for pre and post tamping operations on main line , loop line and turnouts using TTM machines and UNIMAT machines to be arranged by railway eg.,squaring of sleepers, adjustment of spacing of sleepers, heaving up of ballast near tamping zone, removing ballast from sleepers top to make it visible (ballast to be filled below rail head so that lifting rollers are not obstructed ), tightening of fittings between rail and sleepers, with all contractor's labourers equipments, arranging diesel, lubricating oil etc as directed by Engineering Incharge. including all pre-tamping, post tamping work and boxing.				
	The rate shall include all costs of tamping with IRCON's Tie Tamping Machines including periodical reconditioning of tamping tools, providing all consumables, boxing and dressing and any jobs incidental to tie tamping work. The item also includes tamping of points & crossings for which points and crossings tamping machine will be utilised. For the purpose of payment length of points & crossings assembly will be counted as 1.5 times the length of ordinary track. The length of points & crossings assembly will be measured from stock rail joints to back of crossing. The item also includes tamping of trap points, which will be considered as ordinary track. The item is for a duly completed job as per specifications and making the track fit for minimum 75 Kmph speed Track tolerance limits to be brought within limits specified in IR PWM.				
	(I) Final One round of tamping	Track Km.	27.5	13260.00	364,650.00
29	Handling, assembling, linking and laying of BG PRC fan shaped Turnouts 52 Kg including traps on PSC sleepers as per approved IRS drawings including cutting of lead rails in track complete with all standard fittings and fastenings as required, including rehandling, crossing of lines putting rails on sleepers, spreading sleepers ensuring correct spacing, gauge alignment longitudinal and cross levels, katcha packing fastening all fitting & stretcher bar temporary jointing, leading of Rails/Switches/x-ings, fitting. upto one rail length on either side. with contractor's tools, labour etc.				
	a) 1 in 8.5 points & crossings (with 52 kg rails) as per RDSO Drg. No. T- 4865	Nos.	46	32744.00	1,506,224.00
30	Manual through packing of newly laid 1 in 8.5 turnouts / points and crossings to bring them to a good geometry to conform to specified line, level and parameters including designed layout of sleepers, slewing of track to correct alignment, gauging, tightening of fittings, fixing them in correct position, lifting of track as necessary to obtain the required longitudinal/cross levels and designed ballast cushion, packing below the sleepers & boxing to approved Ballast profile with all tools & labours as a complete job. As the through packing is to be done on PSC sleeper track all care be exercised to ensure that the sleepers are not damaged during packing. If the sleepers are damaged in the process of through packing the contractor will have to replace them at his cost.				0.00
	a) First round of through packing	Nos.	46	1000.00	46,000.00
	b) Second through packing providing full ballast cushion and proper ballast profile.	Nos.	46	1000.00	46,000.00

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Item no.	Description of Item	Unit	Qty.	Unit Rate in Rupees	Amount in Rupees
	c) Third and final through packing providing full ballast cushion and final ballast profile.	Nos.	46	1000.00	46,000.00
31	Welding of 52 Kg rail joints by flash butt welding process for welding as per requirement at site to be decided by the Engineer including cutting/handling of rails and making prescribed gap for welding, ultrasonic testing of welded joints with USFD machine as per specifications with contractor's own tools, Plants, welding material, labour and materials etc. complete.	Each Joint	2500	3160.00	7,900,000.00
32	Alumino Thermic Welding with Short Pre Heating Process of rail joints of 52 Kgs rails on cess or in situ as per the requirement to make 3 rail SWP (Short Welded Panel) or welding of 52 kg rail joints at other locations as directed by Engineer-in-charge including the cost of all labour and material, tools, fuel, prefabricated moulds, handling of rails, cropping of rail ends, providing specified gaps at rail joints, finishing of welded joints as per specifications, USFD testing and all other testings as per Specifications and as laid down in RDSO Manual for Fusion welding of Rails by the Alumino, Thermic Process 'September 1998' with upto date correction slips (subject to modifications as provided for in Technical Specification) as a complete job as per RDSO specification no. T-19/1984.	Nos.	710	2666.00	1,892,860.00
33	Construction of precast/ cast-in-situ R.C.C. Buffer Stop of RCC grade M-30, excluding reinforcement which will be paid under item no. 10 of BOQ, including shuttering, form work, curing, inserts for lifting etc. complete as per approved drawing and as directed by Engineer-in-charge with labour, materials, all tools and plants, loading, unloading, leading etc. complete.	Cum	7	6418.00	44,926.00
34	Casting, supplying and fixing RCC, Curve, Gradient, LWR, SEJ, Kilometer, Fouling mark and Bridge tablets as per approved drawing duly painted and lettered as per standard practice with contractor's materials, machinery and labour, complete as per specifications.	Nos.	100	2000.00	200,000.00
35	Manufacturing, supplying and fixing Engineering indicator board with retro reflective high intensity grain sheeting fixed aluminum sheet minimum 14 gauge or thicker (confirming to IS 736 with HLVA process confirming to RDSO specification CT/MS/ SW/ WM dated 29.10.2009 including as special specification) the size and shape shall be as per relevant para of IRPWM with black frame support made of angle 25 x 25 x 3 mm, the black portion of figures and letters provided with reflective scotch film on high intensity sheet base as per RDSO specifications. The board shall be provided with angle size 65 x 6 mm of 3.5 mtr. length and painted black and white alternatively in the strips of 25 cm lengths as per drawing, fixing in 300 x 300 x 450 mm concrete mix of 1:3:6 including cost of cement.				
	Whistle indicator, Danger, Stop, Speed indicator, Caution indicator, T/P, T/G, C-35, C-37 board	Sq.m.	5	23959.00	119,795.00
36	Fabricating, supplying and fixing boards made out of 16 gauge M.S. Sheet with angle iron frame of angle 40x40x5mm and angle iron post of 75x75x6mm for Bridge Name boards, LWR boards etc. as per standard Drawings duly painted and lettered with luminous paint with materials, machinery, labour, tools & plant, equipment & machinery, complete as per specifications and prescribed standards.	Nos.	5	2341.00	11,705.00

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Item no.	Description of Item	Unit	Qty.	Unit Rate in Rupees	Amount in Rupees
37	Laying of Sand humps / Snag dead ends as per RDSO standard drawing No: T-347 complete, with contractor's materials (excluding rails and PSC sleepers, fittings and fastenings which will be issued free of cost by the Employer within the Project area), machinery and labour. Sand hump will be treated as a complete item including laying of track beyond back of crossing, making brick channels, duly filled with clean sand including dressing/raising of earth work as per the requirement at site, complete as per the standard railway drawings and specifications. Item includes complete earthwork from ground level and no extra payment shall be made for earthwork.	Nos.	1	117070.00	117,070.00
38	Providing and fixing PCC blocks of 100 mm thick of M-30 grade concrete in Level crossing as per RDSO Drg. No. M/00003 or as approved by Engineer.	Sqm.	50	821.00	41,050.00
39	Items not covered under item no. 1 to 38 and as per Scheduled Items of Standard schedule of rates - 2007 of West Central Railway	As per schedule	1000000	89% above	1,890,000.00
<b>Total of Schedule (D)</b>					<b>25,645,725.00</b>
<b>Grand Total of All Schedules A to D</b>					<b>231,990,444.59</b>

NAME OF CONTRACTOR

SEAL

SIGNATURE OF  
AUTHORIZED REPRESENTATIVE  
NAME  
PLACE  
DATE