

**VOLUME-III
PRICE SCHEDULE, REV-00**

JOB: BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

PREAMBLE

SL NO	DESCRIPTION
1	This preamble forms part of tender document and schedule of items. The tenderer should read this preamble carefully before filling in rates for various items. Clauses under this preamble shall be read in conjunction with various volumes of tender and other tender sections as applicable and shall have precedence over any contrary statement mentioned anywhere in this document.
2	The work shall be carried out strictly as per specifications, description of the items in these schedule and / or engineer's instructions. Drawings enclose with the tender are only preliminary and for guidance/tender purposes giving some idea of the work involved. The work is to be executed as per terms & conditions of the tender and actual drawings/documents, which shall be furnished during execution.
3	Items of work provided in this schedule but not covered in this specification shall be executed strictly as per instruction of the engineer.
4	Unless specifically mentioned otherwise in the tender document, the tenderer shall quote for the finished items and shall provide for the complete cost towards power, fuel, tools, tackles, equipment, constructional plants, temporary works, labour, dismantling of all temporary piping, structures, valves, pumps, tanks & other misc. equipment, strengthening of roads/culverts/bridges etc. including arranging all clearances etc. required for carrying out different activities & tests, materials, levies, transport, layout, repairs, rectification, maintenance till handing over, supervisions, colonies, shops, establishments, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the work according to the complete tender document and this schedule.
5	The quantities of the various items mentioned in this schedule of items are approximate, based on very preliminary information and may vary to any extent or be deleted altogether. The quoted rates of each item will remain firm throughout the period of execution including extension, for reasons whatsoever, as long as variation in the total value of work executed under any part of this contract including extra items, if any but excluding any price variation remains, within plus minus fifteen percent ($\pm 15\%$) of the awarded price as per LOI.
6	Prior written approval of BHEL shall be sought by the contractor in case quantity variation of any item crosses +50% (plus fifty percent) limit during execution and approval to be obtained before execution of further quantity for this item.
7	In case Sealed /Paper Price Bids are opened for finalisation of the tender, for any Item Rate/BOQ based service contract, possibility of variation of quantity/ addition/deletion of items can not be ruled out. Under such circumstances, after execution of work, if it is observed that standing as L-1 is changed based on actual quantity executed, the bidder shall give suitable rebate to maintain your standing as L-1. Since this aspect can be assessed at the end of execution, necessary adjustment will be effected at the end of execution in final bill. This condition shall not be applicable where the tender is finalised through Reverse Auction.
8	BHEL reserve the right to rationalize the rates, quoted by L-1 bidder against unit rate items and/ or other optional items with respect to item-wise lowest rates (amongst the participating bidders), before placement of order. The rates of unit rate/optional items shall remain valid till execution of the order, if the job/work is awarded to the bidder.
9	The rates quoted shall be inclusive of cleaning of site of any vegetation, dressing, clearing of old structures and leveling etc. including fixing of grid pillars, benchmarks etc. required for commencement of site activities. No separate payment will be made towards the same. However, if separate rate for such item is available in the rate schedule, the same shall be considered.
10	Rates shall be quoted in figures and in words in clear legible writing. No overwriting is allowed. All scoring and cancellations should be countersigned and in case of illegibility the interpretation of engineer shall be final. All entries shall be in English language.
11	All works item wise shall be measured upon completion and paid for at the rates quoted and accepted as per BHEL approved payment schedule/billing break-up.
12	The tender shall be deemed to have visited site and made himself aware of all the site conditions, studied the specifications and details of work to be done within the time schedule attached and to have acquainted himself of the conditions prevailing at site before submission of his bid/offer. No claim whatsoever due to lack of knowledge of site conditions shall be entertained after award of the work.
13	No splitting of the job is envisaged unless the same is specifically indicated in the TCC/Vol-1F. Decision of BHEL in this regard shall be final and binding to the bidders.
14	Bidders are not allowed to alter the Price Schedule format including item description, quantity etc. and the offer is liable for rejection if the bidders submit their prices in Price Schedules modified by them. BHEL reserves the right to reject the offers of bidders who submit offers in Price Formats which are modified/ altered by them. Also putting any comments instead of rates/price in the designated column of the rate schedule shall make the offer liable for rejection.
15	Bidders to note that for Civil &/Structural packages, against a particular item against a ST No. appearing in more than one schedule of the BOQ, same rate must be quoted in all schedules for that particular items with same descriptions. If by error, different rates are quoted in different schedules for same ST No.(i.e. item with same description), then the higher of the rates shall be considered for evaluation but awarding shall be done with the lower rate, if the bidder becomes L-1. The same modality shall be applicable for other item rate service contracts where item with same description is repeated in different schedules.
16	For Lumpsum Service Contract : The items/components indicated in the tender is indicative and may vary to any extent. No compensation shall be payable in case of any variation in the items/components listed in the bill of quantities if the executed weight remains within the variation limit. However, in case of deletion of any item or addition of new items over and above the items listed or variation of existing quantity beyond variation limit specified, adjustment (i.e. Payment or recovery as the case may be) shall be done on pro-rata basis based on the Rate per MT worked out from the quoted lump-sum Price and the total weight of components listed /indicated in price schedule plus 15% weight variation limit.
17	Engineer's decision shall be final and binding on the contractor regarding clarification of items in the schedule with respect to the other sections/volumes of the contract.

PREAMBLE

VOLUME-III

PRICE SCHEDULE, REV-00

TENDER NO. PSER:SCT:NKP-C2057:20

**VOLUME-III
PRICE SCHEDULE, REV-00**

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TENDER NO - PSER:SCT:NKP-C2057:20

PREAMBLE

SL NO	DESCRIPTION
18	In case of tender for Civil and/or Structural works, if the Non-schedule items are not quoted by the bidder, it will be treated at par with rate of corresponding item of CPWD/PWD/DSR schedule as prescribed in the tender/BOQ cum Rate Schedule. PVC/escalation is not payable for these Non-scheduled items.
19	No interest, whatsoever, shall be payable by BHEL on the security deposit, any bank guarantee submitted or any amount due to successful bidder/contractor. No idling charge whatsoever (either for labour or any other resources) is payable by BHEL for any reason whatsoever.
20	Size and weights of various items are mentioned in the attached BOQ cum rate/price schedule for reference purpose only & these shall not be taken into consideration for quoting/calculating amount in the rate schedule. These shall be utilised as per relevant sections of tender. Bidders shall quote for each item in the rate column, taking unit as mentioned in the quantity column. Rates shall be filled in both figures and words. Amount shall be calculated based upon these rates multiplied by the mentioned quantity for the respective items.
21	Bidder's Total price shall be considered for evaluation unless stated otherwise.
22	In case of BOP packages, if Bidder does not quote/indicate the price for freight charges against indicated rate schedule, the same shall be considered as 2% of basic price and adjusted with the total quoted price against each item keeping the total quoted price unaltered.

PREAMBLE

VOLUME-III

PRICE SCHEDULE, REV-00

TENDER NO. PSER:SCT:NKP-C2057:20

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TENDER NO - PSER:SCT:NKP-C2057:20

SCH-1 - TOTAL PRICE

SL NO	DESCRIPTION	PRICE SCHEDULE REF	TOTAL PRICE (IN INR)
1.0	TOTAL PRICE FOR BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND AS PER ENTIRE TENDER DOCUMENTS INCLUDING SCOPE SPECIFICATIONS ETC. PERTAINING TO TENDER NO - PSER:SCT:NKP-C2057:20	SCH 2 - BREAK UP OF TOTAL PRICE	<i>IN FIGURES:-</i>
			<i>IN WORDS:-</i>
2.0	NON-SCHEDULE ITEM For items not covered in Schedule 3 & 4, quote % above or below or at par the CPWD Schedule of rates 2018		
a)	Rate of complete item		% above / % below / At par of CPWD Rate Schedule 2018
b)	Rate of supply of material at site only		% above / % below / At par of CPWD Rate Schedule 2018
c)	Rate for execution complete excluding supply of materials.		% above / % below / At par of CPWD Rate Schedule 2018

NOTE

1.0	Bidder shall quote total price for total price of SCH-1- Part only at Sl No. 1 above. All other amounts / rates of each item of works in respective schedules / parts will be derived based on allocated percentages. As such, any uncalled figure/ amount noted at any other place / schedule of Volume-III will not be reckoned & will stand null & void.
2.0	Bidder to note that total price at Sl No. 1 above shall be considered for evaluation & awarding. As such grand total price should be complete in all respect for the full scope defined and considering all terms and conditions.
3.0	Bidder's quoted total price of SCH-3, SCH-4 at Sl. No 1 above, respectively shall be apportioned into amount of various items of works based on allocated percentages against respective item, in respective schedules / parts. As such, bidder shall not indicate / quote any amount / rate in these schedules / parts and any amount / rate quoted against any item shall not be taken into cognizance / account and offer may be liable for rejection.
4.0	Based on the itemwise percentage allocations, the amount for the individual items of the Bill of Quantity shall be arrived at. The rates of individual items shall be derived from the amount against each items after rounded off .
5.0	Bidders to note that this is an item rate contract. Payment shall be made for the actual quantities of work executed at the unit rate arrived at as per Sl No.3 above.
6.0	Based on the itemwise percentage allocations, the amount for the individual items of the Bill of Quantity shall be arrived at. The rates of individual items shall be derived from the amount against each items and its quantity after rounding off to upto 9 decimal places. However, RA bill payment shall be done after rounding off the gross amount to two decimal points. Any adjustment, if required, due to such methodology, will be effected / adjusted in final bill.
7.0	Any item as per scope of work, if not included in the price quoted above and shown separately will not be taken cognizance of and the offer shall be liable for rejection.

**VOLUME-III
PRICE SCHEDULE, REV-00**

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TENDER NO - PSER:SCT:NKP-C2057:20

SCH-1 - TOTAL PRICE

8.0	Price format shall not be changed by bidder in any case and it may lead to cancellation of their offer.
9.0	The quoted price shall be excluding GST including freight on FOR site basis.
10.0	The quantity of items may vary during execution mainly due to actual requirement etc. The unit rates work out from the overall amount quoted & accepted by BHEL shall be considered and no separate unit rates shall be allowed. Unit rates shall be valid throughout the contract period.
11.0	For payment of non schedule items, the rate shall be derived from CPWD Schedule - 2018.

VOLUME-III
PRICE SCHEDULE, REV-00

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JHARKHAND**

TENDER NO - PSER:SCT:NKP-C2057:20

SCH-2 - BREAK UP

SL NO	DESCRIPTION	WEIGHTAGE
1.0	TOTAL SERVICE PART (SCH-3).	0.67494976
2.0	TOTAL SUPPLY PART (SCH-4).	0.32505024
3.0	TOTAL PRICE	1.00000000

VOLUME-III

PRICE SCHEDULE, REV-00

SCH-2 - BREAK UP

TENDER NO - PSER:SCT:NKP-C2057:20

PAGE 1 OF 1

SIGNATURE WITH SEAL
OF BIDDER

VOLUME-III
PRICE SCHEDULE, REV-00

JOB: BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 3 : SERVICE

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
215	Dismantling concrete work for all types of structures at all levels including stacking of servicable material to a lead of 500 m and disposal of unservicable material upto a lead of 2 km, cutting of reinforcement, labour, equipment, safety precautions etc all complete as per drawings, specification and instructions of engineer in charge.			
a	Plain cement concrete of all grades	CUM	2	0.00000622
b	Reinforced cement concrete of all grades	CUM	15	0.00006659
216	Chipping of concrete in reinforced concrete work, cutting pockets, making openings at all levels and according to shapes, disposal of waste materials upto a lead of 2 km as directed by engineer including equipment, safety precautions, making good the broken surface etc all complete as per specification, drawing, instructions of engineer in charge but excluding cutting of reinforcement .	CUM	2	0.00026605
217	Extra over and above St No 216 for cutting of reinforcement, all sizes and types including labour, equipment, return of cut reinforcement to store etc all complete as per specification, drawings and instructions of engineer in charge. Measurement shall be on the cross sectional area of reinforcement cut.	SQCM	50	0.00000083
218	Cutting Reinforced concrete with mechanised tools like Core drilling machine etc. for cutting pockets, holes, cores in slab, beam, column or foundation as per direction of engineer in charge.	CUM	5	0.00289326
508 A	Providing and laying Pressed cement concrete flooring tiles of 22mm thickness and size 300X300 mm conforming to IS 13801 with 15 mm thick 1:4 cement mortar over the top most layer of roofing treatment with fine joints including sealing of expansion joints with polysulphide sealant (cost of material & application of polysulphide sealant is included in this item) etc all complete. (Water proofing paid elsewhere)	SQM	850	0.00195088
600 JOINTS AND FILLERS				
604	Supplying and filling in position hot applied bitumin sealing compund (Grade B) confirming to IS 1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints including application of primer etc. all complete.			
a	10mm X 40mm	RM	100	0.00001724
b	12mm X 25mm	RM	50	0.00000798
c	20mmX25mm	RM	100	0.00001996
605	Providing and sealing of joints with premium grade silicon sealant (Silpruf of GE silicones or approved equivalent) including cleaning of joints, raking out groove, joint filler tapes, application of primer, curing, scaffolding etc. all complete as per manufacturer's recommendation for following size groove:			
a	25mmX25mm	RM	1500	0.00166621
b	50mmX25mm	RM	100	0.00019027
607A	Providing and Sealing of joints/leage direct in touch with soil or structure with Chemical injection grouting using water soluble monomer based chemical (confirming to IS: 2645) and cement slury by pressure pump with arrangement as per IS: 6494 and drawings all complete.	RM	400	0.00112562
700 MS EMBEDMENTS				
701	Transporting of material from store as per ST S 701 of SCH-4 of Vol-III , fabricating and fixing of mild steel embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc. including welding, bolting, cutting, drilling, scaffolding, setting etc. all complete. (Cost on account of supply of embedments, inserts, pipe sleeves, angle pieces, rungs etc. is payable seperately under ST S 701 of SCH-4 of Vol-III)	MT	1	0.00007101
703	Transportation from site stores of fabricated material as per S703 of SCH-4 of Vol-III from store and fixing of embedments, inserts, pipe sleeves, angle pieces, anchor bolts of various diameters, plates of dimensions as required etc. including scaffolding, setting in position, etc. all complete. (Cost on account of supply of embedments, inserts, pipe sleeves, angle pieces, anchor bolts, plates, rungs etc. is payable seperately under ST S 703 of SCH-4 of Vol-III)	MT	5	0.00020017

VOLUME-III
PRICE SCHEDULE, REV-00

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TENDER NO - PSER:SCT:NKP-C2057:20

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ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
704	Transportation of material from store (material as per ST S 704 of SCH-4 of Vol-III) and and erection, installation and alignment of mild steel foundation bolt assembly conforming to IS:2062 and grade 1 of IS:432 in concrete along with nuts, lock nuts (as per IS:1363, 1364 and IS:3138), washers, anchor plates, stiffner plates, protective tape, pipe sleeves, templates etc. including welding, cutting, grinding, threading, drilling etc. all complete. (Cost on account of supply of mild steel foundation bolt assembly with nuts, lock nuts, washers, anchor plates, stiffner plates, protective tape, pipe sleeves, templates etc. etc. is payable separately under ST S 704 of SCH-4 of Vol-III)	MT	1	0.00008483
705	Transporting material from store (material as per ST S 705 of SCH-4 of Vol-III), fabricating, erecting and installing following items in concrete/brickwall for all kind of works, including setting material in concrete, layout, scaffolding, cutting, forming, grinding, drilling, bolting, welding, jointing, testing etc. all complete. (Cost on account of supply of materials is payable separately under ST S 705 of SCH-4 of Vol-III)			
a	MS pipes of all diameters	Quintal	1	0.00000907
b	PVC pipes / conduits of all diameters	Quintal	1	0.00002644
c	UPVC pipes / conduits of all diameters	Quintal	1	0.00004420
d	Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for brick work with expansion sleeve of A6 polyamide:			
i	Upto 250 kg	Each	10	0.00000383
ii	Beyond 250 Kg and upto 500 kg	Each	10	0.00000571
iii	Beyond 500 Kg and upto 750 kg	Each	10	0.00000953
e	Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for concrete work with expansion sleeve of stainless steel:			
ii	Beyond 250 Kg and upto 500 kg	Each	50	0.00002854
iii	Beyond 500 Kg and upto 750 kg	Each	50	0.00004767
900 DOORS, WINDOWS, VENTILATORS, LOUVERS				
901	Providing and fixing wooden frame conforming to IS 4021 made of best quality seasoned CP teakwood free from large or loose knots, cracks or other defects including sand paper smoothening, hold fasts, beading, primer and finish painting / polishing etc. all complete with proper wood joinery, accurately set to required lines or levels and rigidly secured in place. (Finish painting / polishing paid separately)	CUM	1	0.00073657
902	Providing and fixing teakwood frame panel door shutter as per IS 1003 with 35 mm x 150 mm vertical rail & 35mm x 125 mm horizontal rail and 12 mm thick interlocked panels of teakwood with proper wood joinery including beading, preparation of working drawings, godrej or equivalent make mortice lock with handels on both sides, approved ISI mark anodised fittings like door stopper, 300mm long tower bolts, 16x300mm long aldrops, 125mm long handles on both sides etc. butt hinges, sliding bolt, knobs, (all fitting shall be anodised aluminium color dyed), screws, primer and finish painting / polishing etc. all complete. (Finish painting / polishing paid separately)	SQM	10	0.00028826
903	Transporting, fitting and fixing solid core flush door shutter as per IS 2202 part II, 35mm thick homogenous particle board bonded with BWP type phenolformaldihyde synthetic resin, particle board core conforming to IS 3087 type I, 35x12 mm thick teakwood beading all around including preparation of working drawings. godrej or equivalent make mortice lock with handels on both sides, approved ISI mark anodised fittings like door stopper, 300mm long tower bolts, 16x300mm long aldrops, 125mm long handles on both sides etc. butt hinges, sliding bolt, knobs, (all fittings shall be anodised aluminium color dyed), finish flat oil paint confirming to IS: 137 over primer, screws etc. all complete as per drawing, specification and instruction of engineer in charge. with commercial faces and teak wood edges. (Cost on account of supply of solid core flush door is payable separately under ST S 903 of SCH-4 of Vol-III)	SQM	30	0.00021949
904	Transporting and fixing single or double steel door shutters with 35 mm thk flush design shutter comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centres including void filled with mineral wool (density as per specification), all fittings, Godrej or equivalent make mortice lock with handle on both sides, shop and final painting etc all complete. (Cost on account of supply of steel door shutters is payable separately under ST S 904 of SCH-4 of Vol-III)	SQM	65	0.00071616

VOLUME-III
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TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 3 : SERVICE

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
906	Transporting, fitting and fixing anodized extruded aluminium doors (single or double shutter) conforming to IS:1948, IS:1949 fabricated from extruded sections of HINDALCO/JINDAL or equivalent make having minimum 3mm wall thickness as per IS:1285, IS: 733 and anodized and electro color coating of required shade as per IS 1868 (minimum anodized coating of grade AC15). fixed with rawl plugs, expansion fasteners,SS screws / fixing clips necessary filling of gaps at Junctions, at top, bottom & sides with required PVC / neoprene felt for bi-metallic protection etc. Glazing shall be clear float glass of 6mm thickness including snap fit type beading, concealed screws, fixtures, Godrej or equivalent make Mortice lock with handle on both sides, etc all complete. Aluminium section shall be smooth, free of stains, straight, mitred & jointed mechanically wherever required. (Glazing shall be paid separately) (Cost on account of supply of material is payable separately under ST S 906 of SCH-4 of Vol-III)	SQM	20	0.00009192
906A	Transporting and fixing anodized extruded aluminium doors (single or double shutter) conforming to IS:1948, IS:1949 fabricated from extruded sections of HINDALCO/JINDAL or equivalent make having minimum 2 mm wall thickness as per IS:1285, IS: 733 and anodized(15 micron coating thickness) and electro color dyed of required shade as per IS 1868 (minimum anodized coating of grade AC15). fixed with rawl plugs, expansion fasteners,SS screws / fixing clips necessary filling of gaps at Junctions, at top, bottom & sides with required PVC / neoprene felt for bi-metallic protection etc. Glazing shall be clear toughened glass of 10 mm thickness including snap fit type beading, concealed screws, fixtures, Godrej or equivalent make Mortice lock with handle on both sides, etc all complete. Aluminium section shall be smooth, free of stains, straight, mitred & jointed mechanically wherever required. (Glazing shall be paid separately) (Cost on account of supply of material is payable separately under ST S 906A of SCH-4 of Vol-III)	SQM	300	0.00137880
907	Transporting and fixing fire proof steel doors (single or double shutter) with panic devices having 45mm thk flush design comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centers including all fittings, shop painting with approved post office/signal red color fire resistant paint and mineral wool insulation (64 kg/cum density) complete and shall be fire proof as per IS:3614, TAC requirements and as per specification. Minimum ratings shall be 2 Hrs. (Cost on account of supply of material is payable separately under ST S 907 of SCH-4 of Vol-III)	SQM	100	0.00095645
908	Providing and fixing steel windows/ventilator with steel sections as per IS:1038, IS:1361 & IS:7452 latest revision.including all fittings, metal beadings, hold fasts, shop and final painting ,glazing etc. all complete. (Glazing shall be paid separately)			
a	openable type	SQM	6	0.00005896
b	fixed type	SQM	10	0.00006611
911	Providing and fixing of door closers as per IS 3564 ,of approved make & quality all complete of following type :			
a	Over head hydraulic door closures	Each	30	0.00014975
b	Floor mounted Hydraulic door closers	Each	15	0.00020053
912	Providing and fixing pressed steel frames fabricated from 16 gauge M.S sheet mortised, reinforced drilled and tapped for hinges and locks bolts strikes, hold fasts adjustable floor anchors, floor tiles/weather bars ,paintings etc all complete as per specifications.	Kg	500	0.00024776
913	Transporting and fixing in position rolling shutter of hot rolled double dipped galvanised steel lath section of 18 SWG tested mild steel strips at 75mm rolling centres interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation including wire springs, top cover, primer & shop coats of approved enamel paint etc, all complete as per IS 6248 and specification of approved make of following types: The bottom lath shall be coupled to a lock plate fabricated from 3mm thick galvanised steel plate and securely riveted with stiffening angles.(partly coiled and lath/full lath). (Cost on account of supply of rolling shutter is payable separately under ST S 913 of SCH-4 of Vol-III)			
b	Mechanically Operated	SQM	10	0.00004201
c	Electrically operated	SQM	150	0.00078767
914	Providing and fixing PVC doors(25 thk double skin) of sintex or equivalent make including all fitting & fixtures as per specification, drawing and instructions of engineer in charge.	SQM	10	0.00008254

VOLUME-III
PRICE SCHEDULE, REV-00

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TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 3 : SERVICE

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
915	Transporting, Fixing and fitting of glazing of first grade class in steel/aluminium/wooden frames, where ever required, cleaning after fixing including hardware, gaskets, clips, beadings etc. all complete as per Specification for the followings (Cost on account of supply of material is payable separately under ST S 915 of SCH-4 of Vol-III)			
b	4 mm thick clear float glass	SQM	50	0.00006784
ba	5 mm thick tinted float glass	SQM	50	0.00004922
c	5.5 mm thick clear float glass	SQM	5	0.00000781
d	6 mm thick wired glass	SQM	100	0.00015930
da	6mm thick Reflective toughened glass	SQM	800	0.00210705
e	6mm thick Polycarbonate sheet multi (twin) wall fire retardant and ultra violet resistant with sealed open edges.	SQM	100	0.00019455
ea	2mm thick Polycarbonate sheet with profile matching with metal sheeting of building. The Polycarbonate sheets shall be fire and u/v resistant, and suitable for continuous use up to a temperature of 1000C including cost of Suitable aluminium beading . Open ends of the sheet shall be sealed as per manufacturer's recommendations.	SQM	10	0.00001314
g	6 mm thick tinted heat reflecting type float glass	SQM	50	0.00011390
h	6 mm thick clear toughened safety glass	SQM	50	0.00012538
i	10 mm thick clear toughened glass	SQM	200	0.00087794
ia	8 mm thick clear toughened glass	SQM	100	0.00035117
jb	8 mm thick Reflective toughened glass,	SQM	60	0.00023704
k	Two nos. tinted toughened float glass hermetically sealed and separated by 12 mm thick air gap for thermal insulation (only single elevation area to be measured)Thickness as per required fire rating and design requirement	SQM	40	0.00017599
l	One outer tinted heat-reflecting type float glass and one inner plain float glass hermetically sealed and separated by 12 mm thick gap for thermal insulation (only single elevation area to be measured).(Thickness of individual glass will be as per design and required fire rating)	SQM	120	0.00043821
m	6 mm thick laminated glass	SQM	10	0.00005314
n	4 mm thick heat reflecting type float glass	SQM	20	0.00003938
o	6 mm thick Ground glass	SQM	10	0.00001968
p	Two nos. 6 mm thick low-e glass hermetically sealed and separated by 12mm thick air gap insulation.only single elevation area to be measured	SQM	10	0.00000984
q	6mm thk. reflective toughened glass, with Solar factor 45% or less, U-value less than 5.7 W/m2.K, VLT min 40%. Glass shall be of Saint Gobain (India) or ASAHI (India) or equivalent make and shall be free from distortion and thermal stress	SQM	10	0.00001314
r	Fixing Glass block masonry work with approved glass blocks of size 190 x 190 x 90 (min), jointed with suitable adhesive complete as per drawing, specification and instructions of engineer in charge.	SQM	10	0.00001314
919	Providing and fixing 1 mm thk. MS sheet sliding shutters with frame and diagonal braces of 50X50X6 angle iron, 3 mm MS gusset plates at junction and corners, 25 mm dia pulley, 50X50X6 angle and T-iron guide at the top and bottom respectively including painting etc. all complete.	SQM	5	0.00007060
920	Providing & erecting Polycarbonate sheet dome/pyramidal shape skylight in atrium with 6mm thick multi (twin) wall fire retardant and ultra violet resistant polycarbonate sheet. Joints shall be properly sealed with sealant, screws with pvc cap, self tapping screws, EPDM rubber gasket.etc all complete as per detailed drawing and specification. Necessary anodised aluminium framing arrangement shall be provided for fixing of skylight and payment of Aluminium framing shall be made separately under item 909.	SQM	10	0.00008111
920a	Providing and erecting Roof skylight structure with 4mm thick embossed clear translucent polycarbonate IR sheet, both side UV resistant coated, minimum 55% light transmission, solar control, approved make, texture and shade, fixed to powder coated Aluminium section with 60mm width top & bottom with EPDM rubber gasket in approved shape like dome, pyramidal etc, sealing of joints with sealant, screws with pvc cap, self tapping screws, EPDM rubber gasket.etc as per drawing, standards, specification, instruction of engineer in charge etc all complete. Payment shall be made for projected surface area of skylight and cost of powder coated aluminium is deemed to be part of the composite item.	SQM	10	0.00028168

VOLUME-III
PRICE SCHEDULE, REV-00

JOB: BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 3 : SERVICE

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
A921	Providing & fixing 120 minutes Fire Rated, Fully Glazed non load bearing fixed partition, door, with valid fire test certificate from national or international lab with Partition Frame manufactured from minimum 1.6 mm galvanized steel sheet (zinc coating not less than 120 gm/sqm) pressed to form a suitable profile as required (60X70mm) & fixed to the supporting construction by means of M 10 X 120 or bigger steel bolts at 150mm from the edges & every 500mm c/c or higher as per design requirement. The frame shall be finished with etch primer for scratch resistance and shall be powder coated of min. 30 micron of approved shade and color. The glass panels shall be interlayered minimum 11mm thick or higher thickness as per design requirement and manufacturer test certificate, 120 minute fire rating and partially insulated (EW120), with 15 minute full insulation, Non Wired Toughened Interlayered glass having a sound reduction of greater than 37dB, light transmission of 87% and compliant to min. class 1(B)1 category of impact resistance as per EN 12600. The glass should be manufactured in UL & TUV audited Facility and including UL-EU Certification. The glass shall be held in position with minimum 1.6mm G.I Beading, clamped or bolted to the frame profile by 4mm x 35mm steel screws at every 250 mm c/c and a ceramic tape of cross section of 5mm x 20mm on both sides of the glass. The item shall include intumescent putty and fire resistant acrylic sealants and the total assembly shall satisfy the fire resistance criteria of stability, integrity & radiation control and partial insulation (EW120) all complete as per specification, design and site requirements. Shop/fabrication drawings for the item with all construction and anchoring details along with fire rating test reports shall be got approved from Engineer-in-Charge before execution. The glass should be free from distortion and thermal stress.	Sqm	675	0.01695008
A922	Providing & fixing minimum 29mm thick or higher thickness Hermetically sealed double glass (DGU) consisting of Fire resistant glass of minimum 11mm thick or higher thickness as per design requirement and manufacturer test certificate, clear, toughened glass with, 120 minutes fire rated for both integrity & radiation control, remain transparent under both fire and non fire condition and 6mm thick tinted glass with 12mm gap. The partitions and door shall be 120 minutes Fire Rated, Fully Glazed non load bearing fixed partition, openable door, with valid fire test certificate from national or international lab with steel Frame manufactured from minimum 1.6 mm galvanized steel sheet (zinc coating not less than 120 gm/sqm) pressed to form a suitable profile to accomodate the glass & fixed to the supporting construction by means of M 10 X 120 or bigger steel bolts at 150 mm from the edges & every 500mm c/c or as per design requirement. The frame shall be finished with etch primer for scratch resistance and shall be powder coated of min. 30 micron of approved shade and color. The glass panels shall be interlayered minimum 11mm thick or higher thickness, shall be 120 minute fire rating and partially insulated (EW120), with 15 minute full insulation, Non Wired Toughened Interlayered glass having a sound reduction of greater than 37dB, light transmission of 87% and compliant to class 1(B)1 category of impact resistance as per EN 12600. The glass should be manufactured in UL & TUV audited Facility and including UL-EU Certification. The glass shall be held in position with minimum 1.6 mm G.I Beading, clamped or bolted to the frame profile by 4mm x 35mm steel screws at every 250 mm c/c and a ceramic tape of cross section of 5mm x 20mm on both sides of the glass. The item shall include intumescent putty and fire resistant acrylic sealants and the total assembly shall satisfy the fire resistance criteria of stability, integrity & radiation control and partial insulation (EW120) all complete as per specification, design and site requirements. Shop/fabrication drawings for the item with all construction and anchoring details along with fire rating test reports shall be got approved from Engineer-in-Charge before execution. The glass should be free from distortion and thermal stress. Only single elevation area to be measured.	Sqm	110	0.00517919
A923	Providing and fixing electrically operated, self operable/ closing, approved anodized steel framed glass door with minimum 11mm thick or higher thickness as per design requirement and manufacturer test certificate fire rated toughened glass, all complete. Automatic Sliding operating system comprising of Advanced DC brushless motor, Automatic Reversing Safety Device, Suitable for door weight min. 100 kg or as per design requirement, Opening speed : 90-110cm /sec (adjustable), Closing Speed : 40-110cm/sec (adjustable), opening time : within 1-9 seconds after door stopped in opening, controller : 8 Bit micro computer, Motor (Dortexor equivalent) : DC12V, 35W brushless motor, Power Voltage : AC 110V - 240V. 50Hz - 60Hz, Power Consumption : 45W including Infra Red Sensors 2No both sides, rails & top & bottom as required, any another accessories as required etc. all complete of best make and quality as approved by Engineer in charge. The door shall be double panel sliding steel frame door of approx. area 5 sq.m. to 10 sq.m. each. The glass should be free from distortion and thermal stress. Only single elevation area to be measured.	Nos	6	0.00245977

VOLUME-III
PRICE SCHEDULE, REV-00

JOB: BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 3 : SERVICE

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
A924	Providing and fixing of fully glazed steel door with 120 minutes fire rating, of integrity and radiation control (EW 120) fabricated with minimum 1.6 mm thick galvanized steel sheet. The door frames are manufactured from minimum 1.6 mm galvanized steel sheet (zinc coating not less than 120 gm/sqm) pressed to form a suitable profile of min. 60 mm x 70 mm. The door shutter would have a top rail and side rail 60 mm x 85 mm and a bottom rail of 110 mm x 60 mm. The frame shall be finished with approved fire resistant primer or Powder coating of min. 30 micron as per approved shade. The sections have a special insulating infill. The test is conducted in IFTS as per EN 1634-1: 1999. The glass should be minimum 11mm thick or higher thickness as per design requirement and manufacturer test certificate, interlayered clear toughened glass with 120 min. fire rated (remain transparent under both fire and non fire condition) for both integrity & radiation control (EW 120) Non Wired toughened glass with a light transmission of 86% and a sound reduction of 37 dB and manufactured in UL & TUV audited Facility and including UL-EU Certification. The glass should be compliant to class min. class 1(B)1 category of Impact Resistance as per EN 12600. The glass should be held in its place with the help of 1.6 mm GI beading and a special ceramic tape with cross section of 5 x 20 mm as per the test evidence. The shutters should be fixed to the frame using SS Ball Bearing Hinges of size 100 mm x 89 mm and 3 mm thickness or equivalent. Beading should be attached using 4 mm x 35 mm SS screws at a distance of 75 mm from the edges and 150 mm c/c henceforth. The door should be fitted with Mortise Sash lock 952F and door closer TS 68 and hardware of Dorma, Geze or equivalent. The inactive leaf should be fixed to the frame using 1200mm long tower bolt, all complete as per specification, design and site requirements and approved by Engineer incharge before execution. The glass should be free from distortion and thermal stress. Only single elevation area to be measured.	Sqm	70	0.00252682
1000 BRICKWORK				
1002	Providing brick work in cement mortar 1:6 (1 cement 6 coarse sand) in walls, chambers etc. in thickness 230mm at all heights, places and position above plinth including raking out joints, curing, scaffolding etc complete excluding plastering and painting.			
a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 50 kg/cm ²	CUM	200	0.00380362
c	Using burnt clay bricks of class designation 7.5 of nominal dimension	CUM	5	0.00012985
1003	Providing brick work in cement mortar 1:4 (1 cement 4 coarse sand) in partition walls , chambers etc. in thickness 115mm at all heights, places and position above or below plinth/graded level including providing two nos. 6 mm diameter MS bars at every third layer, raking out joints, curing, scaffolding etc complete excluding plastering and painting as per specification.			
a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 50 kg/cm ² for 115mm thick wall	SQM	250	0.00057475
1005	Providing brick soling including spreading of earth, ramming, watering including 25mm thick cushion of sand complete including excavation and disposal of surplus earth - Using flat bricks.			
a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm ²	SQM	240	0.00033682
1006	Breaking of existing brick work at all levels including plastering, removing the rubbish up to a distance of 500 m including transportation, loading, unloading etc. all complete as directed by the engineer.	CUM	10	0.00003525

VOLUME-III
PRICE SCHEDULE, REV-00

JOB: BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 3 : SERVICE

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
1009	Making openings in existing brick wall or partition wall including making good the broken edges/surface with cement mortar etc. complete.	CUM	5	0.00002040
1010	Supply and placing in position mild steel wire fabric of square mesh 25 mm size and wire diameter of 2 mm for encasing of steel sections in concrete including cutting, bending, fixing etc. complete.	SQM	70	0.00004470
1011	Filling existing brick wall/ partition wall opening at all level including making good the broken edges/surface with cement mortar, painting, finishing to match with existing finishing, scaffolding/supporting at any level, removal of debris upto a lead of 1 km including loading, unloading, transportation etc. all complete.	SQM	30	0.00010256
1012	Providing and filling brick bats in soak pits all complete.	CUM	10	0.00005019
1200 CEMENT MORTAR PLASTER				
1209	Providing and laying encasement to box type steel beams at all levels with lath plaster 50 mm nominal thickness with cement plaster (1:4) over chicken wire mesh including all labour, materials, equipment, handling, transporting, mixing, placing, leveling, curing and cleaning, finishing the exposed surfaces etc including centering and shuttering all complete as per specification, drawing and instructions of enginner in charge	SQM	20	0.00002162
FINISHES TO CONCRETE / PLASTERED SURFACES				
1300 FINISHES TO CONCRETE / PLASTERED SURFACES				
1301	Two or more coats of white wash/ colour wash as per IS 627 of approved brand and manufacture to give an even shade including a priming coat as per specifications.	SQM	250	0.00001995
1302	Two or more coats of Exterior masonry paint (water or solvent base) of special resins, adhesives and additives mixed with fine, hard stone aggregate and suitable pigment. The paint shall be applied on a coat of primer over dried, prepared plaster surface as manufacturers guidlines. The final finished coating shall be fungus resistant, UV resistant, water repellant, alkali resistant and extremely durable with color fastness as per specification.	SQM	100	0.00015331
1302A	Two or more coats of Solvent based (100% pure Acrylic Co- polymer resin based) for exterior use without any water sensetive ingradient. Paint shall be applied on a coats of primer over dried prepared plaster surface as per manufacturer guidelines.The final finished coating shall be funfius resistant,UV resistant water resistant ,Alkali resistant, and extermilely durable with colour and shed as per specification	SQM	100	0.00018922
1303	Providing and applying two or more coats of oil bound distemper as per IS 428 of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guideline.	SQM	1200	0.00028735
1304	Two or more coats of acrylic distemper of approved brand and manufacture to give an even shade including a priming coat with distemper primer complete as per IS 428.	SQM	150	0.00003641

VOLUME-III
PRICE SCHEDULE, REV-00

JOB: BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 3 : SERVICE

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
1305	Providing and applying two or more coats of acrylic emulsion paint as per IS 5411 of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guideline.	SQM	4400	0.00159493
1306	Providing and applying 2 or more coats of acid/alkali chemical resistant paint of approved brand and colour to floors, walls and ceiling including preparation of surface to receive paint, providing and applying bitumen primer confirming to IS 158 complete all as per manufacturer's recommendations and as approved by engineer, at all heights above or below grade level, complete as per specifications.	SQM	100	0.00011041
1306A	Providing and applying of two or more coats of Oil resistant paint of approved brand and Menufecturer to five an even shade on surface all complete as per specification	SQM	100	0.00017127
1307	Two or more coats of fire resistant transparent paint as per IS 162 on all woodwork over french polish as per IS 348 or flat oil paint as per IS 137 of approved grade and manufacture to give an even shade as per specifications.	SQM	330	0.00048066
1308	Two or more coats of black anti-corrosive bitumastic painting of approved brand and manufacture to give an even shade complete.	SQM	160	0.00003848
1309	Two or more coats of synthetic enamel paint of approved make made from synthetic resins and drying oil with rutile titanium dioxide and other selected pigments to give smooth, hard, durable & glossy finish to all interior and exterior surfaces complete.	SQM	260	0.00005616
1310	Providing and applying 3 coats of water proof cement paint of approved make and color on exterior surface at all heights including material, labour, scaffolding, curing etc including primer coat complete as per specification.	SQM	1360	0.00031842
1311	Providing and applying resin bonded granular textured finish (Two or more coats), for external applications consisting of crushed stone/quartz chips of .5 mm to 2.5 mm size and of approved natural color/shade and bonded with synthetic resins, adhesives and additives altogether in a single pack mix, applied on cured and dried plaster surface with a dry film thickness of minimum 2 mm. The final finish shall have UV resistance, fungus, bacterial resistance properties all complete with grooves filled with poly sulfide sealant of matching color and shade as per specification/drawing/approval of engineer in charge.	SQM	500	0.00070670
1311A	Providing and applying resin bonded granular textured/Flake finish, for external applications, consisting of crushed stone/quartz chips of 2.5 mm size and of approved natural color/shade and bonded with synthetic resins, adhesives and additives altogether in a single pack mix, applied on cured and dried plaster surface . The final finish shall have UV resistance, fungus, bacterial resistance properties all complete with grooves filled with poly sulfide sealant of matching color and shade as per specification/drawing/approval of engineer in charge.	SQM	50	0.00007420
1311B	Providing and applying Resin Bonded Granuler/flake textured finish for internal applications consisting of crushed sand/quartz chips of 1.2mm size and of approved colour/sheds and bonded with synthetic resins, adhesives and additives altogether in a single pack mix, applied on cured and dried plaster surface . The final finish shall have UV resistance, fungus, bacterial resistance properties all complete with grooves filled with polysulfide sealant of matching color and shade as per specification/drawing/approval of engineer in charge.	SQM	50	0.00009329
1311D	Providing and fixing,Stone work for wall lining(Veneer work) with Black polished granite stone slab 18mm thk/ polished sadarhally grey granite slab 18mm thk over 20mm thk bed of cement morter 1:3 (1 cement, 3 sand) and jointed with gray cement slurry @ 3.3kg/m2 including rubbing, polishing etc, all complete as per specification. (CEMENT WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)	SQM	10	0.00022869
1311E	Providing and applying low VOC (volatile organic compound) resin bonded granular textured finish, for external applications shall consist of crushed stone/quartz chips of .5 mm to 2.5 mm size and of approved natural color/shade and bonded with synthetic resins, adhesives and additives altogether in a single pack mix, applied on cured and dried plaster surface with a dry film thickness of minimum 2 mm. The final finish shall have UV resistance, fungus, bacterial resistance properties all complete with grooves filled with poly sulfide sealant of matching color and shade as per specification/drawing/approval of engineer in charge.	SQM	200	0.00032508
1312	Providing and applying 2 mm thick plaster of paris punning on walls with Oil resistant property including preparation of surface, staging, etc. to achieve a smooth even surface all complete as per specification and as directed by Engineer.	SQM	1000	0.00030259
1313	Providing and applying ready made Epoxy Paint over areas other than steel structure with suitable pigments of approved shade as per specification and direction of Engineer. The epoxy paint shall be a two pack material and shall be resistant to water, splash, spillage & acidic environment. The epoxy paint coating shall be of 150micron thickness over epoxy primer.	SQM	100	0.00008978

VOLUME-III
PRICE SCHEDULE, REV-00

JOB: BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 3 : SERVICE

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
1315	Providing and applying two or more coats of premium Acrylic based weather coat paint of approved brand and manufacture and required shade over one coat of primer after necessary cleaning/ washing, preparing the surface using coir brush/ wire brush, sand paper, including filling of cracks with putty wherever required etc. all complete to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guidelines. The final finished coating shall be fungus resistant, UV resistant, water repellent and extremely durable with color fastness as per specification.	SQM	400	0.00035989
1315A	Two or more coats of textured cement paint of approved quality confirming to IS: 5410 as (Sandtax Matt or equivalent) of approved colour and shade to give an even shade on surface with all in complete.	SQM	40	0.00005138
FLOORING AND SKIRTING				
1400 FLOORING AND SKIRTING				
Flooring and skirting at any level including base layer, labour, material, equipments, transportation, handling, curing, polishing etc. at any level as per specification,				
1403	Providing and laying precast polished heavy duty cement concrete tiles (Carborundum topping) of size 300X300X25 thick of approved shade as per IS 1237, including cement mortar bedding of 1:3 (1 cement : 3 sand) jointed with neat cement slurry etc. all complete with pigment to match the shade of the tiles including rubbing, curing, grinding and polishing complete with laying as per IS 1443 etc. all complete for following:			
a	Laid in floors	SQM	50	0.00018740
b	Laid in skirting	SQM	10	0.00004696
1406	Providing and laying polished Kota stone 18mm to 20mm thk in flooring. Under bed shall average 30mm thk of 1 cement : 2 sand : 4 stone aggregates by volume and brought to proper level. The kota stone slabs/tiles laid over under bed, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry spread over the surface with fine joint finished including pigments, curing, grinding, granite polishing etc. all complete.	SQM	10	0.00004629
1408	Providing polished Kota stone 18mm to 20mm thk in skirting projecting 6mm from adjacent plaster including cutting brickwall upto the required depth, edging, finishing etc. all complete.	SQM	10	0.00004549
1410	Marble stone Flooring laid in 50mm overall thickness with 18-20mm thick marble slabs (grade -1) with minimum 30mm thick underbed of 1 cement : 2 sand : 4 stone aggregate by volume and brought to proper level. The marble slabs/tiles laid over underbed with mortar 1:3, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry spread over the surface with fine joint finished including pigments, curing, grinding, granite polishing etc. all complete.	SQM	20	0.00033675
1412	Providing and laying 18-20mm thick polished Granite stone of approved color and texture in flooring with brass/ stainless steel strips. Under bed shall average 30mm thk of 1 cement : 2 sand : 4 stone aggregate by volume and brought to proper level. The granite stone slabs/tiles laid over under bed, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry spread over the surface with fine joint finished including pigments, curing, grinding, granite polishing etc. all complete.	SQM	200	0.00192952
1412A	Providing and laying 18-20mm thick shot blasted Granite stone in flooring of approved color and texture in flooring with brass/ stainless steel strips. Under bed shall average 30mm thk of 1 cement : 2 sand : 4 stone aggregate by volume and brought to proper level. The granite stone slabs/tiles laid over under bed, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry spread over the surface with fine joint finished including pigments, curing, grinding, granite polishing etc. all complete.	SQM	20	0.00020260
1414	Providing and laying polished Granite stone 18-20mm thk in skirting and dado with 6mm thick projection from adjacent plaster including mortar, cement slurry, pigments, curing, grinding, moulding, granite polishing etc. all complete.	SQM	20	0.00021225
1416	Providing and laying vitrified ceramic tiles of polished variety of size 600x600 from reputed / approved manufacturer, complete including underbed of cement mortar 1:3 with neat cement slurry etc. all complete for following			
d	10mm thick tiles in skirting and dado upto specific height	SQM	400	0.00155847

VOLUME-III
PRICE SCHEDULE, REV-00

JOB: BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 3 : SERVICE

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
1417A	Providing and laying antiskid, full body Vitrified ceramic tiles of matt finish of size 800x800/600x600 mm from reputed / approved manufacturer including underbed of cement mortar 1:3 with neat cement slurry etc. all complete for following with joints 3 to 5 mm wide & 8 to 10 mm deep & shall be filled with approved Epoxy Grout mix of 0.70 kg of organic coated filler of desired shade (0.10 kg of hardner and 0.20 kg of resin per kg) - Full body Vitrified Tiles shall have water absorption less than 0.5%, Modulus of Rupture more than 38N/mm ² , Breaking strength more than 7500 N, Moh's scale more than 6, Abrasion resistance less than 144 mm ³ and coefficient of friction more than 0.4. Vitrified Tiles shall generally conform to IS15622 (Full body Vitrified Tiles shall be Johnson Endura Industrial Tile conforming to IS 4457:2007 or Simpolo Rock Deck Tile conforming to ISO 13006/ISO :10545).			
b1	20mm thick tiles In flooring	SQM	3000	0.03426037
1417B	Laminated wooden flooring	SQM	10	0.00011019
1418	Providing and laying 10 mm thk non-skid fully vitrified tiles of make 'MARBONITE' or 'FERRASTONE of BOSS Profile limited' or equivalent in flooring and skirting over 30 mm thick underbed of 1 part cement and 3 parts coarse sand by weight mixed with sufficient water, complete as per specification laid in pattern of following sizes			
a	400X400 mm	SQM	240	0.00076159
b	600X600 mm	SQM	240	0.00082909
1419	Providing and laying granite stone slab of 20mm thickness single piece for wash basin / sink slab /facia of black or approved colour with cutting, making corners, moulding and opening etc. all complete.	SQM	20	0.00023392
1419A	Providing and laying Heavy Duty Designer Ceramic wall Tiles of 5 mm thick of reputed manufacturer of approved finish shade and colour including underbed of cement mortar 1:3 with neat cement slurry etc. all complete.			
	300X300 mm	SQM	400	0.00141279
1420	Providing and laying Heavy Duty dust pressed Ceramic Tiles of 7mm thick of reputed manufacturer(Grade-5) of approved finish shade and colour including underbed of cement mortar 1:3 with neat cement slurry etc. all complete.			
a	300X300 mm	SQM	3500	0.01030160
b	600X600 mm	SQM	50	0.00021009
1420A	Providing and laying Heavy Duty dust pressed Ceramic Tiles of 10mm thick of reputed manufacturer of approved finish shade and colour including underbed of cement mortar 1:3 with neat cement slurry etc. all complete.			
a	300X300 mm	SQM	300	0.00097129
b	600X600 mm	SQM	100	0.00046219
1422	Providing & fixing Acid / Alkali resistant (Chemical resistant) tiles confirming to IS:4457 and IS: 4860 in flooring/Dado and shall be laid over bitumastic lining of min 12mm thick (to be laid in layers of 6mm each). The tiles shall be applied with 6mm thick Potassium Silicate bedding mortar as per IS:4441, 4443 & 4832 and including preparation of surface, application of bitumen primer, curing etc. all complete for following thicknesses. The tiles should be abrasion resistant & durable.			
a	20 mm thick	SQM	10	0.00007326
1425	Providing and laying polished Marble slabs (Aranga white or equivalent approved shade/color /design) 20 mm thk in staircase landing/skirting and corridors over minimum 20 mm thick underbed of 1 cement : 2 sand : 4 stone aggregates by volume mixed with sufficient water to form a stiff workable mass. The marble slabs shall be laid over under-bed, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry spread over the surface with fine joint finished including moulded marbel nosing, pigments, curing, grinding, making corners, granite polishing etc. complete.	SQM	20	0.00026658
1430	Providing and fixing dividing strips in joints of cast in situ floorings at various elevations, finishing, all labour, material etc. complete as per drawing, specification and instructions of engineer in charge.			
a	Glass strips 40 mm wide and minimum 6mm / 3 mm thick.	RM	500	0.00010305
b	Aluminium strips 40 mm wide and minimum 3 mm thick	RM	500	0.00021449

VOLUME-III
PRICE SCHEDULE, REV-00

JOB: BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 3 : SERVICE

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
1432	Providing and fixing decorative murals in tiles(glass mosaic tiles of minimum size 24mm X 24mm X 3.8 mm thick) from reputed / approved manufacturer as per specification, drawing & instruction of engineer in charge.	SQM	10	0.00015490
1433	Providing and fixing decorative murals in ACP(Aluminium Composite Panels) from reputed / approved manufacturer as per specification, drawing & instruction of engineer in charge.	SQM	10	0.00018710
1433A	Providing and fixing Slip Resisting Nosing at various elevations, finishing, all labour, material etc. complete as per drawing, specification and instructions of engineer in charge.	RM	200	0.00024200
1500 ROOFING/SIDE CLADING				
1501	Transportation from store and fixing METAL DECK SHEET Type-I, permanently color coated galvanised MS troughed metal sheet decking plate (material as per ST No. S 1501 of SCH-4 of Vol-III) over roof purlins for cast-in-situ roof slab as per relevant IS code and as per specification including fixing of plates to beams, side lapping, end lapping etc. all complete for below mentioned spans including fixing of sheet to top flange of beam (face of sheet exposed to operating floor shall be as per ST S 1501 of SCH-4) with drawn arc welding of headed shear anchor studs @ 260mm c/c in the trough and stich screws between two adjacent sheets and sealing with epoxy sealant. The shear anchor studs shall confirm to type B studs specified in AWS D1.1/D1.1M or equivalent as shear connector of 19 mm dia & 100 mm length manufactured from cold drawn round steel bars confirming to ASTM A 29 of grade designation 1010 through 1020 of standard quality with either semi killed or killed welded by drawn arc stud welding through metal deck sheet. Measurement of profile sheeting shall be of the plan area of roof covered by MS trough metal decking. (This item is exclusive of cost on account of supply of metal deck sheet type-I)			
a	Span Upto 1800mm	SQM	4800.00	0.00457640
1501C	Transportation from store and fixing METAL DECK SHEET Type-IV, permanently color coated galvanised MS troughed metal sheet decking plate (material as per ST No. S 1501C of SCH-4 of Vol-III) over floor beams for cast-in-situ roof slab as per relevant IS code and as per specification including fixing of plates to beams, side lapping, end lapping etc. all complete for below mentioned spans including fixing of sheet to top flange of beam (face of sheet exposed to operating floor shall be as per ST S 1501C of SCH-4) with drawn arc welding of headed shear anchor studs @ 260mm c/c in the trough and stich screws between two adjacent sheets and sealing with epoxy sealant. The shear anchor studs shall confirm to type B studs specified in AWS D1.1/D1.1M or equivalent as shear connector of 19 mm dia & 100 mm length manufactured from cold drawn round steel bars confirming to ASTM A 29 of grade designation 1010 through 1020 of standard quality with either semi killed or killed welded by drawn arc stud welding through metal deck sheet. Measurement of profile sheeting shall be of the plan area of roof covered by MS trough metal decking. (This item is exclusive of cost on account of supply of metal deck sheet type-IV)			
a	For Floor Sheet Span Upto 1800mm	SQM	18500.00	0.01763820
b	For Floor Sheet Span Exceeding 1800mm and upto 2500 mm	SQM	6500.00	0.00744066
1502	Providing and fixing shear connectors of mild steel studs having 16mm dia and minimum 75 mm projected length above purlin passing through metal decking as per relevant IS codes and specification.	QUINTAL	50.00	0.00393339
1502A	Providing and fixing shear connectors of mild steel studs having 19 mm dia and minimum 100 mm projected length above purlin passing through metal decking as per relevant IS codes and specification. The rate of galvanising not to be less than 275gm / sq.m. The sheets shall be of approved profile and shall have such section modulus and moment of inertia per metre width that deflection of sheets is limited to span/250 under design wind pressure for two span conditions. No increase in allowable stresses under wind load condition is allowed. The cladding shall have siphoning feature to prevent leakage. The inner sheet shall be fixed to the structure by self drilling fasteners and concealed clips (including sub-girts of size 50X50X50 mm manufactured out of 16G GI 'Z' shape) to connect the external sheet (without penetrating the external sheet) including flashings complete as per specification.v. The insulation shall be of bonded mineral wool of minimum thickness 50mm conforming to IS:8183, having a density of 32 Kg/cu.m. for glass wool & 48 Kg/cu.m. for rock wool and is included in this item.	QUINTAL	100.00	0.00944015

VOLUME-III
PRICE SCHEDULE, REV-00

JOB: BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 3 : SERVICE

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
1503	Transporting and fixing SINGLE SKIN, PROFILED, PERMANENT COLOR COATED M.S. CLADDING SHEET :TYPE-I (material as per ST No. S 1503 of SCH-4 of Vol-III) of approved shade and color, (ON EXTERNAL VERTICAL FACE OF BUILDINGS) as per specification including fixing to supports / rails by concealed fixing system (face of sheet exposed to operating floor shall be as per ST S 1503 of SCH-4), corrosion resistant self tapping / self drilling type fasteners with suitable cap, flashing etc. all complete as per specification. (This item is exclusive of cost on account of supply of SINGLE SKIN, PROFILED, PERMANENT COLOR COATED M.S. CLADDING SHEET :TYPE-I)	SQM	20350.00	0.01940202
1505	Transportation and erection of permanent colour coated sandwiched insulated metal cladding: TYPE III (material as per ST No. S 1505 of SCH-4 of Vol-III) of approved color comprising of trough zinc-aluminium alloy coated (both sides) M.S. sheet of 0.60 mm min thickness to be used on external face of the cladding system. The sheet shall be coated with zinc of class designation Z275 as per ASTM A653M. The exposed face of the sheet to be permanently color coated with silicon modified polyester paint (SMP with silicon content of 30% to 50%) or super polyester paint of minimum 20 microns (nominal) dry film thickness over primer coat of 5mm (nominal) thickness. Inner side of external sheet to be provided with SMP or super polyester paint of 5 microns DFT (nominal) over 5 microns thick (nominal) primer coat. Galvanised M.S. sheets of minimum 0.6 mm thickness to be used as inner liner (internal face) of cladding system. The exposed face to be permanently colour coated with silicon modified polyester paint or super polyester paint of DFT 20 microns (minimum) over primer. The rate of galvanising not to be less than 275gm / sq.m. The sheets shall be of approved profile and shall have such section modulus and moment of inertia per metre width that deflection of sheets is limited to span/250 under design wind pressure for two span conditions. No increase in allowable stresses under wind load condition is allowed. The cladding shall have siphoning feature to prevent leakage. The inner sheet shall be fixed to the structure by self drilling fasteners and concealed clips (including sub-girts of size 50X50X50 mm manufactured out of 16G GI 'Z' shape) to connect the external sheet (without penetrating the external sheet) including flashings complete as per specification. The insulation shall be of bonded mineral wool of minimum thickness 50mm conforming to IS:8183, having a density of 32 Kg/cu.m. for glass wool & 48 Kg/cu.m. for rock wool and is included in this item. (This item is exclusive of cost on account of supply of permanent colour coated sandwiched insulated metal cladding: TYPE III)	SQM	3550.00	0.00440330
1506	Providing and fixing insulation of resin bonded mineral wool of 50 mm nominal thickness conforming to IS 8183 having a density of 32 kg/cum glass wool or 48 kg/cum for rock wool, for cladding/under deck insulation including application of glue and tying with lacing wire, for glass/rock wool as per manufacturer's recommendations.	SQM	2000.00	0.00409801
1507	Providing and fixing insulation of resin bonded mineral wool of 50 mm nominal thickness conforming to IS 8183 having a density of 32 kg/cum glass wool or 48 kg/cum for rock wool, for cladding/under deck insulation including wrapping in black polythene black supported over weld mesh 75X75X1.6 MM dia to hold in position and application of glue & tying with lacing wire, for glass/rock wool as per manufacturer's recommendation.	SQM	3000.00	0.00693536
1508	Providing and installing under deck insulation using minimum 0.05 mm thick aluminium foil on exposed surface followed by 0.60 mm dia and 25 mm mesh GI wire netting, fixed at various elevations with rawl plugs including clips, and 2mm wire ties with roof.	SQM	4000.00	0.01004539
1600 FALSE CEILING				
1604A	Providing, fixing and laying Pre-painted coil coated steel false ceiling system consisting of 0.5mm thick galvanised as per IS: 277 of approved make in LINEAR and SQUARE type 50mm thick mineral wool insulation (as per IS:8183) bound in polythene bags on top of panels. Additional hangers and height adjustment clips shall be provided for return air grills, light fixtures. A.C. ducts etc. suitable M.S. channel (minimum MC 75) grid 1200 c/c maximum shall also be provided above the false ceiling level for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc. The work to be complete as per specifications, drawings and direction of engineer. (supply, fabrication & erection of structural platform grid made up of MS Channels/ Beams / Angles shall be paid separately under ST No 2301B and is not included in this item)	SQM	2400.00	0.02761575
1700 RAIN WATER DOWN TAKE PIPES				
1706	Fixing UPVC down take pipes of 160mm diameter- Class 3 as per IS:4985 all complete. (Cost on account of supply of UPVC down take pipes is payable separately under ST S 1706 of SCH-4 of Vol-III)	RM	50.00	0.00002671
1707	Fixing GI down take pipes conforming to IS:1239 /IS:3589 of medium duty all complete for following diameters as per specification (Cost on account of supply of GI down take pipes is payable separately under ST S 1707 of SCH-4 of Vol-III)			
a	150 mm Dia	RM	2000.00	0.00273517
1800 MISCELLANEOUS WORKS				

VOLUME-III
PRICE SCHEDULE, REV-00

JOB: BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 3 : SERVICE

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
1809	Providing Chemical injection grouting with pressure pump for water retaining concrete structures conforming to IS:6494, including fixing nozzles, cost of approved cement, admixture, curing etc. all complete . Payment shall be made as per the consumption of chemical grout.	Kg	10.00	0.00000541
1810	Transporting, laying and fixing rails and guide rails in concrete for transformer, rail track including cutting of rails, joining of rails, anchoring lugs etc all complete. (Cost on account of supply of material is payable seperately under ST S 1810 of SCH-4 of Vol-III)	MT	45.00	0.00522511
1826	Supply and laying approved quality rounded pebbles / gravels of 40mm size in transformer yards.	CUM	400.00	0.00335569
1828	Dismantling old existing reinforced/non-reinforced brickwork/blockwork/stone masonry work in mud/lime/ cement mortar at any level including clearing/cleaning, stacking the serviceable materials at plant site and disposal of unserviceable materials within a lead upto1km all complete.	CUM	4.00	0.00001692
1829	Dismantling old existing plain/re-inforced concrete work at any level including clearing/cleaning, stacking the serviceable materials at plant site and disposal of unserviceable materials within a lead upto 1km all complete.	CUM	15.00	0.00004295
1830	Dismantling old existing structural steel work at any level including plates, bolts, cutting rivets, welding, dismembering and stacking the dismantled materials within a lead upto 1km etc all complete.	MT	2.00	0.00005342
1832	Providing & filling Bentonite Powder (Sodium base) mixed with water in electronic earthing pit as per drawing & direction below ground level including all materials, transportation, labour, incidental etc all complete as per specification.	CUM	30.00	0.00067428
1833	Supply & fixing FRP (fibre reinforced plastic) sheets 2 mm thick including GI hooks/ J or L bolts, nuts, washers, bitumen washers etc. complete including overlap 100mm .	SQM	60.00	0.00014330
1834	Supply & fixing of Exaust Fan with all accessories with required fittings of approved brand and as per specification.	Nos	10.00	0.00005142
2000 FENCING AND GATES				
2007	Supply and fixing of hot dip galvanised mild steel posts for fencing. Rate of zinc coating shall not be less than 710 g/m2 on steel posts.	MT	5.00	0.00129698
2009	Supply, fabrication and installing in position and testing galvanised MS Gates out of channels, joists, angles, flats, plates, pipes, welded steel wire mesh & sheets including stiffners, bracings, fabricated hinges, MS Aldrops with locking arrangement, tempered steel pivot, guide track of MS Tee, bronze aluminium ball bearing arrangements, castor wheels, paintings etc. all complete.	MT	5.00	0.00156078
2009A	Two or more coats of chlorinated rubber paint (as per IS: 13467) over a suitable primer of approved quality colour and shade to give an even shade on surface with all in complete.	SQM	20.00	0.00005700
2010	Supply, fabrication and installing in position and testing MS Gates out of channels, joists, angles, flats, plates, pipes, welded steel wire mesh & sheets including stiffners, bracings, fabricated hinges, MS Aldrops with locking arrangement, tempered steel pivot, guide track of MS Tee, bronze aluminium ball bearing arrangements, castor wheels, paintings etc. all complete.	MT	5.00	0.00149049
2100 WATER SUPPLY				
Water supply work including men, material, equipment etc. at any level as per specification, drawings and as directed by engineer - in - charge.				
2101	Providing and fixing in position tested heavy duty type chromium plated (CP) brass long neck bib cocks including sockets, union, nuts etc all complete - 15mm nominal bore.	EACH	10.00	0.00003931
2102	Providing and fixing in position heavy duty brass stop cock of approved quality including all specials etc all complete - 15mm nominal bore.	EACH	10.00	0.00002793
2103	Providing and fixing in position heavy duty brass full way valve with wheel of approved quality including all specials etc all complete for following sizes:			
a	25mm nominal bore.	EACH	10.00	0.00004343
b	50mm nominal bore.	EACH	10.00	0.00010442
2104	Providing and fixing GI pipes class B medium class conforming to IS:1239 pipes shall be concealed and painted with anticorrosive paint, complete for internal works with GI sockets, unions, elbows, tees, nipples etc and clamps including cutting and making good the walls etc all complete for following sizes:			
a	15 mm nominal bore.	RM	50.00	0.00007249
b	20 mm nominal bore.	RM	50.00	0.00008048

VOLUME-III
PRICE SCHEDULE, REV-00

JOB: BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 3 : SERVICE

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
c	25 mm nominal bore.	RM	50.00	0.00009394
2105	Providing and fixing GI pipes class B complete for external work with GI sockets, unions, elbows, tees, nipples etc including trenching & refilling, anti-corrosive paint etc all complete for following sizes:			
a	15 mm nominal bore.	RM	50.00	0.00006235
b	20 mm nominal bore.	RM	50.00	0.00007034
c	25 mm nominal bore.	RM	50.00	0.00008380
d	50 mm nominal bore.	RM	50.00	0.00012790
2106A	Providing and fixing of 900x600x6 THK Locking mirror from reputed manufacturer, mirror shall be mounted with teak wood bedding and minimum 12mm thk plywood backing including CP bracket,etc all complete	EACH	2.00	0.00001270
2107	Providing and fixing 610mmx127mmx6mm thk clear glass with C.P Guard rails and mounted on C.P. brackets etc all complete.	EACH	5.00	0.00002117
2108A	Providing and fixing 600x20 mm diameter stainless steel towel rails including SS screw all complete.	EACH	8.00	0.00001783
2109	Providing and fixing 20mm dia chromium plated M.S. pipes wall mounted towel rod with C.P. Brackets etc all complete.	EACH	10.00	0.00002178
2113	Providing and fixing chromium plated brass shower rose with 15 or 20 mm inlet all complete.	EACH	3.00	0.00001054
2114	Providing & fixing in position P.V.C. water tank of Syntex or approved equivalent including making all necessary inlet & outlet pipes, fixture, ball cocks, valves etc all complete for following capacities. GI pipes shall be paid separately under ST No. 2105.			
a	1000 litres capacity	EACH	3.00	0.00013471
b	2000 litres capacity	EACH	2.00	0.00017963
2115	Providing and fixing approved stainless steel sink with integrated drainboard as per IS:13983 of size 915x460x178mm with CI brackets, stainless steel chain with rubber plug 40mm, CP brass waste trap with necessary union complete including painting the fittings, cutting and making good the wall where required etc. all complete.	EACH	5.00	0.00020002
	SANITARY WORKS			
2200	SANITARY WORKS			
2201A	Supply and fixing coloured glazed vitreous oval shape chain wash basin 450x550mm conforming to IS: 2556 mounted over 20 mm thk granite beveled edge counter.The Basin shall be fitted with approved shape bib cock photo-voltic control system for water control,bottle trap with necessary union including cutting of notch in granite counter slab etc complete as per specification	EACH	10.00	0.00048763
2202	Providing and fixing approved vitreous china laboratory sink of size 600x400x200mm conforming to IS:2556 (part-5) with R.S. or C.I. brackets, chromium plated brass chain with rubber plug 40mm, CP brass waste and 40mm CP brass trap with necessary union complete including painting the fittings, cutting and making good the wall where required etc. all complete.	EACH	6.00	0.00015847
2203	Providing and fixing stainless steel kitchen sink of size 610x510x200mm conforming to IS: 13983 including all fittings etc. all complete.	EACH	3.00	0.00009232
2204A	Providing and fixing wall mounted coloured glazed vitreous water closet with PV flushing system,water faucet ,Toilet paper holder, open front solid plastic seat and plastic cover,including necessary CP connection etc all complete.	EACH	10.00	0.00044882
2205A	Providing and fixing Coloured glazed vitreous china orissa pan (580x440mm) water closet with PV flushing system, toilet paper holder as per IS: 2556 including all finishing complete as per specification.	EACH	10.00	0.00044882
2206	Providing and fixing white flat back glazed vitreous china urinals of size 440x265x355 mm with photo voltaic control flushing system as per IS:2556 (part 6, section 1) with flush pipes, lead pipes, gratings, traps and necessary C.P. fittings etc. all complete.	EACH	10.00	0.00084218
2208	Providing, laying light duty non pressure NP3 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc all complete for following.			
a	200mm dia	RM	20.00	0.00004110
b	300mm dia	RM	20.00	0.00008321
c	450mm dia	RM	20.00	0.00014746

VOLUME-III

PRICE SCHEDULE, REV-00

SCH-3 - SERVICE

TENDER NO - PSER:SCT:NKP-C2057:20

SIGNATURE WITH SEAL

OF BIDDER

VOLUME-III
PRICE SCHEDULE, REV-00

JOB: BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 3 : SERVICE

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
2214	Providing and fixing square mouth S.W Gully trap grade 'A' complete with CI grating, brick masonry chamber and water tight CI cover with 300x300mm (inside). The weight of cover to be not less than 4.53 Kg and frame to be not less than 2.72 Kg etc all complete for following sizes:			
a	100x100mm P or S Type.	EACH	8.00	0.00009104
b	150x100mm P or S Type.	EACH	8.00	0.00009338
c	150x150mm P or S Type.	EACH	8.00	0.00009566
2216	Providing and fixing heavy duty UPVC floor traps with C.P jalli all complete.	EACH	8.00	0.00004018
2217C	Providing and installing approved brand energy efficient Geyser of 25L capacity including fittings all complete as per drg.	EACH	2.00	0.00026736
2218A	Providing and installing approved brand single tap water efficient water cooler of 150 L cooling capacity all complete.	EACH	2.00	0.00076927
2220	Providing and fixing eye and face drinking water fountain (combined unit with receptacle conforming to IS: 10592) all complete as per specification.	EACH	2.00	0.00005357
2221	Providing and fixing polished 18mm thk beveled edge granite slab of required size fitted over counters including 1:3 morter bed facia, all complete as per specification.	SQM	15.00	0.00024443
2222A	Providing, laying and jointing sand cast iron pipes of following diameter with lead joint confirming to IS: 1729 including bends,branches, and all other necessary fittings, M.S holder bats,clamps, cutting and marking on the walls and floor ,jointing, testing etc. all complete .			
i	150 mm dia	RM	100.00	0.00084970
ii	100 mm dia	RM	150.00	0.00078368
2223	Providing and fixing Electric operated hand dryer of approved make with pv control and all fittings including testing etc.in fully operating condition all complete as per specification	EACH	5.00	0.00004905
2300	STRUCTURAL STEEL WORKS Structural steel works including all labour, material, equipments, transportation, handling etc. at any level as per specification, drawings and as directed by engineer - in - charge.			
2301	Transportation, Fabrication and Erection of Coal bunkers (Cylindrical Shell & Conical Hopper) and ring beam at site with structural steel of grade E250 conforming to IS:2062, connection design & preparation of fabrication drgs, straightening,cutting, bending, rolling,grinding, machining, drilling, welding, electrodes and other consumables , alignment, erection bolts & nuts (weight of erection bolts, nuts and welds not payable) assembly, edge preparation, pre heating (min preheat and interpass temperature of 20 degree C for welding over 20mm and upto 40 mm & 66 degree C for welding over 40mm and upto 63 mm & 110 degree C for thickness over 63 mm & use of low hydrogen /radiogenic electrodes) post heating, testing of welders, inspection of welds , visual inspection , non destructive and special testing , rectification and correction of defective welding works , production test plate,inspection and testing, erection scheme,protection against damage in transit , stability of structures, installation of temporary structures, surface preparation by means of manual or mechanical power tools as per IS:1477 part1, rectification, blast cleaning of steel surface, application of primer, intermediate , final, finish coat of paint etc. all complete, as per drawing, specification & instructions of Engineer in charge. Blast cleaning of steel surface, application of primer and paint including supply shall be paid separately as per Item No-2302A,2304A,2304B & 2304C (Structural Steel will be supplied free of Cost by BHEL as per TCC)			
a	Fabrication of Coal Bunkers 60%	MT	1565.00	0.06519444
b	After Erection 20%	MT	1565.00	0.02173146
c	Alignment 10%	MT	1565.00	0.01086573
d	Handing over 10%	MT	1565.00	0.01086573

VOLUME-III
PRICE SCHEDULE, REV-00

JOB: BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 3 : SERVICE

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
2301B	Transportation, Fabrication and erection of structural steel of grade E 250 in rolled/ built up section conforming to IS 2062 mild steel rounds in columns, beams, struts, monorails, stays, safety chains, ladders, MS gratings, gantry girders, roof trusses, portals, laced purlins, space frames, hangers, wall beams, sheeting runners, brackets, stiffeners, stub columns, bracings, cleats, base plates, splice plates, gussets, end plates, steel frame grid over false ceiling, walkway platforms, ladders, stairs, stringers, treads, landings, decking and seal plates, galleries etc including blast cleaning, providing & applying primer, providing and applying intermediate, final and final finish coat of paint (blast cleaning, primer and paint shall be paid separately as per item no 2302A, 2304A, 2304B & 2304 C), connection design & preparation of fabrication drgs, straightening, cutting, bending, rolling, grinding, machining, drilling, welding, electrodes and other consumables, alignment, erection bolts & nuts (weight of erection bolts and nuts not payable), assembly, edge preparation, preheating / post heating if required, testing of welders, inspection of welds, visual inspection, non destructive and special testing, rectification and correction of defective welding works, production test plate, inspection and testing, erection scheme, protection against damage in transit, stability of structures, installation of temporary structures, setting column bases, surface preparation by means of manual or mechanical power tools as per IS:1477 part 1, touch-up painting, rectification, dismantling and removal of all temporary structures (weight of temporary structures not payable), etc all complete. (STRUCTURAL STEEL WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)			
a	Fabrication 60%	MT	345.00	0.01101489
b	Erection 40%	MT	345.00	0.00734326
2301C	Transportation, Fabrication and erection of ERW GI pipe section of minimum grade Yst 240 IS:1161, in columns, beams, ties, struts, bracings, roof truss, connections to other members (tubular/non-tubular), special connections if required etc. including blast cleaning, providing & applying primer, providing and applying intermediate, final and final finish coat of paint (blast cleaning, primer and paint shall be paid separately as per item no 2302A, 2304A, 2304B & 2304 C), connection design & preparation of fabrication drgs, cutting, grinding, machining, drilling, welding, electrodes and other consumables, alignment, erection bolts & nuts (weight of erection bolts & nuts not payable), assembly, edge preparation, preheating/post heating if required, testing of welders, inspection of welds, visual inspection, non destructive and special testing, rectification and correction of defective welding works, inspection and testing, erection scheme, protection against damage in transit, stability of structures, surface preparation by means of manual or mechanical power tools as per IS:1477 part 1, touch-up painting, rectification, installation of temporary structures (scaffolding, access ladders, working platforms etc.) if required, dismantling and removal of temporary structures after completion of work (weight of temporary structures not payable), etc all complete. Payment shall be made for weight of structure but not for Nuts & Bolts/washers, gusset plates, stiffeners, special connections etc. (Cost on account of supply of ERW pipe section is payable separately under ST S 2301C of SCH-4 of Vol-III)	MT	45.00	0.00265211
2301D	Transportation, Fabrication and erection of galvanized Hollow steel sections (square & rectangular) of minimum grade Yst 240 IS:4923 in ties, struts, bracings, roof truss, connections to other members (tubular/non-tubular) etc. including blast cleaning, providing & applying primer, providing and applying intermediate, final and final finish coat of paint (blast cleaning, primer and paint shall be paid separately as per item no 2302A, 2304A, 2304B & 2304 C), connection design & preparation of fabrication drgs, cutting, grinding, machining, drilling, welding, electrodes and other consumables, alignment, erection bolts & nuts (weight of erection bolts, nuts and welds not payable), assembly, edge preparation, preheating if required, post heating, testing of welders, inspection of welds, visual inspection, non destructive and special testing, rectification and correction of defective welding works, inspection and testing, erection scheme, protection against damage in transit, stability of structures, surface preparation by means of manual or mechanical power tools as per IS:1477 part 1, touch-up painting, rectification, installation of temporary structures (scaffolding, access ladders, working platforms etc.) if required, dismantling and removal of temporary structures after completion of work (weight of temporary structures not payable), etc all complete. Payment shall be made for weight of structure but not for Nuts & Bolts/washers, gusset plates, stiffeners, special connections etc. (Cost on account of supply of galvanised Hollow steel section is payable separately under ST S 2301D of SCH-4 of Vol-III)	MT	10.00	0.00062753

VOLUME-III
PRICE SCHEDULE, REV-00

JOB: BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 3 : SERVICE

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
2301E	Bolted Erection of structural steel [of mild steel/High strength steel rolled section / built up section / combination of both conforming to IS:2062, pipe sections] true to line, level, plumb & dimension, rectification if any, including collection of factory fabricated parts from BHEL store and assembly, installation of erection/connection bolts and application of final finish paint coat(Payment for final coat of payment shall be made separately as per Item No. 2304C) as per approved drawing, specification and approval of engineer in charge. Erection joints shall be mostly bolted with HSFG bolts/washer/nut, which will be paid separately under item 2301 & 2311. Erection bolts shall be arranged by the bidder and is not payable. the work shall be satisfactorily completed with required tightening of HSFG bolts along with DTI (DIRECT TENSION INDICATOR) washers to be supplied by the bidder(Cost of DTI washer is included in this item and not payable separately). Welding required for erection/seating shall be included in this item. The prefabricated structure shall be supplied in variable length to the maximum length of 10 meters -12 meters and all erection work on ground or at any elevation is included in this item. Payment shall be made for weight of permanent structure, HSFG nuts, bolts & splice plate, DTI washers, gusset plates, stiffeners but not for erection bolts & nuts, etc.			
a	Erection 55%	MT	2830.00	0.04944721
b	Bolting 10%	MT	5600.00	0.01779019
c	Alignment 30%	MT	5600.00	0.05337058
d	Handing over 5%	MT	9350.00	0.01485163
2301F	Providing welded splices for joining pre-fabricated structural parts (Beams, columns, roof trusses, struts, ties, bracings etc.)	MT	300.00	0.01028262
2302A	Extra over ST NO. 2301/2301A/2301B/2301C/2301D for Blast cleaning of steel structure including application of primer as per specification	MT(of steel)	1463.39	0.01379255
2303A	Extra over ST NO. 2301F for Manual cleaning of steel structures and applying providing & applying coat of self curing inorganic zinc ethyle Silicate primer (solid by volume Minimum 62+/-2% & zinc dust % on dry film minimum 80 %). Zinc dust pigment shall be as per specifications. Primer of minimum 60 micron DFT shall be applied over shot blast cleaned surface including touch-up painting etc all complete.	MT(of steel)	270.00	0.00146429
2303B	Extra over ST NO. 2301A to 2301E for Manual cleaning of steel structures embedded in concrete and applying Primer Coat of Chlorinated Rubber based Zinc Phosphate primer of 50 micron (DFT).	MT(of steel)	30.00	0.00013817
2304A	Providing and applying (with airless spray technique) intermediate coat of Polyamide cured pigmented Micaceous Iron Oxide(MIO content minimum 30 %) Epoxy based Paint (solid by volume Minimum 62+/-2%) of minimum 75 micron total DFT	MT(of steel)	1463.39	0.00391426
2304B	Providing and applying (with airless spray technique) polyamide cured color pigmented epoxy based paint (solid by volume Minimum 60%) as Finish coating of minimum 75 micron total DFT	MT(of steel)	1463.39	0.00397078
2304C	Providing and applying Polyurethane based colour pigmented paint (solid by volume Minimum 55+/-2%) as Final finish coating of minimum total DFT 50 micron for all structure.	MT(of steel)	10900.00	0.03411778
2307	Transportation, fabrication, erection and alignment of factory made electroforged galvanised grating units with mild steel (having minimum galvanisation of 610 g/sqm) conforming to IS:2062 in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete. (Cost against supply of factory made electroforged galvanised grating units with fixing clamps, fittings, fixtures, etc. payable separately under ST No. S 2307 of SCH-4 of Vol-III)	MT	350.00	0.01382053
2308A	Transportation, fabrication, erection and alignment of factory made chequered plates confirming to IS 3502 with mild steel of grade E250, quality BR, semi killed, conforming to IS:2062 in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including 1 coat of redoxide zinc-chromate primer (after erection), fixing clamps, fittings, fixtures, grinding, drilling, welding, edge preparation, etc. all complete. Min. thickness of chequered plate shall be 6 mm excluding projection. (Cost against supply of factory made chequered plate units with fixing clamps, fittings, fixtures etc. payable separately under ST No. S 2308A of SCH-4 of Vol-III)	MT	70.00	0.00351103
2310	Transporting and fixing in position permanent mild steel bolts (class 4.6 as per IS : 1367 and grade 'C' as per IS: 1363) and nuts, washers etc. up to and inclusive of 39 mm diameter and upto 300mm long for structural steel work etc all complete. (Cost against supply of permanent mild steel bolts, nuts, washers etc. payable separately under ST No. S 2310 of SCH-4 of Vol-III)	Quintal	5.00	0.00004388

VOLUME-III
PRICE SCHEDULE, REV-00

JOB: BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 3 : SERVICE

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
2311	Transporting and fixing in positing of high strength structural bolts (of property class 8.8 and product grade 'C' as per IS: 1367) and conforming to IS: 3757 and high strength structural hardened and tempered nuts (of property class '8' as per IS:1367) conforming to IS:6623 with hardened and tempered washers as per IS:6649 etc. up to and inclusive of 39 mm diameter and upto 300 mm long for structural steel work etc all complete. (Cost against supply of high strength structural bolts, high strength structural hardened and tempered nuts, hardened and tempered washers etc. payable seperately under ST No. S 2311 of SCH-4 of Vol-III)	Quintal	82.00	0.00125164
2312	Dismantling of steel structure, lowering of material and carriage of the dismantled material up to field fabrication shop / projects storage including temporary dismantling, cutting, re-welding, supporting, and restoring to correct position all temporarily dismantled members, re-alignment of all adjacent connected members to their correct positions (weight of such adjacent members and temporarily dismantled members not payable), scafolding, staging, tools & tackles, gas cutting, welding, consumables etc all complete.	MT	50.00	0.00118282
2313	Addition to, alterations in and/or modifiction of "Erection Marks" including cutting of parts, gauging of welds, cutting, grinding, fabrication, welding, drilling holes, straightening, removal of bends, raising to the required level, painting, transportation, return of unutilised steel pieces to the project store, temporarily dismantling, cutting, re-welding, supporting and restoring to correct position of all the temporarily dismantled members, realignment of adjacent connected members (weight of such temporarily dismantled and adjacent members not payable) etc all complete for the following:			
a	In erected position	MT	100.00	0.00297494
b	In fabrication yard	MT	50.00	0.00133489
2314	Re-erection of dismantled fabricated structural steel members including carriage of modified "Erection Marks" from the field fabrication shop to erection site, lifting to required position, aligning in position, tack welding, final welding and touch up painting including temporary dismantling and re-erection of temporarily dismantled members, cutting, rewelding, supporting and restoring to the correct position of all temporarily dismantled members, re-alignment of adjacent connected members (weight of such temporarily dismantled members and adjacent members not payable), scafolding, staging, tools & tackles, gas cutting, welding, consumables etc all complete.	MT	100.00	0.00394777
2315A	Transportation,handling,fabrication and erection of minimum 4.0 mm thick stainless steel liner of grade SS: 304Transportation,handling,fabrication and erection of minimum 4.0 mm thick stainless steel liner of grade SS: 304(as manufactured by SAIL Finish Grade 2B (Cold rolled, Annealed & Pickled and Skin passed)) on M.S. plate for inside surfaces of bunkers including fixing with stainless steel studs, bolting (including countersunk), welding with electrode classification E308L for welding of stainless steel to stainless steel and E309 for stainless steel to mild steel etc. all complete. Supply of bolts, studs is included in this item. (STAINLESS STEEL WILL BE SUPPLIED FREE OF COST BY BHEL AS PER TCC)	MT	90.00	0.04033367
2317	Providing and fixing in position PTFE type sliding bearings of reputed manufacturer , individual bearing suitable for required vertical loads as per the construction drawings and for maximum displacement of +- 50 mm including all taxes, duties, transportation, installation , drilling,bolting, erecting, aligning etc. all complete for following vertical loads			
a	20 Tons	EACH	7.00	0.00021601
b	25 Tons	EACH	2.00	0.00007242
c	40 Tons	EACH	6.00	0.00029986
d	50 Tons	EACH	2.00	0.00011775
f	80 Tons	EACH	1.00	0.00010735
2318	Providing and fixing flexible open ended bellow strap of neoprene of minimum thickness 2 mm and minimum width 200 mm with aluminium striped edges as sealing below top bunker and bottom of tripper floor to avoid the coal dust nuisance all complete	RM	510.00	0.00248037
2319	Transportation, fabrication and fixing of stainless steel pipe hand railing of 32 mm/40 mm dia including transportation , loading/unloading etc. all complete (Cost against supply of stainless steel pipe is payable seperately under ST No. S 2319 of SCH-4 of Vol-III)	MT	12.00	0.00475955
2320	Transportation,handling, fabrication and fixing of GI pipe hand railing (900 mm high) of 32mm/40 mm dia (medium grade) including transportation , loading/unloading etc. all complete (GI PIPE WILL BE SUPPLIED FREE OF COST BY BHEL)	MT	30.00	0.00288002
2321	Conducting radiography test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete	RM	500.00	0.00553228

VOLUME-III

PRICE SCHEDULE, REV-00

SCH-3 - SERVICE

TENDER NO - PSER:SCT:NKP-C2057:20

SIGNATURE WITH SEAL

OF BIDDER

VOLUME-III
PRICE SCHEDULE, REV-00

JOB: BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 3 : SERVICE

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
2322	Conducting ultasonic test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete	RM	200.00	0.00080099
2323	Conducting ultasonic test on steel plates as per ASTM-A578 level B-S2 or equivalent wherever specified including equipments , measuring devices, gauges, test report etc. all complete	SQM	100.00	0.00002376
2324	Conducting magnetic particle test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete	RM	50.00	0.00015073
2325	Conducting dye penetration test on welds wherever specified by engineer including provision of necessary equipments, measuring devices, gauges etc. all complete (over and above the work already specified in the specifications)	RM	1000.00	0.00236657
Total				0.67494976

VOLUME-III
PRICE SCHEDULE, REV-00

BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 4 : SUPPLY

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
S 700	MS EMBEDMENTS: Supply of MS embedments including all labour, material, equipment, transportation, handling etc. all complete as per specification, drawings and as directed by engineer - in - charge.			
S 701	Supply of mild steel materials for embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc. all complete. (Payment shall be restricted to quantity consumed as per ST 701 of SCH- 3 of Vol-III).	MT	1	0.00016571
S 703	Supply of fabricatd embedments, inserts, pipe sleeves, angle pieces, anchor bolts of various diameters, plates of dimensions as required etc. all complete. (Payment shall be restricted to quantity consumed as per ST 703 of SCH- 3 of Vol-III).	MT	5	0.00095280
S 704	Supply of mild steel foundation bolt assembly conforming to IS:2062 and grade 1 of IS:432 along with nuts, lock nuts (as per IS:1363, 1364 and IS:3138), washers, anchor plates, stiffner plates, protective tape, pipe sleeves, templates etc. all complete. (Payment shall be restricted to quantity consumed as per ST 704 of SCH- 3 of Vol-III).	MT	1	0.00019793
S 705	Supplying, following items in concrete/brickwall for all kind of works, all complete. (Payment shall be restricted to quantity consumed as per ST 705 of SCH- 3 of Vol-III).			0.00000000
a	MS pipes of all diameters	Quintal	1	0.00002118
b	PVC pipes / conduits of all diameters	Quintal	1	0.00006169
c	UPVC pipes / conduits of all diameters	Quintal	1	0.0010313
d	Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for brick work with expansion sleeve of A6 polyamide:			0.00000000
i	Upto 250 kg	Each	10	0.00001703
ii	Beyond 250 Kg and upto 500 kg	Each	10	0.00002173
iii	Beyond 500 Kg and upto 750 kg	Each	10	0.00002453
e	Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for concrete work with expansion sleeve of stainless steel:			0.00000000
ii	Beyond 250 Kg and upto 500 kg	Each	50	0.00012299
iii	Beyond 500 Kg and upto 750 kg	Each	50	0.00013792
S 900	DOORS, WINDOWS, VENTILATORS, LOUVERS: Supply of Doors, windows, ventilators, louvers, roof ventilators, rolling shutters, partitions including all labour, material, equipments, transportation, handling, preparation of working drawings etc. all complete as per specification, drawings and as directed by engineer - in - charge.			0.00000000

VOLUME-III

PRICE SCHEDULE, REV-00

SCH-4 - SUPPLY

TENDER NO - PSER:SCT:NKP-C2057:20

VOLUME-III
PRICE SCHEDULE, REV-00

BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 4 : SUPPLY

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
S 903	<p>Providing solid core flush door shutter as per IS 2202 part II, 35mm thick homogenous particle board bonded with BWP type phenolformaldihyde synthetic resin, particle board core conforming to IS 3087 type I, 35x12 mm thick teakwood beading all around including preparation of working drawings. godrej or equivalent make mortice lock with handels on both sides,approved ISI mark anodised fittings like door stopper,300mm long tower bolts,16x300mm long aldrops ,125mm long handles on both sides etc. butt hinges, sliding bolt, knobs, (all fittings shall be anodised aluminium color dyed), finish flat oil paint confirming to IS: 137 over primer, screws etc. all complete as per drawing, specification and instruction of engineer in charge. with commercial faces and teak wood edges. (Finish painting paid separately)</p> <p>(Payment shall be restricted to quantity consumed as per ST 903 of SCH- 3 of Vol-III).</p>	SQM	30	0.00051201
S 904	<p>Providing single or double steel door shutters with 35 mm thk flush design shutter comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centres including void filled with mineral wool (density as per specification), all fittings, Godrej or equivalent make mortice lock with handle on both sides, shop and final painting etc all complete.</p> <p>(Payment shall be restricted to quantity consumed as per ST 904 of SCH- 3 of Vol-III).</p>	SQM	65	0.00167095
S 906	<p>Providing anodized extruded aluminium doors (single or double shutter) conforming to IS:1948, IS:1949 fabricated from extruded sections of HINDALCO/JINDAL or equivalent make having minimum 3mm wall thickness as per IS:1285, IS:733 and anodized and electro color coating of required shade as per IS 1868 (minimum anodized coating of grade AC15). fixed with rawl plugs, expansion fasteners,SS screws / fixing clips necessary filling of gaps at Junctions, at top, bottom & sides with required PVC / neoprene felt for bi-metallic protection etc. Glazing shall be clear float glass of 6mm thickness including snap fit type beading, concealed screws, fixtures, Godrej or equivalent make Mortice lock with handle on both sides, etc all complete. Aluminium section shall be smooth, free of stains, straight, mitred & jointed mechanically wherever required. (Glazing shall be paid separately)</p> <p>(Payment shall be restricted to quantity consumed as per ST 906 of SCH- 3 of Vol-III).</p>	SQM	20	0.00036648

VOLUME-III

PRICE SCHEDULE, REV-00

SCH-4 - SUPPLY

TENDER NO - PSER:SCT:NKP-C2057:20

VOLUME-III
PRICE SCHEDULE, REV-00

BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 4 : SUPPLY

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
S 906A	Providing anodized extruded aluminium doors (single or double shutter) conforming to IS:1948, IS:1949 fabricated from extruded sections of HINDALCO/JINDAL or equivalent make having minimum 2 mm wall thickness as per IS:1285, IS:733 and anodized(15 micron coating thickness) and electro color dyed of required shade as per IS 1868 (minimum anodized coating of grade AC15). fixed with rawl plugs, expansion fasteners,SS screws / fixing clips necessary filling of gaps at Junctions, at top, bottom & sides with required PVC / neoprene felt for bi-metallic protection etc. Glazing shall be clear toughened glass of 10 mm thickness including snap fit type beading, concealed screws, fixtures, Godrej or equivalent make Mortice lock with handle on both sides, etc all complete. Aluminium section shall be smooth, free of stains, straight, mitred & jointed mechanically wherever required. (Glazing shall be paid separately) (Payment shall be restricted to quantity consumed as per ST 906A of SCH- 3 of Vol-III).	SQM	300	0.00665354
S 907	Providing fire proof steel doors (single or double shutter) with panic devices having 45mm thk flush design comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centers including all fittings, shop painting with approved post office/signal red color fire resistant paint and mineral wool insulation (64 kg/cum density) complete and shall be fire proof as per IS:3614, TAC requirements and as per specification. Minimum ratings shall be 2 Hrs. (Payment shall be restricted to quantity consumed as per ST 907 of SCH- 3 of Vol-III).	SQM	100	0.00223148
S 913	Providing rolling shutter of hot rolled double dipped galvanised steel lath section of 18 SWG tested mild steel strips at 75mm rolling centres interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation including wire springs, top cover, primer & shop coats of approved enamel paint etc, all complete as per IS 6248 and specification of approved make of following types: The bottom lath shall be coupled to a lock plate fabricated from 3mm thick galvanised steel plate and securely riveted with stiffening angles.(partly coiled and lath/full lath). (Payment shall be restricted to quantity consumed as per ST 913 of SCH- 3 of Vol-III).			0.00000000
b	Mechanically Operated	SQM	10	0.00019227
c	Electrically operated	SQM	150	0.00360513
S 915	Supply of glazing of first grade class for steel/aluminium/wooden frames including hardware, gaskets, clips, beadings etc. all complete as per Specification for the followings (Payment shall be restricted to quantity consumed as per ST 915 of SCH- 3 of Vol-III).			0.00000000

VOLUME-III

PRICE SCHEDULE, REV-00

SCH-4 - SUPPLY

TENDER NO - PSER:SCT:NKP-C2057:20

VOLUME-III
PRICE SCHEDULE, REV-00

BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 4 : SUPPLY

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
b	4 mm thick clear float glass	SQM	50	0.00015813
ba	5 mm thick tinted float glass	SQM	50	0.00021318
c	5.5 mm thick clear float glass	SQM	5	0.00001822
d	6 mm thick wired glass	SQM	100	0.00037147
da	6mm thick Reflective toughened glass	SQM	800	0.00491654
e	6mm thick Polycarbonate sheet multi (twin) wall fire retardant and ultra violet resistant with sealed open edges.	SQM	100	0.00045428
ea	2mm thick Polycarbonate sheet with profile matching with metal sheeting of building. The Polycarbonate sheets shall be fire and u/v resistant, and suitable for continuous use up to a temperature of 1000C including cost of Suitable aluminium beading . Open ends of the sheet shall be sealed as per manufacturer's recommendations.	SQM	10	0.00011989
g	6 mm thick tinted heat reflecting type float glass	SQM	50	0.00026572
h	6 mm thick clear toughened safety glass	SQM	50	0.00029265
i	10 mm thick clear toughened glass	SQM	200	0.00204856
ia	8 mm thick clear toughened glass	SQM	100	0.00081942
jb	8 mm thick Reflective toughened glass,	SQM	60	0.00055311
j	Two nos. 6 mm thick clear toughened float glass hermetically sealed and separated by 12 mm thick air gap for thermal insulation (only single elevation area to be measured)	SQM	30	0.00026449
k	Two nos. tinted toughened float glass hermetically sealed and separated by 12 mm thick air gap for thermal insulation (only single elevation area to be measured)Thickness as per required fire rating and design requirement	SQM	40	0.00041051
l	One outer tinted heat-reflecting type float glass and one inner plain float glass hermetically sealed and seperated by 12 mm thick gap for thermal insulation (only single elevation area to be measured).(Thickness of indivisual glass will be as per design and required fire rating)	SQM	120	0.00102249
m	6 mm thick laminated glass	SQM	10	0.00012401
n	4 mm thick heat reflecting type float glass	SQM	20	0.00014307
o	6 mm thick Ground glass	SQM	10	0.00007808
p	Two nos. 6 mm thick low-e glass harmetically selaed and separated by 12mm thick air gap insulation.only single elevation area to be measured	SQM	10	0.00014982
q	6mm thk. reflective toughened glass, with Solar factor 45% or less, U-value less than 5.7 W/m2.K, VLT min 40%. Glass shall be of Saint Gobain (India) or ASAHI (India) or equivalent make and shall be free from distortion and thermal stress	SQM	10	0.00014121
r	providing Glass block masonry work with approved glass blocks of size 190 x 190 x 90 (min), jointed with suitable adhesive complete as per drawing, specification and instructions of engineer in charge.	SQM	10	0.00021779

VOLUME-III

PRICE SCHEDULE, REV-00

SCH-4 - SUPPLY

TENDER NO - PSER:SCT:NKP-C2057:20

VOLUME-III
PRICE SCHEDULE, REV-00

BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 4 : SUPPLY

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
S 1500	ROOFING/SIDE CLADING			0.00000000
S 1501	<p>METAL DECK SHEET Type-I, Designing & supplying permanently color coated galvanised MS troughed metal sheet decking plate of approved colour over roof purlins for cast-in-situ roof slab as per relevant IS code and Grade as per specification. Bare metal thickness(BMT) of deck plate shall be minimum 0.8mm with minimum trough depth of 44 mm having minimum yield strength of 250 MPa and shall serve as permanent shuttering to the roof slab & shall have adequate strength to support weight of green concrete and imposed loads of min 450 kg/sqm (for two span condition) during construction between beams as per manufacturer's recommendations/ calculations/ test certificates for approval etc. all complete for below mentioned spans. The sheet shall be permanently coated with silicon modified polyester(SMP silicon content 30%-50%) paint or super polyester paint of minimum 20 micron DFT on exposed surface (facing operating floor) and minimum 5 micron on other face over epoxy primer of 5 micron applied over coating (degnitated class Z275). Measurement of profile sheeting shall be of the plan area of roof covered by MS trough metal decking.</p> <p>(Qty to be supplied shall be as per instruction of BHEL).</p>			0.00000000
a	Span Upto 1800mm	SQM	160.00	0.00067851
S 1501C	<p>METAL DECK SHEET Type-IV, Designing and supplying permanently color coated galvanised MS troughed metal sheet decking plate of approved colour over floor beams for cast-in-situ roof slab as per relevant IS code and Grade as per specification. Bare metal thickness(BMT) of deck plate shall be minimum 0.8mm with minimum <i>trough depth of 51 mm</i> having minimum yield strength of 250 MPa and shall serve as permanent shuttering to the roof slab 150mm thick measured over crest of metal decking & shall have adequate strength to support weight of green concrete and imposed loads of min 550 kg/sqm (for two span condition) during construction between beams as per manufacturer's recommendations/ calculations/ test certificates for approval including fixing of plates to beams, side lapping, end lapping etc. all complete for below mentioned spans. The sheet shall be permanently coated with silicon modified polyester(SMP silicon content 30%-50%) paint or super polyester paint of minimum 20 micron DFT on exposed surface (facing operating floor) and minimum 5 micron on other face over epoxy primer of 5 micron applied over coating (degnitated class Z275). Measurement of profile sheeting shall be of the plan area of roof covered by MS trough metal decking. The SMP and polyester paint shall confirm to product type 4 as per AS/NZS 2728</p> <p>(Qty to be supplied shall be as per instruction of BHEL).</p>			0.00000000
a	For Floor sheet Span Upto 1800mm	SQM	10000.00	0.04240668
b	Span Exceeding 1800mm and upto 2500 mm	SQM	5500.00	0.02685348

VOLUME-III

PRICE SCHEDULE, REV-00

SCH-4 - SUPPLY

TENDER NO - PSER:SCT:NKP-C2057:20

VOLUME-III
PRICE SCHEDULE, REV-00

BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 4 : SUPPLY

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
S 1503	Designing and supplying SINGLE SKIN, PROFILED, PERMANENT COLOR COATED M.S. CLADDING SHEET :TYPE-I of approved shade and color, (ON EXTERNAL VERTICAL FACE OF BUILDINGS) of 0.6mm bare metal thickness(BMT) having minimum yield strength OF GRADE SS255 AS PER ASTM A653M/GRADE G250 AS PER AS 1397 COATED WITH ZINC OF CLASS DESIGNATION Z275 etc. all complete as per specification. The sheet shall be permanently coated with silicon modified polyester(SMP silicon content min. 30%) paint or super polyester paint of minimum 20 micron DFT on exposed surface (facing operating floor) and minimum 5 micron on other face over epoxy primer of 5 micron applied over coating (deginate class Z275). The permanent colour coated sheet shall meet the general requirements of IS : 14246 and shall conform to class 3 for the durability. The SMP and polyester paint shall confirm to product type 4 as per AS/NZS 2728. (Qty to be supplied shall be as per instruction of BHEL).	SQM	13680.00	0.04981002
S 1505	Design and supply of permanent colour coated sandwiched insulated metal cladding: TYPE III of approved color comprising of trough zinc-aluminium alloy coated (both sides) M.S. sheet of 0.60 mm min thickness to be used on external face of the cladding system. The sheet shall be coated with zinc of class designation Z275 as per ASTM A653M. The exposed face of the sheet to be permanently color coated with silicon modified polyester paint (SMP with silicon content of 30% to 50%) or super polyester paint of minimum 20 microns (nominal) dry film thickness over primer coat of 5mm (nominal) thickness. Inner side of external sheet to be provided with SMP or super polyester paint of 5 microns DFT (nominal) over 5 microns thick (nominal) primer coat. Galvanised M.S. sheets of minimum 0.6 mm thickness to be used as inner liner (internal face) of cladding system. The exposed face to be permanently colour coated with silicon modified polyester paint or super polyester paint of DFT 20 microns (minimum) over primer. The rate of galvanising not to be less than 275 gm / sq m. The steels shall be of approved profile and shall have such section modulus and moment of inertia per metre width that deflection of sheets is limited to span/250 under design wind pressure for two span conditions . No increase in allowable stresses under wind load condition is allowed. The cladding shall have siphoning features to prevent leakage . The inner sheet shall be fixed to the structure by self drilling fasteners and concealed clips (including sub girts of size 50x50x50 mm manufactured out of 16G GI Z shape) to connect the external sheet (with out penetrating the external sheet) including flashings complete as per specification.v. The insulation shall be of bonded mineral wool of minimum thickness 50mm conforming to IS:8183 , having a density of 32 Kg/cu.m. for glass wool & 48 Kg/cu.m. for rock wool and is included in this item. (Qty to be supplied shall be as per instruction of BHEL).	SQM	5170.00	0.02750243
S 1700	RAIN WATER DOWN TAKE PIPES			0.00000000
S 1706	Supply of UPVC down take pipes of 160mm diameter- Class 3 as per IS:4985 all complete. (Payment shall be restricted to quantity consumed as per ST 1706 of SCH- 3 of Vol-III).	RM	50	0.00008809
S 1707	Supplying GI down take pipes conforming to IS:1239 /IS:3589 of medium duty all complete as per specification for following diameters. (Payment shall be restricted to quantity consumed as per ST 1707 of SCH- 3 of Vol-III).	RM	2000.00	0.00652015

VOLUME-III

PRICE SCHEDULE, REV-00

SCH-4 - SUPPLY

TENDER NO - PSER:SCT:NKP-C2057:20

VOLUME-III
PRICE SCHEDULE, REV-00

BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 4 : SUPPLY

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
S 1800	MISCELLANEOUS			0.00000000
S 1810	Supplying rails and guide rails etc all complete required for execution of work as per ST 1810 (Payment shall be restricted to quantity consumed as per ST 1810 of SCH- 3 of Vol-III).	MT	45	0.01120439
S 2300	STRUCTURAL STEEL			0.00000000
S 2301C	Supply of ERW GI pipe section of minimum grade Yst 240 conforming to IS: 1161, in columns, beams, ties, struts, bracings, roof truss, connections to other members(tubular/non-tubular), special connections if required etc. including blast cleaning, providing & applying primer, providing and applying intermediate, final and final finish coat of paint (blast cleaning, primer and paint shall be paid separately as per item no 2302A, 2304A, 2304B & 2304 C), connection design & preparation of fabrication drgs, cutting, grinding, machining, drilling, welding, electrodes and other consumables, alignment, erection bolts & nuts (weight of erection bolts & nuts not payable), assembly, edge preparation, preheating/post heating if required, testing of welders, inspection of welds, visual inspection, non destructive and special testing, rectification and correction of defective welding works, inspection and testing, erection scheme, protection against damage in transit, stability of structures, surface preparation by means of manual or mechanical power tools as per IS:1477 part 1, touch-up painting, rectification, installation of temporary structures(scaffolding, access ladders, working platforms etc.) if required, dismantling and removal of temporary structures after completion of work (weight of temporary structures not payable), etc all complete. Payment shall be made for weight of structure but not for Nuts & Bolts/washers, gusset plates, stiffeners, special connections etc. (Payment shall be restricted to quantity consumed as per ST 2301C of SCH- 3 of Vol-III).	MT	45.00	0.01378014
S 2301D	Supply of galvanized Hollow steel sections (square & rectangular) of minimim grade Yst 240 conforming to IS: 4923, in ties, struts, bracings, roof truss, connections to other members(tubular/non-tubular) etc. including blast cleaning, providing & applying primer, providing and applying intermediate, final and final finish coat of paint (blast cleaning, primer and paint shall be paid separately as per item no 2302A, 2304A, 2304B & 2304 C), connection design & preparation of fabrication drgs, cutting, grinding, machining, drilling, welding, electrodes and other consumables, alignment, erection bolts & nuts (weight of erection bolts, nuts and welds not payable), assembly, edge preparation, preheating if required, post heating, testing of welders, inspection of welds, visual inspection, non destructive and special testing, rectification and correction of defective welding works, inspection and testing, erection scheme, protection against damage in transit, stability of structures, surface preparation by means of manual or mechanical power tools as per IS:1477 part 1, touch-up painting, rectification, installation of temporary structures(scaffolding, access ladders, working platforms etc.) if required, dismantling and removal of temporary structures after completion of work (weight of temporary structures not payable), etc all complete. Payment shall be made for weight of structure but not for Nuts & Bolts/washers, gusset plates, stiffeners, special connections etc. (Payment shall be restricted to quantity consumed as per ST 2301D of SCH- 3 of Vol-III).	MT	10.00	0.00325303

VOLUME-III

PRICE SCHEDULE, REV-00

SCH-4 - SUPPLY

TENDER NO - PSER:SCT:NKP-C2057:20

VOLUME-III
PRICE SCHEDULE, REV-00

BALANCE STRUCTURAL AND CIVIL WORKS ETC. OF U#1 & U#3 IN 3X660 MW NORTH KARANPURA STPP, JHARKHAND

TENDER NO - PSER:SCT:NKP-C2057:20

SCHEDULE - 4 : SUPPLY

ST NO.	ITEM DESCRIPTION	UNIT	QUANTITY	WEIGHTAGE
S 2307	Supply of factory made electroforged galvanised grating units with mild steel (having minimum galvanisation of 610 g/sqm) conforming to IS:2062 in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete. (Bolts, nuts, washers shall be paid separately under item 2310 & 2311 as applicable) (Payment shall be restricted to quantity consumed as per ST 2307 of SCH- 3 of Vol-III).	MT	350.00	0.07949109
S 2308 A	Supplying factory made chequered plates confirming to IS 3502 with mild steel of grade E250, quality BR, semi killed, conforming to IS:2062 or equivalent grade conforming to ASTM & BS standards only in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including 1 coat of redoxide zinc-chromate primer (at shop), fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete. Min. thickness of chequered plate shall be 6 mm excluding projection. (Payment shall be restricted to quantity consumed as per ST 2308A of SCH- 3 of Vol-III).	MT	70.00	0.01330034
S 2310	Supply of permanent mild steel bolts (class 4.6 as per IS : 1367 and grade 'C' as per IS: 1363) and nuts, washers etc. up to and inclusive of 39 mm diameter and upto 300mm long for structural steel work etc all complete. (Payment shall be restricted to quantity consumed as per ST 2310 of SCH- 3 of Vol-III).	Quintal	5.00	0.00013352
S 2311	Supply of high strength structural bolts (of property class 8.8 and product grade 'C' as per IS: 1367) and conforming to IS: 3757 and high strength structural hardened and tempered nuts (of property class '8' as per IS:1367) conforming to IS:6623 with hardened and tempered washers as per IS:6649 etc. up to and inclusive of 39 mm diameter and upto 300 mm long for structural steel work etc all complete. (Payment shall be restricted to quantity consumed as per ST 2311 of SCH- 3 of Vol-III).	Quintal	82.00	0.00505589
S 2319	Supply of stainless steel pipe hand railing of 32 mm/40 mm dia including transportation, loading/unloading etc. all complete. (Payment shall be restricted to quantity consumed as per ST 2319 of SCH- 3 of Vol-III).	MT	12.00	0.01513134
TOTAL				0.32505024

VOLUME-III

PRICE SCHEDULE, REV-00

SCH-4 - SUPPLY

TENDER NO - PSER:SCT:NKP-C2057:20